Full wwPDB EM Validation Report ⓘ

Jan 12, 2026 – 12:12 PM EST

PDB ID	:	8UX4 / pdb_00008ux4
EMDB ID	:	EMD-42687
Title	:	Mitochondrial ribosome of saccharomyces cerevisiae class II from YEP with Dextrose culture
Authors	:	Yu, Z.; Zheng, F.; Zhou, C.
Deposited on	:	2023-11-08
Resolution	:	3.30 Å(reported)

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

The following versions of software and data (see references ⓘ) were used in the production of this report:

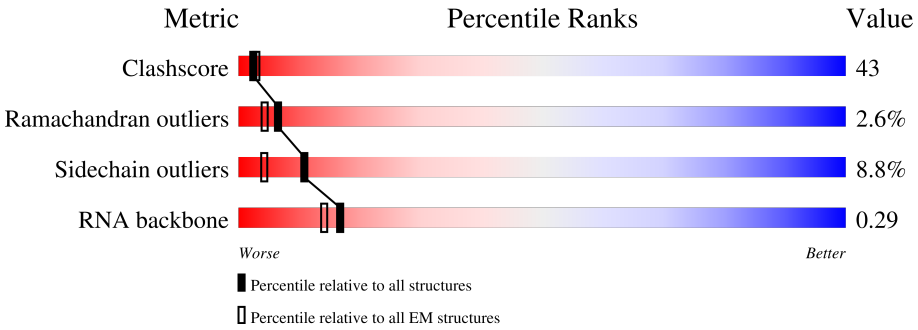
EMDB validation analysis	:	0.0.1.dev129
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.47

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 3.30 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415
RNA backbone	6643	2191

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	34	71% 21% 71% 9%
2	AB	95	92% 20% 57% 22%
3	AC	259	95% 30% 56% 13%
4	AD	301	100% 32% 54% 14%
5	AE	298	99% 18% 56% 22%
6	AF	320	75% 23% 40% 14% 21%
7	AG	236	97% 34% 56% 10%

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Mol	Chain	Length	Quality of chain
8	AH	234	100% 30% 57% 12%
9	AI	405	96% 30% 57% 11%
10	AJ	96	90% 27% 49% 20%
11	AK	264	92% 33% 57% 9%
12	AL	1498	95% 17% 48% 35%
13	AM	76	96% 17% 32% 51%
14	AN	13	92% 15% 77% 8%
15	Z	91	95% 30% 48% 18%
16	g	298	65% 23% 36% 8% 34%
17	h	267	93% 39% 51% 9%
18	i	320	84% 25% 49% 17% 8%
19	j	485	57% 26% 29% 41%
20	k	293	89% 40% 48% 9%
21	l	131	98% 13% 73% 15%
22	m	161	99% 35% 47% 17%
23	n	155	90% 62% 37%
24	o	244	88% 52% 33% 7% 7%
25	p	134	90% 27% 57% 15%
26	q	152	99% 17% 70% 12%
27	r	125	84% 22% 66% 12%
28	s	120	97% 24% 62% 12%
29	t	113	85% 35% 51% 13%
30	u	253	96% 23% 67% 10%
31	v	106	86% 25% 70% 5%
32	w	204	100% 20% 62% 17%

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Mol	Chain	Length	Quality of chain
33	x	99	87% 18% 51% 20% 8%
34	y	80	95% 22% 58% 18%
35	z	92	91% 28% 57% 13%
36	0	38	71% 84% 16%
37	1	348	86% 87% 13%
38	2	113	93% 73% 26%
39	3	130	90% 85% 15%
40	4	138	93% 85% 14%
41	5	324	92% 85% 15%
42	6	259	82% 80% 10% 10%
43	7	106	83% 85% 14%
44	8	199	97% 90% 10%
45	9	215	89% 83% 10% 6%
46	A	2876	92% 9% 60% 29%
47	B	328	88% 48% 39% 10%
48	C	249	83% 74% 25%
49	D	252	95% 82% 16%
50	E	274	90% 81% 17%
51	F	196	94% 86% 14%
52	G	74	95% 89% 11%
53	H	160	76% 86% 13%
54	I	138	78% 78% 14% 8%
55	J	220	86% 70% 25% 5%
56	K	195	81% 82% 17%
57	L	237	91% 85% 11%

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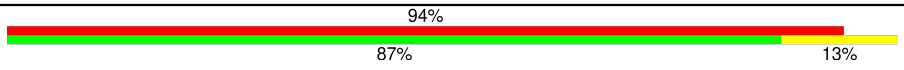
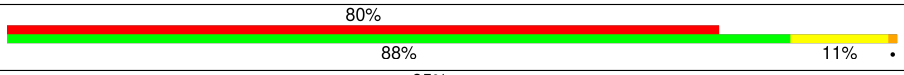
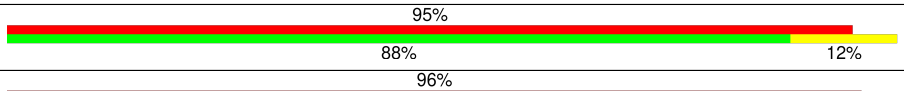
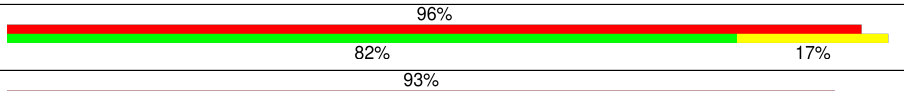
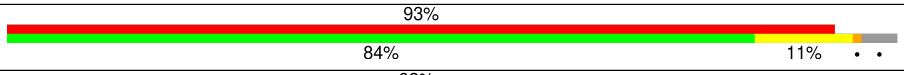
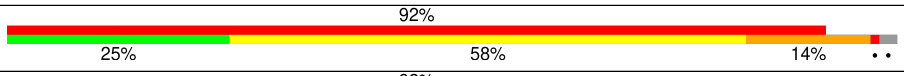
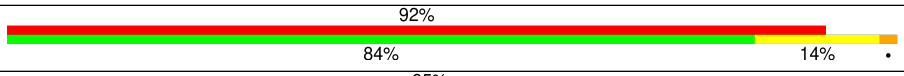
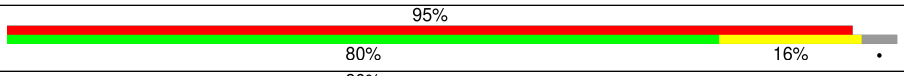
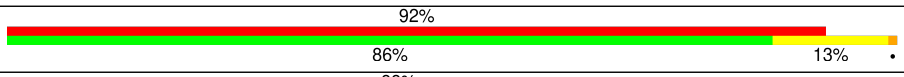
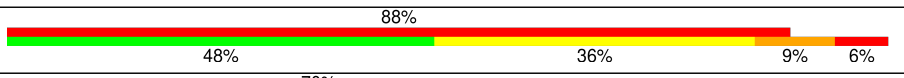
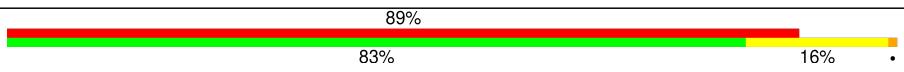
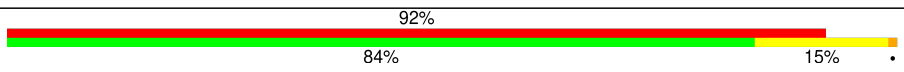
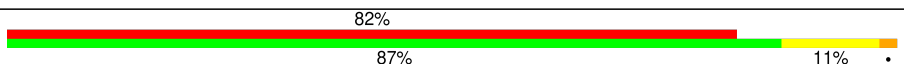
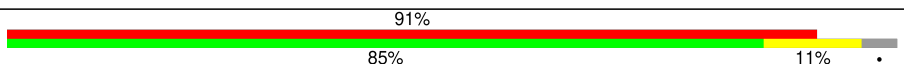
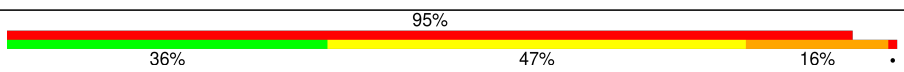
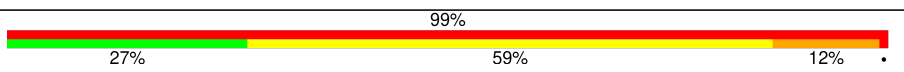
Mol	Chain	Length	Quality of chain
58	M	151	
59	N	118	
60	O	225	
61	P	207	
62	Q	296	
63	R	337	
64	S	185	
65	T	225	
66	U	82	
67	V	76	
68	W	112	
69	X	64	
70	Y	46	
71	a	177	
72	b	155	
73	c	119	
74	d	215	
75	e	165	
76	f	138	

2 Entry composition

There are 76 unique types of molecules in this entry. The entry contains 201676 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called Small ribosomal subunit protein mS38.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	AA	34	Total	C	N	O	S	0	0
			304	183	75	44	2		

- Molecule 2 is a protein called Small ribosomal subunit protein mS41.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	AB	95	Total	C	N	O	S	0	0
			808	512	153	142	1		

- Molecule 3 is a protein called Small ribosomal subunit protein mS42.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	AC	259	Total	C	N	O	S	0	0
			2079	1335	352	387	5		

- Molecule 4 is a protein called Small ribosomal subunit protein mS43.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	AD	301	Total	C	N	O	S	0	0
			2422	1530	418	464	10		

- Molecule 5 is a protein called Small ribosomal subunit protein mS27.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	AE	298	Total	C	N	O	S	0	0
			2432	1569	421	438	4		

- Molecule 6 is a protein called Small ribosomal subunit protein mS45.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	AF	252	Total	C	N	O	S	0	0
			2079	1327	377	369	6		

- Molecule 7 is a protein called Small ribosomal subunit protein mS23.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	AG	236	Total	C	N	O	S	0	0
			1931	1224	337	363	7		

- Molecule 8 is a protein called Small ribosomal subunit protein mS26.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	AH	234	Total	C	N	O	S	0	0
			1887	1197	339	347	4		

- Molecule 9 is a protein called Small ribosomal subunit protein mS29.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	AI	405	Total	C	N	O	S	0	0
			3243	2087	545	603	8		

- Molecule 10 is a protein called Small ribosomal subunit protein mS33.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	AJ	96	Total	C	N	O	S	0	0
			774	496	140	135	3		

- Molecule 11 is a protein called Small ribosomal subunit protein mS35.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	AK	264	Total	C	N	O	S	0	0
			2212	1397	399	412	4		

- Molecule 12 is a RNA chain called Small ribosomal subunit rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	AL	1498	Total	C	N	O	P	0	0
			31820	14309	5622	10391	1498		

- Molecule 13 is a RNA chain called Small ribosomal subunit tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	AM	76	Total	C	N	O	P	0	0
			1615	723	289	528	75		

- Molecule 14 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	AN	13	Total	C	N	O	P	0	0
			270	123	49	86	12		

- Molecule 15 is a protein called Small ribosomal subunit protein mS37.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	Z	87	Total	C	N	O	S	0	0
			687	435	128	118	6		

- Molecule 16 is a protein called Small ribosomal subunit protein bS1m.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	g	198	Total	C	N	O	S	0	0
			1577	1014	278	280	5		

- Molecule 17 is a protein called Small ribosomal subunit protein uS2m.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	h	267	Total	C	N	O	S	0	0
			2095	1319	368	406	2		

- Molecule 18 is a protein called Small ribosomal subunit protein uS3m.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	i	293	Total	C	N	O	S	0	0
			2461	1554	432	452	23		

- Molecule 19 is a protein called Small ribosomal subunit protein uS4m.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	j	287	Total	C	N	O	S	0	0
			2370	1542	420	404	4		

- Molecule 20 is a protein called Small ribosomal subunit protein uS5m.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	k	287	Total	C	N	O	S	0	0
			2297	1468	407	414	8		

- Molecule 21 is a protein called 37S ribosomal protein MRP17, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	l	131	Total	C	N	O	S	0	0
			1055	671	189	191	4		

- Molecule 22 is a protein called Small ribosomal subunit protein uS7m.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	m	161	Total	C	N	O	S	0	0
			1282	811	238	228	5		

- Molecule 23 is a protein called 37S ribosomal protein S8, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	n	155	Total	C	N	O	S	0	0
			1221	772	218	221	10		

- Molecule 24 is a protein called Small ribosomal subunit protein uS9m.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	o	226	Total	C	N	O	S	0	0
			1820	1167	332	316	5		

- Molecule 25 is a protein called Small ribosomal subunit protein uS10m.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	p	134	Total	C	N	O	S	0	0
			1108	719	192	193	4		

- Molecule 26 is a protein called Small ribosomal subunit protein uS11m.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	q	152	Total	C	N	O	S	0	0
			1208	775	211	216	6		

- Molecule 27 is a protein called Small ribosomal subunit protein uS12m.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	r	124	Total	C	N	O	S	0	0
			949	585	194	166	4		

- Molecule 28 is a protein called Small ribosomal subunit protein uS13m.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	s	119	Total	C	N	O	S	0	0
			930	587	178	159	6		

- Molecule 29 is a protein called Small ribosomal subunit protein uS14m.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	t	113	Total	C	N	O	S	0	0
			942	605	180	153	4		

- Molecule 30 is a protein called Small ribosomal subunit protein uS15m.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	u	253	Total	C	N	O	S	0	0
			2070	1292	387	383	8		

- Molecule 31 is a protein called Small ribosomal subunit protein bS16m.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	v	106	Total	C	N	O	S	0	0
			830	529	155	144	2		

- Molecule 32 is a protein called MRPL38 isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	w	204	Total	C	N	O	S	0	0
			1683	1055	315	308	5		

- Molecule 33 is a protein called Small ribosomal subunit protein bS18m.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	x	91	Total	C	N	O	S	0	0
			738	463	143	128	4		

- Molecule 34 is a protein called Small ribosomal subunit protein uS19m.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	y	80	Total	C	N	O	S	0	0
			636	408	115	111	2		

- Molecule 35 is a protein called Small ribosomal subunit protein bS21m.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	z	92	Total	C	N	O	S	0	0
			760	475	150	130	5		

- Molecule 36 is a protein called Large ribosomal subunit protein bL36m.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	0	38	Total	C	N	O	S	0	0
			324	205	66	50	3		

- Molecule 37 is a protein called Large ribosomal subunit protein mL38.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	1	348	Total	C	N	O	S	0	0
			2875	1847	499	523	6		

- Molecule 38 is a protein called Large ribosomal subunit protein mL40.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	2	113	Total	C	N	O	S	0	0
			944	597	174	168	5		

- Molecule 39 is a protein called Large ribosomal subunit protein mL41.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	3	130	Total	C	N	O	S	0	0
			1046	671	189	183	3		

- Molecule 40 is a protein called Large ribosomal subunit protein mL43.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	4	138	Total	C	N	O	S	0	0
			1117	700	219	193	5		

- Molecule 41 is a protein called Large ribosomal subunit protein mL44.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	5	324	Total	C	N	O	S	0	0
			2552	1630	431	480	11		

- Molecule 42 is a protein called Large ribosomal subunit protein mL46.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	6	234	Total	C	N	O	S	0	0
			1932	1250	327	353	2		

- Molecule 43 is a protein called Large ribosomal subunit protein mL49.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	7	106	Total	C	N	O	S	0	0
			858	553	151	152	2		

- Molecule 44 is a protein called Large ribosomal subunit protein uL30m.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	8	199	Total	C	N	O	S	0	0
			1629	1032	278	315	4		

- Molecule 45 is a protein called Large ribosomal subunit protein mL57.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	9	202	Total	C	N	O	S	0	0
			1587	1014	279	289	5		

- Molecule 46 is a RNA chain called Large ribosomal subunit rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	A	2876	Total	C	N	O	P	0	0
			61141	27507	10875	19889	2870		

- Molecule 47 is a protein called Large ribosomal subunit protein uL2m.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	B	321	Total	C	N	O	S	0	0
			2527	1575	507	436	9		

- Molecule 48 is a protein called Large ribosomal subunit protein uL3m.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	C	249	Total	C	N	O	S	0	0
			1932	1218	360	344	10		

- Molecule 49 is a protein called Large ribosomal subunit protein uL4m.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	D	252	Total	C	N	O	S	0	0
			1991	1264	355	369	3		

- Molecule 50 is a protein called Large ribosomal subunit protein uL5m.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	E	274	Total	C	N	O	S	0	0
			2187	1396	391	394	6		

- Molecule 51 is a protein called Large ribosomal subunit protein uL6m.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	F	196	Total	C	N	O	S	0	0
			1524	967	273	280	4		

- Molecule 52 is a protein called Large ribosomal subunit protein bL9m.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	G	74	Total	C	N	O	S	0	0
			617	393	110	113	1		

- Molecule 53 is a protein called Large ribosomal subunit protein uL13m.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	H	160	Total	C	N	O	S	0	0
			1275	807	240	224	4		

- Molecule 54 is a protein called Large ribosomal subunit protein uL14m.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	I	127	Total	C	N	O	S	0	0
			956	595	180	170	11		

- Molecule 55 is a protein called Large ribosomal subunit protein uL15m.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	J	220	Total	C	N	O	S	0	0
			1746	1119	326	298	3		

- Molecule 56 is a protein called Large ribosomal subunit protein uL16m.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	K	195	Total	C	N	O	S	0	0
			1573	1001	297	270	5		

- Molecule 57 is a protein called Large ribosomal subunit protein bL17m.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	L	229	Total	C	N	O	S	0	0
			1817	1140	333	336	8		

- Molecule 58 is a protein called Large ribosomal subunit protein bL19m.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	M	151	Total	C	N	O	S	0	0
			1206	766	220	217	3		

- Molecule 59 is a protein called Large ribosomal subunit protein bL21m.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	N	118	Total	C	N	O	S	0	0
			948	598	177	171	2		

- Molecule 60 is a protein called Large ribosomal subunit protein uL22m.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	O	225	Total	C	N	O	S	0	0
			1826	1169	332	320	5		

- Molecule 61 is a protein called Large ribosomal subunit protein uL23m.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	P	207	Total	C	N	O	S	0	0
			1729	1104	310	309	6		

- Molecule 62 is a protein called Large ribosomal subunit protein uL24m.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	Q	284	Total	C	N	O	S	0	0
			2272	1451	396	417	8		

- Molecule 63 is a protein called Large ribosomal subunit protein bL27m.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	R	331	Total	C	N	O	S	0	0
			2738	1728	497	509	4		

- Molecule 64 is a protein called MRPS9 isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	S	185	Total	C	N	O	S	0	0
			1543	994	281	265	3		

- Molecule 65 is a protein called Large ribosomal subunit protein uL29m.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	T	216	Total	C	N	O	S	0	0
			1792	1139	324	325	4		

- Molecule 66 is a protein called Large ribosomal subunit protein uL30m.

Mol	Chain	Residues	Atoms				AltConf	Trace
66	U	82	Total	C	N	O	0	0
			639	410	116	113		

- Molecule 67 is a protein called Large ribosomal subunit protein bL31m.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	V	66	Total	C	N	O	S	0	0
			543	340	110	92	1		

- Molecule 68 is a protein called Large ribosomal subunit protein bL32m.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	W	112	Total	C	N	O	S	0	0
			937	587	181	163	6		

- Molecule 69 is a protein called Large ribosomal subunit protein bL33m.

Mol	Chain	Residues	Atoms				AltConf	Trace
69	X	64	Total	C	N	O	0	0
			512	330	96	86		

- Molecule 70 is a protein called Large ribosomal subunit protein bL34m.

Mol	Chain	Residues	Atoms				AltConf	Trace
70	Y	46	Total	C	N	O	0	0
			385	245	82	58		

- Molecule 71 is a protein called Large ribosomal subunit protein mL58.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	a	177	Total	C	N	O	S	0	0
			1440	907	267	260	6		

- Molecule 72 is a protein called Large ribosomal subunit protein mL59.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	b	155	Total	C	N	O	S	0	0
			1299	850	225	221	3		

- Molecule 73 is a protein called Large ribosomal subunit protein mL60.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	c	119	Total	C	N	O	S	0	0
			1004	645	191	164	4		

- Molecule 74 is a protein called Large ribosomal subunit protein mL67.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	d	206	Total	C	N	O	S	0	0
			1746	1117	318	304	7		

- Molecule 75 is a protein called Large ribosomal subunit protein uL10m.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	e	165	Total	C	N	O	S	0	0
			1340	862	234	238	6		

- Molecule 76 is a protein called Large ribosomal subunit protein uL11m.

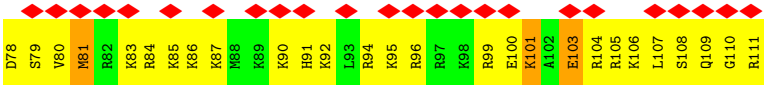
Mol	Chain	Residues	Atoms					AltConf	Trace
76	f	138	Total	C	N	O	S	0	0
			1032	668	176	183	5		

3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

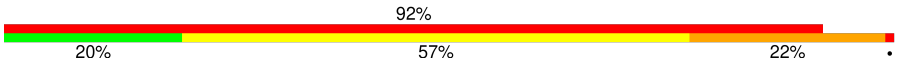
• Molecule 1: Small ribosomal subunit protein mS38

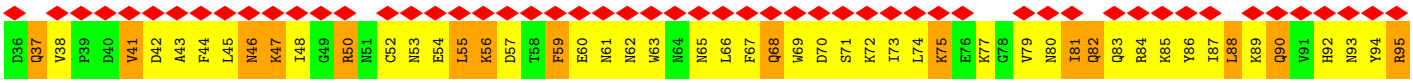
Chain AA:



• Molecule 2: Small ribosomal subunit protein mS41

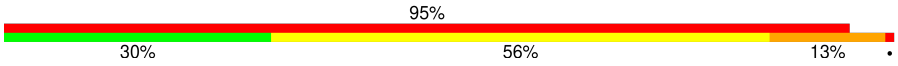
Chain AB:

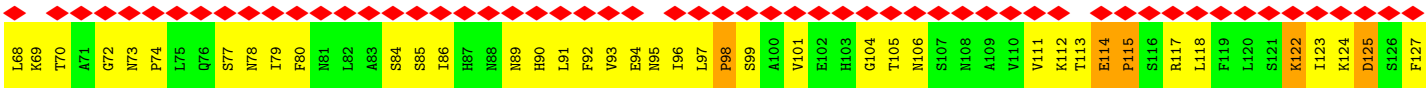


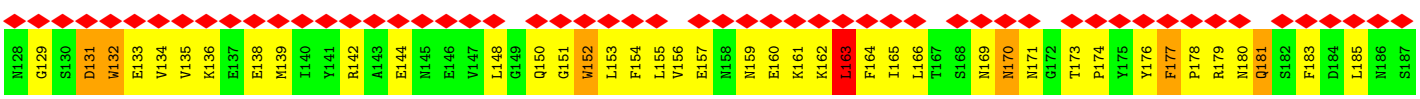


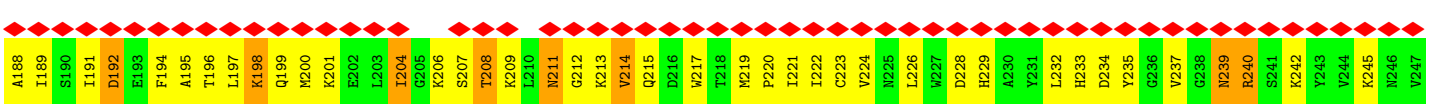
• Molecule 3: Small ribosomal subunit protein mS42

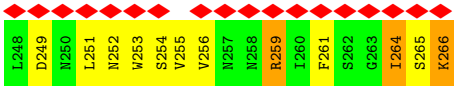
Chain AC:





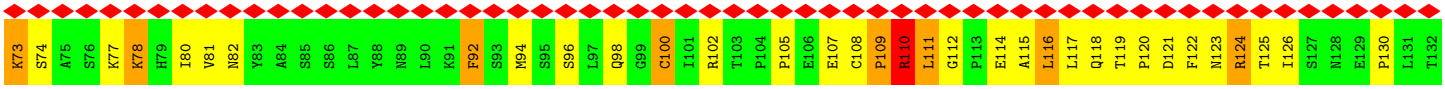


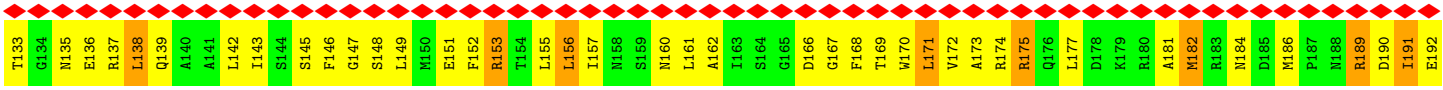


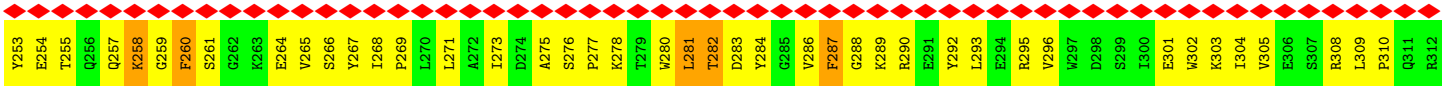


• Molecule 4: Small ribosomal subunit protein mS43

Chain AD:

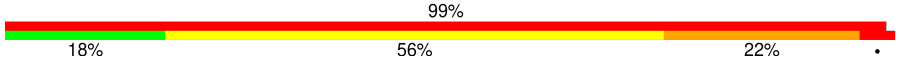


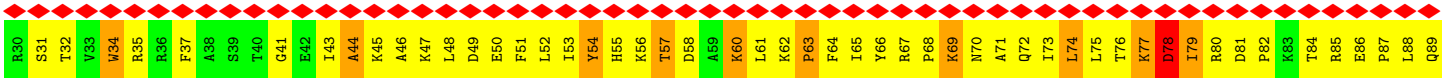


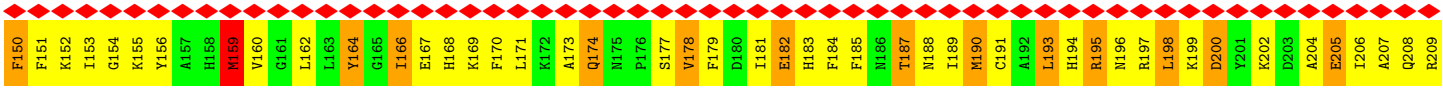


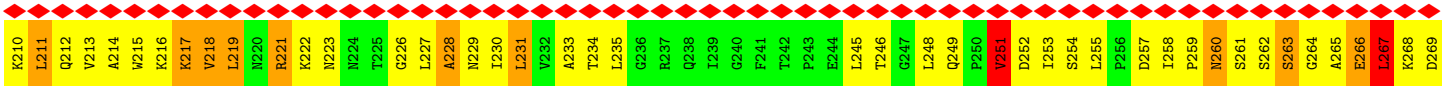
• Molecule 5: Small ribosomal subunit protein mS27

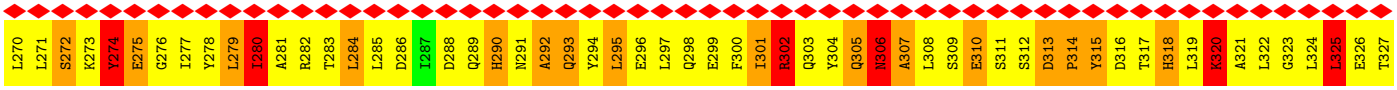
Chain AE:





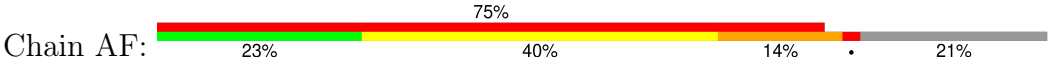


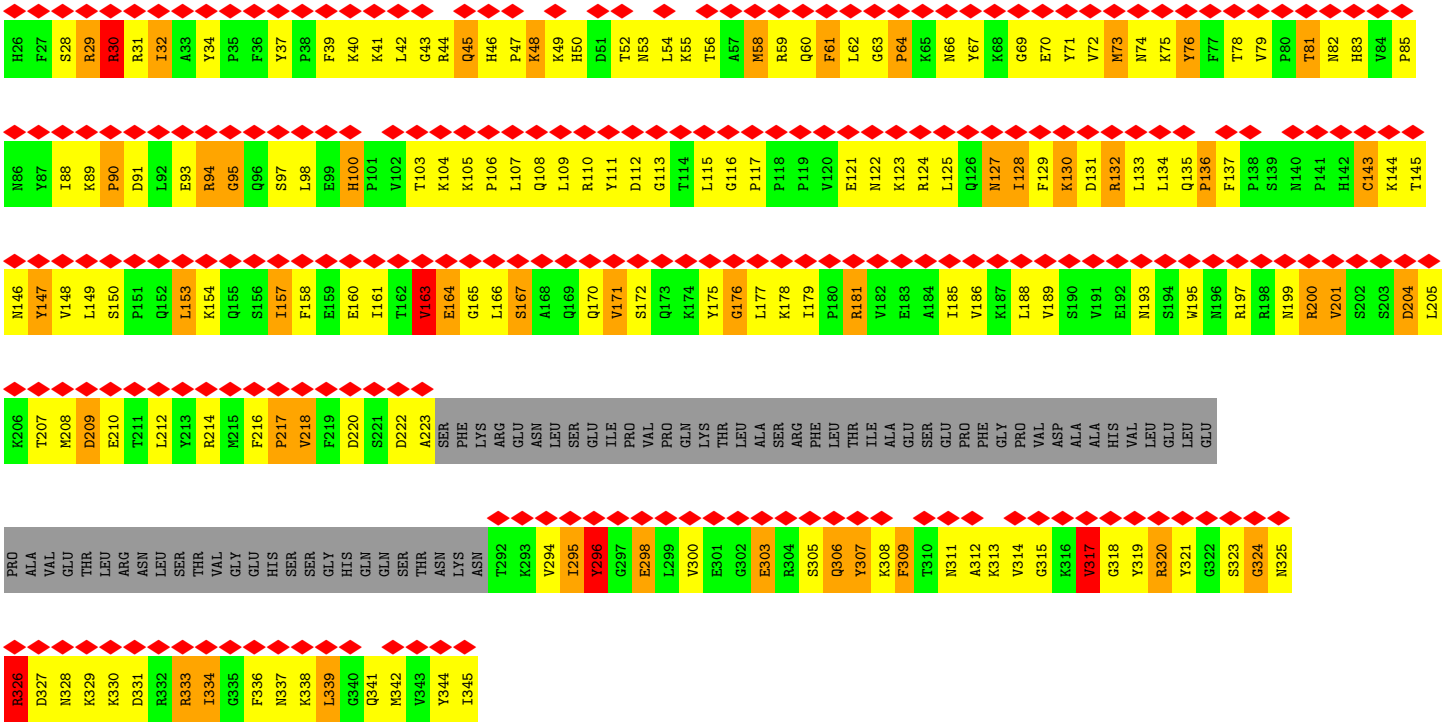




• Molecule 6: Small ribosomal subunit protein mS45

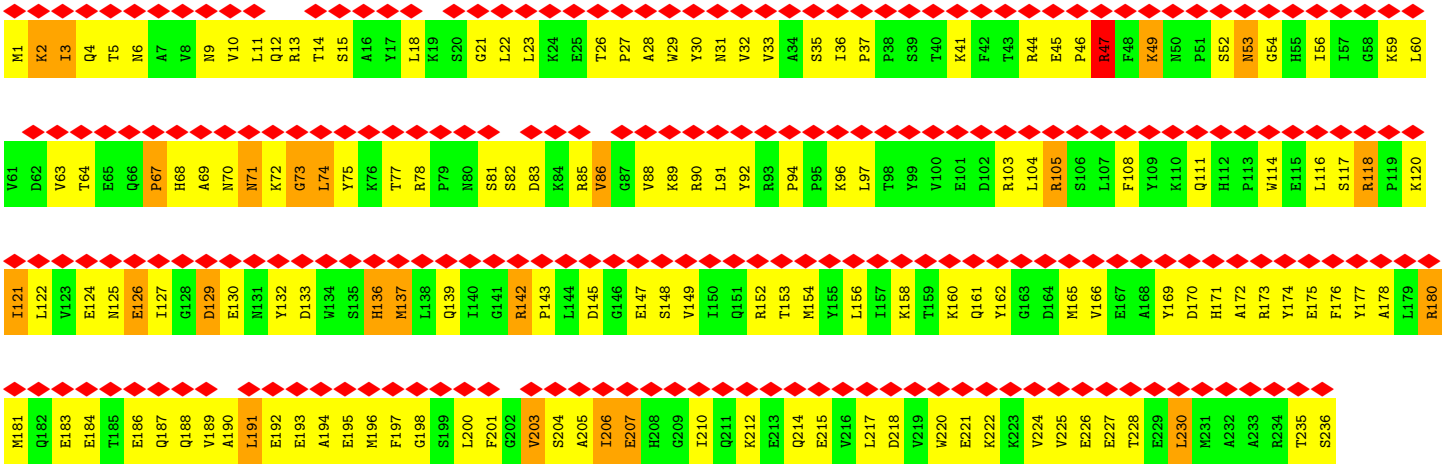
Chain AF:





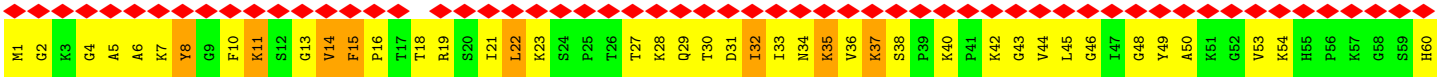
• Molecule 7: Small ribosomal subunit protein mS23

Chain AG:



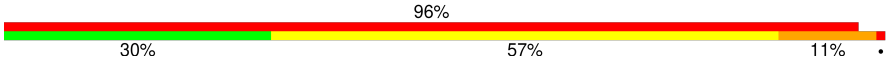
• Molecule 8: Small ribosomal subunit protein mS26

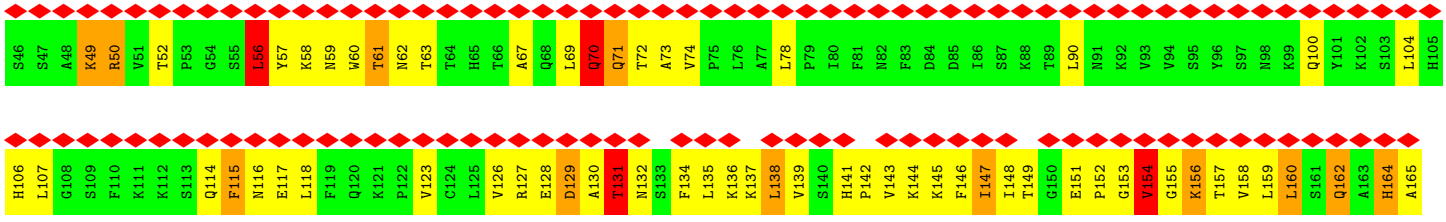
Chain AH:



• Molecule 9: Small ribosomal subunit protein mS29

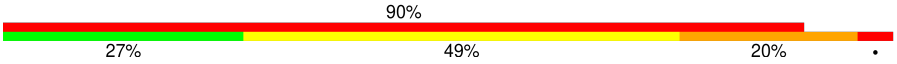
Chain AI:

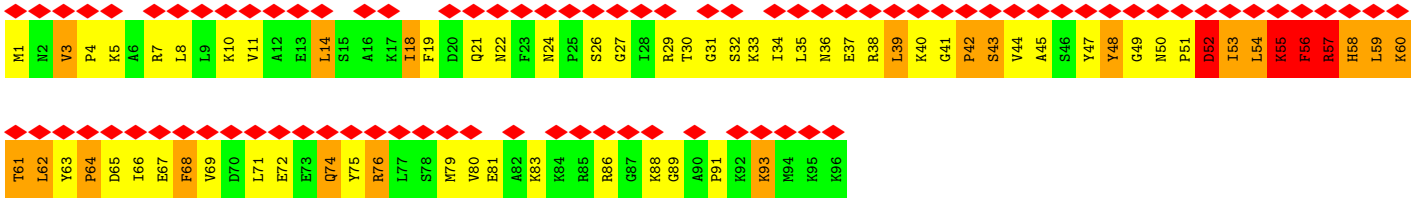




• Molecule 10: Small ribosomal subunit protein mS33

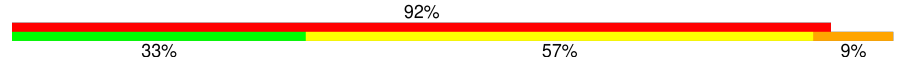
Chain AJ:

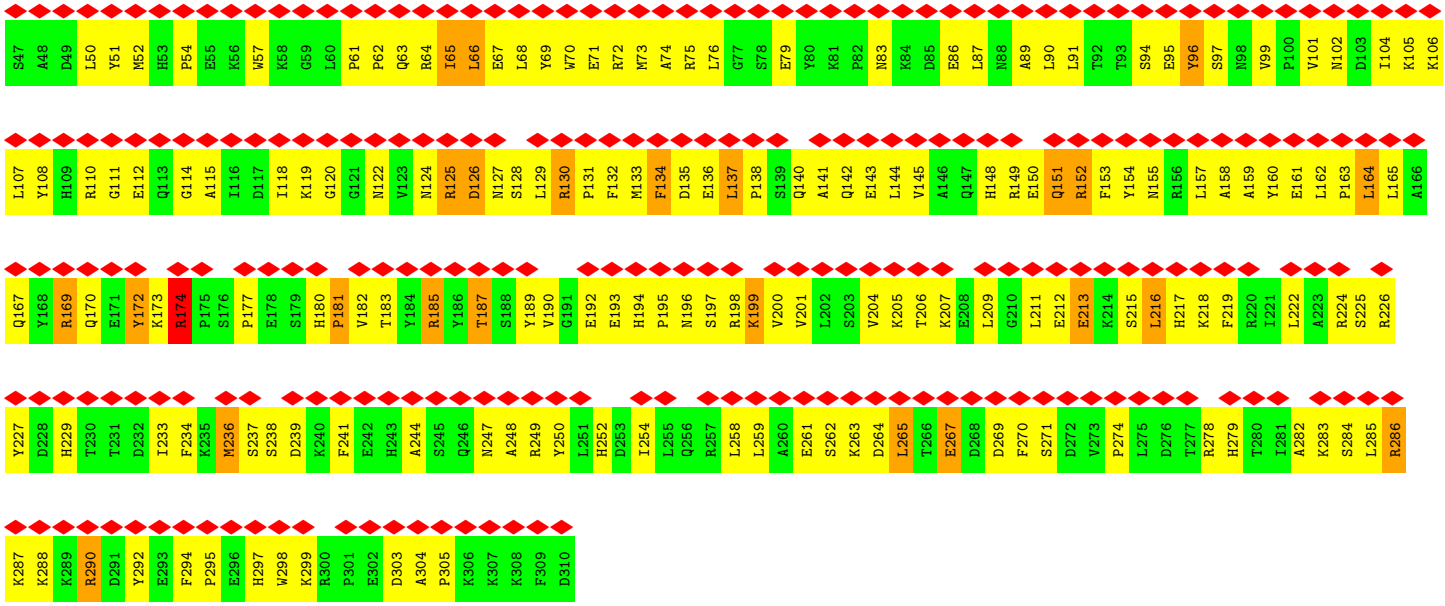




• Molecule 11: Small ribosomal subunit protein mS35

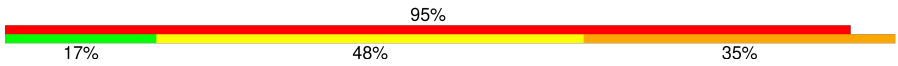
Chain AK:

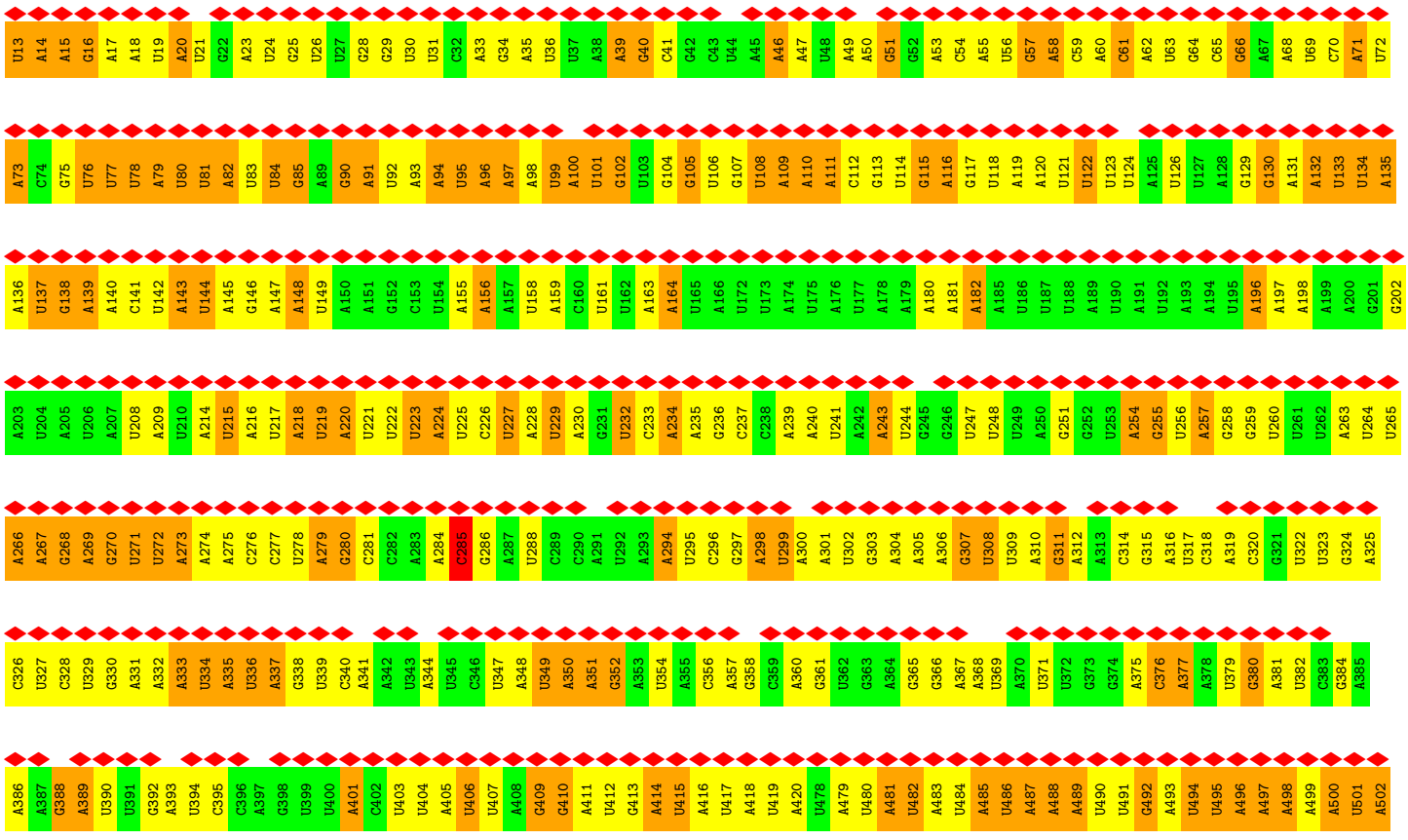


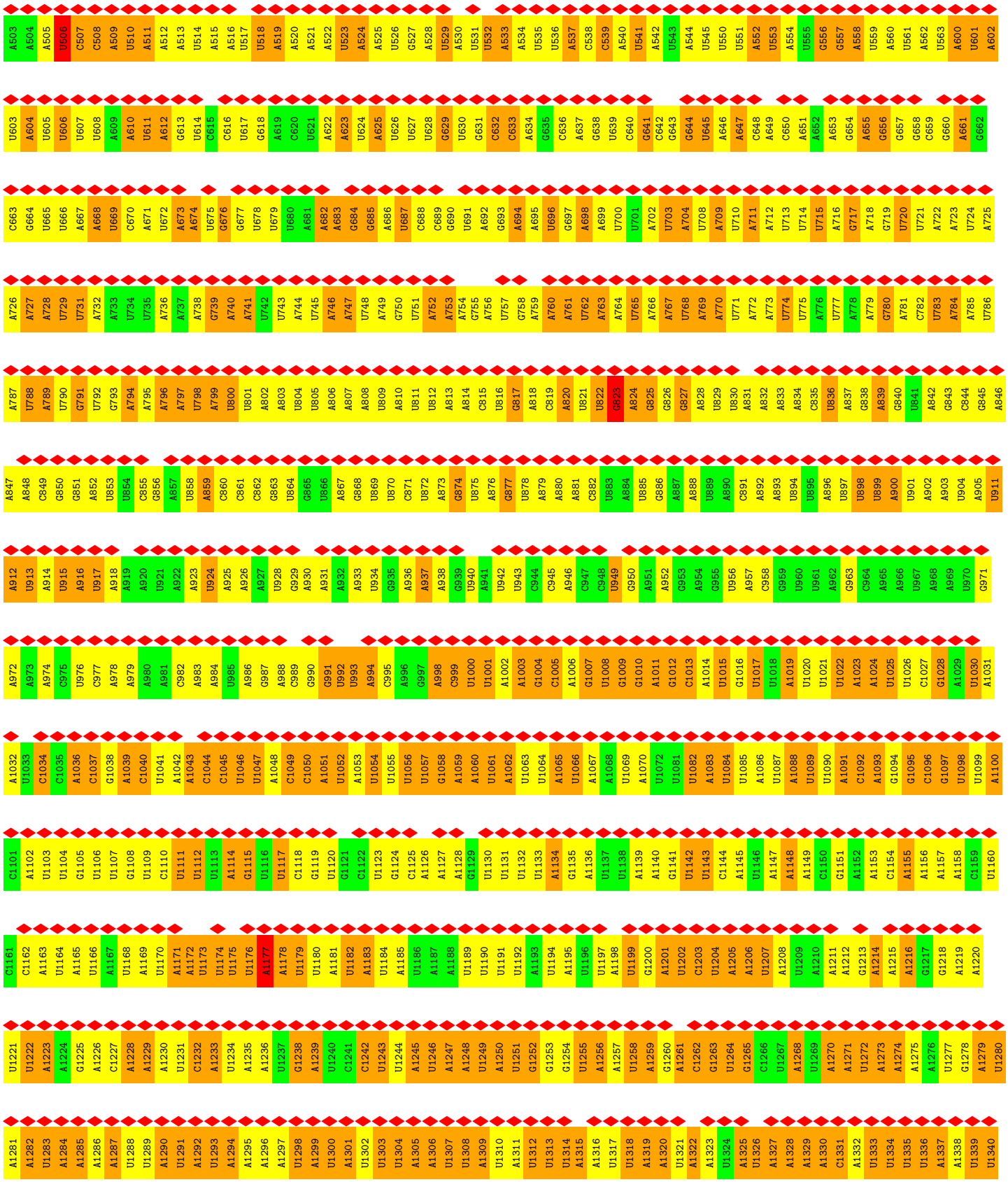


• Molecule 12: Small ribosomal subunit rRNA

Chain AL:



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U603 A604 U605 U606 U607 U608 A609 A610 U611 A612 G613 U614 C615 C616 U617 G618 A619 C620 U621 A622 A623 U624 A625 U626 U627 U628 G629 U630 G631 C632 C633 A634 G635 C636 A637 G638 U639 C640 G641 C642 G643 G644 U645 A646 A647 C648 A649 C650 A651 A652 A653 G654 A655 G656 G657 G658 C659 G660 A661 G662
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A787 U788 A789 U790 G791 U792 G793 A794 A795 A796 A797 U798 A799 U800 U801 A802 A803 U804 U805 A806 A807 A808 U809 A810 U811 U812 A813 A814 C815 U816 G817 A818 C819 A820 U821 U822 G823 A824 G825 G826 G827 A828 U829 U830 A831 A832 A833 A834 C835 U836 A837 G838 A839 G840 U841 A842 G843 C844 G845 A846
A847 A848 C849 G850 G851 A852 U853 U854 C855 G856 A857 U858 A859 C860 C861 C862 G863 U864 G865 U866 A867 G868 U869 U870 C871 U872 A873 G874 U875 A876 G877 U878 A879 A880 A881 C882 U883 A884 U885 G886 A887 A888 U889 A890 C891 A892 A893 U894 U895 A896 U897 U898 U899 A900 U901 A902 A903 U904 A905 U911
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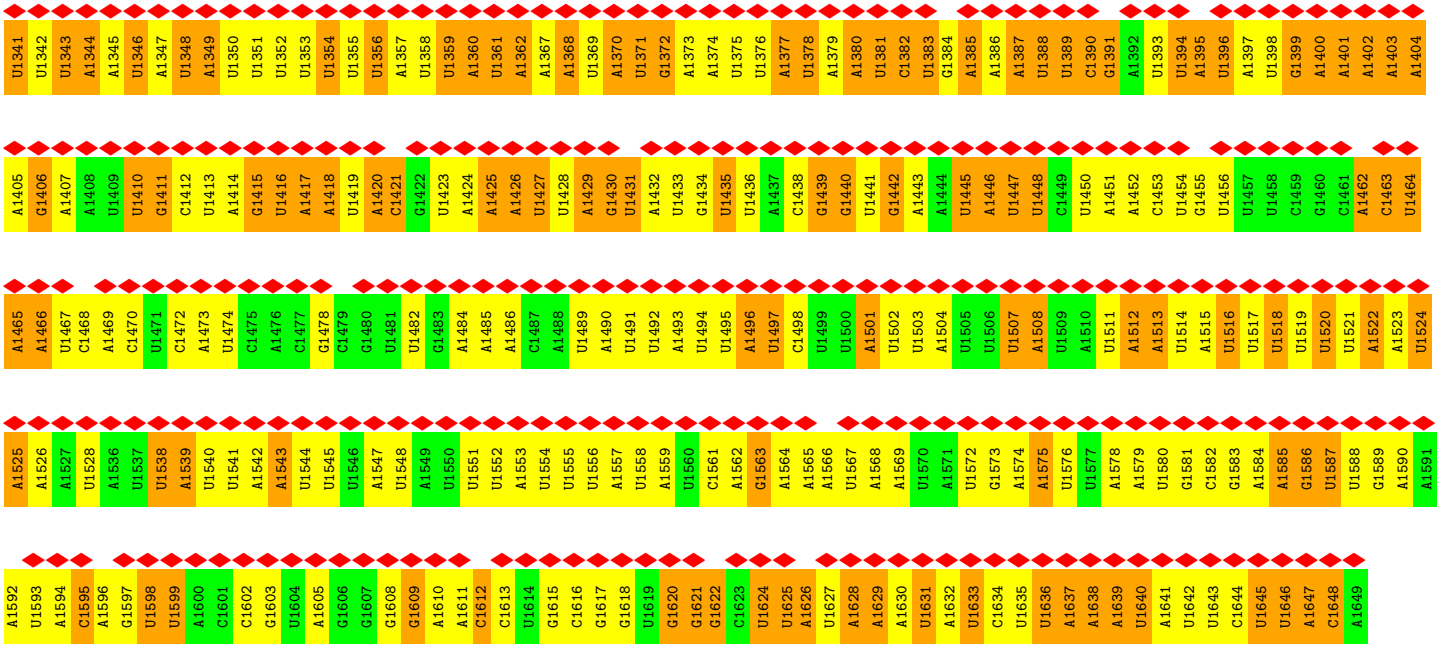
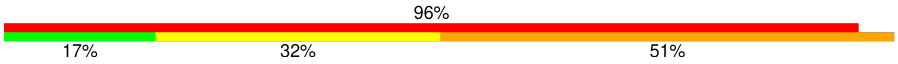
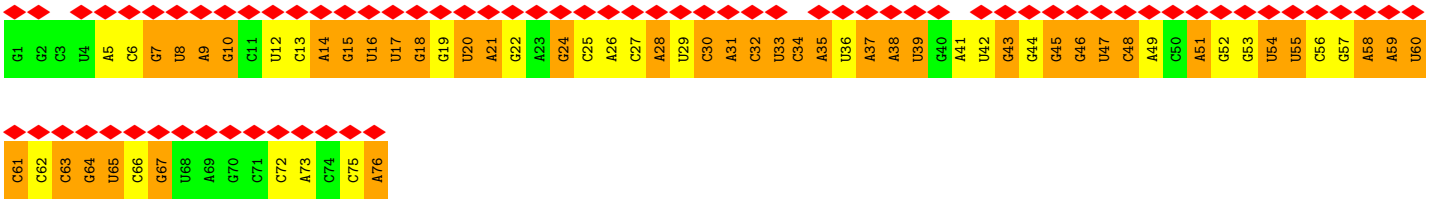
A972 A973 A974 C975 U976 C977 A978 A979 A980 A981 C982 A983 A984 U985 A986 G987 A988 C989 G990 G991 U992 U993 A994 C995 A996 G997 A998 C999 U1000 U1001 A1002 A1003 G1004 C1005 A1006 G1007 U1008 G1009 G1010 A1011 G1012 C1013 A1014 U1015 G1016 U1017 U1018 A1019 A1020 U1021 U1022 A1023 A1024 U1025 U1026 C1027 G1028 A1029 U1030 A1031
A1032 U1033 C1034 C1035 A1036 C1037 G1038 A1039 C1040 U1041 A1042 A1043 C1044 C1045 U1046 U1047 A1048 C1049 C1050 A1051 U1052 A1053 U1054 U1055 U1056 U1057 G1058 A1059 A1060 U1061 A1062 U1063 U1064 A1065 U1066 A1067 A1068 U1069 A1070 U1072 U1081 U1082 A1083 U1084 U1085 A1086 U1087 A1088 U1089 U1090 A1091 C1092 A1093 G1094 G1095 C1096 G1097 U1098 U1099 A1100
C1101 A1102 U1103 U1104 G1105 U1106 U1107 G1108 U1109 C1110 U1111 U1112 U1113 A1114 G1115 U1116 U1117 C1118 G1119 U1120 G1121 C1122 U1123 G1124 C1125 A1126 A1127 A1128 G1129 U1130 U1131 U1132 U1133 A1134 G1135 A1136 U1137 U1138 A1139 A1140 G1141 U1142 U1143 C1144 A1145 U1146 A1147 A1148 A1149 C1150 G1151 A1152 A1153 C1154 A1155 A1156 A1157 A1158 C1159 U1160
C1161 C1162 A1163 U1164 A1165 U1166 A1167 U1168 A1169 U1170 A1171 A1172 U1173 A1174 A1175 U1176 A1177 A1178 U1179 U1180 A1181 U1182 A1183 U1184 A1185 U1186 A1187 A1188 U1189 U1190 U1191 U1192 A1193 U1194 A1195 U1196 U1197 A1198 U1199 G1200 A1201 U1202 C1203 U1204 A1205 A1206 U1207 A1208 U1209 A1210 A1211 A1212 G1213 A1214 A1215 A1216 G1217 G1218 A1219 A1220
U1221 U1222 A1223 A1224 G1225 A1226 C1227 A1228 A1229 A1230 U1231 C1232 A1233 U1234 A1235 A1236 U1237 G1238 A1239 U1240 C1241 C1242 U1243 U1244 A1245 U1246 A1247 A1248 U1249 A1250 U1251 G1252 G1253 G1254 U1255 A1256 A1257 U1258 A1259 G1260 A1261 C1262 G1263 U1264 G1265 C1266 U1267 A1268 U1269 A1270 A1271 U1272 A1273 A1274 A1275 A1276 U1277 G1278 A1279 U1280
A1281 A1282 U1283 A1284 A1285 A1286 A1287 U1288 U1289 A1290 U1291 A1292 U1293 A1294 A1295 A1296 A1297 U1298 A1299 U1300 A1301 U1302 U1303 U1304 A1305 A1306 U1307 U1308 A1309 U1310 A1311 U1312 U1313 U1314 A1315 A1316 U1317 U1318 A1319 A1320 U1321 A1322 A1323 U1324 A1325 U1326 A1327 A1328 A1329 A1330 C1331 A1332 U1333 U1334 U1335 U1336 A1337 A1338 U1339 U1340



• Molecule 13: Small ribosomal subunit tRNA

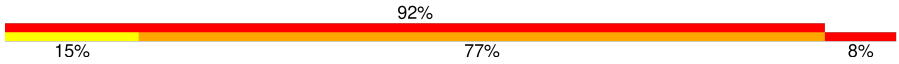
Chain AM:





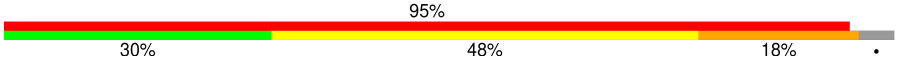
• Molecule 14: mRNA

Chain AN:



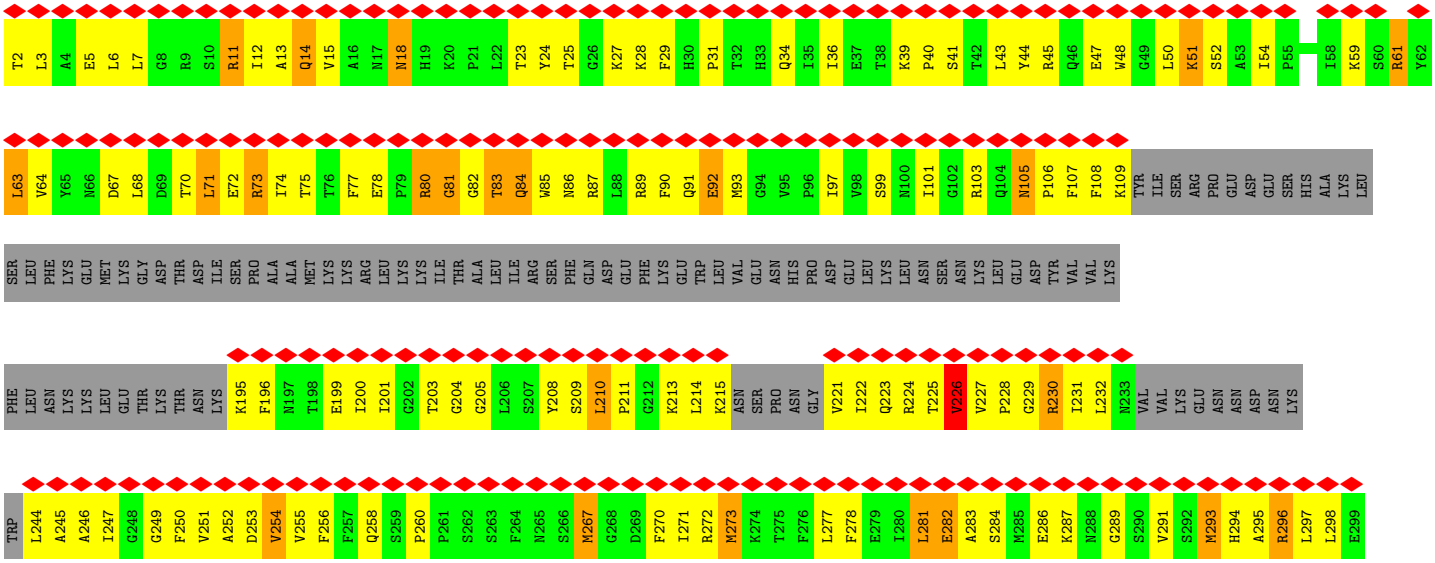
• Molecule 15: Small ribosomal subunit protein mS37

Chain Z:



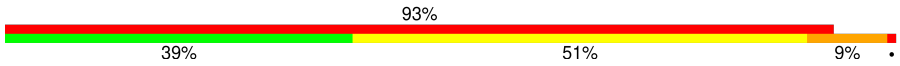
• Molecule 16: Small ribosomal subunit protein bS1m

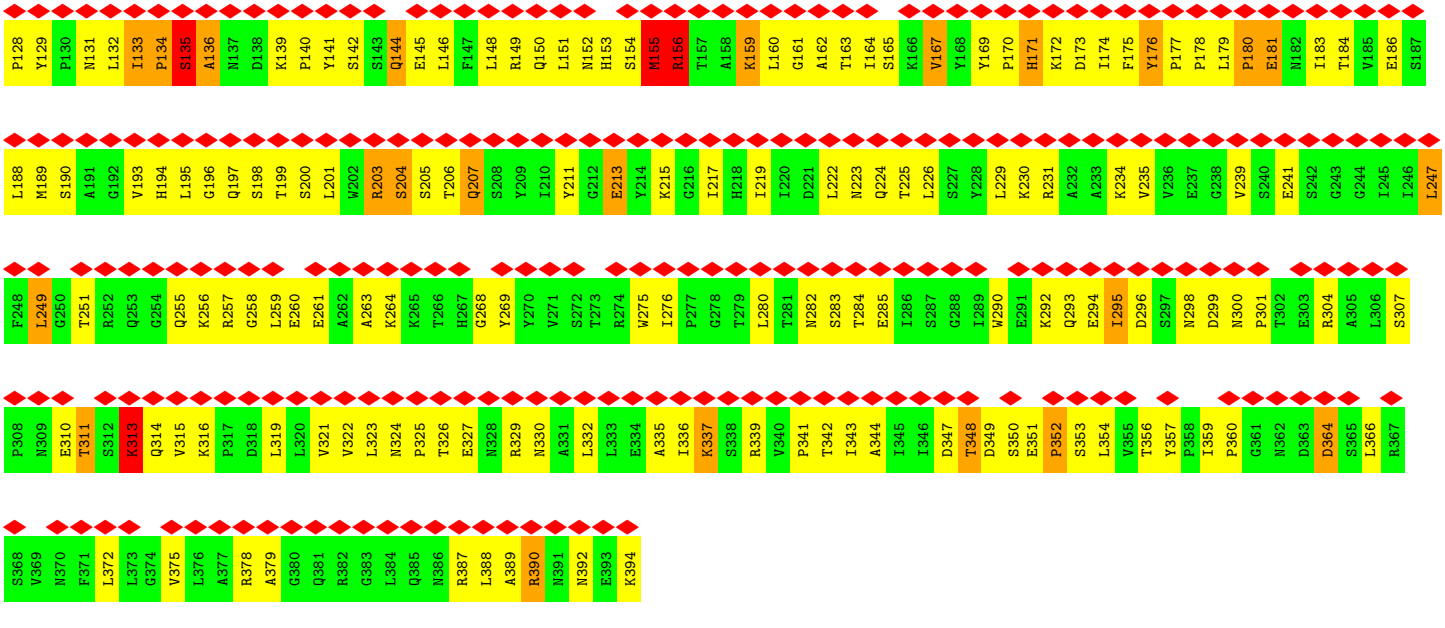
Chain g:



• Molecule 17: Small ribosomal subunit protein uS2m

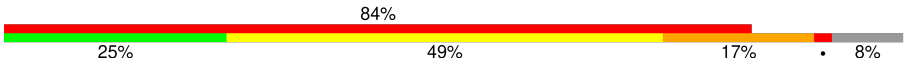
Chain h:

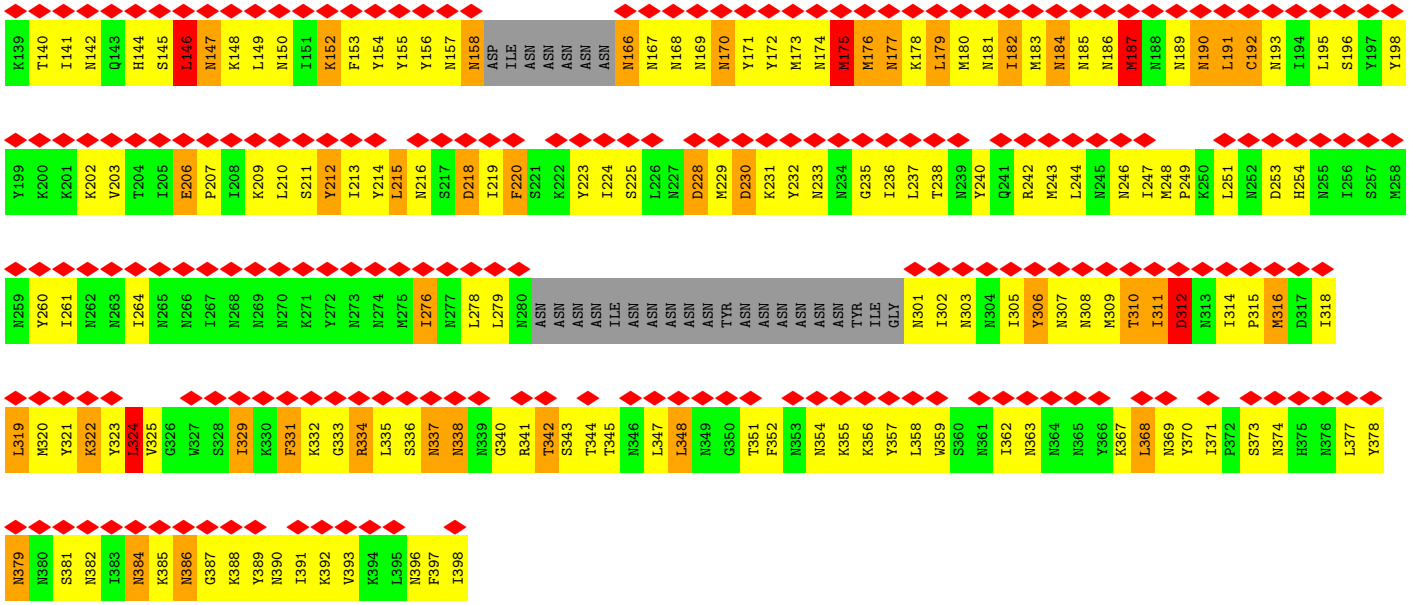




• Molecule 18: Small ribosomal subunit protein uS3m

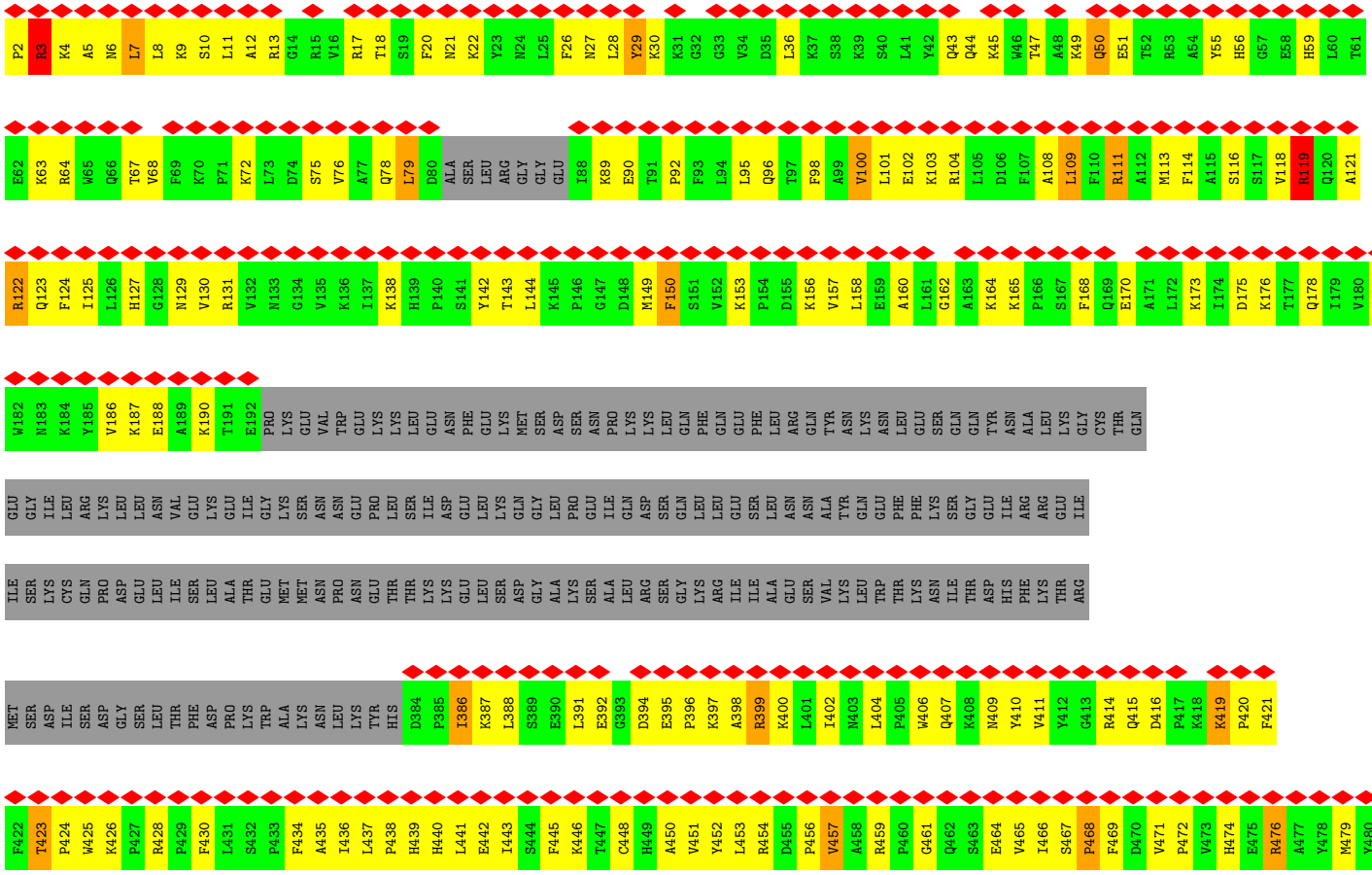
Chain i:

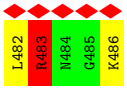




• Molecule 19: Small ribosomal subunit protein uS4m

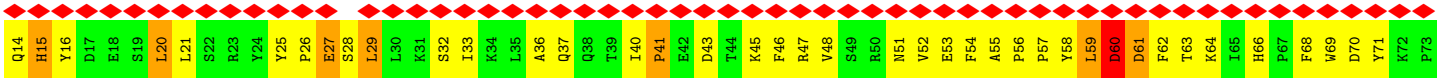
Chain j:

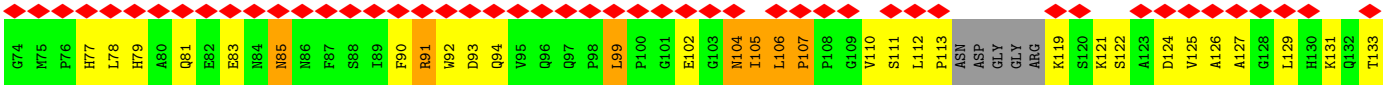


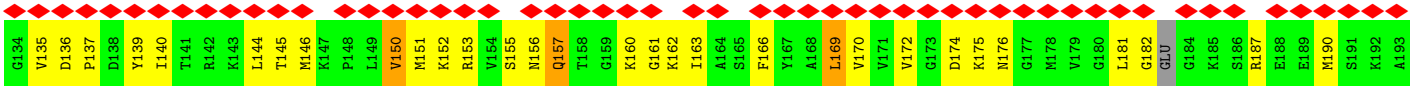


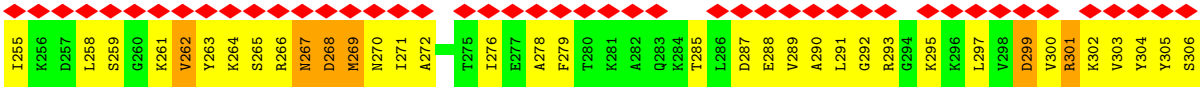
• Molecule 20: Small ribosomal subunit protein uS5m

Chain k:



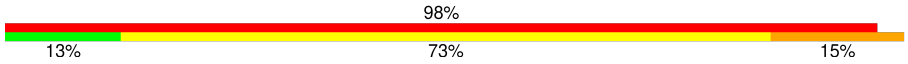


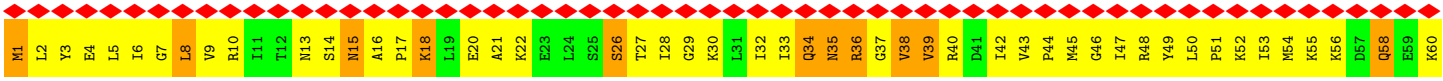


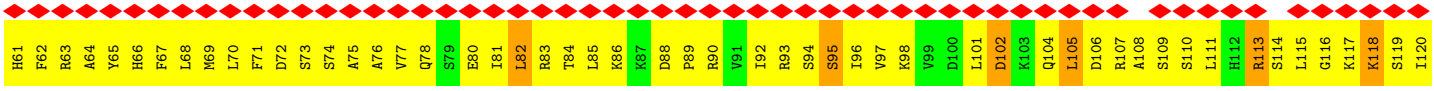


• Molecule 21: 37S ribosomal protein MRP17, mitochondrial

Chain l:

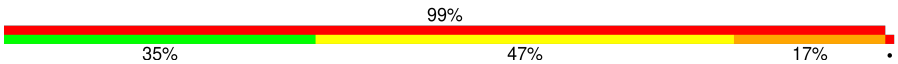


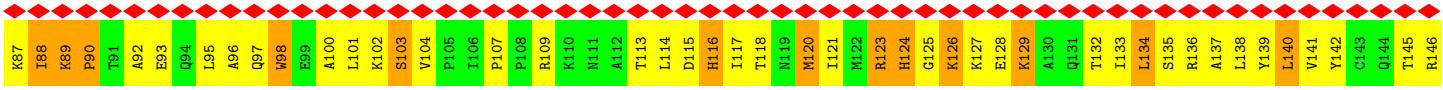


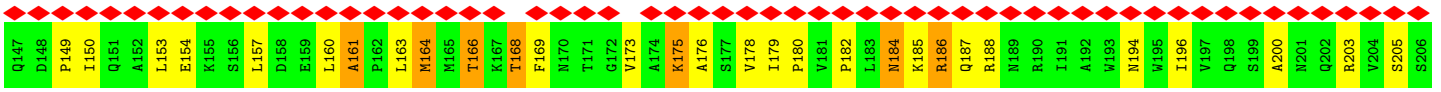


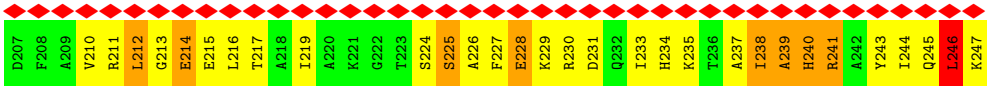
• Molecule 22: Small ribosomal subunit protein uS7m

Chain m:



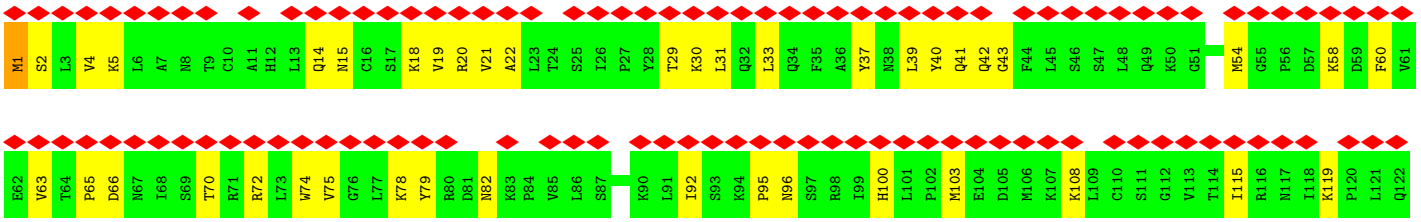






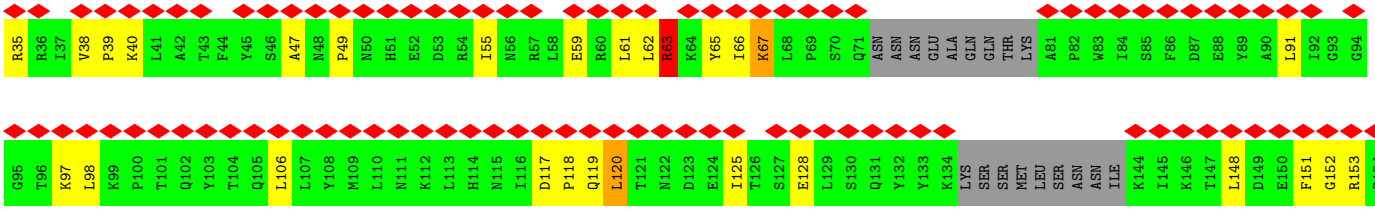
• Molecule 23: 37S ribosomal protein S8, mitochondrial

Chain n:



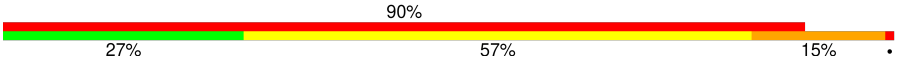
• Molecule 24: Small ribosomal subunit protein uS9m

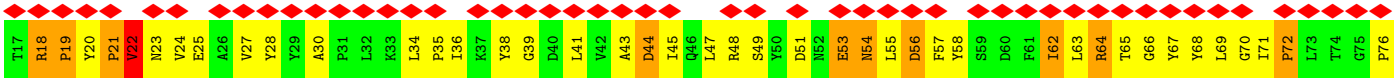
Chain o:



• Molecule 25: Small ribosomal subunit protein uS10m

Chain p:



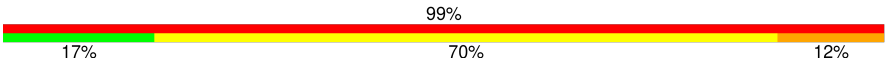


K77 P78 L79 P80 T81 R82 R83 E84 R85 W86 T87 V88 I89 K90 S91 P92 F93 V94 H95 A96 K97 S98 K99 E100 N101 F102 E103 R104 H105 T106 H107 K108 R109 L110 I111 R112 A113 W114 D115 T116 N117 P118 E119 V120 L121 Q122 M123 L124 I125 A126 Y127 I128 T129 K130 H131 S132 M133 A134 G135 V136

G137 M138 K139 C140 N141 F142 F143 Q144 R145 S146 E147 I148 S149 L150

• Molecule 26: Small ribosomal subunit protein uS11m

Chain q:



V66 Y67 K68 P69 K70 E71 E72 V73 V74 K75 Y76 I77 L78 H79 G80 K81 F82 T83 K84 N85 N86 T87 H88 L89 T90 F91 S92 S93 V94 V95 E96 D97 K98 N99 F100 H101 K102 N103 K104 G105 L106 T107 Y108 N109 D110 T111 M112 L113 Y114 Y115 L116 N117 L118 P119 Q120 K121 V122 K123 I124 S125

L126 S127 T128 G129 C130 L131 G132 F133 R134 K135 A136 A137 R138 G139 E140 Y141 E142 A143 A144 F145 Q146 T147 S148 G149 R150 M151 F152 E153 L154 I155 K156 E157 K158 N159 M160 L161 N162 K163 D164 I165 E166 V167 V168 M169 D170 D171 F172 G173 K174 G175 R176 A177 A178 F179 I180 S181 A182 L183 V184 G185

K186 E187 G188 A189 S190 V191 V192 K193 K194 V195 V196 K197 I198 S199 D200 A201 T202 K203 L204 K205 F206 G207 G208 V209 R210 S211 P212 K213 M214 R215 R216 L217

• Molecule 27: Small ribosomal subunit protein uS12m

Chain r:

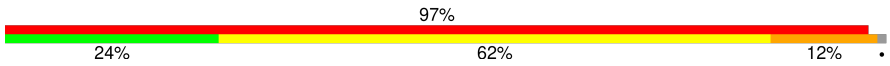
A29 T30 L31 N32 Q33 I34 K35 R36 G37 S38 G39 P40 P41 R42 R43 K44 K45 I46 S47 T48 A49 P50 Q51 L52 D53 Q54 C55 P56 Q57 R58 K59 G60 V61 V62 L63 R64 V65 M66 V67 L68 K69 P70 K71 K72 P73 N74 S75 A76 Q77 R78 K79 A80 C81 R82 V83 R84 L85 T86 N87 G88

N89 V90 V91 S92 A93 Y94 I95 P96 G97 E98 G99 H100 D101 A102 Q103 E104 H105 S106 I107 V108 Y109 V110 R111 G112 G113 R114 C115 Q116 D117 L118 P119 G120 V121 K122 Y123 H124 V125 I126 R127 G128 A129 G130 D131 L132 S133 G134 V135 V136 N137 R138 I139 S140 SER R142 S143 K144 Y145 G146 A147 K148

K149 P150 S151 K152 S153

• Molecule 28: Small ribosomal subunit protein uS13m

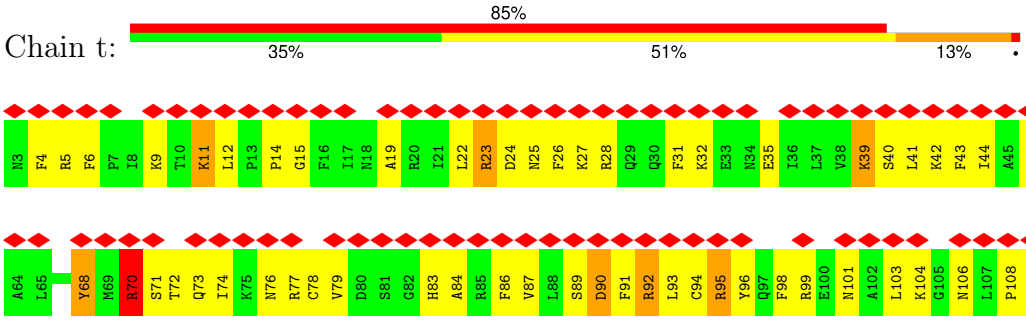
Chain s:



V2 V3 H4 I5 L6 G7 K8 G9 F10 K11 G12 K13 E14 V15 I16 K17 I18 A19 L20 A21 S22 K23 F24 TYR G26 I27 G28 K29 T30 T31 A32 E33 K34 I35 C36 S37 K38 L39 G40 F41 Y42 P43 W44 M45 R46 M47 H48 Q49 L50 S51 E52 P53 Q54 I55 M56 S57 I58 A59 S60 E61

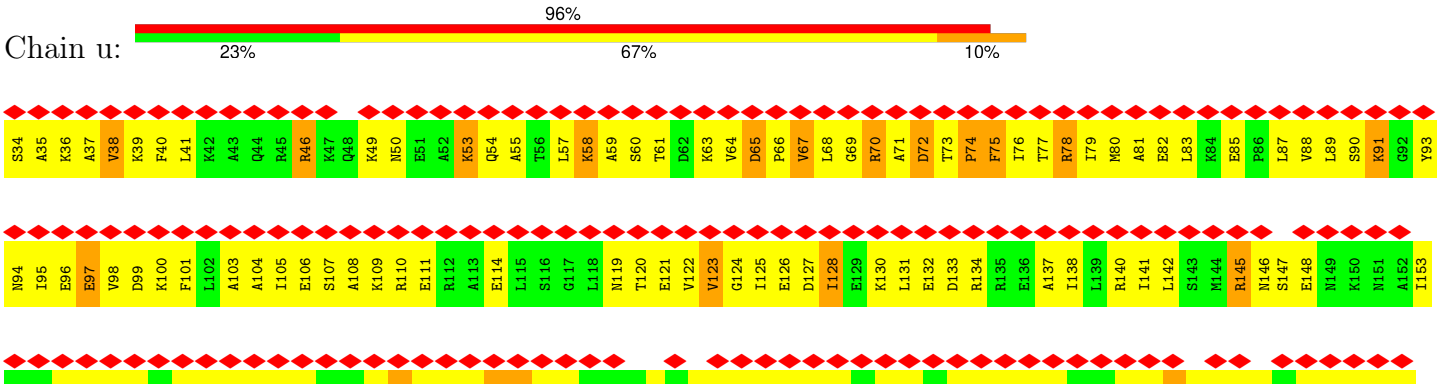
L62 S63 T64 M65 T66 I67 E68 G69 D70 A71 R72 A73 I74 V75 K76 D77 N78 I79 A80 L81 K82 R83 K84 I85 G86 S87 Y88 S89 G90 M91 R92 H93 T94 L95 H96 L97 P98 V99 R100 G101 Q102 H103 T104 R105 N106 N107 A108 K109 T110 A111 R112 K113 L114 N115 K116 I117 D118 R119 R120 G121

Chain t:



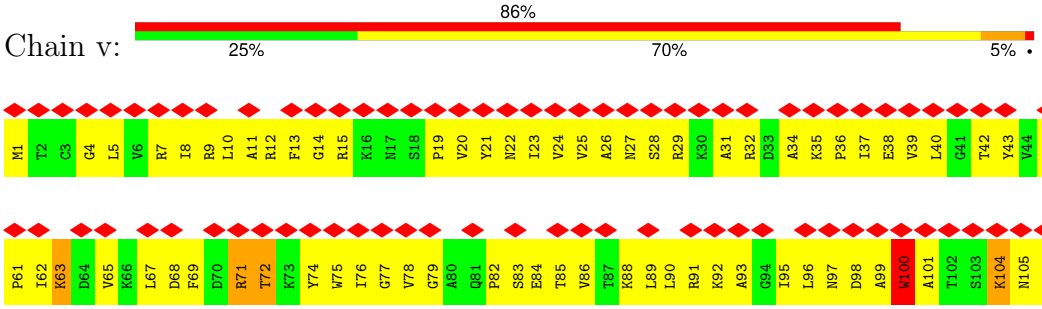
• Molecule 30: Small ribosomal subunit protein uS15m

Chain u:



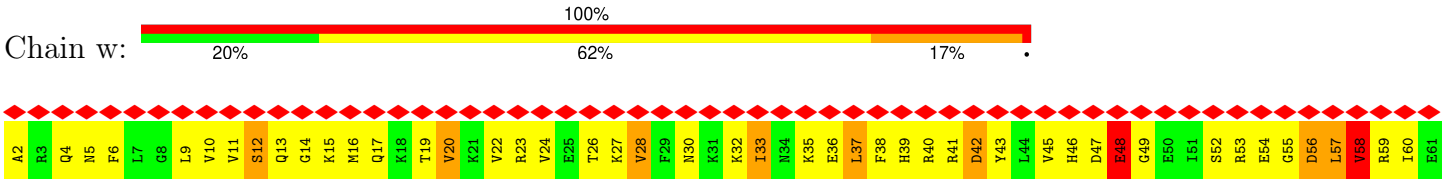
• Molecule 31: Small ribosomal subunit protein bS16m

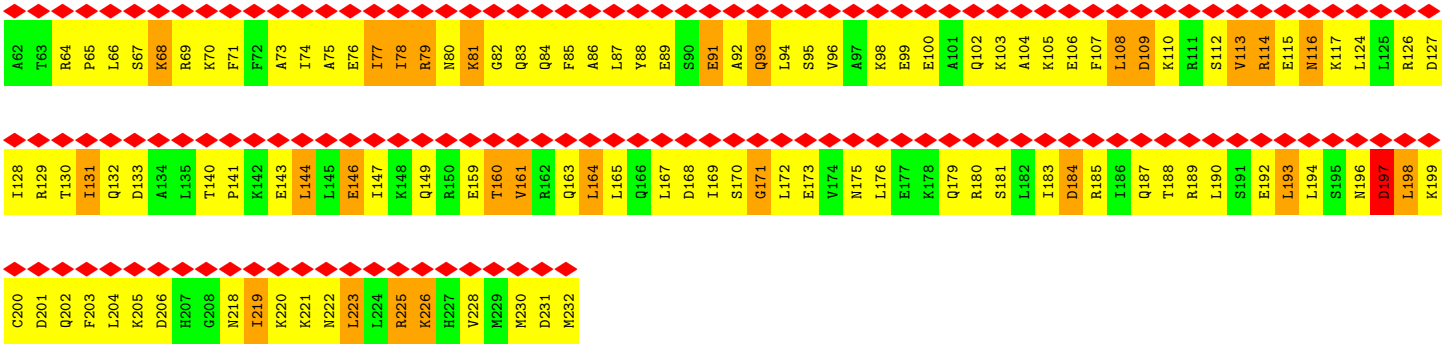
Chain v:



• Molecule 32: MRPL38 isoform 1

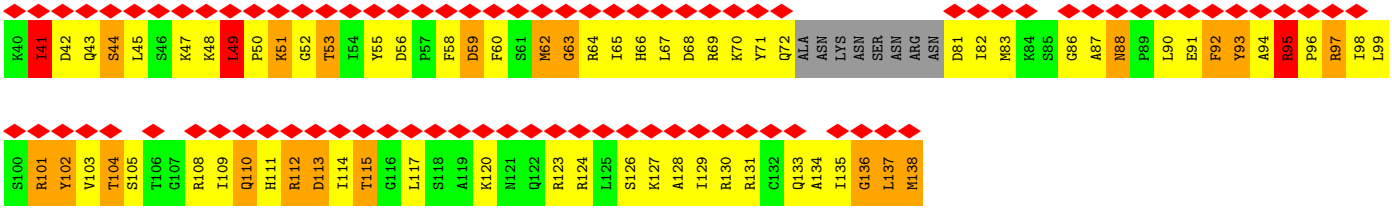
Chain w:





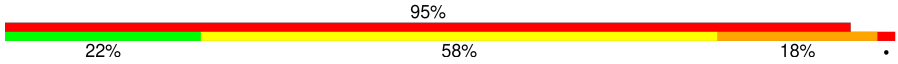
• Molecule 33: Small ribosomal subunit protein bS18m

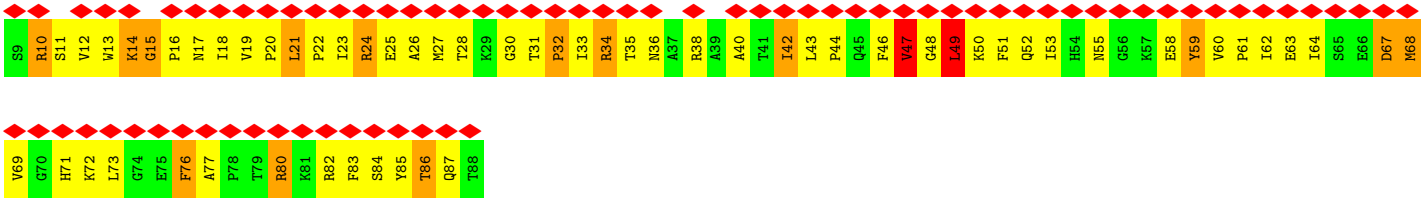
Chain x:



• Molecule 34: Small ribosomal subunit protein uS19m

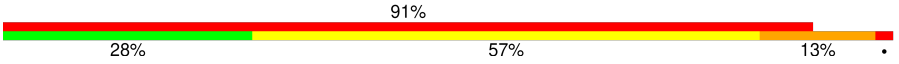
Chain y:

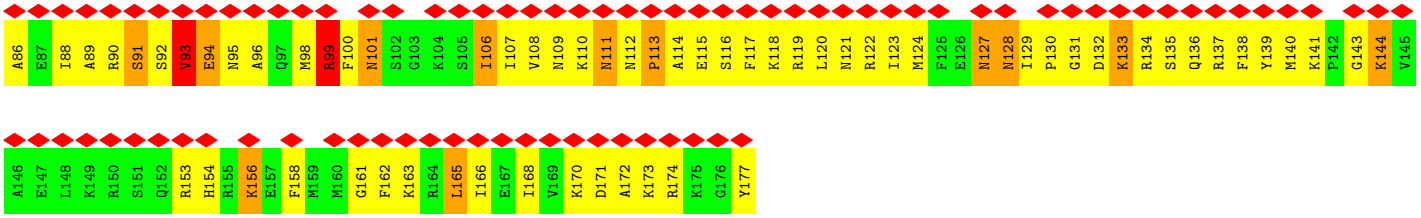




• Molecule 35: Small ribosomal subunit protein bS21m

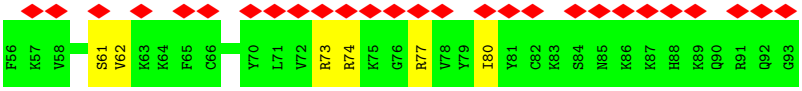
Chain z:





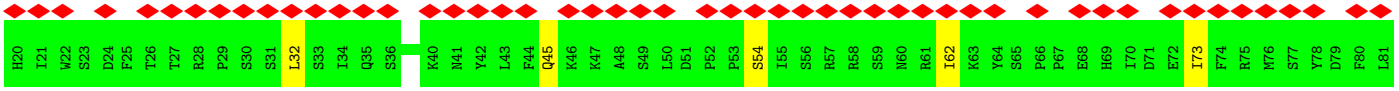
• Molecule 36: Large ribosomal subunit protein bL36m

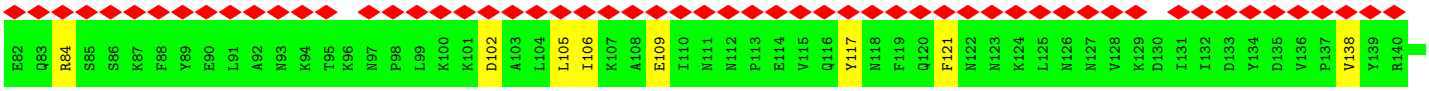
Chain 0:

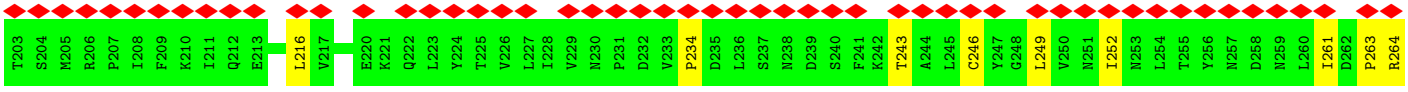


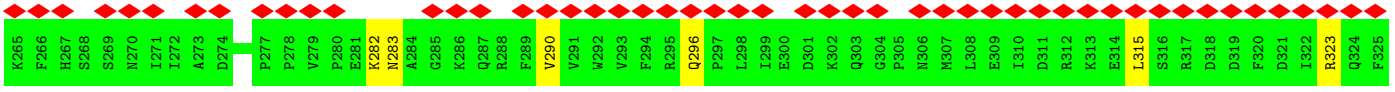
• Molecule 37: Large ribosomal subunit protein mL38

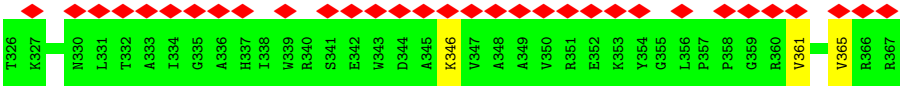
Chain 1:





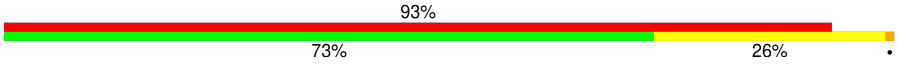


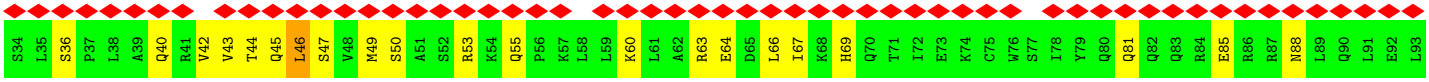


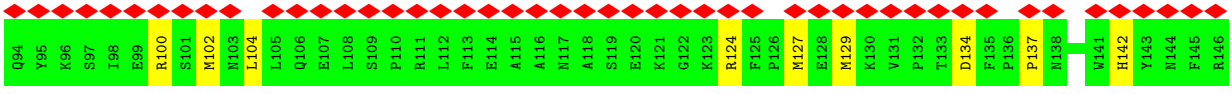


• Molecule 38: Large ribosomal subunit protein mL40

Chain 2:

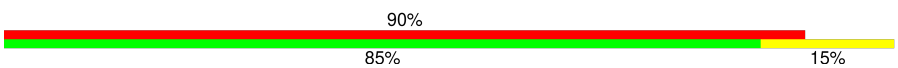


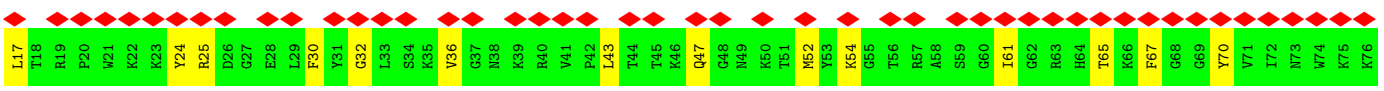


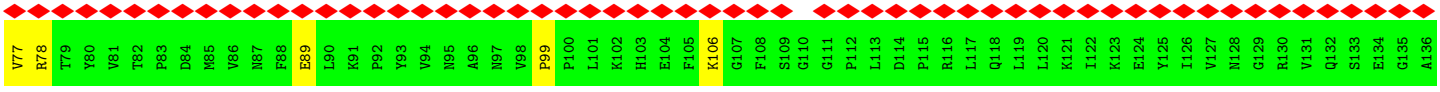


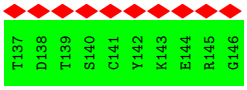
• Molecule 39: Large ribosomal subunit protein mL41

Chain 3:









• Molecule 40: Large ribosomal subunit protein mL43

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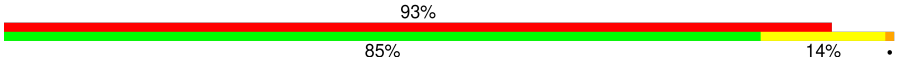
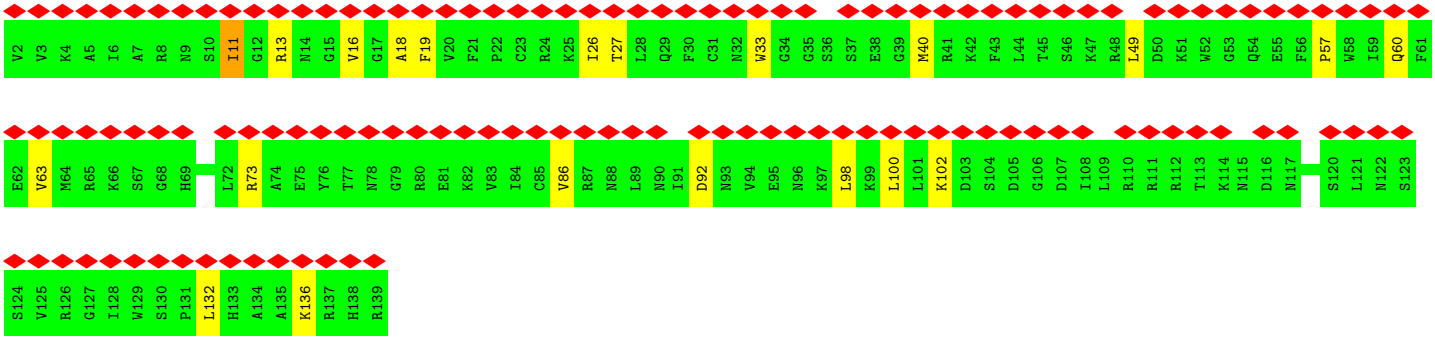
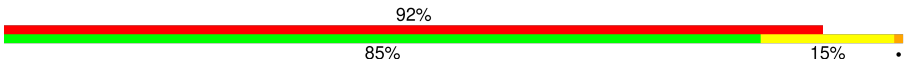
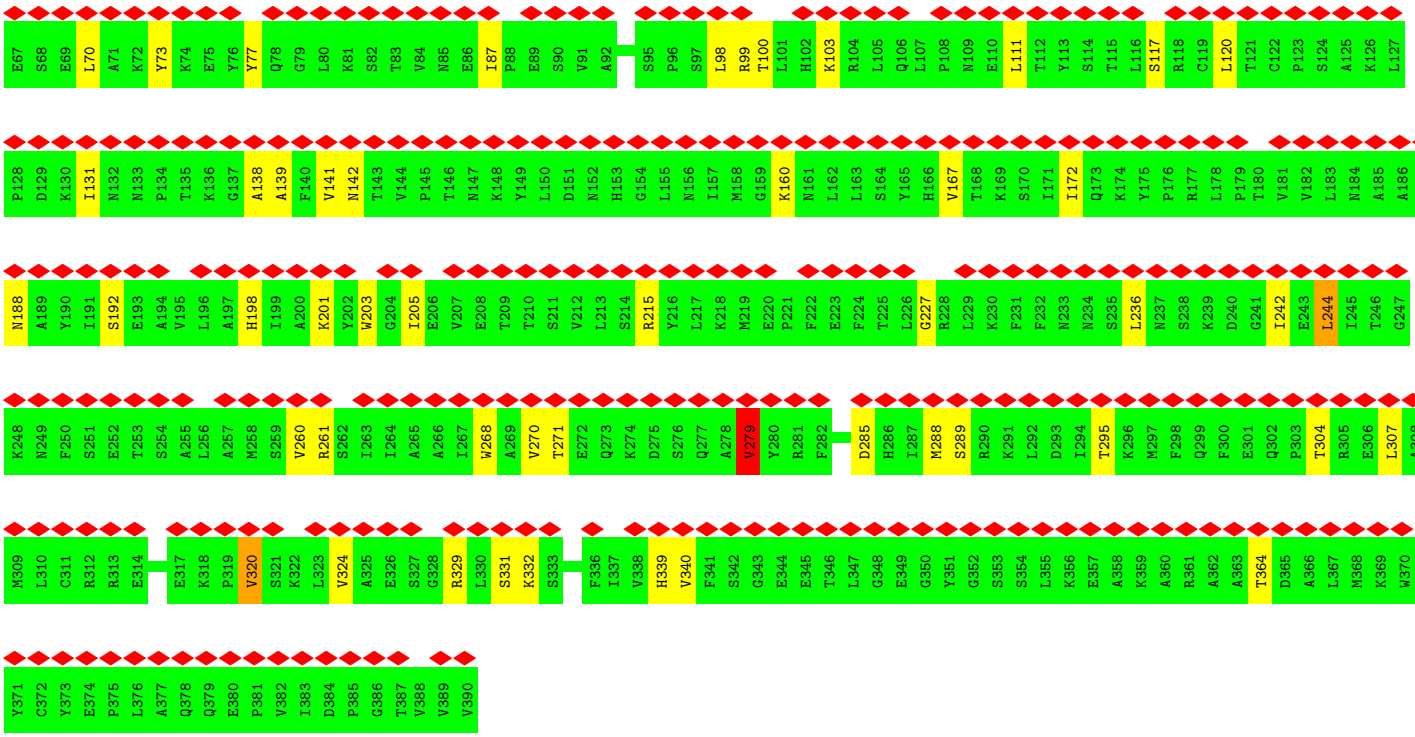




• Molecule 41: Large ribosomal subunit protein mL44

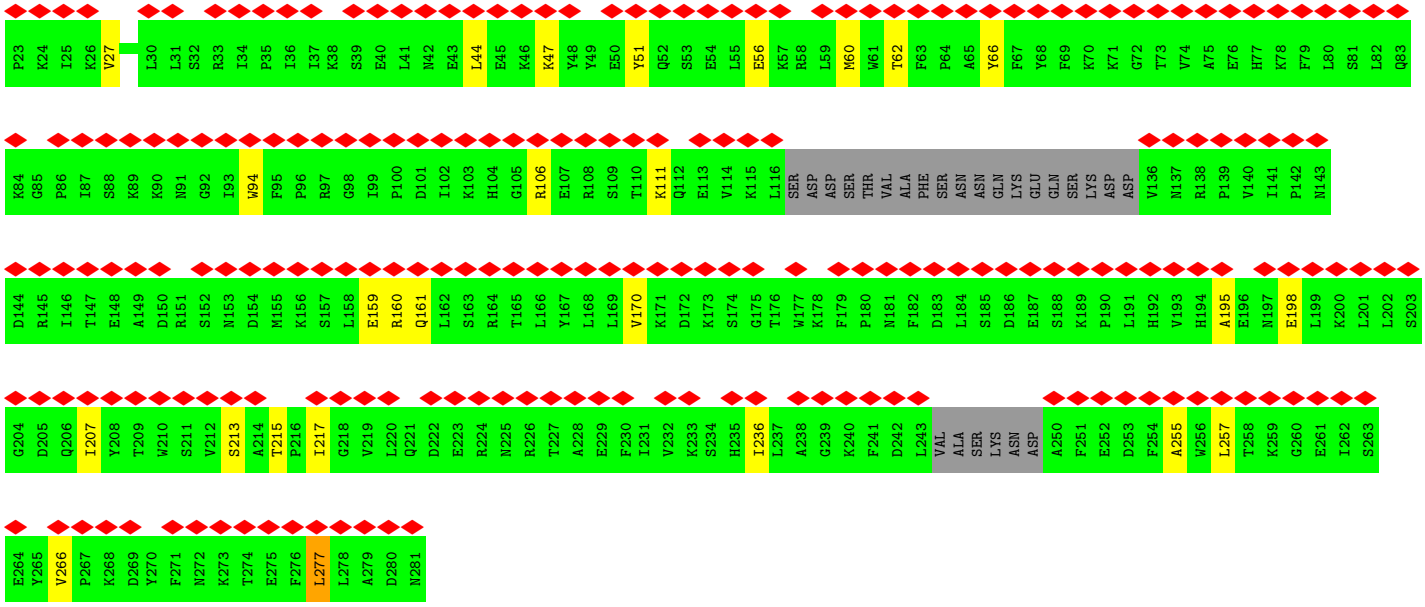
Chain 5:





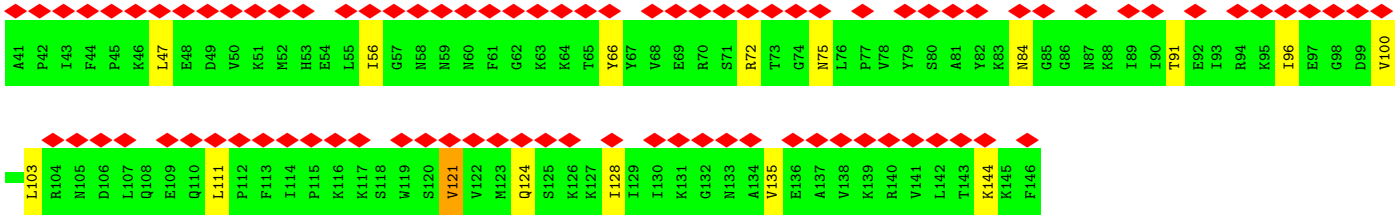
• Molecule 42: Large ribosomal subunit protein mL46

Chain 6:



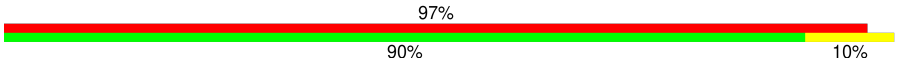
• Molecule 43: Large ribosomal subunit protein mL49

Chain 7:



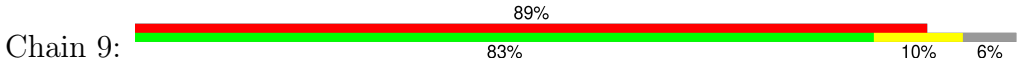
• Molecule 44: Large ribosomal subunit protein uL30m

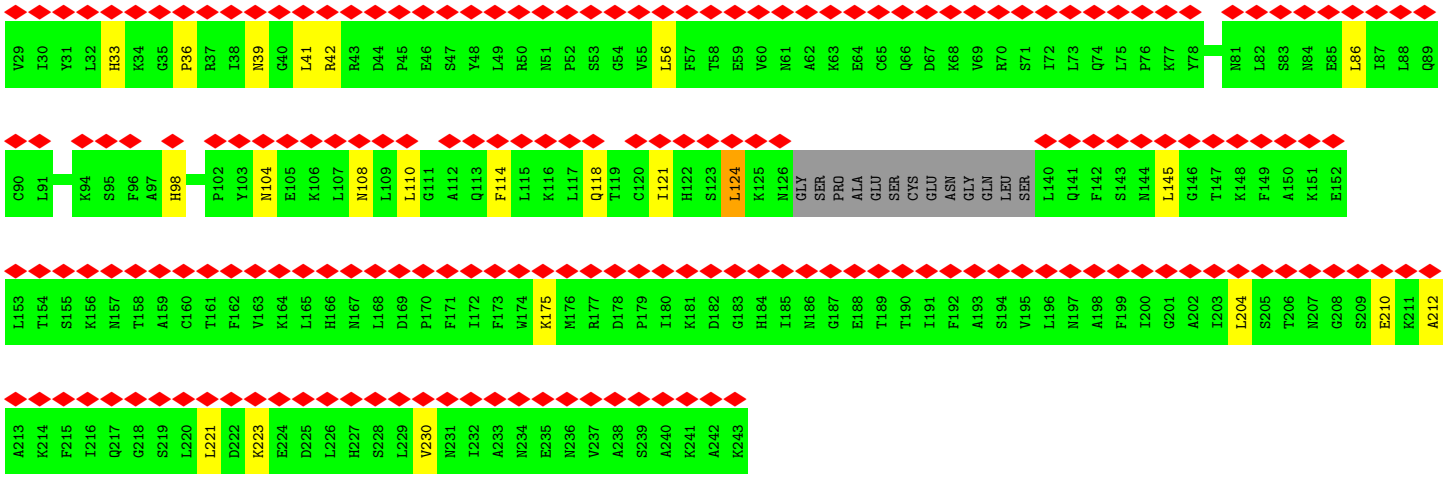
Chain 8:



• Molecule 45: Large ribosomal subunit protein mL57

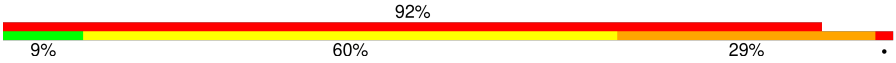
Chain 9:

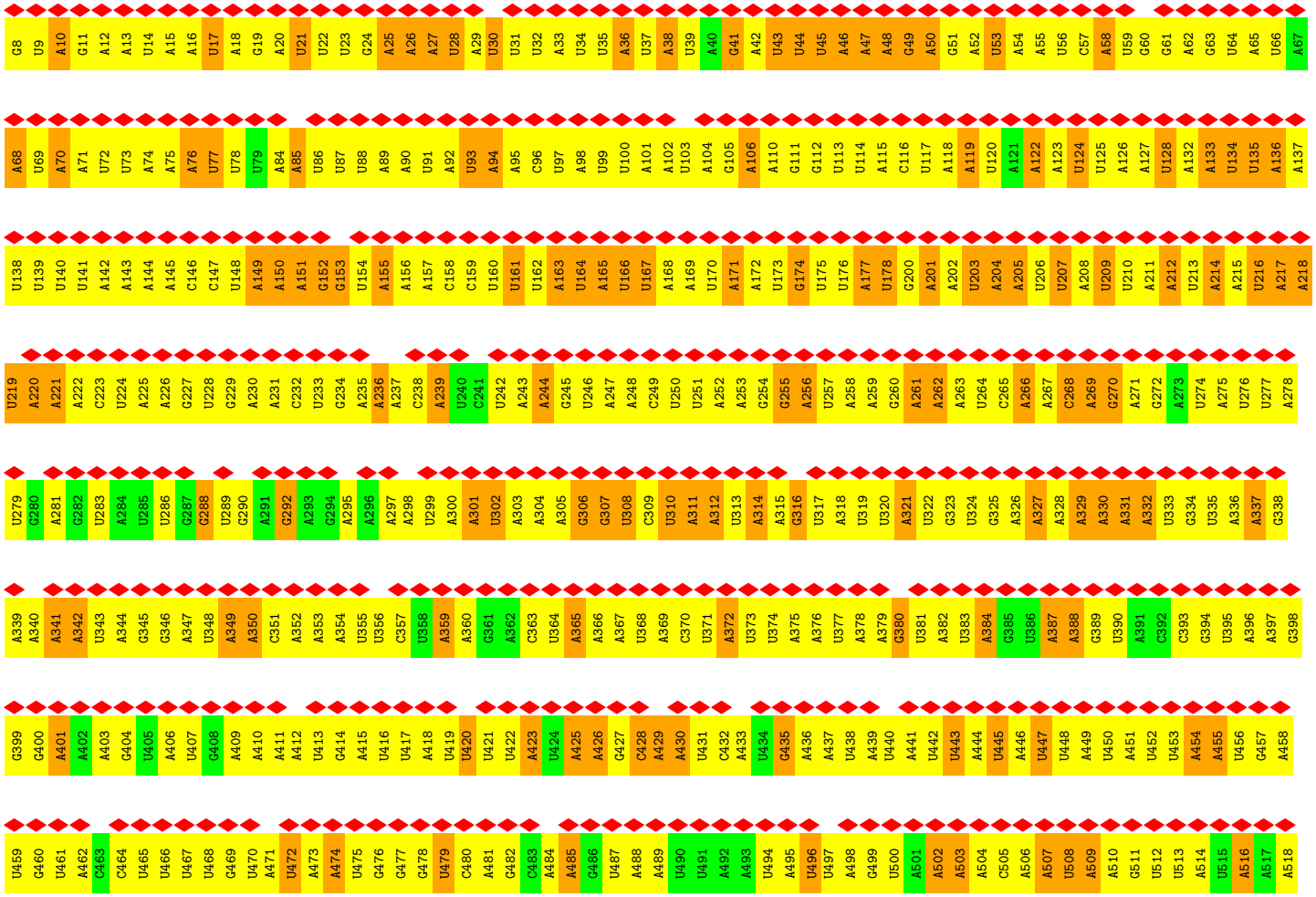


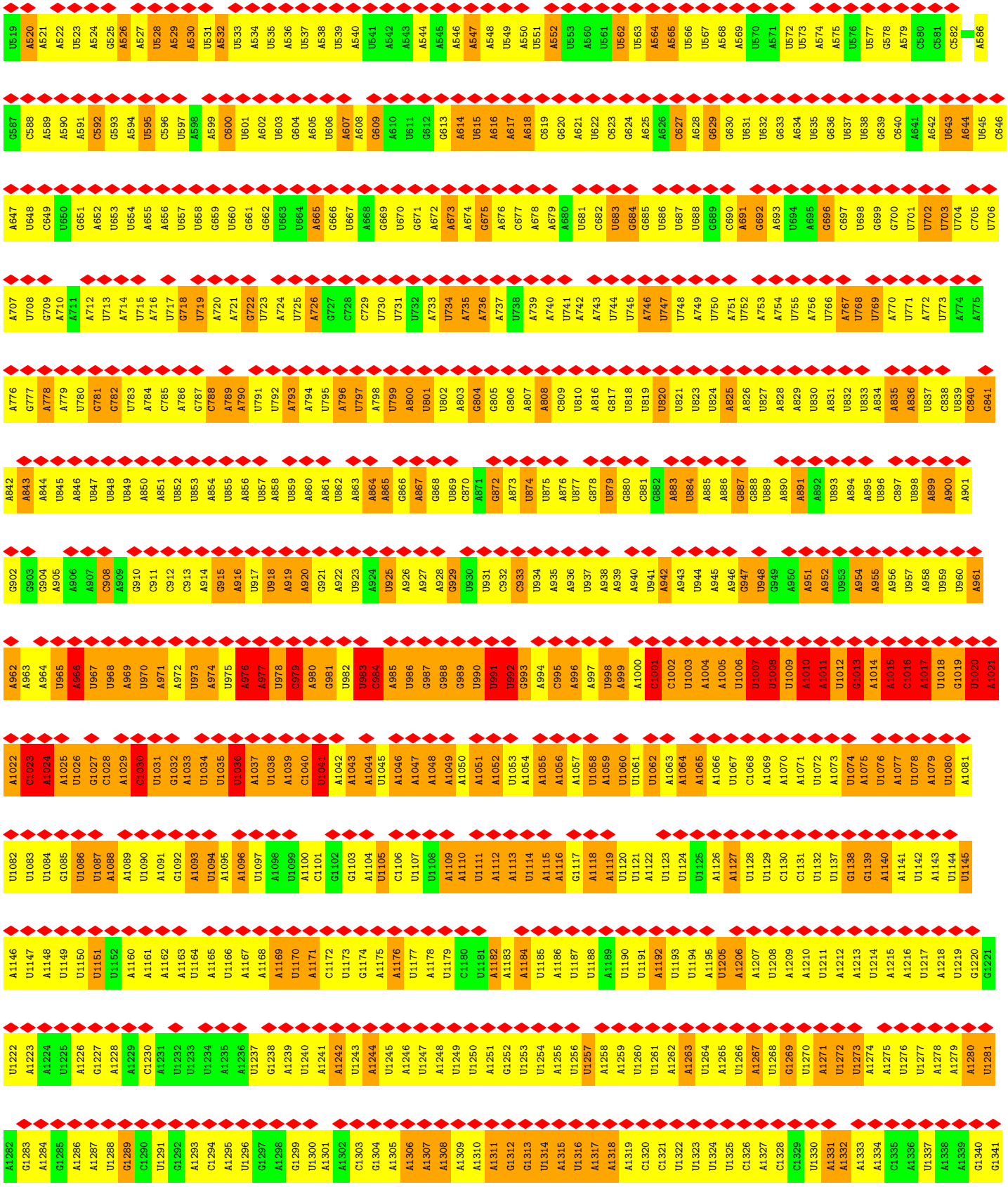


• Molecule 46: Large ribosomal subunit rRNA

Chain A:



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A647 U648 C649 U650 G651 A652 U653 U654 A655 A656 U657 U658 G659 U660 G661 G662 U663 U664 A665 G666 U667 A668 G669 U670 G671 A672 A673 A674 G675 A676 C677 A678 A679 A680 U681 C682 U683 G684 A685 U686 U687 U688 G689 C690 A691 G692 A693 U694 A695 G696 C697 U698 G699 G700 U701 U702 U703 U704 C705 U706
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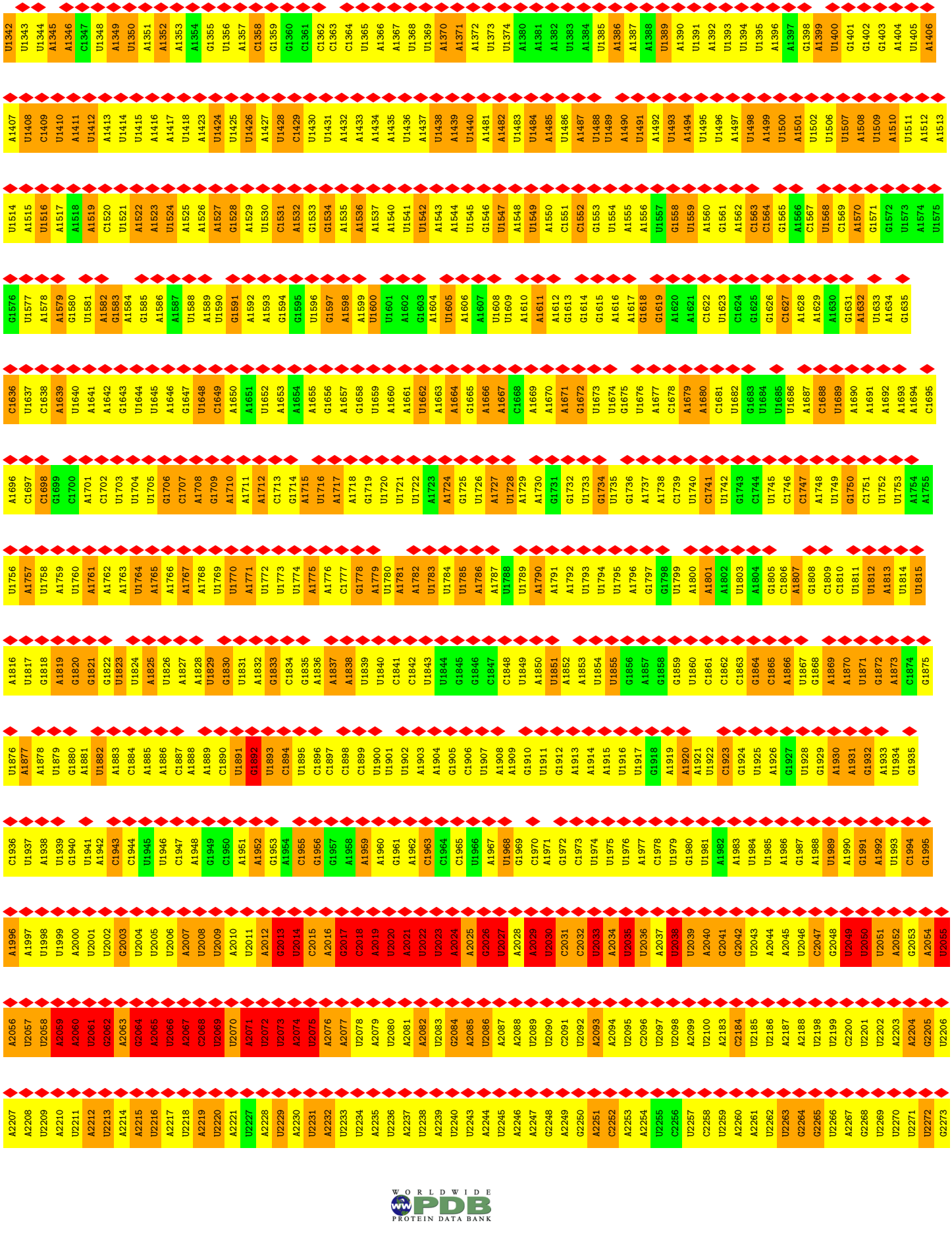
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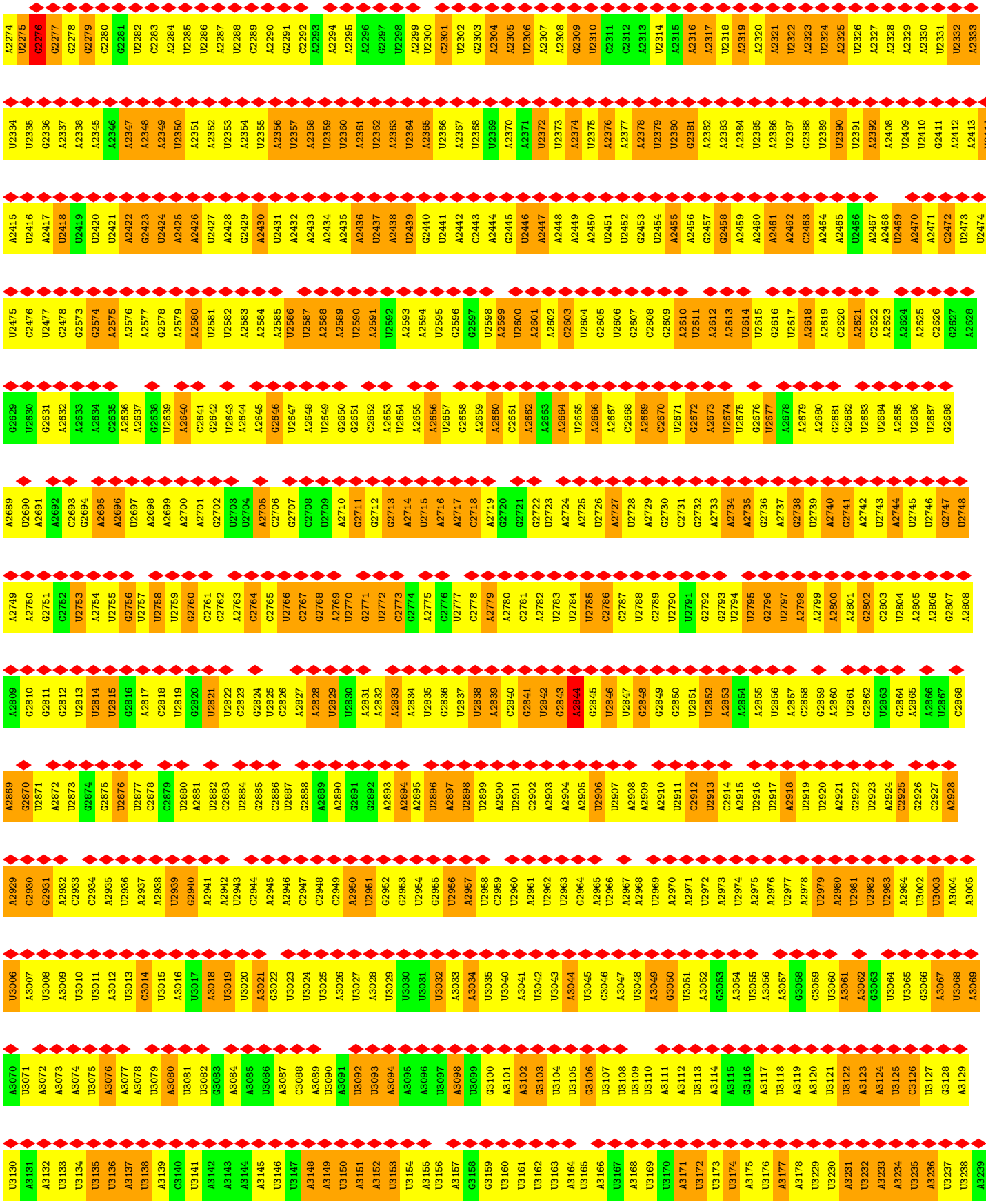
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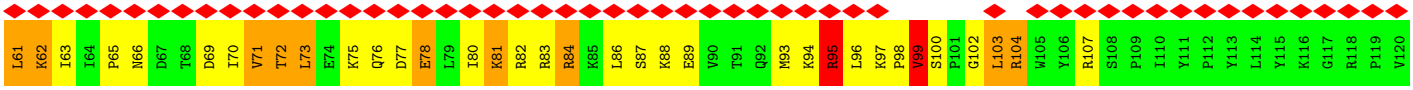
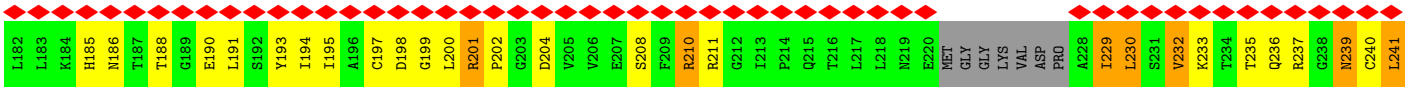
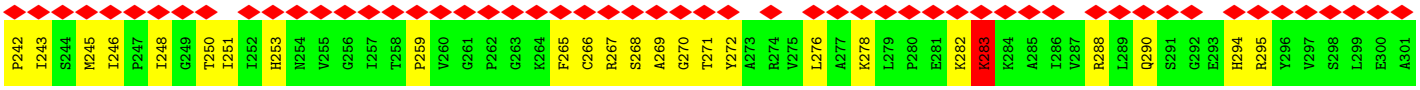
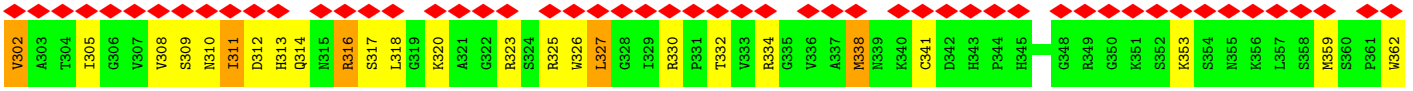
• Molecule 47: Large ribosomal subunit protein uL2m

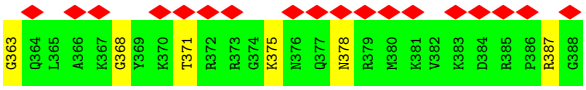
Chain B:





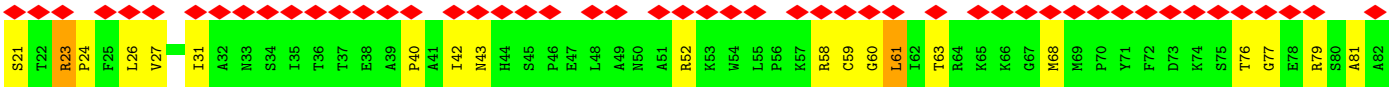


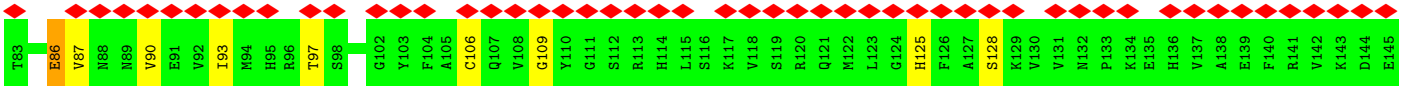


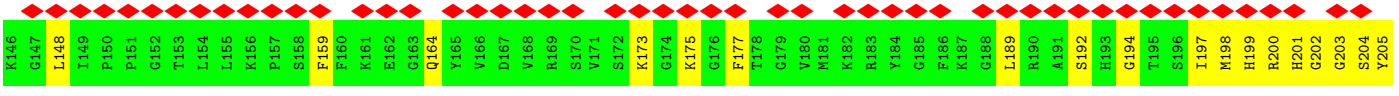


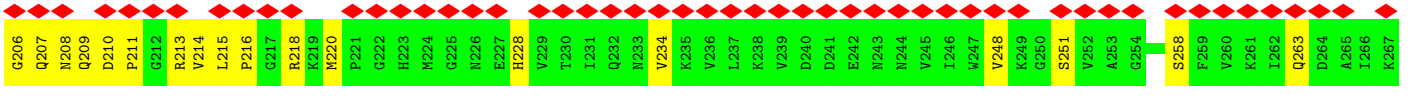
• Molecule 48: Large ribosomal subunit protein uL3m

Chain C:



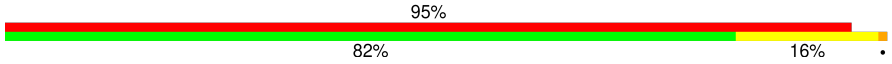


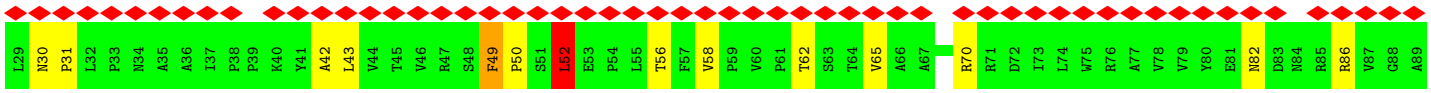


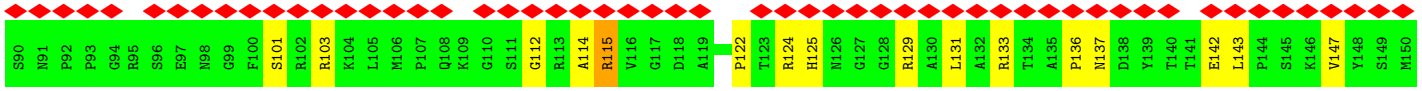


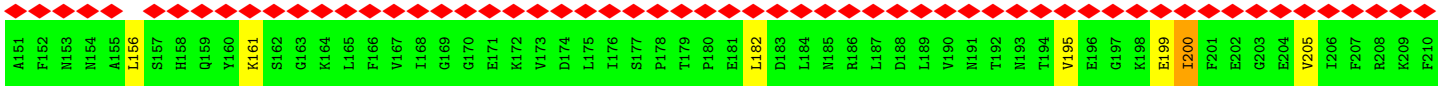
• Molecule 49: Large ribosomal subunit protein uL4m

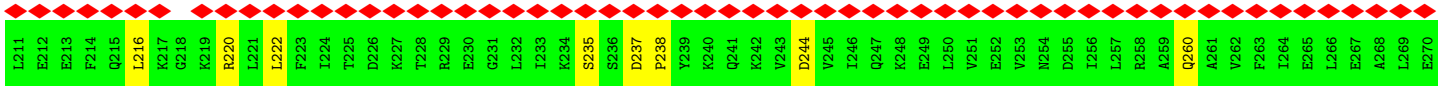
Chain D:

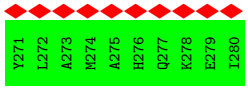






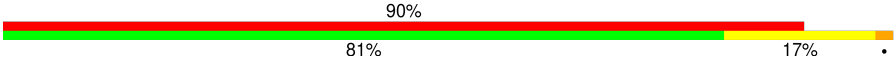


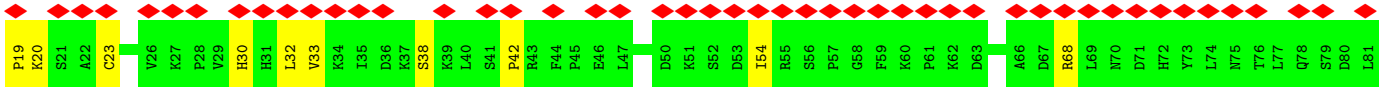


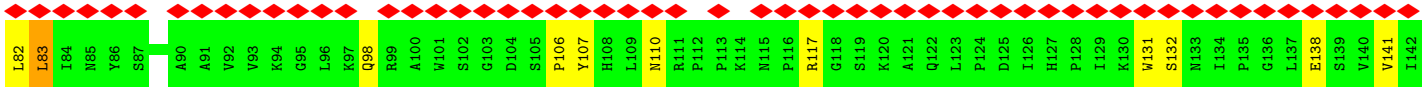


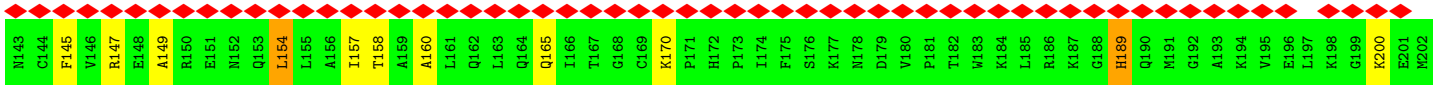
• Molecule 50: Large ribosomal subunit protein uL5m

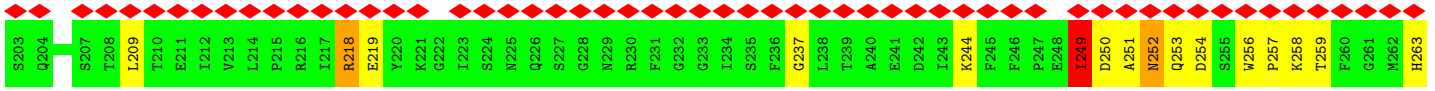
Chain E:

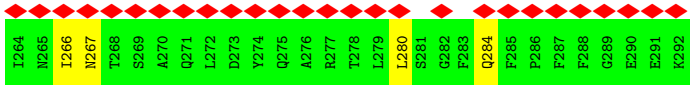






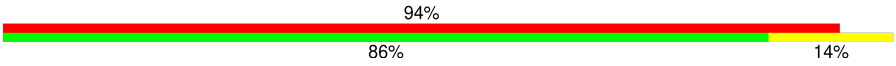






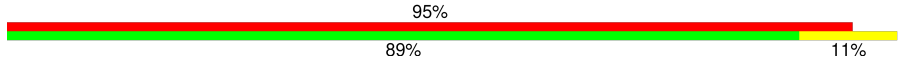
• Molecule 51: Large ribosomal subunit protein uL6m

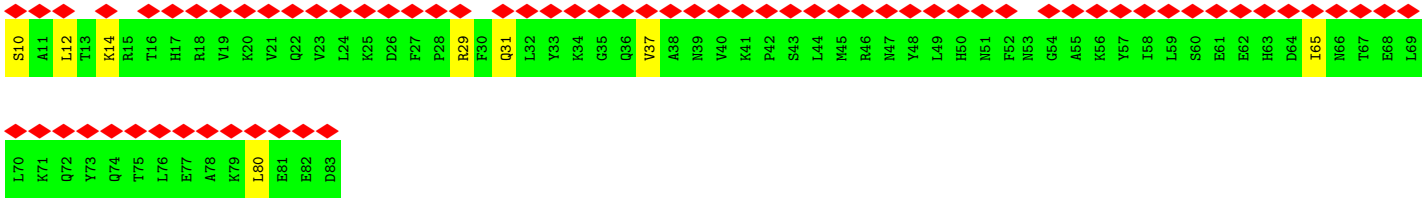
Chain F:



• Molecule 52: Large ribosomal subunit protein bL9m

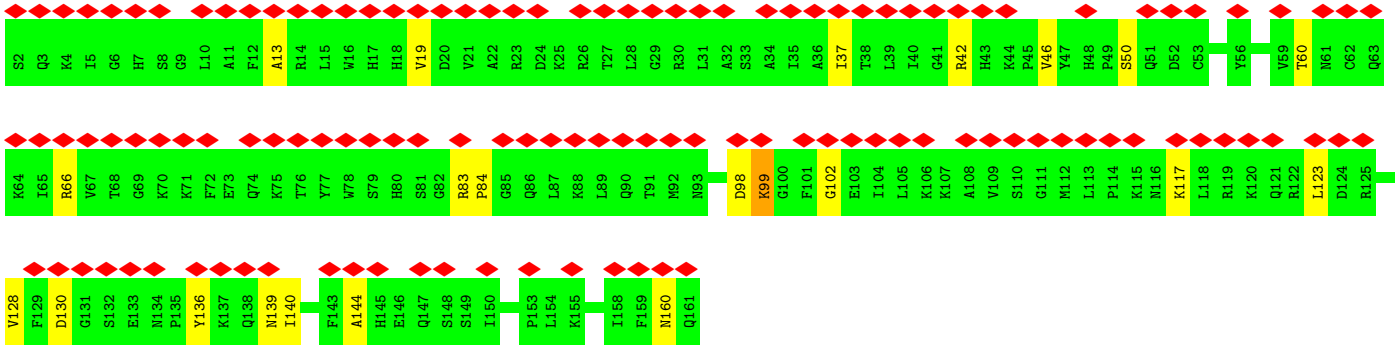
Chain G:





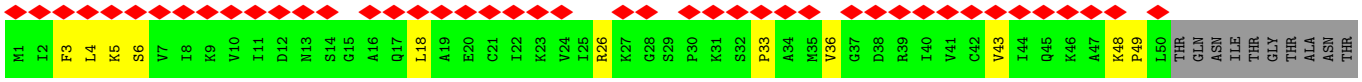
• Molecule 53: Large ribosomal subunit protein uL13m

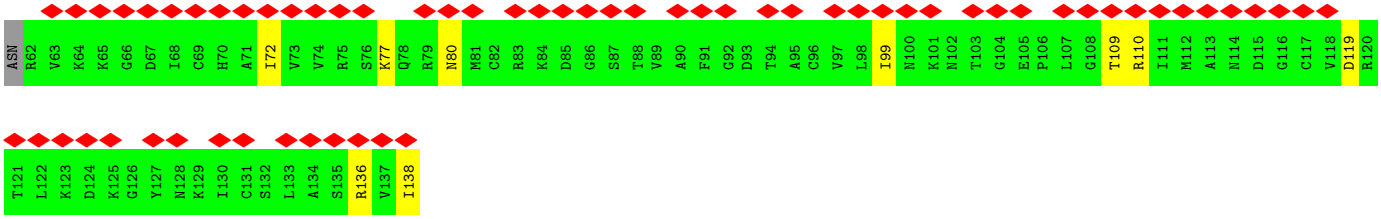
Chain H:



• Molecule 54: Large ribosomal subunit protein uL14m

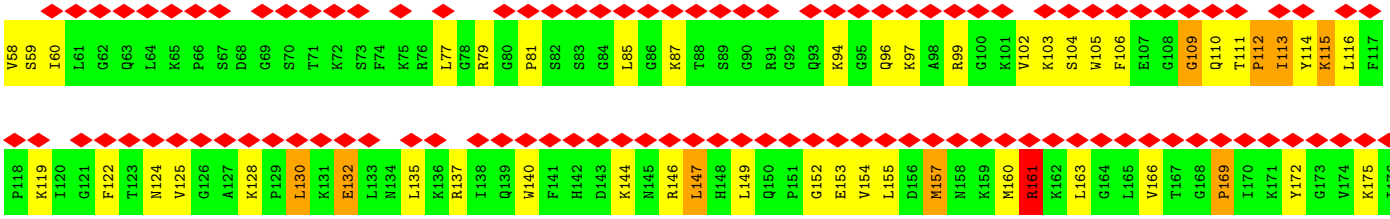
Chain I:





• Molecule 55: Large ribosomal subunit protein uL15m

Chain J:

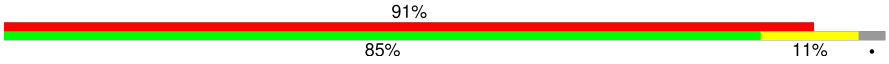


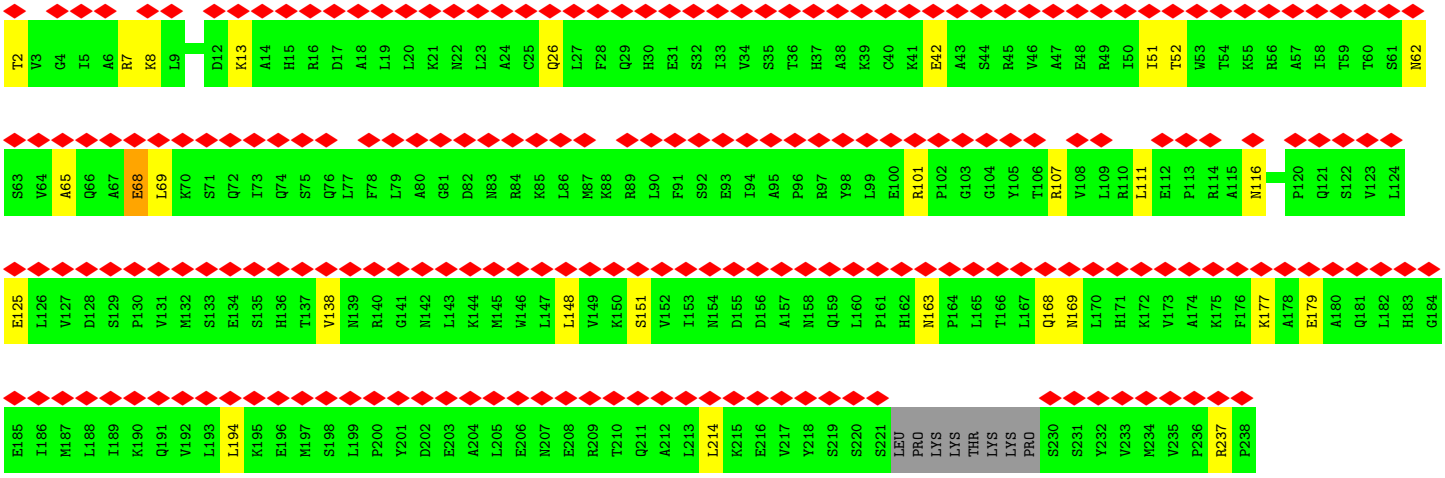
• Molecule 56: Large ribosomal subunit protein uL16m

Chain K:

• Molecule 57: Large ribosomal subunit protein bL17m

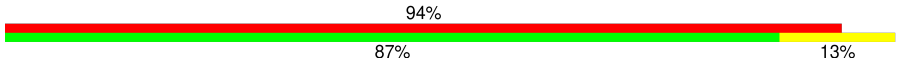
Chain L:

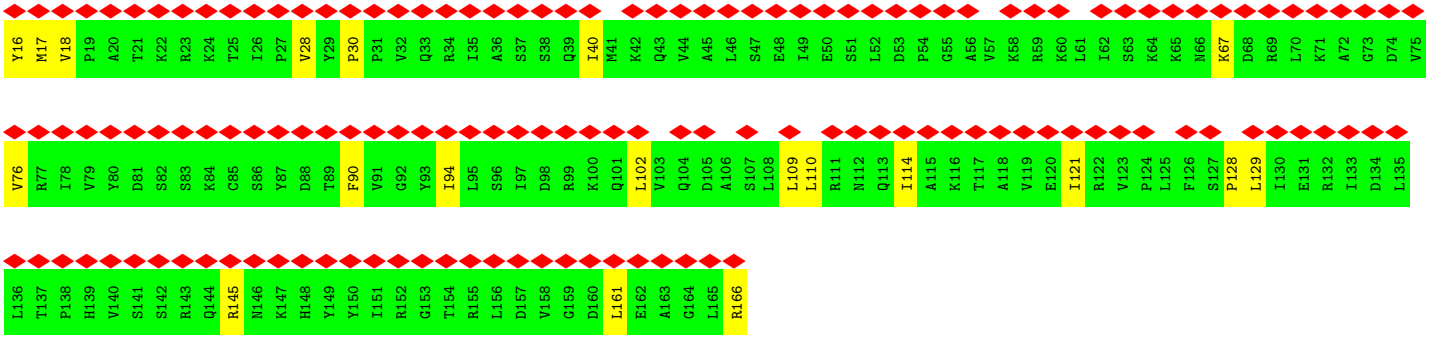




• Molecule 58: Large ribosomal subunit protein bL19m

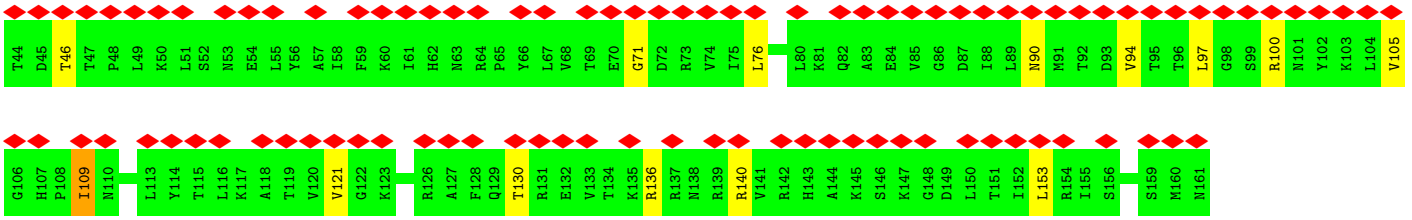
Chain M:





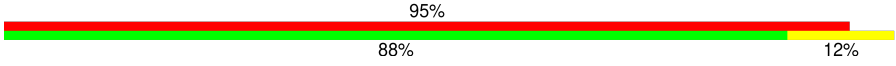
• Molecule 59: Large ribosomal subunit protein bL21m

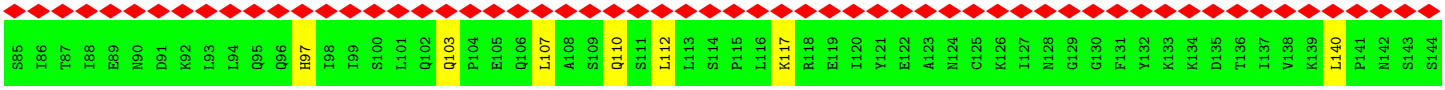
Chain N:

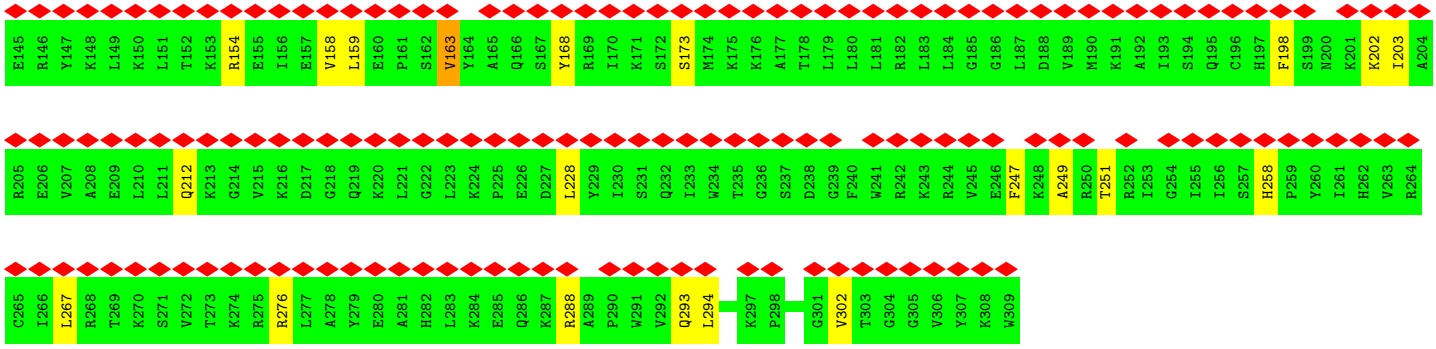


• Molecule 60: Large ribosomal subunit protein uL22m

Chain O:

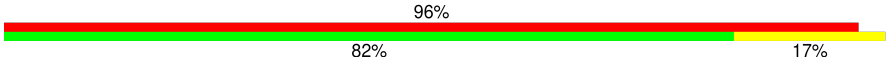


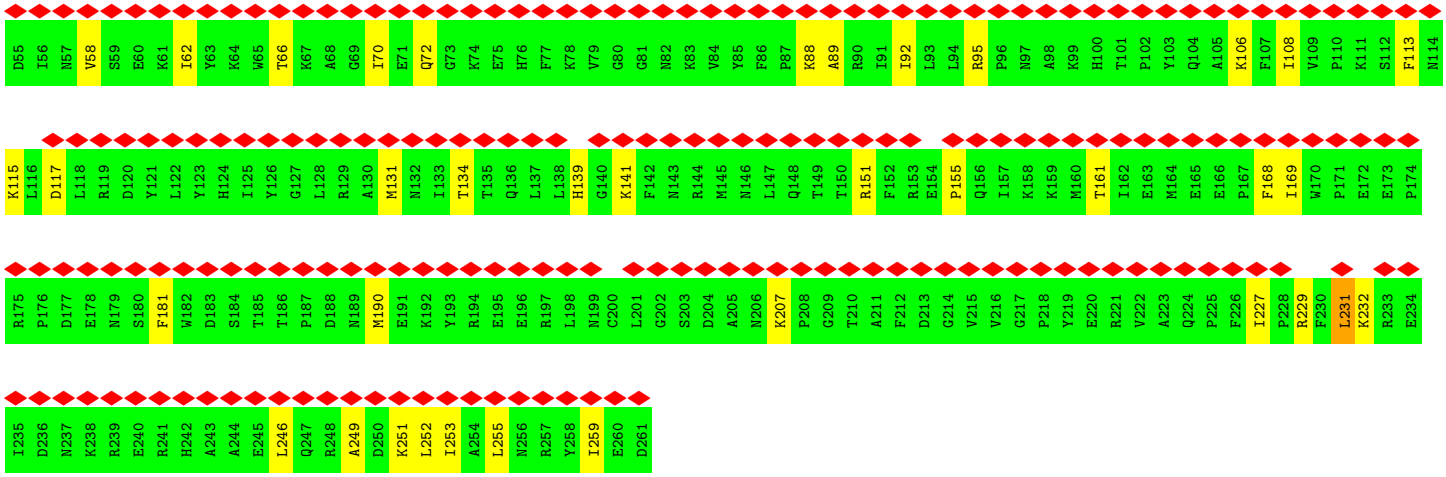




• Molecule 61: Large ribosomal subunit protein uL23m

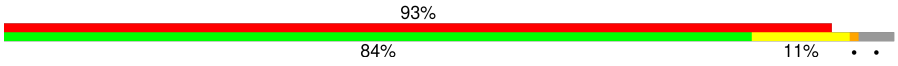
Chain P:

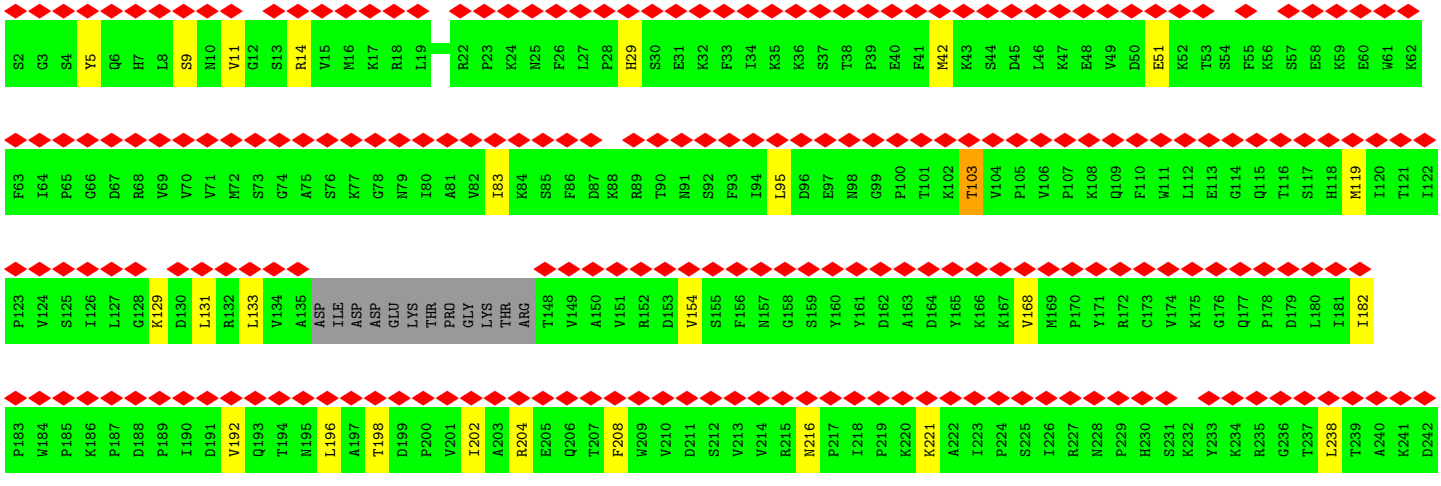


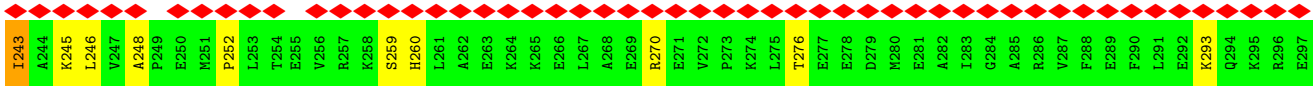


• Molecule 62: Large ribosomal subunit protein uL24m

Chain Q:

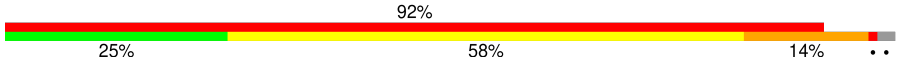


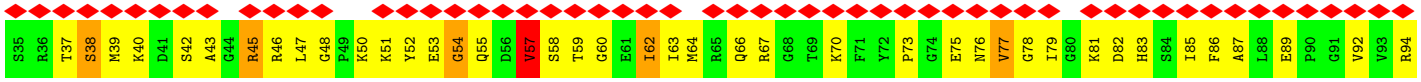


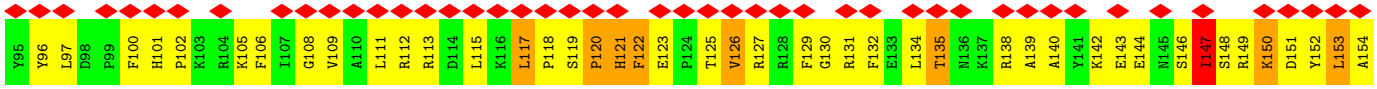


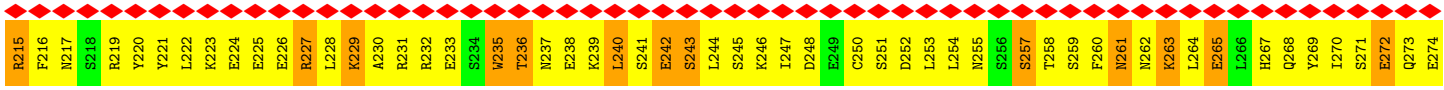
• Molecule 63: Large ribosomal subunit protein bL27m

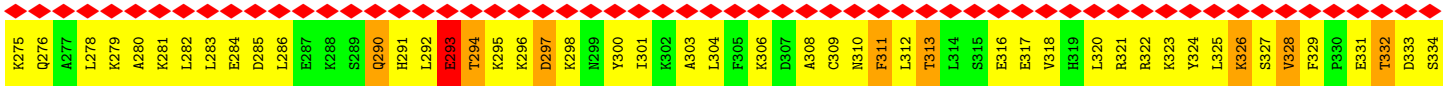
Chain R:

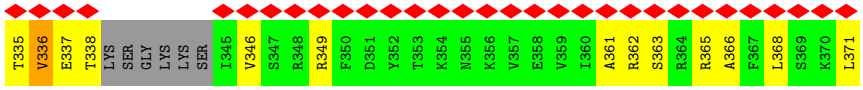






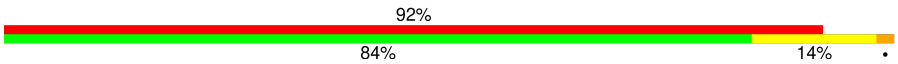


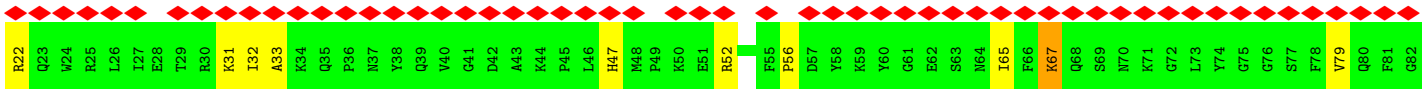


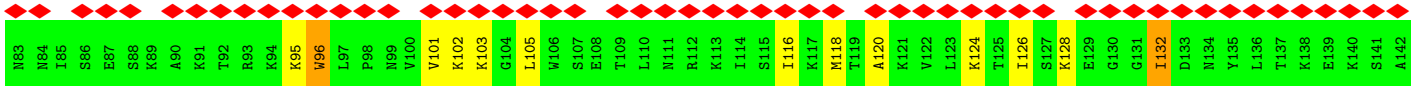


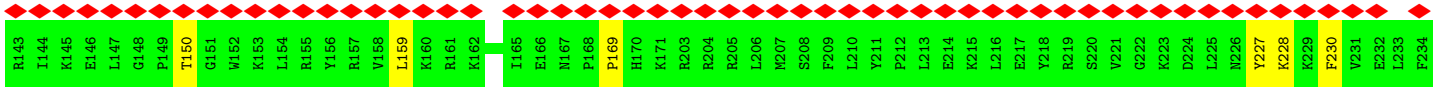
• Molecule 64: MRPS9 isoform 1

Chain S:



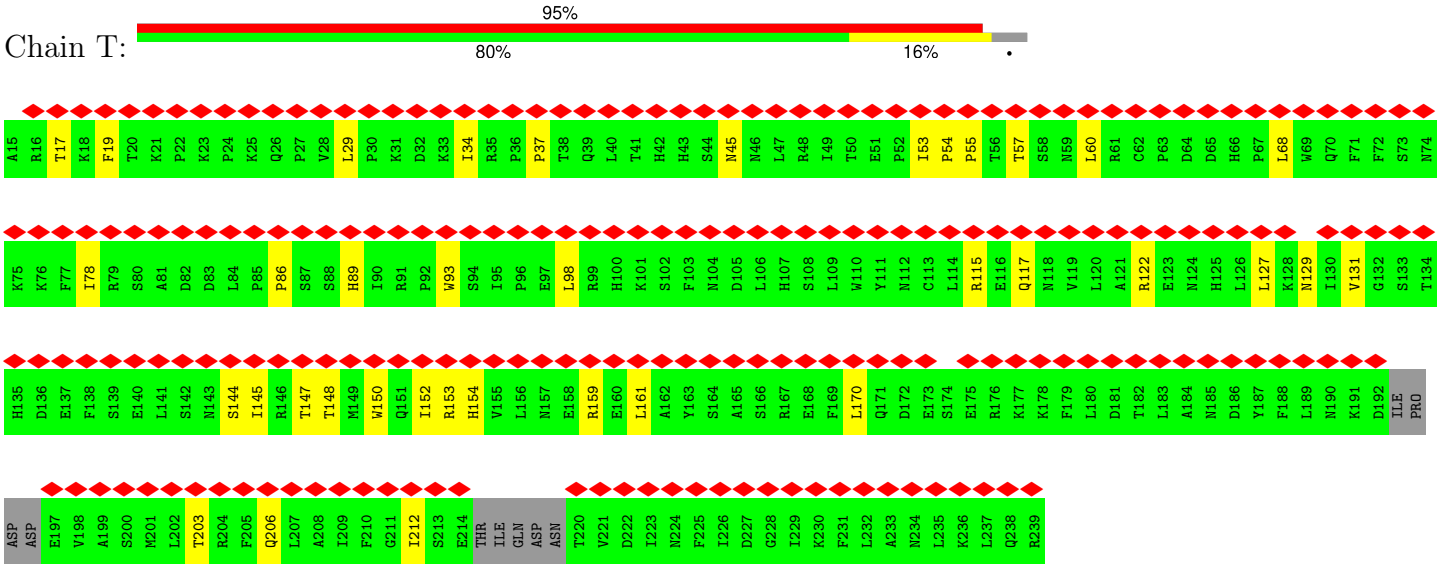






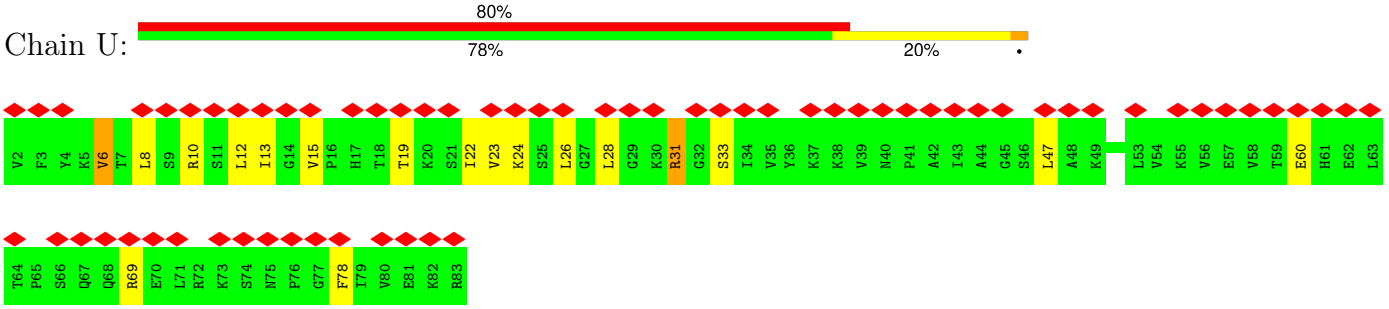
• Molecule 65: Large ribosomal subunit protein uL29m

Chain T:



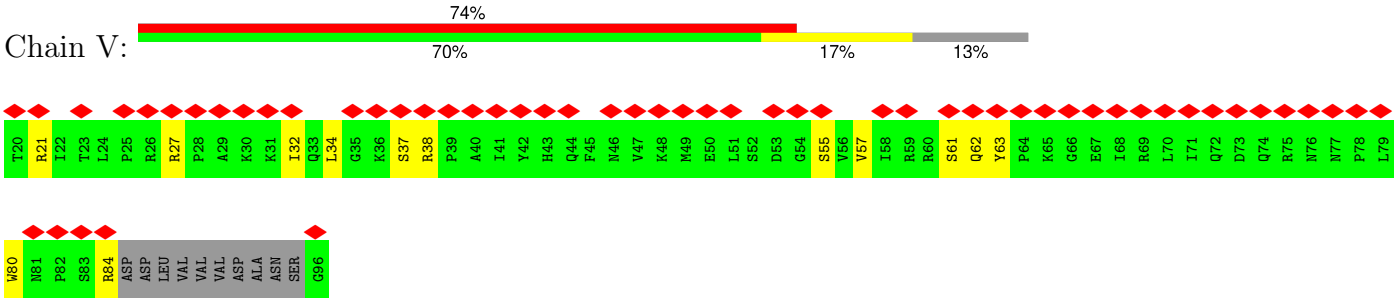
• Molecule 66: Large ribosomal subunit protein uL30m

Chain U:



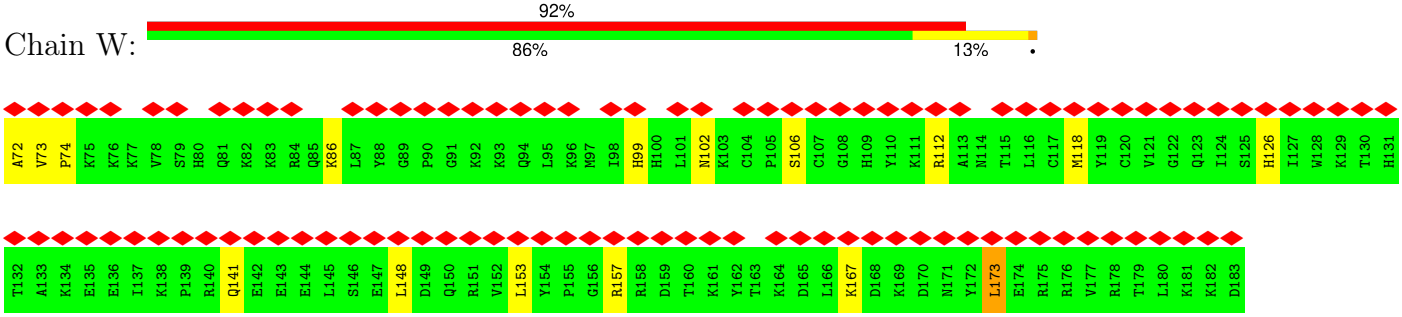
• Molecule 67: Large ribosomal subunit protein bL31m

Chain V:



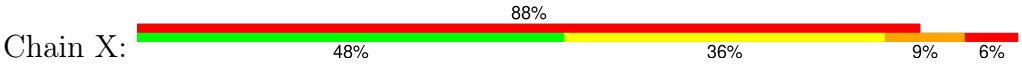
• Molecule 68: Large ribosomal subunit protein bL32m

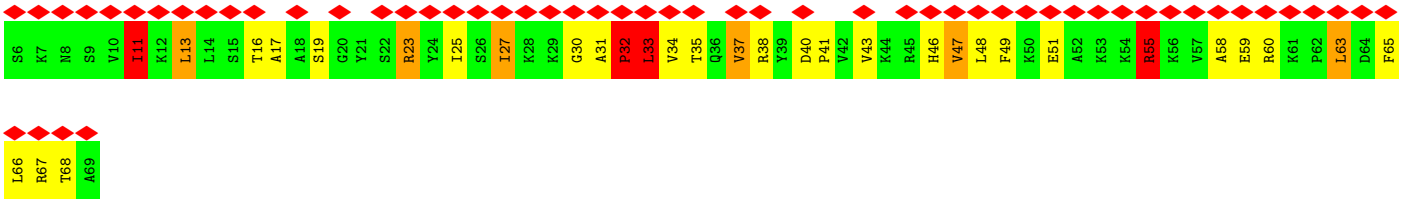
Chain W:



• Molecule 69: Large ribosomal subunit protein bL33m

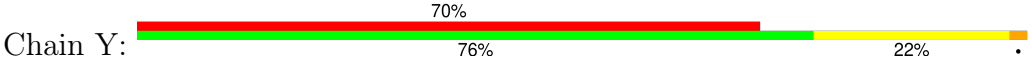
Chain X:

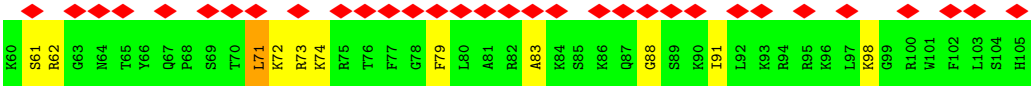




• Molecule 70: Large ribosomal subunit protein bL34m

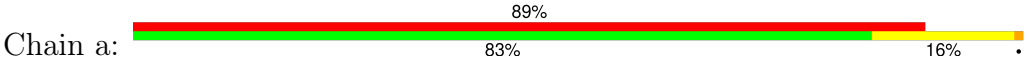
Chain Y:

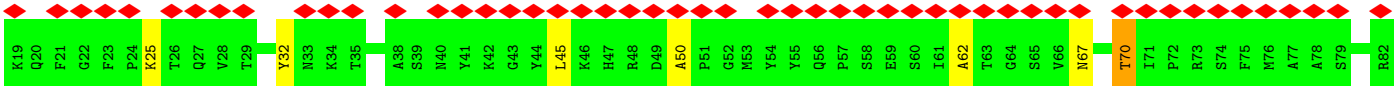


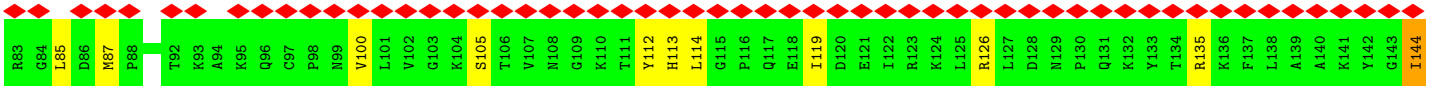


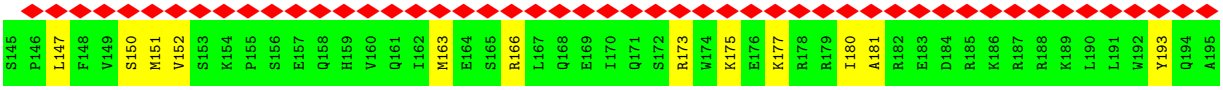
• Molecule 71: Large ribosomal subunit protein mL58

Chain a:



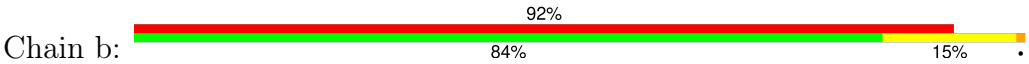


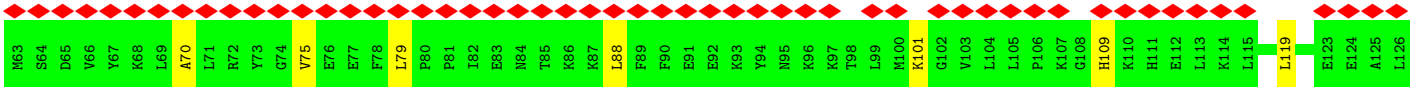


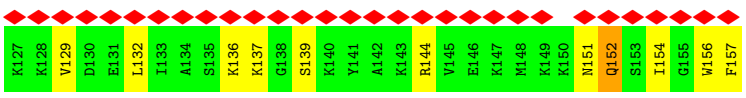


• Molecule 72: Large ribosomal subunit protein mL59

Chain b:

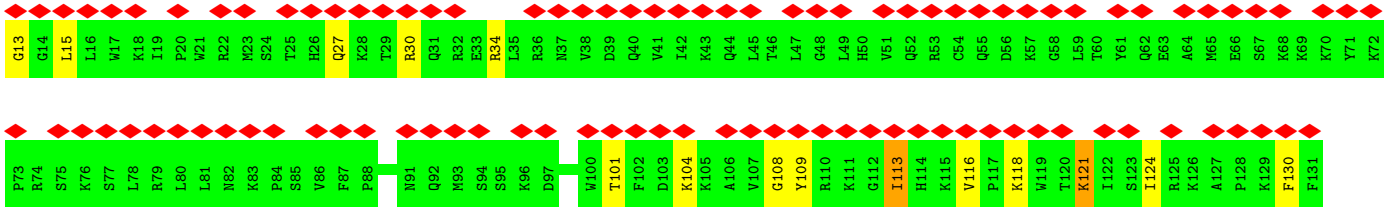






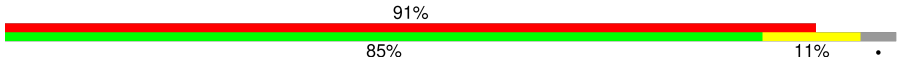
• Molecule 73: Large ribosomal subunit protein mL60

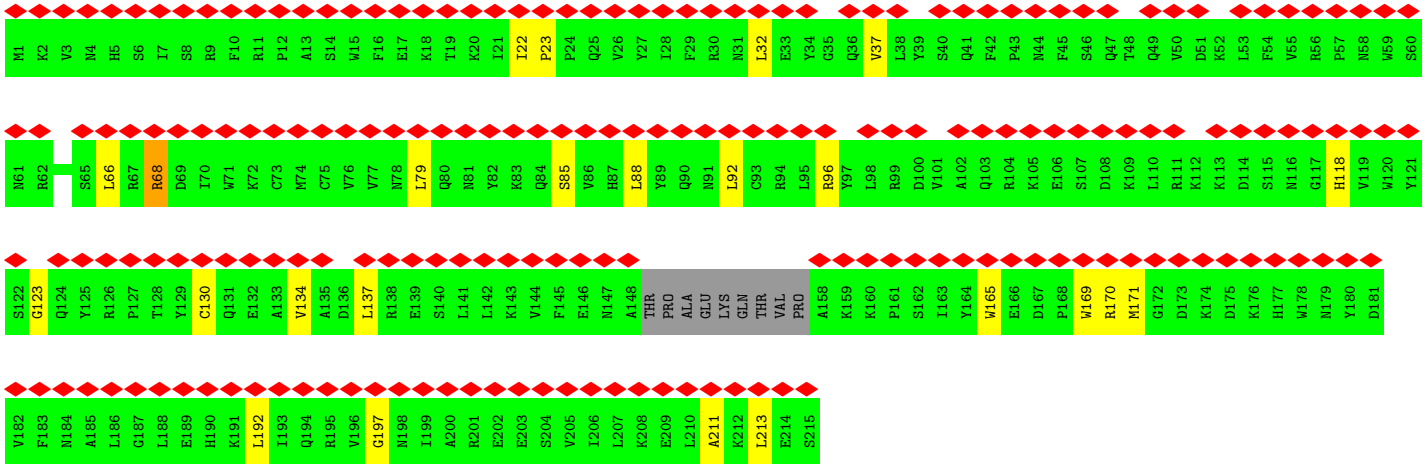
Chain c:



• Molecule 74: Large ribosomal subunit protein mL67

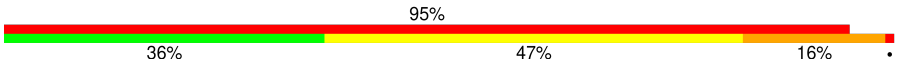
Chain d:

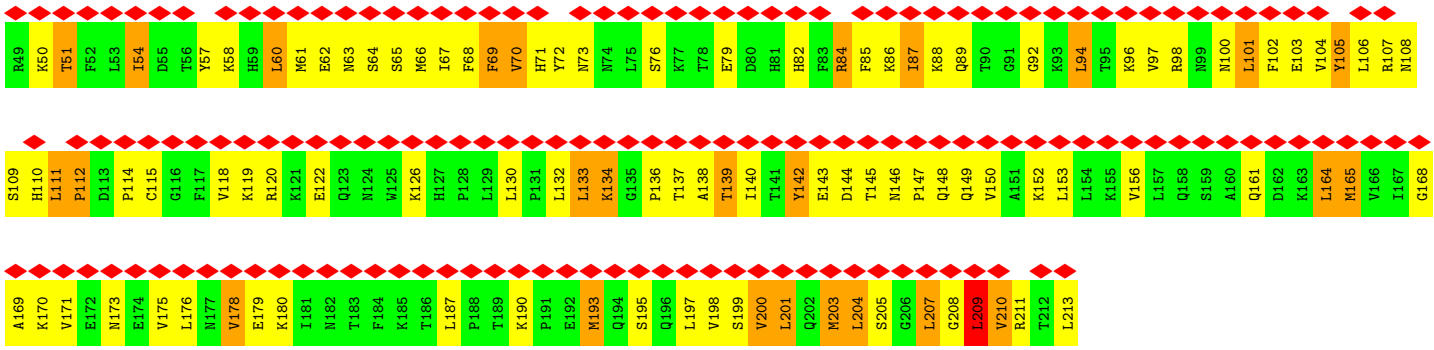




• Molecule 75: Large ribosomal subunit protein uL10m

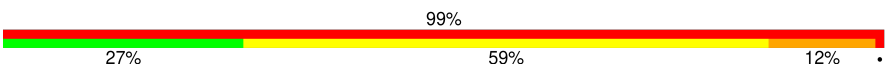
Chain e:

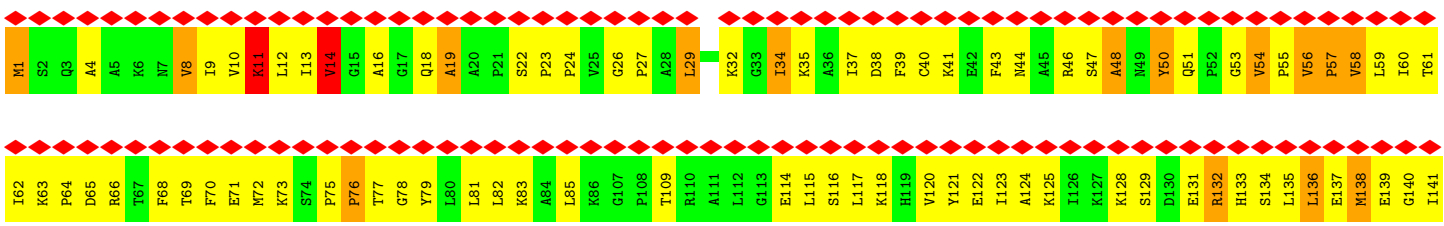


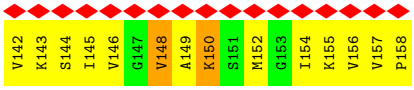


• Molecule 76: Large ribosomal subunit protein uL11m

Chain f:






V142
K143
S144
I145
V146
G147
V148
A149
K150
S151
M152
G153
I154
K155
V156
V157
P158

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	14356	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	60	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	21.532	Depositor
Minimum map value	-14.432	Depositor
Average map value	0.067	Depositor
Map value standard deviation	1.665	Depositor
Recommended contour level	4.3	Depositor
Map size (Å)	427.52, 427.52, 427.52	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.835, 0.835, 0.835	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	AA	0.85	0/304	1.22	0/386
2	AB	0.78	0/825	1.03	3/1101 (0.3%)
3	AC	0.89	0/2130	1.21	1/2891 (0.0%)
4	AD	0.90	0/2472	1.23	3/3338 (0.1%)
5	AE	0.83	0/2490	1.23	31/3372 (0.9%)
6	AF	0.88	0/2130	1.18	4/2867 (0.1%)
7	AG	0.88	0/1974	1.19	1/2668 (0.0%)
8	AH	0.92	0/1915	1.21	1/2559 (0.0%)
9	AI	0.94	0/3309	1.13	19/4472 (0.4%)
10	AJ	0.79	0/788	1.10	2/1052 (0.2%)
11	AK	0.94	0/2268	1.13	2/3058 (0.1%)
12	AL	0.57	0/35625	0.81	13/55407 (0.0%)
13	AM	0.74	0/1805	0.94	0/2811
14	AN	0.72	0/301	1.12	1/466 (0.2%)
15	Z	0.89	0/702	1.23	5/945 (0.5%)
16	g	0.92	0/1610	1.15	2/2168 (0.1%)
17	h	0.89	0/2138	1.27	2/2903 (0.1%)
18	i	0.88	0/2503	1.14	0/3375
19	j	0.91	0/2435	1.16	1/3281 (0.0%)
20	k	0.88	0/2350	1.20	6/3165 (0.2%)
21	l	0.98	0/1068	1.15	2/1430 (0.1%)
22	m	1.01	0/1305	1.21	10/1763 (0.6%)
23	n	0.73	0/1240	1.19	1/1670 (0.1%)
24	o	0.67	0/1855	1.00	0/2492
25	p	0.89	0/1140	1.16	0/1547
26	q	1.04	2/1228 (0.2%)	1.10	5/1638 (0.3%)
27	r	0.91	0/963	1.17	6/1289 (0.5%)
28	s	0.91	0/943	1.27	0/1256
29	t	0.94	1/961 (0.1%)	1.18	3/1285 (0.2%)
30	u	1.00	0/2094	1.10	7/2796 (0.3%)
31	v	0.88	0/845	1.11	1/1143 (0.1%)
32	w	0.91	0/1694	1.17	10/2252 (0.4%)
33	x	0.90	0/749	1.26	8/998 (0.8%)
34	y	0.92	0/652	1.16	1/882 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
35	z	0.87	0/771	1.19	5/1019 (0.5%)
36	0	0.42	0/329	0.56	0/432
37	1	0.47	0/2949	0.84	0/3998
38	2	0.44	0/963	0.94	0/1295
39	3	0.48	0/1072	0.79	0/1442
40	4	0.46	0/1138	0.88	0/1526
41	5	0.45	0/2604	0.92	1/3526 (0.0%)
42	6	0.48	0/1978	0.83	0/2664
43	7	0.51	0/873	0.84	0/1170
44	8	0.46	0/1659	0.95	0/2230
45	9	0.48	0/1616	0.95	0/2177
46	A	0.45	0/68487	0.75	117/106545 (0.1%)
47	B	0.80	0/2573	1.18	3/3456 (0.1%)
48	C	0.49	0/1975	0.79	0/2657
49	D	0.51	0/2031	0.91	0/2751
50	E	0.48	0/2244	0.82	1/3033 (0.0%)
51	F	0.50	0/1551	0.82	0/2093
52	G	0.44	0/628	0.88	0/844
53	H	0.48	0/1302	0.90	0/1749
54	I	0.46	0/962	0.80	0/1285
55	J	0.62	0/1783	1.03	1/2384 (0.0%)
56	K	0.51	0/1606	0.91	0/2148
57	L	0.45	0/1845	0.95	0/2489
58	M	0.51	0/1224	0.83	0/1651
59	N	0.46	0/961	0.75	0/1295
60	O	0.45	0/1859	0.89	0/2495
61	P	0.44	0/1773	0.88	0/2390
62	Q	0.50	0/2323	0.83	0/3135
63	R	0.96	1/2783 (0.0%)	1.12	20/3723 (0.5%)
64	S	0.48	0/1576	0.88	0/2104
65	T	0.49	0/1837	0.96	0/2486
66	U	0.60	0/648	0.89	2/870 (0.2%)
67	V	0.48	0/553	0.68	0/742
68	W	0.44	0/955	0.83	0/1273
69	X	0.93	0/520	1.25	0/696
70	Y	0.43	0/392	0.98	0/515
71	a	0.48	0/1471	0.97	0/1976
72	b	0.45	0/1333	0.92	0/1783
73	c	0.46	0/1028	0.91	0/1372
74	d	0.44	0/1791	0.90	0/2415
75	e	0.96	0/1367	1.13	0/1844
76	f	0.97	0/1051	1.21	1/1416 (0.1%)
All	All	0.63	4/215195 (0.0%)	0.91	302/311820 (0.1%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
2	AB	0	2
3	AC	0	3
4	AD	0	5
5	AE	0	2
6	AF	0	4
7	AG	0	6
8	AH	0	5
9	AI	0	2
10	AJ	0	2
11	AK	0	7
16	g	0	3
17	h	0	5
19	j	0	8
20	k	0	1
21	l	0	1
22	m	0	1
24	o	0	6
25	p	0	1
27	r	0	2
28	s	0	2
29	t	0	2
30	u	0	2
31	v	0	1
33	x	0	1
34	y	0	3
47	B	0	15
48	C	0	1
55	J	0	1
56	K	0	1
63	R	0	1
69	X	0	3
75	e	0	1
76	f	0	1
All	All	0	101

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
63	R	148	SER	CA-C	-6.41	1.49	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	q	147	THR	CA-C	-5.11	1.46	1.52
26	q	142	GLU	CA-C	-5.09	1.46	1.52
29	t	47	ASN	CA-C	5.07	1.59	1.53

All (302) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
46	A	2067	A	P-O3'-C3'	-15.91	96.34	120.20
46	A	2072	U	P-O3'-C3'	-15.35	97.17	120.20
46	A	2018	C	P-O3'-C3'	-13.27	100.30	120.20
46	A	2023	U	P-O3'-C3'	-12.84	100.95	120.20
46	A	2064	G	P-O3'-C3'	-12.74	101.08	120.20
46	A	2073	U	P-O3'-C3'	-11.88	102.38	120.20
46	A	2061	U	P-O3'-C3'	-11.26	103.31	120.20
46	A	1007	U	P-O3'-C3'	11.07	136.81	120.20
46	A	2030	U	P-O3'-C3'	-10.97	103.74	120.20
46	A	2846	U	P-O3'-C3'	-10.68	104.19	120.20
46	A	2060	A	P-O3'-C3'	-10.60	104.30	120.20
32	w	197	ASP	N-CA-C	-10.55	99.94	112.92
46	A	2021	A	P-O3'-C3'	-10.35	104.67	120.20
46	A	2071	A	P-O3'-C3'	-10.24	104.84	120.20
32	w	219	ILE	N-CA-C	-10.17	99.78	113.00
63	R	184	LEU	N-CA-C	-10.02	99.85	113.18
46	A	2032	C	P-O3'-C3'	-10.02	105.17	120.20
46	A	2055	U	P-O3'-C3'	-9.97	105.25	120.20
11	AK	69	TYR	N-CA-C	-9.93	100.44	111.07
46	A	2042	G	P-O3'-C3'	-9.87	105.40	120.20
46	A	2024	A	P-O3'-C3'	-9.56	105.86	120.20
46	A	1024	A	P-O3'-C3'	-9.54	105.89	120.20
46	A	2066	U	P-O3'-C3'	-9.50	105.95	120.20
46	A	2017	G	P-O3'-C3'	-9.45	106.03	120.20
46	A	2842	U	P-O3'-C3'	-9.44	106.04	120.20
5	AE	78	ASP	N-CA-C	-9.14	99.11	111.54
46	A	2020	U	P-O3'-C3'	-9.03	106.65	120.20
46	A	2074	A	P-O3'-C3'	-8.85	106.93	120.20
46	A	2065	A	P-O3'-C3'	-8.78	107.04	120.20
46	A	2035	U	P-O3'-C3'	-8.71	107.13	120.20
46	A	965	U	P-O3'-C3'	-8.67	107.19	120.20
46	A	966	A	P-O3'-C3'	-8.67	107.20	120.20
63	R	185	LYS	N-CA-C	-8.65	100.48	111.90
55	J	169	PRO	N-CA-CB	-8.62	94.20	103.25
46	A	1038	U	P-O3'-C3'	-8.59	107.31	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
46	A	2070	U	P-O3'-C3'	-8.53	107.41	120.20
46	A	981	G	P-O3'-C3'	-8.43	107.56	120.20
46	A	2075	U	P-O3'-C3'	-8.41	107.58	120.20
46	A	2059	A	P-O3'-C3'	-8.38	107.63	120.20
46	A	1040	C	P-O3'-C3'	-8.37	107.64	120.20
63	R	202	ARG	N-CA-C	-8.24	102.24	111.71
46	A	980	A	P-O3'-C3'	-8.22	107.86	120.20
46	A	2062	G	P-O3'-C3'	-8.21	107.89	120.20
46	A	990	U	P-O3'-C3'	-8.19	107.92	120.20
22	m	238	ILE	N-CA-C	-8.15	102.39	110.30
5	AE	279	LEU	N-CA-C	-8.14	102.44	112.38
46	A	1027	G	P-O3'-C3'	-8.13	108.01	120.20
9	AI	347	GLY	N-CA-C	8.11	122.31	112.49
46	A	1005	A	P-O3'-C3'	-8.04	108.15	120.20
32	w	221	LYS	N-CA-C	-8.02	102.61	111.36
5	AE	325	LEU	N-CA-C	-8.02	102.54	111.28
12	AL	122	U	C2'-C3'-O3'	7.99	121.48	109.50
46	A	2027	U	P-O3'-C3'	-7.95	108.28	120.20
46	A	2775	A	P-O3'-C3'	-7.90	108.35	120.20
5	AE	47	LYS	N-CA-C	-7.88	102.69	111.28
46	A	1008	U	P-O3'-C3'	-7.88	108.38	120.20
35	z	94	GLU	N-CA-C	-7.87	100.53	111.39
5	AE	217	LYS	N-CA-C	-7.86	102.80	112.38
46	A	2844	A	P-O3'-C3'	-7.82	108.46	120.20
46	A	2038	U	P-O3'-C3'	-7.79	108.52	120.20
46	A	2022	U	C2'-C3'-O3'	7.70	121.04	109.50
5	AE	267	LEU	N-CA-C	-7.64	102.95	111.28
63	R	150	LYS	N-CA-C	-7.59	102.15	111.33
9	AI	156	LYS	N-CA-C	-7.56	104.06	113.28
46	A	994	A	P-O3'-C3'	-7.51	108.93	120.20
31	v	100	TRP	N-CA-C	-7.50	103.02	113.37
5	AE	260	ASN	N-CA-C	-7.49	103.25	112.38
46	A	2019	A	P-O3'-C3'	-7.48	108.97	120.20
46	A	1001	C	P-O3'-C3'	-7.47	108.99	120.20
46	A	984	C	P-O3'-C3'	-7.46	109.00	120.20
33	x	49	LEU	CA-C-N	-7.46	112.64	120.03
33	x	49	LEU	C-N-CA	-7.46	112.64	120.03
46	A	2025	A	P-O3'-C3'	-7.45	109.02	120.20
46	A	2033	U	C2'-C3'-O3'	7.38	120.57	109.50
5	AE	77	LYS	N-CA-C	-7.37	103.88	113.17
46	A	998	U	P-O3'-C3'	-7.36	109.16	120.20
46	A	999	A	P-O3'-C3'	-7.35	109.18	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	k	137	PRO	CB-CA-C	-7.32	100.82	113.20
46	A	1030	C	P-O3'-C3'	-7.29	109.26	120.20
20	k	105	ILE	N-CA-C	-7.29	105.42	111.91
46	A	1020	U	P-O3'-C3'	-7.28	109.28	120.20
35	z	127	ASN	N-CA-C	-7.23	103.56	112.88
46	A	2031	C	P-O3'-C3'	-7.21	109.39	120.20
22	m	241	ARG	N-CA-C	-7.21	103.46	112.90
46	A	997	A	P-O3'-C3'	-7.18	109.43	120.20
46	A	2047	C	P-O3'-C3'	-7.18	109.43	120.20
46	A	985	A	P-O3'-C3'	-7.17	109.45	120.20
46	A	2013	G	P-O3'-C3'	-7.17	109.45	120.20
46	A	1022	A	P-O3'-C3'	-7.16	109.46	120.20
5	AE	233	ALA	N-CA-C	-7.11	103.53	111.28
46	A	995	C	P-O3'-C3'	-7.09	109.56	120.20
5	AE	280	ILE	N-CA-C	-7.08	102.87	110.23
5	AE	290	HIS	N-CA-C	-7.07	104.78	113.19
12	AL	506	U	C2'-C3'-O3'	6.99	119.99	109.50
46	A	976	A	P-O3'-C3'	-6.99	109.71	120.20
46	A	2052	A	P-O3'-C3'	-6.98	109.73	120.20
46	A	2036	U	P-O3'-C3'	-6.98	109.74	120.20
12	AL	285	C	C2'-C3'-O3'	6.97	119.96	109.50
5	AE	272	SER	N-CA-C	-6.96	102.91	111.33
63	R	152	TYR	N-CA-C	-6.95	103.76	111.82
35	z	90	ARG	N-CA-C	-6.95	103.71	111.28
63	R	290	GLN	N-CA-C	-6.94	105.75	114.56
46	A	1034	U	P-O3'-C3'	-6.93	109.80	120.20
30	u	38	VAL	N-CA-C	-6.92	103.57	110.62
46	A	1002	C	P-O3'-C3'	-6.90	109.85	120.20
46	A	1016	C	P-O3'-C3'	-6.86	109.91	120.20
5	AE	274	TYR	N-CA-C	-6.85	104.89	113.18
46	A	986	U	P-O3'-C3'	-6.84	109.94	120.20
46	A	1039	A	P-O3'-C3'	-6.84	109.94	120.20
9	AI	162	GLN	N-CA-C	-6.83	103.91	111.36
5	AE	301	ILE	N-CA-C	-6.83	104.12	113.00
29	t	47	ASN	N-CA-C	6.79	120.34	108.52
22	m	239	ALA	N-CA-C	-6.78	101.58	110.53
46	A	989	G	P-O3'-C3'	-6.77	110.05	120.20
46	A	2026	G	P-O3'-C3'	-6.77	110.05	120.20
46	A	1041	U	P-O3'-C3'	-6.75	110.08	120.20
2	AB	41	VAL	N-CA-C	6.74	117.50	110.62
46	A	979	C	P-O3'-C3'	-6.74	110.09	120.20
46	A	2041	G	P-O3'-C3'	-6.71	110.14	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
46	A	1003	U	P-O3'-C3'	-6.70	110.14	120.20
27	r	95	ILE	N-CA-C	6.70	114.53	107.76
63	R	243	SER	N-CA-C	-6.65	103.96	111.07
63	R	203	ALA	CA-C-N	-6.64	111.28	120.38
63	R	203	ALA	C-N-CA	-6.64	111.28	120.38
30	u	128	ILE	N-CA-C	-6.59	103.10	110.62
35	z	98	MET	N-CA-C	-6.55	103.27	113.02
33	x	53	THR	N-CA-C	6.54	118.30	110.19
5	AE	312	SER	N-CA-C	6.53	120.16	109.06
10	AJ	61	THR	N-CA-C	-6.52	104.93	114.39
46	A	987	G	P-O3'-C3'	-6.51	110.44	120.20
46	A	1013	G	P-O3'-C3'	-6.51	110.44	120.20
46	A	1007	U	O3'-P-O5'	6.50	113.75	104.00
46	A	991	U	P-O3'-C3'	-6.50	110.45	120.20
5	AE	74	LEU	N-CA-C	-6.50	103.47	111.33
46	A	1023	C	P-O3'-C3'	-6.50	110.45	120.20
12	AL	297	G	C4'-C3'-O3'	-6.49	103.26	113.00
46	A	988	G	P-O3'-C3'	-6.47	110.49	120.20
63	R	215	ARG	N-CA-C	-6.45	103.37	111.11
46	A	2029	A	C3'-C2'-C1'	-6.42	95.08	101.50
22	m	98	TRP	N-CA-C	-6.41	103.57	111.33
63	R	296	LYS	N-CA-C	-6.40	104.23	111.07
12	AL	937	A	C2'-C3'-O3'	6.35	119.03	109.50
30	u	225	GLU	N-CA-C	-6.35	104.28	111.07
46	A	1037	A	P-O3'-C3'	-6.35	110.68	120.20
46	A	967	U	P-O3'-C3'	-6.33	110.70	120.20
33	x	63	GLY	N-CA-C	-6.33	104.98	112.64
27	r	133	SER	CB-CA-C	-6.33	106.49	114.40
23	n	14	GLN	OE1-CD-NE2	-6.31	116.29	122.60
32	w	113	VAL	N-CA-C	-6.30	104.37	110.42
20	k	107	PRO	N-CA-C	-6.29	103.02	110.70
63	R	263	LYS	N-CA-C	-6.29	105.67	113.15
46	A	2069	U	P-O3'-C3'	-6.25	110.83	120.20
22	m	116	HIS	N-CA-C	-6.25	103.62	111.11
46	A	996	A	P-O3'-C3'	-6.23	110.85	120.20
46	A	1036	U	P-O3'-C3'	-6.21	110.88	120.20
46	A	992	U	P-O3'-C3'	-6.17	110.94	120.20
46	A	974	A	P-O3'-C3'	-6.16	110.96	120.20
46	A	1004	A	P-O3'-C3'	-6.16	110.96	120.20
46	A	1031	U	P-O3'-C3'	-6.15	110.97	120.20
46	A	1033	A	P-O3'-C3'	-6.14	110.99	120.20
3	AC	98	PRO	N-CA-C	-6.13	105.02	113.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
30	u	257	PHE	N-CA-C	-6.12	104.52	111.07
5	AE	108	SER	N-CA-C	-6.12	104.92	112.38
5	AE	305	GLN	N-CA-C	-6.11	104.62	111.28
46	A	1032	G	P-O3'-C3'	-6.08	111.08	120.20
46	A	2064	G	C3'-C2'-C1'	-6.06	95.24	101.30
33	x	41	ILE	N-CA-C	6.04	118.93	108.90
46	A	2051	U	P-O3'-C3'	-6.01	111.19	120.20
46	A	2276	G	P-O3'-C3'	-6.00	111.20	120.20
46	A	993	G	P-O3'-C3'	-5.99	111.22	120.20
9	AI	331	GLU	N-CA-C	-5.98	105.48	112.89
9	AI	195	ASP	N-CA-C	-5.97	105.58	112.92
17	h	207	GLN	N-CA-C	-5.94	105.88	113.01
2	AB	56	LYS	N-CA-C	-5.93	105.75	112.87
46	A	2019	A	C1'-O4'-C4'	-5.92	103.98	109.90
46	A	1010	A	C2'-C3'-O3'	5.92	118.38	109.50
32	w	93	GLN	N-CA-C	-5.90	104.03	111.11
33	x	113	ASP	N-CA-C	-5.90	106.21	113.41
9	AI	252	LYS	N-CA-C	-5.89	106.13	113.38
9	AI	398	GLU	N-CA-C	-5.88	104.87	111.28
30	u	285	THR	N-CA-C	-5.87	104.23	111.33
22	m	120	MET	N-CA-C	-5.86	105.71	112.92
33	x	59	ASP	CA-C-N	-5.86	113.81	122.83
33	x	59	ASP	C-N-CA	-5.86	113.81	122.83
46	A	978	U	P-O3'-C3'	-5.85	111.42	120.20
19	j	468	PRO	N-CA-C	-5.85	108.60	114.68
9	AI	365	ASP	CA-C-N	-5.84	112.89	118.97
9	AI	365	ASP	C-N-CA	-5.84	112.89	118.97
47	B	313	HIS	N-CA-C	-5.82	105.88	112.87
15	Z	52	ALA	N-CA-C	-5.82	104.12	111.11
17	h	352	PRO	CB-CA-C	-5.82	105.17	113.09
46	A	1011	A	P-O3'-C3'	-5.82	111.47	120.20
46	A	1813	A	C2'-C3'-O3'	5.81	118.21	109.50
46	A	1017	A	P-O3'-C3'	-5.78	111.53	120.20
2	AB	47	LYS	N-CA-C	-5.78	106.19	113.18
63	R	293	GLU	N-CA-C	5.77	117.57	111.28
6	AF	90	PRO	N-CA-C	-5.77	106.48	114.27
5	AE	292	ALA	N-CA-C	-5.76	106.47	112.93
6	AF	61	PHE	N-CA-C	-5.75	105.97	112.87
47	B	103	LEU	N-CA-C	-5.74	106.32	113.38
5	AE	82	PRO	N-CA-C	-5.74	107.34	114.68
46	A	2050	U	P-O3'-C3'	-5.73	111.60	120.20
26	q	98	LYS	N-CA-C	-5.73	103.44	110.65

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	AL	937	A	C4'-C3'-O3'	5.72	117.98	109.40
63	R	135	THR	N-CA-C	-5.69	106.33	113.28
9	AI	297	VAL	N-CA-C	-5.69	107.20	112.83
5	AE	306	ASN	N-CA-C	-5.68	105.08	111.28
15	Z	20	LYS	CA-C-N	-5.67	112.75	119.84
15	Z	20	LYS	C-N-CA	-5.67	112.75	119.84
20	k	29	LEU	N-CA-C	-5.67	104.95	112.94
29	t	54	LEU	N-CA-C	-5.66	105.11	111.28
27	r	32	ASN	N-CA-C	-5.65	105.12	111.28
26	q	148	SER	N-CA-C	-5.64	105.18	112.68
4	AD	211	SER	N-CA-C	-5.62	105.04	112.24
9	AI	309	GLU	N-CA-C	-5.62	104.18	111.71
5	AE	275	GLU	N-CA-C	-5.62	104.37	111.11
9	AI	129	ASP	N-CA-C	-5.60	106.44	113.28
46	A	975	U	P-O3'-C3'	-5.60	111.80	120.20
27	r	87	ASN	N-CA-C	-5.60	105.65	113.37
15	Z	22	ILE	CB-CA-C	-5.59	105.87	111.80
76	f	144	SER	N-CA-C	-5.59	105.33	111.82
5	AE	320	LYS	N-CA-C	-5.56	105.31	111.71
5	AE	266	GLU	N-CA-C	-5.54	104.64	111.40
9	AI	189	ASP	N-CA-C	5.53	117.83	110.53
32	w	58	VAL	N-CA-C	5.51	114.42	107.70
46	A	2275	U	P-O3'-C3'	-5.50	111.95	120.20
6	AF	334	ILE	CA-C-O	-5.48	117.86	122.63
22	m	161	ALA	CA-C-N	-5.48	114.14	119.78
22	m	161	ALA	C-N-CA	-5.48	114.14	119.78
12	AL	196	A	C4'-C3'-O3'	5.48	117.61	109.40
63	R	244	LEU	N-CA-C	-5.47	105.31	111.28
46	A	2068	C	P-O3'-C3'	-5.46	112.01	120.20
29	t	39	LYS	N-CA-C	-5.46	105.24	111.14
9	AI	56	LEU	N-CA-C	-5.46	106.48	114.39
16	g	61	ARG	N-CA-C	-5.45	105.85	112.88
30	u	97	GLU	N-CA-C	-5.45	105.34	111.28
5	AE	302	ARG	N-CA-C	-5.44	105.04	110.97
5	AE	315	TYR	CA-CB-CG	-5.44	104.10	113.90
22	m	140	LEU	N-CA-C	-5.44	105.35	111.28
32	w	109	ASP	N-CA-C	-5.44	105.35	111.28
11	AK	224	ARG	CB-CA-C	-5.42	110.34	116.63
27	r	133	SER	N-CA-C	5.42	116.94	109.29
41	5	279	VAL	CB-CA-C	-5.41	105.05	111.97
46	A	2072	U	C4'-C3'-C2'	-5.41	97.19	102.60
46	A	977	A	P-O3'-C3'	-5.41	112.09	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	AF	306	GLN	N-CA-C	-5.39	104.80	111.33
26	q	184	VAL	N-CA-C	5.38	115.59	110.53
12	AL	977	C	C4'-C3'-O3'	-5.38	104.94	113.00
46	A	1015	A	P-O3'-C3'	-5.37	112.14	120.20
47	B	130	HIS	N-CA-C	-5.37	106.89	113.50
5	AE	44	ALA	N-CA-C	-5.36	104.85	111.33
20	k	249	ILE	N-CA-C	-5.35	105.28	110.42
9	AI	273	LYS	N-CA-C	-5.34	104.70	111.11
9	AI	164	HIS	N-CA-C	-5.34	106.03	112.54
32	w	160	THR	N-CA-C	-5.31	106.30	112.89
46	A	2049	U	P-O3'-C3'	-5.31	112.23	120.20
27	r	68	LEU	N-CA-C	5.30	117.74	109.52
46	A	983	U	P-O3'-C3'	-5.30	112.26	120.20
63	R	130	GLY	N-CA-C	5.29	123.05	114.90
63	R	162	LEU	N-CA-C	-5.29	105.41	111.07
21	l	26	SER	N-CA-C	-5.26	104.98	111.40
22	m	240	HIS	N-CA-C	-5.26	106.81	113.23
5	AE	159	MET	N-CA-C	-5.25	105.60	113.89
34	y	67	ASP	N-CA-C	-5.25	106.94	113.55
20	k	121	LYS	N-CA-C	-5.24	104.83	111.11
63	R	70	LYS	N-CA-C	-5.23	105.66	111.36
4	AD	215	VAL	N-CA-C	-5.22	108.20	113.47
63	R	236	THR	N-CA-C	-5.21	99.69	110.80
21	l	39	VAL	N-CA-C	-5.21	102.87	109.80
12	AL	823	G	C2'-C3'-O3'	-5.21	105.89	113.70
46	A	2040	A	P-O3'-C3'	-5.21	112.39	120.20
35	z	91	SER	N-CA-C	-5.21	105.50	111.07
63	R	336	VAL	N-CA-C	5.21	118.36	111.17
46	A	1892	G	C2'-C3'-O3'	5.19	117.28	109.50
10	AJ	74	GLN	N-CA-C	-5.18	105.71	112.23
5	AE	99	LYS	CB-CA-C	-5.17	110.59	116.54
12	AL	196	A	C2'-C3'-O3'	5.17	117.26	109.50
32	w	171	GLY	N-CA-C	-5.17	106.39	113.27
46	A	1021	A	P-O3'-C3'	-5.16	112.46	120.20
14	AN	6	C	C4'-C3'-O3'	5.15	117.12	109.40
8	AH	89	ASN	N-CA-C	-5.14	106.31	112.59
9	AI	160	LEU	N-CA-C	-5.14	105.11	111.33
12	AL	243	A	C2'-C3'-O3'	-5.12	106.02	113.70
7	AG	49	LYS	N-CA-C	5.12	117.76	109.06
46	A	1012	U	P-O3'-C3'	-5.11	112.53	120.20
26	q	147	THR	N-CA-C	-5.11	105.74	112.94
66	U	33	SER	CA-C-N	5.11	129.37	121.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
66	U	33	SER	C-N-CA	5.11	129.37	121.71
15	Z	22	ILE	N-CA-C	5.10	114.62	107.37
4	AD	225	ASN	N-CA-C	-5.10	105.16	111.33
12	AL	285	C	C4'-C3'-O3'	5.10	117.05	109.40
5	AE	54	TYR	N-CA-C	-5.09	105.63	111.07
5	AE	246	THR	N-CA-C	5.08	117.04	108.96
12	AL	1177	A	C2'-C3'-O3'	5.08	117.11	109.50
50	E	249	ILE	N-CA-C	-5.07	105.90	110.82
16	g	14	GLN	N-CA-C	-5.06	105.21	111.33
26	q	142	GLU	N-CA-C	-5.05	105.05	111.11
9	AI	388	GLU	N-CA-C	5.03	117.17	109.07
32	w	73	ALA	N-CA-C	5.03	116.70	108.76
46	A	2014	U	P-O3'-C3'	-5.02	112.67	120.20
9	AI	436	GLY	N-CA-C	5.02	125.08	113.18
30	u	67	VAL	CB-CA-C	-5.01	106.59	111.05

There are no chirality outliers.

All (101) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	AB	117	ARG	Sidechain
2	AB	50	ARG	Sidechain
3	AC	142	ARG	Sidechain
3	AC	240	ARG	Sidechain
3	AC	259	ARG	Sidechain
4	AD	110	ARG	Sidechain
4	AD	153	ARG	Sidechain
4	AD	16	ARG	Sidechain
4	AD	189	ARG	Sidechain
4	AD	290	ARG	Sidechain
5	AE	95	LYS	Peptide
5	AE	96	PRO	Peptide
6	AF	200	ARG	Sidechain
6	AF	29	ARG	Sidechain
6	AF	326	ARG	Sidechain
6	AF	94	ARG	Sidechain
7	AG	105	ARG	Sidechain
7	AG	118	ARG	Sidechain
7	AG	142	ARG	Sidechain
7	AG	180	ARG	Sidechain
7	AG	44	ARG	Sidechain
7	AG	47	ARG	Sidechain

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Mol	Chain	Res	Type	Group
8	AH	104	ARG	Sidechain
8	AH	112	ARG	Sidechain
8	AH	117	ARG	Sidechain
8	AH	184	ARG	Sidechain
8	AH	96	ARG	Sidechain
9	AI	210	ARG	Sidechain
9	AI	50	ARG	Sidechain
10	AJ	38	ARG	Sidechain
10	AJ	57	ARG	Sidechain
11	AK	110	ARG	Sidechain
11	AK	130	ARG	Sidechain
11	AK	152	ARG	Sidechain
11	AK	174	ARG	Sidechain
11	AK	185	ARG	Sidechain
11	AK	249	ARG	Sidechain
11	AK	286	ARG	Sidechain
47	B	104	ARG	Sidechain
47	B	107	ARG	Sidechain
47	B	133	ARG	Sidechain
47	B	142	ARG	Sidechain
47	B	149	ARG	Sidechain
47	B	151	ARG	Sidechain
47	B	159	ARG	Sidechain
47	B	201	ARG	Sidechain
47	B	210	ARG	Sidechain
47	B	267	ARG	Sidechain
47	B	295	ARG	Sidechain
47	B	316	ARG	Sidechain
47	B	325	ARG	Sidechain
47	B	84	ARG	Sidechain
47	B	95	ARG	Sidechain
48	C	200	ARG	Sidechain
55	J	161	ARG	Sidechain
56	K	127	ARG	Sidechain
63	R	235	TRP	Mainchain
69	X	23	ARG	Sidechain
69	X	38	ARG	Sidechain
69	X	55	ARG	Sidechain
75	e	84	ARG	Sidechain
76	f	23	PRO	Peptide
16	g	230	ARG	Sidechain
16	g	73	ARG	Sidechain

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Mol	Chain	Res	Type	Group
16	g	80	ARG	Sidechain
17	h	203	ARG	Sidechain
17	h	231	ARG	Sidechain
17	h	304	ARG	Sidechain
17	h	387	ARG	Sidechain
17	h	390	ARG	Sidechain
19	j	111	ARG	Sidechain
19	j	119	ARG	Sidechain
19	j	122	ARG	Sidechain
19	j	3	ARG	Sidechain
19	j	399	ARG	Sidechain
19	j	423	THR	Peptide
19	j	476	ARG	Sidechain
19	j	483	ARG	Sidechain
20	k	232	ARG	Sidechain
21	l	113	ARG	Sidechain
22	m	186	ARG	Sidechain
24	o	160	ARG	Sidechain
24	o	245	ARG	Sidechain
24	o	254	ARG	Sidechain
24	o	261	ARG	Sidechain
24	o	270	ARG	Sidechain
24	o	63	ARG	Sidechain
25	p	18	ARG	Sidechain
27	r	114	ARG	Sidechain
27	r	72	LYS	Peptide
28	s	120	ARG	Sidechain
28	s	46	ARG	Sidechain
29	t	70	ARG	Sidechain
29	t	92	ARG	Sidechain
30	u	145	ARG	Sidechain
30	u	46	ARG	Sidechain
31	v	71	ARG	Sidechain
33	x	97	ARG	Sidechain
34	y	10	ARG	Sidechain
34	y	15	GLY	Peptide
34	y	34	ARG	Sidechain

5.2 Too-close contacts (i)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen

atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	304	0	357	72	0
2	AB	808	0	809	170	0
3	AC	2079	0	2056	493	0
4	AD	2422	0	2393	387	0
5	AE	2432	0	2479	462	0
6	AF	2079	0	2101	514	0
7	AG	1931	0	1922	631	0
8	AH	1887	0	1996	534	0
9	AI	3243	0	3339	493	0
10	AJ	774	0	818	216	0
11	AK	2212	0	2173	581	0
12	AL	31820	0	15952	3213	0
13	AM	1615	0	821	117	0
14	AN	270	0	143	34	0
15	Z	687	0	719	217	0
16	g	1577	0	1608	525	0
17	h	2095	0	2101	464	0
18	i	2461	0	2449	602	0
19	j	2370	0	2428	362	0
20	k	2297	0	2317	427	0
21	l	1055	0	1127	338	0
22	m	1282	0	1337	314	0
23	n	1221	0	1289	150	0
24	o	1820	0	1902	381	0
25	p	1108	0	1112	358	0
26	q	1208	0	1262	297	0
27	r	949	0	1003	143	0
28	s	930	0	984	208	0
29	t	942	0	991	256	0
30	u	2070	0	2138	382	0
31	v	830	0	890	252	0
32	w	1683	0	1769	359	0
33	x	738	0	771	279	0
34	y	636	0	654	162	0
35	z	760	0	789	189	0
36	0	324	0	347	14	0
37	1	2875	0	2881	58	0
38	2	944	0	969	45	0
39	3	1046	0	1071	34	0
40	4	1117	0	1142	21	0
41	5	2552	0	2600	46	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
42	6	1932	0	1950	22	0
43	7	858	0	908	9	0
44	8	1629	0	1633	11	0
45	9	1587	0	1628	17	0
46	A	61141	0	30663	4502	0
47	B	2527	0	2649	249	0
48	C	1932	0	1969	108	0
49	D	1991	0	2032	31	0
50	E	2187	0	2203	82	0
51	F	1524	0	1587	41	0
52	G	617	0	626	10	0
53	H	1275	0	1310	19	0
54	I	956	0	1037	19	0
55	J	1746	0	1840	88	0
56	K	1573	0	1629	56	0
57	L	1817	0	1878	23	0
58	M	1206	0	1283	29	0
59	N	948	0	1006	8	0
60	O	1826	0	1933	18	0
61	P	1729	0	1724	50	0
62	Q	2272	0	2334	31	0
63	R	2738	0	2811	388	0
64	S	1543	0	1621	36	0
65	T	1792	0	1782	28	0
66	U	639	0	699	12	0
67	V	543	0	568	35	0
68	W	937	0	978	19	0
69	X	512	0	563	65	0
70	Y	385	0	423	15	0
71	a	1440	0	1473	34	0
72	b	1299	0	1367	34	0
73	c	1004	0	1065	20	0
74	d	1746	0	1743	19	0
75	e	1340	0	1396	174	0
76	f	1032	0	1115	155	0
All	All	201676	0	157435	15269	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 43.

All (15269) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:g:7:LEU:CD1	17:h:189:MET:HE1	1.25	1.65
8:AH:104:ARG:CD	12:AL:143:A:H4'	1.27	1.65
4:AD:208:PHE:CE2	16:g:214:LEU:HB3	1.28	1.64
16:g:7:LEU:HD12	17:h:189:MET:CE	1.28	1.64
3:AC:9:HIS:CE1	17:h:164:ILE:CD1	1.81	1.64
8:AH:210:ILE:CG2	21:l:39:VAL:HB	1.19	1.63
11:AK:132:PHE:CD1	18:i:248:MET:CE	1.78	1.63
9:AI:203:MET:HE3	12:AL:1354:U:C5	1.29	1.62
12:AL:1021:U:H4'	34:y:84:SER:CB	1.23	1.62
6:AF:146:ASN:HD22	19:j:439:HIS:CD2	1.13	1.60
7:AG:217:LEU:HD13	16:g:273:MET:CB	1.31	1.60
7:AG:3:ILE:HG21	23:n:20:ARG:CZ	1.22	1.60
12:AL:1258:U:H5	34:y:83:PHE:CB	1.05	1.60
30:u:87:LEU:HD12	32:w:114:ARG:CZ	1.28	1.60
12:AL:140:A:C2	31:v:5:LEU:HD22	1.22	1.59
8:AH:104:ARG:CD	12:AL:143:A:C4'	1.77	1.58
12:AL:15:A:H5"	20:k:261:LYS:CE	1.30	1.58
12:AL:1105:G:C5'	18:i:390:ASN:HD22	1.04	1.58
18:i:148:LYS:CE	20:k:78:LEU:HD12	1.32	1.58
9:AI:203:MET:CE	12:AL:1354:U:H5	1.00	1.58
7:AG:224:VAL:CG1	33:x:45:LEU:HD13	1.20	1.57
4:AD:208:PHE:CE2	16:g:214:LEU:CB	1.77	1.57
7:AG:217:LEU:CD1	16:g:273:MET:HA	1.27	1.57
11:AK:285:LEU:CD1	12:AL:1281:A:C5	1.82	1.56
8:AH:223:VAL:CG1	21:l:44:PRO:HG2	1.14	1.56
11:AK:285:LEU:CD1	12:AL:1281:A:C6	1.87	1.56
2:AB:111:PHE:HZ	12:AL:101:U:C4	1.16	1.56
12:AL:41:C:C4'	27:r:57:GLN:HE22	1.19	1.56
9:AI:203:MET:CE	12:AL:1354:U:C5	1.84	1.55
6:AF:137:PHE:CE1	19:j:468:PRO:HB3	1.37	1.55
8:AH:184:ARG:CG	12:AL:814:A:H4'	1.29	1.55
7:AG:166:VAL:CG2	16:g:195:LYS:HE2	1.27	1.55
12:AL:673:A:C2	20:k:266:ARG:NH2	1.75	1.55
30:u:100:LYS:CB	32:w:167:LEU:HD21	1.10	1.55
18:i:368:LEU:CA	29:t:111:LYS:HG2	1.28	1.54
30:u:275:ARG:NH1	30:u:278:ILE:HD12	1.22	1.54
46:A:603:U:P	47:B:149:ARG:HH12	1.26	1.54
4:AD:210:PHE:CE1	7:AG:196:MET:HG2	1.37	1.54
12:AL:1258:U:C5	34:y:83:PHE:HB2	1.33	1.54
8:AH:50:ALA:HB2	32:w:75:ALA:C	1.30	1.53
4:AD:67:LEU:CA	4:AD:77:LYS:NZ	1.72	1.53
18:i:316:MET:HG3	20:k:69:TRP:CZ2	1.43	1.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1429:A:C8	29:t:72:THR:HG22	1.39	1.53
12:AL:1032:A:H4'	24:o:275:TRP:CZ2	1.42	1.52
12:AL:1258:U:C5	34:y:83:PHE:CB	1.84	1.52
3:AC:237:VAL:CG1	4:AD:44:ARG:HH11	1.18	1.52
11:AK:196:ASN:CA	12:AL:1290:A:N6	1.67	1.52
12:AL:1628:A:C2	35:z:166:ILE:HD12	1.41	1.52
8:AH:184:ARG:CD	12:AL:814:A:H4'	1.40	1.51
8:AH:223:VAL:HG11	21:l:44:PRO:CG	1.38	1.51
12:AL:1216:A:H1'	24:o:256:TYR:CB	1.35	1.51
4:AD:208:PHE:HE2	16:g:214:LEU:CB	1.08	1.50
7:AG:3:ILE:CG2	23:n:20:ARG:NH1	1.72	1.50
3:AC:62:TYR:CD2	17:h:159:LYS:HG3	1.44	1.50
3:AC:188:ALA:CB	4:AD:73:LYS:HB3	1.37	1.50
11:AK:285:LEU:HD12	12:AL:1281:A:C6	1.44	1.50
15:Z:66:ALA:CB	22:m:184:ASN:HB2	1.42	1.50
3:AC:90:HIS:CD2	17:h:161:GLY:HA2	1.45	1.49
6:AF:146:ASN:HB2	19:j:439:HIS:CD2	1.44	1.49
8:AH:224:PHE:CD1	21:l:18:LYS:HD3	1.46	1.49
12:AL:1645:U:C5	17:h:175:PHE:CD1	2.00	1.49
6:AF:61:PHE:CD1	19:j:29:TYR:CZ	1.99	1.49
7:AG:166:VAL:HG11	16:g:195:LYS:CG	1.37	1.49
12:AL:1046:U:P	29:t:23:ARG:HG2	1.50	1.49
46:A:2012:A:H62	46:A:2023:U:C5'	1.26	1.49
3:AC:62:TYR:CD2	17:h:159:LYS:CG	1.95	1.49
15:Z:31:LEU:CD1	22:m:246:LEU:CD2	1.91	1.48
8:AH:198:GLU:CB	21:l:105:LEU:HD23	1.40	1.48
9:AI:56:LEU:HG	22:m:214:GLU:CG	1.44	1.48
7:AG:217:LEU:CD1	16:g:273:MET:CA	1.92	1.48
16:g:200:ILE:HD11	16:g:287:LYS:CE	1.40	1.48
8:AH:46:GLY:HA3	32:w:5:ASN:CB	1.41	1.47
15:Z:66:ALA:CB	22:m:184:ASN:CB	1.89	1.47
12:AL:1624:U:N3	35:z:154:HIS:CE1	1.81	1.47
16:g:200:ILE:HD11	16:g:287:LYS:CD	1.44	1.47
16:g:200:ILE:CD1	16:g:287:LYS:HG2	1.41	1.47
10:AJ:29:ARG:NH2	34:y:13:TRP:CE2	1.80	1.46
12:AL:1647:A:C6	17:h:172:LYS:NZ	1.82	1.46
2:AB:111:PHE:CZ	12:AL:101:U:C4	2.04	1.46
12:AL:774:U:H4'	26:q:120:GLN:NE2	1.30	1.46
8:AH:18:THR:HG23	31:v:38:GLU:CD	1.35	1.46
12:AL:773:A:H5"	26:q:79:HIS:CE1	1.51	1.46
6:AF:146:ASN:ND2	19:j:439:HIS:CD2	1.79	1.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:14:LEU:HD21	11:AK:222:LEU:CD2	1.45	1.46
12:AL:1627:U:N1	35:z:158:PHE:HZ	1.12	1.45
16:g:68:LEU:CD1	17:h:217:ILE:HD12	1.46	1.45
11:AK:285:LEU:HD11	12:AL:1281:A:C5	1.42	1.45
12:AL:1381:U:OP2	34:y:12:VAL:CG2	1.64	1.45
12:AL:1406:G:N2	13:AM:41:A:H2	1.03	1.45
30:u:100:LYS:CB	32:w:167:LEU:CD2	1.94	1.45
12:AL:1105:G:H5"	18:i:390:ASN:ND2	1.26	1.44
30:u:225:GLU:HG3	32:w:88:TYR:CD1	1.50	1.44
6:AF:295:ILE:CD1	31:v:93:ALA:HB1	1.48	1.44
20:k:40:ILE:CD1	25:p:22:VAL:HG12	1.47	1.44
11:AK:140:GLN:NE2	18:i:321:TYR:CD2	1.84	1.44
18:i:316:MET:HG3	20:k:69:TRP:CH2	1.51	1.44
3:AC:148:LEU:HD11	4:AD:82:ASN:CB	1.48	1.44
12:AL:1377:A:H4'	28:s:119:ARG:NH1	1.19	1.44
12:AL:1633:U:C4	33:x:58:PHE:CD2	2.06	1.44
12:AL:1624:U:C4	35:z:154:HIS:CE1	2.05	1.43
17:h:337:LYS:NZ	20:k:203:ARG:HH12	1.14	1.43
7:AG:96:LYS:NZ	12:AL:915:U:H5'	1.18	1.43
7:AG:217:LEU:HD13	16:g:273:MET:CG	1.46	1.43
12:AL:773:A:H5"	26:q:79:HIS:ND1	1.33	1.43
12:AL:1627:U:C1'	35:z:158:PHE:CZ	1.99	1.43
12:AL:15:A:C5'	20:k:261:LYS:HE3	1.45	1.43
12:AL:1172:A:C8	25:p:36:ILE:HD12	1.51	1.43
12:AL:1261:A:H2	28:s:107:ASN:CB	1.31	1.43
46:A:600:C:C1'	47:B:133:ARG:NH1	1.82	1.43
6:AF:137:PHE:CD1	19:j:468:PRO:HB3	1.51	1.42
11:AK:132:PHE:CD1	18:i:248:MET:HE3	1.34	1.42
12:AL:1628:A:H2	35:z:166:ILE:CD1	1.30	1.42
12:AL:1108:G:C4'	25:p:95:HIS:HD2	1.32	1.42
15:Z:66:ALA:HB2	22:m:184:ASN:CB	0.97	1.42
28:s:85:ILE:HD11	34:y:67:ASP:CG	1.44	1.42
12:AL:771:U:O2	26:q:88:HIS:CE1	1.70	1.42
21:l:66:HIS:ND1	33:x:137:LEU:HD23	1.22	1.42
3:AC:237:VAL:HG13	4:AD:44:ARG:NH1	1.26	1.41
9:AI:210:ARG:NE	12:AL:1348:U:C5	1.79	1.41
9:AI:210:ARG:NH2	12:AL:1348:U:C6	1.83	1.41
12:AL:1165:A:P	24:o:254:ARG:HE	1.42	1.41
9:AI:187:ARG:O	28:s:42:TYR:CE2	1.72	1.41
12:AL:1540:U:H2'	12:AL:1541:U:C6	1.53	1.41
18:i:148:LYS:NZ	20:k:78:LEU:HD12	1.31	1.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:67:LEU:CB	4:AD:77:LYS:NZ	1.81	1.40
6:AF:58:MET:HE1	19:j:30:LYS:CE	1.51	1.40
8:AH:153:ILE:CG1	23:n:41:GLN:NE2	1.85	1.40
11:AK:132:PHE:CB	18:i:248:MET:HA	1.49	1.40
11:AK:172:TYR:CE2	25:p:115:ASP:HB3	1.57	1.40
12:AL:13:U:C5'	20:k:238:PHE:HE2	1.33	1.40
12:AL:1627:U:C1'	35:z:158:PHE:HZ	1.31	1.40
6:AF:136:PRO:HB3	19:j:436:ILE:CD1	1.51	1.40
12:AL:1406:G:N2	13:AM:41:A:C2	1.83	1.40
7:AG:166:VAL:HG21	16:g:195:LYS:CE	1.51	1.40
3:AC:148:LEU:HD13	4:AD:82:ASN:ND2	1.11	1.39
8:AH:100:ALA:CB	12:AL:143:A:O5'	1.66	1.39
12:AL:1261:A:C2	28:s:107:ASN:HB2	1.56	1.39
12:AL:1411:G:OP2	24:o:275:TRP:CB	1.70	1.39
3:AC:191:ILE:HD13	4:AD:222:GLN:CG	1.52	1.39
8:AH:103:ARG:NH2	31:v:79:GLY:CA	1.84	1.39
12:AL:13:U:H5'	20:k:238:PHE:CE2	1.58	1.39
3:AC:90:HIS:CD2	17:h:160:LEU:HD12	1.56	1.39
7:AG:224:VAL:HG12	33:x:45:LEU:CD1	0.92	1.39
46:A:2010:A:C2	46:A:2076:A:N1	1.88	1.39
13:AM:76:A:N3	46:A:2662:A:N1	1.71	1.38
8:AH:16:PRO:HG3	31:v:35:LYS:CG	1.52	1.38
18:i:148:LYS:HZ1	20:k:78:LEU:CD1	1.35	1.38
8:AH:223:VAL:CG1	21:l:44:PRO:CG	1.97	1.38
11:AK:132:PHE:CG	18:i:248:MET:HE3	1.59	1.38
21:l:80:GLU:CG	47:B:73:LEU:HB3	1.51	1.38
12:AL:1108:G:H4'	25:p:95:HIS:CD2	1.56	1.37
25:p:85:ARG:HD3	29:t:115:TRP:CH2	1.58	1.37
18:i:148:LYS:NZ	20:k:78:LEU:CD1	1.85	1.37
15:Z:66:ALA:HB2	22:m:184:ASN:CA	1.53	1.37
12:AL:1627:U:C5	15:Z:13:LEU:HD13	1.60	1.36
20:k:59:LEU:HG	25:p:20:TYR:CE1	1.57	1.36
21:l:83:ARG:NH1	47:B:80:ILE:HG21	1.35	1.36
46:A:2010:A:H2	46:A:2076:A:N1	1.16	1.36
6:AF:58:MET:CE	19:j:30:LYS:HE3	1.53	1.36
20:k:40:ILE:HD12	25:p:22:VAL:CG1	1.52	1.36
6:AF:319:TYR:CD1	31:v:42:THR:HG21	1.61	1.36
7:AG:3:ILE:CD1	23:n:20:ARG:HD2	1.52	1.36
12:AL:862:C:OP1	26:q:215:ARG:CG	1.72	1.36
12:AL:1645:U:C4	17:h:175:PHE:CE1	2.11	1.36
22:m:98:TRP:CA	24:o:242:LEU:HD21	1.52	1.36

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:992:U:O4	76:f:13:ILE:CD1	1.73	1.36
6:AF:48:LYS:HE3	12:AL:489:A:C4	1.61	1.35
9:AI:210:ARG:CZ	12:AL:1348:U:C6	2.10	1.35
30:u:74:PRO:HB2	32:w:100:GLU:OE1	1.25	1.35
20:k:40:ILE:CD1	25:p:22:VAL:CG1	2.03	1.35
30:u:87:LEU:CD1	32:w:114:ARG:NH2	1.86	1.35
8:AH:199:LEU:CD2	30:u:93:TYR:CZ	2.10	1.35
11:AK:132:PHE:CE2	18:i:251:LEU:HD21	1.61	1.35
12:AL:1633:U:C5	33:x:58:PHE:CD2	2.12	1.35
46:A:1015:A:H5'	76:f:117:LEU:CD2	1.56	1.35
3:AC:266:LYS:CD	17:h:129:TYR:OH	1.75	1.34
12:AL:1466:A:N1	20:k:157:GLN:OE1	1.57	1.34
46:A:2436:A:H5'	46:A:2437:U:OP2	1.26	1.34
7:AG:96:LYS:HZ2	12:AL:915:U:C3'	1.38	1.34
12:AL:1165:A:OP1	24:o:254:ARG:CG	1.72	1.34
16:g:200:ILE:CD1	16:g:287:LYS:CG	2.05	1.34
4:AD:67:LEU:HB3	4:AD:77:LYS:NZ	1.35	1.34
8:AH:64:PRO:CG	12:AL:133:U:H3	1.39	1.34
4:AD:210:PHE:CE1	7:AG:196:MET:CG	2.08	1.34
7:AG:1:MET:SD	17:h:329:ARG:NH1	1.99	1.34
7:AG:49:LYS:HE3	23:n:58:LYS:NZ	1.38	1.34
12:AL:1046:U:C4'	29:t:77:ARG:HH22	1.39	1.34
30:u:100:LYS:HB2	32:w:167:LEU:CD2	1.50	1.34
3:AC:69:LYS:HD3	12:AL:1640:U:C2	1.62	1.33
6:AF:321:TYR:CE2	31:v:35:LYS:HA	1.63	1.33
12:AL:1647:A:C5	17:h:172:LYS:NZ	1.95	1.33
15:Z:31:LEU:HD13	22:m:246:LEU:CD2	1.47	1.33
46:A:600:C:O4'	47:B:133:ARG:NH1	1.58	1.33
9:AI:210:ARG:NE	12:AL:1348:U:C6	1.97	1.33
8:AH:184:ARG:CG	12:AL:814:A:C4'	2.06	1.33
11:AK:162:LEU:HB3	25:p:68:TYR:CD2	1.61	1.33
12:AL:1060:A:OP2	12:AL:1061:U:N3	1.58	1.33
12:AL:1258:U:C6	34:y:83:PHE:HB2	1.62	1.32
8:AH:180:ARG:CD	12:AL:815:C:OP1	1.74	1.32
8:AH:199:LEU:HD21	30:u:93:TYR:CE2	1.63	1.32
12:AL:637:A:N1	27:r:117:ASP:OD1	1.58	1.32
20:k:54:PHE:HD1	25:p:57:PHE:CE1	1.45	1.32
6:AF:146:ASN:CB	19:j:439:HIS:CD2	2.11	1.32
21:l:83:ARG:NH2	47:B:80:ILE:HD12	1.45	1.32
30:u:175:GLU:CD	30:u:176:VAL:H	1.36	1.32
3:AC:54:ALA:C	7:AG:143:PRO:HB3	1.55	1.32

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:96:PRO:CD	12:AL:1541:U:H1'	1.58	1.32
21:l:38:VAL:CG1	30:u:141:ILE:HD11	1.60	1.32
30:u:276:LYS:HD2	30:u:279:ARG:NH2	1.41	1.32
3:AC:217:TRP:NE1	17:h:146:LEU:HD21	1.42	1.32
8:AH:198:GLU:HB3	21:l:105:LEU:CD2	1.58	1.32
22:m:98:TRP:HA	24:o:242:LEU:CD2	1.58	1.32
11:AK:155:ASN:ND2	20:k:56:PRO:HD3	1.45	1.31
12:AL:691:U:C2	12:AL:825:G:O6	1.83	1.31
12:AL:1021:U:H4'	34:y:84:SER:OG	1.19	1.31
12:AL:1032:A:C4'	24:o:275:TRP:HZ2	1.42	1.31
46:A:2376:A:N6	69:X:68:THR:HG22	1.44	1.31
11:AK:107:LEU:HD21	18:i:168:ASN:OD1	1.17	1.31
12:AL:413:G:O6	19:j:9:LYS:NZ	1.59	1.31
2:AB:111:PHE:CZ	12:AL:101:U:C5	2.18	1.31
12:AL:140:A:C2	31:v:5:LEU:CD2	2.13	1.31
12:AL:1104:U:OP2	18:i:342:THR:HB	1.23	1.31
12:AL:1645:U:O4	17:h:175:PHE:CE1	1.83	1.31
12:AL:1046:U:H4'	29:t:77:ARG:NH2	0.98	1.31
8:AH:19:ARG:NH2	12:AL:233:C:OP1	1.63	1.30
18:i:211:SER:O	18:i:212:TYR:CG	1.84	1.30
22:m:109:ARG:NH2	24:o:228:MET:CE	1.94	1.30
46:A:2012:A:N6	46:A:2023:U:H5'	0.98	1.30
7:AG:166:VAL:CG1	16:g:195:LYS:HG2	1.59	1.30
11:AK:112:GLU:OE2	18:i:174:ASN:ND2	1.63	1.30
28:s:85:ILE:CG1	34:y:67:ASP:HB2	1.60	1.30
12:AL:1216:A:C1'	24:o:256:TYR:CB	2.09	1.30
12:AL:1627:U:O4'	35:z:158:PHE:CE1	1.82	1.30
28:s:85:ILE:CG1	34:y:67:ASP:CB	2.08	1.30
30:u:101:PHE:N	32:w:167:LEU:HD11	1.41	1.30
7:AG:224:VAL:CG1	33:x:45:LEU:CD1	1.88	1.30
15:Z:31:LEU:HD12	22:m:246:LEU:CG	1.60	1.30
6:AF:339:LEU:CD2	31:v:52:LYS:CE	2.10	1.30
15:Z:89:ILE:CD1	35:z:168:ILE:HG22	1.60	1.30
18:i:93:TRP:NE1	29:t:109:GLY:H	1.30	1.30
3:AC:62:TYR:CG	17:h:159:LYS:HG3	1.63	1.29
6:AF:67:TYR:HD2	12:AL:482:U:C5	1.48	1.29
7:AG:49:LYS:CE	23:n:58:LYS:NZ	1.94	1.29
8:AH:167:ASN:O	23:n:65:PRO:CD	1.80	1.29
6:AF:295:ILE:HD11	31:v:93:ALA:CB	1.62	1.29
12:AL:232:U:O2'	31:v:78:VAL:HG11	1.32	1.29
15:Z:38:LEU:HD21	22:m:164:MET:SD	1.71	1.29

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:979:C:O2'	75:e:180:LYS:NZ	1.63	1.29
3:AC:69:LYS:CD	12:AL:1640:U:O2	1.78	1.29
8:AH:104:ARG:HD2	12:AL:143:A:C4'	0.82	1.29
8:AH:198:GLU:CG	21:l:105:LEU:HD23	1.63	1.29
12:AL:1105:G:OP2	18:i:332:LYS:HD3	1.22	1.29
8:AH:53:VAL:HG13	32:w:48:GLU:OE2	1.25	1.29
16:g:68:LEU:CB	17:h:217:ILE:HD11	1.61	1.29
46:A:2012:A:N7	46:A:2023:U:OP1	1.64	1.29
3:AC:90:HIS:CD2	17:h:161:GLY:CA	2.15	1.29
8:AH:210:ILE:CG2	21:l:39:VAL:CB	2.11	1.29
11:AK:153:PHE:HZ	20:k:81:GLN:OE1	1.16	1.29
11:AK:196:ASN:ND2	12:AL:1318:U:H5'	1.45	1.29
12:AL:1021:U:C4'	34:y:84:SER:CB	2.11	1.29
18:i:368:LEU:CA	29:t:111:LYS:CG	2.11	1.29
75:e:66:MET:HB3	75:e:149:GLN:OE1	1.20	1.29
3:AC:148:LEU:CD1	4:AD:82:ASN:HB3	1.61	1.28
3:AC:195:ALA:HA	4:AD:223:TYR:CE2	1.47	1.28
7:AG:3:ILE:CG2	23:n:20:ARG:CZ	2.04	1.28
10:AJ:79:MET:HE2	12:AL:1238:G:OP1	1.11	1.28
12:AL:1627:U:N1	35:z:158:PHE:CZ	1.96	1.28
12:AL:1633:U:C5	33:x:58:PHE:CE2	2.21	1.28
12:AL:1645:U:C5	17:h:175:PHE:HD1	1.36	1.28
18:i:368:LEU:HA	29:t:111:LYS:CG	1.62	1.28
38:2:53:ARG:NH1	69:X:67:ARG:HH12	1.29	1.28
46:A:1439:A:H2'	46:A:1440:U:C6	1.67	1.28
7:AG:96:LYS:NZ	12:AL:915:U:C5'	1.94	1.28
8:AH:103:ARG:NH2	31:v:79:GLY:HA2	0.97	1.28
11:AK:172:TYR:HB3	25:p:116:THR:O	1.17	1.28
38:2:53:ARG:NH1	69:X:67:ARG:NH1	1.82	1.28
12:AL:1046:U:C4'	29:t:77:ARG:NH2	1.92	1.28
20:k:54:PHE:CD1	25:p:57:PHE:CE1	2.21	1.28
8:AH:37:LYS:CD	12:AL:182:A:OP1	1.80	1.28
11:AK:143:GLU:OE1	18:i:91:ASN:ND2	1.63	1.28
12:AL:1106:U:OP2	18:i:392:LYS:NZ	1.65	1.28
12:AL:1486:A:C2	46:A:1859:G:H1'	1.69	1.28
12:AL:1627:U:C6	35:z:158:PHE:CZ	2.22	1.28
18:i:93:TRP:CD1	29:t:109:GLY:H	1.50	1.28
8:AH:198:GLU:CB	21:l:105:LEU:CD2	2.11	1.27
12:AL:1633:U:C4	33:x:58:PHE:CE2	2.19	1.27
16:g:51:LYS:HD3	17:h:196:GLY:O	1.25	1.27
21:l:2:LEU:CD1	21:l:72:ASP:OD1	1.82	1.27

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:80:VAL:HG22	12:AL:1462:A:N6	1.49	1.27
8:AH:210:ILE:HG21	21:l:39:VAL:CB	1.63	1.27
9:AI:449:HIS:O	22:m:114:LEU:HD13	1.27	1.27
3:AC:9:HIS:ND1	17:h:164:ILE:HD13	1.48	1.27
8:AH:37:LYS:HD3	12:AL:182:A:OP1	1.16	1.27
12:AL:233:C:O2'	31:v:27:ASN:ND2	1.66	1.27
12:AL:753:A:H4'	26:q:129:GLY:CA	1.64	1.27
21:l:66:HIS:CE1	33:x:137:LEU:HD23	1.68	1.27
75:e:66:MET:CB	75:e:149:GLN:OE1	1.81	1.27
12:AL:1255:U:OP1	28:s:105:ARG:NH1	1.67	1.27
18:i:148:LYS:NZ	20:k:78:LEU:HA	1.50	1.27
20:k:59:LEU:HB3	25:p:20:TYR:OH	1.21	1.27
17:h:276:ILE:CD1	24:o:47:ALA:HA	1.62	1.27
17:h:276:ILE:HD11	24:o:47:ALA:CA	1.65	1.27
28:s:85:ILE:CD1	34:y:67:ASP:CA	2.11	1.27
6:AF:61:PHE:CD1	19:j:29:TYR:CE1	2.21	1.26
10:AJ:93:LYS:CG	12:AL:1058:G:O6	1.82	1.26
12:AL:1180:U:P	24:o:164:THR:HG21	1.74	1.26
30:u:87:LEU:CD1	32:w:114:ARG:CZ	2.12	1.26
46:A:603:U:OP2	47:B:149:ARG:NH1	1.65	1.26
5:AE:99:LYS:NZ	12:AL:1524:U:O3'	1.67	1.26
12:AL:1261:A:C2	28:s:107:ASN:CB	2.14	1.26
20:k:16:TYR:OH	20:k:20:LEU:CG	1.75	1.26
21:l:110:SER:HB3	33:x:93:TYR:CZ	1.69	1.26
2:AB:111:PHE:HE2	12:AL:101:U:N1	1.33	1.26
9:AI:413:LEU:CD2	22:m:149:PRO:HD2	1.64	1.26
12:AL:1015:U:O4	28:s:106:ASN:ND2	1.67	1.26
14:AN:1:A:O4'	27:r:73:PRO:CA	1.83	1.26
26:q:184:VAL:CG2	35:z:117:PHE:HE2	1.49	1.26
3:AC:265:SER:O	17:h:128:PRO:HD2	1.12	1.26
8:AH:18:THR:HG23	31:v:38:GLU:OE2	1.21	1.26
8:AH:229:GLU:OE2	21:l:43:VAL:HG12	1.26	1.26
46:A:603:U:P	47:B:149:ARG:NH1	2.07	1.26
10:AJ:47:TYR:OH	12:AL:1291:U:O2'	1.53	1.26
12:AL:1647:A:H1'	17:h:176:TYR:CD1	1.69	1.26
18:i:368:LEU:HD12	29:t:111:LYS:CD	1.66	1.26
26:q:184:VAL:CG2	35:z:117:PHE:CE2	2.17	1.26
11:AK:135:ASP:O	20:k:99:LEU:HD21	1.30	1.25
6:AF:62:LEU:HD11	19:j:26:PHE:CZ	1.70	1.25
12:AL:1182:U:C5'	25:p:81:THR:HG23	1.67	1.25
21:l:110:SER:HB3	33:x:93:TYR:OH	1.15	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:151:GLU:O	9:AI:154:VAL:HG12	1.09	1.25
22:m:123:ARG:HB3	22:m:126:LYS:NZ	1.51	1.25
46:A:1932:G:N2	48:C:209:GLN:HG3	1.49	1.25
3:AC:90:HIS:HD2	17:h:161:GLY:CA	1.48	1.25
3:AC:266:LYS:HD2	17:h:129:TYR:CZ	1.70	1.25
6:AF:144:LYS:NZ	19:j:461:GLY:O	1.69	1.25
9:AI:187:ARG:O	28:s:42:TYR:HE2	1.08	1.25
4:AD:155:LEU:HD22	16:g:210:LEU:CG	1.67	1.25
8:AH:16:PRO:CG	31:v:35:LYS:HG2	1.67	1.25
10:AJ:93:LYS:CB	12:AL:1058:G:O6	1.84	1.25
12:AL:873:A:P	30:u:197:LYS:NZ	2.10	1.25
13:AM:76:A:C2	46:A:2688:G:C6	2.23	1.25
14:AN:1:A:O4’	27:r:73:PRO:HA	1.07	1.25
12:AL:749:A:O4’	26:q:121:LYS:HE2	1.37	1.24
17:h:337:LYS:NZ	20:k:203:ARG:NH1	1.83	1.24
2:AB:111:PHE:HZ	12:AL:101:U:C5	1.52	1.24
11:AK:115:ALA:CB	18:i:168:ASN:HD21	1.51	1.24
16:g:7:LEU:HD21	17:h:219:ILE:CD1	1.65	1.24
16:g:200:ILE:CD1	16:g:287:LYS:HE2	1.68	1.24
46:A:2012:A:N6	46:A:2023:U:C5’	1.91	1.24
18:i:316:MET:CG	20:k:69:TRP:CZ2	2.21	1.24
21:l:83:ARG:HH12	47:B:80:ILE:CG2	1.51	1.24
3:AC:55:GLY:HA2	7:AG:121:ILE:CG2	1.66	1.23
6:AF:67:TYR:CD2	12:AL:482:U:C6	2.24	1.23
7:AG:1:MET:SD	17:h:354:LEU:HD11	1.77	1.23
7:AG:75:TYR:O	8:AH:183:ASN:ND2	1.69	1.23
8:AH:78:THR:HG22	12:AL:230:A:O2’	1.06	1.23
12:AL:673:A:H2	20:k:266:ARG:CZ	1.51	1.23
12:AL:771:U:O2	26:q:88:HIS:HE1	0.97	1.23
7:AG:49:LYS:CE	23:n:58:LYS:HZ3	1.47	1.23
12:AL:749:A:O4’	26:q:121:LYS:CE	1.87	1.23
12:AL:1021:U:C5’	34:y:84:SER:HB2	1.67	1.23
12:AL:1182:U:H5”	25:p:81:THR:CG2	1.68	1.23
12:AL:1214:A:H8	12:AL:1214:A:O5’	1.17	1.23
12:AL:1377:A:C4’	28:s:119:ARG:NH1	2.02	1.23
18:i:368:LEU:C	29:t:111:LYS:HG2	1.62	1.23
21:l:110:SER:CB	33:x:93:TYR:CE1	2.20	1.23
3:AC:191:ILE:CD1	4:AD:222:GLN:HG3	1.69	1.23
4:AD:210:PHE:CD1	7:AG:196:MET:HG2	1.71	1.23
7:AG:33:VAL:HG13	17:h:357:TYR:OH	1.33	1.23
8:AH:16:PRO:CG	31:v:35:LYS:CG	2.15	1.23

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:13:U:C5'	20:k:238:PHE:CE2	2.19	1.23
46:A:992:U:O4	76:f:13:ILE:HD12	1.07	1.23
7:AG:147:GLU:OE2	16:g:14:GLN:HG2	1.38	1.23
12:AL:753:A:O3'	26:q:129:GLY:HA3	1.35	1.23
12:AL:862:C:P	26:q:215:ARG:HG2	1.79	1.23
18:i:211:SER:O	18:i:212:TYR:CD2	1.90	1.23
5:AE:96:PRO:HB3	12:AL:1541:U:O4'	1.36	1.23
16:g:249:GLY:CA	33:x:55:TYR:CE1	2.20	1.23
21:l:38:VAL:HG11	30:u:141:ILE:CD1	1.69	1.23
2:AB:111:PHE:CE2	12:AL:101:U:C6	2.27	1.22
3:AC:237:VAL:CG1	4:AD:44:ARG:NH1	1.86	1.22
11:AK:74:ALA:HA	18:i:181:ASN:OD1	1.38	1.22
11:AK:112:GLU:CG	18:i:127:LEU:HD21	1.67	1.22
12:AL:1212:A:OP1	24:o:244:SER:OG	1.57	1.22
15:Z:31:LEU:CD1	22:m:246:LEU:HD23	1.60	1.22
6:AF:339:LEU:HD23	31:v:52:LYS:CE	1.68	1.22
8:AH:184:ARG:HG2	12:AL:814:A:C4'	1.66	1.22
11:AK:75:ARG:NH2	20:k:85:ASN:O	1.70	1.22
11:AK:154:TYR:HD2	25:p:57:PHE:CE2	1.57	1.22
12:AL:1492:U:O2'	12:AL:1493:A:H5'	1.39	1.22
21:l:110:SER:CB	33:x:93:TYR:CZ	2.22	1.22
22:m:246:LEU:N	22:m:246:LEU:HD22	1.46	1.22
6:AF:58:MET:CE	19:j:30:LYS:CE	2.13	1.22
7:AG:217:LEU:CD1	16:g:273:MET:CB	2.15	1.22
46:A:1059:A:O2'	46:A:1060:U:OP1	1.56	1.22
12:AL:861:C:H4'	26:q:217:LEU:CD2	1.66	1.22
12:AL:1165:A:OP1	24:o:254:ARG:HG3	1.08	1.22
46:A:1725:G:OP1	47:B:176:ARG:NH2	1.69	1.22
6:AF:326:ARG:HH22	12:AL:301:A:P	1.63	1.22
11:AK:192:GLU:OE2	18:i:100:TYR:HB2	1.36	1.22
12:AL:1021:U:C4'	34:y:84:SER:HB2	1.66	1.22
21:l:110:SER:CB	33:x:93:TYR:OH	1.87	1.22
7:AG:96:LYS:HZ3	12:AL:915:U:C5'	1.48	1.21
8:AH:153:ILE:HG13	23:n:41:GLN:NE2	0.88	1.21
12:AL:673:A:C2	20:k:266:ARG:CZ	2.22	1.21
12:AL:1046:U:O3'	29:t:77:ARG:NH1	1.73	1.21
18:i:88:ASN:ND2	25:p:53:GLU:OE2	1.74	1.21
25:p:85:ARG:CZ	29:t:115:TRP:CE2	2.23	1.21
7:AG:96:LYS:NZ	12:AL:915:U:C3'	2.03	1.21
6:AF:212:LEU:HD13	19:j:445:PHE:CD2	1.74	1.21
11:AK:161:GLU:HB3	25:p:127:TYR:OH	1.37	1.21

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1013:C:OP2	28:s:107:ASN:HB3	1.39	1.21
12:AL:1213:G:C8	24:o:247:HIS:HE1	1.56	1.21
12:AL:1627:U:H5	15:Z:13:LEU:CD1	1.54	1.21
46:A:1819:A:N1	46:A:1820:G:O6	1.72	1.21
3:AC:265:SER:O	17:h:128:PRO:CD	1.89	1.20
6:AF:61:PHE:CE1	19:j:29:TYR:CE1	2.28	1.20
12:AL:1165:A:P	24:o:254:ARG:NE	2.13	1.20
12:AL:1576:U:H4'	46:A:1861:C:C5'	1.70	1.20
8:AH:100:ALA:O	12:AL:143:A:H5"	1.36	1.20
12:AL:140:A:H2	31:v:5:LEU:CD2	1.49	1.20
15:Z:31:LEU:CD1	22:m:246:LEU:CG	2.16	1.20
18:i:150:ASN:CG	20:k:78:LEU:HB2	1.67	1.20
28:s:85:ILE:HD11	34:y:67:ASP:CA	1.68	1.20
3:AC:217:TRP:CD1	17:h:146:LEU:HD21	1.74	1.20
7:AG:96:LYS:HZ2	12:AL:915:U:C4'	1.52	1.20
12:AL:749:A:H5'	26:q:121:LYS:NZ	1.55	1.20
12:AL:1406:G:H2'	12:AL:1407:A:C8	1.76	1.20
12:AL:1429:A:C8	29:t:72:THR:CG2	2.23	1.20
12:AL:1633:U:O4	33:x:58:PHE:CE2	1.95	1.20
6:AF:136:PRO:CB	19:j:436:ILE:HD12	1.72	1.20
8:AH:14:VAL:HB	12:AL:298:A:N7	1.56	1.20
11:AK:97:SER:HB2	18:i:171:TYR:OH	1.41	1.20
12:AL:41:C:C4'	27:r:57:GLN:NE2	2.03	1.20
12:AL:1045:C:O3'	29:t:23:ARG:HG2	1.36	1.20
46:A:1608:U:O3'	48:C:201:HIS:NE2	1.75	1.20
6:AF:70:GLU:HG3	19:j:426:LYS:NZ	1.56	1.19
6:AF:88:ILE:CD1	19:j:28:LEU:HG	1.71	1.19
8:AH:208:GLU:HG2	30:u:134:ARG:NH1	1.54	1.19
12:AL:1628:A:N6	15:Z:78:ILE:HG21	1.55	1.19
5:AE:88:LEU:CD1	5:AE:90:PRO:HG3	1.73	1.19
12:AL:232:U:O2'	31:v:78:VAL:CG1	1.89	1.19
13:AM:33:U:H3'	24:o:278:ARG:NH1	1.57	1.19
46:A:2317:A:C2	69:X:65:PHE:CD1	2.29	1.19
3:AC:195:ALA:CA	4:AD:223:TYR:CE2	2.06	1.19
8:AH:50:ALA:CB	32:w:75:ALA:C	2.15	1.19
12:AL:825:G:O2'	12:AL:826:G:H5'	1.36	1.19
12:AL:1164:U:O3'	24:o:254:ARG:NE	1.74	1.19
12:AL:1410:U:OP1	24:o:277:LYS:N	1.73	1.19
6:AF:312:ALA:O	31:v:68:ASP:OD2	1.56	1.19
6:AF:321:TYR:OH	31:v:36:PRO:HD3	1.37	1.19
7:AG:184:GLU:CG	16:g:209:SER:HB3	1.72	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:26:SER:HA	12:AL:1299:A:C5	1.76	1.19
6:AF:136:PRO:CG	19:j:436:ILE:HD12	1.73	1.19
8:AH:224:PHE:HD1	21:l:18:LYS:CD	1.54	1.19
3:AC:40:ASP:CG	4:AD:286:VAL:HG21	1.66	1.18
6:AF:48:LYS:HD2	12:AL:489:A:C8	1.77	1.18
12:AL:16:G:OP2	20:k:261:LYS:CD	1.91	1.18
12:AL:665:U:O2'	27:r:111:ARG:NH2	1.74	1.18
46:A:1819:A:C2	46:A:1820:G:O6	1.95	1.18
3:AC:148:LEU:CD1	4:AD:82:ASN:ND2	2.05	1.18
8:AH:224:PHE:CD1	21:l:18:LYS:CD	2.26	1.18
16:g:200:ILE:CD1	16:g:287:LYS:CD	2.18	1.18
4:AD:208:PHE:CD2	16:g:214:LEU:HB3	1.78	1.18
12:AL:873:A:P	30:u:197:LYS:HZ2	1.66	1.18
12:AL:1105:G:P	18:i:332:LYS:HD3	1.83	1.18
12:AL:1647:A:O2'	17:h:176:TYR:CE2	1.91	1.18
46:A:2276:G:H1	56:K:128:MET:CG	1.56	1.18
46:A:2611:U:OP2	69:X:37:VAL:HG12	1.03	1.18
1:AA:80:VAL:HG22	12:AL:1462:A:C6	1.75	1.18
3:AC:188:ALA:CB	4:AD:73:LYS:CB	2.20	1.18
6:AF:61:PHE:CG	19:j:29:TYR:CZ	2.31	1.18
8:AH:50:ALA:HB2	32:w:75:ALA:O	1.40	1.18
16:g:12:ILE:CD1	17:h:195:LEU:HD21	1.73	1.18
11:AK:170:GLN:HE21	25:p:120:VAL:CG2	1.55	1.18
7:AG:217:LEU:HD11	16:g:273:MET:CA	1.66	1.17
12:AL:1117:U:OP1	20:k:160:LYS:NZ	1.75	1.17
12:AL:1630:A:H5"	35:z:170:LYS:CE	1.73	1.17
46:A:2611:U:OP2	69:X:37:VAL:CG1	1.92	1.17
3:AC:90:HIS:CG	17:h:161:GLY:HA2	1.79	1.17
7:AG:217:LEU:HD22	16:g:273:MET:CE	1.72	1.17
8:AH:19:ARG:NH2	12:AL:233:C:P	2.17	1.17
12:AL:1105:G:C4'	18:i:390:ASN:HD22	1.56	1.17
16:g:7:LEU:CD1	17:h:189:MET:CE	1.97	1.17
46:A:1531:C:C4	47:B:326:TRP:CH2	2.32	1.17
3:AC:90:HIS:HD2	17:h:161:GLY:N	1.43	1.17
6:AF:212:LEU:HD13	19:j:445:PHE:CG	1.77	1.17
12:AL:41:C:H4'	27:r:57:GLN:HE22	1.05	1.17
12:AL:409:G:H4'	19:j:123:GLN:NE2	1.59	1.17
12:AL:753:A:C3'	26:q:129:GLY:HA3	1.72	1.17
17:h:337:LYS:HZ1	20:k:203:ARG:NH1	1.39	1.17
46:A:2611:U:C5'	69:X:37:VAL:HG13	1.72	1.17
3:AC:185:LEU:HD12	7:AG:196:MET:C	1.69	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:162:ALA:HB1	7:AG:189:VAL:HG21	1.19	1.17
12:AL:1120:U:O2'	17:h:282:ASN:OD1	1.61	1.17
12:AL:1372:G:N2	12:AL:1400:A:OP2	1.78	1.17
18:i:166:ASN:ND2	18:i:168:ASN:HB3	1.58	1.17
18:i:316:MET:HE3	20:k:69:TRP:CZ2	1.78	1.17
8:AH:103:ARG:HH22	31:v:79:GLY:CA	1.50	1.17
9:AI:310:ASN:CG	28:s:34:LYS:HB3	1.69	1.17
12:AL:1491:U:OP1	54:I:49:PRO:HB2	1.44	1.17
12:AL:1646:U:C2	17:h:176:TYR:CD2	2.16	1.17
4:AD:162:ALA:CB	7:AG:189:VAL:HG21	1.74	1.16
7:AG:91:LEU:HD21	23:n:54:MET:O	1.42	1.16
8:AH:16:PRO:HG3	31:v:35:LYS:CE	1.75	1.16
8:AH:229:GLU:OE2	21:l:43:VAL:CG1	1.92	1.16
9:AI:210:ARG:CZ	12:AL:1348:U:N1	2.04	1.16
12:AL:1108:G:C4'	25:p:95:HIS:CD2	2.20	1.16
3:AC:90:HIS:NE2	17:h:160:LEU:CD1	2.08	1.16
10:AJ:14:LEU:CD2	11:AK:222:LEU:CD2	2.22	1.16
12:AL:728:A:OP1	33:x:123:ARG:NH2	1.79	1.16
12:AL:1631:U:O2'	33:x:66:HIS:HB2	1.42	1.16
20:k:59:LEU:CB	25:p:20:TYR:OH	1.93	1.16
3:AC:217:TRP:NE1	17:h:146:LEU:CD2	2.09	1.16
8:AH:37:LYS:HD3	12:AL:182:A:P	1.84	1.16
8:AH:184:ARG:HD3	12:AL:814:A:H4'	1.19	1.16
11:AK:151:GLN:NE2	18:i:83:LYS:HZ1	1.42	1.16
11:AK:196:ASN:HA	12:AL:1290:A:N6	0.84	1.16
12:AL:773:A:C5'	26:q:79:HIS:ND1	2.07	1.16
12:AL:785:A:O2'	33:x:109:ILE:N	1.76	1.16
12:AL:1411:G:O2'	24:o:272:MET:HB2	1.44	1.16
17:h:131:ASN:CB	24:o:119:GLN:HA	1.75	1.16
18:i:88:ASN:HD22	25:p:53:GLU:CD	1.52	1.16
3:AC:200:MET:HB3	7:AG:200:LEU:CD1	1.72	1.16
7:AG:3:ILE:HG21	23:n:20:ARG:NH1	0.83	1.16
16:g:249:GLY:HA2	33:x:55:TYR:CE1	1.79	1.16
5:AE:95:LYS:HE3	12:AL:1523:A:O3'	1.43	1.16
7:AG:3:ILE:HD12	23:n:20:ARG:CD	1.75	1.16
8:AH:167:ASN:O	23:n:65:PRO:HD3	1.39	1.16
3:AC:191:ILE:HD13	4:AD:222:GLN:CD	1.70	1.15
6:AF:208:MET:HB2	19:j:425:TRP:CZ3	1.81	1.15
10:AJ:29:ARG:NH2	34:y:13:TRP:CZ2	2.12	1.15
12:AL:1645:U:C4	17:h:175:PHE:CD1	2.30	1.15
18:i:166:ASN:HD21	18:i:168:ASN:CB	1.59	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:181:ILE:HA	5:AE:185:PHE:HB3	1.29	1.15
7:AG:184:GLU:HG2	16:g:209:SER:HB3	1.26	1.15
8:AH:100:ALA:HB2	12:AL:143:A:OP1	1.46	1.15
12:AL:691:U:C2	12:AL:825:G:C6	2.32	1.15
12:AL:1628:A:N3	35:z:166:ILE:HG13	1.62	1.15
15:Z:31:LEU:CD1	22:m:246:LEU:HG	1.74	1.15
15:Z:38:LEU:HD12	22:m:238:ILE:CA	1.75	1.15
16:g:200:ILE:HD13	16:g:287:LYS:CG	1.70	1.15
5:AE:99:LYS:CE	12:AL:1524:U:H4'	1.75	1.15
7:AG:217:LEU:CD2	16:g:273:MET:HE3	1.76	1.15
8:AH:224:PHE:CE1	21:l:18:LYS:HD3	1.81	1.15
9:AI:206:LYS:HE2	12:AL:1346:U:C5	1.80	1.15
11:AK:107:LEU:CD2	18:i:168:ASN:OD1	1.94	1.15
12:AL:1031:A:H1'	24:o:278:ARG:NH1	1.58	1.15
3:AC:185:LEU:HD12	7:AG:196:MET:CA	1.77	1.15
10:AJ:29:ARG:NH2	34:y:13:TRP:CD2	2.05	1.15
11:AK:132:PHE:HD2	18:i:249:PRO:CD	1.57	1.15
11:AK:132:PHE:CD2	18:i:249:PRO:HD2	1.82	1.15
16:g:45:ARG:HG3	17:h:170:PRO:CB	1.77	1.15
20:k:48:VAL:HA	25:p:30:ALA:HB2	1.27	1.15
28:s:92:ARG:NH2	28:s:104:THR:CG2	2.10	1.15
46:A:1811:U:C2	46:A:1819:A:N6	2.14	1.15
3:AC:90:HIS:NE2	17:h:160:LEU:HD12	1.59	1.15
6:AF:320:ARG:HD3	8:AH:13:GLY:HA3	1.22	1.15
7:AG:147:GLU:OE2	16:g:14:GLN:CG	1.95	1.15
7:AG:224:VAL:HG12	33:x:45:LEU:HD12	1.16	1.15
18:i:368:LEU:HD12	29:t:111:LYS:HD3	1.27	1.15
25:p:85:ARG:NE	29:t:115:TRP:CZ2	2.15	1.15
6:AF:62:LEU:HD21	19:j:26:PHE:CE1	1.82	1.14
7:AG:221:GLU:HG3	16:g:270:PHE:CE2	1.81	1.14
8:AH:53:VAL:CG1	32:w:48:GLU:OE2	1.96	1.14
12:AL:753:A:C4'	26:q:129:GLY:HA3	1.76	1.14
12:AL:1216:A:C1'	24:o:256:TYR:HB3	1.75	1.14
7:AG:206:ILE:HB	16:g:92:GLU:CD	1.73	1.14
9:AI:431:PHE:CD1	24:o:176:ILE:HD11	1.82	1.14
12:AL:753:A:H4'	26:q:129:GLY:C	1.72	1.14
12:AL:802:A:OP1	33:x:131:ARG:NH2	1.78	1.14
12:AL:1105:G:C5'	18:i:390:ASN:ND2	1.86	1.14
16:g:51:LYS:NZ	17:h:364:ASP:OD2	1.80	1.14
2:AB:110:PHE:CE1	12:AL:101:U:H5'	1.81	1.14
6:AF:307:TYR:CE2	31:v:92:LYS:CB	2.31	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:56:LEU:HG	22:m:214:GLU:CD	1.72	1.14
10:AJ:93:LYS:HG2	12:AL:1058:G:O6	1.44	1.14
12:AL:1361:U:O4	28:s:48:HIS:CD2	2.00	1.14
12:AL:1630:A:H5"	35:z:170:LYS:HE2	1.30	1.14
30:u:74:PRO:HG2	32:w:100:GLU:HG3	1.19	1.14
3:AC:148:LEU:HD13	4:AD:82:ASN:CG	1.73	1.14
11:AK:285:LEU:HD13	12:AL:1281:A:C5	1.83	1.14
12:AL:379:U:O2'	31:v:12:ARG:NH1	1.80	1.14
22:m:101:LEU:HD22	24:o:242:LEU:HD13	1.17	1.14
30:u:87:LEU:HD11	32:w:114:ARG:NH2	1.49	1.14
5:AE:88:LEU:HD13	5:AE:90:PRO:CD	1.78	1.14
6:AF:137:PHE:CE1	19:j:468:PRO:CB	2.30	1.14
8:AH:16:PRO:HG3	31:v:35:LYS:CD	1.78	1.14
10:AJ:53:ILE:CG1	29:t:14:PRO:HB3	1.76	1.14
10:AJ:80:VAL:HG21	12:AL:1091:A:C5'	1.77	1.14
46:A:600:C:C4'	47:B:133:ARG:NH1	2.11	1.14
46:A:1932:G:N2	48:C:209:GLN:CG	2.10	1.14
3:AC:62:TYR:CD2	17:h:159:LYS:HG2	1.72	1.13
8:AH:180:ARG:HD2	12:AL:815:C:OP1	1.48	1.13
8:AH:199:LEU:HD21	30:u:93:TYR:CZ	1.77	1.13
11:AK:107:LEU:CD1	18:i:168:ASN:O	1.96	1.13
11:AK:143:GLU:OE2	18:i:87:LEU:CD2	1.95	1.13
11:AK:161:GLU:CB	25:p:127:TYR:OH	1.95	1.13
12:AL:1013:C:OP2	28:s:107:ASN:CB	1.94	1.13
12:AL:1429:A:N7	29:t:72:THR:HB	1.61	1.13
12:AL:1633:U:C5	33:x:58:PHE:CG	2.35	1.13
46:A:1015:A:H5'	76:f:117:LEU:HD23	1.20	1.13
6:AF:146:ASN:CG	19:j:439:HIS:CD2	2.25	1.13
7:AG:3:ILE:CD1	23:n:20:ARG:CD	2.26	1.13
12:AL:690:G:C8	12:AL:823:G:O6	2.01	1.13
46:A:1819:A:C2	46:A:1820:G:C6	2.36	1.13
46:A:2376:A:N6	69:X:68:THR:CG2	2.10	1.13
8:AH:14:VAL:HB	12:AL:298:A:C5	1.83	1.13
8:AH:46:GLY:HA3	32:w:5:ASN:CG	1.73	1.13
10:AJ:53:ILE:HG12	29:t:14:PRO:CB	1.76	1.13
11:AK:143:GLU:OE2	18:i:87:LEU:HD21	1.49	1.13
12:AL:1013:C:OP2	28:s:107:ASN:ND2	1.80	1.13
12:AL:1627:U:O4'	35:z:158:PHE:HE1	1.13	1.13
12:AL:1631:U:O2'	33:x:66:HIS:CB	1.96	1.13
46:A:1531:C:C4	47:B:326:TRP:CZ2	2.35	1.13
7:AG:3:ILE:CG2	23:n:20:ARG:HH12	1.45	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1258:U:C5	34:y:83:PHE:HB3	1.64	1.13
21:l:2:LEU:HD12	21:l:72:ASP:OD1	0.97	1.13
29:t:60:LEU:CD1	34:y:20:PRO:HG3	1.79	1.13
46:A:2077:A:H3'	46:A:2078:U:O4'	1.48	1.13
3:AC:232:LEU:HD21	4:AD:278:LYS:CA	1.79	1.12
5:AE:149:SER:CB	5:AE:159:MET:CE	2.27	1.12
10:AJ:79:MET:CE	12:AL:1238:G:OP1	1.97	1.13
5:AE:149:SER:OG	5:AE:159:MET:HE3	1.48	1.12
9:AI:58:LYS:O	12:AL:1341:U:O4	1.67	1.12
11:AK:132:PHE:HB3	18:i:248:MET:HA	1.24	1.12
11:AK:196:ASN:HA	12:AL:1290:A:C6	1.84	1.12
12:AL:1164:U:H5"	24:o:254:ARG:NH2	1.61	1.12
12:AL:1313:U:H1'	12:AL:1314:U:H5	1.14	1.12
15:Z:66:ALA:CB	22:m:184:ASN:CA	2.20	1.12
16:g:45:ARG:HG3	17:h:170:PRO:HB3	1.13	1.12
30:u:100:LYS:HB3	32:w:167:LEU:CD2	1.65	1.13
46:A:2324:U:H2'	46:A:2325:A:H8	1.08	1.13
16:g:71:LEU:HD23	17:h:201:LEU:HD21	1.30	1.12
28:s:92:ARG:NH2	28:s:104:THR:HG21	1.62	1.12
9:AI:413:LEU:HD21	22:m:149:PRO:CD	1.80	1.12
12:AL:861:C:C4'	26:q:217:LEU:HD23	1.79	1.12
12:AL:1634:C:H1'	16:g:85:TRP:CH2	1.84	1.12
46:A:981:G:H21	76:f:150:LYS:CD	1.61	1.12
51:F:163:PRO:HB3	75:e:213:LEU:HD13	1.28	1.12
6:AF:67:TYR:CD2	12:AL:482:U:C5	2.37	1.12
7:AG:90:ARG:NH1	12:AL:917:U:OP1	1.82	1.12
8:AH:180:ARG:HD3	12:AL:815:C:OP1	1.44	1.12
9:AI:56:LEU:HD11	22:m:211:ARG:N	1.64	1.12
9:AI:203:MET:HE1	12:AL:1354:U:H5	0.97	1.12
10:AJ:14:LEU:HD11	11:AK:222:LEU:CD2	1.80	1.12
11:AK:138:PRO:HG2	18:i:322:LYS:CA	1.80	1.12
15:Z:89:ILE:CD1	35:z:168:ILE:CG2	2.27	1.12
6:AF:136:PRO:CB	19:j:436:ILE:CD1	2.26	1.12
6:AF:339:LEU:CD2	31:v:52:LYS:HE2	1.72	1.12
7:AG:3:ILE:CG2	23:n:20:ARG:NH2	2.11	1.12
8:AH:202:LEU:HD11	21:l:105:LEU:HB3	1.18	1.12
11:AK:135:ASP:H	20:k:105:ILE:HG12	1.08	1.12
21:l:66:HIS:ND1	33:x:137:LEU:CD2	2.13	1.12
2:AB:108:LYS:HE2	12:AL:68:A:OP1	1.46	1.12
5:AE:94:VAL:O	12:AL:1542:A:O5'	1.65	1.12
8:AH:199:LEU:HD23	30:u:93:TYR:CZ	1.77	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:60:TRP:HB2	22:m:210:VAL:HG22	1.29	1.12
12:AL:1215:A:H4'	12:AL:1216:A:H5'	1.22	1.12
51:F:163:PRO:CB	75:e:213:LEU:HD13	1.79	1.12
63:R:335:THR:HG22	63:R:363:SER:HB3	1.31	1.12
8:AH:64:PRO:HG3	12:AL:133:U:N3	1.13	1.11
12:AL:41:C:O4'	27:r:57:GLN:NE2	1.84	1.11
12:AL:689:C:C2	12:AL:827:G:N2	2.18	1.11
12:AL:1105:G:OP2	18:i:332:LYS:CD	1.97	1.11
15:Z:89:ILE:HD13	35:z:168:ILE:CG2	1.78	1.11
18:i:82:ASN:ND2	20:k:57:PRO:HB3	1.64	1.11
21:l:80:GLU:HG3	47:B:73:LEU:CB	1.79	1.11
3:AC:9:HIS:CE1	17:h:164:ILE:HD13	1.60	1.11
6:AF:307:TYR:OH	31:v:92:LYS:HB3	1.49	1.11
12:AL:502:A:OP1	19:j:7:LEU:HB3	1.49	1.11
12:AL:1381:U:OP2	34:y:12:VAL:HG21	1.25	1.11
22:m:246:LEU:CD2	22:m:246:LEU:H	1.56	1.11
26:q:214:MET:HE1	35:z:140:MET:HG3	1.31	1.11
3:AC:194:PHE:CE2	4:AD:223:TYR:HB2	1.85	1.11
6:AF:61:PHE:CE1	19:j:29:TYR:CD1	2.37	1.11
8:AH:78:THR:CG2	12:AL:230:A:O2'	1.97	1.11
11:AK:112:GLU:CG	18:i:127:LEU:CD2	2.28	1.11
12:AL:1627:U:C6	35:z:158:PHE:HZ	1.61	1.11
16:g:12:ILE:HD12	17:h:195:LEU:HD21	1.22	1.11
16:g:68:LEU:CD1	17:h:217:ILE:CD1	2.27	1.11
6:AF:146:ASN:HB2	19:j:439:HIS:NE2	1.64	1.11
7:AG:74:LEU:HD11	8:AH:187:LEU:HD21	1.17	1.11
8:AH:223:VAL:HG12	21:l:44:PRO:HG2	1.22	1.11
9:AI:206:LYS:HE2	12:AL:1346:U:H5	0.97	1.11
11:AK:144:LEU:HD12	18:i:319:LEU:HD11	1.31	1.11
12:AL:508:C:C5'	19:j:420:PRO:HB2	1.80	1.11
12:AL:1182:U:H1'	25:p:78:PRO:HB2	1.16	1.11
46:A:2276:G:N1	56:K:128:MET:HG2	1.63	1.11
46:A:3160:U:H5"	57:L:52:THR:HG21	1.27	1.11
3:AC:265:SER:C	17:h:128:PRO:HD2	1.75	1.11
11:AK:151:GLN:HG3	18:i:83:LYS:CE	1.81	1.11
11:AK:299:LYS:CE	24:o:151:PHE:HD1	1.64	1.11
2:AB:111:PHE:CE2	12:AL:101:U:N1	2.19	1.10
8:AH:100:ALA:CB	12:AL:143:A:P	2.39	1.10
12:AL:1172:A:C8	25:p:36:ILE:CD1	2.32	1.10
12:AL:1361:U:N3	28:s:48:HIS:HD2	1.49	1.10
12:AL:1382:C:O2	12:AL:1383:U:H5	1.30	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:80:VAL:CG2	12:AL:1462:A:C5	2.35	1.10
3:AC:217:TRP:CE2	17:h:146:LEU:HD21	1.85	1.10
12:AL:1021:U:H4'	34:y:84:SER:HB2	1.11	1.10
12:AL:1382:C:O2	12:AL:1383:U:C5	2.04	1.10
12:AL:1624:U:C4	35:z:154:HIS:ND1	2.18	1.10
18:i:148:LYS:CE	20:k:78:LEU:CD1	2.24	1.10
7:AG:217:LEU:HD13	16:g:273:MET:CA	1.64	1.10
11:AK:132:PHE:HB2	18:i:248:MET:HA	1.19	1.10
12:AL:749:A:H5'	26:q:121:LYS:HZ1	0.95	1.10
12:AL:1624:U:O4	35:z:154:HIS:ND1	1.85	1.10
75:e:66:MET:HG2	75:e:149:GLN:HB3	1.14	1.10
1:AA:92:LYS:HE2	12:AL:956:U:H4'	1.33	1.10
8:AH:100:ALA:C	12:AL:143:A:H5"	1.76	1.10
11:AK:132:PHE:CD1	18:i:248:MET:HE1	1.59	1.10
11:AK:153:PHE:CZ	20:k:81:GLN:OE1	2.04	1.10
11:AK:169:ARG:HB3	25:p:70:GLY:HA3	1.33	1.10
12:AL:673:A:H2	20:k:266:ARG:NH2	1.17	1.10
25:p:85:ARG:CD	29:t:115:TRP:CH2	2.34	1.10
2:AB:111:PHE:HE2	12:AL:101:U:C6	1.64	1.10
5:AE:88:LEU:HD11	5:AE:90:PRO:HG3	1.26	1.10
6:AF:88:ILE:HD11	19:j:28:LEU:HG	1.23	1.10
6:AF:137:PHE:CD2	19:j:468:PRO:HA	1.87	1.10
11:AK:158:ALA:CB	25:p:27:VAL:HG22	1.81	1.10
12:AL:753:A:C4'	26:q:129:GLY:CA	2.27	1.10
15:Z:66:ALA:HB2	22:m:184:ASN:HB3	1.21	1.10
16:g:7:LEU:CD2	17:h:219:ILE:CD1	2.28	1.10
30:u:174:SER:HA	30:u:215:ILE:HD11	1.22	1.10
46:A:1010:A:C2	76:f:50:TYR:OH	2.03	1.10
46:A:2611:U:H5'	69:X:37:VAL:CG1	1.80	1.10
1:AA:80:VAL:HG21	12:AL:1462:A:C5	1.85	1.09
3:AC:148:LEU:CD1	4:AD:82:ASN:CB	2.21	1.09
5:AE:149:SER:CB	5:AE:159:MET:HE2	1.82	1.09
5:AE:149:SER:HB3	5:AE:159:MET:HE2	1.09	1.09
6:AF:58:MET:CG	19:j:11:LEU:HD13	1.80	1.09
8:AH:184:ARG:HD3	12:AL:814:A:C4'	1.80	1.09
4:AD:208:PHE:CE2	16:g:214:LEU:HB2	1.58	1.09
4:AD:208:PHE:CD2	16:g:214:LEU:CD2	2.33	1.09
6:AF:204:ASP:OD2	19:j:158:LEU:CD1	2.00	1.09
6:AF:307:TYR:HE2	31:v:92:LYS:CB	1.63	1.09
6:AF:326:ARG:NH2	12:AL:301:A:P	2.26	1.09
10:AJ:14:LEU:HD11	11:AK:222:LEU:HD22	1.27	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:749:A:C5'	26:q:121:LYS:NZ	2.15	1.09
13:AM:76:A:C2	46:A:2688:G:N1	2.21	1.09
3:AC:179:ARG:CZ	7:AG:201:PHE:HE1	1.63	1.09
6:AF:88:ILE:HD11	19:j:28:LEU:CG	1.82	1.09
7:AG:36:ILE:HD11	17:h:234:LYS:HG2	1.12	1.09
9:AI:56:LEU:HB2	22:m:214:GLU:OE1	1.53	1.09
11:AK:285:LEU:HD11	12:AL:1281:A:N7	1.67	1.09
12:AL:502:A:H4'	19:j:7:LEU:HD21	1.30	1.09
12:AL:749:A:C5'	26:q:121:LYS:HZ1	1.64	1.09
12:AL:760:A:OP1	26:q:136:ALA:HB3	1.51	1.09
12:AL:823:G:OP1	12:AL:886:G:N2	1.84	1.09
12:AL:1628:A:H61	15:Z:78:ILE:CG2	1.64	1.09
18:i:93:TRP:NE1	29:t:109:GLY:N	1.99	1.09
46:A:2625:A:H61	55:J:110:GLN:NE2	1.48	1.09
3:AC:266:LYS:HD2	17:h:129:TYR:OH	0.93	1.09
5:AE:96:PRO:HD3	12:AL:1541:U:H1'	1.26	1.09
6:AF:61:PHE:CG	19:j:29:TYR:CE2	2.40	1.09
9:AI:210:ARG:NE	12:AL:1348:U:C4	2.20	1.09
11:AK:138:PRO:CG	18:i:322:LYS:HA	1.82	1.09
12:AL:1214:A:O5'	12:AL:1214:A:C8	2.05	1.09
12:AL:1628:A:C2	35:z:166:ILE:CD1	2.13	1.09
46:A:1811:U:N3	46:A:1819:A:N6	2.01	1.09
6:AF:67:TYR:CE2	12:AL:482:U:C6	2.41	1.09
6:AF:137:PHE:CD1	19:j:468:PRO:CB	2.36	1.09
6:AF:307:TYR:HE2	31:v:92:LYS:HB2	1.06	1.09
10:AJ:58:HIS:O	10:AJ:59:LEU:HG	1.51	1.09
20:k:40:ILE:HD12	25:p:22:VAL:HG11	1.35	1.09
21:l:8:LEU:HD11	33:x:136:GLY:HA3	1.15	1.09
46:A:2276:G:H1	56:K:128:MET:HG2	0.97	1.09
46:A:2376:A:H61	69:X:68:THR:CG2	1.65	1.09
8:AH:104:ARG:HD2	12:AL:143:A:C5'	1.82	1.08
12:AL:379:U:H1'	31:v:12:ARG:HH11	1.14	1.08
12:AL:1044:C:N3	29:t:73:GLN:NE2	2.01	1.08
16:g:249:GLY:C	33:x:55:TYR:CE1	2.30	1.08
18:i:86:HIS:CE1	25:p:53:GLU:OE1	2.05	1.08
4:AD:155:LEU:HB2	16:g:210:LEU:HG	1.17	1.08
5:AE:149:SER:OG	5:AE:159:MET:CE	2.01	1.08
7:AG:206:ILE:HD13	16:g:92:GLU:OE1	1.50	1.08
7:AG:217:LEU:HD13	16:g:273:MET:HG3	1.25	1.08
11:AK:134:PHE:CE2	20:k:112:LEU:HD23	1.87	1.08
12:AL:749:A:H4'	26:q:121:LYS:HZ3	1.17	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:750:G:H5'	26:q:123:LYS:HA	1.28	1.08
12:AL:1216:A:C1'	24:o:256:TYR:HB2	1.76	1.08
16:g:3:LEU:HD12	17:h:211:TYR:CE2	1.88	1.08
18:i:368:LEU:HA	29:t:111:LYS:CD	1.83	1.08
28:s:85:ILE:HD12	34:y:67:ASP:CB	1.57	1.08
3:AC:179:ARG:NH2	7:AG:201:PHE:CE1	2.21	1.08
3:AC:191:ILE:HG21	4:AD:222:GLN:OE1	1.53	1.08
5:AE:63:PRO:CG	12:AL:1515:A:OP1	2.01	1.08
11:AK:285:LEU:HD11	12:AL:1281:A:C6	1.66	1.08
12:AL:1642:U:H5"	16:g:44:TYR:CD2	1.88	1.08
3:AC:194:PHE:HE2	4:AD:223:TYR:HB2	1.05	1.08
4:AD:67:LEU:HA	4:AD:77:LYS:NZ	1.46	1.08
4:AD:155:LEU:HD22	16:g:210:LEU:CB	1.82	1.08
4:AD:258:LYS:HE2	16:g:226:VAL:HG22	1.33	1.08
8:AH:168:ARG:HG3	23:n:65:PRO:HG2	1.27	1.08
12:AL:1261:A:N3	28:s:107:ASN:HB2	1.69	1.08
18:i:148:LYS:HE3	20:k:78:LEU:HD12	1.08	1.08
22:m:109:ARG:HH22	24:o:228:MET:CE	1.56	1.08
3:AC:188:ALA:HB3	4:AD:73:LYS:HB3	1.24	1.08
8:AH:64:PRO:CG	12:AL:133:U:N3	2.01	1.08
9:AI:367:TYR:CE2	11:AK:274:PRO:HB2	1.86	1.08
10:AJ:14:LEU:CD2	11:AK:222:LEU:HD23	1.84	1.08
12:AL:1291:U:H5'	18:i:103:ASN:HB2	1.36	1.08
15:Z:63:SER:HA	22:m:185:LYS:HB2	1.33	1.08
18:i:93:TRP:CE2	29:t:109:GLY:N	2.21	1.08
21:l:1:MET:SD	30:u:148:GLU:HG2	1.92	1.08
22:m:109:ARG:HH22	24:o:228:MET:HE1	1.02	1.08
26:q:184:VAL:HG23	35:z:117:PHE:HE2	1.05	1.08
30:u:275:ARG:HH12	30:u:278:ILE:CD1	1.66	1.08
46:A:600:C:H1'	47:B:133:ARG:NH1	1.67	1.08
46:A:971:A:N6	75:e:107:ARG:HH21	1.50	1.08
75:e:94:LEU:HA	75:e:140:ILE:HA	1.35	1.08
3:AC:9:HIS:CE1	17:h:164:ILE:HD12	1.64	1.07
4:AD:151:GLU:OE1	16:g:106:PRO:HA	1.51	1.07
6:AF:339:LEU:HD21	31:v:52:LYS:HE3	1.09	1.07
7:AG:177:TYR:CE2	16:g:107:PHE:CZ	2.42	1.07
9:AI:413:LEU:HD21	22:m:149:PRO:HD2	1.10	1.07
9:AI:431:PHE:CE1	24:o:176:ILE:HG12	1.88	1.07
11:AK:195:PRO:HG3	12:AL:1290:A:H2'	1.35	1.07
12:AL:690:G:N7	12:AL:823:G:N7	2.02	1.07
12:AL:760:A:OP2	26:q:136:ALA:HB2	1.53	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1633:U:H5	33:x:58:PHE:CZ	1.71	1.07
13:AM:76:A:C2	46:A:2662:A:N1	2.22	1.07
18:i:114:LEU:HD11	29:t:15:GLY:N	1.69	1.07
30:u:275:ARG:NH1	30:u:278:ILE:CD1	2.15	1.07
11:AK:132:PHE:HB2	18:i:248:MET:CA	1.85	1.07
11:AK:162:LEU:HD22	25:p:65:THR:HA	1.29	1.07
15:Z:27:ALA:HB1	22:m:246:LEU:HB3	1.09	1.07
15:Z:38:LEU:CD2	22:m:164:MET:SD	2.42	1.07
16:g:68:LEU:HD13	17:h:217:ILE:HD12	1.36	1.07
21:l:80:GLU:CB	47:B:73:LEU:HB3	1.83	1.07
46:A:2436:A:C5'	46:A:2437:U:OP2	2.00	1.07
4:AD:198:ILE:O	16:g:214:LEU:HD13	1.55	1.07
5:AE:99:LYS:HE3	12:AL:1524:U:C4'	1.84	1.07
5:AE:128:ILE:HG12	12:AL:156:A:OP1	1.50	1.07
5:AE:271:LEU:HA	5:AE:274:TYR:HB2	1.24	1.07
8:AH:210:ILE:HD12	21:l:40:ARG:O	1.53	1.07
11:AK:170:GLN:NE2	25:p:120:VAL:CG2	2.16	1.07
12:AL:806:A:O2'	30:u:201:ASN:ND2	1.88	1.07
12:AL:1045:C:O2	29:t:73:GLN:OE1	1.72	1.07
16:g:68:LEU:HB3	17:h:217:ILE:HD11	1.13	1.07
28:s:85:ILE:CD1	34:y:67:ASP:CG	2.12	1.07
3:AC:232:LEU:HD21	4:AD:278:LYS:HA	1.31	1.07
6:AF:62:LEU:CD1	19:j:26:PHE:HZ	1.68	1.07
6:AF:295:ILE:CD1	31:v:93:ALA:CB	2.23	1.07
15:Z:89:ILE:HD11	35:z:168:ILE:HG22	1.11	1.07
46:A:1006:U:C4	76:f:135:LEU:HA	1.90	1.07
8:AH:60:HIS:HB2	12:AL:133:U:H5	0.96	1.07
11:AK:299:LYS:HG2	24:o:151:PHE:HB3	1.13	1.07
12:AL:690:G:C5	12:AL:823:G:C5	2.42	1.07
18:i:93:TRP:CZ2	29:t:109:GLY:HA2	1.88	1.07
30:u:175:GLU:CD	30:u:176:VAL:N	2.10	1.07
46:A:1004:A:C5'	76:f:140:GLY:HA3	1.85	1.07
46:A:2029:A:H1'	46:A:2030:U:H4'	1.36	1.07
6:AF:295:ILE:HD11	31:v:93:ALA:CA	1.85	1.06
7:AG:67:PRO:CB	32:w:187:GLN:HE22	1.66	1.06
8:AH:16:PRO:CG	31:v:35:LYS:CE	2.33	1.06
9:AI:56:LEU:CG	22:m:214:GLU:CG	2.33	1.06
11:AK:132:PHE:CD2	18:i:249:PRO:CD	2.37	1.06
11:AK:158:ALA:HB3	25:p:27:VAL:HG22	1.35	1.06
12:AL:657:G:OP1	19:j:13:ARG:NH1	1.88	1.06
15:Z:9:ARG:NH1	16:g:71:LEU:CD1	2.18	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:i:368:LEU:HB3	29:t:111:LYS:HG3	1.35	1.06
29:t:56:LEU:CD1	34:y:18:ILE:HG12	1.84	1.06
1:AA:80:VAL:CG2	12:AL:1462:A:C6	2.36	1.06
6:AF:212:LEU:CD1	19:j:445:PHE:CG	2.39	1.06
7:AG:122:LEU:HD21	16:g:15:VAL:HG21	1.07	1.06
7:AG:206:ILE:HD13	16:g:92:GLU:CD	1.79	1.06
7:AG:221:GLU:HG3	16:g:270:PHE:HE2	1.12	1.06
8:AH:46:GLY:HA3	32:w:5:ASN:HB3	1.37	1.06
12:AL:700:U:OP2	23:n:1:MET:HE3	1.53	1.06
16:g:68:LEU:HD12	17:h:217:ILE:HD12	1.11	1.06
17:h:293:GLN:HB2	24:o:40:LYS:HG2	1.11	1.06
30:u:175:GLU:OE2	30:u:176:VAL:N	1.84	1.06
3:AC:94:GLU:OE1	17:h:160:LEU:HD11	1.53	1.06
8:AH:16:PRO:CD	31:v:35:LYS:HE3	1.85	1.06
8:AH:60:HIS:HB2	12:AL:133:U:C5	1.89	1.06
8:AH:202:LEU:HD11	21:l:105:LEU:CB	1.84	1.06
11:AK:112:GLU:HG2	18:i:127:LEU:CD2	1.86	1.06
12:AL:1182:U:OP1	25:p:81:THR:OG1	1.73	1.06
15:Z:9:ARG:HH12	16:g:71:LEU:HD13	1.16	1.06
18:i:368:LEU:HA	29:t:111:LYS:HG2	1.07	1.06
20:k:54:PHE:HD1	25:p:57:PHE:CD1	1.73	1.06
30:u:232:GLN:HG3	32:w:96:VAL:HG21	1.38	1.06
3:AC:148:LEU:CD2	4:AD:204:ALA:HB2	1.85	1.06
9:AI:60:TRP:HB2	22:m:210:VAL:CG2	1.85	1.06
11:AK:182:VAL:HG21	25:p:148:ILE:HA	1.11	1.06
12:AL:381:A:OP1	31:v:7:ARG:HD3	1.56	1.06
12:AL:873:A:OP2	30:u:197:LYS:NZ	1.87	1.06
12:AL:1627:U:H1'	35:z:158:PHE:CZ	1.79	1.06
12:AL:1630:A:H5"	35:z:170:LYS:NZ	1.69	1.06
14:AN:1:A:H5"	27:r:73:PRO:HB3	1.35	1.06
15:Z:66:ALA:CA	22:m:184:ASN:HB2	1.84	1.06
17:h:131:ASN:HB2	24:o:119:GLN:HA	1.31	1.06
17:h:131:ASN:O	24:o:119:GLN:HB3	1.54	1.06
25:p:85:ARG:CZ	29:t:115:TRP:CZ2	2.38	1.06
46:A:1015:A:C5'	76:f:117:LEU:CD2	2.34	1.06
46:A:1048:A:H5"	75:e:110:HIS:HB2	1.32	1.06
7:AG:3:ILE:HD12	23:n:20:ARG:HD2	1.15	1.06
9:AI:151:GLU:O	9:AI:154:VAL:CG1	2.02	1.06
10:AJ:1:MET:SD	11:AK:278:ARG:NH2	2.29	1.06
12:AL:1343:U:H5"	28:s:13:LYS:HD2	1.12	1.06
12:AL:1627:U:C6	35:z:158:PHE:CE2	2.44	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:t:60:LEU:HD11	34:y:20:PRO:HG3	1.38	1.06
6:AF:67:TYR:HD2	12:AL:482:U:C6	1.64	1.05
8:AH:18:THR:CG2	31:v:38:GLU:CD	2.27	1.05
12:AL:787:A:OP2	33:x:112:ARG:HG3	1.56	1.05
12:AL:1012:G:O5'	28:s:107:ASN:ND2	1.89	1.05
12:AL:1181:A:O2'	25:p:80:PRO:HA	1.54	1.05
12:AL:1258:U:H5	34:y:83:PHE:HB3	0.95	1.05
17:h:315:VAL:HG11	24:o:39:PRO:HD3	1.08	1.05
46:A:1077:A:O2'	46:A:1078:U:H5'	1.55	1.05
1:AA:90:LYS:CE	12:AL:1612:C:H41	1.70	1.05
8:AH:167:ASN:C	23:n:65:PRO:CG	2.29	1.05
8:AH:210:ILE:HG23	21:l:39:VAL:HB	1.34	1.05
16:g:200:ILE:HD11	16:g:287:LYS:HE2	1.08	1.05
18:i:368:LEU:CB	29:t:111:LYS:CG	2.33	1.05
21:l:98:LYS:NZ	30:u:148:GLU:OE1	1.88	1.05
75:e:66:MET:HB2	75:e:149:GLN:HB2	1.37	1.05
3:AC:55:GLY:CA	7:AG:121:ILE:CG2	2.35	1.05
3:AC:69:LYS:HD3	12:AL:1640:U:O2	0.88	1.05
6:AF:58:MET:HG2	19:j:11:LEU:CD1	1.86	1.05
6:AF:62:LEU:HD11	19:j:26:PHE:HZ	0.89	1.05
6:AF:321:TYR:CD1	31:v:13:PHE:CZ	2.43	1.05
9:AI:56:LEU:HG	22:m:214:GLU:HG2	1.37	1.05
12:AL:379:U:C1'	31:v:12:ARG:HH11	1.69	1.05
12:AL:502:A:OP2	19:j:7:LEU:HD22	1.54	1.05
12:AL:1163:A:N3	24:o:256:TYR:OH	1.88	1.05
20:k:48:VAL:HA	25:p:30:ALA:CB	1.84	1.05
46:A:1288:U:C5	49:D:114:ALA:HA	1.91	1.05
3:AC:148:LEU:HD21	4:AD:204:ALA:HB2	1.06	1.05
5:AE:88:LEU:HD13	5:AE:90:PRO:HD3	1.05	1.05
7:AG:217:LEU:HD22	16:g:273:MET:HE3	1.05	1.05
11:AK:182:VAL:CG2	25:p:148:ILE:HG22	1.86	1.05
12:AL:382:U:P	31:v:7:ARG:HH12	1.78	1.05
12:AL:698:A:O2'	23:n:5:LYS:NZ	1.89	1.05
25:p:77:LYS:HE2	25:p:79:LEU:HD21	1.37	1.05
30:u:87:LEU:HD12	32:w:114:ARG:NH2	1.56	1.05
6:AF:136:PRO:HB3	19:j:436:ILE:HD11	1.10	1.05
10:AJ:48:TYR:CE2	29:t:28:ARG:NH1	2.25	1.05
11:AK:135:ASP:OD1	20:k:99:LEU:HD23	1.57	1.05
12:AL:269:A:H4'	32:w:66:LEU:O	1.56	1.05
12:AL:406:U:OP1	19:j:64:ARG:HD2	1.55	1.05
15:Z:9:ARG:NH2	16:g:71:LEU:HD12	1.70	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:i:93:TRP:CD1	29:t:109:GLY:N	2.23	1.05
25:p:77:LYS:HD3	25:p:110:LEU:HD23	1.36	1.05
29:t:56:LEU:HD13	34:y:18:ILE:HG12	1.35	1.05
2:AB:111:PHE:CE2	12:AL:101:U:C2	2.45	1.04
7:AG:220:TRP:NE1	33:x:45:LEU:O	1.90	1.04
8:AH:60:HIS:CB	12:AL:133:U:H5	1.70	1.04
12:AL:1361:U:C4	28:s:48:HIS:CD2	2.45	1.04
16:g:3:LEU:CD1	17:h:211:TYR:CD2	2.40	1.04
46:A:1015:A:C5'	76:f:117:LEU:HD23	1.86	1.04
7:AG:206:ILE:HB	16:g:92:GLU:OE2	1.56	1.04
12:AL:1214:A:H4'	24:o:253:THR:HA	1.37	1.04
12:AL:1261:A:H2	28:s:107:ASN:HB3	1.21	1.04
12:AL:1380:A:OP1	34:y:12:VAL:HG22	1.57	1.04
12:AL:1465:A:OP2	20:k:157:GLN:NE2	1.90	1.04
18:i:176:MET:HE1	20:k:92:TRP:O	1.58	1.04
18:i:316:MET:CE	20:k:69:TRP:CZ2	2.40	1.04
4:AD:209:ASN:HA	16:g:222:ILE:HD13	1.33	1.04
6:AF:328:ASN:O	12:AL:403:U:O2'	1.72	1.04
7:AG:75:TYR:CE2	32:w:183:ILE:HD12	1.93	1.04
7:AG:217:LEU:CD1	16:g:273:MET:HG3	1.85	1.04
12:AL:1046:U:OP1	29:t:23:ARG:HB3	1.58	1.04
16:g:7:LEU:HD21	17:h:219:ILE:HD13	1.05	1.04
46:A:1727:A:H3'	47:B:290:GLN:HG2	1.35	1.04
46:A:2611:U:P	69:X:37:VAL:CG1	2.46	1.04
6:AF:339:LEU:HD23	31:v:52:LYS:HE2	1.05	1.04
6:AF:339:LEU:HD21	31:v:52:LYS:CE	1.77	1.04
7:AG:74:LEU:HD11	8:AH:187:LEU:CD2	1.87	1.04
8:AH:104:ARG:CD	12:AL:143:A:O4'	2.04	1.04
8:AH:198:GLU:CG	21:l:105:LEU:CD2	2.35	1.04
11:AK:154:TYR:CD2	25:p:57:PHE:CE2	2.45	1.04
12:AL:691:U:N3	12:AL:825:G:O6	1.88	1.04
12:AL:740:A:H1'	26:q:206:PHE:HD1	1.20	1.04
12:AL:1045:C:O3'	29:t:23:ARG:CG	2.04	1.04
12:AL:1046:U:P	29:t:23:ARG:CG	2.45	1.04
12:AL:1291:U:C6	18:i:103:ASN:ND2	2.26	1.04
12:AL:1628:A:C5	15:Z:18:VAL:HG11	1.91	1.04
17:h:290:TRP:CH2	24:o:49:PRO:HD2	1.92	1.04
20:k:40:ILE:HD13	25:p:22:VAL:CG1	1.82	1.04
3:AC:54:ALA:HB1	7:AG:143:PRO:CA	1.87	1.04
10:AJ:53:ILE:HD12	10:AJ:55:LYS:HE3	1.37	1.04
11:AK:135:ASP:O	20:k:99:LEU:CD2	2.05	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:826:G:O2'	12:AL:827:G:H5'	1.57	1.04
12:AL:1164:U:H5"	24:o:254:ARG:HH21	1.09	1.04
12:AL:1377:A:H4'	28:s:75:VAL:HG13	1.35	1.04
12:AL:1636:U:P	16:g:61:ARG:NH1	2.30	1.04
18:i:93:TRP:CG	29:t:108:PRO:HA	1.91	1.04
2:AB:110:PHE:HE1	12:AL:101:U:H5'	1.12	1.03
3:AC:148:LEU:CD1	4:AD:82:ASN:CG	2.29	1.03
7:AG:147:GLU:CD	16:g:14:GLN:HG2	1.83	1.03
8:AH:70:ASP:HB2	8:AH:73:ASN:HB2	1.39	1.03
16:g:3:LEU:CG	17:h:211:TYR:CE2	2.40	1.03
46:A:981:G:H21	76:f:150:LYS:CE	1.71	1.03
6:AF:212:LEU:CD1	19:j:445:PHE:CB	2.35	1.03
9:AI:56:LEU:HD11	22:m:211:ARG:CA	1.87	1.03
10:AJ:93:LYS:HG2	12:AL:1058:G:C6	1.93	1.03
12:AL:1021:U:C4'	34:y:84:SER:OG	2.00	1.03
12:AL:1213:G:C8	24:o:247:HIS:CE1	2.45	1.03
13:AM:76:A:N3	46:A:2662:A:C2	2.26	1.03
30:u:100:LYS:HB3	32:w:167:LEU:HD21	1.18	1.03
46:A:1004:A:H5"	76:f:140:GLY:HA3	1.35	1.03
46:A:1015:A:H5'	76:f:117:LEU:HD21	1.36	1.03
46:A:1439:A:C2'	46:A:1440:U:H6	1.70	1.03
6:AF:319:TYR:CD1	31:v:42:THR:CG2	2.42	1.03
8:AH:64:PRO:CG	12:AL:131:A:OP1	2.05	1.03
9:AI:310:ASN:ND2	28:s:34:LYS:HB3	1.71	1.03
12:AL:749:A:C4'	26:q:121:LYS:NZ	2.20	1.03
12:AL:753:A:O3'	26:q:129:GLY:CA	2.06	1.03
12:AL:1117:U:OP1	20:k:160:LYS:CD	2.05	1.03
12:AL:1417:A:OP1	24:o:268:LYS:HB2	1.56	1.03
12:AL:1636:U:P	16:g:61:ARG:HH11	1.81	1.03
15:Z:38:LEU:CD1	22:m:238:ILE:HA	1.88	1.03
25:p:85:ARG:NH2	29:t:115:TRP:NE1	2.07	1.03
46:A:1439:A:H2'	46:A:1440:U:H6	0.90	1.03
46:A:2611:U:P	69:X:37:VAL:HG12	1.97	1.03
50:E:251:ALA:HB1	67:V:63:TYR:CE2	1.92	1.03
76:f:76:PRO:HB2	76:f:79:TYR:HB3	1.40	1.03
6:AF:321:TYR:HE2	31:v:35:LYS:CA	1.71	1.03
7:AG:124:GLU:HB3	16:g:11:ARG:HD2	1.38	1.03
8:AH:18:THR:CG2	31:v:38:GLU:OE2	2.06	1.03
12:AL:15:A:C5'	20:k:261:LYS:CE	2.17	1.03
15:Z:81:HIS:CE1	35:z:173:LYS:HD2	1.93	1.03
16:g:7:LEU:CD2	17:h:219:ILE:HD13	1.88	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1006:U:C5	76:f:135:LEU:HA	1.94	1.03
2:AB:110:PHE:HE2	12:AL:100:A:OP1	1.42	1.03
3:AC:185:LEU:HD12	7:AG:197:PHE:N	1.72	1.03
6:AF:70:GLU:HG3	19:j:426:LYS:HZ1	1.04	1.03
7:AG:67:PRO:CB	32:w:187:GLN:NE2	2.21	1.03
8:AH:2:GLY:HA3	12:AL:299:U:OP2	1.58	1.03
12:AL:15:A:OP1	20:k:261:LYS:NZ	1.90	1.03
16:g:200:ILE:CD1	16:g:287:LYS:CE	2.25	1.03
22:m:211:ARG:NH1	22:m:214:GLU:HB2	1.73	1.03
1:AA:90:LYS:CD	12:AL:1612:C:H41	1.71	1.02
6:AF:58:MET:HE1	19:j:30:LYS:HE2	1.36	1.02
6:AF:319:TYR:HD1	31:v:42:THR:CG2	1.70	1.02
8:AH:16:PRO:HG3	31:v:35:LYS:HG2	1.16	1.02
8:AH:46:GLY:CA	32:w:5:ASN:CB	2.37	1.02
8:AH:223:VAL:HG11	21:l:44:PRO:HG3	1.38	1.02
9:AI:310:ASN:OD1	28:s:34:LYS:HB3	1.56	1.02
10:AJ:14:LEU:CD1	11:AK:222:LEU:HD22	1.88	1.02
10:AJ:19:PHE:CD1	11:AK:226:ARG:NH1	2.27	1.02
12:AL:1014:A:OP2	28:s:103:HIS:CG	2.12	1.02
12:AL:1105:G:H4'	18:i:390:ASN:ND2	1.73	1.02
12:AL:1118:C:P	20:k:187:ARG:HH21	1.80	1.02
6:AF:58:MET:SD	19:j:30:LYS:HE3	1.98	1.02
6:AF:90:PRO:HG3	19:j:29:TYR:HB2	1.38	1.02
6:AF:209:ASP:HB2	19:j:446:LYS:HG2	1.37	1.02
6:AF:321:TYR:CZ	31:v:36:PRO:HD3	1.94	1.02
7:AG:217:LEU:CD1	16:g:273:MET:CG	2.36	1.02
9:AI:206:LYS:CE	12:AL:1346:U:C5	2.42	1.02
9:AI:440:GLU:OE2	24:o:193:ARG:NH1	1.92	1.02
12:AL:637:A:H61	27:r:117:ASP:CG	1.66	1.02
15:Z:9:ARG:NH1	16:g:71:LEU:HD13	1.71	1.02
22:m:109:ARG:NH2	24:o:228:MET:HE2	1.73	1.02
22:m:219:ILE:HG12	22:m:224:SER:HB2	1.38	1.02
3:AC:62:TYR:CE2	17:h:159:LYS:HG2	1.93	1.02
4:AD:155:LEU:CB	16:g:210:LEU:HG	1.88	1.02
5:AE:149:SER:HB3	5:AE:159:MET:CE	1.87	1.02
9:AI:431:PHE:CE1	24:o:176:ILE:CG1	2.43	1.02
12:AL:773:A:C5'	26:q:79:HIS:CE1	2.40	1.02
16:g:272:ARG:CB	33:x:60:PHE:HZ	1.72	1.02
20:k:61:ASP:OD1	25:p:24:VAL:HG22	1.60	1.02
4:AD:213:SER:HA	4:AD:216:MET:HB3	1.39	1.02
11:AK:151:GLN:HG3	18:i:83:LYS:HE2	1.04	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:196:ASN:CB	12:AL:1290:A:N6	2.23	1.02
25:p:85:ARG:CD	29:t:115:TRP:CZ2	2.41	1.02
7:AG:75:TYR:CE2	8:AH:182:TYR:CE2	2.48	1.02
11:AK:172:TYR:CE2	25:p:115:ASP:CB	2.42	1.02
12:AL:381:A:OP1	31:v:7:ARG:CD	2.06	1.02
12:AL:753:A:H4'	26:q:129:GLY:HA3	1.32	1.02
12:AL:862:C:P	26:q:215:ARG:CG	2.44	1.02
12:AL:1429:A:N7	29:t:72:THR:CB	2.22	1.02
12:AL:1646:U:C2	17:h:176:TYR:HD2	1.51	1.02
20:k:59:LEU:HG	25:p:20:TYR:HE1	0.90	1.02
21:l:83:ARG:NH2	47:B:80:ILE:CD1	2.22	1.02
30:u:103:ALA:CB	32:w:165:LEU:HD22	1.89	1.02
3:AC:188:ALA:HB2	4:AD:73:LYS:HB3	1.35	1.01
7:AG:122:LEU:CD2	16:g:15:VAL:HG21	1.89	1.01
8:AH:104:ARG:CG	12:AL:143:A:H4'	1.90	1.01
9:AI:435:ASN:ND2	24:o:176:ILE:H	1.57	1.01
12:AL:1060:A:P	12:AL:1061:U:N3	2.33	1.01
18:i:316:MET:CG	20:k:69:TRP:HZ2	1.60	1.01
18:i:368:LEU:CB	29:t:111:LYS:HG3	1.90	1.01
1:AA:111:ARG:OXT	12:AL:1486:A:OP1	1.77	1.01
3:AC:40:ASP:OD1	4:AD:286:VAL:HG11	1.57	1.01
6:AF:212:LEU:HD12	19:j:445:PHE:CB	1.90	1.01
9:AI:56:LEU:O	22:m:210:VAL:HG11	1.60	1.01
12:AL:1182:U:H1'	25:p:78:PRO:CB	1.90	1.01
16:g:3:LEU:HD12	17:h:211:TYR:CD2	1.95	1.01
30:u:225:GLU:CG	32:w:88:TYR:CD1	2.44	1.01
46:A:979:C:O2'	75:e:180:LYS:CE	2.07	1.01
2:AB:85:LYS:NZ	12:AL:375:A:O3'	1.93	1.01
3:AC:191:ILE:HD13	4:AD:222:GLN:HG3	1.06	1.01
3:AC:195:ALA:CA	4:AD:223:TYR:HE2	1.48	1.01
5:AE:274:TYR:HA	5:AE:277:ILE:HB	1.41	1.01
5:AE:286:ASP:HB2	5:AE:315:TYR:HE2	1.25	1.01
11:AK:75:ARG:NH1	18:i:185:ASN:O	1.94	1.01
12:AL:1291:U:C5'	18:i:103:ASN:CB	2.37	1.01
15:Z:42:SER:HA	22:m:238:ILE:HG21	1.38	1.01
24:o:264:PRO:HG3	25:p:101:ASN:HD21	1.23	1.01
5:AE:258:ILE:HB	5:AE:303:GLN:CB	1.91	1.01
8:AH:46:GLY:HA3	32:w:5:ASN:HB2	1.39	1.01
11:AK:115:ALA:HB2	18:i:168:ASN:HD21	1.23	1.01
16:g:71:LEU:HD23	17:h:201:LEU:CD2	1.90	1.01
21:l:110:SER:HB3	33:x:93:TYR:HH	1.23	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:53:GLU:OE2	63:R:94:ARG:HA	1.60	1.01
3:AC:69:LYS:HE3	12:AL:1637:A:OP1	1.58	1.01
4:AD:198:ILE:O	16:g:214:LEU:CD1	2.09	1.01
5:AE:63:PRO:HG3	12:AL:1515:A:OP1	1.59	1.01
9:AI:188:ASN:O	28:s:42:TYR:CD2	2.14	1.01
10:AJ:40:LYS:CE	10:AJ:42:PRO:HG2	1.91	1.01
12:AL:1343:U:H5"	28:s:13:LYS:CD	1.91	1.01
12:AL:1375:U:H4'	28:s:110:THR:HG21	1.43	1.01
15:Z:43:SER:CB	26:q:186:LYS:NZ	2.24	1.01
16:g:272:ARG:HB3	33:x:60:PHE:HZ	1.21	1.01
21:l:83:ARG:HH22	47:B:80:ILE:CB	1.72	1.01
46:A:2625:A:N6	55:J:110:GLN:HE22	1.58	1.01
5:AE:95:LYS:CE	12:AL:1523:A:O3'	2.10	1.00
8:AH:165:LEU:HD12	12:AL:700:U:H4'	1.43	1.00
8:AH:208:GLU:CB	30:u:134:ARG:HD3	1.91	1.00
11:AK:112:GLU:HG2	18:i:127:LEU:HD22	1.42	1.00
12:AL:1624:U:C5	35:z:154:HIS:CD2	2.49	1.00
46:A:1440:U:H5'	46:A:1481:A:N7	1.37	1.00
46:A:2917:U:O2'	46:A:2918:A:H5'	1.58	1.00
3:AC:55:GLY:C	7:AG:121:ILE:HG23	1.85	1.00
6:AF:146:ASN:CB	19:j:439:HIS:HD2	1.60	1.00
8:AH:223:VAL:HG13	21:l:44:PRO:HG2	1.41	1.00
10:AJ:39:LEU:HA	12:AL:1292:A:N6	1.77	1.00
10:AJ:40:LYS:HE2	10:AJ:42:PRO:HG2	1.40	1.00
12:AL:862:C:OP1	26:q:215:ARG:HG2	0.84	1.00
20:k:59:LEU:CG	25:p:20:TYR:HE1	1.73	1.00
21:l:40:ARG:NH2	30:u:141:ILE:CG2	2.23	1.00
25:p:102:PHE:CD1	29:t:111:LYS:O	2.15	1.00
46:A:971:A:N6	75:e:107:ARG:NH2	2.08	1.00
46:A:2017:G:H21	46:A:2018:C:H5"	1.27	1.00
46:A:3151:A:H3'	46:A:3152:A:H5"	1.41	1.00
6:AF:307:TYR:CE2	31:v:92:LYS:HB2	1.95	1.00
6:AF:320:ARG:CD	8:AH:13:GLY:HA3	1.90	1.00
9:AI:449:HIS:O	22:m:114:LEU:CD1	2.09	1.00
11:AK:299:LYS:HE3	24:o:151:PHE:CD1	1.97	1.00
12:AL:140:A:N3	31:v:5:LEU:HD22	1.73	1.00
12:AL:784:A:H1'	26:q:206:PHE:HD2	1.27	1.00
12:AL:826:G:H21	30:u:246:ASN:ND2	1.59	1.00
12:AL:1031:A:C1'	24:o:278:ARG:HH12	1.74	1.00
12:AL:1046:U:OP1	29:t:23:ARG:CB	2.10	1.00
12:AL:1411:G:OP2	24:o:275:TRP:HB3	0.84	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:110:PHE:CE2	12:AL:100:A:OP1	2.15	1.00
3:AC:55:GLY:CA	7:AG:121:ILE:HG23	1.90	1.00
7:AG:147:GLU:HG2	16:g:14:GLN:HG2	1.43	1.00
10:AJ:53:ILE:HD12	10:AJ:55:LYS:CE	1.91	1.00
11:AK:140:GLN:NE2	18:i:321:TYR:CE2	2.29	1.00
11:AK:151:GLN:HE21	18:i:83:LYS:NZ	1.59	1.00
12:AL:1416:U:O2'	24:o:270:ARG:HD3	1.61	1.00
25:p:92:PRO:O	29:t:95:ARG:NH2	1.95	1.00
46:A:316:G:N7	64:S:128:LYS:HD2	1.75	1.00
2:AB:74:LEU:HD13	2:AB:88:LEU:HD22	1.41	1.00
6:AF:88:ILE:CD1	19:j:28:LEU:CD2	2.40	1.00
12:AL:1343:U:C5'	28:s:13:LYS:HD2	1.92	1.00
15:Z:43:SER:CB	26:q:186:LYS:HZ3	1.74	1.00
46:A:1712:A:N3	47:B:140:THR:CG2	2.25	1.00
9:AI:310:ASN:HD21	28:s:34:LYS:HG2	1.26	1.00
12:AL:1255:U:P	28:s:105:ARG:NH1	2.34	1.00
12:AL:1411:G:P	24:o:275:TRP:HB3	2.01	1.00
18:i:180:MET:HG2	20:k:92:TRP:CD2	1.96	1.00
18:i:368:LEU:CD1	29:t:111:LYS:CD	2.38	1.00
75:e:132:LEU:HD11	75:e:170:LYS:HG2	1.44	1.00
76:f:81:LEU:HD21	76:f:145:ILE:HG23	1.43	1.00
11:AK:112:GLU:HG3	18:i:127:LEU:HD21	1.03	0.99
11:AK:195:PRO:HG2	12:AL:1290:A:C8	1.96	0.99
21:l:83:ARG:CZ	47:B:80:ILE:HD12	1.92	0.99
46:A:2376:A:H62	69:X:68:THR:HG22	1.24	0.99
2:AB:45:LEU:HB3	2:AB:53:ASN:HA	1.41	0.99
5:AE:80:ARG:HB3	5:AE:85:ARG:HA	1.44	0.99
12:AL:1313:U:H1'	12:AL:1314:U:C5	1.97	0.99
16:g:246:ALA:HB1	33:x:55:TYR:CZ	1.97	0.99
46:A:2072:U:H2'	46:A:2073:U:H4'	1.43	0.99
4:AD:208:PHE:HD2	16:g:214:LEU:HD23	1.27	0.99
12:AL:690:G:C5	12:AL:823:G:N7	1.91	0.99
12:AL:826:G:O2'	12:AL:827:G:C5'	2.10	0.99
12:AL:1330:A:H61	12:AL:1333:U:H2'	1.24	0.99
12:AL:1381:U:OP2	34:y:12:VAL:HG23	1.56	0.99
26:q:214:MET:HE1	35:z:140:MET:CG	1.92	0.99
37:1:264:ARG:NH2	63:R:213:ASP:OD2	1.94	0.99
6:AF:71:TYR:OH	19:j:22:LYS:NZ	1.95	0.99
11:AK:170:GLN:HE21	25:p:120:VAL:HG23	1.27	0.99
12:AL:897:U:H4'	15:Z:7:VAL:HG21	1.39	0.99
12:AL:1163:A:H2'	24:o:256:TYR:OH	1.63	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:3:ILE:HD13	23:n:20:ARG:HH11	1.27	0.99
11:AK:97:SER:CB	18:i:171:TYR:OH	2.10	0.99
11:AK:299:LYS:HE3	24:o:151:PHE:HD1	1.24	0.99
7:AG:147:GLU:CG	16:g:14:GLN:HG2	1.92	0.99
12:AL:1255:U:P	28:s:105:ARG:HH12	1.84	0.99
12:AL:1645:U:O4	17:h:175:PHE:HE1	1.23	0.99
18:i:148:LYS:HE3	20:k:78:LEU:CD1	1.89	0.99
19:j:10:SER:HB3	19:j:13:ARG:HB2	1.43	0.99
30:u:87:LEU:HD11	32:w:114:ARG:HH22	1.24	0.99
1:AA:90:LYS:HD2	12:AL:1612:C:N4	1.78	0.99
5:AE:88:LEU:CD1	5:AE:90:PRO:CG	2.41	0.99
6:AF:146:ASN:HD22	19:j:439:HIS:CG	1.79	0.99
6:AF:312:ALA:O	31:v:68:ASP:CG	2.04	0.99
11:AK:196:ASN:HD21	12:AL:1318:U:C5'	1.75	0.99
7:AG:166:VAL:CG2	16:g:195:LYS:CE	2.21	0.99
12:AL:1624:U:C4	35:z:154:HIS:NE2	2.30	0.99
46:A:1761:A:H2'	46:A:1762:A:C8	1.98	0.99
75:e:66:MET:HG2	75:e:149:GLN:CB	1.92	0.99
3:AC:54:ALA:CB	7:AG:143:PRO:HA	1.93	0.99
6:AF:137:PHE:CZ	19:j:468:PRO:HB3	1.98	0.99
7:AG:166:VAL:CG1	16:g:195:LYS:CG	2.27	0.99
7:AG:166:VAL:HG22	16:g:196:PHE:CZ	1.98	0.99
10:AJ:14:LEU:HD21	11:AK:222:LEU:HD22	1.44	0.99
11:AK:132:PHE:CB	18:i:248:MET:CA	2.39	0.99
11:AK:172:TYR:CB	25:p:116:THR:O	2.09	0.99
12:AL:1576:U:H4'	46:A:1861:C:H5'	1.02	0.99
16:g:272:ARG:HB3	33:x:60:PHE:CZ	1.98	0.99
18:i:316:MET:CG	20:k:69:TRP:CH2	2.45	0.99
30:u:132:GLU:HG2	32:w:126:ARG:HG2	1.44	0.99
3:AC:55:GLY:HA2	7:AG:121:ILE:HG12	1.44	0.99
7:AG:3:ILE:HD13	23:n:20:ARG:NH1	1.76	0.99
12:AL:1627:U:C1'	35:z:158:PHE:CE1	2.41	0.99
12:AL:1633:U:C5	33:x:58:PHE:CZ	2.49	0.99
46:A:525:G:N2	55:J:132:GLU:OE1	1.94	0.99
3:AC:161:LYS:HD3	17:h:141:TYR:CD2	1.98	0.98
3:AC:266:LYS:HB3	17:h:128:PRO:HG2	1.43	0.98
6:AF:295:ILE:HD11	31:v:93:ALA:HB1	1.23	0.98
12:AL:1060:A:OP2	12:AL:1061:U:C2	2.15	0.98
18:i:316:MET:HE3	20:k:69:TRP:CE2	1.97	0.98
6:AF:313:LYS:HA	31:v:68:ASP:OD2	1.63	0.98
9:AI:60:TRP:CB	22:m:210:VAL:HG22	1.92	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1624:U:C4	35:z:154:HIS:CG	2.51	0.98
13:AM:32:C:OP2	24:o:277:LYS:HE2	1.63	0.98
3:AC:53:THR:HB	3:AC:59:GLU:HB2	1.45	0.98
12:AL:821:U:N3	12:AL:822:U:N3	1.88	0.98
12:AL:1466:A:C2	20:k:157:GLN:OE1	2.16	0.98
17:h:293:GLN:CB	24:o:40:LYS:HG2	1.94	0.98
46:A:2761:C:OP1	56:K:127:ARG:HD3	1.62	0.98
50:E:252:ASN:OD1	67:V:63:TYR:CE1	2.14	0.98
2:AB:109:SER:CB	12:AL:101:U:OP2	2.11	0.98
6:AF:61:PHE:HB2	19:j:29:TYR:OH	1.61	0.98
12:AL:636:C:H5"	27:r:145:TYR:OH	1.62	0.98
1:AA:101:LYS:HG3	46:A:1833:G:OP1	1.64	0.98
5:AE:96:PRO:CG	12:AL:1541:U:H1'	1.93	0.98
6:AF:321:TYR:CD1	31:v:13:PHE:HZ	1.81	0.98
6:AF:326:ARG:NH2	12:AL:301:A:OP1	1.94	0.98
8:AH:16:PRO:CG	31:v:35:LYS:HE2	1.93	0.98
9:AI:56:LEU:HG	22:m:214:GLU:HG3	1.43	0.98
7:AG:166:VAL:HG22	16:g:196:PHE:CE1	1.96	0.98
9:AI:435:ASN:HD21	24:o:176:ILE:H	1.01	0.98
69:X:47:VAL:HG12	72:b:129:VAL:CG1	1.93	0.98
12:AL:784:A:H1'	26:q:206:PHE:CD2	1.97	0.98
12:AL:1494:U:O2'	12:AL:1495:U:H5'	1.62	0.98
22:m:123:ARG:HB3	22:m:126:LYS:HZ3	1.12	0.98
28:s:92:ARG:HH22	28:s:104:THR:CG2	1.70	0.98
7:AG:1:MET:HE3	17:h:351:GLU:HG2	1.43	0.98
10:AJ:54:LEU:O	18:i:118:LEU:HD21	1.63	0.98
12:AL:774:U:C4'	26:q:120:GLN:NE2	2.27	0.98
30:u:74:PRO:HG2	32:w:100:GLU:CG	1.93	0.98
6:AF:320:ARG:HH12	8:AH:15:PHE:HB3	1.29	0.98
10:AJ:35:LEU:HD21	29:t:43:PHE:CE2	1.99	0.98
10:AJ:80:VAL:HG21	12:AL:1091:A:H5'	1.44	0.98
10:AJ:80:VAL:HG21	12:AL:1091:A:H5"	1.41	0.98
12:AL:698:A:OP1	23:n:2:SER:HB2	1.64	0.98
46:A:1531:C:C5	47:B:326:TRP:CH2	2.51	0.97
5:AE:93:PRO:HB3	12:AL:1542:A:H5'	1.43	0.97
8:AH:100:ALA:HB1	12:AL:143:A:O5'	0.81	0.97
12:AL:642:C:H41	27:r:74:ASN:CG	1.71	0.97
16:g:3:LEU:CD1	17:h:211:TYR:CE2	2.47	0.97
38:2:53:ARG:CZ	69:X:67:ARG:HH12	1.76	0.97
50:E:23:CYS:HB2	63:R:79:ILE:HD13	1.46	0.97
3:AC:55:GLY:HA2	7:AG:121:ILE:HG21	1.46	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:1:190:LYS:HE3	46:A:2363:A:OP1	1.64	0.97
46:A:1530:U:OP1	47:B:94:LYS:NZ	1.96	0.97
3:AC:200:MET:CB	7:AG:200:LEU:HD11	1.95	0.97
3:AC:217:TRP:CD1	17:h:146:LEU:CD2	2.46	0.97
4:AD:261:SER:H	16:g:223:GLN:NE2	1.61	0.97
6:AF:329:LYS:O	12:AL:404:U:H4'	1.64	0.97
7:AG:75:TYR:CE2	32:w:183:ILE:CD1	2.46	0.97
8:AH:104:ARG:HD2	12:AL:143:A:O4'	1.62	0.97
11:AK:150:GLU:OE1	25:p:133:MET:SD	2.22	0.97
12:AL:1032:A:C5'	24:o:275:TRP:HZ2	1.76	0.97
46:A:1728:U:C5	47:B:314:GLN:NE2	2.33	0.97
16:g:3:LEU:HG	17:h:211:TYR:CE2	1.99	0.97
16:g:68:LEU:HD13	17:h:217:ILE:CD1	1.92	0.97
8:AH:19:ARG:HH22	12:AL:233:C:P	1.78	0.97
12:AL:13:U:H5'	20:k:238:PHE:HE2	0.91	0.97
12:AL:1045:C:O2	29:t:73:GLN:CD	2.08	0.97
15:Z:16:LEU:HD12	35:z:162:PHE:CE1	1.99	0.97
46:A:1166:U:H2'	46:A:1167:A:H8	1.25	0.97
9:AI:367:TYR:HE2	11:AK:274:PRO:HB2	1.19	0.97
12:AL:550:U:H5'	19:j:131:ARG:HD2	1.43	0.97
12:AL:1098:U:N3	12:AL:1239:A:H2	1.63	0.97
12:AL:1627:U:C5	15:Z:13:LEU:CD1	2.38	0.97
7:AG:67:PRO:HB2	32:w:187:GLN:NE2	1.79	0.97
9:AI:206:LYS:NZ	12:AL:1346:U:C6	2.33	0.97
10:AJ:14:LEU:HD21	11:AK:222:LEU:HD23	0.97	0.97
11:AK:162:LEU:CB	25:p:68:TYR:CD2	2.47	0.97
12:AL:1647:A:H1'	17:h:176:TYR:CG	2.00	0.97
28:s:85:ILE:HG12	34:y:67:ASP:OD2	1.65	0.97
29:t:60:LEU:HD11	34:y:20:PRO:CG	1.95	0.97
46:A:1531:C:C5	47:B:326:TRP:CZ3	2.53	0.97
8:AH:189:PHE:CZ	32:w:173:GLU:HG2	2.00	0.97
12:AL:351:A:H1'	58:M:166:ARG:HD2	1.43	0.97
16:g:68:LEU:CB	17:h:217:ILE:CD1	2.43	0.97
5:AE:88:LEU:CD1	5:AE:90:PRO:HD3	1.95	0.96
8:AH:167:ASN:HA	23:n:65:PRO:HG3	1.43	0.96
9:AI:431:PHE:CE1	24:o:176:ILE:HD11	1.99	0.96
11:AK:91:LEU:HD22	11:AK:101:VAL:HG13	1.47	0.96
30:u:101:PHE:CA	32:w:167:LEU:HD11	1.94	0.96
12:AL:760:A:P	26:q:136:ALA:HB2	2.04	0.96
18:i:368:LEU:CD1	29:t:111:LYS:HD2	1.95	0.96
21:l:38:VAL:HB	30:u:141:ILE:HG12	1.44	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:s:85:ILE:CG1	34:y:67:ASP:OD2	2.13	0.96
3:AC:200:MET:HB3	7:AG:200:LEU:HD12	1.43	0.96
4:AD:210:PHE:CZ	7:AG:196:MET:CG	2.49	0.96
10:AJ:29:ARG:HH12	34:y:13:TRP:NE1	1.61	0.96
46:A:1531:C:C2	47:B:326:TRP:CD2	2.53	0.96
7:AG:206:ILE:CD1	16:g:92:GLU:OE1	2.11	0.96
11:AK:132:PHE:HD1	18:i:248:MET:HE1	0.80	0.96
12:AL:1105:G:H5"	18:i:390:ASN:CG	1.89	0.96
12:AL:1180:U:OP1	24:o:164:THR:HG21	1.65	0.96
21:l:8:LEU:CD1	33:x:136:GLY:HA3	1.94	0.96
6:AF:295:ILE:HD12	31:v:93:ALA:HB1	1.47	0.96
11:AK:298:TRP:CZ2	24:o:210:ASN:OD1	2.18	0.96
2:AB:105:LEU:HD22	12:AL:389:A:O3'	1.65	0.96
3:AC:148:LEU:CD1	4:AD:82:ASN:HD22	1.71	0.96
4:AD:155:LEU:HD22	16:g:210:LEU:HG	1.47	0.96
6:AF:88:ILE:CD1	19:j:28:LEU:CG	2.39	0.96
8:AH:198:GLU:HB3	21:l:105:LEU:HD23	0.97	0.96
11:AK:299:LYS:CE	24:o:151:PHE:CD1	2.49	0.96
12:AL:232:U:HO2'	31:v:78:VAL:HG11	1.29	0.96
12:AL:749:A:C4'	26:q:121:LYS:CE	2.43	0.96
12:AL:861:C:H4'	26:q:217:LEU:HD23	0.97	0.96
12:AL:1046:U:OP1	29:t:23:ARG:HG2	1.64	0.96
12:AL:1523:A:N1	12:AL:1539:A:N6	2.13	0.96
13:AM:33:U:H3	24:o:278:ARG:HG3	1.26	0.96
3:AC:90:HIS:CD2	17:h:161:GLY:N	2.30	0.96
4:AD:209:ASN:HA	16:g:222:ILE:CD1	1.93	0.96
12:AL:748:U:O2'	26:q:121:LYS:CD	2.13	0.96
22:m:127:LYS:HZ3	24:o:191:LYS:NZ	1.63	0.96
11:AK:112:GLU:HG3	18:i:127:LEU:CD2	1.89	0.96
12:AL:665:U:HO2'	27:r:111:ARG:NH2	1.61	0.96
12:AL:845:G:OP1	26:q:213:LYS:N	1.98	0.96
46:A:1006:U:C5	76:f:135:LEU:O	2.18	0.96
46:A:2324:U:H2'	46:A:2325:A:C8	2.00	0.96
2:AB:93:ASN:HB3	2:AB:98:ARG:HB2	1.46	0.96
6:AF:319:TYR:CE1	31:v:42:THR:HG21	1.99	0.96
7:AG:3:ILE:HG22	23:n:20:ARG:HH22	1.30	0.96
12:AL:1046:U:H4'	29:t:77:ARG:CZ	1.96	0.96
46:A:305:A:H2'	46:A:306:G:C8	2.00	0.96
75:e:66:MET:CE	75:e:142:TYR:CE2	2.49	0.96
10:AJ:26:SER:O	12:AL:1299:A:O2'	1.83	0.96
6:AF:321:TYR:HE2	31:v:35:LYS:HA	0.95	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:96:LYS:NZ	12:AL:915:U:H3'	1.80	0.95
10:AJ:53:ILE:CD1	10:AJ:55:LYS:HE3	1.95	0.95
20:k:40:ILE:HD12	25:p:22:VAL:HG12	1.15	0.95
26:q:198:ILE:HG22	35:z:106:ILE:HG13	1.47	0.95
2:AB:108:LYS:HE2	12:AL:68:A:P	2.05	0.95
3:AC:69:LYS:HE3	12:AL:1637:A:P	2.06	0.95
7:AG:67:PRO:HB2	32:w:187:GLN:HE22	1.28	0.95
12:AL:80:U:H3'	12:AL:81:U:H6	1.26	0.95
12:AL:627:U:H2'	12:AL:628:U:H6	1.30	0.95
12:AL:690:G:N7	12:AL:823:G:C5	2.33	0.95
12:AL:1361:U:H3	28:s:48:HIS:CD2	1.85	0.95
12:AL:1628:A:N3	35:z:166:ILE:CG1	2.27	0.95
17:h:315:VAL:HG11	24:o:39:PRO:CD	1.95	0.95
46:A:1811:U:O2	46:A:1819:A:N6	1.98	0.95
46:A:2771:G:C6	48:C:208:ASN:ND2	2.32	0.95
50:E:251:ALA:HB1	67:V:63:TYR:CZ	2.01	0.95
4:AD:210:PHE:CZ	7:AG:196:MET:HG3	2.02	0.95
6:AF:88:ILE:HD13	19:j:28:LEU:CD2	1.96	0.95
8:AH:103:ARG:HH21	31:v:79:GLY:HA2	1.17	0.95
12:AL:1429:A:N9	29:t:72:THR:HG22	1.81	0.95
16:g:246:ALA:HB1	33:x:55:TYR:CE1	2.01	0.95
22:m:123:ARG:CB	22:m:126:LYS:NZ	2.29	0.95
46:A:1011:A:N7	76:f:50:TYR:OH	1.98	0.95
7:AG:206:ILE:HD13	16:g:92:GLU:CG	1.95	0.95
7:AG:206:ILE:CG1	16:g:92:GLU:OE1	2.15	0.95
18:i:148:LYS:NZ	20:k:78:LEU:HD13	1.78	0.95
21:l:110:SER:HB2	33:x:93:TYR:CE1	1.95	0.95
2:AB:45:LEU:HG	2:AB:56:LYS:HG2	1.47	0.95
2:AB:105:LEU:CD2	12:AL:389:A:O3'	2.13	0.95
11:AK:154:TYR:CD2	25:p:57:PHE:HE2	1.80	0.95
15:Z:43:SER:HB3	26:q:186:LYS:NZ	1.80	0.95
22:m:244:ILE:HG23	22:m:247:LYS:HG3	1.46	0.95
33:x:111:HIS:CE1	35:z:153:ARG:HH12	1.84	0.95
38:2:85:GLU:OE1	46:A:2574:G:N2	1.99	0.95
46:A:1533:G:C5'	47:B:149:ARG:O	2.12	0.95
63:R:259:SER:CB	63:R:269:TYR:HA	1.97	0.95
75:e:67:ILE:HA	75:e:142:TYR:HB3	1.47	0.95
8:AH:184:ARG:HG3	12:AL:814:A:H4'	1.48	0.95
12:AL:750:G:H4'	26:q:123:LYS:C	1.91	0.95
12:AL:1291:U:H5'	18:i:103:ASN:CB	1.97	0.95
17:h:131:ASN:O	24:o:119:GLN:CA	2.15	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:l:38:VAL:HB	30:u:141:ILE:CG1	1.96	0.95
3:AC:55:GLY:C	7:AG:121:ILE:CG2	2.40	0.95
6:AF:58:MET:HG2	19:j:11:LEU:HD13	1.47	0.95
8:AH:100:ALA:HB1	12:AL:143:A:P	2.03	0.95
11:AK:195:PRO:HG3	12:AL:1290:A:C2'	1.97	0.95
12:AL:344:A:OP2	54:I:110:ARG:NH2	2.00	0.95
12:AL:1213:G:H5"	24:o:247:HIS:CE1	2.01	0.95
12:AL:1540:U:C2'	12:AL:1541:U:C6	2.49	0.95
15:Z:27:ALA:HB1	22:m:246:LEU:CB	1.97	0.95
16:g:7:LEU:HD11	17:h:189:MET:CE	1.97	0.95
46:A:30:U:H3	48:C:21:SER:HA	1.32	0.95
3:AC:185:LEU:CD1	7:AG:195:GLU:O	2.15	0.95
7:AG:22:LEU:O	20:k:135:VAL:HA	1.64	0.95
9:AI:206:LYS:CE	12:AL:1346:U:H5	1.77	0.95
12:AL:748:U:O2'	26:q:121:LYS:HD2	1.66	0.95
15:Z:9:ARG:HH12	16:g:71:LEU:CD1	1.78	0.95
47:B:71:VAL:HG12	47:B:75:LYS:HB3	1.47	0.95
55:J:103:LYS:HB3	55:J:106:PHE:HB2	1.48	0.95
59:N:94:VAL:O	59:N:109:ILE:HG13	1.66	0.95
5:AE:258:ILE:HB	5:AE:303:GLN:HB2	1.46	0.95
11:AK:237:SER:N	12:AL:1316:A:OP1	2.00	0.95
12:AL:873:A:P	30:u:197:LYS:HZ1	1.84	0.95
12:AL:1576:U:C4'	46:A:1861:C:H5'	1.95	0.95
15:Z:66:ALA:CB	22:m:184:ASN:N	2.29	0.95
21:l:1:MET:SD	30:u:148:GLU:CG	2.54	0.95
3:AC:266:LYS:CA	17:h:128:PRO:HG2	1.97	0.95
26:q:184:VAL:HG22	35:z:117:PHE:CE2	1.98	0.95
46:A:171:A:H2'	46:A:172:A:C8	2.02	0.95
46:A:2842:U:H5"	48:C:208:ASN:HD22	1.32	0.95
1:AA:95:LYS:HD3	12:AL:1579:A:H5"	1.49	0.94
2:AB:111:PHE:CZ	12:AL:101:U:N3	2.35	0.94
12:AL:828:A:OP1	30:u:249:ARG:HG3	1.66	0.94
12:AL:1182:U:C1'	25:p:78:PRO:HB2	1.96	0.94
15:Z:31:LEU:CD1	22:m:246:LEU:HD21	1.95	0.94
19:j:125:ILE:HG12	19:j:130:VAL:HG21	1.47	0.94
3:AC:148:LEU:HD21	4:AD:204:ALA:CB	1.96	0.94
11:AK:115:ALA:CB	18:i:168:ASN:ND2	2.29	0.94
12:AL:16:G:OP2	20:k:261:LYS:HD3	1.63	0.94
12:AL:861:C:OP1	26:q:216:ARG:N	2.00	0.94
18:i:368:LEU:HB3	29:t:111:LYS:CG	1.97	0.94
3:AC:9:HIS:CE1	17:h:164:ILE:HD11	2.01	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:258:G:P	32:w:68:LYS:HD2	2.06	0.94
12:AL:1361:U:N3	28:s:48:HIS:CD2	2.35	0.94
46:A:2794:U:H2'	46:A:2797:U:H5"	1.49	0.94
75:e:108:ASN:HB2	75:e:111:LEU:HB2	1.48	0.94
3:AC:90:HIS:CD2	17:h:160:LEU:CD1	2.48	0.94
8:AH:50:ALA:HB2	32:w:76:GLU:N	1.82	0.94
9:AI:393:LYS:HZ1	24:o:182:GLN:HG3	1.29	0.94
10:AJ:60:LYS:O	10:AJ:60:LYS:HG2	1.67	0.94
11:AK:132:PHE:HD1	18:i:248:MET:CE	1.36	0.94
12:AL:409:G:H4'	19:j:123:GLN:HE22	1.10	0.94
12:AL:1013:C:OP2	28:s:107:ASN:CG	2.10	0.94
12:AL:1181:A:C2	25:p:78:PRO:HG2	2.03	0.94
18:i:368:LEU:HA	29:t:111:LYS:HD2	1.49	0.94
46:A:172:A:H2'	46:A:173:U:C6	2.03	0.94
3:AC:200:MET:CB	7:AG:200:LEU:CD1	2.44	0.94
8:AH:153:ILE:CG1	23:n:41:GLN:HE22	1.59	0.94
46:A:981:G:N2	76:f:150:LYS:HD3	1.82	0.94
46:A:2461:A:O2'	50:E:145:PHE:CE2	2.21	0.94
46:A:613:G:O2'	47:B:97:LYS:HE2	1.68	0.94
46:A:981:G:H21	76:f:150:LYS:HD3	1.32	0.94
4:AD:208:PHE:CD2	16:g:214:LEU:HD22	1.99	0.94
7:AG:217:LEU:CG	16:g:273:MET:HG3	1.97	0.94
3:AC:55:GLY:HA2	7:AG:121:ILE:HG23	1.49	0.94
4:AD:201:THR:HB	4:AD:205:GLY:HA3	1.50	0.94
7:AG:122:LEU:CD2	16:g:36:ILE:HD12	1.97	0.94
8:AH:14:VAL:HG11	12:AL:298:A:C4	2.02	0.94
8:AH:14:VAL:CB	12:AL:298:A:C5	2.51	0.94
10:AJ:19:PHE:CE1	11:AK:226:ARG:NH1	2.35	0.94
12:AL:760:A:OP1	26:q:136:ALA:CB	2.16	0.94
12:AL:1105:G:C4'	18:i:390:ASN:ND2	2.22	0.94
17:h:131:ASN:O	24:o:119:GLN:CB	2.14	0.94
18:i:93:TRP:CE2	29:t:109:GLY:HA2	2.01	0.94
20:k:267:ASN:HB3	20:k:270:ASN:HB2	1.50	0.94
26:q:215:ARG:HH22	35:z:137:ARG:HH21	0.99	0.94
28:s:84:LYS:HE2	34:y:67:ASP:OD2	1.68	0.94
30:u:173:SER:O	30:u:176:VAL:N	1.98	0.94
46:A:438:U:H2'	46:A:439:A:H8	1.33	0.94
5:AE:283:THR:HA	5:AE:315:TYR:CZ	2.01	0.94
9:AI:153:GLY:C	9:AI:155:GLY:H	1.76	0.94
11:AK:162:LEU:HB3	25:p:68:TYR:HD2	0.99	0.94
15:Z:66:ALA:HB1	22:m:184:ASN:N	1.83	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:g:251:VAL:CG1	33:x:51:LYS:HB2	1.98	0.94
6:AF:146:ASN:CG	19:j:439:HIS:HD2	1.67	0.94
12:AL:749:A:C4’	26:q:121:LYS:HZ3	1.77	0.94
22:m:127:LYS:HZ3	24:o:191:LYS:HZ2	0.94	0.94
46:A:533:U:H5	63:R:135:THR:H	1.09	0.94
6:AF:58:MET:HE1	19:j:30:LYS:CG	1.97	0.93
6:AF:88:ILE:HD13	19:j:28:LEU:HD23	1.46	0.93
11:AK:159:ALA:HA	25:p:23:ASN:HB2	1.49	0.93
12:AL:1104:U:OP2	18:i:342:THR:CB	2.16	0.93
16:g:28:LYS:O	33:x:53:THR:HA	1.68	0.93
46:A:1932:G:H22	48:C:209:GLN:HG3	1.13	0.93
46:A:2384:A:H2’	46:A:2385:U:C6	2.04	0.93
7:AG:3:ILE:HG21	23:n:20:ARG:NH2	1.76	0.93
7:AG:90:ARG:NH1	12:AL:917:U:P	2.41	0.93
8:AH:100:ALA:HB1	12:AL:143:A:C5’	1.96	0.93
12:AL:304:A:H2’	12:AL:305:A:C8	2.03	0.93
12:AL:1628:A:C5	15:Z:18:VAL:CG1	2.47	0.93
15:Z:16:LEU:CD1	35:z:162:PHE:CE1	2.52	0.93
20:k:16:TYR:HH	20:k:20:LEU:HG	1.13	0.93
30:u:275:ARG:HH11	30:u:278:ILE:HD12	1.17	0.93
46:A:1531:C:N3	47:B:326:TRP:CE2	2.37	0.93
4:AD:28:LEU:HB3	4:AD:32:PHE:HB2	1.49	0.93
6:AF:137:PHE:CD2	19:j:468:PRO:CA	2.50	0.93
6:AF:204:ASP:OD2	19:j:158:LEU:HD13	1.65	0.93
12:AL:1135:G:H5”	15:Z:17:LYS:NZ	1.81	0.93
12:AL:1207:U:O2’	12:AL:1208:A:H5’	1.67	0.93
15:Z:31:LEU:HD11	22:m:246:LEU:CD2	1.96	0.93
24:o:264:PRO:CG	25:p:101:ASN:HD21	1.82	0.93
46:A:417:U:H2’	46:A:418:A:H8	1.33	0.93
46:A:2317:A:N1	69:X:65:PHE:HD1	1.66	0.93
8:AH:184:ARG:HD3	12:AL:814:A:C3’	1.99	0.93
11:AK:172:TYR:CZ	25:p:115:ASP:HB3	2.02	0.93
16:g:45:ARG:CG	17:h:170:PRO:HB3	1.98	0.93
21:l:80:GLU:HG3	47:B:73:LEU:HB3	0.93	0.93
21:l:110:SER:HB2	33:x:93:TYR:CZ	1.96	0.93
46:A:3160:U:H5”	57:L:52:THR:CG2	1.98	0.93
3:AC:9:HIS:HE1	17:h:164:ILE:HD11	1.28	0.93
7:AG:36:ILE:CD1	17:h:234:LYS:HG2	1.97	0.93
12:AL:80:U:H3’	12:AL:81:U:C6	2.04	0.93
15:Z:63:SER:O	22:m:184:ASN:OD1	1.87	0.93
18:i:148:LYS:HZ3	20:k:78:LEU:HA	1.13	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:k:61:ASP:OD1	25:p:24:VAL:CG2	2.17	0.93
46:A:1522:A:H2'	46:A:1523:A:C8	2.02	0.93
46:A:2771:G:N1	48:C:208:ASN:ND2	2.15	0.93
63:R:259:SER:HB3	63:R:269:TYR:HA	1.50	0.93
2:AB:85:LYS:NZ	12:AL:376:C:OP1	2.02	0.93
8:AH:16:PRO:HG3	31:v:35:LYS:HE2	1.47	0.93
8:AH:153:ILE:HG13	23:n:41:GLN:HE21	1.15	0.93
8:AH:199:LEU:HD23	30:u:93:TYR:CE1	2.04	0.93
12:AL:803:A:OP1	21:l:98:LYS:N	2.01	0.93
12:AL:1046:U:OP1	29:t:23:ARG:CG	2.17	0.93
17:h:131:ASN:HB2	24:o:119:GLN:CA	1.97	0.93
21:l:80:GLU:HB3	47:B:73:LEU:HG	1.48	0.93
25:p:85:ARG:NE	29:t:115:TRP:CE2	2.35	0.93
30:u:85:GLU:OE1	32:w:107:PHE:CZ	2.21	0.93
4:AD:261:SER:N	16:g:223:GLN:NE2	2.17	0.93
75:e:66:MET:CG	75:e:149:GLN:HB3	1.98	0.93
5:AE:88:LEU:HD11	5:AE:90:PRO:CG	1.99	0.93
5:AE:99:LYS:HE3	12:AL:1524:U:OP1	1.69	0.93
6:AF:307:TYR:CZ	31:v:92:LYS:HB3	2.02	0.93
9:AI:435:ASN:HD21	24:o:176:ILE:N	1.66	0.93
3:AC:40:ASP:OD1	4:AD:286:VAL:CG1	2.17	0.93
3:AC:266:LYS:CB	17:h:128:PRO:HG2	1.97	0.93
4:AD:67:LEU:C	4:AD:77:LYS:NZ	2.26	0.93
12:AL:1179:U:O3'	24:o:164:THR:HG21	1.68	0.93
20:k:59:LEU:CG	25:p:20:TYR:CE1	2.48	0.93
33:x:111:HIS:HE1	35:z:153:ARG:NH1	1.66	0.93
2:AB:85:LYS:NZ	12:AL:376:C:P	2.42	0.93
7:AG:74:LEU:HG	8:AH:186:LEU:HD11	1.50	0.93
7:AG:224:VAL:HG12	33:x:45:LEU:CG	1.99	0.93
9:AI:431:PHE:CE1	24:o:176:ILE:CD1	2.51	0.93
12:AL:269:A:H5'	32:w:66:LEU:O	1.67	0.93
12:AL:508:C:H5'	19:j:420:PRO:HB2	1.49	0.93
12:AL:690:G:C8	12:AL:823:G:C6	2.57	0.93
12:AL:1327:A:O2'	12:AL:1423:U:H5'	1.68	0.93
18:i:93:TRP:CE2	29:t:109:GLY:CA	2.52	0.93
39:3:30:PHE:HB2	46:A:1568:U:C6	2.03	0.93
6:AF:315:GLY:HA2	8:AH:15:PHE:HE2	1.31	0.92
8:AH:184:ARG:CD	12:AL:814:A:C4'	2.29	0.92
9:AI:56:LEU:HG	22:m:211:ARG:NH2	1.83	0.92
12:AL:802:A:OP1	33:x:131:ARG:CZ	2.15	0.92
12:AL:1486:A:C2	46:A:1859:G:C1'	2.52	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:h:337:LYS:HZ2	20:k:203:ARG:HH12	1.05	0.92
21:l:83:ARG:HH22	47:B:80:ILE:HB	1.28	0.92
3:AC:179:ARG:NH2	7:AG:201:PHE:HE1	1.56	0.92
15:Z:16:LEU:HD21	35:z:165:LEU:HB3	1.49	0.92
16:g:200:ILE:HD11	16:g:287:LYS:HD3	1.51	0.92
3:AC:90:HIS:NE2	17:h:160:LEU:HD13	1.85	0.92
5:AE:73:ILE:HA	5:AE:76:THR:HG23	1.51	0.92
6:AF:52:THR:OG1	12:AL:498:A:N7	2.02	0.92
6:AF:137:PHE:CG	19:j:468:PRO:HA	2.04	0.92
10:AJ:26:SER:HA	12:AL:1299:A:C4	2.04	0.92
12:AL:628:U:H2'	12:AL:629:G:C8	2.05	0.92
12:AL:945:C:OP1	27:r:36:ARG:NH2	2.01	0.92
18:i:311:ILE:CG1	20:k:58:TYR:CE2	2.53	0.92
34:y:42:ILE:HD11	34:y:76:PHE:HE2	1.33	0.92
11:AK:132:PHE:HB3	18:i:249:PRO:HD3	1.48	0.92
11:AK:132:PHE:HE2	18:i:251:LEU:HD21	1.21	0.92
12:AL:740:A:H1'	26:q:206:PHE:CD1	2.03	0.92
46:A:1698:C:H5	46:A:1736:G:H21	1.14	0.92
46:A:1727:A:H3'	47:B:290:GLN:CG	1.99	0.92
5:AE:99:LYS:HG3	12:AL:1524:U:O3'	1.68	0.92
11:AK:151:GLN:CG	18:i:83:LYS:HE2	1.96	0.92
12:AL:65:C:H2'	12:AL:66:G:H8	1.34	0.92
12:AL:382:U:OP1	31:v:7:ARG:NH1	2.03	0.92
2:AB:110:PHE:HE1	12:AL:101:U:C5'	1.81	0.92
4:AD:162:ALA:HB1	7:AG:189:VAL:CG2	1.99	0.92
6:AF:208:MET:CG	19:j:425:TRP:HH2	1.82	0.92
7:AG:166:VAL:CB	16:g:195:LYS:HE2	1.99	0.92
7:AG:224:VAL:HG11	33:x:41:ILE:HD11	1.50	0.92
12:AL:326:C:H3'	12:AL:334:U:H5	1.32	0.92
12:AL:749:A:N3	26:q:122:VAL:HB	1.85	0.92
12:AL:1098:U:N3	12:AL:1239:A:C2	2.37	0.92
12:AL:1411:G:C2'	24:o:272:MET:HB2	2.00	0.92
16:g:12:ILE:CD1	17:h:195:LEU:CD2	2.48	0.92
18:i:368:LEU:CB	29:t:111:LYS:HG2	1.97	0.92
30:u:87:LEU:HD12	32:w:114:ARG:NH1	1.83	0.92
2:AB:85:LYS:HZ2	12:AL:376:C:P	1.91	0.92
3:AC:232:LEU:HD21	4:AD:278:LYS:CB	1.98	0.92
18:i:90:MET:SD	25:p:134:ALA:O	2.27	0.92
18:i:93:TRP:CD1	29:t:108:PRO:HA	2.04	0.92
20:k:59:LEU:HD23	25:p:28:TYR:CD2	2.03	0.92
21:l:40:ARG:HH21	30:u:141:ILE:CG2	1.82	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:m:168:THR:HA	22:m:178:VAL:HA	1.49	0.92
24:o:156:ALA:HB1	24:o:233:LYS:HB2	1.51	0.92
3:AC:54:ALA:O	7:AG:143:PRO:HB3	1.68	0.92
8:AH:46:GLY:CA	32:w:5:ASN:CG	2.43	0.92
12:AL:71:A:H61	12:AL:99:U:H3'	1.32	0.92
12:AL:239:A:C5'	32:w:71:PHE:CD2	2.52	0.92
21:l:51:PRO:HG2	33:x:138:MET:H	1.30	0.92
46:A:841:G:OP1	50:E:110:ASN:HB2	1.70	0.92
4:AD:244:ALA:HA	4:AD:247:ALA:HB3	1.51	0.92
6:AF:338:LYS:HZ3	31:v:50:VAL:HA	1.32	0.92
7:AG:4:GLN:HG3	17:h:354:LEU:HD23	1.52	0.92
9:AI:276:ILE:HG13	9:AI:323:LEU:HD11	1.50	0.92
9:AI:310:ASN:HD21	28:s:34:LYS:CG	1.81	0.92
10:AJ:14:LEU:CD1	11:AK:222:LEU:CD2	2.46	0.92
12:AL:773:A:OP1	26:q:79:HIS:HE1	1.53	0.92
12:AL:774:U:H4'	26:q:120:GLN:HE22	1.14	0.92
16:g:249:GLY:C	33:x:55:TYR:HE1	1.73	0.92
19:j:76:VAL:HG23	20:k:306:SER:O	1.68	0.92
20:k:54:PHE:CD1	25:p:57:PHE:HE1	1.81	0.92
21:l:38:VAL:CB	30:u:141:ILE:HD11	1.98	0.92
22:m:211:ARG:NH1	22:m:214:GLU:CB	2.31	0.92
8:AH:64:PRO:CD	12:AL:131:A:OP1	2.18	0.92
9:AI:58:LYS:O	12:AL:1341:U:C4	2.22	0.92
5:AE:283:THR:HA	5:AE:315:TYR:CE2	2.05	0.91
6:AF:308:LYS:HD2	31:v:62:ILE:HD12	1.52	0.91
7:AG:49:LYS:HE3	23:n:58:LYS:HZ3	0.75	0.91
11:AK:170:GLN:NE2	25:p:120:VAL:HG23	1.82	0.91
18:i:82:ASN:HD21	20:k:57:PRO:CB	1.83	0.91
18:i:332:LYS:HG3	18:i:344:THR:HG22	1.50	0.91
25:p:102:PHE:HD1	29:t:111:LYS:O	1.51	0.91
33:x:111:HIS:HE1	35:z:153:ARG:HH12	1.11	0.91
46:A:945:A:C2	51:F:47:ARG:HB2	2.06	0.91
46:A:2625:A:H61	55:J:110:GLN:HE22	1.05	0.91
46:A:3003:U:H2'	46:A:3004:A:C8	2.05	0.91
3:AC:191:ILE:HG22	4:AD:223:TYR:CE1	2.05	0.91
7:AG:3:ILE:HG22	23:n:20:ARG:NH2	1.84	0.91
11:AK:299:LYS:HG2	24:o:151:PHE:CB	2.01	0.91
13:AM:33:U:N3	24:o:278:ARG:HG3	1.50	0.91
46:A:1004:A:C2	75:e:179:GLU:OE2	2.23	0.91
46:A:2205:G:H2'	46:A:2206:U:C6	2.05	0.91
3:AC:232:LEU:CD2	4:AD:278:LYS:HB3	2.01	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:261:SER:N	16:g:223:GLN:HE21	1.68	0.91
6:AF:50:HIS:HA	12:AL:492:G:O6	1.69	0.91
18:i:148:LYS:NZ	20:k:78:LEU:CA	2.32	0.91
7:AG:36:ILE:HD13	17:h:234:LYS:HB3	1.52	0.91
7:AG:75:TYR:CD2	8:AH:182:TYR:CD2	2.58	0.91
7:AG:224:VAL:HG13	33:x:45:LEU:HD13	1.47	0.91
9:AI:295:SER:HB3	9:AI:345:ILE:HG23	1.52	0.91
20:k:45:LYS:HD2	20:k:47:ARG:HH21	1.34	0.91
46:A:1811:U:H3	46:A:1819:A:N6	1.63	0.91
46:A:2078:U:H2'	46:A:2079:A:C8	2.05	0.91
6:AF:54:LEU:HD22	19:j:12:ALA:HA	1.52	0.91
9:AI:192:TYR:HD1	9:AI:193:ASP:H	1.12	0.91
12:AL:1375:U:H4'	28:s:110:THR:CG2	1.98	0.91
12:AL:1486:A:H2	46:A:1859:G:H1'	1.10	0.91
13:AM:76:A:C2	46:A:2662:A:C6	2.59	0.91
16:g:250:PHE:N	33:x:55:TYR:HE1	1.67	0.91
46:A:1728:U:N3	47:B:270:GLY:HA3	1.86	0.91
7:AG:36:ILE:HD11	17:h:234:LYS:CG	1.99	0.91
7:AG:96:LYS:HD2	12:AL:915:U:O3'	1.70	0.91
8:AH:167:ASN:O	23:n:65:PRO:CG	2.19	0.91
10:AJ:93:LYS:HB2	12:AL:1058:G:O6	1.69	0.91
12:AL:1411:G:H4'	24:o:272:MET:HB3	1.52	0.91
13:AM:76:A:H2	46:A:2662:A:N6	1.68	0.91
21:l:40:ARG:HH21	30:u:141:ILE:HG23	1.36	0.91
23:n:1:MET:HG2	23:n:31:LEU:HB2	1.52	0.91
36:0:73:ARG:HB3	46:A:3093:U:C6	2.05	0.91
6:AF:320:ARG:NH1	8:AH:13:GLY:O	2.02	0.91
7:AG:184:GLU:HG2	16:g:209:SER:CB	1.99	0.91
15:Z:38:LEU:HD12	22:m:238:ILE:HA	0.92	0.91
21:l:110:SER:CB	33:x:93:TYR:HE1	1.83	0.91
46:A:2917:U:O2'	46:A:2918:A:C5'	2.18	0.91
4:AD:155:LEU:HD13	16:g:210:LEU:HB2	1.52	0.91
6:AF:62:LEU:HD21	19:j:26:PHE:CZ	2.06	0.91
7:AG:166:VAL:CG2	16:g:196:PHE:CZ	2.53	0.91
9:AI:450:ARG:C	22:m:114:LEU:HD12	1.96	0.91
10:AJ:32:SER:CB	12:AL:1313:U:H5"	2.00	0.91
11:AK:196:ASN:HD21	12:AL:1318:U:H5'	0.79	0.91
46:A:1193:U:H2'	46:A:1194:U:C6	2.05	0.91
46:A:2845:G:O6	48:C:204:SER:OG	1.88	0.91
3:AC:179:ARG:CZ	7:AG:201:PHE:CE1	2.53	0.91
9:AI:154:VAL:HG22	9:AI:154:VAL:O	1.69	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:503:A:OP2	55:J:146:ARG:NH1	2.02	0.91
46:A:981:G:H21	76:f:150:LYS:HE2	1.32	0.91
6:AF:339:LEU:CD2	31:v:52:LYS:HE3	1.82	0.91
7:AG:221:GLU:CG	16:g:270:PHE:HE2	1.82	0.91
12:AL:628:U:H2'	12:AL:629:G:H8	1.35	0.91
12:AL:802:A:OP1	33:x:131:ARG:NE	2.03	0.91
12:AL:1098:U:H3	12:AL:1239:A:H2	1.02	0.91
12:AL:1216:A:C8	24:o:256:TYR:HB2	2.05	0.91
46:A:1166:U:H2'	46:A:1167:A:C8	2.04	0.91
46:A:1358:C:H5	46:A:1553:G:H1	1.12	0.91
46:A:1811:U:O2	46:A:1819:A:C6	2.23	0.91
46:A:3161:U:H2'	46:A:3162:U:C6	2.05	0.91
5:AE:51:PHE:CE1	5:AE:97:LEU:HB3	2.06	0.90
5:AE:63:PRO:HG2	12:AL:1515:A:OP1	1.70	0.90
11:AK:182:VAL:CG2	25:p:148:ILE:HA	2.01	0.90
12:AL:269:A:C4'	32:w:66:LEU:O	2.19	0.90
15:Z:81:HIS:ND1	35:z:173:LYS:HD2	1.85	0.90
18:i:93:TRP:CG	29:t:109:GLY:H	1.87	0.90
75:e:66:MET:SD	75:e:150:VAL:N	2.44	0.90
3:AC:40:ASP:OD1	4:AD:286:VAL:CB	2.20	0.90
6:AF:336:PHE:CE2	19:j:142:TYR:HD1	1.90	0.90
7:AG:33:VAL:HG13	17:h:357:TYR:HH	1.29	0.90
15:Z:16:LEU:HD12	35:z:162:PHE:HE1	1.35	0.90
22:m:109:ARG:NH2	24:o:228:MET:HE1	1.69	0.90
46:A:3254:U:O4	57:L:163:ASN:HB3	1.71	0.90
6:AF:58:MET:CG	19:j:26:PHE:CD2	2.55	0.90
12:AL:1032:A:C4'	24:o:275:TRP:CZ2	2.28	0.90
12:AL:1154:C:OP1	18:i:352:PHE:HB2	1.70	0.90
12:AL:1164:U:O3'	24:o:254:ARG:CD	2.18	0.90
15:Z:66:ALA:HB2	22:m:184:ASN:HB2	0.96	0.90
46:A:849:U:H2'	46:A:850:A:C8	2.05	0.90
46:A:1439:A:C2'	46:A:1440:U:C6	2.50	0.90
6:AF:58:MET:HG3	19:j:26:PHE:HB3	1.50	0.90
11:AK:155:ASN:HD21	20:k:56:PRO:HD3	1.09	0.90
21:l:38:VAL:HG11	30:u:141:ILE:HD11	0.91	0.90
46:A:1004:A:H5"	76:f:140:GLY:CA	2.00	0.90
46:A:1059:A:O2'	46:A:1060:U:P	2.30	0.90
46:A:2010:A:H2	46:A:2076:A:C2	1.88	0.90
1:AA:90:LYS:HD2	12:AL:1612:C:H41	1.33	0.90
2:AB:110:PHE:CE1	12:AL:101:U:C5'	2.54	0.90
6:AF:314:VAL:CG2	8:AH:18:THR:OG1	2.19	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:24:ASN:ND2	12:AL:1313:U:OP1	2.05	0.90
12:AL:1634:C:H1'	16:g:85:TRP:CZ2	2.06	0.90
46:A:371:U:H2'	46:A:372:A:C8	2.07	0.90
11:AK:294:PHE:HZ	24:o:170:VAL:CG1	1.85	0.90
12:AL:502:A:P	19:j:7:LEU:HB3	2.12	0.90
12:AL:1361:U:O4	28:s:48:HIS:NE2	2.04	0.90
21:l:6:ILE:CD1	33:x:94:ALA:HB2	2.02	0.90
26:q:184:VAL:HG23	35:z:117:PHE:CE2	1.95	0.90
46:A:1250:U:H2'	46:A:1251:A:C8	2.07	0.90
76:f:16:ALA:HA	76:f:55:PRO:HA	1.52	0.90
12:AL:1632:A:H5'	33:x:63:GLY:HA3	1.52	0.90
18:i:316:MET:HG3	20:k:69:TRP:HH2	1.32	0.90
3:AC:191:ILE:CD1	4:AD:222:GLN:CD	2.45	0.90
6:AF:320:ARG:HD3	8:AH:13:GLY:CA	2.02	0.90
8:AH:104:ARG:NE	12:AL:143:A:C5'	2.34	0.90
10:AJ:32:SER:OG	12:AL:1313:U:C5'	2.19	0.90
15:Z:27:ALA:CB	22:m:246:LEU:HB3	1.99	0.90
46:A:1142:U:H2'	46:A:1143:A:C8	2.06	0.90
46:A:2276:G:N1	56:K:128:MET:CG	2.26	0.90
4:AD:155:LEU:CD2	16:g:210:LEU:HG	2.02	0.90
8:AH:167:ASN:C	23:n:65:PRO:HG2	1.96	0.90
63:R:331:GLU:HB3	63:R:362:ARG:NH1	1.87	0.90
7:AG:33:VAL:CG1	17:h:357:TYR:OH	2.17	0.90
9:AI:187:ARG:HA	28:s:44:TRP:HB2	1.54	0.90
12:AL:690:G:N7	12:AL:823:G:C6	2.40	0.90
12:AL:1162:C:H4'	29:t:115:TRP:HB2	1.53	0.90
12:AL:1165:A:OP1	24:o:254:ARG:CD	2.19	0.90
12:AL:1287:A:OP2	25:p:83:ARG:HB2	1.72	0.90
12:AL:1633:U:C5	33:x:58:PHE:CD1	2.59	0.90
46:A:1533:G:H4'	47:B:149:ARG:O	1.72	0.90
7:AG:174:TYR:CE1	16:g:107:PHE:CZ	2.59	0.89
10:AJ:14:LEU:CG	11:AK:222:LEU:HD22	2.01	0.89
10:AJ:45:ALA:HB2	29:t:32:LYS:HD3	1.54	0.89
11:AK:151:GLN:HE21	18:i:83:LYS:HZ1	0.89	0.89
12:AL:1202:U:P	16:g:59:LYS:HE2	2.12	0.89
12:AL:1575:A:C2	46:A:1859:G:O2'	2.24	0.89
29:t:5:ARG:HH22	29:t:22:LEU:HD13	1.35	0.89
18:i:82:ASN:HD21	20:k:57:PRO:HB3	1.29	0.89
3:AC:265:SER:OG	17:h:129:TYR:CZ	2.05	0.89
6:AF:67:TYR:HE2	12:AL:482:U:O4'	1.55	0.89
6:AF:204:ASP:OD2	19:j:158:LEU:HD11	1.71	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:168:ARG:HG3	23:n:65:PRO:CG	2.03	0.89
8:AH:208:GLU:HB3	30:u:134:ARG:HD3	1.54	0.89
12:AL:1106:U:OP2	18:i:392:LYS:CE	2.19	0.89
12:AL:1624:U:C4	35:z:154:HIS:CD2	2.59	0.89
13:AM:33:U:H3'	24:o:278:ARG:CZ	2.01	0.89
30:u:132:GLU:CG	32:w:126:ARG:HG2	2.01	0.89
33:x:111:HIS:CE1	35:z:153:ARG:NH1	2.39	0.89
6:AF:50:HIS:CE1	12:AL:493:A:H62	1.89	0.89
11:AK:137:LEU:O	18:i:215:LEU:HD21	1.72	0.89
11:AK:285:LEU:HD12	12:AL:1281:A:N1	1.86	0.89
12:AL:13:U:H5"	20:k:238:PHE:CE2	2.06	0.89
12:AL:233:C:HO2'	31:v:27:ASN:HD22	1.00	0.89
12:AL:825:G:C2'	12:AL:826:G:H5'	2.02	0.89
12:AL:1375:U:C4'	28:s:110:THR:HG21	2.02	0.89
13:AM:76:A:N1	46:A:2688:G:C6	2.41	0.89
18:i:311:ILE:HD11	20:k:58:TYR:OH	1.71	0.89
46:A:100:U:H2'	46:A:101:A:C8	2.08	0.89
46:A:266:A:H2'	46:A:267:A:C8	2.07	0.89
75:e:66:MET:HE3	75:e:142:TYR:CE2	2.07	0.89
6:AF:58:MET:HE1	19:j:30:LYS:CD	2.02	0.89
8:AH:104:ARG:CD	12:AL:143:A:C5'	2.43	0.89
9:AI:56:LEU:HD21	22:m:210:VAL:C	1.90	0.89
12:AL:803:A:H5'	21:l:96:ILE:O	1.73	0.89
12:AL:899:U:H2'	12:AL:900:A:H8	1.37	0.89
15:Z:66:ALA:N	22:m:184:ASN:HB2	1.86	0.89
16:g:200:ILE:HD13	16:g:287:LYS:HG2	0.91	0.89
4:AD:258:LYS:HE2	16:g:226:VAL:CG2	2.03	0.89
6:AF:62:LEU:CD1	19:j:26:PHE:CZ	2.49	0.89
6:AF:321:TYR:CE2	31:v:36:PRO:CD	2.54	0.89
7:AG:114:TRP:CD1	16:g:205:GLY:O	2.25	0.89
9:AI:147:ILE:HA	9:AI:343:LEU:O	1.73	0.89
11:AK:154:TYR:HD2	25:p:57:PHE:CZ	1.90	0.89
12:AL:16:G:H5"	20:k:266:ARG:NH1	1.86	0.89
12:AL:1628:A:O2'	35:z:163:LYS:HD3	1.72	0.89
30:u:74:PRO:CB	32:w:100:GLU:OE1	2.19	0.89
30:u:82:GLU:HG2	32:w:107:PHE:CD1	2.07	0.89
46:A:1250:U:H2'	46:A:1251:A:H8	1.37	0.89
1:AA:91:HIS:NE2	12:AL:1473:A:H5"	1.87	0.89
7:AG:122:LEU:HD21	16:g:15:VAL:CG2	2.00	0.89
12:AL:1014:A:OP2	28:s:103:HIS:ND1	2.04	0.89
21:l:63:ARG:NH2	26:q:108:TYR:OH	2.05	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:1:283:ASN:ND2	63:R:143:GLU:OE1	2.05	0.89
46:A:981:G:N2	76:f:150:LYS:CD	2.35	0.89
1:AA:109:GLN:OE1	46:A:1643:G:O2'	1.89	0.89
8:AH:189:PHE:CE1	32:w:173:GLU:HG2	2.06	0.89
12:AL:1361:U:H3	28:s:48:HIS:HD2	0.93	0.89
21:l:2:LEU:HD12	21:l:72:ASP:CG	1.98	0.89
30:u:232:GLN:HE21	32:w:96:VAL:HG11	1.38	0.89
46:A:125:U:H2'	46:A:126:A:C8	2.07	0.89
46:A:1540:A:H2'	46:A:1541:U:H6	1.35	0.89
3:AC:191:ILE:HG21	4:AD:222:GLN:CD	1.97	0.89
6:AF:61:PHE:CD2	19:j:29:TYR:CE2	2.60	0.89
6:AF:308:LYS:CD	31:v:62:ILE:HD12	2.03	0.89
7:AG:78:ARG:HH12	8:AH:176:LEU:HD11	1.37	0.89
12:AL:239:A:H5"	32:w:71:PHE:CD2	2.08	0.89
12:AL:1382:C:N4	12:AL:1384:G:N7	2.20	0.89
12:AL:1410:U:H4'	24:o:275:TRP:H	1.35	0.89
12:AL:1411:G:O2'	24:o:272:MET:CB	2.20	0.89
12:AL:1624:U:N3	35:z:154:HIS:HE1	1.71	0.89
6:AF:314:VAL:HG22	8:AH:18:THR:OG1	1.72	0.89
8:AH:53:VAL:HG13	32:w:48:GLU:CD	1.98	0.89
8:AH:165:LEU:HD12	12:AL:700:U:C4'	2.03	0.89
12:AL:993:U:H2'	12:AL:994:A:C8	2.08	0.89
12:AL:1014:A:OP1	28:s:103:HIS:CD2	2.26	0.89
18:i:148:LYS:HZ1	20:k:78:LEU:CB	1.84	0.89
18:i:148:LYS:HZ1	20:k:78:LEU:CG	1.84	0.89
26:q:214:MET:CE	35:z:140:MET:HG3	2.03	0.89
46:A:2461:A:H3'	46:A:2462:A:C8	2.08	0.89
4:AD:186:MET:HB3	4:AD:189:ARG:HB2	1.55	0.88
7:AG:1:MET:HE1	17:h:351:GLU:HB3	1.50	0.88
7:AG:67:PRO:HB3	32:w:187:GLN:NE2	1.85	0.88
11:AK:237:SER:HG	12:AL:1316:A:P	1.97	0.88
12:AL:1633:U:C6	33:x:58:PHE:CG	2.61	0.88
16:g:68:LEU:HB2	17:h:217:ILE:HD11	1.52	0.88
75:e:66:MET:HB2	75:e:149:GLN:OE1	1.73	0.88
3:AC:191:ILE:CD1	4:AD:222:GLN:CG	2.39	0.88
6:AF:307:TYR:OH	31:v:92:LYS:CB	2.21	0.88
12:AL:305:A:H2'	12:AL:306:A:C8	2.08	0.88
12:AL:1305:A:H3'	12:AL:1305:A:OP2	1.71	0.88
12:AL:1411:G:C3'	24:o:272:MET:HB2	2.03	0.88
14:AN:1:A:H5"	27:r:73:PRO:CB	2.02	0.88
17:h:337:LYS:HZ2	20:k:203:ARG:NH1	1.62	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:l:2:LEU:CD1	21:l:72:ASP:CG	2.47	0.88
46:A:2457:G:N7	50:E:147:ARG:NH1	2.20	0.88
12:AL:1492:U:HO2'	12:AL:1493:A:H5'	1.38	0.88
20:k:59:LEU:HD21	25:p:28:TYR:HB2	1.55	0.88
21:l:14:SER:OG	26:q:108:TYR:HB3	1.73	0.88
30:u:276:LYS:HD2	30:u:279:ARG:HH22	1.07	0.88
4:AD:175:ARG:HD2	4:AD:191:ILE:HG13	1.55	0.88
4:AD:208:PHE:CD2	16:g:214:LEU:CB	2.47	0.88
7:AG:2:LYS:HB2	12:AL:926:A:H5"	1.54	0.88
12:AL:1004:G:H1'	12:AL:1005:C:H4'	1.55	0.88
12:AL:1047:U:P	29:t:77:ARG:HH12	1.96	0.88
16:g:228:PRO:HA	16:g:277:LEU:HA	1.53	0.88
18:i:302:ILE:HD11	25:p:25:GLU:HB2	1.54	0.88
18:i:311:ILE:HG12	20:k:58:TYR:CE2	2.09	0.88
46:A:2922:G:H22	46:A:2931:G:H2'	1.36	0.88
2:AB:124:TRP:CZ2	12:AL:101:U:O2	2.26	0.88
5:AE:94:VAL:N	12:AL:1542:A:OP1	2.07	0.88
6:AF:319:TYR:HD1	31:v:42:THR:HG21	1.09	0.88
9:AI:56:LEU:CG	22:m:214:GLU:HG3	2.00	0.88
11:AK:237:SER:OG	12:AL:1316:A:P	2.30	0.88
12:AL:757:U:H5	26:q:85:ASN:ND2	1.71	0.88
46:A:2761:C:H5"	56:K:127:ARG:CD	2.03	0.88
6:AF:62:LEU:HD21	19:j:26:PHE:HE1	1.33	0.88
6:AF:208:MET:SD	19:j:425:TRP:CH2	2.66	0.88
8:AH:99:LYS:NZ	31:v:100:TRP:CE3	2.41	0.88
11:AK:135:ASP:N	20:k:105:ILE:HG12	1.88	0.88
12:AL:16:G:OP2	20:k:261:LYS:CE	2.21	0.88
12:AL:666:U:H2'	12:AL:667:A:H8	1.39	0.88
15:Z:9:ARG:CZ	16:g:71:LEU:HD12	2.03	0.88
21:l:40:ARG:NH2	30:u:141:ILE:HG21	1.85	0.88
21:l:71:PHE:O	21:l:72:ASP:OD1	1.91	0.88
28:s:85:ILE:CG1	34:y:67:ASP:CG	2.41	0.88
1:AA:111:ARG:C	12:AL:1486:A:OP1	2.17	0.88
8:AH:16:PRO:HG2	31:v:35:LYS:HG2	1.53	0.88
8:AH:153:ILE:HG13	23:n:41:GLN:CD	1.98	0.88
12:AL:15:A:H5"	20:k:261:LYS:NZ	1.88	0.88
12:AL:622:A:H5"	19:j:43:GLN:HG2	1.56	0.88
12:AL:1642:U:O2'	24:o:66:ILE:HD13	1.74	0.88
46:A:2017:G:H22	46:A:2065:A:H61	1.17	0.88
47:B:71:VAL:HG12	47:B:75:LYS:CB	2.03	0.88
12:AL:899:U:H2'	12:AL:900:A:C8	2.09	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1105:G:H5”	18:i:390:ASN:HD22	0.73	0.88
12:AL:1491:U:P	54:I:49:PRO:HB2	2.14	0.88
12:AL:1624:U:H3	35:z:154:HIS:CE1	1.86	0.88
15:Z:31:LEU:HD11	22:m:246:LEU:HD21	1.53	0.88
16:g:68:LEU:HB3	17:h:217:ILE:CD1	2.00	0.88
25:p:85:ARG:CZ	29:t:115:TRP:NE1	2.34	0.88
46:A:1775:A:H2’	46:A:1776:A:C8	2.08	0.88
46:A:2016:A:H61	46:A:2021:A:H3’	1.37	0.88
3:AC:185:LEU:HB2	7:AG:196:MET:O	1.72	0.88
4:AD:155:LEU:HB2	16:g:210:LEU:CG	2.04	0.88
7:AG:114:TRP:HB2	16:g:204:GLY:O	1.72	0.88
12:AL:1165:A:P	24:o:254:ARG:CD	2.62	0.88
12:AL:1628:A:N3	35:z:166:ILE:HG21	1.89	0.88
17:h:315:VAL:CG1	24:o:39:PRO:HD3	2.00	0.88
18:i:93:TRP:CB	29:t:108:PRO:HA	2.04	0.88
27:r:35:LYS:CE	32:w:37:LEU:HD22	2.03	0.88
46:A:37:U:H2’	46:A:38:A:H8	1.38	0.88
46:A:231:A:H2’	46:A:232:C:C6	2.09	0.88
46:A:2012:A:H61	46:A:2023:U:H5’	1.38	0.88
46:A:2086:U:H2’	46:A:2087:A:C8	2.09	0.88
12:AL:627:U:H2’	12:AL:628:U:C6	2.09	0.88
12:AL:826:G:H21	30:u:246:ASN:HD21	1.17	0.88
12:AL:1172:A:H8	25:p:36:ILE:HD12	1.09	0.88
29:t:60:LEU:CD1	34:y:20:PRO:CG	2.51	0.88
46:A:1426:U:H2’	46:A:1427:A:H8	1.39	0.88
46:A:2006:U:H2’	46:A:2007:A:C8	2.09	0.88
46:A:2014:U:H1’	46:A:2022:U:H5’	1.55	0.88
11:AK:107:LEU:HD11	18:i:168:ASN:OD1	1.74	0.87
12:AL:71:A:N6	12:AL:99:U:H3’	1.89	0.87
12:AL:1163:A:C2’	24:o:256:TYR:OH	2.22	0.87
46:A:1004:A:C5’	76:f:140:GLY:CA	2.51	0.87
46:A:1006:U:O4	76:f:135:LEU:HA	1.74	0.87
46:A:3281:U:H2’	46:A:3282:A:H8	1.38	0.87
75:e:66:MET:CB	75:e:149:GLN:HB2	2.04	0.87
8:AH:208:GLU:HG2	30:u:134:ARG:HH11	1.38	0.87
18:i:93:TRP:HB3	29:t:108:PRO:HA	1.54	0.87
51:F:119:LEU:HD21	75:e:210:VAL:HG12	1.56	0.87
2:AB:109:SER:HA	12:AL:101:U:OP2	1.74	0.87
4:AD:155:LEU:HD22	16:g:210:LEU:HB3	1.57	0.87
8:AH:162:GLN:NE2	23:n:60:PHE:CE1	2.42	0.87
12:AL:521:A:H5’	31:v:46:VAL:HA	1.55	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1099:U:O2	12:AL:1238:G:O6	1.91	0.87
18:i:166:ASN:HD21	18:i:168:ASN:HB3	0.74	0.87
18:i:306:TYR:OH	20:k:59:LEU:HD23	1.74	0.87
22:m:127:LYS:NZ	24:o:191:LYS:NZ	2.23	0.87
3:AC:9:HIS:HE1	17:h:164:ILE:CD1	1.48	0.87
12:AL:1108:G:H4'	25:p:95:HIS:HD2	0.71	0.87
12:AL:1632:A:H1'	33:x:58:PHE:CZ	2.10	0.87
17:h:290:TRP:CZ3	24:o:49:PRO:HD2	2.09	0.87
18:i:303:ASN:HD21	25:p:19:PRO:HA	1.36	0.87
21:l:110:SER:HB3	33:x:93:TYR:CE1	1.95	0.87
46:A:1819:A:C6	46:A:1820:G:O6	2.27	0.87
4:AD:155:LEU:CD2	16:g:210:LEU:CG	2.52	0.87
6:AF:137:PHE:CE2	19:j:468:PRO:N	2.42	0.87
11:AK:285:LEU:CD1	12:AL:1281:A:N6	2.38	0.87
12:AL:1165:A:OP1	24:o:254:ARG:NE	2.06	0.87
13:AM:76:A:H1'	46:A:2662:A:C2	2.09	0.87
20:k:59:LEU:CD2	25:p:28:TYR:HD2	1.88	0.87
25:p:92:PRO:C	29:t:95:ARG:NH2	2.33	0.87
46:A:2210:A:H2'	46:A:2211:U:C6	2.09	0.87
46:A:3278:A:H2'	46:A:3279:U:H6	1.37	0.87
5:AE:88:LEU:CD1	5:AE:90:PRO:CD	2.52	0.87
6:AF:50:HIS:ND1	12:AL:493:A:N6	2.22	0.87
6:AF:75:LYS:HB2	6:AF:97:SER:HB2	1.56	0.87
10:AJ:72:GLU:HG3	18:i:121:LYS:HE3	1.56	0.87
46:A:2845:G:O2'	48:C:198:MET:SD	2.32	0.87
63:R:235:TRP:O	63:R:236:THR:C	2.15	0.87
3:AC:266:LYS:CD	17:h:129:TYR:CZ	2.48	0.87
7:AG:220:TRP:CH2	33:x:41:ILE:HD12	2.09	0.87
8:AH:100:ALA:HB2	12:AL:143:A:P	2.10	0.87
8:AH:210:ILE:HG21	21:l:39:VAL:HB	0.87	0.87
11:AK:75:ARG:HD3	18:i:185:ASN:O	1.74	0.87
12:AL:26:U:P	20:k:267:ASN:HD22	1.98	0.87
30:u:103:ALA:HB1	32:w:165:LEU:HD22	1.55	0.87
6:AF:178:LYS:NZ	19:j:459:ARG:HH22	1.72	0.87
11:AK:132:PHE:CE2	18:i:251:LEU:CD2	2.55	0.87
12:AL:1633:U:H5	33:x:58:PHE:CE1	1.92	0.87
20:k:40:ILE:HD13	25:p:22:VAL:HG12	1.44	0.87
26:q:204:LEU:HD11	35:z:129:ILE:HG23	1.54	0.87
31:v:90:LEU:HB3	31:v:96:LEU:HG	1.57	0.87
46:A:801:U:H2'	46:A:802:U:C6	2.10	0.87
12:AL:1411:G:O2'	24:o:272:MET:N	2.07	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:30:U:H3	48:C:21:SER:CA	1.88	0.87
6:AF:163:VAL:HG12	6:AF:164:GLU:HG2	1.56	0.86
10:AJ:35:LEU:HD21	29:t:43:PHE:CD2	2.10	0.86
12:AL:71:A:H5'	12:AL:100:A:H62	1.38	0.86
12:AL:258:G:OP1	32:w:68:LYS:CD	2.23	0.86
12:AL:508:C:H5"	19:j:420:PRO:HB2	1.55	0.86
12:AL:825:G:O2'	12:AL:826:G:C5'	2.21	0.86
12:AL:1632:A:C5	33:x:67:LEU:HD12	2.09	0.86
16:g:7:LEU:CD2	17:h:219:ILE:HD12	2.05	0.86
20:k:59:LEU:C	25:p:20:TYR:OH	2.18	0.86
32:w:160:THR:HA	32:w:163:GLN:HG2	1.57	0.86
46:A:1111:U:H3'	46:A:1112:A:H5"	1.57	0.86
46:A:1764:U:H3	46:A:1786:A:H61	1.21	0.86
46:A:3278:A:H2'	46:A:3279:U:C6	2.09	0.86
51:F:163:PRO:HB3	75:e:213:LEU:CD1	2.04	0.86
75:e:66:MET:HE2	75:e:142:TYR:CE2	2.10	0.86
3:AC:54:ALA:CB	7:AG:143:PRO:CA	2.52	0.86
12:AL:736:A:O2'	21:l:86:LYS:HE3	1.75	0.86
12:AL:1216:A:N9	24:o:256:TYR:HB2	1.89	0.86
46:A:1426:U:H2'	46:A:1427:A:C8	2.09	0.86
5:AE:99:LYS:HE3	12:AL:1524:U:H4'	0.91	0.86
12:AL:749:A:C4'	26:q:121:LYS:HE2	2.04	0.86
46:A:3174:U:H2'	46:A:3175:A:C8	2.10	0.86
7:AG:75:TYR:HD2	8:AH:182:TYR:HD2	1.21	0.86
7:AG:86:VAL:HG22	23:n:72:ARG:NH1	1.90	0.86
11:AK:112:GLU:N	18:i:172:TYR:CE2	2.43	0.86
22:m:109:ARG:HH21	24:o:228:MET:HE2	1.31	0.86
46:A:417:U:H2'	46:A:418:A:C8	2.10	0.86
75:e:66:MET:CG	75:e:149:GLN:CB	2.52	0.86
2:AB:70:ASP:HB3	2:AB:73:ILE:HG12	1.56	0.86
6:AF:47:PRO:O	12:AL:493:A:N6	2.07	0.86
11:AK:138:PRO:HG2	18:i:322:LYS:HA	0.91	0.86
12:AL:20:A:C2'	12:AL:21:U:H5'	2.05	0.86
12:AL:412:U:H2'	12:AL:413:G:C8	2.11	0.86
12:AL:1181:A:H2	25:p:78:PRO:HG2	1.40	0.86
21:l:35:ASN:HB2	47:B:72:THR:HG21	1.57	0.86
30:u:66:PRO:HD2	30:u:251:TYR:HE2	1.40	0.86
46:A:210:U:H2'	46:A:211:A:H8	1.40	0.86
63:R:335:THR:HG21	63:R:366:ALA:HB2	1.54	0.86
6:AF:313:LYS:CA	31:v:68:ASP:OD2	2.24	0.86
8:AH:64:PRO:HB3	12:AL:133:U:C4	2.10	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:310:ASN:ND2	28:s:34:LYS:HG2	1.89	0.86
10:AJ:58:HIS:O	10:AJ:59:LEU:CG	2.23	0.86
12:AL:785:A:N1	33:x:130:ARG:CG	2.39	0.86
12:AL:1624:U:C2	35:z:154:HIS:CE1	2.63	0.86
28:s:92:ARG:HH21	28:s:104:THR:HG21	1.40	0.86
32:w:6:PHE:HD2	32:w:60:ILE:HD11	1.40	0.86
46:A:1779:A:H2'	46:A:1780:U:C6	2.11	0.86
3:AC:188:ALA:HB1	4:AD:73:LYS:CB	2.03	0.86
3:AC:194:PHE:HE2	4:AD:223:TYR:CB	1.88	0.86
4:AD:38:GLN:HA	4:AD:42:PHE:HB2	1.55	0.86
8:AH:100:ALA:CB	12:AL:143:A:OP1	2.20	0.86
12:AL:804:U:OP1	21:l:98:LYS:HD2	1.76	0.86
12:AL:1255:U:OP2	28:s:105:ARG:CZ	2.23	0.86
22:m:160:LEU:HD11	22:m:226:ALA:HB3	1.55	0.86
46:A:1348:U:H5"	46:A:1349:A:H3'	1.56	0.86
6:AF:48:LYS:CE	12:AL:489:A:C4	2.56	0.86
6:AF:208:MET:HB2	19:j:425:TRP:CH2	2.10	0.86
46:A:1486:U:H2'	46:A:1487:A:C8	2.11	0.86
46:A:1511:U:H2'	46:A:1512:A:C8	2.10	0.86
46:A:2319:A:H2'	46:A:2320:A:C8	2.11	0.86
46:A:2590:U:H3'	46:A:2591:A:C5'	2.05	0.86
3:AC:266:LYS:HB3	17:h:128:PRO:CG	2.06	0.86
4:AD:210:PHE:CZ	7:AG:196:MET:HA	2.11	0.86
12:AL:406:U:OP1	19:j:64:ARG:CD	2.23	0.86
12:AL:501:U:H3'	19:j:9:LYS:O	1.75	0.86
22:m:98:TRP:CB	24:o:242:LEU:HD21	2.06	0.86
29:t:63:ASN:ND2	34:y:18:ILE:O	2.08	0.86
46:A:140:U:H2'	46:A:141:U:C6	2.11	0.86
46:A:1865:C:H3'	46:A:1866:A:H8	1.41	0.86
46:A:3160:U:C5'	57:L:52:THR:HG21	2.06	0.86
7:AG:217:LEU:HD13	16:g:273:MET:HB3	1.56	0.86
10:AJ:32:SER:OG	12:AL:1313:U:C3'	2.24	0.86
12:AL:691:U:N1	12:AL:825:G:O6	2.07	0.86
12:AL:821:U:H3	12:AL:822:U:H3	1.17	0.86
12:AL:1045:C:O2	29:t:73:GLN:HA	1.76	0.86
12:AL:1202:U:OP1	16:g:59:LYS:HE2	1.75	0.86
12:AL:1213:G:H8	24:o:247:HIS:HE1	1.23	0.86
21:l:114:SER:HB2	33:x:92:PHE:CZ	2.11	0.86
46:A:420:U:H2'	46:A:421:U:C6	2.11	0.86
46:A:1541:U:H2'	46:A:1542:U:C6	2.10	0.86
75:e:66:MET:CE	75:e:153:LEU:HD22	2.06	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:e:66:MET:SD	75:e:150:VAL:CA	2.64	0.86
8:AH:16:PRO:CG	31:v:35:LYS:HG3	2.04	0.85
12:AL:1382:C:C2	12:AL:1383:U:C5	2.63	0.85
46:A:457:G:H2'	46:A:458:A:H8	1.41	0.85
46:A:2231:U:H2'	46:A:2232:A:C8	2.11	0.85
8:AH:16:PRO:CB	31:v:35:LYS:HE2	2.06	0.85
10:AJ:14:LEU:CD2	11:AK:222:LEU:HD22	2.00	0.85
12:AL:1037:C:O2'	25:p:94:VAL:HG13	1.74	0.85
30:u:100:LYS:C	32:w:167:LEU:HD11	2.01	0.85
46:A:290:G:O5'	55:J:115:LYS:HE3	1.76	0.85
46:A:804:G:H22	46:A:823:U:H3	1.24	0.85
46:A:2941:A:H2'	46:A:2942:A:C8	2.10	0.85
3:AC:150:GLN:OE1	4:AD:166:ASP:N	2.09	0.85
3:AC:185:LEU:CD1	7:AG:196:MET:C	2.49	0.85
8:AH:198:GLU:HG2	21:l:105:LEU:CD2	2.06	0.85
9:AI:372:HIS:NE2	12:AL:1279:A:H2'	1.90	0.85
11:AK:107:LEU:HD13	18:i:168:ASN:O	1.74	0.85
31:v:8:ILE:HB	31:v:82:PRO:HA	1.56	0.85
46:A:1531:C:N3	47:B:326:TRP:CZ2	2.44	0.85
46:A:2075:U:H2'	46:A:2076:A:C8	2.10	0.85
63:R:198:LEU:HA	63:R:201:VAL:HG12	1.56	0.85
3:AC:54:ALA:HB1	7:AG:143:PRO:N	1.91	0.85
6:AF:58:MET:CE	19:j:30:LYS:HG2	2.06	0.85
7:AG:122:LEU:HD13	16:g:36:ILE:HG23	1.58	0.85
8:AH:168:ARG:CG	23:n:65:PRO:HG2	2.05	0.85
12:AL:691:U:C4	12:AL:825:G:O6	2.29	0.85
12:AL:1128:A:OP1	20:k:155:SER:O	1.94	0.85
13:AM:76:A:C2	46:A:2688:G:O6	2.28	0.85
46:A:1608:U:O3'	48:C:201:HIS:CD2	2.28	0.85
6:AF:212:LEU:HD12	19:j:445:PHE:HB2	1.58	0.85
7:AG:174:TYR:HE1	16:g:107:PHE:CZ	1.94	0.85
8:AH:199:LEU:CD2	30:u:93:TYR:CE2	2.46	0.85
12:AL:845:G:OP1	26:q:212:PRO:HA	1.75	0.85
12:AL:1335:U:H1'	12:AL:1336:U:H4'	1.58	0.85
12:AL:1414:A:H5'	24:o:270:ARG:HH11	1.38	0.85
12:AL:1631:U:O2'	33:x:66:HIS:CG	2.28	0.85
22:m:127:LYS:NZ	24:o:191:LYS:HZ2	1.74	0.85
46:A:1531:C:C6	47:B:326:TRP:CZ3	2.64	0.85
3:AC:90:HIS:HD2	17:h:160:LEU:C	1.84	0.85
3:AC:179:ARG:NH1	7:AG:201:PHE:HE1	1.75	0.85
3:AC:185:LEU:CD1	7:AG:197:PHE:N	2.38	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:69:LYS:HE3	12:AL:1544:U:OP1	1.76	0.85
12:AL:673:A:N3	20:k:266:ARG:NH2	2.25	0.85
12:AL:803:A:H4'	21:l:78:GLN:NE2	1.92	0.85
46:A:3003:U:H2'	46:A:3004:A:H8	1.41	0.85
3:AC:266:LYS:CE	17:h:129:TYR:OH	2.25	0.85
6:AF:136:PRO:CG	19:j:436:ILE:CD1	2.54	0.85
6:AF:307:TYR:CZ	31:v:92:LYS:CB	2.60	0.85
8:AH:184:ARG:HG3	12:AL:814:A:C5'	2.06	0.85
11:AK:144:LEU:HD12	18:i:319:LEU:CD1	2.05	0.85
12:AL:709:A:H2'	12:AL:710:U:H6	1.39	0.85
12:AL:754:A:OP2	26:q:138:ARG:NE	2.10	0.85
12:AL:785:A:N1	33:x:130:ARG:HG2	1.91	0.85
12:AL:785:A:H4'	33:x:108:ARG:HG3	1.57	0.85
12:AL:826:G:C2'	12:AL:827:G:O5'	2.25	0.85
12:AL:1031:A:H1'	24:o:278:ARG:HH12	0.78	0.85
16:g:3:LEU:CD1	17:h:211:TYR:HD2	1.88	0.85
21:l:2:LEU:HD13	21:l:72:ASP:OD2	1.77	0.85
21:l:83:ARG:CZ	47:B:80:ILE:HG21	2.06	0.85
46:A:895:A:H2'	46:A:896:U:C6	2.11	0.85
46:A:2300:U:H3'	63:R:39:MET:HE2	1.57	0.85
46:A:3281:U:H2'	46:A:3282:A:C8	2.11	0.85
6:AF:208:MET:CG	19:j:425:TRP:CH2	2.60	0.85
11:AK:160:TYR:CZ	20:k:29:LEU:HD23	2.12	0.85
11:AK:294:PHE:HZ	24:o:170:VAL:HG11	1.42	0.85
12:AL:13:U:H5'	20:k:238:PHE:CD2	2.11	0.85
12:AL:502:A:P	19:j:7:LEU:HD22	2.16	0.85
12:AL:1320:A:N7	25:p:79:LEU:HD22	1.92	0.85
12:AL:1630:A:C5'	35:z:170:LYS:NZ	2.40	0.85
46:A:1162:A:H2'	46:A:1163:A:C8	2.11	0.85
46:A:3282:A:H2'	46:A:3283:U:C6	2.12	0.85
63:R:312:LEU:HD21	63:R:320:LEU:HD12	1.58	0.85
69:X:47:VAL:HG12	72:b:129:VAL:HG11	1.56	0.85
6:AF:312:ALA:C	31:v:68:ASP:OD2	2.19	0.85
9:AI:126:VAL:HA	9:AI:131:THR:HG21	1.57	0.85
11:AK:158:ALA:HB3	25:p:27:VAL:CG2	2.06	0.85
12:AL:1628:A:H61	15:Z:78:ILE:HG21	0.73	0.85
12:AL:1633:U:O4	33:x:58:PHE:HE2	1.55	0.85
15:Z:9:ARG:HH22	16:g:71:LEU:HD12	1.32	0.85
18:i:93:TRP:HB3	29:t:108:PRO:CA	2.07	0.85
46:A:135:U:H2'	46:A:136:A:C8	2.11	0.85
46:A:800:A:H2'	46:A:801:U:C6	2.12	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2644:A:H2'	46:A:2645:A:C8	2.11	0.85
7:AG:1:MET:CE	17:h:351:GLU:CB	2.55	0.85
7:AG:49:LYS:CE	23:n:58:LYS:HZ1	1.86	0.85
9:AI:187:ARG:O	28:s:42:TYR:CD2	2.30	0.85
10:AJ:48:TYR:CD2	29:t:28:ARG:NH1	2.45	0.85
12:AL:15:A:N1	19:j:45:LYS:NZ	2.24	0.85
12:AL:521:A:H4'	31:v:45:PRO:HB2	1.58	0.85
12:AL:1645:U:C5	17:h:175:PHE:CE1	2.53	0.85
15:Z:89:ILE:HD13	35:z:168:ILE:HG21	1.57	0.85
18:i:99:ASN:HB2	18:i:105:GLU:HB2	1.58	0.85
63:R:336:VAL:HG13	63:R:337:GLU:HG3	1.57	0.85
5:AE:190:MET:HG3	5:AE:283:THR:HG21	1.59	0.84
7:AG:3:ILE:HD12	23:n:20:ARG:NE	1.92	0.84
12:AL:271:U:OP1	32:w:68:LYS:HB3	1.76	0.84
46:A:225:A:H2'	46:A:226:A:H8	1.42	0.84
5:AE:96:PRO:HG3	12:AL:1540:U:O2	1.78	0.84
6:AF:321:TYR:CE2	31:v:35:LYS:CA	2.51	0.84
7:AG:75:TYR:CE2	8:AH:182:TYR:CD2	2.65	0.84
11:AK:304:ALA:HB2	24:o:152:GLY:N	1.91	0.84
12:AL:517:U:H2'	12:AL:518:U:C2	2.11	0.84
12:AL:727:A:H2'	12:AL:728:A:C8	2.11	0.84
13:AM:76:A:H2	46:A:2662:A:H61	1.19	0.84
21:l:80:GLU:CB	47:B:73:LEU:CB	2.55	0.84
46:A:1222:U:H2'	46:A:1223:A:H8	1.41	0.84
2:AB:111:PHE:CZ	12:AL:101:U:C6	2.60	0.84
5:AE:69:LYS:HE3	12:AL:1544:U:P	2.17	0.84
9:AI:210:ARG:CZ	12:AL:1348:U:C2	2.59	0.84
11:AK:54:PRO:HG2	11:AK:83:ASN:HD22	1.41	0.84
12:AL:1180:U:OP1	24:o:164:THR:CG2	2.24	0.84
46:A:53:U:H2'	46:A:54:A:H8	1.40	0.84
46:A:2376:A:H61	69:X:68:THR:HG21	1.42	0.84
4:AD:167:GLY:HA2	4:AD:202:TYR:HA	1.56	0.84
8:AH:21:ILE:HD11	31:v:74:TYR:HB2	1.60	0.84
9:AI:310:ASN:ND2	28:s:34:LYS:CB	2.40	0.84
10:AJ:29:ARG:CZ	34:y:13:TRP:CE2	2.60	0.84
11:AK:99:VAL:CG2	18:i:167:ASN:HB2	2.08	0.84
2:AB:65:ASN:HB3	2:AB:69:TRP:CE2	2.13	0.84
3:AC:55:GLY:HA3	7:AG:143:PRO:HG3	1.59	0.84
4:AD:155:LEU:HD22	16:g:210:LEU:CD1	2.06	0.84
10:AJ:56:PHE:HE2	12:AL:1061:U:OP1	1.60	0.84
12:AL:675:U:C6	20:k:263:TYR:CE2	2.66	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:836:U:H2'	12:AL:837:A:H8	1.40	0.84
12:AL:1291:U:C5'	18:i:103:ASN:HB3	2.05	0.84
30:u:224:PRO:HB3	32:w:85:PHE:HE1	1.41	0.84
46:A:30:U:N3	48:C:21:SER:HA	1.93	0.84
46:A:1901:U:H2'	46:A:1902:U:C6	2.12	0.84
7:AG:206:ILE:CB	16:g:92:GLU:CD	2.49	0.84
8:AH:93:GLN:NE2	12:AL:222:U:OP2	2.11	0.84
12:AL:1559:A:OP1	30:u:36:LYS:HG3	1.76	0.84
12:AL:1628:A:C2	35:z:166:ILE:CG1	2.61	0.84
30:u:276:LYS:CD	30:u:279:ARG:NH2	2.34	0.84
6:AF:34:TYR:CE2	12:AL:496:A:H1'	2.13	0.84
7:AG:166:VAL:HG11	16:g:195:LYS:HG3	1.59	0.84
11:AK:172:TYR:HD2	25:p:116:THR:N	1.76	0.84
12:AL:1647:A:H1'	17:h:176:TYR:CE1	2.11	0.84
13:AM:33:U:H3'	24:o:278:ARG:HH11	1.39	0.84
16:g:3:LEU:HG	17:h:211:TYR:CD2	2.12	0.84
18:i:86:HIS:HE1	25:p:53:GLU:OE1	1.58	0.84
19:j:127:HIS:HB2	19:j:129:ASN:ND2	1.92	0.84
46:A:100:U:H2'	46:A:101:A:H8	1.41	0.84
46:A:874:U:H2'	46:A:875:U:C6	2.13	0.84
46:A:2017:G:N2	46:A:2018:C:H5"	1.93	0.84
46:A:3026:A:H2'	46:A:3027:U:C6	2.13	0.84
3:AC:54:ALA:HB3	7:AG:143:PRO:HA	1.60	0.84
6:AF:58:MET:CG	19:j:11:LEU:CD1	2.49	0.84
8:AH:16:PRO:CD	31:v:35:LYS:CE	2.55	0.84
8:AH:37:LYS:CG	12:AL:182:A:OP1	2.25	0.84
10:AJ:24:ASN:CB	12:AL:1313:U:OP1	2.24	0.84
12:AL:75:G:H1	12:AL:99:U:H3	1.25	0.84
12:AL:381:A:H5"	31:v:7:ARG:NH2	1.93	0.84
12:AL:508:C:OP1	19:j:420:PRO:O	1.94	0.84
12:AL:757:U:H5	26:q:85:ASN:HD21	1.25	0.84
12:AL:760:A:P	26:q:136:ALA:CB	2.66	0.84
18:i:306:TYR:OH	25:p:28:TYR:CE2	2.29	0.84
20:k:262:VAL:HG11	20:k:271:ILE:HD12	1.58	0.84
28:s:85:ILE:CD1	34:y:67:ASP:CB	0.89	0.84
31:v:10:LEU:HB3	31:v:21:TYR:HB3	1.58	0.84
7:AG:96:LYS:HZ1	12:AL:915:U:H3'	1.37	0.84
11:AK:134:PHE:HE2	20:k:112:LEU:HD23	1.41	0.84
11:AK:196:ASN:ND2	12:AL:1318:U:C5'	2.37	0.84
12:AL:269:A:C5'	32:w:66:LEU:O	2.25	0.84
12:AL:1165:A:P	24:o:254:ARG:HG3	2.16	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1255:U:OP2	28:s:105:ARG:NH2	2.10	0.84
12:AL:1523:A:H2	12:AL:1540:U:H3	1.24	0.84
46:A:2761:C:H5"	56:K:127:ARG:HD2	1.59	0.84
4:AD:210:PHE:HZ	7:AG:196:MET:HA	1.43	0.84
7:AG:1:MET:CE	17:h:351:GLU:HB3	2.08	0.84
8:AH:16:PRO:HD3	31:v:35:LYS:HE3	1.58	0.84
8:AH:60:HIS:CB	12:AL:133:U:C5	2.55	0.84
9:AI:353:LYS:NZ	12:AL:1280:U:O4'	2.11	0.84
9:AI:431:PHE:HE1	24:o:176:ILE:HG12	1.36	0.84
9:AI:450:ARG:O	22:m:114:LEU:HB2	1.78	0.84
11:AK:70:TRP:CD1	18:i:173:MET:HG2	2.11	0.84
12:AL:785:A:C2	33:x:109:ILE:HD11	2.12	0.84
28:s:85:ILE:CD1	34:y:67:ASP:HB2	0.51	0.84
46:A:962:A:H61	46:A:1062:U:H3	1.23	0.84
46:A:1706:G:H4'	46:A:1707:C:O5'	1.76	0.84
46:A:1808:G:H2'	46:A:1809:C:C6	2.13	0.84
3:AC:200:MET:HB2	7:AG:200:LEU:HD11	1.60	0.83
4:AD:74:SER:HB3	4:AD:77:LYS:HB2	1.60	0.83
6:AF:295:ILE:HD11	31:v:93:ALA:HA	1.59	0.83
8:AH:14:VAL:CB	12:AL:298:A:N7	2.41	0.83
9:AI:56:LEU:CG	22:m:211:ARG:NH2	2.40	0.83
11:AK:134:PHE:CD2	20:k:112:LEU:HD23	2.12	0.83
11:AK:143:GLU:CD	18:i:87:LEU:CD2	2.51	0.83
12:AL:1060:A:H2	12:AL:1091:A:H3'	1.43	0.83
22:m:211:ARG:HH12	22:m:214:GLU:CB	1.89	0.83
46:A:603:U:OP2	47:B:149:ARG:CZ	2.26	0.83
46:A:2416:U:H2'	46:A:2417:A:C8	2.13	0.83
46:A:2611:U:H5'	69:X:37:VAL:HG13	0.87	0.83
46:A:2762:C:P	56:K:127:ARG:NH2	2.50	0.83
5:AE:198:LEU:HD11	5:AE:322:LEU:HD21	1.61	0.83
8:AH:53:VAL:HG11	32:w:74:ILE:O	1.76	0.83
8:AH:167:ASN:CA	23:n:65:PRO:HG3	2.08	0.83
9:AI:56:LEU:CD1	22:m:211:ARG:HA	2.09	0.83
12:AL:1643:U:H5'	24:o:63:ARG:HD3	1.61	0.83
6:AF:50:HIS:CE1	12:AL:493:A:N6	2.46	0.83
7:AG:120:LYS:CD	16:g:34:GLN:HE22	1.91	0.83
9:AI:151:GLU:H	9:AI:154:VAL:HG11	1.43	0.83
12:AL:15:A:H5"	20:k:261:LYS:HE3	0.85	0.83
12:AL:1291:U:H5"	18:i:103:ASN:HB3	1.60	0.83
16:g:251:VAL:HB	33:x:51:LYS:HA	1.61	0.83
46:A:2018:C:H2'	46:A:2019:A:C8	2.12	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:69:LYS:CD	12:AL:1640:U:C2	2.47	0.83
3:AC:195:ALA:HA	4:AD:223:TYR:HE2	0.80	0.83
8:AH:14:VAL:CG1	12:AL:298:A:C4	2.61	0.83
8:AH:168:ARG:NH1	23:n:66:ASP:OD2	2.09	0.83
11:AK:112:GLU:HA	18:i:172:TYR:OH	1.77	0.83
11:AK:285:LEU:HD13	12:AL:1281:A:C4	2.13	0.83
12:AL:20:A:H2'	12:AL:21:U:H5'	1.59	0.83
12:AL:1012:G:C5'	28:s:107:ASN:ND2	2.41	0.83
12:AL:1014:A:OP2	28:s:103:HIS:HB2	1.78	0.83
25:p:92:PRO:C	29:t:95:ARG:HH21	1.86	0.83
37:1:73:ILE:HG12	42:6:47:LYS:HB3	1.59	0.83
46:A:1533:G:C4'	47:B:149:ARG:O	2.26	0.83
8:AH:54:LYS:O	32:w:48:GLU:OE1	1.95	0.83
10:AJ:66:ILE:HG23	18:i:125:LEU:HB3	1.59	0.83
11:AK:299:LYS:HE2	24:o:151:PHE:HD1	1.40	0.83
12:AL:351:A:C1'	58:M:166:ARG:HD2	2.08	0.83
12:AL:1011:A:C2	12:AL:1402:A:H1'	2.13	0.83
20:k:59:LEU:HB3	25:p:20:TYR:HH	0.95	0.83
46:A:37:U:H2'	46:A:38:A:C8	2.14	0.83
46:A:2276:G:C2	56:K:128:MET:HG2	2.13	0.83
3:AC:62:TYR:CB	17:h:159:LYS:HG3	2.08	0.83
6:AF:58:MET:SD	19:j:30:LYS:CE	2.61	0.83
7:AG:122:LEU:HD22	16:g:36:ILE:HD12	1.59	0.83
12:AL:379:U:C1'	31:v:12:ARG:NH1	2.41	0.83
12:AL:508:C:OP1	19:j:165:LYS:HB3	1.79	0.83
12:AL:1181:A:O2'	25:p:80:PRO:CA	2.26	0.83
12:AL:1491:U:OP1	54:I:49:PRO:CB	2.27	0.83
12:AL:1624:U:O4	35:z:154:HIS:CG	2.30	0.83
22:m:175:LYS:NZ	22:m:176:ALA:O	2.11	0.83
34:y:68:MET:HE2	34:y:76:PHE:CG	2.13	0.83
46:A:536:A:H2'	46:A:537:U:C6	2.14	0.83
46:A:1048:A:H5"	75:e:110:HIS:CB	2.09	0.83
63:R:46:ARG:HD2	63:R:46:ARG:H	1.43	0.83
9:AI:288:MET:HG2	9:AI:290:THR:HG23	1.60	0.83
13:AM:12:U:H2'	13:AM:13:C:H6	1.43	0.83
26:q:203:LYS:O	35:z:133:LYS:NZ	2.12	0.83
46:A:1728:U:H3	47:B:270:GLY:HA3	1.42	0.83
5:AE:95:LYS:CD	12:AL:1523:A:O3'	2.27	0.83
5:AE:254:SER:HA	5:AE:296:GLU:HG2	1.60	0.83
6:AF:321:TYR:CE2	31:v:36:PRO:HD3	2.12	0.83
8:AH:14:VAL:CG1	12:AL:298:A:C5	2.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:56:LEU:HD11	22:m:210:VAL:C	2.04	0.83
11:AK:73:MET:HE1	18:i:173:MET:H	1.42	0.83
11:AK:148:HIS:ND1	11:AK:152:ARG:HD2	1.94	0.83
11:AK:205:LYS:HG2	11:AK:233:ILE:HG12	1.61	0.83
12:AL:1540:U:C2'	12:AL:1541:U:H6	1.88	0.83
46:A:789:A:H2'	46:A:790:A:C8	2.13	0.83
2:AB:124:TRP:HZ2	12:AL:101:U:O2	1.61	0.83
4:AD:208:PHE:CD2	16:g:214:LEU:HD23	2.05	0.83
11:AK:140:GLN:NE2	18:i:321:TYR:CG	2.46	0.83
12:AL:41:C:H4'	27:r:57:GLN:NE2	1.77	0.83
12:AL:773:A:OP1	26:q:79:HIS:CE1	2.31	0.83
12:AL:823:G:H2'	12:AL:824:A:OP2	1.79	0.83
19:j:111:ARG:HD2	19:j:466:ILE:HD12	1.61	0.83
46:A:476:G:H2'	46:A:477:G:C8	2.14	0.83
10:AJ:1:MET:CE	11:AK:278:ARG:NH2	2.41	0.83
46:A:85:A:H2'	46:A:86:U:C6	2.14	0.83
11:AK:162:LEU:HB3	25:p:68:TYR:CE2	2.14	0.82
12:AL:637:A:C6	27:r:117:ASP:OD1	2.31	0.82
12:AL:774:U:H4'	26:q:120:GLN:CD	2.04	0.82
12:AL:1163:A:C4	24:o:256:TYR:OH	2.31	0.82
12:AL:1215:A:H4'	12:AL:1216:A:C5'	2.07	0.82
18:i:368:LEU:HD13	29:t:111:LYS:HD2	1.60	0.82
26:q:215:ARG:HH22	35:z:137:ARG:NH2	1.77	0.82
46:A:2017:G:N2	46:A:2065:A:H61	1.77	0.82
46:A:2842:U:H5'	48:C:208:ASN:HB3	1.61	0.82
46:A:3027:U:H2'	46:A:3028:A:C8	2.14	0.82
63:R:333:ASP:HA	63:R:336:VAL:HG12	1.59	0.82
3:AC:237:VAL:HG11	4:AD:44:ARG:HH11	1.42	0.82
6:AF:321:TYR:CD2	31:v:35:LYS:HA	2.14	0.82
6:AF:344:TYR:HB3	31:v:15:ARG:NH1	1.94	0.82
8:AH:231:PHE:CZ	21:l:48:ARG:CD	2.62	0.82
9:AI:118:LEU:O	22:m:146:ARG:NH1	2.11	0.82
9:AI:203:MET:HE3	12:AL:1354:U:C6	2.08	0.82
12:AL:1340:U:H3	28:s:13:LYS:HD3	1.43	0.82
15:Z:23:ILE:HD12	15:Z:23:ILE:H	1.44	0.82
46:A:875:U:H2'	46:A:876:A:H8	1.43	0.82
46:A:885:A:H2'	46:A:886:A:C8	2.14	0.82
46:A:2207:A:H2'	46:A:2208:A:H8	1.44	0.82
46:A:2609:G:H2'	46:A:2610:A:C8	2.13	0.82
3:AC:40:ASP:CG	4:AD:286:VAL:CG2	2.50	0.82
5:AE:168:HIS:HA	5:AE:171:LEU:HB2	1.62	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:202:LEU:CD1	21:l:105:LEU:HB3	2.08	0.82
9:AI:56:LEU:HD11	22:m:211:ARG:HA	1.61	0.82
12:AL:750:G:H5'	26:q:123:LYS:CA	2.10	0.82
12:AL:1643:U:C5'	24:o:63:ARG:HD3	2.10	0.82
12:AL:1647:A:N6	17:h:172:LYS:NZ	2.26	0.82
16:g:272:ARG:NH1	33:x:47:LYS:O	2.12	0.82
46:A:1914:A:H2'	46:A:1915:A:C8	2.14	0.82
75:e:54:ILE:HD11	75:e:105:TYR:CA	2.08	0.82
1:AA:86:LYS:HG3	12:AL:1602:C:OP2	1.80	0.82
11:AK:182:VAL:HG23	25:p:148:ILE:CG2	2.09	0.82
12:AL:16:G:OP2	20:k:261:LYS:HE2	1.78	0.82
12:AL:901:U:H2'	12:AL:902:A:C8	2.14	0.82
17:h:337:LYS:HZ1	20:k:203:ARG:HH12	0.94	0.82
46:A:64:U:H2'	46:A:65:A:C8	2.14	0.82
69:X:47:VAL:HG12	72:b:129:VAL:HG13	1.61	0.82
5:AE:96:PRO:CB	12:AL:1541:U:O4'	2.25	0.82
5:AE:286:ASP:HB2	5:AE:315:TYR:CE2	2.14	0.82
12:AL:265:U:H2'	12:AL:267:A:OP2	1.79	0.82
12:AL:784:A:N6	33:x:133:GLN:HE22	1.78	0.82
12:AL:1163:A:H2'	24:o:256:TYR:CZ	2.13	0.82
17:h:294:GLU:OE1	24:o:35:ARG:CD	2.27	0.82
18:i:150:ASN:ND2	20:k:78:LEU:HB2	1.92	0.82
21:l:66:HIS:CE1	33:x:137:LEU:CD2	2.56	0.82
31:v:99:ALA:C	31:v:101:ALA:H	1.85	0.82
46:A:88:U:H2'	46:A:89:A:H8	1.43	0.82
46:A:135:U:H2'	46:A:136:A:H8	1.44	0.82
46:A:1168:A:H2'	46:A:1169:A:C8	2.14	0.82
69:X:16:THR:HG21	72:b:132:LEU:HD13	1.59	0.82
1:AA:80:VAL:CG2	12:AL:1462:A:N6	2.37	0.82
8:AH:21:ILE:HA	31:v:74:TYR:CE1	2.14	0.82
11:AK:163:PRO:HB3	25:p:68:TYR:CE1	2.14	0.82
11:AK:196:ASN:HA	12:AL:1290:A:H61	0.99	0.82
12:AL:666:U:H2'	12:AL:667:A:C8	2.15	0.82
34:y:68:MET:HE2	34:y:76:PHE:CD2	2.14	0.82
46:A:1415:U:H2'	46:A:1416:A:C8	2.15	0.82
46:A:1811:U:O2	46:A:1819:A:N1	2.12	0.82
46:A:2975:A:H2'	46:A:2976:A:C8	2.14	0.82
3:AC:55:GLY:CA	7:AG:121:ILE:HG21	2.06	0.82
3:AC:179:ARG:NH2	7:AG:201:PHE:CD1	2.48	0.82
8:AH:16:PRO:CA	31:v:35:LYS:HE2	2.10	0.82
8:AH:184:ARG:CG	12:AL:814:A:C5'	2.57	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:432:LEU:HD21	24:o:197:MET:SD	2.19	0.82
10:AJ:32:SER:OG	12:AL:1313:U:H3'	1.80	0.82
12:AL:1293:U:H3'	12:AL:1294:A:H5"	1.61	0.82
17:h:131:ASN:O	24:o:119:GLN:HA	1.78	0.82
22:m:90:PRO:CB	24:o:241:LEU:HD11	2.10	0.82
37:1:109:GLU:HB3	37:1:138:VAL:HG21	1.60	0.82
46:A:88:U:H2'	46:A:89:A:C8	2.15	0.82
46:A:1769:U:H3'	46:A:1770:U:H5"	1.61	0.82
6:AF:111:TYR:HB2	11:AK:120:GLY:HA2	1.60	0.82
9:AI:372:HIS:CD2	12:AL:1279:A:C2'	2.63	0.82
12:AL:757:U:C5	26:q:85:ASN:ND2	2.46	0.82
15:Z:42:SER:HA	22:m:238:ILE:CG2	2.10	0.82
18:i:82:ASN:HD21	20:k:57:PRO:CG	1.93	0.82
27:r:70:PRO:HG2	27:r:75:SER:HA	1.60	0.82
30:u:225:GLU:HG3	32:w:88:TYR:HD1	1.00	0.82
46:A:620:G:OP1	47:B:100:SER:OG	1.97	0.82
46:A:1510:A:H2'	46:A:1511:U:H6	1.44	0.82
76:f:73:LYS:HG2	76:f:132:ARG:HG3	1.61	0.82
1:AA:78:ASP:HB2	12:AL:982:C:OP1	1.80	0.82
1:AA:95:LYS:HD3	12:AL:1579:A:C5'	2.10	0.82
10:AJ:27:GLY:HA3	12:AL:1300:U:H5	1.45	0.82
11:AK:115:ALA:HB1	18:i:168:ASN:ND2	1.93	0.82
11:AK:303:ASP:OD2	24:o:171:ARG:HB3	1.79	0.82
12:AL:1013:C:OP2	28:s:107:ASN:O	1.95	0.82
12:AL:1014:A:P	28:s:103:HIS:CG	2.73	0.82
12:AL:1597:G:H5"	12:AL:1598:U:H5'	1.61	0.82
21:l:83:ARG:CZ	47:B:80:ILE:CD1	2.54	0.82
38:2:42:VAL:HG21	50:E:154:LEU:HB3	1.60	0.82
46:A:475:U:H2'	46:A:476:G:C8	2.15	0.82
3:AC:204:ILE:HD11	7:AG:200:LEU:HD12	1.61	0.82
5:AE:251:VAL:HG12	5:AE:252:ASP:H	1.45	0.82
6:AF:58:MET:CE	19:j:30:LYS:CG	2.58	0.82
6:AF:58:MET:HE2	19:j:30:LYS:HE3	1.61	0.82
6:AF:212:LEU:CD1	19:j:445:PHE:HB3	2.07	0.82
12:AL:1200:G:H21	12:AL:1203:C:H6	1.26	0.82
12:AL:1387:A:H1'	12:AL:1389:U:O2'	1.79	0.82
63:R:219:ARG:NH2	63:R:248:ASP:HA	1.95	0.82
3:AC:55:GLY:HA2	7:AG:121:ILE:CG1	2.10	0.81
3:AC:59:GLU:O	17:h:164:ILE:HG13	1.80	0.81
5:AE:69:LYS:CE	12:AL:1544:U:OP1	2.28	0.81
9:AI:372:HIS:CD2	12:AL:1279:A:O2'	2.33	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:330:G:H22	12:AL:332:A:H3'	1.45	0.81
12:AL:501:U:H4'	19:j:7:LEU:HD13	1.61	0.81
12:AL:1417:A:OP2	24:o:268:LYS:HD2	1.80	0.81
12:AL:1429:A:C8	29:t:72:THR:CB	2.62	0.81
16:g:200:ILE:HD12	16:g:287:LYS:HG2	1.56	0.81
26:q:193:LYS:HA	35:z:110:LYS:HE2	1.62	0.81
36:0:73:ARG:HB3	46:A:3093:U:C5	2.14	0.81
46:A:457:G:H2'	46:A:458:A:C8	2.15	0.81
46:A:600:C:O4'	47:B:133:ARG:CZ	2.28	0.81
46:A:2917:U:C2'	46:A:2918:A:O5'	2.27	0.81
63:R:329:PHE:HB2	63:R:366:ALA:O	1.80	0.81
3:AC:266:LYS:HD2	17:h:129:TYR:CE2	2.13	0.81
6:AF:321:TYR:OH	31:v:36:PRO:CD	2.25	0.81
8:AH:42:LYS:HG2	8:AH:48:GLY:HA3	1.62	0.81
12:AL:502:A:O4'	19:j:7:LEU:HD11	1.77	0.81
12:AL:675:U:H5	20:k:263:TYR:CZ	1.98	0.81
12:AL:749:A:C1'	26:q:121:LYS:HE2	2.10	0.81
12:AL:1117:U:OP1	20:k:160:LYS:CE	2.28	0.81
21:l:76:ALA:HB1	47:B:77:ASP:OD1	1.79	0.81
46:A:723:U:H4'	55:J:102:VAL:HG21	1.60	0.81
46:A:2200:C:H2'	46:A:2201:U:H6	1.44	0.81
4:AD:255:THR:HA	4:AD:258:LYS:HB2	1.60	0.81
7:AG:4:GLN:HG3	17:h:354:LEU:CD2	2.09	0.81
7:AG:96:LYS:NZ	12:AL:915:U:O3'	2.12	0.81
8:AH:79:VAL:HG12	8:AH:104:ARG:HD3	1.62	0.81
8:AH:184:ARG:HG2	12:AL:814:A:O4'	1.81	0.81
9:AI:447:LEU:O	22:m:135:SER:HB2	1.81	0.81
11:AK:67:GLU:HA	11:AK:70:TRP:HE3	1.44	0.81
11:AK:134:PHE:CZ	20:k:110:VAL:HG23	2.16	0.81
11:AK:142:GLN:HE22	18:i:210:LEU:CD2	1.93	0.81
11:AK:169:ARG:HB3	25:p:70:GLY:CA	2.10	0.81
11:AK:182:VAL:CG2	25:p:148:ILE:CG2	2.57	0.81
12:AL:637:A:N6	27:r:117:ASP:CG	2.37	0.81
12:AL:753:A:H4'	26:q:129:GLY:O	1.80	0.81
12:AL:993:U:H2'	12:AL:994:A:H8	1.45	0.81
12:AL:1117:U:OP1	20:k:160:LYS:HD3	1.81	0.81
12:AL:1295:A:C5	12:AL:1296:A:N7	2.47	0.81
16:g:272:ARG:HH12	33:x:48:LYS:HA	1.45	0.81
21:l:8:LEU:HD11	33:x:136:GLY:CA	2.07	0.81
21:l:80:GLU:CB	47:B:73:LEU:HG	2.10	0.81
26:q:108:TYR:HE2	35:z:89:ALA:HB2	1.43	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:w:13:GLN:HG3	32:w:53:ARG:HA	1.60	0.81
46:A:438:U:H2'	46:A:439:A:C8	2.15	0.81
46:A:1664:A:H3'	46:A:1665:G:H21	1.45	0.81
46:A:2058:U:H3'	46:A:2059:A:C5	2.15	0.81
46:A:2578:G:H2'	46:A:2579:A:C8	2.15	0.81
46:A:2640:A:H2'	46:A:2641:C:C6	2.15	0.81
4:AD:174:ARG:HA	4:AD:267:TYR:HA	1.61	0.81
12:AL:239:A:H5'	32:w:71:PHE:CD2	2.15	0.81
12:AL:1633:U:C5	33:x:58:PHE:CE1	2.67	0.81
12:AL:1634:C:C1'	16:g:85:TRP:CH2	2.62	0.81
27:r:35:LYS:HE3	32:w:37:LEU:HD22	1.62	0.81
46:A:837:U:O4	56:K:51:LYS:NZ	2.14	0.81
46:A:1015:A:C4'	76:f:117:LEU:CD2	2.58	0.81
46:A:1727:A:C3'	47:B:290:GLN:HG2	2.11	0.81
3:AC:191:ILE:HG22	4:AD:223:TYR:CD1	2.14	0.81
6:AF:58:MET:HG3	19:j:26:PHE:CG	2.15	0.81
7:AG:120:LYS:HB3	16:g:34:GLN:HE21	1.46	0.81
8:AH:22:LEU:HB2	8:AH:114:GLU:HB3	1.62	0.81
8:AH:64:PRO:HD2	12:AL:131:A:OP1	1.79	0.81
11:AK:299:LYS:CG	24:o:151:PHE:HB3	2.06	0.81
12:AL:1492:U:O2'	12:AL:1493:A:C5'	2.26	0.81
15:Z:31:LEU:HD12	22:m:246:LEU:HG	0.86	0.81
20:k:16:TYR:OH	20:k:20:LEU:HG	0.81	0.81
32:w:200:CYS:HA	32:w:203:PHE:CD2	2.14	0.81
46:A:568:A:H2'	46:A:569:A:H8	1.44	0.81
3:AC:90:HIS:CE1	17:h:160:LEU:CD1	2.63	0.81
3:AC:148:LEU:HD23	4:AD:203:ASN:HB3	1.63	0.81
11:AK:158:ALA:HB1	25:p:27:VAL:HG22	1.61	0.81
11:AK:165:LEU:HD22	25:p:127:TYR:CE1	2.16	0.81
12:AL:1216:A:N9	24:o:256:TYR:CB	2.44	0.81
18:i:180:MET:HG2	20:k:92:TRP:CE2	2.15	0.81
50:E:251:ALA:HB1	67:V:63:TYR:CD2	2.15	0.81
3:AC:266:LYS:HA	17:h:128:PRO:C	2.06	0.81
7:AG:206:ILE:CD1	16:g:92:GLU:CD	2.52	0.81
11:AK:182:VAL:HG21	25:p:148:ILE:CA	2.04	0.81
46:A:1482:A:H2'	46:A:1483:U:C6	2.16	0.81
46:A:1584:A:H2'	46:A:1585:G:C8	2.16	0.81
46:A:2839:A:OP1	48:C:208:ASN:O	1.99	0.81
3:AC:232:LEU:HD22	4:AD:278:LYS:HB3	1.62	0.81
11:AK:192:GLU:OE2	18:i:100:TYR:CB	2.27	0.81
21:l:66:HIS:HE1	33:x:137:LEU:HB3	1.44	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:479:U:H2'	46:A:480:C:C6	2.16	0.81
46:A:1147:U:H2'	46:A:1148:A:H8	1.45	0.81
46:A:1531:C:N4	47:B:326:TRP:CZ2	2.48	0.81
46:A:1726:U:OP1	47:B:268:SER:OG	1.99	0.81
6:AF:216:PHE:CZ	19:j:435:ALA:HB1	2.15	0.81
7:AG:1:MET:CE	17:h:351:GLU:HG2	2.11	0.81
12:AL:1163:A:O2'	24:o:256:TYR:CE2	2.34	0.81
12:AL:1220:A:H5'	29:t:112:LYS:HZ1	1.45	0.81
20:k:59:LEU:CD2	25:p:28:TYR:CD2	2.64	0.81
30:u:275:ARG:HH12	30:u:278:ILE:HD12	1.01	0.81
46:A:53:U:H2'	46:A:54:A:C8	2.15	0.81
6:AF:58:MET:HG3	19:j:26:PHE:CB	2.10	0.81
6:AF:307:TYR:CE2	31:v:92:LYS:CG	2.64	0.81
6:AF:321:TYR:HD1	31:v:13:PHE:CZ	1.95	0.81
6:AF:338:LYS:NZ	31:v:50:VAL:HA	1.95	0.81
11:AK:115:ALA:HB1	18:i:168:ASN:HD21	1.43	0.81
11:AK:285:LEU:CD1	12:AL:1281:A:C4	2.62	0.81
12:AL:1102:A:O2'	18:i:334:ARG:HG3	1.81	0.81
12:AL:1361:U:C4	28:s:48:HIS:HD2	1.92	0.81
16:g:273:MET:HE3	33:x:60:PHE:HE1	1.44	0.81
5:AE:107:TYR:CE2	5:AE:152:LYS:HB3	2.16	0.80
46:A:1761:A:H2'	46:A:1762:A:H8	1.47	0.80
3:AC:194:PHE:CE2	4:AD:223:TYR:CB	2.63	0.80
5:AE:285:LEU:HD21	5:AE:297:LEU:HB3	1.63	0.80
6:AF:314:VAL:HG12	31:v:71:ARG:HG3	1.61	0.80
8:AH:210:ILE:HG21	21:l:39:VAL:C	2.06	0.80
9:AI:367:TYR:HE2	11:AK:274:PRO:CB	1.95	0.80
12:AL:270:G:H3'	32:w:68:LYS:HB3	1.63	0.80
18:i:93:TRP:HB3	29:t:108:PRO:HB3	1.63	0.80
1:AA:104:ARG:NH2	46:A:1740:U:O2'	2.11	0.80
9:AI:413:LEU:HD23	22:m:149:PRO:HD2	1.64	0.80
18:i:88:ASN:HA	25:p:53:GLU:OE2	1.80	0.80
46:A:225:A:H2'	46:A:226:A:C8	2.17	0.80
46:A:1186:A:H2'	46:A:1187:U:C6	2.16	0.80
46:A:1343:U:C5	61:P:139:HIS:CD2	2.70	0.80
46:A:1712:A:H5"	47:B:362:TRP:CE3	2.17	0.80
6:AF:321:TYR:CZ	31:v:36:PRO:CD	2.64	0.80
11:AK:111:GLY:C	18:i:172:TYR:CE2	2.60	0.80
14:AN:1:A:O4'	27:r:73:PRO:C	2.24	0.80
16:g:12:ILE:O	17:h:215:LYS:NZ	2.14	0.80
22:m:98:TRP:HA	24:o:242:LEU:HD21	0.82	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:3:24:TYR:CG	46:A:1911:U:H4'	2.16	0.80
46:A:1619:G:H5"	54:I:5:LYS:O	1.82	0.80
7:AG:166:VAL:HG13	16:g:196:PHE:CE1	2.16	0.80
8:AH:93:GLN:NE2	12:AL:221:U:H3'	1.96	0.80
10:AJ:40:LYS:HE2	10:AJ:42:PRO:CG	2.10	0.80
11:AK:132:PHE:HB3	18:i:249:PRO:CD	2.11	0.80
11:AK:148:HIS:O	11:AK:152:ARG:HG3	1.80	0.80
12:AL:116:A:H2'	12:AL:117:G:C8	2.16	0.80
12:AL:784:A:C1'	26:q:206:PHE:HD2	1.94	0.80
12:AL:1559:A:OP1	30:u:36:LYS:HE3	1.82	0.80
16:g:3:LEU:CB	17:h:211:TYR:CE2	2.64	0.80
46:A:841:G:O2'	50:E:106:PRO:HB2	1.80	0.80
46:A:841:G:C4	50:E:107:TYR:CE2	2.70	0.80
50:E:23:CYS:CB	63:R:79:ILE:HD13	2.10	0.80
75:e:54:ILE:HD11	75:e:105:TYR:HA	1.61	0.80
3:AC:261:PHE:HB2	17:h:149:ARG:HG3	1.63	0.80
11:AK:182:VAL:HG23	25:p:148:ILE:HG22	1.62	0.80
12:AL:752:A:H2'	12:AL:767:A:H62	1.44	0.80
12:AL:754:A:OP1	26:q:86:ASN:ND2	2.12	0.80
17:h:313:LYS:HG3	20:k:131:LYS:HA	1.62	0.80
18:i:302:ILE:HD12	25:p:20:TYR:CD1	2.17	0.80
22:m:113:THR:HG22	22:m:185:LYS:HZ1	1.46	0.80
46:A:210:U:H2'	46:A:211:A:C8	2.15	0.80
46:A:568:A:H2'	46:A:569:A:C8	2.17	0.80
46:A:826:A:H2'	46:A:827:U:C6	2.17	0.80
46:A:2099:A:H2'	46:A:2100:U:C6	2.17	0.80
6:AF:307:TYR:CZ	31:v:92:LYS:HG3	2.16	0.80
7:AG:22:LEU:HD23	20:k:139:TYR:CD2	2.16	0.80
9:AI:188:ASN:O	28:s:42:TYR:HD2	1.62	0.80
11:AK:304:ALA:HB2	24:o:152:GLY:CA	2.12	0.80
12:AL:381:A:OP1	31:v:7:ARG:HD2	1.81	0.80
12:AL:1164:U:C5'	24:o:254:ARG:HH21	1.94	0.80
12:AL:1630:A:C5'	35:z:170:LYS:HZ3	1.95	0.80
46:A:142:A:H2'	46:A:143:A:C8	2.17	0.80
46:A:290:G:P	55:J:115:LYS:HE3	2.22	0.80
3:AC:237:VAL:HG13	4:AD:44:ARG:HH11	0.63	0.80
8:AH:174:GLU:N	8:AH:174:GLU:OE1	2.15	0.80
8:AH:203:TYR:OH	21:l:105:LEU:O	1.99	0.80
12:AL:272:U:H2'	12:AL:273:A:H8	1.43	0.80
17:h:294:GLU:OE1	24:o:35:ARG:HD2	1.82	0.80
21:l:45:MET:HB3	21:l:48:ARG:HH12	1.46	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1510:A:H2'	46:A:1511:U:C6	2.15	0.80
46:A:1768:A:H2'	46:A:1769:U:C6	2.15	0.80
46:A:1907:U:H2'	46:A:1908:A:H8	1.45	0.80
51:F:163:PRO:HB2	75:e:213:LEU:HD13	1.61	0.80
9:AI:60:TRP:CA	22:m:210:VAL:HG22	2.11	0.80
10:AJ:45:ALA:CB	29:t:32:LYS:HD3	2.12	0.80
12:AL:896:A:O2'	15:Z:9:ARG:NE	2.13	0.80
12:AL:1105:G:C5'	18:i:390:ASN:CB	2.60	0.80
12:AL:1411:G:HO2'	24:o:272:MET:H	1.29	0.80
12:AL:1575:A:H2	46:A:1859:G:O2'	1.63	0.80
12:AL:1632:A:H5'	33:x:63:GLY:CA	2.11	0.80
15:Z:43:SER:HB2	26:q:186:LYS:NZ	1.96	0.80
30:u:74:PRO:CB	32:w:100:GLU:HB3	2.12	0.80
30:u:276:LYS:HD2	30:u:279:ARG:HH21	1.45	0.80
46:A:371:U:H2'	46:A:372:A:H8	1.47	0.80
3:AC:45:LEU:HA	3:AC:48:LYS:HB2	1.64	0.80
5:AE:96:PRO:HB3	12:AL:1541:U:C1'	2.12	0.80
6:AF:88:ILE:HD11	19:j:28:LEU:CD2	2.06	0.80
7:AG:184:GLU:HG3	16:g:209:SER:HB3	1.63	0.80
12:AL:836:U:H2'	12:AL:837:A:C8	2.17	0.80
13:AM:33:U:C3'	24:o:278:ARG:NH1	2.42	0.80
30:u:276:LYS:CD	30:u:279:ARG:HH22	1.92	0.80
46:A:17:U:H2'	46:A:18:A:H8	1.46	0.80
46:A:600:C:C2'	47:B:133:ARG:NH1	2.45	0.80
46:A:2236:U:H2'	46:A:2237:A:H8	1.47	0.80
46:A:2360:U:H5"	63:R:162:LEU:HD13	1.63	0.80
46:A:2588:A:H3'	46:A:2589:A:H8	1.46	0.80
46:A:2838:U:O3'	48:C:210:ASP:HB2	1.80	0.80
5:AE:99:LYS:HZ3	12:AL:1525:A:P	2.05	0.79
8:AH:210:ILE:HG22	21:l:39:VAL:HB	1.58	0.79
10:AJ:80:VAL:HG11	12:AL:1091:A:OP1	1.81	0.79
11:AK:155:ASN:HD21	20:k:56:PRO:CD	1.93	0.79
11:AK:172:TYR:CD2	25:p:116:THR:N	2.50	0.79
12:AL:898:U:H3'	12:AL:899:U:H6	1.46	0.79
12:AL:1014:A:OP2	28:s:103:HIS:CB	2.30	0.79
12:AL:1108:G:O4'	25:p:95:HIS:CD2	2.35	0.79
12:AL:1411:G:H4'	24:o:272:MET:CB	2.11	0.79
12:AL:1465:A:OP1	20:k:162:LYS:HD3	1.81	0.79
12:AL:1643:U:H4'	24:o:63:ARG:HB3	1.60	0.79
29:t:27:LYS:HG2	29:t:68:TYR:HA	1.61	0.79
39:3:17:LEU:HD21	46:A:1319:A:C2	2.16	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:809:C:H2'	46:A:810:U:H6	1.45	0.79
46:A:1006:U:C6	76:f:135:LEU:O	2.36	0.79
46:A:1006:U:H1'	46:A:1007:U:H4'	1.64	0.79
46:A:2262:U:H2'	46:A:2263:U:C6	2.16	0.79
46:A:2461:A:H3'	46:A:2462:A:H8	1.43	0.79
46:A:2762:C:P	56:K:127:ARG:CZ	2.70	0.79
5:AE:51:PHE:N	5:AE:97:LEU:HD11	1.96	0.79
11:AK:162:LEU:HD13	25:p:64:ARG:HB2	1.64	0.79
12:AL:744:A:H2'	12:AL:745:U:C6	2.17	0.79
12:AL:1417:A:O3'	24:o:271:LYS:HD3	1.82	0.79
12:AL:1628:A:N7	15:Z:18:VAL:HG11	1.97	0.79
16:g:231:ILE:HD12	16:g:267:MET:HE1	1.63	0.79
17:h:131:ASN:HB3	24:o:119:GLN:HA	1.62	0.79
21:l:1:MET:CG	30:u:148:GLU:HG3	2.11	0.79
32:w:130:THR:HB	32:w:144:LEU:HB2	1.63	0.79
46:A:262:A:OP1	72:b:59:SER:OG	2.00	0.79
46:A:1865:C:H3'	46:A:1866:A:C8	2.16	0.79
46:A:3018:A:H61	46:A:3027:U:H3	1.30	0.79
46:A:3108:U:H2'	46:A:3109:U:C6	2.16	0.79
6:AF:146:ASN:CB	19:j:439:HIS:NE2	2.35	0.79
7:AG:120:LYS:HE3	16:g:14:GLN:CB	2.12	0.79
8:AH:223:VAL:HG11	21:l:44:PRO:CD	2.12	0.79
11:AK:74:ALA:CA	18:i:181:ASN:OD1	2.26	0.79
12:AL:690:G:N7	12:AL:823:G:O6	2.15	0.79
12:AL:753:A:H5'	26:q:129:GLY:HA2	1.63	0.79
15:Z:9:ARG:CZ	16:g:71:LEU:CD1	2.59	0.79
18:i:148:LYS:HZ1	20:k:78:LEU:CA	1.90	0.79
18:i:251:LEU:HD13	18:i:323:TYR:HB3	1.64	0.79
21:l:114:SER:HB2	33:x:92:PHE:CE1	2.17	0.79
46:A:1703:U:H2'	46:A:1704:U:C6	2.16	0.79
46:A:1717:A:H2'	46:A:1718:A:C8	2.17	0.79
3:AC:191:ILE:HD12	4:AD:222:GLN:NE2	1.98	0.79
5:AE:96:PRO:HD3	12:AL:1541:U:O2	1.82	0.79
12:AL:1291:U:N1	18:i:103:ASN:ND2	1.64	0.79
15:Z:55:VAL:HG12	22:m:163:LEU:HD13	1.64	0.79
30:u:225:GLU:HG3	32:w:88:TYR:CE1	2.15	0.79
46:A:981:G:N2	76:f:150:LYS:HE2	1.97	0.79
46:A:1436:U:H3	46:A:1485:A:H2	1.29	0.79
46:A:3062:A:O2'	54:I:80:ASN:ND2	2.12	0.79
8:AH:138:LEU:HA	8:AH:141:GLU:HB2	1.64	0.79
12:AL:803:A:H4'	21:l:78:GLN:HE22	1.48	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1411:G:O3'	24:o:272:MET:HB2	1.83	0.79
3:AC:62:TYR:HD2	17:h:159:LYS:CG	1.83	0.79
3:AC:200:MET:HB3	7:AG:200:LEU:HD11	1.57	0.79
12:AL:773:A:H5"	26:q:79:HIS:CG	2.18	0.79
16:g:251:VAL:HG12	33:x:51:LYS:HB2	1.62	0.79
17:h:255:GLN:HB3	17:h:259:LEU:HD13	1.63	0.79
22:m:245:GLN:O	22:m:246:LEU:C	2.24	0.79
28:s:85:ILE:HD12	34:y:67:ASP:HB3	1.22	0.79
46:A:2584:A:H4'	50:E:98:GLN:HE22	1.46	0.79
6:AF:61:PHE:CZ	19:j:29:TYR:CG	2.71	0.79
8:AH:16:PRO:N	31:v:35:LYS:HE3	1.97	0.79
8:AH:93:GLN:HE21	12:AL:222:U:P	2.06	0.79
9:AI:449:HIS:HE1	22:m:149:PRO:HG3	1.47	0.79
12:AL:607:U:H2'	12:AL:608:U:C6	2.18	0.79
12:AL:632:C:C6	12:AL:644:G:H5'	2.17	0.79
12:AL:1202:U:P	16:g:59:LYS:CE	2.71	0.79
12:AL:1287:A:OP2	25:p:83:ARG:O	2.01	0.79
46:A:27:A:C2	71:a:147:LEU:HD21	2.17	0.79
46:A:601:U:H2'	46:A:602:A:H8	1.45	0.79
46:A:1020:U:H5"	75:e:134:LYS:HB2	1.65	0.79
7:AG:217:LEU:HD21	33:x:60:PHE:CE1	2.18	0.79
12:AL:1540:U:H2'	12:AL:1541:U:C5	2.15	0.79
12:AL:1642:U:H5"	16:g:44:TYR:HD2	1.47	0.79
21:l:36:ARG:HA	30:u:140:ARG:NE	1.96	0.79
21:l:80:GLU:HB3	47:B:73:LEU:CG	2.12	0.79
30:u:238:ASP:O	30:u:242:THR:HG23	1.83	0.79
37:1:283:ASN:HD21	63:R:143:GLU:CD	1.91	0.79
46:A:600:C:C1'	47:B:133:ARG:HH11	1.92	0.79
46:A:1127:A:H61	46:A:1142:U:H3	1.30	0.79
5:AE:62:LYS:HB2	5:AE:63:PRO:HD3	1.65	0.79
5:AE:258:ILE:HB	5:AE:303:GLN:HB3	1.63	0.79
8:AH:182:TYR:OH	32:w:180:ARG:HD2	1.82	0.79
8:AH:210:ILE:CD1	21:l:40:ARG:O	2.29	0.79
9:AI:393:LYS:HB3	9:AI:436:GLY:O	1.82	0.79
11:AK:70:TRP:CD1	18:i:173:MET:CG	2.65	0.79
11:AK:142:GLN:HE22	18:i:210:LEU:HD21	1.47	0.79
11:AK:196:ASN:HD22	12:AL:1318:U:H3'	1.47	0.79
12:AL:826:G:O2'	12:AL:827:G:O5'	2.00	0.79
12:AL:1216:A:H1'	24:o:256:TYR:HB3	0.81	0.79
13:AM:14:A:H3'	13:AM:15:G:H4'	1.63	0.79
46:A:1387:A:H5'	64:S:65:ILE:O	1.82	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:319:TYR:OH	31:v:20:VAL:HG11	1.83	0.79
7:AG:75:TYR:CD2	8:AH:182:TYR:HD2	1.95	0.79
7:AG:124:GLU:OE2	17:h:190:SER:HA	1.83	0.79
7:AG:177:TYR:HE2	16:g:107:PHE:CZ	1.97	0.79
12:AL:15:A:H5"	20:k:261:LYS:HE2	1.56	0.79
12:AL:406:U:H2'	12:AL:407:U:H6	1.48	0.79
12:AL:1032:A:C5'	24:o:275:TRP:CZ2	2.58	0.79
46:A:355:U:H2'	46:A:356:U:C6	2.18	0.79
46:A:3161:U:H2'	46:A:3162:U:H6	1.44	0.79
2:AB:109:SER:CA	12:AL:101:U:OP2	2.31	0.78
3:AC:9:HIS:HD1	17:h:164:ILE:HD13	1.46	0.78
3:AC:159:ASN:ND2	3:AC:160:GLU:OE1	2.16	0.78
4:AD:260:PHE:CE2	16:g:222:ILE:HA	2.18	0.78
8:AH:208:GLU:CG	30:u:134:ARG:NH1	2.44	0.78
9:AI:203:MET:HE1	12:AL:1354:U:C5	1.84	0.78
10:AJ:29:ARG:NH2	34:y:13:TRP:CE3	2.50	0.78
12:AL:675:U:H6	20:k:263:TYR:CE2	2.00	0.78
12:AL:689:C:O2	12:AL:827:G:N2	2.17	0.78
12:AL:826:G:N2	30:u:246:ASN:ND2	2.31	0.78
16:g:251:VAL:CB	33:x:51:LYS:HA	2.12	0.78
37:1:73:ILE:CG1	42:6:47:LYS:HB3	2.13	0.78
46:A:1109:A:C2	51:F:44:ARG:NH1	2.51	0.78
2:AB:94:TYR:O	2:AB:96:ASN:N	2.16	0.78
3:AC:114:GLU:HB2	3:AC:115:PRO:HD2	1.66	0.78
9:AI:60:TRP:CA	22:m:210:VAL:CG2	2.61	0.78
11:AK:181:PRO:HG2	25:p:148:ILE:HG23	1.63	0.78
11:AK:285:LEU:HD11	12:AL:1281:A:N6	1.96	0.78
17:h:259:LEU:HD11	17:h:323:LEU:HD12	1.63	0.78
17:h:314:GLN:HG3	17:h:316:LYS:HG2	1.64	0.78
21:l:38:VAL:HG21	30:u:141:ILE:CD1	2.13	0.78
46:A:149:A:H5'	70:Y:83:ALA:HB1	1.64	0.78
46:A:992:U:O4	76:f:13:ILE:HD11	1.82	0.78
46:A:1486:U:H2'	46:A:1487:A:H8	1.48	0.78
46:A:1808:G:H2'	46:A:1809:C:H6	1.46	0.78
46:A:1996:A:H61	46:A:2090:U:H3	1.28	0.78
46:A:2412:A:H2'	46:A:2413:A:C8	2.18	0.78
6:AF:28:SER:O	12:AL:623:A:OP1	2.01	0.78
7:AG:120:LYS:HB3	16:g:34:GLN:NE2	1.98	0.78
11:AK:132:PHE:HB2	18:i:248:MET:CB	2.12	0.78
11:AK:155:ASN:ND2	20:k:56:PRO:CD	2.39	0.78
12:AL:753:A:O5'	26:q:129:GLY:O	1.99	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1046:U:H4'	29:t:77:ARG:HH21	1.42	0.78
46:A:1932:G:C2	48:C:209:GLN:CG	2.65	0.78
46:A:1989:U:H4'	46:A:1990:A:H5"	1.65	0.78
46:A:2951:U:H2'	46:A:2952:G:H8	1.46	0.78
11:AK:132:PHE:HB2	18:i:248:MET:SD	2.23	0.78
12:AL:1213:G:C4	12:AL:1215:A:OP2	2.36	0.78
18:i:368:LEU:O	29:t:111:LYS:HB3	1.84	0.78
46:A:1608:U:O2'	48:C:201:HIS:CE1	2.36	0.78
46:A:2063:A:H3'	46:A:2064:G:C8	2.18	0.78
46:A:2982:U:H2'	46:A:2983:U:O4'	1.83	0.78
6:AF:61:PHE:CB	19:j:29:TYR:OH	2.31	0.78
9:AI:345:ILE:HD12	9:AI:355:LEU:HD22	1.64	0.78
12:AL:147:A:H61	12:AL:225:U:H3	1.30	0.78
12:AL:330:G:N2	12:AL:332:A:H3'	1.99	0.78
12:AL:698:A:OP1	23:n:2:SER:CB	2.31	0.78
12:AL:748:U:O3'	26:q:121:LYS:HE3	1.82	0.78
12:AL:1254:G:OP1	34:y:80:ARG:HG2	1.84	0.78
12:AL:1524:U:H4'	12:AL:1524:U:OP1	1.82	0.78
22:m:246:LEU:CD2	22:m:246:LEU:N	2.22	0.78
46:A:90:A:H2'	46:A:91:U:C6	2.18	0.78
46:A:3288:C:H2'	46:A:3289:U:C6	2.19	0.78
47:B:61:LEU:HD13	47:B:63:ILE:HD11	1.65	0.78
51:F:167:SER:OG	75:e:213:LEU:O	2.02	0.78
3:AC:55:GLY:CA	7:AG:143:PRO:HG3	2.12	0.78
3:AC:185:LEU:HD12	7:AG:196:MET:HA	1.63	0.78
9:AI:179:TYR:CD2	9:AI:182:LEU:HG	2.18	0.78
12:AL:305:A:H2'	12:AL:306:A:H8	1.46	0.78
12:AL:755:G:O6	26:q:138:ARG:NH2	2.16	0.78
12:AL:1044:C:C4	29:t:73:GLN:NE2	2.46	0.78
15:Z:31:LEU:HD13	22:m:246:LEU:HD23	0.78	0.78
16:g:3:LEU:HB3	17:h:211:TYR:HE2	1.49	0.78
16:g:249:GLY:HA2	33:x:55:TYR:CD1	2.19	0.78
18:i:97:ILE:HB	18:i:144:HIS:HB2	1.65	0.78
46:A:140:U:H2'	46:A:141:U:H6	1.47	0.78
46:A:1216:A:H2'	46:A:1217:U:C6	2.16	0.78
46:A:1288:U:H5"	46:A:1289:G:H5"	1.65	0.78
5:AE:65:ILE:HG23	5:AE:90:PRO:HA	1.65	0.78
7:AG:117:SER:OG	16:g:31:PRO:HG3	1.84	0.78
18:i:93:TRP:HB3	29:t:108:PRO:CB	2.14	0.78
20:k:54:PHE:CE1	25:p:57:PHE:CE1	2.72	0.78
46:A:1719:G:H2'	46:A:1720:U:C6	2.18	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2673:A:C5	55:J:125:VAL:HG21	2.18	0.78
63:R:219:ARG:HH21	63:R:248:ASP:HA	1.48	0.78
5:AE:149:SER:CB	5:AE:159:MET:HE3	2.07	0.78
7:AG:116:LEU:HD22	16:g:34:GLN:HB2	1.66	0.78
7:AG:220:TRP:CZ2	33:x:41:ILE:HD12	2.19	0.78
12:AL:539:C:H2'	12:AL:540:A:C8	2.17	0.78
12:AL:561:U:H2'	12:AL:562:A:C8	2.19	0.78
12:AL:1032:A:H4'	24:o:275:TRP:CH2	2.16	0.78
17:h:290:TRP:CE3	24:o:49:PRO:HG2	2.19	0.78
22:m:246:LEU:HD22	22:m:246:LEU:H	0.70	0.78
30:u:222:ASP:O	30:u:224:PRO:HD3	1.84	0.78
34:y:24:ARG:HA	34:y:27:MET:HE2	1.66	0.78
46:A:874:U:H2'	46:A:875:U:H6	1.48	0.78
63:R:235:TRP:CE3	63:R:239:LYS:HG2	2.19	0.78
3:AC:69:LYS:CE	12:AL:1637:A:OP1	2.32	0.78
6:AF:307:TYR:CE2	31:v:92:LYS:HG3	2.17	0.78
7:AG:124:GLU:OE2	17:h:189:MET:O	2.01	0.78
8:AH:53:VAL:CG1	32:w:48:GLU:CD	2.54	0.78
8:AH:202:LEU:HD13	21:l:106:ASP:HB2	1.64	0.78
12:AL:1389:U:H4'	12:AL:1390:C:OP1	1.81	0.78
18:i:369:ASN:HB3	29:t:114:ILE:HD11	1.65	0.78
46:A:9:U:H2'	46:A:10:A:C8	2.18	0.78
46:A:1531:C:C2	47:B:326:TRP:CE2	2.71	0.78
46:A:1712:A:N3	47:B:140:THR:HG21	1.97	0.78
46:A:2352:A:H2'	46:A:2353:U:C6	2.17	0.78
6:AF:137:PHE:CG	19:j:468:PRO:HB3	2.18	0.78
6:AF:208:MET:CB	19:j:425:TRP:CZ3	2.67	0.78
7:AG:228:THR:HG22	33:x:42:ASP:CG	2.09	0.78
12:AL:319:A:H2'	12:AL:320:C:C6	2.19	0.78
12:AL:748:U:O2'	26:q:121:LYS:CE	2.31	0.78
12:AL:1013:C:P	28:s:107:ASN:HD22	2.07	0.78
25:p:102:PHE:HE1	29:t:103:LEU:CD2	1.97	0.78
30:u:74:PRO:CG	32:w:100:GLU:HB3	2.14	0.78
32:w:220:LYS:HA	32:w:223:LEU:HB2	1.64	0.78
46:A:600:C:H1'	47:B:133:ARG:HH11	1.46	0.78
7:AG:49:LYS:NZ	23:n:58:LYS:NZ	2.32	0.77
11:AK:162:LEU:CD1	25:p:64:ARG:HB2	2.14	0.77
12:AL:665:U:H2'	12:AL:666:U:C6	2.19	0.77
12:AL:781:A:H2	26:q:208:GLY:HA2	1.48	0.77
18:i:311:ILE:HG13	20:k:58:TYR:CE2	2.19	0.77
20:k:45:LYS:CD	20:k:47:ARG:HH21	1.96	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:k:48:VAL:CA	25:p:30:ALA:HB2	2.12	0.77
30:u:101:PHE:CA	32:w:167:LEU:CD1	2.61	0.77
46:A:1706:G:N3	47:B:265:PHE:CE1	2.52	0.77
46:A:2276:G:H22	56:K:128:MET:CE	1.97	0.77
2:AB:105:LEU:HD22	12:AL:390:U:P	2.24	0.77
3:AC:90:HIS:CD2	17:h:160:LEU:C	2.62	0.77
12:AL:1170:U:O2	25:p:78:PRO:CD	2.32	0.77
12:AL:1320:A:N7	25:p:79:LEU:CD2	2.46	0.77
21:l:98:LYS:CE	30:u:148:GLU:OE1	2.33	0.77
30:u:74:PRO:CG	32:w:100:GLU:HG3	2.10	0.77
46:A:926:A:H2'	46:A:927:A:C8	2.18	0.77
46:A:1322:U:H2'	46:A:1323:U:H6	1.50	0.77
5:AE:218:VAL:HG11	5:AE:221:ARG:CZ	2.14	0.77
5:AE:255:LEU:HD13	5:AE:300:PHE:CB	2.15	0.77
12:AL:940:U:H1'	23:n:15:ASN:OD1	1.84	0.77
12:AL:1559:A:OP1	30:u:36:LYS:CE	2.33	0.77
13:AM:76:A:C2	46:A:2662:A:N6	2.50	0.77
46:A:311:A:H5"	62:Q:260:HIS:NE2	2.00	0.77
46:A:1010:A:C2	46:A:1011:A:N6	2.35	0.77
75:e:66:MET:CE	75:e:142:TYR:HE2	1.94	0.77
10:AJ:80:VAL:CG2	12:AL:1091:A:H5"	2.15	0.77
11:AK:164:LEU:HB2	20:k:32:SER:CB	2.15	0.77
12:AL:801:U:H5'	33:x:130:ARG:HB3	1.65	0.77
22:m:244:ILE:HG23	22:m:247:LYS:HE3	1.66	0.77
27:r:58:ARG:NH1	27:r:87:ASN:HB3	1.99	0.77
32:w:27:LYS:HE2	32:w:36:GLU:HB3	1.66	0.77
46:A:235:A:H61	46:A:238:C:H3'	1.48	0.77
46:A:2029:A:C4	46:A:2030:U:H1'	2.20	0.77
46:A:2951:U:H2'	46:A:2952:G:C8	2.19	0.77
63:R:53:GLU:O	63:R:55:GLN:N	2.17	0.77
6:AF:58:MET:SD	19:j:11:LEU:HD13	2.24	0.77
6:AF:111:TYR:HB2	11:AK:120:GLY:CA	2.13	0.77
7:AG:75:TYR:HD2	8:AH:182:TYR:CD2	2.00	0.77
7:AG:120:LYS:CB	16:g:34:GLN:NE2	2.47	0.77
8:AH:16:PRO:CD	31:v:35:LYS:HG3	2.13	0.77
10:AJ:29:ARG:NH2	34:y:13:TRP:CH2	2.52	0.77
13:AM:76:A:N3	46:A:2662:A:C6	2.50	0.77
15:Z:66:ALA:H	22:m:184:ASN:HB2	1.46	0.77
31:v:23:ILE:HD12	31:v:67:LEU:HB2	1.67	0.77
46:A:175:U:H2'	46:A:176:U:C6	2.18	0.77
46:A:1288:U:C6	49:D:114:ALA:HA	2.20	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2205:G:H2'	46:A:2206:U:O4'	1.85	0.77
47:B:61:LEU:HD13	47:B:63:ILE:CD1	2.15	0.77
5:AE:214:ALA:O	5:AE:217:LYS:HB2	1.85	0.77
12:AL:1225:G:O2'	20:k:160:LYS:O	2.02	0.77
12:AL:1295:A:C4	12:AL:1296:A:N7	2.53	0.77
46:A:292:G:OP1	55:J:105:TRP:CZ2	2.38	0.77
46:A:3251:A:H5'	46:A:3252:U:H2'	1.65	0.77
2:AB:74:LEU:O	2:AB:77:LYS:HB2	1.84	0.77
9:AI:372:HIS:CD2	12:AL:1279:A:H2'	2.20	0.77
12:AL:521:A:H5"	31:v:45:PRO:O	1.84	0.77
12:AL:632:C:H4'	12:AL:633:C:H5"	1.67	0.77
12:AL:634:A:N1	12:AL:650:C:H1'	2.00	0.77
12:AL:786:U:O2	33:x:130:ARG:NH1	2.18	0.77
12:AL:1128:A:OP1	20:k:155:SER:C	2.27	0.77
12:AL:1212:A:OP1	24:o:244:SER:CB	2.33	0.77
12:AL:1216:A:H1'	24:o:256:TYR:CG	2.18	0.77
12:AL:1330:A:N6	12:AL:1333:U:H2'	1.98	0.77
12:AL:1647:A:C1'	17:h:176:TYR:CG	2.67	0.77
15:Z:33:LEU:HD13	15:Z:57:GLU:HB3	1.66	0.77
46:A:10:A:H2'	46:A:11:G:H8	1.50	0.77
46:A:231:A:H2'	46:A:232:C:H6	1.49	0.77
46:A:1439:A:H2'	46:A:1440:U:O4'	1.85	0.77
46:A:1493:U:H2'	46:A:1494:A:C8	2.19	0.77
46:A:1706:G:N3	47:B:265:PHE:HE1	1.82	0.77
46:A:1757:A:H5'	46:A:1757:A:C8	2.19	0.77
46:A:2443:C:H2'	46:A:2444:A:H8	1.50	0.77
46:A:2976:A:H2'	46:A:2977:U:C6	2.19	0.77
1:AA:80:VAL:CG2	12:AL:1462:A:N7	2.46	0.77
3:AC:185:LEU:CD1	7:AG:196:MET:CA	2.61	0.77
3:AC:185:LEU:HB2	7:AG:196:MET:C	2.08	0.77
3:AC:188:ALA:HB3	4:AD:73:LYS:CB	2.00	0.77
8:AH:50:ALA:CB	32:w:76:GLU:N	2.45	0.77
12:AL:419:U:H2'	12:AL:420:A:C8	2.20	0.77
12:AL:748:U:H2'	12:AL:749:A:C8	2.20	0.77
12:AL:1626:A:O2'	35:z:158:PHE:CD1	2.38	0.77
24:o:160:ARG:HD3	24:o:225:GLU:HB3	1.65	0.77
30:u:101:PHE:N	32:w:167:LEU:CD1	2.37	0.77
46:A:98:A:H2'	46:A:99:U:H6	1.49	0.77
46:A:2077:A:C3'	46:A:2078:U:O4'	2.32	0.77
46:A:2208:A:H2'	46:A:2209:U:C6	2.20	0.77
47:B:311:ILE:HD12	47:B:311:ILE:H	1.49	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:162:LEU:CD2	25:p:65:THR:HA	2.11	0.77
18:i:302:ILE:HA	18:i:305:ILE:HB	1.66	0.77
26:q:210:ARG:HE	35:z:139:TYR:HD1	1.29	0.77
46:A:300:A:OP1	55:J:228:TRP:HZ2	1.68	0.77
5:AE:96:PRO:HD3	12:AL:1541:U:C1'	2.10	0.77
6:AF:61:PHE:CD1	19:j:29:TYR:OH	2.38	0.77
9:AI:172:GLN:HG2	9:AI:286:PRO:HG2	1.65	0.77
12:AL:691:U:C6	12:AL:825:G:O6	2.37	0.77
12:AL:1182:U:O2'	25:p:109:ARG:NH2	2.18	0.77
21:l:38:VAL:CB	30:u:141:ILE:CG1	2.62	0.77
46:A:10:A:H2'	46:A:11:G:C8	2.20	0.77
46:A:795:U:H2'	46:A:796:A:C8	2.20	0.77
46:A:818:U:H2'	46:A:819:U:O4'	1.84	0.77
46:A:984:C:OP1	46:A:993:G:H5"	1.85	0.77
46:A:3282:A:H2'	46:A:3283:U:H6	1.48	0.77
75:e:66:MET:HE1	75:e:153:LEU:HD22	1.66	0.77
3:AC:74:PRO:HB2	7:AG:191:LEU:HD13	1.67	0.76
6:AF:344:TYR:CB	31:v:15:ARG:NH1	2.49	0.76
8:AH:198:GLU:CB	21:l:105:LEU:HD21	2.13	0.76
12:AL:749:A:O4'	26:q:121:LYS:HE3	1.80	0.76
22:m:101:LEU:CD2	24:o:242:LEU:HD13	2.08	0.76
37:1:190:LYS:CE	46:A:2363:A:OP1	2.32	0.76
46:A:979:C:O2'	75:e:180:LYS:HE3	1.83	0.76
46:A:1433:A:H2'	46:A:1434:A:C8	2.19	0.76
46:A:2200:C:H2'	46:A:2201:U:C6	2.19	0.76
75:e:69:PHE:HA	75:e:139:THR:HB	1.65	0.76
7:AG:122:LEU:CD1	16:g:36:ILE:HD12	2.14	0.76
9:AI:310:ASN:HD21	28:s:34:LYS:CB	1.98	0.76
12:AL:16:G:OP2	20:k:261:LYS:HD2	1.84	0.76
12:AL:739:G:H2'	12:AL:740:A:C8	2.20	0.76
12:AL:1215:A:C4'	12:AL:1216:A:H5'	2.11	0.76
12:AL:1320:A:C8	25:p:79:LEU:HD22	2.20	0.76
46:A:1528:G:H2'	46:A:1529:A:C8	2.21	0.76
63:R:147:ILE:H	63:R:147:ILE:HD13	1.49	0.76
3:AC:191:ILE:CD1	4:AD:222:GLN:NE2	2.49	0.76
3:AC:228:ASP:OD2	4:AD:277:PRO:CD	2.33	0.76
12:AL:748:U:O2'	26:q:121:LYS:HE3	1.85	0.76
26:q:96:GLU:HA	26:q:114:TYR:OH	1.84	0.76
27:r:114:ARG:HG3	27:r:116:GLN:H	1.48	0.76
30:u:161:ARG:HD2	30:u:171:THR:HG22	1.67	0.76
33:x:113:ASP:OD2	35:z:156:LYS:NZ	2.18	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:64:U:H2'	46:A:65:A:H8	1.49	0.76
46:A:1006:U:C5	76:f:135:LEU:CA	2.68	0.76
46:A:2593:A:H2'	46:A:2594:A:C8	2.21	0.76
46:A:3264:C:H2'	46:A:3265:U:C6	2.21	0.76
46:A:3280:C:H2'	46:A:3281:U:C6	2.19	0.76
5:AE:255:LEU:CD1	5:AE:300:PHE:HB2	2.15	0.76
7:AG:96:LYS:CD	12:AL:915:U:O3'	2.33	0.76
7:AG:220:TRP:CZ2	33:x:41:ILE:CD1	2.68	0.76
12:AL:379:U:C2'	31:v:12:ARG:NH1	2.49	0.76
12:AL:1340:U:H1'	12:AL:1342:U:H4'	1.66	0.76
15:Z:37:LEU:HD13	15:Z:54:LEU:HD13	1.67	0.76
15:Z:62:THR:HB	22:m:184:ASN:HA	1.65	0.76
16:g:7:LEU:HD11	17:h:189:MET:HE3	1.67	0.76
32:w:170:SER:HA	32:w:173:GLU:HB2	1.66	0.76
75:e:71:HIS:HB2	75:e:165:MET:HB2	1.67	0.76
1:AA:104:ARG:HH21	46:A:1740:U:H4'	1.50	0.76
12:AL:1632:A:C6	33:x:67:LEU:HD12	2.20	0.76
30:u:64:VAL:HB	30:u:237:ASN:HD22	1.50	0.76
46:A:26:A:N1	71:a:114:LEU:N	2.33	0.76
46:A:1129:U:H2'	46:A:1130:C:H6	1.49	0.76
46:A:1703:U:H2'	46:A:1704:U:H6	1.50	0.76
46:A:2473:U:H2'	46:A:2474:U:C6	2.20	0.76
76:f:116:SER:HA	76:f:157:VAL:HB	1.68	0.76
6:AF:178:LYS:HZ1	19:j:459:ARG:HH22	1.33	0.76
8:AH:104:ARG:NE	12:AL:143:A:H5'	2.01	0.76
8:AH:198:GLU:HB3	21:l:105:LEU:CG	2.15	0.76
10:AJ:56:PHE:CE2	12:AL:1061:U:OP1	2.38	0.76
12:AL:675:U:C5	20:k:263:TYR:CZ	2.73	0.76
12:AL:1540:U:H2'	12:AL:1541:U:H6	0.96	0.76
16:g:272:ARG:HH22	33:x:48:LYS:HA	1.49	0.76
22:m:123:ARG:HB3	22:m:126:LYS:HZ2	1.51	0.76
24:o:151:PHE:HB2	24:o:153:ARG:HE	1.51	0.76
46:A:98:A:H2'	46:A:99:U:C6	2.20	0.76
46:A:1719:G:H2'	46:A:1720:U:H6	1.50	0.76
46:A:1901:U:H2'	46:A:1902:U:H6	1.48	0.76
46:A:2016:A:N6	46:A:2021:A:H3'	1.99	0.76
3:AC:177:PHE:HE1	3:AC:200:MET:HG2	1.50	0.76
3:AC:219:MET:HE1	17:h:153:HIS:NE2	2.01	0.76
6:AF:137:PHE:CZ	19:j:468:PRO:CB	2.63	0.76
6:AF:212:LEU:HD12	19:j:445:PHE:HB3	1.66	0.76
9:AI:413:LEU:HD21	22:m:149:PRO:CG	2.14	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1216:A:N9	24:o:256:TYR:CG	2.54	0.76
16:g:45:ARG:CG	17:h:170:PRO:CB	2.60	0.76
18:i:93:TRP:CG	29:t:108:PRO:CA	2.67	0.76
46:A:149:A:H2'	46:A:150:A:C8	2.21	0.76
46:A:2332:U:H2'	46:A:2333:A:H8	1.50	0.76
46:A:2853:A:H8	46:A:2853:A:H5'	1.51	0.76
5:AE:215:TRP:CH2	5:AE:248:LEU:HB2	2.20	0.76
6:AF:58:MET:HG3	19:j:26:PHE:CD2	2.21	0.76
6:AF:208:MET:HG3	19:j:425:TRP:HH2	1.48	0.76
8:AH:93:GLN:CG	12:AL:222:U:OP2	2.34	0.76
8:AH:224:PHE:CE2	21:l:22:LYS:HG3	2.20	0.76
10:AJ:32:SER:OG	12:AL:1313:U:H5"	1.83	0.76
12:AL:1011:A:H3'	12:AL:1012:G:C2	2.21	0.76
18:i:368:LEU:C	29:t:111:LYS:CG	2.54	0.76
25:p:85:ARG:NH2	29:t:115:TRP:CD1	2.53	0.76
46:A:1932:G:H22	48:C:209:GLN:CG	1.87	0.76
8:AH:14:VAL:HG12	12:AL:298:A:C8	2.21	0.76
8:AH:16:PRO:CA	31:v:35:LYS:CE	2.64	0.76
8:AH:103:ARG:HH21	31:v:79:GLY:CA	1.75	0.76
9:AI:206:LYS:NZ	12:AL:1346:U:C5	2.53	0.76
11:AK:132:PHE:HD2	18:i:249:PRO:HD3	1.50	0.76
12:AL:809:U:H2'	12:AL:810:A:C8	2.20	0.76
16:g:51:LYS:CD	17:h:196:GLY:O	2.20	0.76
21:l:51:PRO:CG	33:x:138:MET:H	1.98	0.76
46:A:52:A:H2'	46:A:53:U:C6	2.21	0.76
46:A:54:A:H2'	46:A:55:A:C8	2.21	0.76
46:A:1024:A:O2'	46:A:1026:U:N3	2.18	0.76
46:A:1140:A:H2'	46:A:1141:A:C8	2.21	0.76
46:A:1521:U:H2'	46:A:1522:A:C8	2.20	0.76
46:A:2085:A:H2'	46:A:2086:U:C6	2.21	0.76
46:A:2882:U:H2'	46:A:2883:C:H6	1.51	0.76
46:A:3117:A:H2'	46:A:3118:U:C6	2.21	0.76
7:AG:147:GLU:OE2	16:g:14:GLN:HA	1.86	0.76
7:AG:206:ILE:HB	16:g:92:GLU:OE1	1.85	0.76
9:AI:118:LEU:HD22	9:AI:411:VAL:HG13	1.68	0.76
9:AI:153:GLY:O	9:AI:155:GLY:N	2.19	0.76
9:AI:431:PHE:CD1	24:o:176:ILE:CD1	2.67	0.76
12:AL:1164:U:O3'	24:o:254:ARG:HD2	1.86	0.76
12:AL:1624:U:N3	35:z:154:HIS:NE2	2.30	0.76
15:Z:46:HIS:CE1	22:m:234:HIS:CB	2.69	0.76
19:j:125:ILE:CG1	19:j:130:VAL:HG21	2.13	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:q:198:ILE:HG21	35:z:106:ILE:HD11	1.68	0.76
46:A:1540:A:H2'	46:A:1541:U:C6	2.20	0.76
5:AE:105:PHE:O	5:AE:109:VAL:HG23	1.86	0.75
7:AG:32:VAL:CG1	17:h:235:VAL:HA	2.16	0.75
7:AG:96:LYS:CE	12:AL:915:U:O3'	2.34	0.75
11:AK:107:LEU:CD1	18:i:168:ASN:OD1	2.33	0.75
12:AL:750:G:C5'	26:q:123:LYS:HA	2.12	0.75
27:r:93:ALA:HA	27:r:123:TYR:O	1.86	0.75
46:A:17:U:H2'	46:A:18:A:C8	2.21	0.75
46:A:125:U:H2'	46:A:126:A:H8	1.50	0.75
46:A:2288:U:H2'	46:A:2289:C:C6	2.20	0.75
3:AC:232:LEU:CD2	4:AD:278:LYS:CA	2.63	0.75
5:AE:227:LEU:HB3	5:AE:231:LEU:HB2	1.68	0.75
7:AG:205:ALA:HB3	16:g:92:GLU:CB	2.16	0.75
9:AI:56:LEU:CB	22:m:214:GLU:OE1	2.34	0.75
11:AK:99:VAL:HG21	18:i:167:ASN:HB2	1.68	0.75
11:AK:136:GLU:HG2	18:i:212:TYR:CE2	2.20	0.75
11:AK:294:PHE:CZ	24:o:170:VAL:HG11	2.21	0.75
12:AL:521:A:C5'	31:v:45:PRO:O	2.34	0.75
12:AL:665:U:H2'	12:AL:666:U:H6	1.51	0.75
12:AL:1021:U:H5"	34:y:84:SER:HB2	1.65	0.75
12:AL:1163:A:C2'	24:o:256:TYR:CZ	2.68	0.75
12:AL:1624:U:C5	35:z:154:HIS:NE2	2.53	0.75
15:Z:66:ALA:HB2	22:m:184:ASN:N	1.98	0.75
18:i:88:ASN:ND2	25:p:53:GLU:CD	2.33	0.75
21:l:62:PHE:CD2	26:q:116:LEU:HD11	2.21	0.75
30:u:132:GLU:HG2	32:w:126:ARG:CG	2.17	0.75
30:u:173:SER:HB2	30:u:176:VAL:HG23	1.67	0.75
46:A:743:A:H2'	46:A:744:U:H6	1.51	0.75
46:A:1322:U:H2'	46:A:1323:U:C6	2.22	0.75
46:A:1808:G:H1	46:A:1823:U:H3	1.32	0.75
46:A:2824:G:H2'	46:A:2825:U:C6	2.20	0.75
50:E:252:ASN:OD1	67:V:63:TYR:CD1	2.38	0.75
5:AE:65:ILE:CG2	5:AE:90:PRO:HA	2.16	0.75
6:AF:61:PHE:CD1	19:j:29:TYR:CE2	2.66	0.75
12:AL:708:U:OP1	12:AL:709:A:OP2	2.03	0.75
16:g:6:LEU:HB3	17:h:189:MET:SD	2.26	0.75
30:u:99:ASP:HB3	32:w:124:LEU:HD13	1.68	0.75
46:A:2246:A:H2'	46:A:2247:A:H8	1.50	0.75
5:AE:189:ILE:HG21	5:AE:235:LEU:HD22	1.66	0.75
7:AG:166:VAL:CB	16:g:195:LYS:CE	2.62	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:21:ILE:HG23	31:v:74:TYR:HE1	1.50	0.75
8:AH:224:PHE:HD1	21:l:18:LYS:CE	1.98	0.75
9:AI:56:LEU:CG	22:m:214:GLU:CD	2.55	0.75
9:AI:310:ASN:HD21	28:s:34:LYS:HB3	1.51	0.75
12:AL:382:U:P	31:v:7:ARG:NH1	2.57	0.75
12:AL:773:A:C5'	26:q:79:HIS:HD1	1.99	0.75
12:AL:1559:A:OP1	30:u:36:LYS:CG	2.33	0.75
46:A:217:A:H5'	64:S:47:HIS:HE1	1.52	0.75
46:A:497:U:H2'	46:A:498:A:H8	1.49	0.75
3:AC:237:VAL:HG11	4:AD:44:ARG:HD2	1.67	0.75
5:AE:286:ASP:CB	5:AE:315:TYR:HE2	1.99	0.75
7:AG:3:ILE:HD13	23:n:20:ARG:CD	2.15	0.75
8:AH:99:LYS:NZ	31:v:100:TRP:CD2	2.55	0.75
8:AH:224:PHE:CZ	21:l:22:LYS:HG3	2.22	0.75
9:AI:188:ASN:C	28:s:42:TYR:CD2	2.64	0.75
11:AK:132:PHE:CB	18:i:248:MET:HE3	2.17	0.75
12:AL:522:A:H61	12:AL:527:G:H5'	1.49	0.75
12:AL:1028:G:H1'	25:p:93:PHE:HZ	1.51	0.75
12:AL:1098:U:C2	12:AL:1239:A:H2	2.03	0.75
15:Z:81:HIS:CE1	35:z:173:LYS:CD	2.68	0.75
46:A:600:C:H4'	47:B:133:ARG:NH1	2.00	0.75
46:A:744:U:H2'	46:A:745:U:C6	2.21	0.75
46:A:1147:U:H2'	46:A:1148:A:C8	2.22	0.75
11:AK:67:GLU:HA	11:AK:70:TRP:CE3	2.22	0.75
11:AK:135:ASP:CG	20:k:99:LEU:HD23	2.10	0.75
11:AK:170:GLN:NE2	25:p:120:VAL:HG22	2.00	0.75
12:AL:502:A:C4'	19:j:7:LEU:HD21	2.12	0.75
12:AL:811:U:H2'	12:AL:812:U:C6	2.21	0.75
12:AL:825:G:C2'	12:AL:826:G:C5'	2.64	0.75
30:u:74:PRO:HB2	32:w:100:GLU:CD	2.10	0.75
46:A:71:A:H2'	46:A:72:U:C6	2.21	0.75
46:A:536:A:H2'	46:A:537:U:H6	1.51	0.75
46:A:603:U:OP1	47:B:149:ARG:NH1	2.20	0.75
46:A:1324:U:H2'	46:A:1325:U:H6	1.50	0.75
46:A:1530:U:P	47:B:94:LYS:HZ2	2.09	0.75
46:A:1806:C:H2'	46:A:1830:G:C8	2.22	0.75
46:A:2088:A:H2'	46:A:2089:U:C6	2.21	0.75
46:A:2317:A:N1	69:X:65:PHE:CD1	2.47	0.75
46:A:2420:U:H2'	46:A:2421:U:C6	2.21	0.75
46:A:2917:U:H2'	46:A:2918:A:O5'	1.87	0.75
1:AA:95:LYS:CD	12:AL:1579:A:H5"	2.16	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:16:G:C5'	20:k:266:ARG:HH11	2.00	0.75
12:AL:84:U:H2'	12:AL:85:G:H4'	1.67	0.75
12:AL:604:A:H3'	12:AL:605:U:C6	2.22	0.75
12:AL:1060:A:C2	12:AL:1091:A:H3'	2.22	0.75
12:AL:1645:U:C6	17:h:175:PHE:CD1	2.74	0.75
21:l:13:ASN:HB3	21:l:16:ALA:O	1.86	0.75
24:o:264:PRO:HG3	25:p:101:ASN:ND2	2.01	0.75
46:A:126:A:H2'	46:A:127:A:C8	2.20	0.75
46:A:254:G:H2'	46:A:255:G:C8	2.21	0.75
46:A:311:A:H5"	62:Q:260:HIS:CD2	2.22	0.75
46:A:446:A:H4'	46:A:447:U:OP1	1.85	0.75
46:A:1167:A:H3'	46:A:1168:A:H8	1.52	0.75
46:A:1589:A:H2'	46:A:1590:U:H6	1.52	0.75
46:A:2220:U:H2'	46:A:2220:U:O2	1.85	0.75
46:A:2594:A:H2'	46:A:2595:U:C6	2.20	0.75
46:A:2966:U:H2'	46:A:2967:A:C8	2.22	0.75
46:A:3234:A:H4'	46:A:3235:U:OP1	1.84	0.75
7:AG:147:GLU:HG2	16:g:14:GLN:CG	2.16	0.75
12:AL:226:C:H2'	12:AL:227:U:C5	2.22	0.75
12:AL:803:A:H2'	12:AL:804:U:C6	2.21	0.75
12:AL:1012:G:C5'	28:s:107:ASN:HD21	1.99	0.75
46:A:743:A:H2'	46:A:744:U:C6	2.21	0.75
46:A:1728:U:C2	47:B:269:ALA:O	2.40	0.75
46:A:2416:U:H2'	46:A:2417:A:H8	1.50	0.75
2:AB:124:TRP:HZ2	12:AL:101:U:C2	2.04	0.75
6:AF:67:TYR:CE2	12:AL:482:U:O4'	2.40	0.75
6:AF:67:TYR:HE2	12:AL:482:U:C6	2.01	0.75
6:AF:137:PHE:CG	19:j:468:PRO:CA	2.70	0.75
11:AK:165:LEU:CD2	25:p:127:TYR:CE1	2.69	0.75
12:AL:381:A:H5"	31:v:7:ARG:HH21	1.52	0.75
12:AL:629:G:H2'	12:AL:630:U:C6	2.22	0.75
12:AL:1004:G:N2	12:AL:1006:A:OP1	2.20	0.75
12:AL:1105:G:OP2	18:i:332:LYS:CE	2.34	0.75
12:AL:1172:A:N7	25:p:36:ILE:HD12	2.00	0.75
12:AL:1342:U:H2'	12:AL:1356:U:H3'	1.68	0.75
12:AL:1381:U:H3'	12:AL:1382:C:H5"	1.68	0.75
28:s:85:ILE:HG12	34:y:67:ASP:CG	2.10	0.75
32:w:11:VAL:HG21	32:w:23:ARG:HG3	1.69	0.75
46:A:449:A:H2'	46:A:450:U:C6	2.22	0.75
46:A:1999:U:H2'	46:A:2000:A:C8	2.22	0.75
46:A:2420:U:H2'	46:A:2421:U:H6	1.52	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:81:ILE:HA	2:AB:84:ARG:HH12	1.51	0.74
5:AE:223:ASN:HD22	5:AE:251:VAL:HG21	1.50	0.74
7:AG:117:SER:HB3	16:g:83:THR:CG2	2.16	0.74
8:AH:231:PHE:HZ	21:l:48:ARG:HD2	1.52	0.74
9:AI:60:TRP:CB	22:m:210:VAL:CG2	2.57	0.74
11:AK:140:GLN:CD	18:i:321:TYR:CD2	2.65	0.74
11:AK:299:LYS:HE2	24:o:151:PHE:CD1	2.19	0.74
12:AL:1264:U:OP1	24:o:276:VAL:CG1	2.35	0.74
12:AL:1375:U:C5'	28:s:110:THR:HG21	2.16	0.74
19:j:7:LEU:HB2	19:j:10:SER:HB2	1.68	0.74
46:A:200:G:H2'	46:A:200:G:N3	2.00	0.74
46:A:1501:A:H2'	46:A:1502:U:O4'	1.86	0.74
46:A:2365:A:H2'	46:A:2366:U:C6	2.22	0.74
5:AE:96:PRO:CB	12:AL:1541:U:C1'	2.65	0.74
6:AF:50:HIS:HB3	12:AL:491:U:O4	1.87	0.74
6:AF:70:GLU:HG3	19:j:426:LYS:HZ3	1.52	0.74
6:AF:321:TYR:CE2	31:v:36:PRO:HD2	2.20	0.74
8:AH:53:VAL:HG21	32:w:74:ILE:HG22	1.67	0.74
10:AJ:53:ILE:CD1	10:AJ:55:LYS:CE	2.58	0.74
12:AL:637:A:C2	27:r:116:GLN:CB	2.69	0.74
12:AL:1105:G:H5'	18:i:390:ASN:HB2	1.67	0.74
12:AL:1172:A:H5'	25:p:114:TRP:HZ2	1.52	0.74
17:h:290:TRP:CD2	24:o:49:PRO:CG	2.70	0.74
19:j:423:THR:HA	19:j:425:TRP:H	1.50	0.74
21:l:51:PRO:HG2	33:x:138:MET:N	2.01	0.74
22:m:238:ILE:O	22:m:241:ARG:HB3	1.86	0.74
46:A:533:U:C6	63:R:134:LEU:HA	2.21	0.74
3:AC:148:LEU:HD13	4:AD:82:ASN:HD22	0.91	0.74
4:AD:208:PHE:HE2	16:g:214:LEU:CA	2.00	0.74
6:AF:311:ASN:ND2	31:v:69:PHE:CD1	2.55	0.74
8:AH:199:LEU:CD2	30:u:93:TYR:OH	2.35	0.74
9:AI:153:GLY:C	9:AI:155:GLY:N	2.43	0.74
9:AI:226:LEU:HD13	9:AI:230:TYR:HD2	1.51	0.74
12:AL:809:U:H2'	12:AL:810:A:H8	1.52	0.74
16:g:228:PRO:HG3	16:g:277:LEU:HG	1.68	0.74
32:w:188:THR:O	32:w:192:GLU:HB3	1.87	0.74
46:A:1142:U:H2'	46:A:1143:A:H8	1.48	0.74
46:A:2922:G:N2	46:A:2931:G:H2'	2.02	0.74
46:A:3280:C:H2'	46:A:3281:U:H6	1.52	0.74
3:AC:228:ASP:OD2	4:AD:277:PRO:CG	2.35	0.74
7:AG:114:TRP:HE1	16:g:87:ARG:HG3	1.50	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:112:GLU:N	18:i:172:TYR:HE2	1.84	0.74
12:AL:81:U:C2'	12:AL:82:A:H5'	2.17	0.74
12:AL:1615:G:OP1	26:q:213:LYS:HD2	1.88	0.74
16:g:3:LEU:HD12	17:h:211:TYR:HE2	1.44	0.74
30:u:87:LEU:HG	32:w:114:ARG:HH12	1.51	0.74
46:A:1068:C:H2'	46:A:1069:A:C8	2.22	0.74
46:A:2649:U:OP1	50:E:19:PRO:N	2.20	0.74
46:A:2899:U:H2'	46:A:2900:A:H8	1.53	0.74
5:AE:182:GLU:HB2	5:AE:183:HIS:CE1	2.22	0.74
5:AE:302:ARG:HE	5:AE:303:GLN:HG3	1.51	0.74
7:AG:122:LEU:HA	16:g:11:ARG:HB3	1.69	0.74
11:AK:76:LEU:HD22	11:AK:79:GLU:HB2	1.69	0.74
11:AK:181:PRO:HG2	25:p:148:ILE:CG2	2.17	0.74
12:AL:116:A:H2'	12:AL:117:G:H8	1.51	0.74
12:AL:1295:A:C4	12:AL:1296:A:C8	2.75	0.74
13:AM:60:U:H5"	13:AM:61:C:H5	1.52	0.74
16:g:28:LYS:O	33:x:53:THR:CA	2.36	0.74
18:i:104:MET:SD	18:i:107:MET:CE	2.76	0.74
22:m:161:ALA:HB1	22:m:188:ARG:HB3	1.69	0.74
22:m:244:ILE:HG23	22:m:247:LYS:CG	2.17	0.74
46:A:1139:G:H2'	46:A:1140:A:C8	2.23	0.74
46:A:2332:U:H2'	46:A:2333:A:C8	2.22	0.74
46:A:2410:U:H2'	46:A:2411:G:C8	2.22	0.74
75:e:108:ASN:HB2	75:e:111:LEU:CB	2.16	0.74
7:AG:78:ARG:NH1	8:AH:176:LEU:HD11	2.01	0.74
8:AH:101:GLU:HA	8:AH:104:ARG:HG2	1.68	0.74
12:AL:690:G:H4'	30:u:210:GLN:OE1	1.87	0.74
12:AL:862:C:P	26:q:215:ARG:HG3	2.28	0.74
12:AL:1251:U:H2'	12:AL:1252:G:C8	2.22	0.74
24:o:239:ASN:HB3	24:o:242:LEU:HB2	1.68	0.74
28:s:92:ARG:NH2	28:s:104:THR:HG22	1.97	0.74
46:A:370:C:H2'	46:A:371:U:C6	2.22	0.74
46:A:372:A:H2'	46:A:373:U:H6	1.53	0.74
46:A:2018:C:H2'	46:A:2019:A:H8	1.50	0.74
3:AC:55:GLY:CA	7:AG:121:ILE:HG12	2.16	0.74
10:AJ:53:ILE:HG12	29:t:14:PRO:HB3	0.85	0.74
11:AK:292:TYR:CE2	24:o:179:ASN:HA	2.23	0.74
12:AL:240:A:H5"	32:w:43:TYR:OH	1.87	0.74
12:AL:774:U:C4'	26:q:120:GLN:HE22	1.96	0.74
12:AL:1647:A:C1'	17:h:176:TYR:CD1	2.63	0.74
46:A:2065:A:H1'	46:A:2066:U:C4	2.23	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:261:ASN:HB3	63:R:267:HIS:NE2	2.02	0.74
6:AF:54:LEU:CD2	19:j:12:ALA:HA	2.18	0.74
6:AF:321:TYR:CE1	31:v:13:PHE:CZ	2.75	0.74
7:AG:3:ILE:HD11	23:n:20:ARG:HD2	1.66	0.74
8:AH:79:VAL:CG1	8:AH:104:ARG:HD3	2.18	0.74
11:AK:75:ARG:NH2	20:k:85:ASN:C	2.46	0.74
11:AK:199:LYS:HD2	11:AK:237:SER:HB2	1.70	0.74
12:AL:826:G:N2	30:u:246:ASN:HD21	1.86	0.74
12:AL:1170:U:O2	25:p:78:PRO:CG	2.35	0.74
30:u:73:THR:O	30:u:74:PRO:C	2.29	0.74
40:4:18:ALA:HB2	41:5:285:ASP:HB3	1.70	0.74
46:A:2425:A:C2	67:V:27:ARG:CD	2.71	0.74
46:A:3027:U:H2'	46:A:3028:A:H8	1.50	0.74
55:J:111:THR:HB	55:J:116:LEU:HG	1.70	0.74
3:AC:228:ASP:OD2	4:AD:277:PRO:HD2	1.87	0.74
4:AD:254:GLU:HG3	16:g:226:VAL:HG21	1.68	0.74
5:AE:96:PRO:N	12:AL:1541:U:H1'	2.02	0.74
7:AG:3:ILE:HG23	23:n:20:ARG:HH12	1.49	0.74
7:AG:75:TYR:HE2	8:AH:182:TYR:CE2	2.04	0.74
9:AI:367:TYR:OH	11:AK:274:PRO:HD2	1.87	0.74
30:u:224:PRO:HB3	32:w:85:PHE:CE1	2.22	0.74
46:A:2473:U:H2'	46:A:2474:U:H6	1.53	0.74
46:A:3024:U:H2'	46:A:3025:U:C6	2.23	0.74
6:AF:208:MET:SD	19:j:425:TRP:HH2	2.08	0.74
10:AJ:26:SER:CA	12:AL:1299:A:C5	2.66	0.74
12:AL:1630:A:H5"	35:z:170:LYS:HZ3	1.50	0.74
25:p:77:LYS:HB3	25:p:110:LEU:HB3	1.68	0.74
29:t:60:LEU:HD12	34:y:20:PRO:HD3	1.69	0.74
46:A:1784:U:H3'	46:A:1785:U:H6	1.51	0.74
46:A:2845:G:C6	48:C:204:SER:OG	2.41	0.74
63:R:335:THR:HB	63:R:363:SER:H	1.52	0.74
75:e:66:MET:SD	75:e:150:VAL:HA	2.28	0.74
3:AC:61:TYR:OH	16:g:40:PRO:HD2	1.88	0.73
4:AD:155:LEU:CG	16:g:210:LEU:HG	2.18	0.73
5:AE:41:GLY:HA3	5:AE:108:SER:HB2	1.69	0.73
6:AF:44:ARG:NH2	12:AL:495:U:C5'	2.51	0.73
7:AG:217:LEU:CD1	16:g:273:MET:HB3	2.16	0.73
8:AH:231:PHE:CZ	21:l:48:ARG:HD3	2.23	0.73
11:AK:162:LEU:CB	25:p:68:TYR:HD2	1.91	0.73
12:AL:1386:A:H5'	12:AL:1387:A:OP2	1.86	0.73
16:g:7:LEU:CD1	17:h:189:MET:HE3	2.14	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:t:101:ASN:HA	29:t:106:ASN:HD22	1.52	0.73
30:u:85:GLU:OE1	32:w:107:PHE:CE1	2.41	0.73
39:3:54:LYS:HE3	46:A:157:A:P	2.28	0.73
46:A:747:U:H2'	46:A:748:U:C6	2.23	0.73
46:A:1310:A:H2'	46:A:1311:A:H8	1.51	0.73
46:A:1811:U:H3	46:A:1819:A:H62	1.34	0.73
46:A:2882:U:H2'	46:A:2883:C:C6	2.22	0.73
3:AC:90:HIS:CB	17:h:161:GLY:HA2	2.17	0.73
5:AE:315:TYR:O	5:AE:319:LEU:HG	1.89	0.73
7:AG:224:VAL:CB	33:x:45:LEU:CD1	2.67	0.73
9:AI:367:TYR:CE2	11:AK:274:PRO:CB	2.69	0.73
11:AK:290:ARG:HG3	12:AL:1179:U:O4	1.87	0.73
12:AL:1015:U:O4	28:s:106:ASN:CG	2.31	0.73
12:AL:1105:G:H5"	18:i:390:ASN:CB	2.17	0.73
12:AL:1411:G:C4'	24:o:272:MET:HB3	2.18	0.73
21:l:110:SER:HG	33:x:93:TYR:HE1	1.35	0.73
46:A:99:U:H2'	46:A:100:U:C6	2.23	0.73
46:A:1722:U:C4'	47:B:141:VAL:HG21	2.18	0.73
2:AB:108:LYS:CE	12:AL:68:A:OP1	2.33	0.73
2:AB:124:TRP:CZ2	12:AL:101:U:C2	2.75	0.73
7:AG:74:LEU:CD1	8:AH:187:LEU:HD21	2.10	0.73
7:AG:166:VAL:CG2	16:g:196:PHE:CE1	2.69	0.73
9:AI:449:HIS:HE1	22:m:149:PRO:CG	2.00	0.73
12:AL:1464:U:O2'	20:k:157:GLN:NE2	2.20	0.73
15:Z:16:LEU:CD2	35:z:165:LEU:HG	2.19	0.73
18:i:368:LEU:O	29:t:111:LYS:HG2	1.89	0.73
21:l:110:SER:OG	33:x:93:TYR:HE1	1.72	0.73
46:A:172:A:H2'	46:A:173:U:H6	1.51	0.73
46:A:2090:U:H2'	46:A:2091:C:C6	2.23	0.73
46:A:2441:U:H2'	46:A:2442:A:H8	1.52	0.73
46:A:2762:C:OP2	56:K:127:ARG:CZ	2.36	0.73
3:AC:261:PHE:CG	17:h:141:TYR:OH	2.42	0.73
6:AF:48:LYS:HG2	12:AL:489:A:H2'	1.70	0.73
7:AG:206:ILE:HG12	16:g:227:VAL:HG13	1.70	0.73
7:AG:224:VAL:CB	33:x:45:LEU:HD13	2.15	0.73
11:AK:174:ARG:HG3	25:p:38:TYR:CD2	2.23	0.73
12:AL:769:A:H4'	12:AL:770:A:H5'	1.70	0.73
12:AL:835:C:H2'	12:AL:836:U:C6	2.22	0.73
12:AL:1235:A:H2'	12:AL:1236:A:C8	2.23	0.73
13:AM:76:A:H2	46:A:2688:G:O6	1.72	0.73
46:A:54:A:H2'	46:A:55:A:H8	1.53	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1006:U:C4	76:f:135:LEU:CA	2.71	0.73
46:A:1427:A:H2'	46:A:1428:U:C6	2.23	0.73
46:A:1481:A:H2'	46:A:1482:A:O4'	1.87	0.73
46:A:1728:U:C4	47:B:314:GLN:NE2	2.56	0.73
46:A:2276:G:N2	56:K:128:MET:HG2	2.02	0.73
46:A:2585:A:H2'	46:A:2586:U:C5	2.23	0.73
46:A:2661:C:H5"	55:J:119:LYS:HD3	1.69	0.73
2:AB:109:SER:HB2	12:AL:101:U:OP2	1.86	0.73
6:AF:61:PHE:CE1	19:j:29:TYR:CZ	2.66	0.73
6:AF:307:TYR:OH	31:v:92:LYS:CG	2.37	0.73
7:AG:60:LEU:HD21	23:n:70:THR:HG21	1.69	0.73
7:AG:75:TYR:CZ	32:w:183:ILE:HD12	2.23	0.73
7:AG:221:GLU:CG	16:g:270:PHE:CE2	2.63	0.73
12:AL:340:C:H4'	12:AL:1502:U:H4'	1.67	0.73
12:AL:709:A:H2'	12:AL:710:U:C6	2.22	0.73
12:AL:748:U:C2'	26:q:121:LYS:HE3	2.18	0.73
12:AL:1011:A:H2	12:AL:1402:A:H1'	1.53	0.73
12:AL:1429:A:N7	29:t:72:THR:CG2	2.44	0.73
18:i:119:LEU:HD21	18:i:183:MET:HE1	1.71	0.73
29:t:70:ARG:O	29:t:73:GLN:N	2.20	0.73
37:1:234:PRO:HB3	63:R:129:PHE:CE1	2.23	0.73
38:2:53:ARG:HH11	69:X:67:ARG:NH1	1.83	0.73
46:A:984:C:H2'	46:A:985:A:H8	1.52	0.73
46:A:1165:A:H2'	46:A:1166:U:C6	2.23	0.73
46:A:2737:A:H3'	46:A:2738:G:H8	1.53	0.73
63:R:282:LEU:O	63:R:286:LEU:HG	1.88	0.73
2:AB:41:VAL:HG23	2:AB:63:TRP:HE3	1.54	0.73
11:AK:298:TRP:CE2	24:o:210:ASN:CG	2.66	0.73
12:AL:835:C:O2'	12:AL:836:U:H5'	1.89	0.73
12:AL:1172:A:C5'	25:p:114:TRP:HZ2	2.01	0.73
16:g:3:LEU:CG	17:h:211:TYR:CD2	2.67	0.73
46:A:103:U:H2'	46:A:104:A:C8	2.22	0.73
46:A:226:A:H2'	46:A:227:G:H8	1.53	0.73
46:A:1140:A:H2'	46:A:1141:A:H8	1.53	0.73
46:A:1534:G:OP1	47:B:151:ARG:HD2	1.89	0.73
46:A:1757:A:H3'	46:A:1758:U:C6	2.23	0.73
46:A:2012:A:C8	46:A:2023:U:OP1	2.40	0.73
46:A:3269:U:H2'	46:A:3270:A:C8	2.23	0.73
63:R:230:ALA:HA	63:R:235:TRP:CD1	2.24	0.73
3:AC:185:LEU:CD1	7:AG:196:MET:HA	2.17	0.73
6:AF:34:TYR:HE2	12:AL:496:A:HO2'	1.34	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1046:U:C3'	29:t:77:ARG:HH22	2.02	0.73
12:AL:1636:U:OP1	16:g:61:ARG:NH1	2.17	0.73
15:Z:63:SER:CA	22:m:185:LYS:HB2	2.15	0.73
21:l:55:LYS:HA	21:l:60:LYS:HA	1.70	0.73
27:r:35:LYS:HB2	32:w:33:ILE:HD12	1.69	0.73
31:v:11:ALA:HB3	31:v:22:ASN:HB2	1.71	0.73
38:2:42:VAL:HG11	50:E:154:LEU:HG	1.70	0.73
46:A:44:U:H2'	46:A:45:U:C6	2.24	0.73
56:K:229:PHE:CG	63:R:122:PHE:HZ	2.06	0.73
3:AC:229:HIS:ND1	4:AD:281:LEU:HD21	2.02	0.73
4:AD:111:LEU:HB3	4:AD:115:ALA:HB2	1.71	0.73
6:AF:295:ILE:HG23	6:AF:309:PHE:HB2	1.69	0.73
7:AG:75:TYR:CD2	8:AH:182:TYR:CE2	2.76	0.73
11:AK:196:ASN:CG	12:AL:1290:A:N6	2.46	0.73
14:AN:1:A:C1'	27:r:73:PRO:HA	2.18	0.73
32:w:67:SER:HB3	32:w:70:LYS:HB3	1.70	0.73
46:A:149:A:C2	46:A:1371:A:H2'	2.24	0.73
46:A:686:U:H2'	46:A:687:U:C6	2.23	0.73
46:A:796:A:H2'	46:A:797:U:C6	2.24	0.73
63:R:92:VAL:HG21	63:R:113:ARG:HG2	1.71	0.73
4:AD:258:LYS:C	4:AD:260:PHE:H	1.95	0.73
5:AE:314:PRO:HB2	5:AE:318:HIS:CG	2.24	0.73
10:AJ:32:SER:CB	12:AL:1313:U:C5'	2.67	0.73
11:AK:134:PHE:CE1	20:k:110:VAL:HG21	2.24	0.73
12:AL:326:C:H3'	12:AL:334:U:C5	2.20	0.73
12:AL:825:G:H2'	12:AL:826:G:C5'	2.19	0.73
15:Z:89:ILE:HD11	35:z:168:ILE:CG2	2.00	0.73
24:o:158:GLY:H	24:o:230:ALA:HB2	1.53	0.73
28:s:85:ILE:HD13	34:y:67:ASP:CA	2.00	0.73
30:u:246:ASN:C	30:u:248:ASP:H	1.97	0.73
46:A:2083:U:H2'	46:A:2084:G:C8	2.24	0.73
46:A:2205:G:H2'	46:A:2206:U:H6	1.51	0.73
46:A:2276:G:H22	56:K:128:MET:HG2	1.54	0.73
46:A:2576:A:H2'	46:A:2577:A:C8	2.23	0.73
47:B:165:GLN:HG2	47:B:185:HIS:HA	1.70	0.73
75:e:66:MET:HE2	75:e:142:TYR:HE2	1.51	0.73
1:AA:90:LYS:CE	12:AL:1612:C:N4	2.50	0.73
3:AC:90:HIS:CB	17:h:161:GLY:CA	2.67	0.73
3:AC:181:GLN:HG3	7:AG:197:PHE:O	1.87	0.73
10:AJ:14:LEU:HD11	11:AK:222:LEU:HD21	1.71	0.73
12:AL:258:G:OP1	32:w:68:LYS:HD3	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1465:A:OP2	12:AL:1466:A:C6	2.42	0.73
18:i:370:TYR:CZ	29:t:103:LEU:O	2.42	0.73
26:q:158:LYS:HB3	26:q:160:MET:HE3	1.71	0.73
32:w:45:VAL:HG11	32:w:74:ILE:HG13	1.69	0.73
46:A:606:U:H2'	46:A:607:A:C8	2.24	0.73
46:A:1712:A:C2	47:B:140:THR:HG21	2.23	0.73
46:A:2384:A:H2'	46:A:2385:U:H6	1.53	0.73
46:A:2899:U:H2'	46:A:2900:A:C8	2.24	0.73
4:AD:199:LEU:HB3	16:g:214:LEU:HD22	1.70	0.72
5:AE:96:PRO:CG	12:AL:1541:U:C1'	2.67	0.72
7:AG:181:MET:HA	16:g:208:TYR:O	1.89	0.72
11:AK:161:GLU:HB3	25:p:127:TYR:CZ	2.24	0.72
12:AL:16:G:H5"	20:k:266:ARG:HH11	1.52	0.72
12:AL:823:G:C2'	12:AL:824:A:OP2	2.37	0.72
12:AL:861:C:C5'	26:q:217:LEU:HD23	2.17	0.72
16:g:273:MET:CE	33:x:60:PHE:HE1	2.02	0.72
18:i:93:TRP:NE1	29:t:109:GLY:CA	2.52	0.72
20:k:293:ARG:O	23:n:43:GLY:HA3	1.89	0.72
27:r:104:GLU:O	27:r:105:HIS:HB2	1.90	0.72
29:t:31:PHE:CZ	29:t:71:SER:HB3	2.23	0.72
46:A:1350:U:O4	62:Q:5:TYR:HE2	1.72	0.72
46:A:2762:C:OP2	56:K:127:ARG:NH1	2.22	0.72
2:AB:110:PHE:CZ	12:AL:101:U:OP1	2.42	0.72
5:AE:285:LEU:HD21	5:AE:297:LEU:CB	2.18	0.72
6:AF:58:MET:HB3	19:j:26:PHE:CD2	2.24	0.72
8:AH:93:GLN:HG3	12:AL:222:U:P	2.29	0.72
9:AI:154:VAL:O	9:AI:154:VAL:CG2	2.36	0.72
9:AI:210:ARG:HE	12:AL:1348:U:C6	1.44	0.72
10:AJ:67:GLU:H	18:i:125:LEU:HD13	1.53	0.72
12:AL:1441:U:OP1	24:o:161:LYS:HG3	1.89	0.72
17:h:290:TRP:CD2	24:o:49:PRO:HG3	2.23	0.72
18:i:150:ASN:HB2	20:k:78:LEU:HD13	1.71	0.72
21:l:38:VAL:CB	30:u:141:ILE:CD1	2.66	0.72
25:p:102:PHE:CE1	29:t:103:LEU:HD21	2.24	0.72
39:3:67:PHE:CD1	46:A:1404:A:C8	2.77	0.72
46:A:23:U:H2'	46:A:24:G:C8	2.24	0.72
46:A:875:U:H2'	46:A:876:A:C8	2.24	0.72
46:A:1245:U:H2'	46:A:1246:A:H8	1.54	0.72
46:A:2063:A:H2'	46:A:2064:G:O4'	1.89	0.72
46:A:2299:A:H2'	46:A:2300:U:C6	2.25	0.72
46:A:2927:C:H2'	46:A:2928:A:O4'	1.88	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:e:66:MET:CB	75:e:149:GLN:CB	2.66	0.72
4:AD:73:LYS:HE2	4:AD:215:VAL:HG13	1.71	0.72
4:AD:111:LEU:HA	4:AD:114:GLU:HB2	1.70	0.72
5:AE:279:LEU:CD2	5:AE:315:TYR:HB2	2.19	0.72
6:AF:48:LYS:HE3	12:AL:489:A:N9	2.04	0.72
6:AF:178:LYS:NZ	19:j:459:ARG:NH2	2.36	0.72
8:AH:162:GLN:NE2	23:n:60:PHE:CZ	2.57	0.72
8:AH:198:GLU:HG3	21:l:105:LEU:HD23	1.69	0.72
9:AI:283:SER:HB3	9:AI:335:ALA:HB3	1.70	0.72
11:AK:75:ARG:NH2	20:k:85:ASN:HA	2.04	0.72
11:AK:107:LEU:HD13	18:i:172:TYR:HD1	1.54	0.72
12:AL:225:U:H2'	12:AL:226:C:C6	2.24	0.72
15:Z:16:LEU:CD1	35:z:162:PHE:CD1	2.72	0.72
16:g:251:VAL:HB	33:x:51:LYS:CA	2.19	0.72
46:A:9:U:H2'	46:A:10:A:H8	1.52	0.72
46:A:1647:G:H8	47:B:104:ARG:HH22	1.37	0.72
46:A:1712:A:N3	47:B:140:THR:HG23	2.03	0.72
46:A:3235:U:H2'	46:A:3236:A:C8	2.25	0.72
69:X:11:ILE:HD13	69:X:27:ILE:HG12	1.70	0.72
3:AC:148:LEU:CD2	4:AD:204:ALA:CB	2.60	0.72
3:AC:191:ILE:HD11	4:AD:222:GLN:HG3	1.71	0.72
5:AE:45:LYS:HA	5:AE:48:LEU:HD12	1.72	0.72
7:AG:174:TYR:CE1	16:g:107:PHE:HZ	2.05	0.72
8:AH:199:LEU:HD11	30:u:142:LEU:HD11	1.71	0.72
12:AL:511:A:H2'	12:AL:512:A:O4'	1.90	0.72
12:AL:533:A:H2'	12:AL:534:A:O4'	1.89	0.72
12:AL:1170:U:O2	25:p:78:PRO:HG3	1.89	0.72
12:AL:1382:C:C2	12:AL:1383:U:H5	2.02	0.72
12:AL:1647:A:O2'	17:h:176:TYR:CD2	2.28	0.72
15:Z:46:HIS:CE1	22:m:235:LYS:N	2.58	0.72
18:i:100:TYR:HE1	25:p:139:LYS:HB2	1.53	0.72
32:w:47:ASP:C	32:w:49:GLY:H	1.96	0.72
46:A:277:U:H2'	46:A:278:A:H8	1.54	0.72
46:A:2441:U:H2'	46:A:2442:A:C8	2.24	0.72
1:AA:87:LYS:HD2	12:AL:1612:C:OP2	1.89	0.72
3:AC:237:VAL:HG12	4:AD:44:ARG:NH1	1.99	0.72
5:AE:316:ASP:HA	5:AE:319:LEU:HD12	1.70	0.72
9:AI:127:ARG:O	9:AI:131:THR:HG23	1.88	0.72
10:AJ:91:PRO:HG2	12:AL:1243:U:C5	2.25	0.72
11:AK:115:ALA:CB	18:i:172:TYR:OH	2.37	0.72
11:AK:132:PHE:CD2	18:i:249:PRO:HD3	2.21	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:508:C:O5'	19:j:420:PRO:O	2.08	0.72
12:AL:1024:A:H5'	12:AL:1050:C:H4'	1.71	0.72
12:AL:1182:U:H5"	25:p:81:THR:HG23	0.79	0.72
12:AL:1406:G:C2'	12:AL:1407:A:C8	2.68	0.72
12:AL:1411:G:O3'	24:o:272:MET:HG3	1.89	0.72
12:AL:1646:U:N1	17:h:176:TYR:HD2	1.86	0.72
18:i:316:MET:CE	20:k:69:TRP:HZ2	1.91	0.72
32:w:185:ARG:HA	32:w:188:THR:OG1	1.89	0.72
37:1:184:PHE:O	63:R:200:ARG:NH1	2.21	0.72
46:A:749:A:H2'	46:A:750:U:C6	2.25	0.72
46:A:1310:A:H2'	46:A:1311:A:C8	2.25	0.72
51:F:119:LEU:HD21	75:e:210:VAL:CG1	2.19	0.72
69:X:35:THR:O	72:b:136:LYS:HE3	1.89	0.72
75:e:102:PHE:O	75:e:105:TYR:HB3	1.89	0.72
1:AA:90:LYS:HE3	12:AL:1612:C:H41	1.49	0.72
6:AF:314:VAL:HG11	8:AH:18:THR:HG21	1.69	0.72
6:AF:329:LYS:O	12:AL:404:U:C4'	2.37	0.72
7:AG:3:ILE:HG21	23:n:20:ARG:HH12	0.97	0.72
11:AK:75:ARG:HH11	18:i:187:MET:H	1.38	0.72
12:AL:1013:C:H2'	12:AL:1014:A:C8	2.24	0.72
12:AL:1559:A:H5"	30:u:36:LYS:HE2	1.71	0.72
15:Z:66:ALA:HA	22:m:184:ASN:HA	1.71	0.72
18:i:148:LYS:HZ2	20:k:78:LEU:HD13	1.52	0.72
28:s:85:ILE:CD1	34:y:67:ASP:C	2.61	0.72
38:2:88:ASN:ND2	46:A:2574:G:O2'	2.14	0.72
46:A:1193:U:H2'	46:A:1194:U:H6	1.54	0.72
46:A:2065:A:H1'	46:A:2066:U:O4	1.89	0.72
3:AC:69:LYS:HD2	12:AL:1640:U:H3	1.54	0.72
5:AE:146:LEU:HB3	5:AE:156:TYR:HE1	1.54	0.72
7:AG:96:LYS:NZ	12:AL:915:U:C4'	2.27	0.72
7:AG:166:VAL:CG1	16:g:195:LYS:HG3	2.18	0.72
7:AG:217:LEU:CB	16:g:273:MET:HG3	2.19	0.72
8:AH:210:ILE:HG21	21:l:39:VAL:CA	2.19	0.72
12:AL:524:A:H2'	12:AL:525:A:C8	2.24	0.72
12:AL:806:A:H2'	12:AL:807:A:C8	2.25	0.72
12:AL:1375:U:H5'	28:s:110:THR:HG21	1.72	0.72
30:u:120:THR:HG23	30:u:123:VAL:HG23	1.70	0.72
46:A:1015:A:C5'	76:f:117:LEU:HD21	2.12	0.72
46:A:1589:A:H2'	46:A:1590:U:C6	2.25	0.72
46:A:2209:U:H2'	46:A:2210:A:C8	2.25	0.72
46:A:2477:U:H2'	46:A:2478:C:C6	2.25	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2917:U:HO2'	46:A:2918:A:H5'	1.55	0.72
46:A:2982:U:C2	46:A:2983:U:H1'	2.24	0.72
46:A:3110:U:H2'	46:A:3111:A:C8	2.24	0.72
5:AE:128:ILE:CG1	12:AL:156:A:OP1	2.34	0.72
8:AH:160:MET:HE1	23:n:37:TYR:CE1	2.24	0.72
12:AL:1370:A:C2	12:AL:1371:U:O4	2.42	0.72
17:h:178:PRO:HG2	17:h:375:VAL:HG22	1.72	0.72
21:l:36:ARG:HA	30:u:140:ARG:CZ	2.19	0.72
46:A:3162:U:H2'	46:A:3163:U:C6	2.25	0.72
63:R:292:LEU:HA	63:R:297:ASP:HB3	1.71	0.72
76:f:120:VAL:HG21	76:f:156:VAL:HG13	1.71	0.72
3:AC:194:PHE:CE2	4:AD:223:TYR:CG	2.78	0.72
4:AD:195:LYS:HD3	4:AD:196:LEU:H	1.54	0.72
5:AE:283:THR:HG23	5:AE:315:TYR:CE1	2.24	0.72
6:AF:37:TYR:OH	19:j:29:TYR:OH	2.08	0.72
11:AK:132:PHE:HB3	18:i:248:MET:CA	2.11	0.72
12:AL:257:A:H2'	12:AL:258:G:C8	2.25	0.72
12:AL:406:U:H2'	12:AL:407:U:C6	2.24	0.72
12:AL:508:C:P	19:j:420:PRO:O	2.47	0.72
12:AL:561:U:H3	12:AL:602:A:H61	1.38	0.72
12:AL:1261:A:C2	28:s:107:ASN:HB3	2.06	0.72
16:g:6:LEU:HD21	17:h:186:GLU:OE1	1.89	0.72
18:i:100:TYR:HE1	25:p:139:LYS:CB	2.03	0.72
18:i:114:LEU:HD11	29:t:15:GLY:CA	2.20	0.72
21:l:66:HIS:CE1	33:x:137:LEU:HB3	2.24	0.72
21:l:76:ALA:CB	47:B:77:ASP:OD1	2.38	0.72
26:q:94:VAL:HG12	26:q:95:VAL:H	1.54	0.72
27:r:35:LYS:NZ	32:w:37:LEU:HD22	2.05	0.72
38:2:60:LYS:HE3	46:A:2372:U:O4	1.89	0.72
46:A:895:A:H2'	46:A:896:U:H6	1.55	0.72
46:A:1072:U:C2	46:A:1073:A:C8	2.78	0.72
46:A:2300:U:H3'	63:R:39:MET:CE	2.20	0.72
46:A:2425:A:C2	67:V:27:ARG:NE	2.57	0.72
50:E:252:ASN:OD1	67:V:63:TYR:HE1	1.71	0.72
3:AC:40:ASP:OD1	4:AD:286:VAL:HG21	1.89	0.72
5:AE:102:LEU:HG	5:AE:103:ASN:H	1.53	0.72
6:AF:137:PHE:CZ	19:j:468:PRO:CD	2.73	0.72
6:AF:137:PHE:CZ	19:j:468:PRO:HD3	2.25	0.72
12:AL:485:A:H2'	12:AL:486:U:C6	2.25	0.72
12:AL:1633:U:C6	33:x:58:PHE:CD1	2.78	0.72
13:AM:54:U:H2'	13:AM:55:U:C2	2.25	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:g:28:LYS:N	33:x:53:THR:HG22	2.05	0.72
20:k:45:LYS:HD2	20:k:47:ARG:NH2	2.04	0.72
20:k:59:LEU:HG	25:p:20:TYR:CZ	2.20	0.72
22:m:142:TYR:CZ	22:m:146:ARG:HD2	2.25	0.72
32:w:20:VAL:O	32:w:45:VAL:N	2.22	0.72
32:w:76:GLU:HG2	32:w:77:ILE:H	1.55	0.72
46:A:479:U:H2'	46:A:480:C:H6	1.52	0.72
46:A:1932:G:N2	48:C:209:GLN:NE2	2.38	0.72
46:A:1932:G:C2	48:C:209:GLN:CD	2.68	0.72
6:AF:58:MET:HG2	19:j:11:LEU:CD2	2.20	0.71
7:AG:217:LEU:HD11	16:g:273:MET:HA	0.72	0.71
10:AJ:24:ASN:HD22	12:AL:1313:U:P	2.13	0.71
11:AK:137:LEU:O	18:i:215:LEU:CD2	2.38	0.71
11:AK:196:ASN:CA	12:AL:1290:A:C6	2.56	0.71
12:AL:1373:A:H2	12:AL:1399:G:H3'	1.55	0.71
12:AL:1406:G:H2'	12:AL:1407:A:H8	1.46	0.71
12:AL:1436:U:O3'	25:p:87:THR:HG21	1.90	0.71
15:Z:19:LYS:O	15:Z:21:PRO:HD3	1.90	0.71
20:k:54:PHE:CD1	25:p:57:PHE:CD1	2.65	0.71
46:A:2004:U:H2'	46:A:2005:U:H5	1.54	0.71
46:A:3230:U:H2'	46:A:3231:A:C8	2.25	0.71
6:AF:71:TYR:CZ	19:j:22:LYS:NZ	2.57	0.71
7:AG:67:PRO:HB2	32:w:187:GLN:CD	2.16	0.71
7:AG:217:LEU:CD2	16:g:273:MET:HG3	2.19	0.71
10:AJ:27:GLY:HA3	12:AL:1300:U:C5	2.25	0.71
12:AL:1628:A:N3	35:z:166:ILE:CG2	2.52	0.71
16:g:3:LEU:HB3	17:h:211:TYR:CE2	2.24	0.71
19:j:100:VAL:HA	19:j:103:LYS:HD3	1.73	0.71
22:m:123:ARG:CB	22:m:126:LYS:HZ3	1.94	0.71
43:7:75:ASN:OD1	55:J:144:LYS:HE2	1.90	0.71
46:A:3269:U:H2'	46:A:3270:A:H8	1.55	0.71
63:R:175:LYS:HB2	63:R:175:LYS:NZ	2.05	0.71
5:AE:99:LYS:CE	12:AL:1524:U:C4'	2.57	0.71
8:AH:154:MET:HG3	8:AH:157:ASP:OD2	1.89	0.71
12:AL:271:U:H4'	12:AL:272:U:OP1	1.90	0.71
12:AL:1107:U:H3	12:AL:1229:A:H61	1.38	0.71
16:g:68:LEU:HD12	17:h:217:ILE:CD1	2.03	0.71
18:i:167:ASN:O	18:i:170:ASN:N	2.21	0.71
19:j:411:VAL:HG23	19:j:414:ARG:HB2	1.72	0.71
21:l:38:VAL:CG2	30:u:141:ILE:HD11	2.20	0.71
27:r:127:ARG:HD2	27:r:132:LEU:HD13	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:u:82:GLU:HG2	32:w:107:PHE:CE1	2.25	0.71
30:u:87:LEU:CD1	32:w:114:ARG:HH22	1.86	0.71
46:A:497:U:H2'	46:A:498:A:C8	2.25	0.71
46:A:1129:U:H2'	46:A:1130:C:C6	2.24	0.71
46:A:1247:U:H2'	46:A:1248:A:H8	1.53	0.71
46:A:2185:U:H2'	46:A:2186:U:H6	1.55	0.71
46:A:2580:A:H2'	46:A:2581:U:C6	2.25	0.71
75:e:169:ALA:HB1	75:e:176:LEU:HB3	1.72	0.71
5:AE:322:LEU:O	5:AE:326:GLU:HG2	1.89	0.71
8:AH:180:ARG:HG3	12:AL:815:C:P	2.30	0.71
8:AH:208:GLU:HG2	30:u:134:ARG:CZ	2.21	0.71
11:AK:99:VAL:HB	18:i:171:TYR:HE2	1.55	0.71
11:AK:115:ALA:HB3	18:i:172:TYR:OH	1.91	0.71
11:AK:150:GLU:CA	20:k:71:TYR:OH	2.39	0.71
12:AL:331:A:H3'	12:AL:332:A:C8	2.26	0.71
12:AL:772:A:O4'	26:q:88:HIS:ND1	2.24	0.71
12:AL:1627:U:O4'	35:z:158:PHE:CZ	2.26	0.71
18:i:95:THR:O	29:t:108:PRO:HB3	1.90	0.71
22:m:211:ARG:HH12	22:m:214:GLU:HB3	1.53	0.71
32:w:33:ILE:HG23	32:w:35:LYS:H	1.54	0.71
46:A:175:U:H3	46:A:203:U:H3	1.38	0.71
46:A:1344:U:H2'	46:A:1562:A:C2	2.25	0.71
46:A:1871:U:H5"	47:B:353:LYS:HE3	1.73	0.71
46:A:2016:A:H5'	46:A:2016:A:C4	2.25	0.71
46:A:2093:A:C2	52:G:29:ARG:NH2	2.58	0.71
46:A:2442:A:H2'	46:A:2443:C:C6	2.25	0.71
76:f:10:VAL:HG21	76:f:29:LEU:HG	1.71	0.71
8:AH:153:ILE:HG13	23:n:41:GLN:HE22	0.89	0.71
8:AH:189:PHE:CE1	32:w:173:GLU:CG	2.73	0.71
9:AI:449:HIS:CE1	22:m:149:PRO:CG	2.73	0.71
12:AL:524:A:N6	31:v:104:LYS:HD3	2.05	0.71
12:AL:1540:U:O2'	12:AL:1541:U:H5'	1.89	0.71
18:i:105:GLU:HA	18:i:108:ASN:HD22	1.54	0.71
19:j:7:LEU:CB	19:j:10:SER:HB2	2.19	0.71
46:A:1416:A:H2'	46:A:1417:A:C8	2.25	0.71
69:X:13:LEU:HD11	69:X:34:VAL:HG13	1.73	0.71
2:AB:71:SER:HA	2:AB:74:LEU:HD12	1.71	0.71
6:AF:62:LEU:CG	19:j:26:PHE:CZ	2.73	0.71
8:AH:104:ARG:HD3	12:AL:143:A:O4'	1.91	0.71
9:AI:355:LEU:HB3	9:AI:356:PRO:HD3	1.72	0.71
9:AI:449:HIS:CE1	22:m:149:PRO:HG2	2.26	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:26:SER:CB	12:AL:1299:A:C6	2.73	0.71
11:AK:285:LEU:CD1	12:AL:1281:A:N7	2.39	0.71
12:AL:963:G:OP2	30:u:267:SER:OG	2.04	0.71
12:AL:1105:G:H5'	18:i:390:ASN:CB	2.20	0.71
12:AL:1258:U:C6	34:y:83:PHE:CB	2.42	0.71
18:i:320:MET:HE1	18:i:362:ILE:HG21	1.72	0.71
29:t:11:LYS:HD2	29:t:11:LYS:H	1.55	0.71
46:A:976:A:H2'	46:A:977:A:C8	2.25	0.71
46:A:1076:U:H2'	46:A:1077:A:H5"	1.73	0.71
46:A:2972:U:H2'	46:A:2973:A:H8	1.55	0.71
1:AA:105:ARG:CD	46:A:1875:G:H4'	2.19	0.71
3:AC:163:LEU:HD21	3:AC:221:ILE:HG13	1.73	0.71
5:AE:74:LEU:HD21	5:AE:88:LEU:HD21	1.73	0.71
12:AL:641:G:O6	27:r:74:ASN:ND2	2.23	0.71
12:AL:656:G:H2'	12:AL:657:G:H8	1.56	0.71
12:AL:845:G:P	26:q:212:PRO:HA	2.30	0.71
12:AL:1258:U:H5	34:y:83:PHE:CA	2.00	0.71
12:AL:1429:A:C8	29:t:72:THR:HA	2.26	0.71
12:AL:1540:U:C2	12:AL:1541:U:C5	2.79	0.71
15:Z:88:ARG:HH21	16:g:74:ILE:HG21	1.55	0.71
16:g:78:GLU:HB3	16:g:80:ARG:HG2	1.72	0.71
25:p:20:TYR:HB3	25:p:25:GLU:HB3	1.71	0.71
26:q:215:ARG:NH2	35:z:137:ARG:HH21	1.82	0.71
29:t:48:MET:O	29:t:50:LEU:N	2.23	0.71
29:t:50:LEU:HB3	29:t:51:PRO:HD2	1.72	0.71
30:u:100:LYS:CB	32:w:167:LEU:HD23	2.14	0.71
46:A:43:U:H2'	46:A:44:U:C6	2.25	0.71
46:A:320:U:H2'	46:A:321:A:C8	2.25	0.71
46:A:1899:C:H2'	46:A:1900:U:H6	1.56	0.71
46:A:2091:C:H2'	46:A:2092:U:C6	2.26	0.71
6:AF:137:PHE:CE2	19:j:468:PRO:CA	2.74	0.71
8:AH:104:ARG:NE	12:AL:143:A:C4'	2.51	0.71
8:AH:208:GLU:CG	30:u:134:ARG:HD3	2.20	0.71
11:AK:143:GLU:OE2	18:i:87:LEU:HD23	1.87	0.71
12:AL:514:U:H2'	12:AL:515:A:H8	1.56	0.71
12:AL:1117:U:P	20:k:160:LYS:CD	2.79	0.71
13:AM:35:A:H1'	13:AM:36:U:H5	1.56	0.71
25:p:102:PHE:CE1	29:t:103:LEU:CD2	2.74	0.71
38:2:43:VAL:HG13	46:A:2425:A:C8	2.26	0.71
41:5:201:LYS:HB3	46:A:443:U:C2	2.26	0.71
46:A:1004:A:H5'	76:f:140:GLY:CA	2.19	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1532:A:H5”	47:B:150:ASN:OD1	1.91	0.71
46:A:1757:A:H5’	46:A:1757:A:H8	1.55	0.71
46:A:2027:U:H3’	46:A:2028:A:H8	1.56	0.71
63:R:338:THR:C	63:R:361:ALA:HB1	2.15	0.71
4:AD:155:LEU:HD22	16:g:210:LEU:HD12	1.72	0.71
8:AH:64:PRO:HG3	12:AL:131:A:OP1	1.91	0.71
8:AH:229:GLU:OE2	21:l:43:VAL:HG13	1.90	0.71
9:AI:151:GLU:N	9:AI:154:VAL:HG11	2.06	0.71
11:AK:143:GLU:CD	18:i:87:LEU:HD21	2.12	0.71
12:AL:782:C:O2’	26:q:207:GLY:HA3	1.90	0.71
12:AL:1293:U:H3	12:AL:1317:U:H3	1.39	0.71
12:AL:1378:U:H2’	12:AL:1379:A:C8	2.25	0.71
25:p:85:ARG:HD3	29:t:115:TRP:HH2	1.45	0.71
46:A:74:A:H2’	46:A:75:A:C8	2.26	0.71
46:A:873:A:H2’	46:A:874:U:C6	2.25	0.71
46:A:992:U:C4	76:f:13:ILE:CD1	2.72	0.71
46:A:1049:A:H2’	75:e:111:LEU:HD22	1.71	0.71
46:A:1313:G:H5”	46:A:1314:U:H5”	1.72	0.71
46:A:1428:U:H5”	46:A:1429:C:H5’	1.73	0.71
46:A:2739:U:O4	51:F:212:LYS:NZ	2.24	0.71
46:A:2918:A:H2’	46:A:2919:U:H6	1.56	0.71
6:AF:111:TYR:CB	11:AK:120:GLY:HA2	2.19	0.71
7:AG:78:ARG:HH22	8:AH:176:LEU:HD21	1.54	0.71
8:AH:164:LEU:HD21	23:n:33:LEU:CD2	2.20	0.71
10:AJ:26:SER:O	12:AL:1299:A:C2’	2.38	0.71
12:AL:753:A:C5’	26:q:129:GLY:HA2	2.19	0.71
12:AL:1117:U:P	20:k:160:LYS:HD2	2.31	0.71
15:Z:27:ALA:O	15:Z:28:ASN:C	2.30	0.71
20:k:169:LEU:HD22	20:k:181:LEU:HD12	1.72	0.71
32:w:189:ARG:NH1	32:w:203:PHE:HB3	2.05	0.71
39:3:36:VAL:HG11	46:A:393:C:OP1	1.91	0.71
46:A:201:A:H2’	46:A:202:A:C8	2.26	0.71
46:A:723:U:H2’	46:A:724:A:H8	1.56	0.71
46:A:1020:U:C5’	75:e:134:LYS:HB2	2.21	0.71
46:A:2410:U:H2’	46:A:2411:G:H8	1.55	0.71
46:A:2601:A:H3’	46:A:2603:C:N4	2.05	0.71
46:A:2761:C:OP1	56:K:127:ARG:CD	2.39	0.71
46:A:2861:U:H2’	46:A:2862:G:C8	2.25	0.71
7:AG:3:ILE:CD1	23:n:20:ARG:CZ	2.69	0.70
7:AG:217:LEU:HD22	16:g:273:MET:HG3	1.73	0.70
11:AK:107:LEU:HD11	18:i:168:ASN:C	2.16	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:76:A:N3	46:A:2688:G:N1	2.39	0.70
30:u:100:LYS:HB2	32:w:167:LEU:HD21	0.71	0.70
30:u:127:ASP:HB3	30:u:130:LYS:HD3	1.73	0.70
46:A:217:A:H5'	64:S:47:HIS:CE1	2.26	0.70
46:A:816:A:H2'	46:A:817:G:C8	2.26	0.70
46:A:1344:U:H2'	46:A:1562:A:N3	2.05	0.70
46:A:1549:U:C5	61:P:62:ILE:HD13	2.26	0.70
7:AG:117:SER:HB3	16:g:83:THR:HG21	1.73	0.70
8:AH:93:GLN:HE21	12:AL:221:U:H3'	1.55	0.70
12:AL:485:A:H2'	12:AL:486:U:H6	1.56	0.70
12:AL:632:C:C5	12:AL:644:G:H5'	2.27	0.70
12:AL:777:U:OP1	21:l:55:LYS:NZ	2.19	0.70
12:AL:1111:U:H4'	12:AL:1112:U:H4'	1.71	0.70
12:AL:1114:A:N6	12:AL:1156:A:H5'	2.06	0.70
18:i:150:ASN:CB	20:k:78:LEU:HB2	2.20	0.70
21:l:38:VAL:CG1	30:u:141:ILE:CD1	2.45	0.70
25:p:85:ARG:NE	29:t:115:TRP:CH2	2.58	0.70
30:u:100:LYS:HB3	32:w:167:LEU:CG	2.21	0.70
46:A:1533:G:H5'	47:B:149:ARG:O	1.90	0.70
46:A:2411:G:H2'	46:A:2412:A:H8	1.55	0.70
46:A:3261:U:OP1	71:a:175:LYS:HE3	1.91	0.70
3:AC:62:TYR:CD1	17:h:159:LYS:HE3	2.25	0.70
3:AC:169:ASN:OD1	7:AG:197:PHE:HE1	1.73	0.70
3:AC:217:TRP:CG	17:h:146:LEU:HD21	2.26	0.70
4:AD:162:ALA:HB3	7:AG:189:VAL:HG21	1.69	0.70
6:AF:216:PHE:HZ	19:j:435:ALA:HB1	1.54	0.70
7:AG:122:LEU:O	16:g:11:ARG:CB	2.39	0.70
8:AH:167:ASN:C	23:n:65:PRO:HG3	2.16	0.70
8:AH:200:LEU:HB3	30:u:101:PHE:CE2	2.26	0.70
12:AL:904:U:H3	12:AL:913:U:H3	1.39	0.70
12:AL:1416:U:O2'	24:o:270:ARG:CD	2.36	0.70
46:A:75:A:H2'	46:A:76:A:C8	2.26	0.70
46:A:1249:U:H2'	46:A:1250:U:C6	2.26	0.70
46:A:2245:U:H2'	46:A:2246:A:H8	1.55	0.70
2:AB:38:VAL:HG13	2:AB:43:ALA:HB3	1.74	0.70
6:AF:208:MET:CB	19:j:425:TRP:CH2	2.74	0.70
6:AF:307:TYR:CE2	31:v:92:LYS:HB3	2.14	0.70
7:AG:3:ILE:CB	23:n:20:ARG:CZ	2.69	0.70
8:AH:93:GLN:HG3	12:AL:222:U:OP1	1.91	0.70
9:AI:56:LEU:O	22:m:210:VAL:CG1	2.38	0.70
12:AL:524:A:H2'	12:AL:525:A:H8	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1200:G:C2	12:AL:1203:C:O2'	2.44	0.70
20:k:59:LEU:HB3	25:p:20:TYR:CZ	2.24	0.70
22:m:97:GLN:HB3	24:o:242:LEU:HD11	1.73	0.70
22:m:109:ARG:HH21	24:o:228:MET:CE	1.84	0.70
25:p:92:PRO:HA	29:t:96:TYR:CE2	2.27	0.70
34:y:42:ILE:HD11	34:y:76:PHE:CE2	2.22	0.70
46:A:12:A:H2'	46:A:13:A:C8	2.27	0.70
46:A:511:G:H2'	46:A:512:U:C6	2.25	0.70
46:A:523:U:H5"	55:J:194:ARG:NH1	2.07	0.70
46:A:854:A:H2'	46:A:855:U:C6	2.27	0.70
46:A:2443:C:H2'	46:A:2444:A:C8	2.26	0.70
46:A:2853:A:H5'	46:A:2853:A:C8	2.26	0.70
75:e:66:MET:CE	75:e:150:VAL:HA	2.21	0.70
2:AB:79:VAL:O	2:AB:80:ASN:C	2.34	0.70
10:AJ:29:ARG:NH1	34:y:13:TRP:NE1	2.37	0.70
14:AN:1:A:C4'	27:r:73:PRO:HA	2.21	0.70
16:g:272:ARG:NH1	33:x:48:LYS:HA	2.06	0.70
20:k:25:TYR:HB3	20:k:26:PRO:HD2	1.73	0.70
35:z:89:ALA:O	35:z:92:SER:HB2	1.91	0.70
46:A:1898:C:H2'	46:A:1899:C:H6	1.54	0.70
63:R:242:GLU:HA	63:R:245:SER:CB	2.20	0.70
2:AB:82:GLN:HG2	12:AL:376:C:P	2.31	0.70
3:AC:232:LEU:CD2	4:AD:278:LYS:CB	2.64	0.70
7:AG:174:TYR:CE1	16:g:107:PHE:CE2	2.80	0.70
11:AK:107:LEU:HB3	18:i:172:TYR:HB3	1.74	0.70
11:AK:153:PHE:CZ	20:k:81:GLN:CD	2.69	0.70
12:AL:766:A:H2'	12:AL:767:A:H5"	1.73	0.70
18:i:88:ASN:CB	25:p:53:GLU:OE2	2.39	0.70
19:j:114:PHE:HE2	19:j:450:ALA:HB2	1.55	0.70
20:k:25:TYR:CE1	25:p:21:PRO:HD3	2.26	0.70
21:l:6:ILE:HG23	21:l:45:MET:HE1	1.73	0.70
27:r:51:GLN:C	27:r:53:ASP:H	1.97	0.70
46:A:142:A:H2'	46:A:143:A:H8	1.57	0.70
46:A:547:A:H2'	46:A:548:A:C8	2.27	0.70
46:A:636:G:O2'	46:A:639:G:H1'	1.92	0.70
46:A:2079:A:H2'	46:A:2080:U:C6	2.27	0.70
46:A:2259:U:H2'	46:A:2260:A:C8	2.27	0.70
46:A:2731:C:H2'	46:A:2732:G:H8	1.57	0.70
46:A:2734:A:H5"	56:K:167:LYS:HE3	1.72	0.70
63:R:259:SER:HB2	63:R:269:TYR:HA	1.72	0.70
5:AE:271:LEU:CA	5:AE:274:TYR:HB2	2.13	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:307:TYR:CZ	31:v:92:LYS:CG	2.74	0.70
9:AI:178:SER:O	9:AI:179:TYR:C	2.32	0.70
12:AL:632:C:H5'	12:AL:633:C:C6	2.27	0.70
12:AL:828:A:H2'	12:AL:829:U:C6	2.27	0.70
15:Z:55:VAL:HG12	22:m:163:LEU:CD1	2.22	0.70
18:i:369:ASN:O	29:t:114:ILE:HD11	1.90	0.70
21:l:6:ILE:HG12	21:l:68:LEU:HD12	1.73	0.70
27:r:61:VAL:HG22	27:r:107:ILE:HG12	1.73	0.70
46:A:265:C:H2'	46:A:266:A:O4'	1.91	0.70
46:A:941:U:H2'	46:A:942:A:C8	2.27	0.70
46:A:1010:A:H2	76:f:50:TYR:HH	0.81	0.70
46:A:2234:U:H2'	46:A:2235:A:O4'	1.92	0.70
46:A:2694:G:H21	55:J:116:LEU:HD11	1.55	0.70
46:A:3010:U:H2'	46:A:3011:U:C6	2.26	0.70
8:AH:231:PHE:C	8:AH:233:ASP:H	2.00	0.70
11:AK:195:PRO:HG2	12:AL:1290:A:N9	2.07	0.70
12:AL:1117:U:O3'	20:k:187:ARG:NH2	2.25	0.70
12:AL:1645:U:C6	17:h:175:PHE:HD1	2.05	0.70
18:i:306:TYR:OH	25:p:28:TYR:CD2	2.42	0.70
40:4:33:TRP:CH2	46:A:1274:A:C8	2.78	0.70
46:A:2845:G:H21	48:C:189:LEU:HD21	1.55	0.70
63:R:295:LYS:N	63:R:371:LEU:HB3	2.06	0.70
5:AE:278:TYR:CZ	5:AE:282:ARG:HG2	2.27	0.70
6:AF:85:PRO:HG3	6:AF:134:LEU:HD23	1.74	0.70
7:AG:60:LEU:CD2	23:n:70:THR:HB	2.21	0.70
7:AG:217:LEU:HB3	16:g:273:MET:HG3	1.73	0.70
8:AH:100:ALA:C	12:AL:143:A:C5'	2.62	0.70
8:AH:103:ARG:HD2	31:v:100:TRP:HH2	1.57	0.70
8:AH:208:GLU:CG	30:u:134:ARG:HH11	2.03	0.70
8:AH:231:PHE:CZ	21:l:48:ARG:HD2	2.25	0.70
9:AI:60:TRP:N	22:m:210:VAL:HG21	2.06	0.70
11:AK:148:HIS:CE1	11:AK:152:ARG:HD2	2.27	0.70
12:AL:1503:U:O2'	12:AL:1504:A:H5'	1.91	0.70
12:AL:1646:U:O4	17:h:175:PHE:HA	1.92	0.70
20:k:292:GLY:O	23:n:78:LYS:HE2	1.92	0.70
21:l:35:ASN:O	21:l:36:ARG:HB2	1.92	0.70
22:m:88:ILE:O	22:m:89:LYS:HB2	1.90	0.70
22:m:123:ARG:HE	22:m:123:ARG:HA	1.54	0.70
30:u:253:GLN:NE2	30:u:264:ILE:H	1.89	0.70
46:A:2378:A:N6	46:A:2422:A:C5	2.60	0.70
69:X:16:THR:CG2	72:b:132:LEU:HD13	2.22	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:59:GLU:O	17:h:164:ILE:HG21	1.91	0.70
3:AC:90:HIS:CE1	17:h:160:LEU:HD13	2.26	0.70
8:AH:14:VAL:HG11	12:AL:298:A:C5	2.25	0.70
11:AK:107:LEU:CD1	18:i:168:ASN:C	2.65	0.70
12:AL:782:C:H2'	12:AL:783:U:C6	2.27	0.70
12:AL:1117:U:OP1	20:k:160:LYS:HD2	1.92	0.70
21:l:2:LEU:HD13	21:l:72:ASP:CG	2.16	0.70
21:l:4:GLU:O	21:l:96:ILE:HA	1.92	0.70
22:m:97:GLN:HA	22:m:100:ALA:HB3	1.74	0.70
29:t:60:LEU:HD12	34:y:20:PRO:CD	2.22	0.70
46:A:3108:U:H2'	46:A:3109:U:H6	1.57	0.70
3:AC:185:LEU:HD13	7:AG:195:GLU:O	1.91	0.69
4:AD:231:ALA:HB3	4:AD:235:GLY:HA2	1.74	0.69
8:AH:100:ALA:CA	12:AL:143:A:O5'	2.40	0.69
9:AI:287:ILE:HG13	9:AI:334:PHE:CD1	2.27	0.69
12:AL:823:G:O2'	12:AL:824:A:O5'	2.09	0.69
12:AL:863:G:H2'	12:AL:864:U:H6	1.57	0.69
12:AL:1338:A:H2'	12:AL:1339:U:H3'	1.72	0.69
12:AL:1411:G:C4'	24:o:272:MET:CB	2.69	0.69
12:AL:1465:A:OP2	12:AL:1466:A:C5	2.45	0.69
20:k:40:ILE:HD13	25:p:22:VAL:HG13	1.72	0.69
26:q:76:TYR:O	26:q:165:ILE:HA	1.92	0.69
38:2:55:GLN:NE2	46:A:2428:A:N1	2.40	0.69
46:A:136:A:H2'	46:A:137:A:C8	2.27	0.69
46:A:137:A:H2'	46:A:138:U:C6	2.27	0.69
46:A:1006:U:H1'	46:A:1007:U:C4'	2.22	0.69
46:A:1059:A:H2'	46:A:1060:U:C6	2.27	0.69
46:A:2330:A:C2	63:R:321:ARG:HD2	2.26	0.69
46:A:2839:A:OP2	48:C:209:GLN:HB3	1.92	0.69
61:P:181:PHE:HB3	65:T:127:LEU:HD11	1.73	0.69
76:f:51:GLN:HB3	76:f:54:VAL:HG13	1.74	0.69
3:AC:86:ILE:CG2	17:h:162:ALA:HB2	2.22	0.69
3:AC:169:ASN:CB	7:AG:197:PHE:CE1	2.75	0.69
3:AC:179:ARG:NH1	7:AG:201:PHE:CE1	2.59	0.69
4:AD:208:PHE:CZ	16:g:214:LEU:HB2	2.24	0.69
4:AD:210:PHE:CD1	7:AG:196:MET:CG	2.59	0.69
5:AE:87:PRO:O	5:AE:89:GLN:HG3	1.92	0.69
5:AE:221:ARG:HD2	5:AE:249:GLN:HE21	1.55	0.69
6:AF:62:LEU:CD2	19:j:26:PHE:CZ	2.75	0.69
6:AF:137:PHE:CG	19:j:468:PRO:CB	2.74	0.69
7:AG:1:MET:CE	17:h:354:LEU:HD11	2.21	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:221:GLU:HG3	16:g:270:PHE:CZ	2.27	0.69
8:AH:46:GLY:CA	32:w:5:ASN:OD1	2.39	0.69
12:AL:821:U:C2	12:AL:822:U:C4	2.73	0.69
12:AL:1382:C:C2	12:AL:1383:U:C6	2.80	0.69
12:AL:1632:A:C5'	33:x:63:GLY:HA3	2.21	0.69
12:AL:1632:A:C1'	33:x:58:PHE:CZ	2.74	0.69
33:x:103:VAL:C	33:x:105:SER:H	2.00	0.69
46:A:85:A:H2'	46:A:86:U:H6	1.58	0.69
46:A:1657:A:H2'	46:A:1658:G:H8	1.57	0.69
46:A:2824:G:H2'	46:A:2825:U:H6	1.56	0.69
46:A:2857:A:H2'	46:A:2858:C:C6	2.27	0.69
46:A:2861:U:H2'	46:A:2862:G:H8	1.58	0.69
63:R:331:GLU:HB3	63:R:362:ARG:HH11	1.55	0.69
5:AE:274:TYR:CA	5:AE:277:ILE:HB	2.19	0.69
6:AF:61:PHE:CE2	19:j:29:TYR:CD2	2.81	0.69
7:AG:204:SER:H	7:AG:207:GLU:HB2	1.56	0.69
8:AH:210:ILE:HD12	21:l:40:ARG:C	2.15	0.69
9:AI:449:HIS:C	22:m:114:LEU:HD13	2.16	0.69
12:AL:257:A:H2'	12:AL:258:G:H8	1.56	0.69
12:AL:258:G:P	32:w:68:LYS:CD	2.79	0.69
12:AL:1053:A:N3	12:AL:1249:U:OP1	2.26	0.69
15:Z:62:THR:HA	15:Z:66:ALA:HA	1.73	0.69
16:g:249:GLY:HA2	33:x:55:TYR:CZ	2.27	0.69
32:w:205:LYS:O	32:w:206:ASP:C	2.34	0.69
46:A:801:U:H2'	46:A:802:U:H6	1.54	0.69
46:A:1664:A:H3'	46:A:1665:G:N2	2.06	0.69
46:A:2477:U:H2'	46:A:2478:C:C5	2.27	0.69
46:A:2761:C:H5"	56:K:127:ARG:NE	2.07	0.69
46:A:3151:A:H3'	46:A:3152:A:C5'	2.19	0.69
4:AD:210:PHE:CE1	7:AG:196:MET:CB	2.75	0.69
8:AH:37:LYS:HG2	12:AL:182:A:OP1	1.91	0.69
11:AK:145:VAL:HG21	20:k:68:PHE:CE1	2.26	0.69
11:AK:196:ASN:OD1	12:AL:1290:A:N6	2.24	0.69
27:r:85:LEU:HD21	27:r:110:VAL:HG21	1.74	0.69
38:2:85:GLU:HG3	46:A:2476:C:O2	1.91	0.69
46:A:853:U:H2'	46:A:854:A:C8	2.27	0.69
46:A:3271:A:HO2'	58:M:16:TYR:N	1.89	0.69
69:X:47:VAL:CG1	72:b:129:VAL:HG11	2.23	0.69
5:AE:60:LYS:HE3	12:AL:1514:U:O2'	1.92	0.69
8:AH:199:LEU:HD11	30:u:142:LEU:CD1	2.22	0.69
10:AJ:58:HIS:O	10:AJ:59:LEU:CB	2.41	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:761:A:H3'	12:AL:762:U:H6	1.57	0.69
12:AL:794:A:H2'	12:AL:795:A:C8	2.27	0.69
16:g:7:LEU:HD23	17:h:219:ILE:CD1	2.20	0.69
18:i:125:LEU:HD21	18:i:175:MET:HE3	1.75	0.69
21:l:80:GLU:CB	47:B:73:LEU:CG	2.70	0.69
29:t:27:LYS:HE3	29:t:73:GLN:HB2	1.74	0.69
37:1:84:ARG:HH12	46:A:2477:U:P	2.16	0.69
46:A:1131:C:H1'	46:A:1139:G:N2	2.07	0.69
46:A:2442:A:H2'	46:A:2443:C:H6	1.58	0.69
46:A:3237:U:H4'	57:L:65:ALA:HB2	1.75	0.69
8:AH:231:PHE:HB2	33:x:97:ARG:HD3	1.74	0.69
9:AI:106:HIS:HB2	9:AI:215:ALA:HB2	1.75	0.69
12:AL:532:U:H2'	12:AL:533:A:H8	1.56	0.69
12:AL:807:A:H2'	12:AL:808:A:C8	2.26	0.69
12:AL:1202:U:OP2	16:g:59:LYS:NZ	2.20	0.69
12:AL:1394:U:H2'	12:AL:1395:A:H4'	1.74	0.69
12:AL:1410:U:OP1	24:o:276:VAL:C	2.36	0.69
18:i:101:ASN:HB2	18:i:104:MET:HB3	1.74	0.69
18:i:153:PHE:CE1	18:i:207:PRO:HB3	2.27	0.69
21:l:38:VAL:CG2	30:u:141:ILE:HG13	2.22	0.69
22:m:109:ARG:NH2	24:o:228:MET:SD	2.65	0.69
34:y:36:ASN:HB2	34:y:59:TYR:HE2	1.56	0.69
46:A:1350:U:O4	62:Q:5:TYR:CE2	2.44	0.69
46:A:1523:A:C2'	46:A:1524:U:H5'	2.22	0.69
46:A:1746:C:N4	46:A:1799:U:H2'	2.07	0.69
46:A:2897:A:N1	71:a:177:LYS:NZ	2.40	0.69
75:e:66:MET:HB2	75:e:149:GLN:CB	2.17	0.69
1:AA:91:HIS:NE2	12:AL:1473:A:C5'	2.55	0.69
8:AH:231:PHE:CE2	33:x:96:PRO:HD2	2.27	0.69
10:AJ:86:ARG:NH2	12:AL:1239:A:OP2	2.25	0.69
11:AK:97:SER:HB2	18:i:171:TYR:HH	1.58	0.69
11:AK:144:LEU:HD22	18:i:84:LEU:O	1.92	0.69
12:AL:826:G:H21	30:u:246:ASN:CG	2.00	0.69
12:AL:1337:A:H1'	12:AL:1369:U:H1'	1.74	0.69
13:AM:28:A:H1'	13:AM:43:G:H22	1.55	0.69
15:Z:23:ILE:O	15:Z:24:ARG:HB2	1.91	0.69
16:g:246:ALA:HB1	33:x:55:TYR:CE2	2.27	0.69
18:i:311:ILE:HG12	20:k:58:TYR:CZ	2.27	0.69
20:k:289:VAL:HG11	23:n:124:GLY:HA3	1.73	0.69
30:u:74:PRO:O	30:u:75:PHE:C	2.36	0.69
31:v:25:VAL:HG21	31:v:75:TRP:CD1	2.28	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:8:G:H2'	46:A:9:U:C6	2.27	0.69
46:A:160:U:H2'	46:A:161:U:O4'	1.93	0.69
46:A:300:A:OP1	55:J:228:TRP:CZ2	2.45	0.69
46:A:425:A:H62	46:A:1943:C:H5'	1.56	0.69
46:A:1770:U:OP1	46:A:1770:U:H4'	1.92	0.69
46:A:2245:U:H2'	46:A:2246:A:C8	2.28	0.69
46:A:2350:U:H2'	46:A:2351:A:C8	2.28	0.69
46:A:2576:A:H2'	46:A:2577:A:H8	1.58	0.69
46:A:2876:U:H3'	46:A:2876:U:P	2.33	0.69
4:AD:209:ASN:CA	16:g:222:ILE:HD13	2.16	0.69
6:AF:321:TYR:CE1	31:v:13:PHE:CE2	2.81	0.69
8:AH:93:GLN:HG2	12:AL:222:U:OP2	1.93	0.69
9:AI:430:TYR:OH	24:o:175:GLU:HG2	1.92	0.69
10:AJ:24:ASN:HB2	12:AL:1313:U:OP1	1.91	0.69
11:AK:206:THR:HA	11:AK:209:LEU:HD12	1.73	0.69
12:AL:821:U:H2'	12:AL:822:U:O5'	1.92	0.69
12:AL:862:C:OP2	26:q:215:ARG:HG3	1.92	0.69
12:AL:911:U:H4'	12:AL:912:A:OP1	1.92	0.69
12:AL:1329:A:H1'	12:AL:1421:C:H4'	1.75	0.69
18:i:211:SER:O	18:i:212:TYR:CD1	2.46	0.69
18:i:367:LYS:HG3	18:i:373:SER:HA	1.75	0.69
21:l:2:LEU:HA	21:l:72:ASP:OD1	1.91	0.69
21:l:32:ILE:HG12	21:l:81:ILE:HD11	1.73	0.69
27:r:55:CYS:SG	27:r:58:ARG:HD2	2.32	0.69
27:r:115:CYS:O	27:r:117:ASP:N	2.24	0.69
46:A:370:C:H2'	46:A:371:U:H6	1.56	0.69
46:A:375:A:H2'	46:A:376:A:C8	2.27	0.69
46:A:951:A:H4'	46:A:952:A:OP1	1.93	0.69
46:A:1439:A:C2	46:A:1440:U:C2	2.81	0.69
46:A:1728:U:O2	47:B:269:ALA:O	2.11	0.69
46:A:1728:U:C6	47:B:314:GLN:NE2	2.60	0.69
46:A:1815:U:H2'	46:A:1816:A:H8	1.57	0.69
46:A:2941:A:H2'	46:A:2942:A:H8	1.57	0.69
63:R:261:ASN:HD22	63:R:267:HIS:HD2	1.41	0.69
7:AG:13:ARG:HH21	17:h:339:ARG:CG	2.06	0.69
7:AG:206:ILE:CB	16:g:92:GLU:OE1	2.40	0.69
8:AH:50:ALA:CB	32:w:75:ALA:O	2.30	0.69
12:AL:1153:A:H5"	18:i:351:THR:CB	2.22	0.69
15:Z:38:LEU:HD21	22:m:164:MET:CE	2.23	0.69
19:j:76:VAL:CG2	20:k:306:SER:O	2.40	0.69
46:A:14:U:H2'	46:A:15:A:H8	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:320:U:H2'	46:A:321:A:H8	1.58	0.69
46:A:991:U:H1'	46:A:1036:U:H4'	1.75	0.69
46:A:1485:A:H2'	46:A:1486:U:C6	2.28	0.69
46:A:1649:C:H5'	46:A:1649:C:H6	1.58	0.69
46:A:1932:G:H21	48:C:209:GLN:HE21	1.41	0.69
46:A:1952:A:H4'	48:C:208:ASN:HA	1.75	0.69
63:R:46:ARG:HD2	63:R:46:ARG:N	2.07	0.69
76:f:81:LEU:HD21	76:f:145:ILE:CG2	2.22	0.69
3:AC:156:VAL:HG12	3:AC:220:PRO:HA	1.74	0.69
7:AG:74:LEU:HD23	8:AH:186:LEU:HD21	1.74	0.69
8:AH:180:ARG:CD	12:AL:815:C:P	2.81	0.69
12:AL:1624:U:C2	35:z:154:HIS:NE2	2.61	0.69
12:AL:1645:U:C4'	17:h:176:TYR:HE2	2.06	0.69
18:i:148:LYS:HZ2	20:k:78:LEU:CD1	2.00	0.69
25:p:77:LYS:CD	25:p:110:LEU:HD23	2.20	0.69
38:2:43:VAL:HG13	46:A:2425:A:H8	1.57	0.69
46:A:834:A:HO2'	46:A:835:A:H8	1.41	0.69
46:A:1249:U:H2'	46:A:1250:U:H6	1.58	0.69
1:AA:105:ARG:HD2	46:A:1875:G:H4'	1.75	0.68
5:AE:274:TYR:HA	5:AE:277:ILE:CB	2.18	0.68
6:AF:52:THR:HG23	12:AL:498:A:H5"	1.76	0.68
12:AL:691:U:N3	12:AL:825:G:C6	2.53	0.68
12:AL:1085:U:H2'	12:AL:1086:A:C8	2.27	0.68
16:g:71:LEU:CD2	17:h:201:LEU:HD21	2.16	0.68
16:g:281:LEU:HB2	16:g:294:HIS:HB2	1.75	0.68
20:k:36:ALA:HB2	25:p:23:ASN:HD22	1.57	0.68
46:A:657:U:H2'	46:A:658:U:H6	1.57	0.68
46:A:1490:A:H2	46:A:1523:A:H2	1.39	0.68
46:A:1775:A:H2'	46:A:1776:A:H8	1.54	0.68
46:A:1819:A:N3	46:A:1820:G:C6	2.61	0.68
46:A:2062:G:H3'	46:A:2063:A:C5'	2.23	0.68
46:A:2276:G:N1	56:K:128:MET:CB	2.56	0.68
46:A:3109:U:H2'	46:A:3110:U:C6	2.28	0.68
75:e:65:SER:O	75:e:143:GLU:OE2	2.11	0.68
6:AF:58:MET:CB	19:j:11:LEU:HD13	2.22	0.68
11:AK:190:VAL:HG21	25:p:138:MET:HE2	1.74	0.68
15:Z:31:LEU:HD13	22:m:246:LEU:CG	2.07	0.68
16:g:25:THR:HG21	33:x:71:TYR:O	1.92	0.68
17:h:134:PRO:O	17:h:135:SER:C	2.37	0.68
18:i:316:MET:SD	20:k:69:TRP:CZ2	2.86	0.68
46:A:2069:U:H2'	46:A:2070:U:H6	1.56	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:B:145:GLY:HA3	47:B:330:ARG:HG3	1.75	0.68
2:AB:81:ILE:O	2:AB:84:ARG:N	2.24	0.68
3:AC:40:ASP:OD1	4:AD:286:VAL:CG2	2.41	0.68
3:AC:69:LYS:CG	12:AL:1640:U:O2	2.41	0.68
5:AE:99:LYS:HG3	12:AL:1525:A:P	2.33	0.68
5:AE:286:ASP:CB	5:AE:315:TYR:CE2	2.76	0.68
6:AF:58:MET:HE1	19:j:30:LYS:CB	2.23	0.68
7:AG:29:TRP:CE2	17:h:341:PRO:HD3	2.27	0.68
7:AG:228:THR:HG22	33:x:42:ASP:OD2	1.93	0.68
12:AL:16:G:C5'	20:k:266:ARG:NH1	2.56	0.68
12:AL:71:A:H5'	12:AL:100:A:N6	2.07	0.68
12:AL:691:U:H2'	12:AL:692:A:H8	1.59	0.68
12:AL:750:G:H4'	26:q:123:LYS:O	1.92	0.68
12:AL:1105:G:C5'	18:i:390:ASN:CG	2.59	0.68
13:AM:72:C:H2'	13:AM:73:A:H8	1.59	0.68
17:h:269:TYR:OH	24:o:38:VAL:CG1	2.41	0.68
20:k:45:LYS:CD	20:k:47:ARG:NH2	2.57	0.68
28:s:84:LYS:HE2	34:y:67:ASP:CG	2.17	0.68
46:A:614:A:H3'	46:A:614:A:OP2	1.93	0.68
46:A:947:G:C6	46:A:1107:U:C5	2.81	0.68
46:A:1266:U:H2'	46:A:1267:A:C8	2.27	0.68
46:A:1521:U:H2'	46:A:1522:A:H8	1.57	0.68
46:A:1920:A:H61	46:A:1934:U:H3	1.41	0.68
46:A:2026:G:H22	46:A:2070:U:H3	1.40	0.68
46:A:2220:U:H2'	46:A:2221:A:H5"	1.75	0.68
46:A:2705:A:H5'	46:A:2705:A:H8	1.58	0.68
46:A:2748:U:H2'	46:A:2749:A:C8	2.28	0.68
8:AH:103:ARG:HH22	31:v:79:GLY:HA2	0.85	0.68
12:AL:532:U:H2'	12:AL:533:A:C8	2.29	0.68
30:u:74:PRO:HB3	32:w:100:GLU:HB3	1.74	0.68
31:v:49:PRO:HA	31:v:61:PRO:HB3	1.74	0.68
32:w:160:THR:HA	32:w:163:GLN:CG	2.22	0.68
46:A:992:U:H3	76:f:13:ILE:HA	1.58	0.68
46:A:1509:U:H2'	46:A:1510:A:H8	1.59	0.68
46:A:1752:U:H2'	46:A:1753:U:C6	2.29	0.68
46:A:1865:C:H5"	46:A:1866:A:H2'	1.76	0.68
46:A:2004:U:H2'	46:A:2005:U:C5	2.28	0.68
46:A:2090:U:H2'	46:A:2091:C:H6	1.57	0.68
46:A:2246:A:H2'	46:A:2247:A:C8	2.28	0.68
46:A:2259:U:H2'	46:A:2260:A:H8	1.56	0.68
46:A:2644:A:H2'	46:A:2645:A:H8	1.55	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:B:197:CYS:SG	47:B:198:ASP:N	2.62	0.68
55:J:144:LYS:HB3	55:J:146:ARG:HG3	1.76	0.68
63:R:193:LEU:HD21	63:R:250:CYS:HB3	1.75	0.68
63:R:231:ARG:O	63:R:232:ARG:C	2.35	0.68
2:AB:48:ILE:HB	2:AB:86:TYR:CE2	2.28	0.68
5:AE:96:PRO:CB	12:AL:1541:U:H1'	2.23	0.68
7:AG:120:LYS:HE3	16:g:14:GLN:HB2	1.73	0.68
11:AK:163:PRO:HG3	25:p:23:ASN:HB3	1.75	0.68
12:AL:226:C:H2'	12:AL:227:U:C6	2.29	0.68
12:AL:675:U:H6	20:k:263:TYR:HE2	1.38	0.68
12:AL:843:G:H1'	26:q:209:VAL:HB	1.74	0.68
12:AL:1372:G:H22	12:AL:1400:A:P	2.15	0.68
12:AL:1627:U:C6	35:z:158:PHE:HE2	2.08	0.68
12:AL:1630:A:C6	15:Z:24:ARG:NH1	2.61	0.68
13:AM:72:C:H2'	13:AM:73:A:C8	2.29	0.68
14:AN:1:A:C4'	27:r:73:PRO:CA	2.72	0.68
15:Z:47:MET:HE1	22:m:230:ARG:HH11	1.58	0.68
22:m:211:ARG:HH12	22:m:214:GLU:HB2	1.52	0.68
31:v:99:ALA:C	31:v:101:ALA:N	2.47	0.68
3:AC:72:GLY:O	3:AC:73:ASN:C	2.36	0.68
3:AC:217:TRP:CE2	17:h:146:LEU:CD2	2.67	0.68
5:AE:211:LEU:HD13	5:AE:235:LEU:HD23	1.74	0.68
8:AH:75:ILE:HG23	8:AH:108:ILE:HG12	1.76	0.68
9:AI:210:ARG:NH2	12:AL:1348:U:H6	1.79	0.68
11:AK:150:GLU:OE1	25:p:133:MET:CE	2.41	0.68
12:AL:502:A:C5'	19:j:7:LEU:CD2	2.71	0.68
12:AL:1496:A:H2	30:u:41:LEU:HD21	1.58	0.68
16:g:273:MET:HE3	33:x:60:PHE:CE1	2.27	0.68
30:u:87:LEU:CD1	32:w:114:ARG:NH1	2.49	0.68
35:z:96:ALA:O	35:z:100:PHE:HB2	1.93	0.68
46:A:218:A:C2	46:A:219:U:H1'	2.28	0.68
46:A:224:U:H2'	46:A:225:A:H8	1.59	0.68
46:A:1493:U:H2'	46:A:1494:A:H8	1.57	0.68
46:A:1657:A:H2'	46:A:1658:G:C8	2.28	0.68
46:A:1925:U:H2'	46:A:1926:A:C8	2.29	0.68
46:A:1996:A:N6	46:A:2090:U:H3	1.91	0.68
46:A:2088:A:H2'	46:A:2089:U:H6	1.57	0.68
46:A:2232:A:H2'	46:A:2233:U:C6	2.28	0.68
46:A:3110:U:H2'	46:A:3111:A:H8	1.56	0.68
3:AC:65:HIS:NE2	17:h:159:LYS:HD2	2.09	0.68
3:AC:261:PHE:CD1	17:h:141:TYR:OH	2.44	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:36:ILE:CD1	17:h:234:LYS:HB3	2.23	0.68
9:AI:413:LEU:HD11	9:AI:449:HIS:CE1	2.29	0.68
12:AL:77:U:H2'	12:AL:78:U:C6	2.28	0.68
12:AL:494:U:H4'	12:AL:495:U:OP1	1.94	0.68
12:AL:1177:A:H61	25:p:77:LYS:HZ1	1.42	0.68
12:AL:1344:A:H2	12:AL:1356:U:O2'	1.76	0.68
12:AL:1645:U:H4'	17:h:176:TYR:HE2	1.57	0.68
19:j:144:LEU:HB3	19:j:452:TYR:CD2	2.29	0.68
22:m:101:LEU:O	22:m:102:LYS:C	2.36	0.68
27:r:86:THR:C	27:r:88:GLY:H	2.01	0.68
30:u:74:PRO:CG	32:w:100:GLU:CG	2.71	0.68
46:A:356:U:H2'	46:A:357:C:C6	2.29	0.68
46:A:1346:A:H1'	74:d:123:GLY:O	1.93	0.68
46:A:2943:U:H2'	46:A:2944:C:H6	1.58	0.68
6:AF:61:PHE:CG	19:j:29:TYR:OH	2.47	0.68
6:AF:319:TYR:CE1	31:v:42:THR:CG2	2.72	0.68
9:AI:190:PHE:HD1	28:s:42:TYR:HB3	1.59	0.68
12:AL:863:G:H2'	12:AL:864:U:C6	2.28	0.68
12:AL:1084:U:H2'	12:AL:1085:U:C6	2.29	0.68
12:AL:1630:A:N6	15:Z:24:ARG:HH12	1.92	0.68
13:AM:33:U:C3'	24:o:278:ARG:HH11	2.07	0.68
18:i:100:TYR:CE1	25:p:139:LYS:HB2	2.27	0.68
28:s:92:ARG:HH22	28:s:104:THR:HG22	1.56	0.68
32:w:12:SER:O	32:w:20:VAL:HG22	1.94	0.68
32:w:196:ASN:HB3	32:w:199:LYS:HB2	1.73	0.68
46:A:418:A:H2'	46:A:419:U:C6	2.28	0.68
46:A:931:U:C4	46:A:1119:A:C4	2.82	0.68
46:A:1531:C:N4	47:B:326:TRP:CH2	2.61	0.68
46:A:2317:A:C2	69:X:65:PHE:CE1	2.82	0.68
46:A:2415:A:H2'	46:A:2416:U:C5	2.28	0.68
46:A:3014:C:H3'	46:A:3015:U:H6	1.59	0.68
76:f:14:VAL:HG23	76:f:57:PRO:HA	1.76	0.68
3:AC:62:TYR:CG	17:h:159:LYS:CG	2.50	0.68
6:AF:212:LEU:CD1	19:j:445:PHE:CD2	2.66	0.68
7:AG:90:ARG:CZ	12:AL:917:U:OP1	2.41	0.68
12:AL:1165:A:P	24:o:254:ARG:CG	2.79	0.68
12:AL:1418:A:P	24:o:271:LYS:HE3	2.34	0.68
16:g:51:LYS:HE2	17:h:197:GLN:HA	1.75	0.68
26:q:108:TYR:CE2	35:z:89:ALA:HB2	2.28	0.68
30:u:204:ASN:O	30:u:205:LEU:C	2.34	0.68
46:A:31:U:OP2	48:C:23:ARG:NH1	2.26	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:547:A:H2'	46:A:548:A:H8	1.56	0.68
46:A:827:U:H2'	46:A:828:A:H8	1.56	0.68
46:A:939:A:H2'	46:A:940:A:H8	1.59	0.68
46:A:1105:U:H2'	46:A:1106:C:C6	2.28	0.68
46:A:1780:U:H2'	46:A:1781:A:C8	2.29	0.68
46:A:2454:U:HO2'	50:E:263:HIS:CE1	2.12	0.68
46:A:3171:A:H5"	46:A:3173:U:O4'	1.94	0.68
5:AE:56:LYS:HA	5:AE:129:ARG:HH22	1.59	0.68
5:AE:99:LYS:CG	12:AL:1524:U:O3'	2.41	0.68
6:AF:71:TYR:CE2	19:j:22:LYS:NZ	2.61	0.68
7:AG:224:VAL:CG1	33:x:45:LEU:HD12	1.90	0.68
10:AJ:26:SER:HB2	12:AL:1299:A:N1	2.09	0.68
12:AL:134:U:H2'	12:AL:135:A:C8	2.29	0.68
12:AL:642:C:N4	27:r:74:ASN:CG	2.49	0.68
12:AL:1170:U:H4'	25:p:76:PRO:HD2	1.76	0.68
12:AL:1558:U:H5"	30:u:35:ALA:HB2	1.75	0.68
21:l:38:VAL:HG21	30:u:137:ALA:HB1	1.76	0.68
29:t:27:LYS:HZ1	29:t:70:ARG:C	2.02	0.68
29:t:104:LYS:HD3	29:t:106:ASN:HD21	1.59	0.68
38:2:45:GLN:OE1	50:E:158:THR:HG22	1.94	0.68
46:A:956:A:H2'	46:A:957:U:O4'	1.93	0.68
46:A:1163:A:H2'	46:A:1164:U:C6	2.29	0.68
46:A:1766:A:H2'	46:A:1767:A:C8	2.29	0.68
46:A:2089:U:H2'	46:A:2090:U:H6	1.56	0.68
46:A:3152:A:H2'	46:A:3153:U:C6	2.28	0.68
6:AF:336:PHE:CE2	19:j:142:TYR:CD1	2.80	0.67
8:AH:29:GLN:HB3	8:AH:32:ILE:HB	1.76	0.67
8:AH:184:ARG:HD3	12:AL:814:A:O3'	1.92	0.67
12:AL:700:U:P	23:n:1:MET:HE3	2.33	0.67
12:AL:826:G:H2'	12:AL:827:G:O5'	1.92	0.67
12:AL:1047:U:P	29:t:77:ARG:NH1	2.61	0.67
12:AL:1125:C:O4'	20:k:225:HIS:NE2	2.27	0.67
15:Z:55:VAL:CG1	22:m:163:LEU:CD1	2.71	0.67
28:s:84:LYS:CE	34:y:67:ASP:OD2	2.42	0.67
46:A:73:U:H2'	46:A:74:A:C8	2.28	0.67
46:A:601:U:H3	46:A:661:G:H1	1.42	0.67
46:A:1006:U:C1'	46:A:1007:U:H4'	2.23	0.67
46:A:1105:U:H2'	46:A:1106:C:H6	1.59	0.67
46:A:1324:U:H2'	46:A:1325:U:C6	2.28	0.67
46:A:1531:C:C6	47:B:326:TRP:CE3	2.82	0.67
46:A:2210:A:H2'	46:A:2211:U:H6	1.56	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2231:U:H2'	46:A:2232:A:H8	1.56	0.67
46:A:2352:A:H2'	46:A:2353:U:H6	1.57	0.67
46:A:2411:G:H2'	46:A:2412:A:C8	2.28	0.67
46:A:2797:U:O2	51:F:194:TYR:HE2	1.77	0.67
47:B:201:ARG:HB3	47:B:202:PRO:HD2	1.75	0.67
3:AC:219:MET:HE1	17:h:153:HIS:CD2	2.30	0.67
6:AF:58:MET:HB2	19:j:11:LEU:CD1	2.24	0.67
7:AG:60:LEU:HD21	23:n:70:THR:CB	2.24	0.67
8:AH:16:PRO:HD3	31:v:35:LYS:HG3	1.75	0.67
8:AH:83:GLN:HB2	12:AL:145:A:H5"	1.76	0.67
10:AJ:1:MET:CE	11:AK:278:ARG:HH22	2.08	0.67
10:AJ:51:PRO:C	10:AJ:52:ASP:CG	2.62	0.67
10:AJ:80:VAL:CG1	12:AL:1091:A:OP1	2.42	0.67
12:AL:46:A:H61	12:AL:407:U:H3	1.41	0.67
12:AL:702:A:H2'	12:AL:703:U:C6	2.29	0.67
12:AL:1134:A:H2'	15:Z:83:ALA:HB1	1.75	0.67
12:AL:1575:A:H2	46:A:1859:G:C2'	2.07	0.67
18:i:82:ASN:HD21	20:k:57:PRO:HG3	1.60	0.67
18:i:302:ILE:CD1	25:p:25:GLU:HB2	2.24	0.67
25:p:85:ARG:NH1	29:t:115:TRP:CZ2	2.61	0.67
46:A:2069:U:H2'	46:A:2070:U:C6	2.29	0.67
46:A:2918:A:H2'	46:A:2919:U:C6	2.29	0.67
46:A:3088:C:H2'	46:A:3089:A:O4'	1.95	0.67
4:AD:67:LEU:HB3	4:AD:77:LYS:CE	2.22	0.67
5:AE:204:ALA:HB1	5:AE:205:GLU:OE1	1.95	0.67
6:AF:48:LYS:HE3	12:AL:489:A:C5	2.24	0.67
6:AF:48:LYS:CG	12:AL:489:A:H2'	2.24	0.67
9:AI:224:ILE:HG21	9:AI:282:GLN:HG2	1.76	0.67
11:AK:298:TRP:CE2	24:o:210:ASN:OD1	2.47	0.67
12:AL:351:A:C4	58:M:166:ARG:HD2	2.29	0.67
12:AL:412:U:H2'	12:AL:413:G:H8	1.58	0.67
12:AL:629:G:H2'	12:AL:630:U:H6	1.60	0.67
18:i:93:TRP:CD2	29:t:109:GLY:N	2.56	0.67
46:A:750:U:H2'	46:A:751:A:C8	2.29	0.67
46:A:1059:A:H2'	46:A:1060:U:H6	1.58	0.67
46:A:1978:C:H2'	46:A:1979:U:C6	2.29	0.67
56:K:58:VAL:HG11	73:c:104:LYS:HB2	1.77	0.67
76:f:120:VAL:HG13	76:f:145:ILE:HB	1.75	0.67
11:AK:107:LEU:HD13	18:i:172:TYR:CD1	2.29	0.67
11:AK:137:LEU:HD11	20:k:68:PHE:HE1	1.58	0.67
12:AL:1344:A:C2	12:AL:1356:U:O2'	2.46	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1372:G:H2'	12:AL:1373:A:C8	2.29	0.67
15:Z:10:LEU:HD12	35:z:165:LEU:HD22	1.76	0.67
16:g:272:ARG:NH2	33:x:48:LYS:HA	2.08	0.67
17:h:290:TRP:CH2	24:o:49:PRO:CD	2.74	0.67
18:i:82:ASN:ND2	20:k:57:PRO:CB	2.43	0.67
22:m:168:THR:HB	22:m:178:VAL:HG22	1.75	0.67
32:w:88:TYR:O	32:w:91:GLU:HG2	1.95	0.67
46:A:1579:A:H5'	46:A:1579:A:H8	1.60	0.67
63:R:286:LEU:O	63:R:290:GLN:HB3	1.94	0.67
76:f:63:LYS:HB3	76:f:64:PRO:HD2	1.76	0.67
4:AD:213:SER:HA	4:AD:216:MET:CB	2.21	0.67
7:AG:3:ILE:CD1	23:n:20:ARG:NE	2.54	0.67
8:AH:22:LEU:H	8:AH:114:GLU:HG2	1.59	0.67
11:AK:134:PHE:CE1	20:k:110:VAL:CG2	2.78	0.67
11:AK:160:TYR:CE1	20:k:29:LEU:HD23	2.29	0.67
12:AL:225:U:H2'	12:AL:226:C:H6	1.60	0.67
12:AL:804:U:H2'	12:AL:805:U:C6	2.30	0.67
14:AN:2:U:H3'	14:AN:3:G:H4'	1.76	0.67
15:Z:46:HIS:ND1	22:m:234:HIS:HB3	2.10	0.67
35:z:110:LYS:O	35:z:111:ASN:C	2.37	0.67
41:5:139:ALA:CB	61:P:249:ALA:HB1	2.24	0.67
41:5:329:ARG:O	53:H:139:ASN:HB3	1.95	0.67
43:7:72:ARG:NH2	46:A:504:A:OP1	2.22	0.67
46:A:702:U:C4	55:J:79:ARG:CZ	2.76	0.67
46:A:756:A:C2	46:A:767:A:C4	2.82	0.67
46:A:976:A:H2	75:e:175:VAL:HG21	1.60	0.67
46:A:1424:U:H2'	46:A:1425:U:O4'	1.94	0.67
46:A:1932:G:N2	48:C:209:GLN:CD	2.53	0.67
63:R:154:ALA:O	63:R:155:LYS:C	2.36	0.67
7:AG:3:ILE:CD1	23:n:20:ARG:NH1	2.54	0.67
7:AG:22:LEU:HA	20:k:135:VAL:HG13	1.76	0.67
11:AK:112:GLU:HB3	18:i:127:LEU:HD11	1.74	0.67
12:AL:272:U:H2'	12:AL:273:A:C8	2.29	0.67
12:AL:656:G:H2'	12:AL:657:G:C8	2.30	0.67
12:AL:1631:U:O2	33:x:66:HIS:CD2	2.47	0.67
16:g:270:PHE:HB3	16:g:273:MET:HB2	1.77	0.67
18:i:303:ASN:ND2	25:p:19:PRO:HA	2.08	0.67
34:y:71:HIS:HB3	34:y:76:PHE:HE1	1.59	0.67
46:A:71:A:H2'	46:A:72:U:H6	1.59	0.67
46:A:226:A:H2'	46:A:227:G:C8	2.30	0.67
46:A:521:A:H2'	46:A:522:A:C8	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:562:U:O4	55:J:137:ARG:NH1	2.28	0.67
46:A:1523:A:H2'	46:A:1524:U:H5'	1.76	0.67
46:A:2470:A:H2'	46:A:2471:A:C8	2.28	0.67
9:AI:210:ARG:CD	12:AL:1348:U:C4	2.77	0.67
9:AI:298:LEU:HD22	9:AI:354:THR:HB	1.77	0.67
10:AJ:93:LYS:HB3	12:AL:1058:G:O6	1.89	0.67
11:AK:136:GLU:HG2	18:i:212:TYR:CD2	2.29	0.67
11:AK:292:TYR:CE2	24:o:214:THR:HG22	2.29	0.67
11:AK:292:TYR:OH	24:o:179:ASN:OD1	2.12	0.67
12:AL:138:G:H1'	12:AL:139:A:C8	2.29	0.67
12:AL:351:A:N9	58:M:166:ARG:HD2	2.10	0.67
12:AL:1232:C:H1'	12:AL:1236:A:H61	1.59	0.67
15:Z:39:GLN:OE1	22:m:241:ARG:HD3	1.94	0.67
20:k:25:TYR:CZ	25:p:21:PRO:HG3	2.30	0.67
21:l:40:ARG:NE	21:l:72:ASP:OD2	2.28	0.67
25:p:47:LEU:HD11	25:p:62:ILE:HD12	1.76	0.67
30:u:66:PRO:HD2	30:u:251:TYR:CE2	2.27	0.67
30:u:169:GLY:O	30:u:171:THR:HG23	1.95	0.67
30:u:220:LYS:HB2	30:u:227:TYR:CD1	2.28	0.67
46:A:92:A:O2'	46:A:93:U:H5"	1.95	0.67
46:A:217:A:C4	64:S:47:HIS:CE1	2.82	0.67
46:A:575:A:OP1	55:J:104:SER:HB2	1.94	0.67
46:A:941:U:H2'	46:A:942:A:H8	1.58	0.67
46:A:1128:U:H2'	46:A:1129:U:C6	2.29	0.67
46:A:1827:A:H2'	46:A:1828:A:C8	2.29	0.67
46:A:3139:A:OP1	48:C:177:PHE:HB2	1.94	0.67
2:AB:105:LEU:HD21	12:AL:389:A:O3'	1.94	0.67
5:AE:309:SER:O	5:AE:310:GLU:C	2.37	0.67
6:AF:315:GLY:HA2	8:AH:15:PHE:CE2	2.22	0.67
8:AH:209:PHE:HB3	8:AH:215:GLN:CD	2.20	0.67
10:AJ:1:MET:HE2	11:AK:278:ARG:HH22	1.60	0.67
11:AK:165:LEU:HD22	25:p:127:TYR:HE1	1.56	0.67
11:AK:190:VAL:HG21	25:p:138:MET:CE	2.24	0.67
12:AL:15:A:C4'	20:k:261:LYS:HE3	2.21	0.67
12:AL:479:A:N1	19:j:181:LEU:HD13	2.10	0.67
12:AL:1642:U:P	16:g:41:SER:HA	2.34	0.67
29:t:42:LYS:HB3	29:t:46:ARG:NH1	2.08	0.67
32:w:115:GLU:O	32:w:116:ASN:C	2.35	0.67
39:3:67:PHE:HB3	46:A:1404:A:N7	2.09	0.67
46:A:55:A:H2'	46:A:56:U:H6	1.58	0.67
46:A:601:U:H2'	46:A:602:A:C8	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:659:G:H2'	46:A:660:U:C6	2.30	0.67
46:A:1715:A:H5"	46:A:1716:U:C6	2.29	0.67
46:A:2323:A:N1	46:A:2370:A:H1'	2.10	0.67
5:AE:73:ILE:HA	5:AE:76:THR:CG2	2.24	0.67
9:AI:203:MET:CE	12:AL:1354:U:C4	2.72	0.67
9:AI:224:ILE:CG2	9:AI:282:GLN:HG2	2.25	0.67
12:AL:40:G:H2'	12:AL:41:C:C6	2.30	0.67
12:AL:1474:U:H4'	12:AL:1610:A:H4'	1.75	0.67
12:AL:1647:A:O2'	17:h:176:TYR:CZ	2.46	0.67
15:Z:46:HIS:CE1	22:m:234:HIS:HB3	2.30	0.67
21:l:56:LYS:HB2	21:l:92:ILE:HG23	1.76	0.67
46:A:666:G:N2	46:A:684:G:H1'	2.09	0.67
46:A:673:A:C2	47:B:338:MET:HG2	2.30	0.67
46:A:936:A:H5"	71:a:32:TYR:CG	2.30	0.67
46:A:1083:U:H2'	46:A:1084:U:H6	1.59	0.67
46:A:2063:A:H3'	46:A:2064:G:H8	1.60	0.67
46:A:2288:U:H2'	46:A:2289:C:H6	1.59	0.67
3:AC:266:LYS:N	17:h:128:PRO:HG2	2.09	0.67
6:AF:58:MET:CB	19:j:11:LEU:CD1	2.72	0.67
9:AI:118:LEU:HD22	9:AI:411:VAL:CG1	2.24	0.67
12:AL:785:A:N1	33:x:130:ARG:HD3	2.10	0.67
12:AL:811:U:H2'	12:AL:812:U:H6	1.58	0.67
12:AL:940:U:H4'	23:n:18:LYS:NZ	2.10	0.67
12:AL:1466:A:C6	20:k:157:GLN:OE1	2.45	0.67
12:AL:1628:A:H2	35:z:166:ILE:HD12	0.52	0.67
14:AN:1:A:O4'	27:r:73:PRO:O	2.13	0.67
16:g:249:GLY:C	33:x:55:TYR:CD1	2.72	0.67
46:A:14:U:H2'	46:A:15:A:C8	2.30	0.67
46:A:61:G:H1'	46:A:410:A:N6	2.10	0.67
46:A:351:C:H2'	46:A:352:A:H8	1.59	0.67
46:A:962:A:N6	46:A:1062:U:H3	1.92	0.67
46:A:1058:U:H2'	46:A:1059:A:O4'	1.94	0.67
46:A:2093:A:N1	52:G:29:ARG:NH2	2.42	0.67
50:E:249:ILE:HG22	50:E:253:GLN:OE1	1.94	0.67
2:AB:81:ILE:O	2:AB:82:GLN:C	2.38	0.66
3:AC:68:LEU:HD13	12:AL:1639:A:N7	2.10	0.66
3:AC:93:VAL:HA	3:AC:96:ILE:HG12	1.78	0.66
4:AD:146:PHE:CZ	4:AD:198:ILE:HG13	2.29	0.66
4:AD:155:LEU:CD2	16:g:210:LEU:HD12	2.26	0.66
5:AE:149:SER:HA	5:AE:153:ILE:HB	1.75	0.66
5:AE:255:LEU:HD13	5:AE:300:PHE:CD2	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:336:PHE:CZ	19:j:142:TYR:HA	2.30	0.66
7:AG:121:ILE:HG12	7:AG:143:PRO:HG3	1.77	0.66
8:AH:46:GLY:CA	32:w:5:ASN:HB3	2.14	0.66
12:AL:1095:G:H22	12:AL:1243:U:H1'	1.60	0.66
12:AL:1163:A:O2'	24:o:256:TYR:CZ	2.47	0.66
16:g:199:GLU:HG3	16:g:200:ILE:HG12	1.76	0.66
19:j:404:LEU:HB2	19:j:407:GLN:HB2	1.77	0.66
30:u:87:LEU:CG	32:w:114:ARG:NH1	2.57	0.66
46:A:1259:A:H2'	46:A:1260:U:C6	2.30	0.66
46:A:2089:U:H2'	46:A:2090:U:C6	2.29	0.66
46:A:2286:U:H2'	46:A:2287:A:H8	1.59	0.66
63:R:235:TRP:O	63:R:237:ASN:N	2.28	0.66
63:R:242:GLU:HA	63:R:245:SER:HB3	1.77	0.66
75:e:132:LEU:HD11	75:e:170:LYS:CG	2.24	0.66
4:AD:92:PHE:CZ	4:AD:269:PRO:HB2	2.30	0.66
5:AE:218:VAL:HG22	5:AE:221:ARG:HG2	1.76	0.66
6:AF:48:LYS:HE3	12:AL:489:A:N3	2.06	0.66
11:AK:151:GLN:CD	18:i:83:LYS:HZ1	2.02	0.66
12:AL:34:G:C4'	19:j:486:LYS:HG3	2.26	0.66
12:AL:637:A:C2	27:r:116:GLN:HB2	2.31	0.66
12:AL:720:U:H2'	12:AL:721:U:C6	2.29	0.66
22:m:169:PHE:HD2	22:m:179:ILE:HB	1.59	0.66
22:m:244:ILE:CG2	22:m:247:LYS:HE3	2.23	0.66
26:q:188:GLY:O	26:q:192:VAL:HG23	1.95	0.66
30:u:74:PRO:CG	32:w:100:GLU:CB	2.73	0.66
46:A:421:U:H2'	46:A:422:U:C6	2.30	0.66
46:A:992:U:H2'	46:A:1037:A:H4'	1.75	0.66
46:A:1110:A:H2'	46:A:1111:U:O4'	1.94	0.66
46:A:1413:A:H61	46:A:1545:U:H3	1.41	0.66
46:A:1519:A:H8	46:A:3022:G:H22	1.38	0.66
46:A:2943:U:H2'	46:A:2944:C:C6	2.30	0.66
47:B:210:ARG:HE	47:B:302:VAL:HB	1.60	0.66
63:R:220:TYR:O	63:R:221:TYR:C	2.38	0.66
63:R:298:LYS:HB2	63:R:371:LEU:HD12	1.76	0.66
1:AA:111:ARG:OXT	12:AL:1486:A:C5'	2.43	0.66
5:AE:226:GLY:HA3	5:AE:252:ASP:O	1.95	0.66
5:AE:248:LEU:HD12	5:AE:249:GLN:H	1.58	0.66
6:AF:329:LYS:C	12:AL:404:U:H4'	2.20	0.66
10:AJ:26:SER:HB2	12:AL:1299:A:C2	2.30	0.66
11:AK:132:PHE:CE1	18:i:248:MET:CE	2.70	0.66
11:AK:189:TYR:HB3	11:AK:192:GLU:HB2	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:351:A:C4	58:M:166:ARG:CG	2.78	0.66
12:AL:1645:U:H5	17:h:175:PHE:HD1	1.29	0.66
18:i:369:ASN:HB3	29:t:114:ILE:CD1	2.24	0.66
21:l:83:ARG:HH12	47:B:80:ILE:HG21	0.61	0.66
21:l:83:ARG:HH22	47:B:80:ILE:CG1	2.07	0.66
26:q:191:VAL:O	26:q:192:VAL:C	2.38	0.66
30:u:90:SER:C	30:u:91:LYS:HG2	2.21	0.66
32:w:27:LYS:HG2	32:w:38:PHE:CE2	2.29	0.66
37:1:202:VAL:HG22	46:A:2361:A:C8	2.31	0.66
46:A:1083:U:H2'	46:A:1084:U:C6	2.30	0.66
46:A:2010:A:C2	46:A:2076:A:C2	2.71	0.66
46:A:2016:A:H1'	46:A:2019:A:H5"	1.78	0.66
11:AK:107:LEU:CG	18:i:168:ASN:OD1	2.43	0.66
11:AK:148:HIS:HB2	18:i:84:LEU:HD13	1.77	0.66
11:AK:150:GLU:HA	20:k:71:TYR:OH	1.95	0.66
11:AK:154:TYR:CD2	25:p:57:PHE:CZ	2.75	0.66
12:AL:381:A:C5'	31:v:7:ARG:NH2	2.58	0.66
12:AL:1635:U:O4	16:g:82:GLY:O	2.13	0.66
19:j:416:ASP:HB3	19:j:423:THR:HG21	1.77	0.66
46:A:200:G:C2'	46:A:201:A:H5'	2.26	0.66
46:A:375:A:H2'	46:A:376:A:H8	1.59	0.66
46:A:817:G:H8	46:A:817:G:O5'	1.79	0.66
46:A:1395:U:H2'	46:A:1396:A:C8	2.31	0.66
46:A:1899:C:H2'	46:A:1900:U:C6	2.30	0.66
46:A:2362:U:C4	72:b:151:ASN:OD1	2.48	0.66
46:A:3272:U:H4'	71:a:163:MET:HG2	1.77	0.66
75:e:65:SER:O	75:e:149:GLN:OE1	2.13	0.66
1:AA:104:ARG:HH22	46:A:1740:U:HO2'	1.42	0.66
7:AG:69:ALA:HB1	7:AG:74:LEU:N	2.11	0.66
9:AI:307:ASN:HD21	9:AI:311:LYS:HB2	1.61	0.66
12:AL:15:A:C3'	20:k:261:LYS:HE2	2.25	0.66
12:AL:64:G:H2'	12:AL:65:C:C6	2.30	0.66
12:AL:845:G:OP1	26:q:212:PRO:CA	2.44	0.66
12:AL:1045:C:H1'	29:t:73:GLN:OE1	1.95	0.66
12:AL:1082:U:H3'	12:AL:1083:A:H8	1.61	0.66
12:AL:1181:A:H2	25:p:78:PRO:CG	2.07	0.66
16:g:7:LEU:HD12	17:h:189:MET:HE2	1.66	0.66
46:A:89:A:H2'	46:A:90:A:H8	1.60	0.66
46:A:818:U:H3'	46:A:819:U:C6	2.31	0.66
46:A:1438:U:H5"	46:A:1439:A:C8	2.30	0.66
46:A:2029:A:H1'	46:A:2030:U:C4'	2.22	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2415:A:H2'	46:A:2416:U:C6	2.30	0.66
46:A:2475:U:H2'	46:A:2476:C:H6	1.60	0.66
46:A:2883:C:H2'	46:A:2884:U:C6	2.31	0.66
73:c:101:THR:HG23	73:c:113:ILE:HD13	1.78	0.66
1:AA:80:VAL:HG22	12:AL:1462:A:H62	1.55	0.66
1:AA:94:ARG:NH1	12:AL:1611:A:OP2	2.29	0.66
2:AB:108:LYS:O	2:AB:109:SER:C	2.38	0.66
3:AC:78:ASN:CA	7:AG:190:ALA:HB2	2.26	0.66
6:AF:28:SER:C	12:AL:623:A:OP1	2.38	0.66
6:AF:314:VAL:HG21	8:AH:18:THR:OG1	1.95	0.66
7:AG:75:TYR:CE2	8:AH:182:TYR:HE2	2.10	0.66
7:AG:90:ARG:CZ	12:AL:917:U:P	2.84	0.66
9:AI:286:PRO:HB3	9:AI:338:GLU:HB3	1.78	0.66
11:AK:292:TYR:HE2	24:o:214:THR:HG22	1.61	0.66
12:AL:785:A:C2'	33:x:109:ILE:H	2.08	0.66
12:AL:1647:A:N6	17:h:172:LYS:HZ1	1.91	0.66
20:k:292:GLY:O	23:n:78:LYS:CE	2.44	0.66
21:l:38:VAL:HG21	30:u:141:ILE:HD11	1.75	0.66
29:t:56:LEU:CD1	34:y:18:ILE:CG1	2.69	0.66
33:x:56:ASP:H	33:x:59:ASP:HB3	1.59	0.66
46:A:416:U:H2'	46:A:417:U:C6	2.31	0.66
46:A:717:U:O2'	55:J:109:GLY:HA3	1.94	0.66
46:A:723:U:O3'	55:J:102:VAL:HG11	1.96	0.66
46:A:800:A:H2'	46:A:801:U:H6	1.61	0.66
46:A:873:A:H2'	46:A:874:U:H6	1.58	0.66
46:A:1128:U:H2'	46:A:1129:U:H6	1.61	0.66
46:A:1710:A:H4'	47:B:371:THR:OG1	1.95	0.66
47:B:317:SER:O	47:B:318:LEU:C	2.39	0.66
75:e:66:MET:CG	75:e:149:GLN:HB2	2.21	0.66
2:AB:81:ILE:O	2:AB:83:GLN:N	2.29	0.66
6:AF:52:THR:HG23	12:AL:498:A:C5'	2.26	0.66
6:AF:146:ASN:ND2	19:j:439:HIS:NE2	2.39	0.66
12:AL:691:U:H2'	12:AL:692:A:C8	2.30	0.66
12:AL:1082:U:H3'	12:AL:1083:A:C8	2.29	0.66
12:AL:1556:U:H2'	12:AL:1557:A:C8	2.31	0.66
13:AM:12:U:H2'	13:AM:13:C:C6	2.27	0.66
21:l:6:ILE:HD13	33:x:94:ALA:HB2	1.75	0.66
28:s:96:HIS:HB3	28:s:112:ARG:HA	1.77	0.66
46:A:268:C:H5"	46:A:269:A:C8	2.31	0.66
46:A:657:U:H2'	46:A:658:U:C6	2.31	0.66
46:A:1015:A:C4'	76:f:117:LEU:HD23	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1581:U:H2'	46:A:1582:A:H5"	1.78	0.66
46:A:1907:U:H2'	46:A:1908:A:C8	2.30	0.66
46:A:2276:G:H22	56:K:128:MET:HE3	1.59	0.66
46:A:2581:U:H2'	46:A:2582:U:C6	2.30	0.66
63:R:117:LEU:C	63:R:119:SER:H	2.03	0.66
5:AE:45:LYS:HB2	5:AE:105:PHE:CD2	2.30	0.66
6:AF:336:PHE:HZ	19:j:142:TYR:HA	1.59	0.66
7:AG:60:LEU:CD2	23:n:70:THR:CB	2.73	0.66
9:AI:135:LEU:O	9:AI:139:VAL:HG23	1.95	0.66
9:AI:449:HIS:C	22:m:114:LEU:CD1	2.68	0.66
12:AL:15:A:C4'	20:k:261:LYS:CE	2.74	0.66
12:AL:514:U:H2'	12:AL:515:A:C8	2.31	0.66
12:AL:1370:A:C2	12:AL:1372:G:C2	2.83	0.66
18:i:82:ASN:HD22	20:k:57:PRO:HB3	1.61	0.66
19:j:6:ASN:HB2	19:j:13:ARG:HD2	1.78	0.66
28:s:85:ILE:HD11	34:y:67:ASP:CB	0.26	0.66
30:u:246:ASN:O	30:u:248:ASP:N	2.28	0.66
32:w:103:LYS:HA	32:w:106:GLU:CD	2.21	0.66
35:z:123:ILE:HG22	35:z:124:MET:HE2	1.77	0.66
39:3:89:GLU:HB3	62:Q:202:ILE:HD13	1.77	0.66
46:A:725:U:H1'	46:A:2625:A:N3	2.10	0.66
46:A:808:A:H3'	46:A:809:C:H6	1.60	0.66
46:A:1167:A:H2'	46:A:1168:A:O4'	1.96	0.66
46:A:2713:G:N7	46:A:2767:C:H3'	2.11	0.66
3:AC:60:SER:O	17:h:169:TYR:OH	2.08	0.66
7:AG:1:MET:CE	17:h:351:GLU:CG	2.73	0.66
7:AG:88:VAL:HG22	23:n:74:TRP:CH2	2.31	0.66
7:AG:166:VAL:HG21	16:g:196:PHE:CZ	2.28	0.66
8:AH:14:VAL:HG21	12:AL:298:A:C6	2.31	0.66
9:AI:279:LEU:O	9:AI:282:GLN:HG3	1.96	0.66
11:AK:87:LEU:HD21	11:AK:105:LYS:HG3	1.78	0.66
12:AL:15:A:H3'	20:k:261:LYS:HE2	1.76	0.66
12:AL:20:A:H2'	12:AL:21:U:C5'	2.24	0.66
12:AL:1014:A:OP1	28:s:103:HIS:CG	2.49	0.66
12:AL:1441:U:H3'	12:AL:1442:G:C8	2.31	0.66
17:h:290:TRP:CE3	24:o:49:PRO:CG	2.79	0.66
31:v:43:TYR:HE1	31:v:63:LYS:HD3	1.60	0.66
32:w:37:LEU:H	32:w:37:LEU:HD12	1.60	0.66
46:A:55:A:H2'	46:A:56:U:C6	2.31	0.66
46:A:723:U:H2'	46:A:724:A:C8	2.29	0.66
46:A:1764:U:H3	46:A:1786:A:N6	1.91	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1794:U:H2'	46:A:1795:U:C6	2.31	0.66
46:A:1932:G:N2	48:C:209:GLN:HE21	1.94	0.66
46:A:1986:A:H2'	46:A:1987:G:C8	2.31	0.66
46:A:2203:A:H2'	46:A:2204:A:C8	2.31	0.66
48:C:31:ILE:HD13	53:H:140:ILE:CD1	2.26	0.66
52:G:37:VAL:HG21	52:G:65:ILE:HD11	1.76	0.66
75:e:66:MET:HE3	75:e:142:TYR:CD2	2.30	0.66
75:e:66:MET:HE1	75:e:153:LEU:CD2	2.25	0.66
3:AC:208:THR:HA	3:AC:212:GLY:H	1.61	0.66
6:AF:52:THR:CG2	12:AL:498:A:H5"	2.26	0.66
6:AF:308:LYS:HD3	31:v:62:ILE:HD12	1.78	0.66
9:AI:187:ARG:HG2	28:s:44:TRP:CD2	2.31	0.66
9:AI:206:LYS:NZ	12:AL:1346:U:H5"	2.10	0.66
11:AK:142:GLN:OE1	18:i:154:TYR:HE2	1.79	0.66
12:AL:271:U:OP1	32:w:68:LYS:CB	2.44	0.66
16:g:249:GLY:N	33:x:55:TYR:CE1	2.63	0.66
27:r:94:TYR:HB2	27:r:121:VAL:HG11	1.78	0.66
29:t:47:ASN:O	29:t:48:MET:C	2.38	0.66
46:A:292:G:OP1	55:J:105:TRP:HZ2	1.78	0.66
46:A:2236:U:H2'	46:A:2237:A:C8	2.30	0.66
46:A:2445:G:H2'	46:A:2446:U:C6	2.32	0.66
51:F:119:LEU:CD2	75:e:210:VAL:HG12	2.26	0.66
76:f:120:VAL:HG22	76:f:145:ILE:HG21	1.78	0.66
3:AC:78:ASN:N	7:AG:190:ALA:CB	2.59	0.65
5:AE:227:LEU:O	5:AE:228:ALA:C	2.39	0.65
7:AG:124:GLU:HB2	16:g:11:ARG:HH11	1.60	0.65
8:AH:104:ARG:NH2	12:AL:142:U:H2'	2.10	0.65
11:AK:143:GLU:OE1	18:i:91:ASN:CG	2.37	0.65
11:AK:149:ARG:HG2	20:k:69:TRP:O	1.94	0.65
12:AL:239:A:H5"	32:w:71:PHE:HD2	1.61	0.65
12:AL:379:U:H1'	31:v:12:ARG:NH1	1.99	0.65
12:AL:749:A:H4'	26:q:121:LYS:NZ	1.89	0.65
12:AL:821:U:C2	12:AL:822:U:N3	2.64	0.65
12:AL:894:U:H4'	17:h:204:SER:OG	1.96	0.65
12:AL:1334:U:H3'	12:AL:1335:U:H2'	1.77	0.65
12:AL:1491:U:P	54:I:49:PRO:CB	2.84	0.65
15:Z:46:HIS:CE1	22:m:234:HIS:HB2	2.30	0.65
15:Z:66:ALA:CB	22:m:184:ASN:HA	2.23	0.65
16:g:249:GLY:CA	33:x:55:TYR:CZ	2.79	0.65
21:l:71:PHE:C	21:l:72:ASP:OD1	2.38	0.65
30:u:177:GLN:HB2	30:u:215:ILE:HD13	1.76	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:110:A:H5'	46:A:110:A:H8	1.60	0.65
46:A:595:U:H2'	46:A:595:U:O2	1.95	0.65
46:A:1697:C:H2'	46:A:1698:C:C6	2.31	0.65
46:A:1747:C:O2	46:A:1747:C:H2'	1.95	0.65
46:A:2417:A:H2'	46:A:2418:U:O4'	1.95	0.65
46:A:2585:A:H2'	46:A:2586:U:H5	1.60	0.65
46:A:2748:U:H2'	46:A:2749:A:H8	1.61	0.65
46:A:3288:C:H2'	46:A:3289:U:H6	1.61	0.65
62:Q:252:PRO:HG2	64:S:159:LEU:HB3	1.78	0.65
76:f:81:LEU:CD2	76:f:145:ILE:HG23	2.24	0.65
3:AC:40:ASP:OD1	4:AD:286:VAL:HB	1.95	0.65
6:AF:58:MET:HE2	19:j:30:LYS:HG2	1.77	0.65
6:AF:208:MET:HB2	19:j:425:TRP:HZ3	1.57	0.65
7:AG:120:LYS:CB	16:g:34:GLN:HE21	2.05	0.65
7:AG:127:ILE:HG12	16:g:11:ARG:HH12	1.61	0.65
7:AG:191:LEU:O	7:AG:192:GLU:C	2.39	0.65
8:AH:208:GLU:HB3	30:u:134:ARG:HH11	1.60	0.65
8:AH:231:PHE:HE2	33:x:96:PRO:HD2	1.62	0.65
11:AK:132:PHE:CD2	18:i:251:LEU:HD21	2.28	0.65
14:AN:1:A:C2	27:r:72:LYS:O	2.49	0.65
15:Z:85:LEU:HB3	15:Z:88:ARG:HH11	1.60	0.65
16:g:284:SER:O	16:g:291:VAL:HA	1.96	0.65
18:i:88:ASN:CG	25:p:53:GLU:OE2	2.39	0.65
19:j:391:LEU:HD22	19:j:398:ALA:HA	1.76	0.65
24:o:248:LYS:C	24:o:250:GLY:N	2.54	0.65
26:q:165:ILE:O	26:q:195:VAL:HA	1.97	0.65
46:A:511:G:H2'	46:A:512:U:H6	1.60	0.65
46:A:704:U:H2'	46:A:705:C:C6	2.30	0.65
46:A:772:A:H2'	46:A:773:U:C6	2.30	0.65
46:A:795:U:H2'	46:A:796:A:H8	1.60	0.65
46:A:809:C:H2'	46:A:810:U:C6	2.30	0.65
46:A:955:A:H2'	46:A:956:A:C8	2.31	0.65
46:A:1712:A:H5"	47:B:362:TRP:CD2	2.30	0.65
46:A:1724:A:H62	47:B:154:LEU:HD11	1.61	0.65
63:R:193:LEU:CD2	63:R:250:CYS:HB3	2.26	0.65
63:R:272:GLU:HA	63:R:275:LYS:CG	2.26	0.65
3:AC:55:GLY:HA2	7:AG:121:ILE:CB	2.25	0.65
5:AE:65:ILE:HG23	5:AE:90:PRO:CA	2.25	0.65
7:AG:91:LEU:CD1	23:n:74:TRP:CH2	2.79	0.65
8:AH:224:PHE:HD1	21:l:18:LYS:NZ	1.94	0.65
9:AI:115:PHE:CZ	9:AI:447:LEU:HD11	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:75:ARG:HH22	20:k:85:ASN:HA	1.60	0.65
12:AL:687:U:H2'	12:AL:688:C:C6	2.31	0.65
12:AL:1046:U:H5'	29:t:24:ASP:OD1	1.96	0.65
12:AL:1295:A:H2'	12:AL:1296:A:H8	1.62	0.65
16:g:3:LEU:CB	17:h:211:TYR:HE2	2.06	0.65
18:i:306:TYR:HB2	18:i:309:MET:HE2	1.78	0.65
21:l:66:HIS:HE1	33:x:137:LEU:CB	2.09	0.65
29:t:48:MET:C	29:t:50:LEU:H	2.04	0.65
32:w:102:GLN:OE1	32:w:106:GLU:OE2	2.15	0.65
34:y:42:ILE:CD1	34:y:76:PHE:HE2	2.07	0.65
46:A:86:U:H2'	46:A:87:U:H6	1.62	0.65
46:A:464:C:H2'	46:A:465:U:C6	2.31	0.65
46:A:741:U:H2'	46:A:742:A:H8	1.61	0.65
46:A:3081:U:H2'	46:A:3082:U:C6	2.31	0.65
46:A:3287:U:H2'	46:A:3288:C:H6	1.62	0.65
5:AE:308:LEU:CD2	5:AE:313:ASP:HB3	2.26	0.65
8:AH:168:ARG:NH1	23:n:66:ASP:CG	2.54	0.65
9:AI:177:ILE:HD13	9:AI:320:MET:HE1	1.77	0.65
9:AI:345:ILE:HD11	9:AI:355:LEU:HD13	1.77	0.65
10:AJ:18:ILE:CD1	11:AK:261:GLU:HG3	2.26	0.65
11:AK:70:TRP:HD1	18:i:173:MET:HG2	1.61	0.65
12:AL:1038:G:H2'	12:AL:1039:A:C8	2.32	0.65
12:AL:1238:G:H3'	12:AL:1239:A:H8	1.62	0.65
26:q:198:ILE:CG2	35:z:106:ILE:HG13	2.26	0.65
40:4:33:TRP:CH2	46:A:1274:A:N7	2.65	0.65
46:A:411:A:H2'	46:A:412:A:C8	2.32	0.65
46:A:925:U:H5"	46:A:1174:G:O6	1.97	0.65
46:A:1006:U:C5	76:f:135:LEU:C	2.74	0.65
46:A:1773:U:H2'	46:A:1774:U:C6	2.31	0.65
46:A:2247:A:H4'	47:B:259:PRO:HG2	1.78	0.65
46:A:2378:A:N6	46:A:2422:A:C8	2.64	0.65
46:A:2675:U:H2'	46:A:2676:G:H8	1.60	0.65
46:A:2972:U:H2'	46:A:2973:A:C8	2.30	0.65
50:E:23:CYS:SG	63:R:73:PRO:HD2	2.36	0.65
76:f:16:ALA:HA	76:f:55:PRO:CA	2.25	0.65
2:AB:41:VAL:HG23	2:AB:63:TRP:HA	1.78	0.65
3:AC:37:VAL:HA	3:AC:41:TYR:HB3	1.79	0.65
3:AC:54:ALA:C	7:AG:143:PRO:CB	2.51	0.65
3:AC:265:SER:C	17:h:128:PRO:CD	2.55	0.65
11:AK:75:ARG:CD	18:i:185:ASN:O	2.43	0.65
12:AL:691:U:C5	12:AL:825:G:O6	2.49	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:902:A:H2'	12:AL:903:A:O4'	1.97	0.65
12:AL:1045:C:C2	29:t:73:GLN:OE1	2.49	0.65
24:o:264:PRO:CG	25:p:101:ASN:ND2	2.59	0.65
30:u:34:SER:O	30:u:35:ALA:C	2.38	0.65
41:5:236:LEU:HD13	61:P:246:LEU:HD23	1.78	0.65
46:A:30:U:O4	48:C:21:SER:N	2.30	0.65
46:A:275:A:H2'	46:A:276:U:C6	2.31	0.65
46:A:1068:C:H2'	46:A:1069:A:H8	1.60	0.65
46:A:3005:A:H2'	46:A:3006:U:C6	2.32	0.65
46:A:3265:U:H2'	46:A:3266:A:H8	1.62	0.65
76:f:77:THR:HG22	76:f:148:VAL:HG12	1.77	0.65
4:AD:175:ARG:H	4:AD:268:ILE:HG12	1.60	0.65
6:AF:44:ARG:HH22	12:AL:495:U:H5'	1.60	0.65
6:AF:58:MET:HG2	19:j:26:PHE:HD2	1.61	0.65
7:AG:120:LYS:CE	16:g:14:GLN:CB	2.75	0.65
8:AH:83:GLN:CG	12:AL:145:A:H5"	2.27	0.65
8:AH:210:ILE:HG22	21:l:39:VAL:CB	2.20	0.65
9:AI:107:LEU:HD11	9:AI:174:ILE:HD12	1.78	0.65
9:AI:431:PHE:CG	24:o:176:ILE:HD11	2.30	0.65
11:AK:161:GLU:CG	25:p:127:TYR:OH	2.45	0.65
11:AK:196:ASN:ND2	12:AL:1318:U:H3'	2.12	0.65
12:AL:15:A:H5'	20:k:261:LYS:HE3	1.64	0.65
12:AL:502:A:H4'	19:j:7:LEU:CD2	2.17	0.65
12:AL:1200:G:N2	12:AL:1203:C:C6	2.53	0.65
12:AL:1381:U:P	34:y:12:VAL:HG23	2.36	0.65
15:Z:46:HIS:HE1	22:m:235:LYS:N	1.94	0.65
25:p:41:LEU:HD22	25:p:112:ARG:HH21	1.61	0.65
37:1:106:ILE:HA	37:1:138:VAL:HG22	1.78	0.65
42:6:66:TYR:HB2	46:A:2424:U:O4	1.97	0.65
46:A:480:C:H2'	46:A:481:A:C8	2.32	0.65
46:A:525:G:O6	55:J:175:LYS:HD3	1.95	0.65
46:A:1712:A:H2'	46:A:1713:C:C6	2.32	0.65
46:A:2300:U:C6	63:R:39:MET:HE1	2.31	0.65
46:A:3064:U:H2'	46:A:3065:U:C6	2.32	0.65
63:R:175:LYS:HB2	63:R:175:LYS:HZ2	1.60	0.65
3:AC:217:TRP:CD2	17:h:146:LEU:HD21	2.31	0.65
7:AG:3:ILE:HD13	23:n:20:ARG:CZ	2.26	0.65
8:AH:103:ARG:HH22	31:v:79:GLY:C	2.03	0.65
11:AK:292:TYR:CZ	24:o:179:ASN:HA	2.31	0.65
12:AL:1120:U:O2	17:h:282:ASN:ND2	2.30	0.65
12:AL:1636:U:OP2	16:g:61:ARG:NH1	2.28	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:g:249:GLY:N	33:x:55:TYR:CZ	2.64	0.65
18:i:114:LEU:HD11	29:t:15:GLY:H	1.57	0.65
19:j:149:MET:HA	19:j:451:VAL:HA	1.79	0.65
22:m:116:HIS:CE1	22:m:186:ARG:HB3	2.32	0.65
26:q:214:MET:CE	35:z:140:MET:CG	2.70	0.65
46:A:316:G:C8	64:S:128:LYS:HD2	2.31	0.65
46:A:505:C:H4'	46:A:567:U:H4'	1.78	0.65
46:A:595:U:O4	70:Y:73:ARG:HB2	1.97	0.65
46:A:1081:A:H2'	46:A:1082:U:C6	2.31	0.65
46:A:1348:U:O2'	65:T:129:ASN:OD1	2.14	0.65
46:A:1720:U:H1'	47:B:135:ASN:HD21	1.61	0.65
46:A:1779:A:H2'	46:A:1780:U:H6	1.60	0.65
46:A:2777:U:H2'	46:A:2778:C:O4'	1.96	0.65
75:e:65:SER:HB2	75:e:146:ASN:HB2	1.79	0.65
4:AD:143:ILE:HG23	4:AD:148:SER:HA	1.77	0.65
4:AD:170:TRP:HB2	4:AD:199:LEU:HD12	1.78	0.65
6:AF:330:LYS:HA	12:AL:404:U:H4'	1.79	0.65
7:AG:174:TYR:HE1	16:g:107:PHE:CE2	2.15	0.65
11:AK:134:PHE:CD2	20:k:112:LEU:CD2	2.80	0.65
12:AL:34:G:H5'	19:j:486:LYS:HG3	1.77	0.65
12:AL:741:A:H5'	26:q:203:LYS:HB3	1.78	0.65
12:AL:1313:U:O2	12:AL:1314:U:O4	2.14	0.65
12:AL:1320:A:C5	25:p:80:PRO:HD3	2.32	0.65
12:AL:1327:A:H1'	12:AL:1423:U:H4'	1.78	0.65
12:AL:1627:U:C4'	35:z:158:PHE:HE1	2.09	0.65
16:g:50:LEU:HD12	16:g:54:ILE:HD11	1.78	0.65
18:i:311:ILE:HA	18:i:315:PRO:HG2	1.77	0.65
21:l:17:PRO:HB2	21:l:47:ILE:HD11	1.78	0.65
30:u:196:ARG:HH12	30:u:261:LYS:HE3	1.62	0.65
46:A:89:A:H2'	46:A:90:A:C8	2.31	0.65
46:A:905:A:H2'	46:A:908:C:H42	1.62	0.65
46:A:1530:U:P	47:B:94:LYS:NZ	2.69	0.65
46:A:1722:U:O4'	47:B:141:VAL:HG21	1.97	0.65
46:A:1986:A:H2'	46:A:1987:G:H8	1.61	0.65
46:A:2594:A:H2'	46:A:2595:U:H6	1.62	0.65
46:A:2771:G:H5'	46:A:2772:U:H4'	1.79	0.65
9:AI:60:TRP:HB2	22:m:210:VAL:HG23	1.76	0.65
9:AI:368:VAL:HG12	9:AI:369:THR:H	1.61	0.65
10:AJ:14:LEU:CD1	11:AK:222:LEU:HD21	2.26	0.65
12:AL:700:U:OP2	23:n:1:MET:CE	2.39	0.65
12:AL:785:A:O2'	33:x:109:ILE:O	2.14	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1255:U:OP2	28:s:105:ARG:NH1	2.28	0.65
25:p:77:LYS:HE2	25:p:79:LEU:CD2	2.22	0.65
32:w:47:ASP:O	32:w:49:GLY:N	2.29	0.65
34:y:32:PRO:HA	34:y:50:LYS:O	1.97	0.65
46:A:929:G:C8	73:c:30:ARG:NH2	2.65	0.65
46:A:964:A:H2'	46:A:965:U:C6	2.31	0.65
46:A:1004:A:H5'	76:f:140:GLY:HA3	1.76	0.65
46:A:1015:A:C5	46:A:1016:C:H1'	2.31	0.65
46:A:1368:U:H2'	46:A:1369:U:C6	2.32	0.65
46:A:2428:A:OP2	50:E:170:LYS:NZ	2.30	0.65
63:R:60:GLY:N	63:R:87:ALA:O	2.28	0.65
4:AD:151:GLU:OE1	16:g:106:PRO:CA	2.38	0.65
4:AD:168:PHE:N	4:AD:201:THR:O	2.30	0.65
6:AF:209:ASP:CB	19:j:446:LYS:HG2	2.19	0.65
7:AG:120:LYS:HE3	16:g:14:GLN:HB3	1.77	0.65
8:AH:93:GLN:NE2	12:AL:221:U:C3'	2.59	0.65
11:AK:144:LEU:CD1	18:i:319:LEU:CD1	2.75	0.65
12:AL:419:U:H2'	12:AL:420:A:H8	1.59	0.65
12:AL:658:G:OP1	19:j:50:GLN:CG	2.44	0.65
12:AL:1335:U:H3	28:s:18:ILE:HD13	1.62	0.65
12:AL:1631:U:O2'	33:x:66:HIS:ND1	2.28	0.65
30:u:46:ARG:HA	30:u:49:LYS:HD2	1.79	0.65
34:y:13:TRP:O	34:y:15:GLY:N	2.31	0.65
39:3:17:LEU:HD21	46:A:1319:A:H2	1.60	0.65
46:A:73:U:H2'	46:A:74:A:H8	1.61	0.65
46:A:854:A:H2'	46:A:855:U:H6	1.60	0.65
46:A:1248:A:H2'	46:A:1249:U:C6	2.31	0.65
46:A:1332:A:H2	46:A:1578:A:N3	1.95	0.65
46:A:1535:A:H2'	46:A:1536:A:C8	2.31	0.65
46:A:2027:U:H3'	46:A:2028:A:C8	2.31	0.65
46:A:3263:U:H5"	71:a:181:ALA:CB	2.27	0.65
65:T:55:PRO:HG2	68:W:153:LEU:HD21	1.79	0.65
4:AD:149:LEU:HD12	4:AD:152:PHE:HD2	1.61	0.64
5:AE:278:TYR:OH	5:AE:282:ARG:HG2	1.97	0.64
11:AK:107:LEU:HD11	18:i:168:ASN:O	1.92	0.64
11:AK:193:GLU:H	18:i:101:ASN:ND2	1.94	0.64
12:AL:327:U:H2'	12:AL:328:C:H6	1.62	0.64
12:AL:657:G:OP2	19:j:6:ASN:OD1	2.14	0.64
12:AL:785:A:H2	33:x:109:ILE:HD11	1.59	0.64
12:AL:1325:A:H4'	12:AL:1326:U:OP1	1.97	0.64
15:Z:38:LEU:HD23	22:m:164:MET:HE1	1.77	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:g:45:ARG:HG3	17:h:170:PRO:CG	2.26	0.64
16:g:48:TRP:CE3	16:g:63:LEU:HD22	2.33	0.64
16:g:246:ALA:HA	16:g:251:VAL:HA	1.79	0.64
17:h:197:GLN:H	17:h:348:THR:HG1	1.44	0.64
18:i:150:ASN:CG	20:k:78:LEU:CB	2.58	0.64
18:i:176:MET:HE1	20:k:92:TRP:C	2.22	0.64
18:i:368:LEU:HD12	29:t:111:LYS:CG	2.25	0.64
19:j:98:PHE:HB3	19:j:101:LEU:HD12	1.78	0.64
19:j:442:GLU:HB3	19:j:451:VAL:HB	1.79	0.64
20:k:15:HIS:CD2	20:k:15:HIS:H	2.14	0.64
20:k:289:VAL:HG11	23:n:124:GLY:CA	2.27	0.64
21:l:3:TYR:CD2	21:l:78:GLN:HG3	2.31	0.64
29:t:60:LEU:HD11	34:y:20:PRO:CA	2.28	0.64
30:u:100:LYS:CA	32:w:167:LEU:HD21	2.19	0.64
46:A:351:C:H2'	46:A:352:A:C8	2.32	0.64
46:A:716:A:O2'	55:J:110:GLN:HG2	1.98	0.64
46:A:1164:U:H2'	46:A:1165:A:H8	1.62	0.64
46:A:1386:A:O3'	64:S:65:ILE:O	2.14	0.64
46:A:1391:U:H2'	46:A:1392:A:H8	1.61	0.64
46:A:1535:A:OP1	47:B:151:ARG:NH2	2.28	0.64
46:A:1759:A:H2'	46:A:1760:U:O4'	1.96	0.64
46:A:2185:U:H2'	46:A:2186:U:C6	2.32	0.64
46:A:3240:A:H2'	46:A:3241:U:O2	1.97	0.64
63:R:261:ASN:HB3	63:R:267:HIS:CD2	2.32	0.64
4:AD:172:VAL:HG12	4:AD:269:PRO:HA	1.80	0.64
7:AG:124:GLU:CB	16:g:11:ARG:HH11	2.10	0.64
9:AI:69:LEU:O	9:AI:70:GLN:C	2.41	0.64
11:AK:154:TYR:O	20:k:54:PHE:CZ	2.50	0.64
12:AL:339:U:H2'	12:AL:340:C:C6	2.32	0.64
12:AL:699:A:C2	12:AL:714:U:C2	2.85	0.64
12:AL:1172:A:C2	25:p:114:TRP:CH2	2.86	0.64
28:s:92:ARG:HH21	28:s:104:THR:CG2	1.99	0.64
37:1:234:PRO:HB3	63:R:129:PHE:CD1	2.32	0.64
45:9:41:LEU:HD13	71:a:119:ILE:HD11	1.79	0.64
46:A:211:A:H2'	46:A:212:A:C8	2.32	0.64
46:A:1020:U:OP1	75:e:134:LYS:HG3	1.96	0.64
46:A:1898:C:H2'	46:A:1899:C:C6	2.32	0.64
46:A:2085:A:H2'	46:A:2086:U:H6	1.62	0.64
46:A:3071:U:H2'	46:A:3072:A:O4'	1.98	0.64
63:R:129:PHE:CE2	63:R:131:ARG:HB2	2.32	0.64
3:AC:123:ILE:HG23	3:AC:127:PHE:HD2	1.61	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:264:ILE:HG21	17:h:132:LEU:HD21	1.77	0.64
5:AE:299:GLU:O	5:AE:302:ARG:HB3	1.96	0.64
8:AH:153:ILE:CD1	23:n:41:GLN:HE22	2.11	0.64
12:AL:46:A:N6	12:AL:407:U:H3	1.96	0.64
12:AL:515:A:H3'	12:AL:516:A:C8	2.31	0.64
12:AL:550:U:C5'	19:j:131:ARG:HD2	2.26	0.64
12:AL:711:A:OP1	32:w:79:ARG:NH1	2.23	0.64
12:AL:1134:A:H2'	15:Z:83:ALA:CB	2.27	0.64
16:g:200:ILE:CD1	16:g:287:LYS:HD3	2.19	0.64
17:h:144:GLN:HE21	24:o:119:GLN:CB	2.10	0.64
21:l:114:SER:C	21:l:116:GLY:H	2.03	0.64
22:m:124:HIS:O	22:m:125:GLY:C	2.40	0.64
25:p:92:PRO:CA	29:t:96:TYR:CE2	2.80	0.64
32:w:189:ARG:O	32:w:193:LEU:HD23	1.98	0.64
33:x:69:ARG:HA	33:x:72:GLN:CD	2.21	0.64
46:A:1663:A:H2'	46:A:1664:A:C8	2.32	0.64
46:A:2759:U:H2'	46:A:2760:G:O4'	1.96	0.64
46:A:3007:A:H2'	46:A:3008:U:C6	2.31	0.64
46:A:3073:A:C2	46:A:3105:U:C2	2.86	0.64
7:AG:11:LEU:H	7:AG:11:LEU:HD23	1.61	0.64
7:AG:124:GLU:HB3	16:g:11:ARG:CD	2.23	0.64
8:AH:21:ILE:HD11	31:v:74:TYR:CB	2.21	0.64
9:AI:131:THR:OG1	9:AI:132:ASN:N	2.29	0.64
9:AI:450:ARG:O	22:m:114:LEU:CB	2.45	0.64
12:AL:530:A:C6	12:AL:532:U:H1'	2.32	0.64
12:AL:553:U:H2'	12:AL:554:A:C8	2.32	0.64
12:AL:777:U:P	21:l:55:LYS:HZ1	2.21	0.64
12:AL:898:U:H3'	12:AL:899:U:C6	2.32	0.64
12:AL:1216:A:C1'	24:o:256:TYR:CG	2.80	0.64
12:AL:1630:A:N6	15:Z:24:ARG:NH1	2.46	0.64
18:i:191:LEU:O	18:i:193:ASN:N	2.30	0.64
18:i:379:ASN:HB3	18:i:392:LYS:HG2	1.79	0.64
25:p:85:ARG:NH2	29:t:115:TRP:CE2	2.53	0.64
30:u:103:ALA:HB1	32:w:165:LEU:CD2	2.26	0.64
46:A:224:U:H2'	46:A:225:A:C8	2.33	0.64
46:A:1531:C:N1	47:B:326:TRP:CE3	2.66	0.64
46:A:2608:C:H2'	46:A:2609:G:O4'	1.97	0.64
3:AC:69:LYS:CD	12:AL:1640:U:N3	2.60	0.64
3:AC:169:ASN:HB3	7:AG:197:PHE:CZ	2.33	0.64
8:AH:21:ILE:HA	31:v:74:TYR:CZ	2.32	0.64
8:AH:32:ILE:HA	8:AH:35:LYS:HB3	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:56:LEU:CB	22:m:214:GLU:HG3	2.26	0.64
9:AI:60:TRP:N	22:m:210:VAL:CG2	2.60	0.64
9:AI:60:TRP:HD1	22:m:140:LEU:HD11	1.62	0.64
11:AK:209:LEU:HD22	11:AK:259:LEU:HD21	1.79	0.64
12:AL:40:G:H2'	12:AL:41:C:H6	1.63	0.64
12:AL:232:U:O2'	31:v:78:VAL:HG12	1.93	0.64
12:AL:279:A:O2'	12:AL:280:G:H8	1.81	0.64
12:AL:823:G:H5"	12:AL:945:C:H1'	1.79	0.64
21:l:14:SER:OG	26:q:108:TYR:CB	2.44	0.64
24:o:248:LYS:O	24:o:250:GLY:N	2.31	0.64
33:x:94:ALA:O	33:x:95:ARG:C	2.39	0.64
46:A:465:U:H5"	55:J:87:LYS:NZ	2.12	0.64
46:A:805:G:H1	46:A:821:U:H3	1.45	0.64
46:A:1013:G:O4'	76:f:122:GLU:OE1	2.16	0.64
46:A:1245:U:H2'	46:A:1246:A:C8	2.32	0.64
46:A:1520:C:H42	46:A:3021:A:H61	1.42	0.64
46:A:2408:A:H2'	46:A:2408:A:N3	2.13	0.64
63:R:308:ALA:HA	63:R:311:PHE:CE2	2.32	0.64
69:X:31:ALA:O	69:X:32:PRO:C	2.41	0.64
2:AB:94:TYR:C	2:AB:96:ASN:N	2.54	0.64
3:AC:40:ASP:OD2	4:AD:286:VAL:HG21	1.94	0.64
7:AG:166:VAL:HG22	16:g:196:PHE:HE1	1.60	0.64
9:AI:350:ARG:HG2	9:AI:351:THR:N	2.11	0.64
9:AI:413:LEU:HD11	9:AI:449:HIS:ND1	2.11	0.64
12:AL:753:A:C5'	26:q:129:GLY:CA	2.74	0.64
12:AL:785:A:O2'	33:x:109:ILE:CA	2.46	0.64
12:AL:1012:G:H5"	28:s:107:ASN:ND2	2.12	0.64
12:AL:1220:A:H5'	29:t:112:LYS:NZ	2.13	0.64
15:Z:10:LEU:HD12	35:z:165:LEU:CD2	2.27	0.64
18:i:82:ASN:HB3	18:i:85:GLN:HG3	1.79	0.64
26:q:70:LYS:HB3	26:q:97:ASP:OD1	1.97	0.64
39:3:106:LYS:HA	46:A:124:U:OP2	1.97	0.64
46:A:502:A:H4'	46:A:503:A:OP1	1.96	0.64
46:A:645:U:H2'	46:A:646:C:C6	2.33	0.64
46:A:781:G:N3	46:A:2294:A:H2'	2.12	0.64
46:A:948:U:H5'	46:A:948:U:H6	1.62	0.64
46:A:2412:A:H2'	46:A:2413:A:H8	1.59	0.64
46:A:2827:A:O2'	46:A:2828:A:H5'	1.98	0.64
46:A:2883:C:H2'	46:A:2884:U:H6	1.61	0.64
3:AC:169:ASN:OD1	7:AG:197:PHE:CE1	2.50	0.64
12:AL:1118:C:P	20:k:187:ARG:NH2	2.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1335:U:H5'	28:s:44:TRP:HZ2	1.61	0.64
15:Z:55:VAL:HG11	22:m:163:LEU:HD11	1.78	0.64
17:h:293:GLN:HB2	24:o:40:LYS:CG	2.07	0.64
20:k:25:TYR:CE2	25:p:21:PRO:HG3	2.31	0.64
28:s:85:ILE:CD1	34:y:67:ASP:HB3	1.14	0.64
46:A:741:U:H2'	46:A:742:A:C8	2.33	0.64
46:A:1073:A:N6	46:A:1079:A:N6	2.46	0.64
76:f:148:VAL:HG23	76:f:154:ILE:HD12	1.80	0.64
7:AG:224:VAL:CG1	33:x:45:LEU:HB3	2.27	0.64
8:AH:71:VAL:HG13	8:AH:111:PHE:HB3	1.78	0.64
8:AH:100:ALA:CA	12:AL:143:A:C5'	2.76	0.64
12:AL:65:C:H2'	12:AL:66:G:C8	2.26	0.64
12:AL:1207:U:O2'	12:AL:1208:A:C5'	2.44	0.64
12:AL:1411:G:O3'	24:o:272:MET:CB	2.45	0.64
32:w:16:MET:HE3	32:w:19:THR:HB	1.79	0.64
32:w:76:GLU:HG2	32:w:77:ILE:N	2.13	0.64
32:w:128:ILE:C	32:w:130:THR:H	2.06	0.64
32:w:128:ILE:HG13	32:w:147:ILE:HG21	1.80	0.64
46:A:171:A:H2'	46:A:172:A:H8	1.57	0.64
46:A:730:U:H2'	46:A:731:U:C6	2.33	0.64
46:A:913:C:OP1	73:c:118:LYS:HA	1.98	0.64
46:A:1088:A:H2'	46:A:1089:A:H8	1.63	0.64
46:A:1720:U:H1'	47:B:135:ASN:ND2	2.13	0.64
46:A:2068:C:H2'	46:A:2069:U:C6	2.32	0.64
46:A:2659:A:H2'	46:A:2660:A:C8	2.33	0.64
46:A:2674:U:C2	46:A:2675:U:C5	2.86	0.64
46:A:3265:U:H2'	46:A:3266:A:C8	2.32	0.64
7:AG:227:GLU:HA	7:AG:230:LEU:HD23	1.79	0.64
8:AH:174:GLU:OE1	8:AH:174:GLU:CA	2.46	0.64
9:AI:329:SER:HB2	9:AI:383:LYS:HE2	1.79	0.64
9:AI:335:ALA:O	9:AI:336:ASN:C	2.40	0.64
11:AK:237:SER:OG	12:AL:1316:A:OP1	2.15	0.64
12:AL:405:A:H2'	12:AL:406:U:C6	2.33	0.64
12:AL:630:U:H3'	12:AL:631:G:C8	2.32	0.64
12:AL:752:A:H4'	26:q:130:CYS:HA	1.80	0.64
12:AL:1391:G:H1'	12:AL:1431:U:H4'	1.79	0.64
12:AL:1411:G:OP1	24:o:275:TRP:N	2.31	0.64
15:Z:94:HIS:CD2	17:h:203:ARG:HG3	2.32	0.64
25:p:92:PRO:CA	29:t:96:TYR:HE2	2.11	0.64
27:r:42:ARG:HH21	27:r:44:LYS:HE2	1.62	0.64
46:A:15:A:H2'	46:A:16:A:O4'	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:19:G:H2'	46:A:20:A:H8	1.63	0.64
46:A:480:C:H2'	46:A:481:A:H8	1.63	0.64
46:A:1530:U:OP1	47:B:94:LYS:CE	2.46	0.64
46:A:1608:U:C3'	48:C:201:HIS:NE2	2.61	0.64
46:A:2454:U:O2'	50:E:263:HIS:ND1	2.22	0.64
6:AF:110:ARG:HH21	6:AF:117:PRO:HD2	1.62	0.64
6:AF:136:PRO:HG2	19:j:436:ILE:HD12	1.75	0.64
7:AG:114:TRP:HD1	16:g:205:GLY:O	1.80	0.64
8:AH:16:PRO:HA	31:v:35:LYS:CE	2.27	0.64
8:AH:16:PRO:HA	31:v:35:LYS:HE2	1.78	0.64
9:AI:60:TRP:CE3	22:m:136:ARG:HD3	2.33	0.64
9:AI:372:HIS:HD2	12:AL:1279:A:O2'	1.79	0.64
11:AK:183:THR:HG22	25:p:145:ARG:HG2	1.80	0.64
11:AK:195:PRO:HG2	12:AL:1290:A:C4	2.33	0.64
12:AL:745:U:H2'	12:AL:746:A:C8	2.32	0.64
17:h:136:ALA:HB3	17:h:139:LYS:HG2	1.80	0.64
18:i:315:PRO:C	20:k:69:TRP:CH2	2.76	0.64
32:w:35:LYS:HG3	32:w:37:LEU:HG	1.80	0.64
41:5:138:ALA:HB2	41:5:244:LEU:HD12	1.80	0.64
45:9:175:LYS:CE	46:A:23:U:H5'	2.28	0.64
46:A:214:A:H2'	46:A:215:A:H8	1.63	0.64
46:A:418:A:H2'	46:A:419:U:H6	1.63	0.64
46:A:730:U:H2'	46:A:731:U:H6	1.63	0.64
46:A:1435:A:H2'	46:A:1436:U:C6	2.33	0.64
46:A:2001:U:H3'	46:A:2002:U:H6	1.63	0.64
46:A:2063:A:N3	46:A:2064:G:H1'	2.13	0.64
46:A:2270:U:H2'	46:A:2271:U:C6	2.33	0.64
46:A:2662:A:H2	46:A:2688:G:H22	1.46	0.64
46:A:2961:A:H2'	46:A:2962:U:C6	2.33	0.64
6:AF:344:TYR:HB3	31:v:15:ARG:HH12	1.62	0.63
7:AG:122:LEU:HD13	16:g:36:ILE:HD12	1.80	0.63
7:AG:127:ILE:CD1	16:g:11:ARG:NH1	2.61	0.63
8:AH:164:LEU:O	23:n:63:VAL:HB	1.99	0.63
9:AI:301:ALA:O	9:AI:302:TYR:C	2.40	0.63
12:AL:258:G:OP1	32:w:68:LYS:HD2	1.93	0.63
12:AL:625:A:N6	12:AL:655:A:H5'	2.13	0.63
12:AL:1046:U:H4'	29:t:77:ARG:HH22	0.81	0.63
12:AL:1336:U:H3	12:AL:1338:A:H62	1.46	0.63
16:g:200:ILE:HD12	16:g:287:LYS:CG	2.20	0.63
16:g:272:ARG:HB2	33:x:60:PHE:HZ	1.56	0.63
19:j:78:GLN:O	19:j:79:LEU:C	2.42	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:1:156:MET:HG3	50:E:33:VAL:HG11	1.80	0.63
46:A:537:U:H2'	46:A:538:A:C8	2.32	0.63
46:A:2007:A:N6	46:A:2080:U:H3	1.96	0.63
46:A:2205:G:C2'	46:A:2206:U:O4'	2.45	0.63
47:B:241:LEU:HD13	47:B:246:ILE:HG12	1.80	0.63
63:R:100:PHE:O	63:R:102:PRO:HD3	1.99	0.63
76:f:19:ALA:HA	76:f:43:PHE:HD1	1.62	0.63
1:AA:80:VAL:HG23	12:AL:1462:A:N7	2.13	0.63
2:AB:107:LYS:HD3	2:AB:107:LYS:H	1.63	0.63
5:AE:120:PHE:HB3	5:AE:162:LEU:HD13	1.80	0.63
5:AE:123:TRP:HD1	5:AE:124:THR:HG23	1.64	0.63
5:AE:227:LEU:HD11	5:AE:280:ILE:CG2	2.28	0.63
5:AE:301:ILE:O	5:AE:305:GLN:HB2	1.98	0.63
8:AH:180:ARG:HD2	12:AL:815:C:P	2.38	0.63
9:AI:70:GLN:O	9:AI:71:GLN:C	2.41	0.63
11:AK:161:GLU:O	11:AK:165:LEU:HB3	1.98	0.63
12:AL:329:U:H3'	12:AL:330:G:H8	1.62	0.63
12:AL:1382:C:O2	12:AL:1383:U:C6	2.51	0.63
12:AL:1401:A:H8	12:AL:1401:A:H5'	1.63	0.63
16:g:47:GLU:OE2	17:h:366:LEU:HB3	1.97	0.63
17:h:293:GLN:N	24:o:38:VAL:O	2.31	0.63
18:i:104:MET:SD	18:i:107:MET:HE1	2.37	0.63
18:i:145:SER:HB2	25:p:134:ALA:HA	1.79	0.63
20:k:140:ILE:HA	20:k:144:LEU:HD12	1.79	0.63
26:q:184:VAL:HG21	35:z:117:PHE:CE2	2.27	0.63
31:v:43:TYR:CE1	31:v:63:LYS:HD3	2.33	0.63
46:A:253:A:H2'	46:A:254:G:C8	2.34	0.63
46:A:425:A:N3	46:A:425:A:H2'	2.11	0.63
46:A:2444:A:H2'	46:A:2445:G:C8	2.34	0.63
46:A:2744:A:C8	46:A:2796:G:C5	2.87	0.63
46:A:3023:U:H2'	46:A:3024:U:C6	2.33	0.63
46:A:3174:U:H2'	46:A:3175:A:H8	1.61	0.63
63:R:155:LYS:HG3	63:R:159:LEU:HD23	1.80	0.63
1:AA:108:SER:O	1:AA:111:ARG:HB2	1.97	0.63
2:AB:48:ILE:HG22	2:AB:90:GLN:HE21	1.62	0.63
2:AB:81:ILE:HA	2:AB:84:ARG:NH1	2.12	0.63
3:AC:153:LEU:HB3	3:AC:224:VAL:HB	1.79	0.63
6:AF:52:THR:OG1	12:AL:498:A:C8	2.47	0.63
7:AG:92:TYR:OH	23:n:21:VAL:CG1	2.45	0.63
12:AL:660:G:O6	19:j:2:PRO:HD3	1.97	0.63
12:AL:724:U:C2	12:AL:725:A:C8	2.86	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1576:U:H5”	46:A:1861:C:H4’	1.80	0.63
13:AM:19:G:H4’	13:AM:20:U:H5”	1.79	0.63
18:i:145:SER:O	18:i:146:LEU:C	2.41	0.63
18:i:216:ASN:HB3	18:i:219:ILE:HB	1.78	0.63
30:u:127:ASP:HB2	30:u:130:LYS:HB2	1.78	0.63
46:A:203:U:H2’	46:A:204:A:N9	2.12	0.63
46:A:468:U:H1’	46:A:873:A:O4’	1.98	0.63
46:A:969:A:H5’	46:A:1056:A:C2	2.33	0.63
46:A:1821:G:H2’	46:A:1822:G:H8	1.63	0.63
46:A:2717:A:H2’	46:A:2717:A:N3	2.13	0.63
63:R:215:ARG:HD3	63:R:255:ASN:CG	2.24	0.63
2:AB:111:PHE:CZ	12:AL:101:U:C2	2.82	0.63
4:AD:260:PHE:HA	16:g:223:GLN:HG2	1.81	0.63
6:AF:147:TYR:HB3	6:AF:217:PRO:HB2	1.79	0.63
7:AG:147:GLU:OE2	16:g:14:GLN:CA	2.45	0.63
8:AH:75:ILE:HD13	8:AH:108:ILE:HG23	1.80	0.63
12:AL:744:A:H2’	12:AL:745:U:H6	1.61	0.63
12:AL:1123:U:H2’	12:AL:1124:G:C8	2.32	0.63
12:AL:1136:A:OP1	15:Z:79:ASN:OD1	2.17	0.63
12:AL:1264:U:OP1	24:o:276:VAL:HG13	1.99	0.63
12:AL:1427:U:H5”	29:t:87:VAL:O	1.98	0.63
17:h:314:GLN:CG	17:h:316:LYS:HG2	2.28	0.63
19:j:175:ASP:HB3	19:j:402:ILE:HG21	1.81	0.63
21:l:83:ARG:HH22	47:B:80:ILE:CD1	2.06	0.63
26:q:131:LEU:HD23	26:q:147:THR:HG23	1.80	0.63
46:A:19:G:H2’	46:A:20:A:C8	2.33	0.63
46:A:311:A:H5”	62:Q:260:HIS:HE2	1.61	0.63
46:A:1284:A:H2’	46:A:1284:A:N3	2.12	0.63
46:A:1499:A:H2’	46:A:1500:U:C6	2.34	0.63
46:A:1544:A:H2’	46:A:1545:U:C6	2.34	0.63
63:R:45:ARG:HB2	63:R:47:LEU:HG	1.79	0.63
69:X:32:PRO:O	69:X:33:LEU:C	2.41	0.63
2:AB:90:GLN:HB3	2:AB:100:ILE:CG2	2.28	0.63
3:AC:69:LYS:HD3	12:AL:1640:U:N3	2.12	0.63
5:AE:215:TRP:CH2	5:AE:248:LEU:HD13	2.33	0.63
6:AF:136:PRO:HG3	19:j:436:ILE:HD12	1.74	0.63
6:AF:319:TYR:HE1	31:v:42:THR:CB	2.11	0.63
7:AG:49:LYS:HE3	23:n:58:LYS:HZ1	1.50	0.63
12:AL:725:A:H3’	12:AL:726:A:H8	1.64	0.63
12:AL:1031:A:H2’	12:AL:1032:A:C8	2.34	0.63
12:AL:1631:U:O2	33:x:66:HIS:CG	2.52	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:i:88:ASN:CA	25:p:53:GLU:OE2	2.46	0.63
21:l:1:MET:CG	30:u:148:GLU:CG	2.74	0.63
22:m:98:TRP:CD1	24:o:242:LEU:HD23	2.33	0.63
46:A:714:A:H2'	46:A:715:U:C6	2.33	0.63
46:A:807:A:H2	46:A:818:U:H3	1.45	0.63
46:A:1069:A:H2'	46:A:1070:A:C8	2.32	0.63
46:A:1306:A:C4	46:A:1598:A:N6	2.67	0.63
46:A:1368:U:H2'	46:A:1369:U:H6	1.64	0.63
46:A:1892:G:H5'	46:A:1894:C:N4	2.13	0.63
46:A:2012:A:N6	46:A:2023:U:C4'	2.62	0.63
46:A:2368:U:OP1	63:R:322:ARG:NH2	2.31	0.63
46:A:2444:A:H2'	46:A:2445:G:H8	1.62	0.63
56:K:187:VAL:HG11	73:c:130:PHE:CD2	2.34	0.63
63:R:219:ARG:HG2	63:R:223:LYS:HD3	1.80	0.63
63:R:294:THR:HA	63:R:371:LEU:HD22	1.81	0.63
3:AC:206:LYS:HA	3:AC:209:LYS:HB2	1.81	0.63
5:AE:267:LEU:O	5:AE:271:LEU:N	2.30	0.63
6:AF:48:LYS:CD	12:AL:489:A:C8	2.69	0.63
8:AH:79:VAL:HB	8:AH:104:ARG:HB3	1.79	0.63
9:AI:305:TYR:HE1	28:s:42:TYR:HB2	1.63	0.63
9:AI:310:ASN:ND2	28:s:34:LYS:CG	2.51	0.63
12:AL:1162:C:C4'	29:t:115:TRP:HB2	2.26	0.63
12:AL:1646:U:C1'	17:h:176:TYR:HD2	2.12	0.63
15:Z:42:SER:CA	22:m:238:ILE:CG2	2.76	0.63
21:l:83:ARG:NH1	47:B:80:ILE:HD13	2.14	0.63
30:u:74:PRO:HG2	32:w:100:GLU:CB	2.29	0.63
30:u:246:ASN:C	30:u:248:ASP:N	2.55	0.63
46:A:534:A:H5"	63:R:142:LYS:NZ	2.13	0.63
46:A:588:C:H2'	46:A:589:A:H8	1.62	0.63
46:A:685:G:H2'	46:A:686:U:C6	2.34	0.63
46:A:780:U:O2'	46:A:781:G:H5'	1.99	0.63
46:A:1015:A:H4'	76:f:117:LEU:CD2	2.28	0.63
46:A:1091:A:H2'	46:A:1092:G:O4'	1.99	0.63
46:A:1110:A:C2'	46:A:1111:U:H5'	2.29	0.63
46:A:1310:A:O2'	46:A:1311:A:H5'	1.97	0.63
46:A:1327:A:H2'	46:A:1328:C:C6	2.34	0.63
46:A:1837:A:H62	46:A:1840:U:H5	1.46	0.63
46:A:2712:G:H2'	46:A:2713:G:O4'	1.97	0.63
46:A:2731:C:H2'	46:A:2732:G:C8	2.34	0.63
46:A:2762:C:P	56:K:127:ARG:NH1	2.72	0.63
46:A:3279:U:H2'	46:A:3280:C:C6	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:117:LEU:O	63:R:119:SER:N	2.29	0.63
6:AF:61:PHE:CE1	19:j:29:TYR:CG	2.85	0.63
7:AG:77:THR:CG2	8:AH:179:LYS:CD	2.76	0.63
9:AI:226:LEU:HD13	9:AI:230:TYR:CD2	2.34	0.63
9:AI:249:ASN:O	9:AI:253:ASN:HB2	1.99	0.63
11:AK:138:PRO:HG3	18:i:322:LYS:O	1.99	0.63
11:AK:174:ARG:HH12	11:AK:177:PRO:HD3	1.63	0.63
12:AL:1151:G:OP1	24:o:97:LYS:CE	2.47	0.63
12:AL:1628:A:C2	35:z:166:ILE:CG2	2.81	0.63
16:g:3:LEU:HD11	17:h:211:TYR:HD2	1.62	0.63
30:u:156:ALA:O	30:u:157:VAL:C	2.40	0.63
45:9:98:HIS:CE1	46:A:3276:U:O2	2.52	0.63
46:A:26:A:C5	71:a:112:TYR:HA	2.33	0.63
46:A:1077:A:O2'	46:A:1078:U:C5'	2.41	0.63
46:A:1431:U:H2'	46:A:1432:A:C8	2.34	0.63
46:A:1757:A:H3'	46:A:1758:U:H6	1.64	0.63
46:A:2839:A:H8	48:C:209:GLN:HG2	1.64	0.63
46:A:2857:A:H2'	46:A:2858:C:H6	1.63	0.63
50:E:251:ALA:HB1	67:V:63:TYR:CE1	2.32	0.63
2:AB:89:LYS:HE3	12:AL:388:G:OP1	1.98	0.63
2:AB:118:LYS:H	2:AB:118:LYS:HD2	1.63	0.63
4:AD:105:PRO:HG2	4:AD:283:ASP:HB3	1.80	0.63
4:AD:193:TYR:HD1	4:AD:310:PRO:HG2	1.62	0.63
5:AE:279:LEU:HD21	5:AE:315:TYR:N	2.13	0.63
5:AE:323:GLY:O	5:AE:327:THR:N	2.31	0.63
6:AF:58:MET:CG	19:j:26:PHE:HB3	2.25	0.63
7:AG:173:ARG:HH21	16:g:107:PHE:HE1	1.47	0.63
8:AH:91:SER:HA	8:AH:94:LYS:HD2	1.81	0.63
10:AJ:53:ILE:HG21	18:i:114:LEU:HD13	1.81	0.63
11:AK:192:GLU:CD	18:i:100:TYR:H	2.05	0.63
11:AK:298:TRP:HZ2	24:o:175:GLU:HB2	1.63	0.63
12:AL:16:G:P	20:k:261:LYS:HD3	2.38	0.63
12:AL:331:A:H3'	12:AL:332:A:H8	1.61	0.63
18:i:180:MET:HG2	20:k:92:TRP:CE3	2.34	0.63
18:i:331:PHE:HB3	18:i:335:LEU:HD12	1.80	0.63
19:j:104:ARG:HA	19:j:143:THR:HA	1.81	0.63
19:j:125:ILE:HG12	19:j:130:VAL:CG2	2.26	0.63
29:t:60:LEU:HD12	34:y:20:PRO:HG3	1.80	0.63
31:v:22:ASN:HA	31:v:42:THR:HA	1.80	0.63
32:w:6:PHE:CD2	32:w:60:ILE:HD11	2.30	0.63
32:w:117:LYS:HD3	32:w:117:LYS:C	2.24	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:167:U:H2'	46:A:168:A:O4'	1.99	0.63
46:A:620:G:H4'	46:A:654:U:H5'	1.80	0.63
46:A:888:G:H2'	46:A:889:U:C6	2.33	0.63
46:A:1069:A:H2'	46:A:1070:A:H8	1.64	0.63
46:A:1259:A:H2'	46:A:1260:U:H6	1.63	0.63
46:A:1604:A:H2'	46:A:1605:U:O4'	1.99	0.63
46:A:1959:A:OP1	49:D:112:GLY:CA	2.47	0.63
46:A:3150:U:N3	46:A:3153:U:H5	1.96	0.63
63:R:294:THR:CA	63:R:371:LEU:HD22	2.28	0.63
3:AC:69:LYS:HE3	12:AL:1637:A:OP2	1.97	0.63
4:AD:173:ALA:HB1	4:AD:193:TYR:HB2	1.79	0.63
5:AE:102:LEU:HD23	5:AE:141:HIS:CD2	2.33	0.63
7:AG:3:ILE:HG23	23:n:20:ARG:NH1	2.03	0.63
9:AI:56:LEU:CD1	22:m:211:ARG:NH2	2.55	0.63
11:AK:132:PHE:CZ	18:i:251:LEU:HD11	2.33	0.63
12:AL:233:C:HO2'	31:v:27:ASN:ND2	1.71	0.63
12:AL:691:U:O2	12:AL:824:A:C6	2.52	0.63
12:AL:718:A:H61	12:AL:816:U:H3	1.47	0.63
12:AL:835:C:H2'	12:AL:836:U:H6	1.63	0.63
12:AL:1106:U:OP2	18:i:392:LYS:HE2	1.97	0.63
12:AL:1153:A:H5"	18:i:351:THR:HB	1.81	0.63
13:AM:62:C:H2'	13:AM:63:C:H4'	1.79	0.63
14:AN:8:A:O2'	14:AN:9:C:H5"	1.99	0.63
30:u:105:ILE:HG22	30:u:109:LYS:HE2	1.80	0.63
30:u:132:GLU:CD	32:w:126:ARG:HG2	2.24	0.63
32:w:13:GLN:HB2	32:w:54:GLU:HB2	1.81	0.63
32:w:131:ILE:HG22	32:w:144:LEU:HD12	1.81	0.63
32:w:193:LEU:HD13	32:w:200:CYS:HB3	1.81	0.63
35:z:94:GLU:O	35:z:95:ASN:C	2.38	0.63
46:A:825:A:H2'	46:A:826:A:C8	2.33	0.63
46:A:944:U:H2'	46:A:945:A:C8	2.34	0.63
46:A:1015:A:O3'	76:f:117:LEU:HD22	1.99	0.63
46:A:1849:U:H2'	46:A:1850:A:C8	2.34	0.63
46:A:1852:A:C8	54:I:43:VAL:HG21	2.34	0.63
46:A:2018:C:H5'	46:A:2019:A:OP2	1.98	0.63
46:A:2019:A:H62	46:A:2061:U:H3	1.46	0.63
46:A:2916:U:H2'	46:A:2917:U:C6	2.33	0.63
63:R:174:ASP:CG	63:R:178:LYS:HE3	2.24	0.63
76:f:78:GLY:HA2	76:f:148:VAL:CG2	2.29	0.63
2:AB:111:PHE:CE2	12:AL:101:U:C5	2.61	0.62
4:AD:260:PHE:HA	16:g:223:GLN:CG	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:61:PHE:CZ	19:j:29:TYR:CD2	2.87	0.62
7:AG:120:LYS:HD2	16:g:34:GLN:HE22	1.63	0.62
8:AH:21:ILE:HG23	31:v:74:TYR:CE1	2.31	0.62
8:AH:64:PRO:CB	12:AL:133:U:N3	2.60	0.62
9:AI:297:VAL:HG12	9:AI:325:MET:HE2	1.79	0.62
11:AK:170:GLN:HE21	25:p:120:VAL:HG21	1.58	0.62
12:AL:524:A:H62	31:v:104:LYS:HD3	1.62	0.62
12:AL:759:A:H2'	12:AL:760:A:O4'	1.99	0.62
12:AL:821:U:C2'	12:AL:822:U:O5'	2.47	0.62
12:AL:823:G:O2'	12:AL:824:A:P	2.57	0.62
12:AL:1105:G:H4'	18:i:390:ASN:HD21	1.62	0.62
12:AL:1213:G:H8	24:o:247:HIS:CE1	2.04	0.62
12:AL:1351:U:O4	12:AL:1357:A:C8	2.52	0.62
28:s:85:ILE:HD11	34:y:67:ASP:HB3	0.79	0.62
29:t:56:LEU:HD13	34:y:18:ILE:CG1	2.21	0.62
35:z:135:SER:C	35:z:137:ARG:H	2.06	0.62
46:A:372:A:H2'	46:A:373:U:C6	2.33	0.62
46:A:1073:A:H2'	46:A:1074:U:C6	2.34	0.62
46:A:1424:U:H2'	46:A:1425:U:C6	2.34	0.62
46:A:1786:A:H8	46:A:1786:A:O5'	1.82	0.62
46:A:1816:A:H2'	46:A:1817:U:C6	2.33	0.62
46:A:2321:A:N3	46:A:2322:U:H5	1.97	0.62
46:A:2712:G:H2'	46:A:2713:G:C1'	2.29	0.62
3:AC:8:ILE:HA	3:AC:50:THR:CG2	2.29	0.62
4:AD:98:GLN:HB3	4:AD:301:GLU:HB2	1.82	0.62
4:AD:277:PRO:HB3	4:AD:281:LEU:HD22	1.81	0.62
5:AE:315:TYR:CG	5:AE:316:ASP:N	2.61	0.62
6:AF:123:LYS:O	6:AF:125:LEU:N	2.31	0.62
7:AG:77:THR:CG2	8:AH:179:LYS:HD2	2.29	0.62
7:AG:91:LEU:HD12	23:n:74:TRP:CH2	2.34	0.62
7:AG:120:LYS:CE	16:g:14:GLN:HB3	2.29	0.62
8:AH:233:ASP:O	8:AH:234:ALA:C	2.42	0.62
9:AI:210:ARG:CD	12:AL:1348:U:C5	2.79	0.62
11:AK:172:TYR:HE2	25:p:115:ASP:CB	2.05	0.62
12:AL:417:U:H2'	12:AL:418:A:C8	2.33	0.62
12:AL:637:A:N1	27:r:116:GLN:HB2	2.15	0.62
12:AL:1370:A:C2	12:AL:1371:U:C4	2.87	0.62
17:h:290:TRP:CZ2	24:o:49:PRO:CD	2.81	0.62
18:i:306:TYR:CE2	25:p:28:TYR:HE2	2.17	0.62
18:i:311:ILE:HG13	20:k:58:TYR:HE2	1.63	0.62
38:2:50:SER:HB2	46:A:2426:A:H5'	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1187:U:H2'	46:A:1188:U:C6	2.34	0.62
46:A:1430:U:H3'	46:A:1431:U:C6	2.34	0.62
46:A:2207:A:H2'	46:A:2208:A:C8	2.30	0.62
46:A:2323:A:H3'	46:A:2324:U:H5'	1.80	0.62
46:A:2814:U:H5'	46:A:2833:A:C2	2.34	0.62
46:A:2839:A:OP2	48:C:209:GLN:CG	2.47	0.62
76:f:38:ASP:HA	76:f:41:LYS:HD3	1.81	0.62
3:AC:78:ASN:HA	7:AG:190:ALA:HB2	1.82	0.62
3:AC:148:LEU:HB3	4:AD:203:ASN:HB3	1.81	0.62
3:AC:265:SER:CB	17:h:129:TYR:OH	2.47	0.62
4:AD:77:LYS:HB3	4:AD:81:VAL:HG23	1.80	0.62
6:AF:58:MET:CB	19:j:26:PHE:CD2	2.81	0.62
6:AF:88:ILE:CD1	19:j:28:LEU:HD21	2.29	0.62
6:AF:153:LEU:HD21	6:AF:177:LEU:HD11	1.81	0.62
7:AG:49:LYS:HE2	23:n:58:LYS:HZ1	1.61	0.62
7:AG:60:LEU:HD21	23:n:70:THR:CG2	2.28	0.62
10:AJ:57:ARG:O	10:AJ:58:HIS:C	2.42	0.62
11:AK:237:SER:OG	12:AL:1316:A:OP2	2.17	0.62
12:AL:753:A:C4'	26:q:129:GLY:HA2	2.27	0.62
12:AL:862:C:OP1	26:q:215:ARG:CD	2.46	0.62
12:AL:1181:A:C2	25:p:78:PRO:CG	2.82	0.62
12:AL:1540:U:N3	12:AL:1541:U:C4	2.68	0.62
12:AL:1630:A:C5'	35:z:170:LYS:HE2	2.18	0.62
16:g:51:LYS:CG	17:h:217:ILE:HD13	2.29	0.62
22:m:117:ILE:HD11	22:m:157:LEU:HD21	1.81	0.62
46:A:26:A:N1	71:a:113:HIS:N	2.47	0.62
46:A:926:A:H2'	46:A:927:A:H8	1.63	0.62
46:A:1239:A:N6	46:A:1271:A:H62	1.96	0.62
46:A:1608:U:C3'	48:C:201:HIS:HE2	2.13	0.62
46:A:2388:G:H2'	46:A:2388:G:N3	2.14	0.62
46:A:2470:A:H2'	46:A:2471:A:H8	1.64	0.62
46:A:2927:C:OP1	51:F:211:LYS:HE2	1.99	0.62
50:E:251:ALA:CB	67:V:63:TYR:CD2	2.82	0.62
55:J:157:MET:HA	55:J:160:MET:HB2	1.80	0.62
2:AB:94:TYR:O	2:AB:95:ARG:C	2.42	0.62
5:AE:95:LYS:NZ	12:AL:1523:A:H4'	2.13	0.62
8:AH:208:GLU:CA	30:u:134:ARG:HD3	2.29	0.62
11:AK:51:TYR:HD2	11:AK:72:ARG:HA	1.64	0.62
11:AK:132:PHE:CG	18:i:248:MET:CE	2.46	0.62
11:AK:241:PHE:HE2	11:AK:250:TYR:HB2	1.64	0.62
12:AL:325:A:H2'	12:AL:326:C:C6	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:536:U:H2'	12:AL:537:A:C8	2.34	0.62
12:AL:550:U:H5'	19:j:131:ARG:CD	2.25	0.62
12:AL:1327:A:O2'	12:AL:1423:U:C5'	2.43	0.62
25:p:102:PHE:HE1	29:t:103:LEU:HD23	1.64	0.62
32:w:189:ARG:O	32:w:192:GLU:HG3	2.00	0.62
46:A:2063:A:C4	46:A:2064:G:H1'	2.35	0.62
46:A:2716:A:N3	46:A:2717:A:H3'	2.14	0.62
46:A:3018:A:N6	46:A:3027:U:H3	1.97	0.62
9:AI:422:TRP:CD1	9:AI:426:ILE:HD11	2.35	0.62
11:AK:144:LEU:CD1	18:i:319:LEU:HD11	2.19	0.62
12:AL:779:A:H2'	12:AL:780:G:C8	2.34	0.62
12:AL:861:C:OP1	26:q:215:ARG:HA	2.00	0.62
12:AL:1411:G:O2'	24:o:272:MET:CA	2.47	0.62
15:Z:43:SER:CB	26:q:186:LYS:HZ2	2.10	0.62
18:i:106:ILE:HG21	29:t:92:ARG:HG3	1.81	0.62
21:l:36:ARG:HG3	30:u:140:ARG:HG2	1.82	0.62
46:A:1057:A:C2'	46:A:1058:U:H5'	2.29	0.62
46:A:1558:G:H5"	46:A:1558:G:H8	1.64	0.62
46:A:2414:U:H2'	46:A:2415:A:H8	1.64	0.62
46:A:2641:C:OP1	72:b:144:ARG:NH1	2.32	0.62
46:A:2779:A:H2'	46:A:2780:A:C8	2.34	0.62
5:AE:118:ASP:O	5:AE:122:GLU:HG3	1.99	0.62
7:AG:116:LEU:CD2	16:g:34:GLN:HB2	2.29	0.62
7:AG:166:VAL:HB	16:g:195:LYS:HE3	1.81	0.62
9:AI:162:GLN:O	9:AI:165:ALA:HB3	2.00	0.62
9:AI:189:ASP:OD2	9:AI:202:PRO:HB2	2.00	0.62
11:AK:75:ARG:HH22	20:k:85:ASN:CA	2.13	0.62
12:AL:401:A:H3'	12:AL:401:A:N3	2.14	0.62
12:AL:1056:U:H4'	12:AL:1058:G:H5"	1.82	0.62
12:AL:1105:G:OP2	18:i:332:LYS:NZ	2.32	0.62
12:AL:1486:A:H1'	46:A:1859:G:H4'	1.82	0.62
12:AL:1646:U:H1'	17:h:176:TYR:HD2	1.65	0.62
13:AM:32:C:OP2	24:o:277:LYS:CE	2.44	0.62
15:Z:16:LEU:HD11	35:z:162:PHE:CD1	2.34	0.62
21:l:1:MET:HG2	30:u:148:GLU:HG3	1.81	0.62
22:m:141:VAL:HA	22:m:217:THR:HG22	1.81	0.62
30:u:268:LYS:O	30:u:269:LYS:C	2.41	0.62
46:A:74:A:H2'	46:A:75:A:H8	1.64	0.62
46:A:861:A:H2'	46:A:862:U:C6	2.34	0.62
46:A:1029:A:H4'	46:A:1030:C:OP2	2.00	0.62
46:A:1638:C:C2'	46:A:1639:A:H5'	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1647:G:H1'	47:B:98:PRO:O	2.00	0.62
46:A:1666:A:H2'	46:A:1667:A:C8	2.34	0.62
46:A:1760:U:O2'	46:A:1761:A:H5'	2.00	0.62
46:A:1932:G:C2	48:C:209:GLN:NE2	2.67	0.62
46:A:2258:C:H2'	46:A:2259:U:H6	1.65	0.62
46:A:3287:U:H2'	46:A:3288:C:C6	2.34	0.62
4:AD:175:ARG:HA	4:AD:193:TYR:HA	1.79	0.62
5:AE:195:ARG:HG3	5:AE:199:LYS:HD2	1.82	0.62
6:AF:137:PHE:CE2	19:j:467:SER:C	2.77	0.62
7:AG:125:ASN:O	7:AG:126:GLU:C	2.42	0.62
7:AG:206:ILE:HD11	16:g:227:VAL:CG1	2.29	0.62
10:AJ:26:SER:O	12:AL:1299:A:C4	2.53	0.62
11:AK:162:LEU:CB	25:p:68:TYR:CE2	2.80	0.62
12:AL:1008:U:O2'	24:o:274:THR:HG21	1.99	0.62
14:AN:10:C:H5'	14:AN:10:C:C6	2.34	0.62
18:i:93:TRP:CG	29:t:109:GLY:N	2.58	0.62
18:i:148:LYS:CE	20:k:79:HIS:H	2.12	0.62
26:q:85:ASN:O	26:q:138:ARG:HG3	2.00	0.62
26:q:131:LEU:HD21	26:q:150:ARG:HB3	1.82	0.62
33:x:70:LYS:HD2	33:x:71:TYR:CZ	2.35	0.62
37:1:323:ARG:HH12	63:R:123:GLU:HA	1.64	0.62
46:A:200:G:C3'	46:A:201:A:H5'	2.30	0.62
46:A:592:C:H2'	46:A:593:G:C8	2.35	0.62
46:A:2905:A:H2'	46:A:2906:U:O4'	1.99	0.62
63:R:298:LYS:O	63:R:301:ILE:HG22	2.00	0.62
4:AD:202:TYR:O	4:AD:203:ASN:C	2.42	0.62
8:AH:205:VAL:HG22	30:u:134:ARG:NH2	2.14	0.62
9:AI:236:ASN:O	9:AI:240:ALA:HB2	2.00	0.62
9:AI:294:PHE:CE2	9:AI:298:LEU:HG	2.35	0.62
12:AL:785:A:C2	33:x:109:ILE:CD1	2.82	0.62
16:g:246:ALA:HB1	33:x:55:TYR:CD1	2.34	0.62
21:l:125:ASN:HA	21:l:128:TYR:CB	2.30	0.62
21:l:128:TYR:O	21:l:129:GLN:C	2.43	0.62
26:q:198:ILE:HG22	35:z:106:ILE:CG1	2.27	0.62
30:u:75:PHE:HE2	30:u:164:PHE:CE1	2.18	0.62
46:A:969:A:H3'	46:A:969:A:OP2	1.99	0.62
46:A:2232:A:H2'	46:A:2233:U:H6	1.64	0.62
46:A:2665:U:H2'	46:A:2666:A:O4'	1.99	0.62
46:A:2730:G:H2'	46:A:2731:C:C6	2.34	0.62
75:e:61:MET:HE2	75:e:105:TYR:HE1	1.65	0.62
1:AA:95:LYS:NZ	12:AL:1579:A:O3'	2.31	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:45:LYS:O	5:AE:49:ASP:N	2.33	0.62
7:AG:13:ARG:HH21	17:h:339:ARG:HG2	1.64	0.62
8:AH:142:LYS:HA	8:AH:145:LYS:HE2	1.81	0.62
9:AI:283:SER:HB3	9:AI:335:ALA:CB	2.30	0.62
10:AJ:74:GLN:C	10:AJ:76:ARG:H	2.08	0.62
12:AL:323:U:C2	12:AL:324:G:C8	2.88	0.62
12:AL:607:U:H2'	12:AL:608:U:H6	1.63	0.62
12:AL:827:G:O2'	12:AL:828:A:H5'	2.00	0.62
12:AL:1011:A:H3'	12:AL:1012:G:N2	2.15	0.62
12:AL:1057:U:N3	12:AL:1060:A:N7	2.47	0.62
12:AL:1411:G:O3'	24:o:272:MET:CG	2.48	0.62
18:i:176:MET:CE	20:k:92:TRP:O	2.43	0.62
18:i:212:TYR:C	18:i:214:TYR:H	2.08	0.62
20:k:292:GLY:O	23:n:78:LYS:NZ	2.33	0.62
30:u:252:MET:SD	30:u:257:PHE:HB2	2.39	0.62
34:y:71:HIS:HB3	34:y:76:PHE:CE1	2.34	0.62
46:A:24:G:H2'	46:A:25:A:C8	2.35	0.62
46:A:330:A:HO2'	46:A:331:A:H8	1.46	0.62
46:A:525:G:C2	55:J:177:LEU:HD11	2.35	0.62
46:A:1892:G:H5'	46:A:1894:C:H41	1.64	0.62
46:A:2202:U:C2	46:A:2203:A:C8	2.87	0.62
46:A:2598:U:H4'	46:A:2602:A:H62	1.63	0.62
46:A:2674:U:H2'	46:A:2675:U:H6	1.65	0.62
46:A:2937:A:H2'	46:A:2938:A:C8	2.35	0.62
2:AB:63:TRP:O	2:AB:67:PHE:HB2	2.00	0.62
3:AC:78:ASN:ND2	7:AG:186:GLU:HB3	2.14	0.62
7:AG:94:PRO:HG3	17:h:207:GLN:OE1	2.00	0.62
7:AG:127:ILE:CD1	16:g:11:ARG:HH12	2.13	0.62
12:AL:14:A:OP1	20:k:238:PHE:HZ	1.83	0.62
12:AL:323:U:O2'	12:AL:324:G:H5'	1.99	0.62
12:AL:492:G:C2	12:AL:498:A:C5	2.87	0.62
15:Z:38:LEU:CD2	22:m:164:MET:CE	2.77	0.62
24:o:62:LEU:HB3	24:o:63:ARG:HH22	1.65	0.62
46:A:750:U:H2'	46:A:751:A:H8	1.63	0.62
46:A:1073:A:H61	46:A:1079:A:N6	1.98	0.62
46:A:1144:U:C2'	46:A:1145:U:H5'	2.30	0.62
46:A:1163:A:H2'	46:A:1164:U:H6	1.64	0.62
46:A:1323:U:H2'	46:A:1324:U:C6	2.35	0.62
46:A:1536:A:H2'	46:A:1537:A:C8	2.34	0.62
46:A:2010:A:C2	46:A:2076:A:C6	2.81	0.62
46:A:2358:A:H2'	46:A:2359:U:C6	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2936:U:H2'	46:A:2937:A:C8	2.35	0.62
63:R:200:ARG:NH1	63:R:221:TYR:CG	2.68	0.62
75:e:66:MET:HE1	75:e:150:VAL:HA	1.82	0.62
76:f:16:ALA:CA	76:f:55:PRO:HA	2.26	0.62
1:AA:108:SER:CB	1:AA:111:ARG:NH2	2.63	0.61
3:AC:90:HIS:CB	17:h:161:GLY:HA3	2.30	0.61
7:AG:52:SER:C	7:AG:54:GLY:H	2.08	0.61
8:AH:210:ILE:CG2	21:l:39:VAL:CA	2.77	0.61
9:AI:60:TRP:HA	22:m:210:VAL:HG22	1.81	0.61
11:AK:99:VAL:HB	18:i:171:TYR:CE2	2.35	0.61
11:AK:149:ARG:CG	20:k:69:TRP:O	2.47	0.61
12:AL:217:U:H2'	12:AL:218:A:H8	1.64	0.61
12:AL:501:U:H4'	12:AL:502:A:O5'	1.99	0.61
12:AL:784:A:H61	33:x:133:GLN:HE22	1.49	0.61
12:AL:896:A:H4'	15:Z:9:ARG:NH2	2.15	0.61
12:AL:1496:A:H2	30:u:41:LEU:CD2	2.12	0.61
21:l:120:ILE:O	21:l:124:VAL:N	2.33	0.61
23:n:103:MET:HG3	23:n:145:LYS:HA	1.81	0.61
30:u:174:SER:HA	30:u:215:ILE:CD1	2.15	0.61
30:u:253:GLN:HE21	30:u:263:LEU:N	1.98	0.61
34:y:42:ILE:CD1	34:y:76:PHE:CE2	2.81	0.61
46:A:1253:U:H2'	46:A:1254:U:C6	2.35	0.61
46:A:1735:U:H2'	46:A:1736:G:O4'	1.98	0.61
46:A:1815:U:H2'	46:A:1816:A:C8	2.35	0.61
46:A:2016:A:H5'	46:A:2016:A:N3	2.15	0.61
46:A:2581:U:H2'	46:A:2582:U:H6	1.64	0.61
76:f:128:LYS:HE2	76:f:138:MET:HB2	1.80	0.61
3:AC:155:LEU:O	3:AC:221:ILE:N	2.34	0.61
3:AC:162:LYS:O	3:AC:163:LEU:C	2.43	0.61
7:AG:166:VAL:HG13	16:g:196:PHE:CD1	2.34	0.61
8:AH:231:PHE:HZ	21:l:48:ARG:CD	2.08	0.61
9:AI:314:TYR:HD2	9:AI:316:LEU:HB2	1.64	0.61
11:AK:185:ARG:HG3	25:p:143:PHE:CE2	2.35	0.61
12:AL:930:A:OP2	20:k:223:ARG:NH2	2.33	0.61
14:AN:1:A:H1'	27:r:72:LYS:HB2	1.80	0.61
26:q:96:GLU:HG2	26:q:97:ASP:H	1.65	0.61
26:q:97:ASP:CG	26:q:99:ASN:HB2	2.25	0.61
26:q:137:ALA:C	26:q:139:GLY:H	2.06	0.61
46:A:940:A:H2'	46:A:941:U:C6	2.35	0.61
46:A:986:U:H2'	46:A:987:G:C8	2.34	0.61
46:A:2006:U:H2'	46:A:2007:A:N7	2.14	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:193:LEU:HD11	63:R:247:ILE:HA	1.82	0.61
76:f:121:TYR:HD2	76:f:142:VAL:HG22	1.64	0.61
3:AC:148:LEU:HD11	4:AD:82:ASN:HB3	0.68	0.61
5:AE:278:TYR:CE1	5:AE:301:ILE:HG12	2.35	0.61
6:AF:149:LEU:HB3	6:AF:153:LEU:HD23	1.80	0.61
8:AH:34:ASN:C	8:AH:36:VAL:N	2.56	0.61
8:AH:64:PRO:CB	12:AL:133:U:C4	2.58	0.61
8:AH:199:LEU:CD2	30:u:93:TYR:CE1	2.69	0.61
9:AI:56:LEU:HD23	9:AI:63:THR:HG21	1.81	0.61
9:AI:164:HIS:CE1	9:AI:176:ASN:HB2	2.35	0.61
10:AJ:93:LYS:CE	12:AL:1058:G:O6	2.48	0.61
11:AK:299:LYS:HE2	24:o:151:PHE:HA	1.80	0.61
12:AL:271:U:H2'	12:AL:272:U:C6	2.35	0.61
12:AL:537:A:H8	12:AL:537:A:OP2	1.84	0.61
12:AL:871:C:H2'	12:AL:872:U:C6	2.34	0.61
12:AL:1261:A:H2	28:s:107:ASN:CG	2.06	0.61
12:AL:1442:G:H5'	22:m:125:GLY:HA2	1.82	0.61
15:Z:38:LEU:CD2	22:m:164:MET:HE1	2.30	0.61
17:h:294:GLU:OE1	24:o:35:ARG:HD3	1.98	0.61
21:l:33:ILE:C	21:l:35:ASN:H	2.06	0.61
22:m:246:LEU:C	22:m:247:LYS:HD2	2.25	0.61
32:w:57:LEU:HB3	32:w:78:ILE:HG22	1.82	0.61
34:y:21:LEU:HB3	34:y:23:ILE:HG13	1.82	0.61
46:A:523:U:C5'	55:J:194:ARG:NH1	2.63	0.61
46:A:920:A:H2'	46:A:921:G:C8	2.35	0.61
46:A:1391:U:H2'	46:A:1392:A:C8	2.36	0.61
46:A:2216:U:H3	46:A:2232:A:H61	1.48	0.61
46:A:2261:A:H2'	46:A:2262:U:C6	2.35	0.61
46:A:2782:A:H2'	46:A:2783:U:C6	2.35	0.61
63:R:242:GLU:O	63:R:246:LYS:HG3	1.99	0.61
6:AF:58:MET:HB3	19:j:26:PHE:CE2	2.35	0.61
6:AF:333:ARG:N	6:AF:333:ARG:HE	1.99	0.61
8:AH:64:PRO:HG2	12:AL:131:A:OP1	1.98	0.61
8:AH:162:GLN:HG3	23:n:60:PHE:CE1	2.36	0.61
8:AH:208:GLU:CB	30:u:134:ARG:HH11	2.12	0.61
10:AJ:40:LYS:HE3	10:AJ:42:PRO:HG2	1.79	0.61
11:AK:65:ILE:O	11:AK:66:LEU:C	2.44	0.61
11:AK:182:VAL:HG22	25:p:148:ILE:HG22	1.79	0.61
13:AM:76:A:N6	46:A:2689:A:C5	2.68	0.61
15:Z:66:ALA:CA	22:m:184:ASN:HA	2.29	0.61
16:g:214:LEU:O	16:g:215:LYS:C	2.43	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:g:252:ALA:HB2	16:g:293:MET:HE2	1.81	0.61
16:g:272:ARG:CB	33:x:60:PHE:CZ	2.64	0.61
18:i:237:LEU:HB2	18:i:240:TYR:HB3	1.82	0.61
18:i:316:MET:SD	20:k:69:TRP:HZ2	2.22	0.61
21:l:125:ASN:HA	21:l:128:TYR:HB3	1.80	0.61
23:n:128:LEU:O	23:n:151:LEU:HB2	2.00	0.61
26:q:99:ASN:O	26:q:100:PHE:C	2.44	0.61
30:u:58:LYS:O	30:u:59:ALA:C	2.43	0.61
30:u:60:SER:O	30:u:61:THR:C	2.44	0.61
30:u:107:SER:HA	30:u:110:ARG:NH2	2.15	0.61
46:A:523:U:H5'	55:J:194:ARG:CZ	2.30	0.61
46:A:656:A:H2'	46:A:657:U:C6	2.35	0.61
46:A:742:A:H2'	46:A:743:A:C8	2.35	0.61
46:A:1222:U:H2'	46:A:1223:A:C8	2.31	0.61
46:A:1765:A:N6	46:A:1786:A:C6	2.69	0.61
46:A:1904:A:H2'	46:A:1905:G:O4'	2.00	0.61
75:e:107:ARG:HD3	75:e:130:LEU:HD11	1.83	0.61
3:AC:69:LYS:CD	12:AL:1640:U:H3	2.13	0.61
3:AC:114:GLU:O	3:AC:115:PRO:C	2.42	0.61
7:AG:184:GLU:HG2	16:g:209:SER:CA	2.30	0.61
8:AH:16:PRO:HG2	31:v:35:LYS:CG	2.20	0.61
8:AH:34:ASN:O	8:AH:35:LYS:C	2.42	0.61
11:AK:107:LEU:HD11	18:i:168:ASN:CA	2.30	0.61
11:AK:172:TYR:HD2	25:p:116:THR:CA	2.13	0.61
12:AL:20:A:H2'	12:AL:21:U:O4'	2.01	0.61
12:AL:617:U:N3	12:AL:656:G:C2	2.69	0.61
12:AL:632:C:H5'	12:AL:633:C:H6	1.62	0.61
12:AL:1058:G:H8	12:AL:1247:A:C6	2.18	0.61
12:AL:1096:C:H4'	12:AL:1097:G:O5'	2.00	0.61
12:AL:1285:A:H2'	12:AL:1286:A:C8	2.35	0.61
15:Z:16:LEU:HD11	35:z:162:PHE:CE1	2.33	0.61
16:g:231:ILE:HG12	16:g:278:PHE:HZ	1.63	0.61
20:k:25:TYR:CE1	25:p:21:PRO:CD	2.83	0.61
20:k:59:LEU:CA	25:p:20:TYR:OH	2.47	0.61
20:k:102:GLU:CD	20:k:102:GLU:H	2.09	0.61
27:r:59:LYS:O	27:r:86:THR:HG23	1.99	0.61
32:w:26:THR:O	32:w:38:PHE:HA	2.01	0.61
46:A:326:A:H2'	46:A:329:A:H61	1.66	0.61
46:A:880:G:C6	46:A:890:A:C6	2.88	0.61
46:A:1267:A:H3'	46:A:1268:U:H6	1.65	0.61
46:A:1924:G:H2'	46:A:1925:U:C6	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2476:C:H2'	46:A:2477:U:O4'	2.00	0.61
46:A:2727:A:H1'	46:A:2758:U:N3	2.15	0.61
63:R:329:PHE:O	63:R:362:ARG:NH2	2.34	0.61
6:AF:62:LEU:CD2	19:j:26:PHE:CE1	2.72	0.61
7:AG:1:MET:HE1	17:h:351:GLU:CB	2.25	0.61
7:AG:75:TYR:CZ	32:w:183:ILE:CD1	2.80	0.61
8:AH:224:PHE:CD1	21:l:18:LYS:CG	2.83	0.61
11:AK:115:ALA:HB2	18:i:172:TYR:CE1	2.35	0.61
12:AL:653:A:H2'	12:AL:654:G:C8	2.35	0.61
12:AL:653:A:H2'	12:AL:654:G:H8	1.65	0.61
12:AL:1179:U:C1'	24:o:164:THR:OG1	2.49	0.61
13:AM:35:A:H4'	14:AN:9:C:H42	1.65	0.61
18:i:148:LYS:HE2	20:k:79:HIS:H	1.65	0.61
18:i:329:ILE:HG23	18:i:347:LEU:HB2	1.81	0.61
30:u:87:LEU:HG	32:w:114:ARG:NH1	2.16	0.61
30:u:111:GLU:HA	30:u:114:GLU:HG3	1.83	0.61
46:A:929:G:N7	73:c:30:ARG:NH2	2.45	0.61
46:A:1265:A:H2'	46:A:1266:U:H6	1.64	0.61
46:A:1415:U:H2'	46:A:1416:A:H8	1.61	0.61
46:A:2059:A:H5'	46:A:2060:A:C5	2.36	0.61
46:A:2464:A:H5'	50:E:141:VAL:HG11	1.82	0.61
46:A:2590:U:H3'	46:A:2591:A:H5'	1.81	0.61
46:A:2837:U:H2'	46:A:2838:U:C6	2.36	0.61
46:A:2977:U:O5'	46:A:2977:U:H6	1.83	0.61
3:AC:150:GLN:CD	4:AD:166:ASP:N	2.58	0.61
5:AE:72:GLN:CD	12:AL:1513:A:OP1	2.43	0.61
5:AE:324:LEU:HA	5:AE:327:THR:HG23	1.83	0.61
8:AH:2:GLY:CA	12:AL:299:U:OP2	2.44	0.61
8:AH:100:ALA:CA	12:AL:143:A:H5"	2.30	0.61
8:AH:209:PHE:C	8:AH:215:GLN:HG2	2.26	0.61
9:AI:226:LEU:HD22	9:AI:278:GLU:HG3	1.83	0.61
11:AK:211:LEU:HD22	11:AK:219:PHE:HB2	1.83	0.61
12:AL:622:A:N3	12:AL:657:G:O2'	2.33	0.61
12:AL:1021:U:H5'	34:y:84:SER:HB2	1.73	0.61
12:AL:1580:U:H2'	12:AL:1581:G:H8	1.65	0.61
46:A:723:U:H4'	55:J:102:VAL:CG2	2.30	0.61
46:A:799:U:H3'	46:A:800:A:H8	1.66	0.61
46:A:2062:G:H22	46:A:2065:A:P	2.23	0.61
46:A:2474:U:H2'	46:A:2475:U:C6	2.36	0.61
46:A:2674:U:H2'	46:A:2675:U:C6	2.36	0.61
46:A:2917:U:O2'	46:A:2918:A:O5'	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:3065:U:H2'	46:A:3066:G:C8	2.35	0.61
63:R:138:ARG:HG3	63:R:142:LYS:HZ2	1.64	0.61
3:AC:226:LEU:HD22	3:AC:240:ARG:HE	1.65	0.61
7:AG:67:PRO:HD2	7:AG:68:HIS:HD2	1.66	0.61
11:AK:132:PHE:H	18:i:247:ILE:C	2.08	0.61
11:AK:187:THR:HB	11:AK:197:SER:HA	1.83	0.61
12:AL:1258:U:H6	34:y:83:PHE:CD2	2.18	0.61
18:i:191:LEU:O	18:i:192:CYS:C	2.41	0.61
18:i:397:PHE:O	18:i:398:ILE:C	2.44	0.61
46:A:278:A:N6	46:A:300:A:C6	2.69	0.61
46:A:643:U:H4'	46:A:644:A:O5'	1.98	0.61
46:A:1109:A:N3	51:F:44:ARG:NH1	2.48	0.61
46:A:1184:A:H2'	46:A:1185:U:C6	2.35	0.61
46:A:1265:A:H2'	46:A:1266:U:C6	2.36	0.61
46:A:1311:A:H2'	46:A:1312:G:C8	2.36	0.61
46:A:1358:C:O2'	46:A:1359:G:H5"	2.01	0.61
46:A:1988:A:H2'	46:A:1991:G:C8	2.36	0.61
46:A:2077:A:H3'	46:A:2078:U:C4'	2.27	0.61
46:A:2425:A:C2	67:V:27:ARG:HD2	2.35	0.61
63:R:338:THR:N	63:R:361:ALA:HB3	2.16	0.61
75:e:87:ILE:HD12	75:e:92:GLY:HA3	1.82	0.61
9:AI:70:GLN:O	9:AI:72:THR:N	2.34	0.61
9:AI:190:PHE:CD1	28:s:42:TYR:HB3	2.35	0.61
12:AL:508:C:H5'	19:j:420:PRO:CB	2.28	0.61
12:AL:1512:A:H2'	12:AL:1513:A:C8	2.36	0.61
13:AM:33:U:N3	24:o:278:ARG:CG	2.43	0.61
18:i:126:LYS:HZ1	18:i:130:MET:H	1.48	0.61
19:j:391:LEU:HD13	19:j:402:ILE:HD11	1.83	0.61
21:l:38:VAL:CG2	30:u:141:ILE:CG1	2.79	0.61
22:m:244:ILE:CG2	22:m:247:LYS:HG3	2.24	0.61
26:q:164:ASP:HB3	26:q:196:VAL:CG2	2.31	0.61
31:v:23:ILE:HG21	31:v:67:LEU:HD13	1.82	0.61
40:4:136:LYS:HD2	46:A:1114:U:H3	1.66	0.61
46:A:316:G:C5	64:S:128:LYS:HD2	2.35	0.61
46:A:1088:A:H2'	46:A:1089:A:C8	2.36	0.61
46:A:1178:A:H2'	46:A:1179:U:H6	1.65	0.61
46:A:3109:U:H2'	46:A:3110:U:H6	1.65	0.61
7:AG:22:LEU:CD2	20:k:139:TYR:CD2	2.84	0.61
7:AG:120:LYS:HD3	16:g:34:GLN:HE22	1.65	0.61
8:AH:231:PHE:O	8:AH:233:ASP:N	2.31	0.61
11:AK:112:GLU:CG	18:i:127:LEU:HD22	2.14	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:140:A:H2	31:v:5:LEU:HD22	0.81	0.61
12:AL:719:G:O2'	30:u:177:GLN:OE1	2.16	0.61
12:AL:1099:U:C2	12:AL:1238:G:O6	2.54	0.61
12:AL:1252:G:N3	12:AL:1253:G:N1	2.48	0.61
12:AL:1377:A:O2'	28:s:75:VAL:HG22	2.01	0.61
12:AL:1410:U:OP1	24:o:276:VAL:HA	2.01	0.61
17:h:194:HIS:HB3	17:h:222:LEU:HD11	1.82	0.61
21:l:6:ILE:HD13	33:x:94:ALA:CB	2.31	0.61
26:q:131:LEU:HG	26:q:147:THR:HA	1.83	0.61
26:q:183:LEU:O	26:q:188:GLY:HA3	2.01	0.61
28:s:82:LYS:HB3	34:y:71:HIS:NE2	2.15	0.61
32:w:200:CYS:O	32:w:204:LEU:HG	2.01	0.61
38:2:53:ARG:HB3	46:A:2374:A:OP1	2.00	0.61
46:A:58:A:OP2	61:P:229:ARG:NH2	2.33	0.61
46:A:203:U:H2'	46:A:204:A:C8	2.36	0.61
46:A:639:G:C8	60:O:249:ALA:HB1	2.36	0.61
46:A:823:U:H2'	46:A:823:U:O2	2.01	0.61
46:A:824:U:H2'	46:A:825:A:C8	2.36	0.61
46:A:1746:C:H42	46:A:1799:U:H2'	1.64	0.61
46:A:2001:U:H2'	46:A:2002:U:O4'	2.01	0.61
46:A:2087:A:H2'	46:A:2088:A:C8	2.36	0.61
46:A:2301:C:H4'	63:R:37:THR:HG21	1.83	0.61
2:AB:41:VAL:O	2:AB:44:PHE:HB2	2.00	0.60
3:AC:55:GLY:N	7:AG:143:PRO:HB3	2.12	0.60
7:AG:36:ILE:CD1	17:h:234:LYS:CG	2.68	0.60
8:AH:18:THR:HG23	31:v:38:GLU:OE1	1.95	0.60
8:AH:199:LEU:HD23	30:u:93:TYR:OH	1.96	0.60
10:AJ:14:LEU:CG	11:AK:222:LEU:CD2	2.71	0.60
12:AL:335:A:C2	12:AL:337:A:H1'	2.36	0.60
12:AL:911:U:H2'	12:AL:912:A:C8	2.36	0.60
12:AL:1010:G:H2'	12:AL:1010:G:N3	2.16	0.60
22:m:141:VAL:HA	22:m:217:THR:CG2	2.30	0.60
22:m:178:VAL:HB	22:m:240:HIS:HD2	1.66	0.60
29:t:60:LEU:CD1	34:y:20:PRO:CD	2.77	0.60
30:u:78:ARG:HH12	30:u:163:GLU:CD	2.08	0.60
31:v:1:MET:HE1	31:v:104:LYS:HG3	1.83	0.60
46:A:1141:A:H2'	46:A:1142:U:O4'	2.01	0.60
46:A:2761:C:O3'	56:K:127:ARG:NH2	2.33	0.60
46:A:3064:U:H2'	46:A:3065:U:H6	1.66	0.60
51:F:167:SER:CB	75:e:213:LEU:O	2.49	0.60
63:R:180:LEU:HD23	63:R:184:LEU:HD13	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:272:GLU:HA	63:R:275:LYS:HB2	1.83	0.60
63:R:332:THR:O	63:R:336:VAL:N	2.28	0.60
2:AB:37:GLN:HA	2:AB:37:GLN:HE21	1.66	0.60
6:AF:108:GLN:N	6:AF:116:GLY:O	2.34	0.60
6:AF:136:PRO:HG3	19:j:436:ILE:CD1	2.30	0.60
7:AG:127:ILE:CG1	16:g:11:ARG:HH12	2.13	0.60
8:AH:37:LYS:CE	12:AL:182:A:OP1	2.48	0.60
10:AJ:26:SER:CA	12:AL:1299:A:C4	2.82	0.60
10:AJ:48:TYR:CD2	29:t:28:ARG:HD3	2.36	0.60
12:AL:752:A:H2'	12:AL:767:A:N6	2.14	0.60
16:g:63:LEU:HD12	16:g:77:PHE:CD2	2.35	0.60
17:h:131:ASN:HB2	24:o:118:PRO:O	2.01	0.60
17:h:307:SER:HB2	17:h:310:GLU:HG3	1.83	0.60
20:k:293:ARG:HH21	23:n:42:GLN:HB3	1.66	0.60
21:l:104:GLN:NE2	21:l:119:SER:HB2	2.16	0.60
30:u:162:LYS:HA	30:u:165:GLU:CD	2.26	0.60
46:A:666:G:H21	46:A:684:G:H1'	1.65	0.60
46:A:1247:U:H2'	46:A:1248:A:C8	2.36	0.60
46:A:1972:G:H2'	46:A:1973:C:C6	2.37	0.60
46:A:2016:A:H61	46:A:2022:U:P	2.24	0.60
46:A:2024:A:H2'	46:A:2025:A:O4'	2.01	0.60
46:A:2084:G:H2'	46:A:2085:A:O4'	2.01	0.60
46:A:2301:C:C4'	63:R:37:THR:HG21	2.31	0.60
46:A:3059:C:H2'	46:A:3060:U:C6	2.36	0.60
2:AB:42:ASP:CG	2:AB:56:LYS:HD3	2.26	0.60
3:AC:54:ALA:HB1	7:AG:143:PRO:HA	1.59	0.60
4:AD:71:ASN:HD21	4:AD:77:LYS:HD2	1.64	0.60
4:AD:253:TYR:CE2	16:g:298:LEU:O	2.54	0.60
5:AE:276:GLY:HA2	5:AE:279:LEU:HB2	1.81	0.60
5:AE:278:TYR:HE1	5:AE:301:ILE:HG12	1.65	0.60
6:AF:74:ASN:O	6:AF:75:LYS:C	2.43	0.60
7:AG:3:ILE:CG2	23:n:20:ARG:HH22	1.89	0.60
7:AG:59:LYS:O	23:n:54:MET:HG3	2.01	0.60
7:AG:122:LEU:CD2	16:g:15:VAL:CG2	2.70	0.60
7:AG:154:MET:HB3	7:AG:158:LYS:HE3	1.83	0.60
8:AH:195:LYS:HB3	30:u:93:TYR:HE1	1.66	0.60
9:AI:432:LEU:CD2	24:o:197:MET:SD	2.88	0.60
11:AK:195:PRO:HG3	12:AL:1290:A:C3'	2.31	0.60
11:AK:292:TYR:CD2	24:o:180:GLY:N	2.70	0.60
12:AL:81:U:O2'	12:AL:82:A:H5'	2.00	0.60
12:AL:502:A:P	19:j:7:LEU:CB	2.80	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:741:A:C5'	26:q:203:LYS:HB3	2.31	0.60
12:AL:750:G:C4'	26:q:123:LYS:C	2.72	0.60
12:AL:773:A:H5'	26:q:79:HIS:HD1	1.66	0.60
12:AL:860:C:O2'	26:q:216:ARG:O	2.11	0.60
12:AL:1031:A:C1'	24:o:278:ARG:NH1	2.47	0.60
12:AL:1045:C:O2	29:t:73:GLN:CA	2.47	0.60
19:j:144:LEU:CB	19:j:452:TYR:CD2	2.84	0.60
25:p:76:PRO:O	25:p:77:LYS:C	2.43	0.60
27:r:96:PRO:HG2	27:r:127:ARG:HG2	1.82	0.60
29:t:42:LYS:HD3	29:t:46:ARG:HH22	1.65	0.60
30:u:238:ASP:O	30:u:238:ASP:OD1	2.20	0.60
39:3:30:PHE:HA	46:A:1568:U:C5	2.36	0.60
46:A:599:A:O2'	47:B:133:ARG:NH2	2.34	0.60
46:A:1704:U:H2'	46:A:1705:U:C6	2.37	0.60
46:A:2364:U:H2'	46:A:2365:A:H5'	1.83	0.60
46:A:2858:C:H2'	46:A:2859:G:C8	2.37	0.60
46:A:2917:U:H2'	46:A:2918:A:H8	1.66	0.60
46:A:3050:G:H2'	46:A:3051:U:C6	2.36	0.60
75:e:103:GLU:HB2	75:e:130:LEU:HB3	1.83	0.60
5:AE:50:GLU:OE1	5:AE:94:VAL:HA	2.01	0.60
5:AE:227:LEU:O	5:AE:231:LEU:N	2.27	0.60
7:AG:166:VAL:HG11	16:g:195:LYS:HG2	0.65	0.60
7:AG:205:ALA:HB3	16:g:92:GLU:HB2	1.84	0.60
10:AJ:29:ARG:NH2	34:y:13:TRP:CZ3	2.70	0.60
11:AK:75:ARG:NH2	20:k:85:ASN:CA	2.63	0.60
12:AL:382:U:P	31:v:7:ARG:HH22	2.24	0.60
12:AL:673:A:C2	20:k:266:ARG:NE	2.68	0.60
12:AL:1135:G:H5"	15:Z:17:LYS:HZ2	1.66	0.60
12:AL:1305:A:OP2	12:AL:1305:A:C3'	2.49	0.60
12:AL:1575:A:C2	46:A:1860:U:O4'	2.55	0.60
18:i:155:TYR:HE2	18:i:176:MET:HE2	1.65	0.60
26:q:169:MET:HE2	26:q:169:MET:H	1.66	0.60
27:r:64:ARG:NH2	27:r:82:ARG:HG2	2.17	0.60
46:A:508:U:H2'	46:A:509:A:O4'	2.01	0.60
46:A:603:U:P	47:B:149:ARG:CZ	2.88	0.60
46:A:894:A:H2'	46:A:895:A:C8	2.36	0.60
46:A:1146:A:H2'	46:A:1147:U:C6	2.35	0.60
46:A:1676:U:H2'	46:A:1677:A:H8	1.66	0.60
46:A:2016:A:C1'	46:A:2019:A:H5"	2.31	0.60
46:A:2971:A:H2'	46:A:2972:U:C6	2.37	0.60
46:A:2975:A:H2'	46:A:2976:A:H8	1.62	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:C:43:ASN:HB2	53:H:98:ASP:HA	1.83	0.60
63:R:200:ARG:NH1	63:R:221:TYR:CD1	2.69	0.60
4:AD:210:PHE:CZ	7:AG:196:MET:CA	2.84	0.60
5:AE:215:TRP:HH2	5:AE:248:LEU:HD13	1.67	0.60
5:AE:318:HIS:O	5:AE:321:ALA:HB3	2.02	0.60
8:AH:5:ALA:H	12:AL:298:A:H4'	1.65	0.60
8:AH:93:GLN:CG	12:AL:222:U:P	2.89	0.60
12:AL:413:G:H2'	12:AL:501:U:C5	2.36	0.60
12:AL:414:A:H61	12:AL:501:U:C5'	2.13	0.60
12:AL:1264:U:OP1	24:o:276:VAL:HG11	1.99	0.60
12:AL:1446:A:H1'	12:AL:1447:U:H3'	1.83	0.60
12:AL:1642:U:O2'	24:o:66:ILE:CD1	2.48	0.60
15:Z:36:ASN:HA	15:Z:39:GLN:HB2	1.82	0.60
16:g:41:SER:O	16:g:45:ARG:HG2	2.01	0.60
17:h:298:ASN:HA	17:h:388:LEU:HD22	1.84	0.60
20:k:60:ASP:N	25:p:20:TYR:OH	2.34	0.60
20:k:61:ASP:HB2	25:p:24:VAL:HG11	1.83	0.60
22:m:160:LEU:HD11	22:m:226:ALA:CB	2.29	0.60
24:o:238:PHE:O	24:o:239:ASN:C	2.43	0.60
27:r:43:ARG:HA	27:r:43:ARG:HH11	1.66	0.60
28:s:75:VAL:HA	28:s:78:ASN:HD22	1.67	0.60
46:A:1319:A:N7	57:L:116:ASN:ND2	2.48	0.60
46:A:1542:U:H2'	46:A:1543:A:C8	2.36	0.60
46:A:1768:A:H2'	46:A:1769:U:C5	2.36	0.60
46:A:2590:U:H3'	46:A:2591:A:H5"	1.83	0.60
46:A:2894:A:H4'	46:A:2895:A:O5'	2.02	0.60
46:A:2966:U:H2'	46:A:2967:A:H8	1.66	0.60
2:AB:48:ILE:HB	2:AB:86:TYR:HE2	1.66	0.60
4:AD:67:LEU:O	4:AD:70:GLU:HB2	2.01	0.60
4:AD:155:LEU:CD2	16:g:210:LEU:CB	2.70	0.60
5:AE:166:ILE:O	5:AE:170:PHE:HB2	2.01	0.60
6:AF:58:MET:CE	19:j:26:PHE:HB3	2.32	0.60
9:AI:57:TYR:HA	22:m:205:SER:HB2	1.83	0.60
9:AI:434:GLY:HA2	24:o:183:LEU:HB3	1.84	0.60
10:AJ:33:LYS:HG3	10:AJ:34:ILE:HD12	1.83	0.60
12:AL:109:A:H2	12:AL:332:A:H2'	1.67	0.60
12:AL:381:A:C5'	31:v:7:ARG:HH21	2.14	0.60
12:AL:637:A:C2	27:r:116:GLN:HB3	2.35	0.60
16:g:225:THR:O	16:g:226:VAL:C	2.44	0.60
17:h:155:MET:O	17:h:156:ARG:HB2	2.01	0.60
18:i:303:ASN:HD21	25:p:19:PRO:CA	2.10	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:i:368:LEU:O	29:t:111:LYS:CG	2.48	0.60
32:w:85:PHE:HA	32:w:88:TYR:HD2	1.65	0.60
35:z:106:ILE:HD13	35:z:120:LEU:HB2	1.83	0.60
44:8:209:PRO:HG3	55:J:58:VAL:HG12	1.84	0.60
46:A:319:U:H2'	46:A:320:U:H6	1.67	0.60
46:A:824:U:H2'	46:A:825:A:H8	1.65	0.60
46:A:1711:A:O2'	46:A:1712:A:H5'	2.02	0.60
46:A:2016:A:N6	46:A:2022:U:O5'	2.33	0.60
46:A:2381:G:C6	46:A:2382:A:C5	2.89	0.60
46:A:2869:A:H3'	46:A:2870:G:H5"	1.82	0.60
46:A:3024:U:H2'	46:A:3025:U:H6	1.62	0.60
46:A:3235:U:H2'	46:A:3236:A:H8	1.66	0.60
63:R:286:LEU:CD2	63:R:304:LEU:HD13	2.32	0.60
4:AD:27:PRO:O	4:AD:28:LEU:C	2.42	0.60
5:AE:209:ARG:HA	5:AE:212:GLN:HB2	1.84	0.60
5:AE:304:TYR:HA	5:AE:307:ALA:HB3	1.83	0.60
7:AG:224:VAL:HA	33:x:45:LEU:CD1	2.31	0.60
9:AI:179:TYR:HD2	9:AI:182:LEU:HG	1.65	0.60
12:AL:269:A:H2'	12:AL:271:U:C5	2.36	0.60
12:AL:273:A:O2'	12:AL:274:A:H5'	2.00	0.60
12:AL:315:G:H2'	12:AL:316:A:C8	2.37	0.60
12:AL:414:A:N6	12:AL:501:U:O4'	2.35	0.60
12:AL:510:U:H2'	12:AL:511:A:C8	2.37	0.60
12:AL:698:A:H4'	23:n:5:LYS:HE3	1.83	0.60
12:AL:845:G:H21	12:AL:867:A:H62	1.47	0.60
12:AL:1155:A:O2'	12:AL:1223:A:H1'	2.01	0.60
12:AL:1245:A:H4'	12:AL:1247:A:C6	2.37	0.60
12:AL:1414:A:C5'	24:o:270:ARG:HH11	2.14	0.60
15:Z:43:SER:HB2	26:q:186:LYS:HZ2	1.65	0.60
18:i:110:MET:SD	29:t:79:VAL:HG11	2.41	0.60
30:u:225:GLU:CG	32:w:88:TYR:HD1	1.94	0.60
30:u:232:GLN:CG	32:w:96:VAL:HG21	2.22	0.60
46:A:87:U:H2'	46:A:88:U:C6	2.36	0.60
46:A:148:U:H4'	70:Y:79:PHE:CE1	2.37	0.60
46:A:214:A:H2'	46:A:215:A:C8	2.37	0.60
46:A:753:A:H2'	46:A:754:A:C8	2.37	0.60
46:A:1075:A:C6	46:A:1076:U:H1'	2.37	0.60
46:A:1216:A:H2'	46:A:1217:U:H6	1.64	0.60
46:A:2054:A:H4'	46:A:2055:U:C5'	2.32	0.60
46:A:2578:G:H2'	46:A:2579:A:H8	1.67	0.60
46:A:2724:A:HO2'	46:A:2756:G:H1	1.50	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2906:U:H2'	46:A:2907:U:C6	2.36	0.60
46:A:2978:A:H2'	46:A:2979:U:O4'	2.02	0.60
64:S:105:LEU:HD12	64:S:118:MET:HE1	1.83	0.60
2:AB:46:ASN:CA	2:AB:53:ASN:HB3	2.32	0.60
5:AE:45:LYS:HB2	5:AE:105:PHE:HD2	1.66	0.60
5:AE:277:ILE:O	5:AE:280:ILE:HB	2.02	0.60
7:AG:59:LYS:HG2	7:AG:60:LEU:N	2.15	0.60
7:AG:92:TYR:CZ	23:n:21:VAL:HG13	2.36	0.60
9:AI:420:LYS:NZ	9:AI:428:GLU:OE2	2.35	0.60
9:AI:449:HIS:HB3	22:m:150:ILE:CG1	2.32	0.60
11:AK:107:LEU:HD12	18:i:168:ASN:O	1.95	0.60
12:AL:491:U:H3	12:AL:498:A:H61	1.48	0.60
12:AL:491:U:C2	12:AL:499:A:C2	2.88	0.60
12:AL:804:U:H2'	12:AL:805:U:H6	1.64	0.60
14:AN:1:A:C5'	27:r:73:PRO:CB	2.76	0.60
18:i:153:PHE:O	18:i:207:PRO:HA	2.01	0.60
18:i:261:ILE:HD11	18:i:356:LYS:HA	1.84	0.60
21:l:33:ILE:C	21:l:35:ASN:N	2.58	0.60
32:w:33:ILE:HG23	32:w:35:LYS:HG2	1.83	0.60
46:A:215:A:C5	46:A:216:U:C4	2.90	0.60
46:A:2026:G:H1	46:A:2070:U:H3	1.50	0.60
46:A:2205:G:O2'	46:A:2206:U:O4'	2.20	0.60
46:A:2273:G:H2'	46:A:2274:A:C8	2.35	0.60
46:A:2795:U:H5'	46:A:2796:G:H5"	1.82	0.60
63:R:155:LYS:HB3	63:R:156:PRO:CD	2.31	0.60
63:R:198:LEU:O	63:R:199:ILE:C	2.44	0.60
3:AC:135:VAL:HG12	3:AC:139:MET:HG3	1.83	0.60
4:AD:258:LYS:C	4:AD:260:PHE:N	2.60	0.60
5:AE:41:GLY:HA3	5:AE:108:SER:CB	2.31	0.60
5:AE:99:LYS:CE	12:AL:1524:U:O3'	2.49	0.60
5:AE:314:PRO:HB2	5:AE:318:HIS:HB2	1.84	0.60
6:AF:44:ARG:NH2	12:AL:495:U:H5'	2.16	0.60
7:AG:60:LEU:HD22	23:n:70:THR:HB	1.82	0.60
7:AG:122:LEU:CD1	16:g:36:ILE:CD1	2.80	0.60
7:AG:222:LYS:O	7:AG:225:VAL:HB	2.00	0.60
8:AH:210:ILE:CG2	21:l:39:VAL:C	2.75	0.60
9:AI:371:TYR:HD2	9:AI:372:HIS:CE1	2.20	0.60
9:AI:393:LYS:HZ1	24:o:182:GLN:CG	2.08	0.60
12:AL:540:A:H2'	12:AL:541:U:C6	2.37	0.60
12:AL:610:A:H1'	12:AL:611:U:C4	2.37	0.60
12:AL:612:A:C6	12:AL:661:A:C8	2.90	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1104:U:H3'	12:AL:1105:G:H8	1.66	0.60
16:g:36:ILE:HB	16:g:63:LEU:HD23	1.84	0.60
18:i:93:TRP:CE2	29:t:109:GLY:H	1.60	0.60
20:k:25:TYR:CZ	25:p:21:PRO:HD3	2.36	0.60
26:q:176:ARG:O	26:q:180:ILE:HG13	2.02	0.60
35:z:93:VAL:O	35:z:94:GLU:C	2.43	0.60
46:A:704:U:H2'	46:A:705:C:H6	1.66	0.60
46:A:767:A:H2'	46:A:767:A:N3	2.16	0.60
46:A:863:A:H2'	46:A:864:A:C8	2.36	0.60
46:A:1137:U:O2'	46:A:1138:G:H5'	2.02	0.60
46:A:1183:A:O2'	46:A:1184:A:H5'	2.02	0.60
46:A:1215:A:H5"	66:U:69:ARG:HG2	1.83	0.60
46:A:1432:A:H2'	46:A:1433:A:C8	2.37	0.60
46:A:1439:A:C2'	46:A:1440:U:O4'	2.50	0.60
46:A:1978:C:H2'	46:A:1979:U:H6	1.66	0.60
46:A:2939:U:H5'	46:A:2940:G:OP2	2.02	0.60
46:A:3008:U:H2'	46:A:3009:A:H8	1.66	0.60
63:R:120:PRO:O	63:R:121:HIS:HB2	2.02	0.60
3:AC:185:LEU:CG	7:AG:196:MET:C	2.74	0.60
4:AD:293:LEU:HA	4:AD:296:VAL:HB	1.84	0.60
6:AF:158:PHE:HB2	6:AF:189:VAL:HG11	1.83	0.60
7:AG:224:VAL:HG12	33:x:45:LEU:HD13	0.62	0.60
11:AK:163:PRO:HA	25:p:68:TYR:CD1	2.36	0.60
12:AL:675:U:C5	20:k:263:TYR:CE2	2.90	0.60
12:AL:698:A:P	23:n:2:SER:HB2	2.41	0.60
27:r:80:ALA:HB1	27:r:93:ALA:O	2.02	0.60
28:s:53:PRO:O	28:s:56:MET:HB2	2.02	0.60
32:w:10:VAL:HA	32:w:22:VAL:HG22	1.84	0.60
46:A:77:U:H2'	46:A:78:U:H6	1.67	0.60
46:A:220:A:H3'	46:A:221:A:C8	2.37	0.60
46:A:496:U:H2'	46:A:497:U:C6	2.36	0.60
46:A:746:A:O2'	46:A:747:U:H5'	2.01	0.60
46:A:1883:A:H2'	46:A:1884:C:C6	2.37	0.60
46:A:2087:A:H2'	46:A:2088:A:H8	1.67	0.60
46:A:2243:U:O2'	46:A:2244:A:H5'	2.02	0.60
63:R:178:LYS:HB2	63:R:178:LYS:NZ	2.17	0.60
3:AC:25:VAL:HG12	3:AC:28:ILE:HD13	1.84	0.59
5:AE:141:HIS:C	5:AE:143:GLN:H	2.08	0.59
5:AE:255:LEU:CD1	5:AE:300:PHE:CB	2.79	0.59
5:AE:266:GLU:HA	5:AE:269:ASP:OD2	2.00	0.59
7:AG:205:ALA:HB3	16:g:92:GLU:HB3	1.82	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:49:TYR:CD2	8:AH:61:ARG:HG2	2.37	0.59
9:AI:176:ASN:HA	9:AI:290:THR:O	2.02	0.59
10:AJ:74:GLN:C	10:AJ:76:ARG:N	2.59	0.59
12:AL:405:A:H2'	12:AL:406:U:H6	1.64	0.59
12:AL:636:C:H1'	12:AL:650:C:H5"	1.84	0.59
12:AL:1021:U:C5'	34:y:84:SER:CB	2.56	0.59
16:g:71:LEU:HD23	17:h:201:LEU:HD23	1.82	0.59
17:h:131:ASN:CB	24:o:118:PRO:O	2.51	0.59
17:h:154:SER:O	17:h:156:ARG:N	2.35	0.59
21:l:77:VAL:O	21:l:81:ILE:HG13	2.03	0.59
25:p:48:ARG:HH21	25:p:106:THR:HG21	1.67	0.59
25:p:92:PRO:N	29:t:96:TYR:HE2	2.00	0.59
37:1:361:VAL:HG21	63:R:144:GLU:CG	2.31	0.59
41:5:242:ILE:HD11	60:O:117:LYS:HB2	1.82	0.59
46:A:16:A:H2'	46:A:17:U:C6	2.37	0.59
46:A:690:C:H2'	46:A:691:A:C8	2.36	0.59
46:A:1928:U:H2'	46:A:1929:G:C8	2.37	0.59
46:A:1997:A:C6	46:A:1998:U:C4	2.90	0.59
46:A:2586:U:H4'	46:A:2587:U:O5'	2.02	0.59
46:A:2728:U:H3	46:A:2754:A:H61	1.50	0.59
46:A:2814:U:C2	46:A:2815:U:C5	2.89	0.59
63:R:197:TYR:HD2	63:R:198:LEU:HD13	1.67	0.59
63:R:245:SER:O	63:R:248:ASP:HB2	2.02	0.59
63:R:316:GLU:O	63:R:317:GLU:C	2.44	0.59
3:AC:194:PHE:HD1	3:AC:197:LEU:HD23	1.66	0.59
7:AG:96:LYS:HZ2	12:AL:915:U:C5'	1.73	0.59
7:AG:206:ILE:HG12	16:g:92:GLU:OE1	1.99	0.59
11:AK:151:GLN:CG	18:i:83:LYS:CE	2.68	0.59
11:AK:162:LEU:HD22	25:p:65:THR:CA	2.19	0.59
12:AL:769:A:H4'	12:AL:770:A:C5'	2.32	0.59
12:AL:803:A:H2'	12:AL:804:U:H6	1.64	0.59
12:AL:859:A:H2'	12:AL:860:C:C6	2.37	0.59
12:AL:1417:A:OP1	24:o:268:LYS:CB	2.43	0.59
16:g:245:ALA:HB2	16:g:254:VAL:HG13	1.85	0.59
23:n:1:MET:HE2	23:n:30:LYS:HB3	1.84	0.59
26:q:214:MET:SD	35:z:140:MET:HG3	2.42	0.59
29:t:60:LEU:HD11	34:y:20:PRO:CB	2.31	0.59
41:5:131:ILE:O	61:P:253:ILE:HD13	2.02	0.59
46:A:469:G:H2'	46:A:1930:A:N7	2.17	0.59
46:A:1032:G:H3'	46:A:1033:A:H8	1.67	0.59
46:A:1411:A:C8	61:P:58:VAL:CG2	2.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1618:G:OP2	54:I:77:LYS:HD3	2.02	0.59
46:A:1750:G:H2'	46:A:1751:C:C6	2.36	0.59
46:A:2012:A:C6	46:A:2023:U:H5'	2.14	0.59
46:A:3267:U:H2'	46:A:3268:A:H8	1.67	0.59
63:R:269:TYR:CZ	63:R:271:SER:HA	2.37	0.59
3:AC:8:ILE:O	17:h:165:SER:N	2.31	0.59
3:AC:91:LEU:O	3:AC:95:ASN:ND2	2.35	0.59
4:AD:118:GLN:HB3	7:AG:175:GLU:HA	1.82	0.59
4:AD:208:PHE:HE2	16:g:214:LEU:HB3	0.76	0.59
4:AD:249:THR:HA	4:AD:252:ILE:HB	1.83	0.59
5:AE:87:PRO:O	5:AE:88:LEU:C	2.45	0.59
5:AE:107:TYR:CZ	5:AE:152:LYS:HB3	2.37	0.59
5:AE:194:HIS:CE1	5:AE:315:TYR:OH	2.55	0.59
5:AE:227:LEU:HD11	5:AE:280:ILE:HG23	1.84	0.59
5:AE:255:LEU:HD13	5:AE:300:PHE:HB2	1.80	0.59
5:AE:271:LEU:O	5:AE:275:GLU:N	2.35	0.59
6:AF:29:ARG:O	6:AF:30:ARG:C	2.44	0.59
6:AF:58:MET:HG2	19:j:11:LEU:HD11	1.79	0.59
7:AG:122:LEU:O	16:g:11:ARG:HB2	2.02	0.59
7:AG:177:TYR:CE2	16:g:107:PHE:CE2	2.89	0.59
8:AH:224:PHE:CD1	21:l:18:LYS:NZ	2.70	0.59
11:AK:294:PHE:CZ	24:o:170:VAL:CG1	2.77	0.59
12:AL:1013:C:H2'	12:AL:1014:A:H8	1.65	0.59
12:AL:1636:U:H5"	12:AL:1637:A:C2	2.37	0.59
16:g:272:ARG:HH22	33:x:48:LYS:CA	2.16	0.59
17:h:314:GLN:HG3	17:h:316:LYS:CG	2.31	0.59
21:l:29:GLY:O	21:l:33:ILE:HG13	2.02	0.59
30:u:72:ASP:O	30:u:73:THR:C	2.43	0.59
33:x:101:ARG:O	33:x:103:VAL:N	2.33	0.59
46:A:159:C:H2'	46:A:160:U:H6	1.67	0.59
46:A:228:U:H2'	46:A:229:G:O4'	2.01	0.59
46:A:425:A:H5"	53:H:117:LYS:NZ	2.17	0.59
46:A:475:U:OP1	46:A:2768:G:N2	2.33	0.59
46:A:537:U:H2'	46:A:538:A:H8	1.67	0.59
46:A:831:A:O2'	46:A:832:U:H5'	2.03	0.59
46:A:1697:C:H2'	46:A:1698:C:C5	2.37	0.59
46:A:2022:U:H3	46:A:2064:G:H1	1.48	0.59
46:A:2316:A:C5'	69:X:63:LEU:HD21	2.32	0.59
46:A:2675:U:H2'	46:A:2676:G:C8	2.37	0.59
46:A:2845:G:N2	48:C:189:LEU:HD21	2.17	0.59
46:A:2900:A:H2'	46:A:2901:U:O4'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:3014:C:C4	46:A:3033:A:C5	2.91	0.59
46:A:3135:U:H4'	46:A:3136:U:OP1	2.02	0.59
63:R:149:ARG:O	63:R:150:LYS:C	2.44	0.59
64:S:227:TYR:O	64:S:230:PHE:N	2.35	0.59
4:AD:45:VAL:HA	4:AD:48:LEU:HB2	1.83	0.59
5:AE:253:ILE:HG12	5:AE:254:SER:N	2.16	0.59
6:AF:143:CYS:O	6:AF:143:CYS:SG	2.59	0.59
12:AL:325:A:H2'	12:AL:326:C:H6	1.67	0.59
12:AL:697:G:H5"	23:n:4:VAL:HG23	1.84	0.59
13:AM:31:A:H8	13:AM:31:A:H5"	1.67	0.59
15:Z:34:MET:HE1	22:m:182:PRO:HD3	1.83	0.59
16:g:68:LEU:HB2	17:h:217:ILE:CD1	2.23	0.59
16:g:251:VAL:CG2	33:x:51:LYS:HA	2.32	0.59
19:j:36:LEU:HD22	19:j:44:GLN:HG2	1.84	0.59
21:l:110:SER:CA	33:x:93:TYR:OH	2.50	0.59
25:p:34:LEU:HB3	25:p:35:PRO:HD2	1.84	0.59
28:s:51:SER:O	28:s:54:GLN:N	2.27	0.59
46:A:995:C:H2'	46:A:996:A:C8	2.37	0.59
46:A:1186:A:H2'	46:A:1187:U:H6	1.62	0.59
46:A:2071:A:H2'	46:A:2072:U:H5'	1.84	0.59
46:A:3122:U:H4'	46:A:3123:A:O5'	2.02	0.59
63:R:295:LYS:HE2	63:R:371:LEU:C	2.26	0.59
75:e:168:GLY:CA	75:e:178:VAL:HG13	2.31	0.59
1:AA:111:ARG:OXT	12:AL:1486:A:H5"	2.03	0.59
2:AB:89:LYS:HE2	12:AL:388:G:H5"	1.85	0.59
4:AD:208:PHE:CE2	16:g:214:LEU:O	2.56	0.59
5:AE:273:LYS:O	5:AE:277:ILE:HG13	2.02	0.59
7:AG:85:ARG:O	7:AG:86:VAL:C	2.45	0.59
7:AG:166:VAL:CG1	16:g:196:PHE:CE1	2.84	0.59
8:AH:198:GLU:HB2	21:l:105:LEU:CD2	2.26	0.59
11:AK:172:TYR:CE2	25:p:115:ASP:C	2.81	0.59
12:AL:93:A:H2'	12:AL:94:A:C8	2.36	0.59
12:AL:868:G:H2'	12:AL:869:U:C6	2.37	0.59
12:AL:1295:A:N6	12:AL:1296:A:H62	2.01	0.59
12:AL:1327:A:H2'	12:AL:1328:A:H8	1.67	0.59
12:AL:1575:A:N1	46:A:1859:G:O2'	2.36	0.59
12:AL:1634:C:H41	16:g:80:ARG:HA	1.66	0.59
16:g:210:LEU:HD22	16:g:211:PRO:HD2	1.84	0.59
18:i:93:TRP:CB	29:t:108:PRO:HB3	2.32	0.59
18:i:212:TYR:C	18:i:214:TYR:N	2.60	0.59
19:j:127:HIS:HB2	19:j:129:ASN:HD21	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:k:16:TYR:CZ	20:k:20:LEU:CD2	2.77	0.59
21:l:1:MET:HG2	30:u:148:GLU:CG	2.32	0.59
21:l:32:ILE:HD13	21:l:71:PHE:CG	2.36	0.59
24:o:248:LYS:C	24:o:250:GLY:H	2.09	0.59
46:A:299:U:H2'	46:A:300:A:O4'	2.02	0.59
46:A:414:G:H2'	46:A:415:A:C8	2.37	0.59
46:A:419:U:H2'	46:A:420:U:C6	2.37	0.59
46:A:714:A:H2'	46:A:715:U:H6	1.68	0.59
46:A:1130:C:H2'	46:A:1131:C:C6	2.38	0.59
46:A:1413:A:H2'	46:A:1414:U:C6	2.38	0.59
46:A:1880:G:H3'	46:A:1881:A:H5"	1.84	0.59
46:A:2716:A:H1'	46:A:2717:A:O5'	2.02	0.59
46:A:2895:A:H2'	46:A:2895:A:N3	2.17	0.59
46:A:3135:U:H2'	46:A:3137:A:N7	2.17	0.59
46:A:3290:A:H8	46:A:3290:A:O5'	1.86	0.59
55:J:112:PRO:O	55:J:113:ILE:C	2.46	0.59
63:R:121:HIS:O	63:R:123:GLU:N	2.34	0.59
75:e:132:LEU:HD21	75:e:170:LYS:HD3	1.84	0.59
2:AB:124:TRP:CH2	12:AL:101:U:O2	2.55	0.59
6:AF:48:LYS:HE2	12:AL:489:A:H2'	1.84	0.59
6:AF:147:TYR:HA	6:AF:217:PRO:HD2	1.85	0.59
6:AF:314:VAL:CG1	31:v:71:ARG:HG3	2.33	0.59
8:AH:14:VAL:CG1	12:AL:298:A:C8	2.85	0.59
10:AJ:76:ARG:HG2	12:AL:1092:C:P	2.42	0.59
12:AL:46:A:N1	12:AL:407:U:O2	2.35	0.59
12:AL:634:A:OP2	27:r:77:GLN:N	2.34	0.59
12:AL:785:A:N1	33:x:130:ARG:CD	2.65	0.59
12:AL:1117:U:P	20:k:160:LYS:HD3	2.42	0.59
12:AL:1220:A:H4'	29:t:112:LYS:HD2	1.84	0.59
12:AL:1335:U:H3	28:s:18:ILE:CD1	2.16	0.59
12:AL:1628:A:C4	35:z:166:ILE:HG21	2.37	0.59
18:i:93:TRP:CD1	29:t:108:PRO:CA	2.83	0.59
18:i:95:THR:HG22	18:i:142:ASN:HD22	1.66	0.59
19:j:4:LYS:HG3	19:j:5:ALA:H	1.68	0.59
28:s:4:HIS:ND1	28:s:4:HIS:N	2.50	0.59
28:s:85:ILE:HD13	34:y:67:ASP:HB2	0.59	0.59
34:y:13:TRP:C	34:y:15:GLY:N	2.60	0.59
37:1:283:ASN:ND2	63:R:143:GLU:CD	2.58	0.59
46:A:271:A:H2'	46:A:272:G:C8	2.38	0.59
46:A:851:A:H2'	46:A:852:U:C6	2.38	0.59
46:A:945:A:C2	51:F:47:ARG:CB	2.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1786:A:C2	46:A:1787:A:C5	2.91	0.59
46:A:3026:A:H2'	46:A:3027:U:H6	1.67	0.59
51:F:167:SER:CB	75:e:213:LEU:C	2.74	0.59
63:R:272:GLU:CD	63:R:276:GLN:HE22	2.10	0.59
75:e:54:ILE:CD1	75:e:105:TYR:HA	2.29	0.59
76:f:76:PRO:HB2	76:f:79:TYR:CB	2.26	0.59
3:AC:9:HIS:HD2	3:AC:50:THR:HG23	1.68	0.59
3:AC:55:GLY:C	7:AG:121:ILE:HG21	2.25	0.59
4:AD:171:LEU:HD23	4:AD:271:LEU:HB3	1.84	0.59
4:AD:284:TYR:HE1	4:AD:295:ARG:HD2	1.68	0.59
4:AD:309:LEU:HD12	4:AD:310:PRO:HD2	1.85	0.59
5:AE:65:ILE:HG23	5:AE:90:PRO:CB	2.33	0.59
5:AE:279:LEU:HD23	5:AE:315:TYR:HB2	1.83	0.59
5:AE:279:LEU:O	5:AE:280:ILE:C	2.46	0.59
5:AE:320:LYS:O	5:AE:324:LEU:HG	2.03	0.59
9:AI:134:PHE:HB2	9:AI:389:PHE:CZ	2.38	0.59
9:AI:206:LYS:NZ	12:AL:1346:U:C5'	2.65	0.59
9:AI:220:LEU:HD11	9:AI:285:VAL:HG11	1.83	0.59
10:AJ:29:ARG:CZ	34:y:13:TRP:CZ2	2.83	0.59
10:AJ:32:SER:OG	12:AL:1313:U:C2'	2.51	0.59
11:AK:172:TYR:CD2	25:p:116:THR:O	2.56	0.59
12:AL:750:G:O4'	26:q:122:VAL:HG12	2.03	0.59
12:AL:1404:A:H1'	12:AL:1405:A:C6	2.37	0.59
15:Z:66:ALA:CA	22:m:184:ASN:CA	2.81	0.59
19:j:129:ASN:HA	19:j:153:LYS:HD3	1.85	0.59
21:l:56:LYS:HB3	21:l:61:HIS:HD2	1.68	0.59
46:A:200:G:H2'	46:A:201:A:H5'	1.85	0.59
46:A:306:G:C6	46:A:365:A:C4	2.90	0.59
46:A:1245:U:C2	46:A:1246:A:C8	2.91	0.59
46:A:1820:G:C5	46:A:1821:G:H1'	2.37	0.59
46:A:2356:A:N1	46:A:2363:A:N6	2.50	0.59
46:A:2839:A:OP2	48:C:209:GLN:HG3	2.03	0.59
63:R:117:LEU:C	63:R:119:SER:N	2.54	0.59
76:f:63:LYS:HE3	76:f:69:THR:HG23	1.85	0.59
3:AC:127:PHE:HZ	3:AC:165:ILE:HG13	1.68	0.59
3:AC:152:TRP:HE1	3:AC:171:ASN:HA	1.66	0.59
4:AD:201:THR:HB	4:AD:205:GLY:CA	2.30	0.59
5:AE:134:TRP:CG	5:AE:173:ALA:HB2	2.38	0.59
5:AE:151:PHE:CE1	5:AE:319:LEU:HD23	2.38	0.59
5:AE:285:LEU:HD22	5:AE:292:ALA:HA	1.84	0.59
6:AF:34:TYR:HE2	12:AL:496:A:O2'	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:186:GLY:O	28:s:43:PRO:HB2	2.03	0.59
12:AL:401:A:N7	12:AL:661:A:O2'	2.35	0.59
12:AL:762:U:H2'	12:AL:762:U:O2	2.03	0.59
12:AL:1194:U:H2'	12:AL:1195:A:C8	2.37	0.59
12:AL:1425:A:N6	12:AL:1436:U:H3	2.01	0.59
38:2:53:ARG:HH12	69:X:67:ARG:NH1	1.92	0.59
46:A:620:G:H2'	46:A:1682:U:H1'	1.84	0.59
46:A:741:U:C2	46:A:742:A:C8	2.90	0.59
46:A:1343:U:C6	61:P:139:HIS:CD2	2.91	0.59
46:A:1488:U:H2'	46:A:1489:U:C6	2.37	0.59
46:A:1543:A:H2'	46:A:1544:A:H8	1.67	0.59
46:A:2687:U:H2'	46:A:2688:G:C8	2.38	0.59
50:E:251:ALA:CB	67:V:63:TYR:CG	2.86	0.59
63:R:335:THR:O	63:R:362:ARG:HA	2.02	0.59
4:AD:67:LEU:O	4:AD:77:LYS:NZ	2.34	0.59
6:AF:216:PHE:CE2	19:j:437:LEU:HD11	2.38	0.59
6:AF:295:ILE:HD13	31:v:93:ALA:HB1	1.72	0.59
9:AI:147:ILE:CD1	9:AI:355:LEU:HD11	2.31	0.59
12:AL:220:A:H2'	12:AL:221:U:C6	2.37	0.59
12:AL:562:A:H2'	12:AL:563:U:O4'	2.03	0.59
12:AL:813:A:H2'	12:AL:814:A:C8	2.38	0.59
12:AL:1165:A:C5'	24:o:254:ARG:HG3	2.33	0.59
12:AL:1179:U:O3'	24:o:164:THR:CG2	2.46	0.59
12:AL:1331:C:H2'	12:AL:1332:A:C8	2.38	0.59
15:Z:34:MET:HG3	22:m:164:MET:HE3	1.85	0.59
32:w:53:ARG:HH21	32:w:83:GLN:HG2	1.68	0.59
32:w:94:LEU:O	32:w:95:SER:C	2.46	0.59
38:2:127:MET:HG2	67:V:80:TRP:HA	1.83	0.59
46:A:52:A:H2'	46:A:53:U:H6	1.65	0.59
46:A:588:C:H2'	46:A:589:A:C8	2.38	0.59
46:A:2421:U:C2	46:A:2422:A:N7	2.70	0.59
46:A:2467:A:O2'	46:A:2468:A:H5'	2.03	0.59
3:AC:59:GLU:O	17:h:164:ILE:CG1	2.51	0.59
5:AE:63:PRO:CG	12:AL:1515:A:P	2.91	0.59
5:AE:111:PRO:HA	5:AE:153:ILE:O	2.03	0.59
5:AE:197:ARG:HH22	5:AE:319:LEU:HD13	1.67	0.59
5:AE:228:ALA:O	5:AE:229:ASN:C	2.45	0.59
5:AE:278:TYR:CE2	5:AE:282:ARG:HG2	2.38	0.59
6:AF:308:LYS:HD2	31:v:62:ILE:CD1	2.29	0.59
9:AI:248:LEU:HA	9:AI:253:ASN:OD1	2.03	0.59
10:AJ:40:LYS:HE2	10:AJ:42:PRO:CD	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:750:G:H1'	26:q:125:SER:HB2	1.85	0.59
12:AL:1417:A:H8	12:AL:1418:A:C8	2.21	0.59
12:AL:1632:A:C2	35:z:174:ARG:NH1	2.71	0.59
13:AM:75:C:H5"	13:AM:76:A:C8	2.38	0.59
15:Z:16:LEU:HD22	35:z:165:LEU:HD23	1.85	0.59
16:g:246:ALA:CB	33:x:55:TYR:CZ	2.80	0.59
18:i:211:SER:C	18:i:212:TYR:CG	2.71	0.59
33:x:103:VAL:O	33:x:105:SER:N	2.35	0.59
34:y:33:ILE:O	34:y:35:THR:N	2.35	0.59
46:A:202:A:C6	46:A:203:U:C4	2.91	0.59
46:A:807:A:C2	46:A:819:U:O2	2.56	0.59
46:A:874:U:H1'	46:A:910:G:C8	2.38	0.59
46:A:2058:U:H3'	46:A:2059:A:C6	2.37	0.59
46:A:2425:A:H2	67:V:27:ARG:HG3	1.67	0.59
46:A:2584:A:H4'	50:E:98:GLN:NE2	2.16	0.59
63:R:298:LYS:HD2	63:R:368:LEU:O	2.02	0.59
76:f:78:GLY:HA2	76:f:148:VAL:HB	1.84	0.59
2:AB:105:LEU:HD22	12:AL:390:U:OP1	2.03	0.58
3:AC:95:ASN:ND2	3:AC:223:CYS:H	2.01	0.58
4:AD:28:LEU:CB	4:AD:32:PHE:HB2	2.28	0.58
4:AD:143:ILE:HA	4:AD:148:SER:HA	1.85	0.58
4:AD:157:ILE:HG12	4:AD:293:LEU:HB3	1.84	0.58
6:AF:34:TYR:HE2	12:AL:496:A:H1'	1.65	0.58
6:AF:67:TYR:HE2	12:AL:482:U:C1'	2.16	0.58
7:AG:166:VAL:HB	16:g:195:LYS:CE	2.31	0.58
8:AH:104:ARG:HE	12:AL:143:A:C5'	2.15	0.58
9:AI:181:GLU:OE2	9:AI:296:LYS:HE2	2.03	0.58
11:AK:57:TRP:CZ3	11:AK:86:GLU:HG3	2.38	0.58
11:AK:150:GLU:HB2	20:k:71:TYR:OH	2.03	0.58
11:AK:151:GLN:NE2	18:i:83:LYS:NZ	2.28	0.58
12:AL:34:G:C5'	19:j:486:LYS:HG3	2.33	0.58
12:AL:109:A:C2	12:AL:332:A:H2'	2.38	0.58
12:AL:110:A:H3'	12:AL:111:A:H8	1.68	0.58
12:AL:380:G:OP1	31:v:83:SER:HB3	2.03	0.58
12:AL:665:U:HO2'	27:r:111:ARG:HH21	1.23	0.58
12:AL:1342:U:H6	12:AL:1356:U:H5'	1.68	0.58
12:AL:1580:U:H2'	12:AL:1581:G:C8	2.37	0.58
17:h:275:TRP:HZ2	17:h:280:LEU:HG	1.67	0.58
18:i:166:ASN:C	18:i:166:ASN:HD22	2.11	0.58
19:j:6:ASN:O	19:j:7:LEU:HB2	2.02	0.58
32:w:80:ASN:HB2	32:w:84:GLN:HE21	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:5:73:TYR:CE2	61:P:255:LEU:HD21	2.38	0.58
46:A:1184:A:H2'	46:A:1185:U:H6	1.68	0.58
46:A:1239:A:H2'	46:A:1240:U:H5'	1.85	0.58
46:A:1528:G:H2'	46:A:1529:A:H8	1.66	0.58
46:A:1937:U:H2'	46:A:1938:A:C8	2.38	0.58
46:A:2218:U:H2'	46:A:2219:A:O4'	2.02	0.58
46:A:2886:C:H5"	48:C:216:PRO:HA	1.85	0.58
3:AC:174:PRO:HB2	3:AC:220:PRO:HB3	1.86	0.58
6:AF:319:TYR:CE1	31:v:42:THR:CB	2.87	0.58
8:AH:117:ARG:HA	8:AH:120:HIS:CE1	2.38	0.58
12:AL:222:U:H2'	12:AL:223:U:C6	2.38	0.58
12:AL:484:U:C2	12:AL:485:A:C8	2.90	0.58
12:AL:756:A:C8	26:q:85:ASN:ND2	2.71	0.58
12:AL:810:A:H2'	12:AL:811:U:C6	2.38	0.58
13:AM:36:U:H2'	13:AM:37:A:C8	2.37	0.58
16:g:3:LEU:CD1	17:h:211:TYR:HE2	2.04	0.58
20:k:241:ARG:O	20:k:259:SER:HA	2.03	0.58
21:l:38:VAL:CG2	30:u:141:ILE:CD1	2.78	0.58
26:q:149:GLY:O	26:q:150:ARG:C	2.45	0.58
30:u:220:LYS:HB2	30:u:227:TYR:CG	2.39	0.58
37:1:183:PRO:HB3	63:R:209:TYR:OH	2.03	0.58
46:A:1509:U:H2'	46:A:1510:A:C8	2.37	0.58
46:A:1959:A:OP1	49:D:112:GLY:HA3	2.02	0.58
46:A:2198:U:O4	64:S:227:TYR:HE2	1.85	0.58
46:A:2362:U:N3	72:b:151:ASN:OD1	2.35	0.58
46:A:2611:U:C5'	69:X:37:VAL:CG1	2.61	0.58
46:A:2769:A:N3	46:A:2769:A:H3'	2.18	0.58
48:C:77:GLY:HA2	58:M:128:PRO:HG2	1.85	0.58
51:F:121:VAL:HG21	75:e:210:VAL:HB	1.85	0.58
63:R:94:ARG:O	63:R:96:TYR:HD1	1.85	0.58
63:R:333:ASP:HA	63:R:336:VAL:CG1	2.30	0.58
3:AC:161:LYS:HD3	17:h:141:TYR:HD2	1.66	0.58
3:AC:185:LEU:HG	7:AG:198:GLY:H	1.67	0.58
5:AE:95:LYS:HE3	12:AL:1524:U:P	2.43	0.58
6:AF:74:ASN:HA	6:AF:98:LEU:HD23	1.85	0.58
6:AF:88:ILE:HD11	19:j:28:LEU:HD21	1.85	0.58
7:AG:2:LYS:O	7:AG:3:ILE:C	2.46	0.58
7:AG:120:LYS:CE	16:g:14:GLN:HB2	2.32	0.58
8:AH:45:LEU:C	32:w:59:ARG:HD2	2.28	0.58
9:AI:288:MET:HA	9:AI:340:SER:O	2.02	0.58
12:AL:23:A:O2'	12:AL:24:U:H5'	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:825:G:C2’	12:AL:826:G:O5’	2.51	0.58
12:AL:1216:A:C4	24:o:256:TYR:CG	2.91	0.58
28:s:76:LYS:N	28:s:119:ARG:HE	1.72	0.58
29:t:98:PHE:O	29:t:99:ARG:C	2.45	0.58
30:u:279:ARG:O	30:u:283:ARG:HG3	2.03	0.58
31:v:85:THR:O	31:v:89:LEU:HG	2.02	0.58
37:1:365:VAL:HG21	46:A:546:A:H5”	1.85	0.58
46:A:449:A:H2’	46:A:450:U:H6	1.68	0.58
46:A:603:U:OP2	47:B:149:ARG:NH2	2.36	0.58
46:A:749:A:H2’	46:A:750:U:H6	1.63	0.58
46:A:1311:A:H2’	46:A:1312:G:H8	1.68	0.58
76:f:143:LYS:HD2	76:f:143:LYS:H	1.67	0.58
1:AA:95:LYS:NZ	12:AL:1580:U:P	2.76	0.58
2:AB:92:HIS:CD2	12:AL:524:A:H2	2.21	0.58
5:AE:280:ILE:HG22	5:AE:281:ALA:N	2.19	0.58
5:AE:293:GLN:HG3	5:AE:294:TYR:N	2.18	0.58
6:AF:48:LYS:CE	12:AL:489:A:H2’	2.32	0.58
6:AF:53:ASN:HB2	12:AL:498:A:OP2	2.03	0.58
6:AF:200:ARG:HD2	12:AL:551:U:H4’	1.84	0.58
9:AI:118:LEU:HD13	9:AI:411:VAL:HG11	1.84	0.58
9:AI:276:ILE:HG13	9:AI:323:LEU:CD1	2.30	0.58
11:AK:195:PRO:HG2	12:AL:1290:A:C5	2.38	0.58
12:AL:14:A:OP1	20:k:238:PHE:CZ	2.57	0.58
12:AL:79:A:H3’	12:AL:80:U:H6	1.67	0.58
12:AL:327:U:H2’	12:AL:328:C:C6	2.38	0.58
12:AL:632:C:OP2	12:AL:644:G:H4’	2.03	0.58
12:AL:788:U:H5’	35:z:153:ARG:HG3	1.84	0.58
12:AL:846:A:N6	12:AL:867:A:H1’	2.19	0.58
12:AL:1410:U:OP1	24:o:276:VAL:CA	2.52	0.58
13:AM:59:A:H5”	13:AM:60:U:H5	1.69	0.58
16:g:48:TRP:HE3	16:g:63:LEU:HD22	1.65	0.58
17:h:177:PRO:HG2	17:h:378:ARG:HB2	1.86	0.58
17:h:283:SER:C	17:h:285:GLU:H	2.11	0.58
18:i:325:VAL:HB	18:i:396:ASN:HD22	1.67	0.58
20:k:27:GLU:O	20:k:29:LEU:N	2.36	0.58
22:m:124:HIS:O	22:m:126:LYS:N	2.37	0.58
32:w:80:ASN:C	32:w:82:GLY:H	2.10	0.58
46:A:466:U:H2’	46:A:467:U:O4’	2.03	0.58
46:A:1358:C:H5	46:A:1553:G:N1	1.94	0.58
46:A:1777:C:H5’	46:A:1778:G:OP2	2.03	0.58
46:A:2030:U:O4	46:A:2032:C:N4	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:3065:U:H2'	46:A:3066:G:H8	1.68	0.58
51:F:121:VAL:CG2	75:e:210:VAL:HB	2.33	0.58
75:e:58:LYS:HA	75:e:105:TYR:OH	2.03	0.58
3:AC:12:PRO:HG2	17:h:160:LEU:O	2.04	0.58
3:AC:228:ASP:OD2	4:AD:277:PRO:HB2	2.04	0.58
4:AD:28:LEU:HD23	4:AD:32:PHE:CD1	2.38	0.58
4:AD:251:PHE:HA	4:AD:255:THR:HB	1.86	0.58
5:AE:274:TYR:O	5:AE:275:GLU:C	2.45	0.58
7:AG:1:MET:SD	17:h:354:LEU:CD1	2.72	0.58
9:AI:159:LEU:O	9:AI:160:LEU:C	2.46	0.58
10:AJ:60:LYS:O	10:AJ:60:LYS:CG	2.46	0.58
11:AK:137:LEU:HD11	20:k:68:PHE:CE1	2.38	0.58
12:AL:259:G:O4'	32:w:17:GLN:HB2	2.03	0.58
12:AL:738:A:O3'	21:l:93:ARG:NH2	2.36	0.58
12:AL:761:A:C2	12:AL:851:G:H1'	2.39	0.58
12:AL:1411:G:OP2	24:o:275:TRP:CG	2.54	0.58
12:AL:1631:U:C2	33:x:66:HIS:HB3	2.37	0.58
12:AL:1632:A:C4'	33:x:63:GLY:HA3	2.33	0.58
17:h:269:TYR:OH	24:o:38:VAL:HG12	2.03	0.58
20:k:36:ALA:HB1	25:p:22:VAL:HB	1.85	0.58
21:l:80:GLU:HG3	47:B:73:LEU:CA	2.33	0.58
21:l:80:GLU:HB2	47:B:73:LEU:CB	2.32	0.58
21:l:111:LEU:HD12	33:x:95:ARG:HD2	1.85	0.58
22:m:97:GLN:O	22:m:98:TRP:C	2.46	0.58
35:z:91:SER:O	35:z:92:SER:C	2.47	0.58
46:A:416:U:H2'	46:A:417:U:H6	1.69	0.58
46:A:1164:U:C2	46:A:1165:A:C8	2.92	0.58
46:A:1898:C:O2'	46:A:1899:C:H5'	2.04	0.58
46:A:1992:A:OP1	52:G:10:SER:N	2.36	0.58
46:A:2762:C:OP1	56:K:127:ARG:NH2	2.34	0.58
46:A:2771:G:H8	46:A:2771:G:O5'	1.86	0.58
46:A:2929:A:H2'	46:A:2930:G:O4'	2.03	0.58
46:A:3152:A:OP1	46:A:3152:A:H4'	2.03	0.58
65:T:57:THR:HG21	68:W:148:LEU:HD12	1.85	0.58
3:AC:114:GLU:CB	3:AC:115:PRO:HD2	2.33	0.58
5:AE:266:GLU:O	5:AE:270:LEU:HG	2.04	0.58
7:AG:49:LYS:HE2	7:AG:56:ILE:HG23	1.84	0.58
7:AG:67:PRO:HG2	7:AG:68:HIS:CD2	2.39	0.58
7:AG:174:TYR:HA	7:AG:177:TYR:CD2	2.39	0.58
9:AI:100:GLN:HA	9:AI:168:VAL:HG21	1.85	0.58
11:AK:205:LYS:HA	11:AK:233:ILE:HA	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:692:A:H1'	12:AL:824:A:N1	2.17	0.58
12:AL:699:A:H5'	23:n:5:LYS:HZ2	1.67	0.58
12:AL:729:U:O5'	12:AL:729:U:H6	1.86	0.58
12:AL:1168:U:H2'	12:AL:1169:A:C8	2.39	0.58
12:AL:1212:A:OP1	24:o:244:SER:CA	2.52	0.58
13:AM:36:U:H3	14:AN:9:C:HO2'	1.49	0.58
25:p:123:MET:O	25:p:124:LEU:C	2.46	0.58
30:u:175:GLU:CG	30:u:176:VAL:N	2.65	0.58
32:w:140:THR:HB	32:w:141:PRO:HD3	1.85	0.58
46:A:674:A:H2'	46:A:674:A:N3	2.17	0.58
46:A:1343:U:C4	61:P:139:HIS:CD2	2.91	0.58
46:A:1824:U:H2'	46:A:1825:A:H8	1.68	0.58
46:A:1947:C:O2'	46:A:3139:A:N1	2.35	0.58
46:A:2016:A:C2	46:A:2021:A:H8	2.22	0.58
46:A:2264:G:H1'	46:A:2266:U:H5	1.69	0.58
63:R:229:LYS:HB2	63:R:229:LYS:NZ	2.19	0.58
63:R:326:LYS:O	63:R:327:SER:C	2.46	0.58
2:AB:73:ILE:O	2:AB:77:LYS:HG2	2.04	0.58
2:AB:109:SER:OG	12:AL:101:U:OP2	2.21	0.58
5:AE:99:LYS:O	5:AE:137:ILE:CG2	2.52	0.58
7:AG:206:ILE:CD1	16:g:92:GLU:CG	2.78	0.58
8:AH:14:VAL:HG12	12:AL:298:A:N9	2.18	0.58
8:AH:29:GLN:CB	8:AH:32:ILE:HB	2.33	0.58
10:AJ:32:SER:HG	12:AL:1313:U:H3'	1.69	0.58
11:AK:189:TYR:CD2	18:i:100:TYR:HD1	2.22	0.58
12:AL:412:U:OP2	19:j:21:ASN:ND2	2.37	0.58
12:AL:757:U:O4	26:q:85:ASN:OD1	2.21	0.58
12:AL:1028:G:N3	25:p:93:PHE:CZ	2.71	0.58
12:AL:1032:A:H5"	24:o:275:TRP:HE1	1.67	0.58
12:AL:1125:C:H5'	20:k:225:HIS:NE2	2.19	0.58
12:AL:1382:C:N3	12:AL:1383:U:C5	2.72	0.58
12:AL:1646:U:H1'	17:h:176:TYR:CD2	2.38	0.58
16:g:51:LYS:HG2	17:h:217:ILE:HD13	1.85	0.58
16:g:71:LEU:CD2	17:h:201:LEU:CD2	2.74	0.58
18:i:155:TYR:CD1	18:i:207:PRO:HB2	2.38	0.58
30:u:225:GLU:CG	32:w:88:TYR:CE1	2.83	0.58
32:w:76:GLU:CD	32:w:78:ILE:HB	2.28	0.58
33:x:70:LYS:HD2	33:x:71:TYR:CE2	2.38	0.58
46:A:60:G:H2'	46:A:61:G:O4'	2.03	0.58
46:A:155:A:C5	70:Y:71:LEU:HD23	2.39	0.58
46:A:742:A:H2'	46:A:743:A:H8	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:887:G:C2	73:c:15:LEU:HB2	2.38	0.58
46:A:2031:C:H2'	46:A:2032:C:C6	2.39	0.58
46:A:2082:A:H2'	46:A:2083:U:O4'	2.03	0.58
46:A:2187:A:H2'	46:A:2188:A:H8	1.67	0.58
46:A:2202:U:H2'	46:A:2203:A:H8	1.69	0.58
46:A:2586:U:H5'	46:A:2586:U:H6	1.69	0.58
46:A:2795:U:H5"	46:A:2796:G:C8	2.39	0.58
46:A:2974:U:H2'	46:A:2975:A:C8	2.39	0.58
69:X:35:THR:O	72:b:136:LYS:CE	2.50	0.58
7:AG:224:VAL:HG11	33:x:41:ILE:CD1	2.30	0.58
9:AI:447:LEU:O	22:m:135:SER:CB	2.52	0.58
12:AL:837:A:H3'	12:AL:838:G:H8	1.68	0.58
12:AL:1216:A:H2'	12:AL:1216:A:N3	2.18	0.58
12:AL:1411:G:C3'	24:o:272:MET:CB	2.78	0.58
24:o:155:ILE:HG12	24:o:168:PHE:CD2	2.39	0.58
30:u:34:SER:O	30:u:37:ALA:N	2.27	0.58
35:z:106:ILE:CD1	35:z:120:LEU:HB2	2.33	0.58
46:A:206:U:C4	46:A:207:U:C4	2.92	0.58
46:A:1411:A:N7	61:P:58:VAL:HB	2.18	0.58
63:R:184:LEU:C	63:R:186:LEU:N	2.56	0.58
63:R:240:LEU:HA	63:R:243:SER:HB3	1.86	0.58
76:f:78:GLY:HA2	76:f:148:VAL:HG21	1.84	0.58
3:AC:157:GLU:HA	3:AC:163:LEU:HA	1.85	0.58
4:AD:284:TYR:CE1	4:AD:295:ARG:HD2	2.39	0.58
6:AF:50:HIS:HD1	12:AL:493:A:N6	2.02	0.58
12:AL:817:G:OP1	30:u:166:ARG:NH1	2.37	0.58
12:AL:901:U:H2'	12:AL:902:A:H8	1.66	0.58
12:AL:1021:U:HO2'	34:y:84:SER:HG	1.52	0.58
15:Z:16:LEU:CD2	35:z:165:LEU:CG	2.81	0.58
18:i:128:ASN:O	18:i:129:ASN:C	2.46	0.58
19:j:102:GLU:HG3	19:j:465:VAL:HG22	1.86	0.58
20:k:59:LEU:HD23	25:p:28:TYR:HD2	1.49	0.58
20:k:263:TYR:O	20:k:264:LYS:C	2.47	0.58
22:m:113:THR:HG22	22:m:185:LYS:NZ	2.19	0.58
24:o:148:LEU:HB3	24:o:152:GLY:HA2	1.86	0.58
26:q:67:TYR:HD2	26:q:68:LYS:O	1.87	0.58
46:A:600:C:OP1	47:B:330:ARG:NE	2.33	0.58
46:A:644:A:H5'	46:A:1571:G:O2'	2.04	0.58
46:A:1316:U:C6	68:W:173:LEU:HB3	2.39	0.58
46:A:1712:A:H2'	46:A:1713:C:H6	1.69	0.58
46:A:1748:A:H2'	46:A:1749:U:C6	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2365:A:H2'	46:A:2366:U:H6	1.67	0.58
46:A:2885:G:H21	48:C:214:VAL:HG21	1.68	0.58
46:A:2935:A:H2'	46:A:2936:U:C6	2.38	0.58
46:A:3011:U:H2'	46:A:3012:A:C8	2.39	0.58
46:A:3155:A:C6	46:A:3247:A:C4	2.91	0.58
63:R:259:SER:HB3	63:R:268:GLN:O	2.04	0.58
63:R:301:ILE:HD12	63:R:304:LEU:HD12	1.86	0.58
3:AC:93:VAL:O	3:AC:97:LEU:N	2.36	0.58
4:AD:126:ILE:HG23	4:AD:153:ARG:HD2	1.85	0.58
4:AD:260:PHE:C	16:g:223:GLN:HE21	2.12	0.58
7:AG:132:TYR:HE2	7:AG:142:ARG:HB2	1.69	0.58
8:AH:46:GLY:HA2	32:w:59:ARG:CD	2.34	0.58
9:AI:305:TYR:CE1	28:s:42:TYR:HB2	2.39	0.58
12:AL:511:A:H61	12:AL:608:U:H1'	1.69	0.58
12:AL:606:U:H2'	12:AL:607:U:C6	2.39	0.58
12:AL:750:G:O2'	26:q:125:SER:N	2.37	0.58
12:AL:801:U:H1'	33:x:134:ALA:HB2	1.86	0.58
12:AL:1429:A:C8	29:t:72:THR:CA	2.86	0.58
12:AL:1636:U:P	16:g:61:ARG:HH12	2.23	0.58
15:Z:5:PRO:O	15:Z:7:VAL:HG12	2.04	0.58
17:h:199:THR:HG21	17:h:213:GLU:HB2	1.84	0.58
19:j:438:PRO:HG3	19:j:466:ILE:HD11	1.86	0.58
21:l:53:ILE:HA	21:l:62:PHE:HA	1.86	0.58
32:w:104:ALA:O	32:w:105:LYS:C	2.46	0.58
46:A:959:U:H2'	46:A:960:U:C6	2.39	0.58
46:A:1118:A:O2'	46:A:1119:A:H3'	2.03	0.58
46:A:1164:U:H2'	46:A:1165:A:C8	2.39	0.58
46:A:1439:A:C4	46:A:1440:U:C6	2.92	0.58
46:A:1819:A:H2'	46:A:1820:G:C8	2.39	0.58
46:A:2018:C:C6	46:A:2065:A:N6	2.72	0.58
46:A:2461:A:C6	50:E:147:ARG:HD3	2.39	0.58
46:A:2574:G:O2'	46:A:2575:A:H5'	2.03	0.58
46:A:2811:G:H2'	46:A:2812:G:H8	1.68	0.58
46:A:3162:U:H2'	46:A:3163:U:H6	1.68	0.58
46:A:3268:A:H2'	46:A:3269:U:O4'	2.04	0.58
55:J:161:ARG:HA	55:J:166:VAL:O	2.03	0.58
3:AC:195:ALA:N	4:AD:223:TYR:CZ	2.71	0.57
6:AF:46:HIS:CE1	6:AF:48:LYS:HB3	2.39	0.57
8:AH:180:ARG:CG	12:AL:815:C:P	2.91	0.57
10:AJ:48:TYR:OH	29:t:76:ASN:OD1	2.21	0.57
10:AJ:68:PHE:CZ	18:i:122:MET:HG3	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1214:A:H8	12:AL:1214:A:P	2.27	0.57
12:AL:1628:A:N6	15:Z:18:VAL:HG11	2.05	0.57
13:AM:37:A:N6	14:AN:9:C:O2'	2.37	0.57
18:i:248:MET:HG3	18:i:324:LEU:HB3	1.86	0.57
20:k:105:ILE:O	20:k:106:LEU:C	2.47	0.57
21:l:33:ILE:O	21:l:35:ASN:N	2.36	0.57
22:m:224:SER:O	22:m:226:ALA:N	2.38	0.57
28:s:10:PHE:HA	28:s:23:LYS:HZ3	1.68	0.57
37:1:182:PHE:O	46:A:2361:A:N6	2.37	0.57
46:A:85:A:H8	46:A:85:A:O5'	1.86	0.57
46:A:247:A:H2'	46:A:248:A:O4'	2.03	0.57
46:A:1487:A:H2'	46:A:1488:U:H5'	1.85	0.57
46:A:2243:U:H2'	46:A:2244:A:H8	1.67	0.57
46:A:2336:G:C5	46:A:2337:A:C5	2.92	0.57
46:A:2336:G:C4	46:A:2337:A:C8	2.92	0.57
46:A:2705:A:H5'	46:A:2705:A:C8	2.37	0.57
55:J:154:VAL:HG12	55:J:189:ALA:HB3	1.85	0.57
3:AC:62:TYR:CE2	17:h:163:THR:HG22	2.39	0.57
3:AC:169:ASN:O	3:AC:170:ASN:C	2.47	0.57
3:AC:217:TRP:HB3	17:h:149:ARG:NH2	2.19	0.57
6:AF:161:ILE:HG13	6:AF:186:VAL:HG22	1.86	0.57
6:AF:320:ARG:CG	8:AH:13:GLY:HA3	2.34	0.57
7:AG:224:VAL:CG1	33:x:41:ILE:HD11	2.29	0.57
8:AH:97:LEU:HD12	12:AL:144:U:OP1	2.04	0.57
8:AH:196:LEU:HD11	32:w:169:ILE:HG12	1.86	0.57
11:AK:182:VAL:HG23	25:p:148:ILE:HG23	1.86	0.57
12:AL:750:G:H5'	26:q:122:VAL:O	2.04	0.57
12:AL:1635:U:O4	16:g:82:GLY:CA	2.52	0.57
21:l:3:TYR:CE2	21:l:78:GLN:HG3	2.38	0.57
21:l:110:SER:OG	33:x:93:TYR:CE1	2.52	0.57
26:q:141:TYR:O	26:q:142:GLU:C	2.47	0.57
26:q:205:LYS:NZ	26:q:209:VAL:O	2.38	0.57
28:s:14:GLU:HG2	28:s:19:ALA:HB2	1.85	0.57
30:u:85:GLU:CD	32:w:107:PHE:CZ	2.81	0.57
37:1:73:ILE:HG12	42:6:47:LYS:CB	2.31	0.57
38:2:42:VAL:HG21	50:E:154:LEU:CB	2.32	0.57
46:A:170:U:O2'	46:A:171:A:H5'	2.03	0.57
46:A:927:A:OP1	73:c:34:ARG:NH1	2.37	0.57
46:A:1725:G:H2'	46:A:1726:U:H5'	1.86	0.57
46:A:1962:A:N7	46:A:1963:C:N4	2.52	0.57
46:A:2025:A:C2	46:A:2072:U:C2	2.91	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2413:A:C5	46:A:2414:U:C4	2.92	0.57
63:R:193:LEU:HD22	63:R:250:CYS:SG	2.44	0.57
2:AB:82:GLN:CG	12:AL:376:C:P	2.93	0.57
3:AC:177:PHE:HA	3:AC:180:ASN:HD21	1.69	0.57
4:AD:155:LEU:CD2	16:g:210:LEU:CD1	2.79	0.57
5:AE:211:LEU:CD2	5:AE:245:LEU:HD21	2.34	0.57
6:AF:82:ASN:O	6:AF:83:HIS:HB2	2.04	0.57
8:AH:199:LEU:O	8:AH:204:HIS:N	2.37	0.57
10:AJ:31:GLY:O	10:AJ:32:SER:C	2.44	0.57
12:AL:949:U:C2	27:r:41:PRO:HG3	2.39	0.57
12:AL:1151:G:OP1	24:o:97:LYS:HD3	2.05	0.57
12:AL:1172:A:H3'	12:AL:1173:U:H5"	1.86	0.57
16:g:6:LEU:CB	17:h:189:MET:SD	2.90	0.57
21:l:38:VAL:HG21	30:u:141:ILE:HG13	1.86	0.57
21:l:83:ARG:HH22	47:B:80:ILE:CG2	2.17	0.57
21:l:114:SER:C	21:l:116:GLY:N	2.61	0.57
29:t:60:LEU:HD12	34:y:20:PRO:CG	2.34	0.57
36:0:73:ARG:CB	46:A:3093:U:C5	2.87	0.57
46:A:165:A:H61	46:A:213:U:H3	1.51	0.57
46:A:170:U:C2'	46:A:171:A:H5'	2.34	0.57
46:A:435:G:C2	46:A:455:A:C8	2.93	0.57
46:A:1358:C:H6	46:A:1553:G:H22	1.52	0.57
46:A:1662:U:H6	46:A:1662:U:H5"	1.70	0.57
46:A:1665:G:N7	46:A:2961:A:O2'	2.37	0.57
46:A:2612:A:N3	46:A:2648:A:H2'	2.18	0.57
46:A:2977:U:C6	46:A:2977:U:O5'	2.58	0.57
46:A:3274:U:H2'	46:A:3275:C:O4'	2.04	0.57
53:H:102:GLY:HA2	53:H:128:VAL:HG11	1.87	0.57
63:R:204:SER:CB	63:R:214:ALA:HB1	2.34	0.57
3:AC:99:SER:HB2	3:AC:252:ASN:HD22	1.68	0.57
3:AC:265:SER:OG	17:h:129:TYR:OH	1.81	0.57
5:AE:316:ASP:HA	5:AE:319:LEU:CD1	2.34	0.57
8:AH:202:LEU:HD11	21:l:105:LEU:HB2	1.79	0.57
9:AI:130:ALA:O	9:AI:131:THR:C	2.45	0.57
10:AJ:55:LYS:O	10:AJ:56:PHE:C	2.47	0.57
11:AK:67:GLU:CD	11:AK:67:GLU:H	2.13	0.57
11:AK:152:ARG:HG2	20:k:62:PHE:HE2	1.69	0.57
11:AK:164:LEU:HB2	20:k:32:SER:HB2	1.84	0.57
12:AL:227:U:H2'	12:AL:228:A:C8	2.40	0.57
12:AL:767:A:OP1	12:AL:768:U:H2'	2.04	0.57
12:AL:784:A:N6	33:x:133:GLN:NE2	2.50	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:54:U:H3	13:AM:58:A:H3'	1.70	0.57
17:h:131:ASN:CG	24:o:118:PRO:O	2.47	0.57
19:j:168:PHE:CZ	19:j:395:GLU:HA	2.40	0.57
20:k:196:LYS:O	20:k:199:TRP:HB3	2.04	0.57
21:l:83:ARG:NH2	47:B:80:ILE:HB	2.10	0.57
21:l:119:SER:HB3	21:l:122:GLU:HG3	1.85	0.57
28:s:51:SER:O	28:s:52:GLU:C	2.47	0.57
28:s:106:ASN:ND2	28:s:107:ASN:H	2.02	0.57
30:u:238:ASP:OD1	30:u:238:ASP:C	2.43	0.57
32:w:57:LEU:HB3	32:w:78:ILE:CG2	2.35	0.57
46:A:132:A:H2'	46:A:133:A:C8	2.38	0.57
46:A:785:C:H2'	46:A:786:A:O4'	2.04	0.57
46:A:861:A:H2'	46:A:862:U:H6	1.68	0.57
46:A:1011:A:C8	76:f:50:TYR:OH	2.56	0.57
46:A:1032:G:H3'	46:A:1033:A:C8	2.39	0.57
46:A:1055:A:H5"	46:A:1055:A:C8	2.39	0.57
46:A:1073:A:N6	46:A:1079:A:H61	2.02	0.57
46:A:1769:U:C3'	46:A:1770:U:H5"	2.32	0.57
46:A:1815:U:C2	46:A:1816:A:C8	2.93	0.57
46:A:2349:A:H3'	46:A:2350:U:C6	2.40	0.57
46:A:2430:A:O4'	67:V:34:LEU:HD22	2.05	0.57
46:A:3119:A:H4'	48:C:125:HIS:HA	1.85	0.57
46:A:3137:A:H2'	46:A:3138:U:C6	2.39	0.57
63:R:203:ALA:O	63:R:204:SER:C	2.45	0.57
74:d:79:LEU:HD12	74:d:85:SER:HA	1.86	0.57
3:AC:74:PRO:HB3	7:AG:201:PHE:CE1	2.39	0.57
3:AC:77:SER:HB2	7:AG:190:ALA:HB1	1.86	0.57
3:AC:150:GLN:HE22	4:AD:166:ASP:HB2	1.69	0.57
3:AC:195:ALA:N	4:AD:223:TYR:CE2	2.71	0.57
3:AC:217:TRP:NE1	17:h:146:LEU:HD22	2.13	0.57
3:AC:228:ASP:OD2	4:AD:277:PRO:CB	2.52	0.57
3:AC:266:LYS:CD	17:h:129:TYR:CE2	2.61	0.57
5:AE:275:GLU:O	5:AE:279:LEU:HG	2.04	0.57
6:AF:48:LYS:HG3	12:AL:489:A:H3'	1.87	0.57
6:AF:150:SER:HB3	6:AF:218:VAL:HG21	1.86	0.57
6:AF:330:LYS:HZ3	12:AL:36:U:P	2.27	0.57
7:AG:90:ARG:CZ	12:AL:917:U:OP2	2.52	0.57
12:AL:41:C:C5'	27:r:57:GLN:NE2	2.67	0.57
12:AL:234:A:H4'	31:v:29:ARG:HH22	1.68	0.57
12:AL:753:A:C4'	26:q:129:GLY:O	2.50	0.57
12:AL:801:U:C5'	33:x:130:ARG:HB3	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:816:U:H4'	30:u:172:GLY:O	2.04	0.57
12:AL:1295:A:C6	12:AL:1296:A:N7	2.71	0.57
12:AL:1541:U:H3'	12:AL:1542:A:H8	1.69	0.57
15:Z:66:ALA:CB	22:m:184:ASN:H	2.18	0.57
17:h:133:ILE:O	17:h:134:PRO:C	2.47	0.57
22:m:114:LEU:O	22:m:118:THR:HG23	2.03	0.57
28:s:2:VAL:N	28:s:4:HIS:CE1	2.72	0.57
32:w:160:THR:O	32:w:161:VAL:C	2.44	0.57
46:A:203:U:H2'	46:A:204:A:C1'	2.34	0.57
46:A:474:A:OP2	46:A:1955:C:N4	2.36	0.57
46:A:771:U:H2'	46:A:772:A:C8	2.40	0.57
46:A:1173:U:H2'	46:A:1174:G:O4'	2.05	0.57
46:A:1508:A:H2'	46:A:1509:U:C6	2.39	0.57
46:A:2286:U:H2'	46:A:2287:A:C8	2.38	0.57
46:A:2347:A:O2'	46:A:2348:A:H5'	2.04	0.57
46:A:2360:U:H5"	63:R:162:LEU:CD1	2.31	0.57
46:A:2625:A:N6	55:J:110:GLN:NE2	2.24	0.57
46:A:2827:A:C2'	46:A:2828:A:H5'	2.35	0.57
46:A:3150:U:C4	46:A:3153:U:H5	2.21	0.57
2:AB:46:ASN:H	2:AB:46:ASN:ND2	2.01	0.57
2:AB:111:PHE:HE2	12:AL:101:U:C1'	2.15	0.57
4:AD:151:GLU:CD	16:g:106:PRO:HA	2.28	0.57
8:AH:46:GLY:CA	32:w:5:ASN:HB2	2.24	0.57
12:AL:333:A:C4	12:AL:335:A:C8	2.93	0.57
12:AL:738:A:H4'	21:l:93:ARG:NH2	2.20	0.57
13:AM:33:U:H4'	13:AM:34:C:H5'	1.86	0.57
15:Z:38:LEU:CD1	22:m:238:ILE:CA	2.64	0.57
18:i:102:LYS:O	18:i:103:ASN:C	2.48	0.57
18:i:174:ASN:O	18:i:175:MET:C	2.47	0.57
20:k:27:GLU:C	20:k:29:LEU:H	2.12	0.57
28:s:98:PRO:HD2	28:s:104:THR:HG22	1.86	0.57
30:u:101:PHE:HA	32:w:167:LEU:CD1	2.34	0.57
30:u:125:ILE:O	30:u:126:GLU:C	2.48	0.57
30:u:125:ILE:HB	30:u:128:ILE:HG13	1.87	0.57
32:w:78:ILE:O	32:w:79:ARG:HD2	2.05	0.57
32:w:85:PHE:HA	32:w:88:TYR:CD2	2.40	0.57
38:2:49:MET:HE1	50:E:160:ALA:HB1	1.86	0.57
46:A:217:A:N9	64:S:47:HIS:CE1	2.72	0.57
46:A:575:A:P	55:J:104:SER:HB2	2.43	0.57
46:A:616:A:C8	46:A:1429:C:H1'	2.40	0.57
46:A:931:U:H2'	46:A:932:C:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:947:G:C6	46:A:1107:U:H5	2.22	0.57
46:A:990:U:H2'	46:A:991:U:C2	2.40	0.57
46:A:1497:A:H2'	46:A:1498:U:O4'	2.04	0.57
46:A:1664:A:H2'	46:A:1665:G:N3	2.19	0.57
46:A:1696:A:OP2	47:B:334:ARG:NH1	2.38	0.57
46:A:2029:A:N6	46:A:2059:A:N1	2.52	0.57
46:A:2062:G:N2	46:A:2065:A:OP1	2.36	0.57
46:A:2072:U:C2'	46:A:2073:U:H4'	2.28	0.57
46:A:2345:A:H2'	46:A:2345:A:N3	2.18	0.57
46:A:2590:U:H4'	46:A:2603:C:H5"	1.87	0.57
46:A:2926:G:C2	46:A:2928:A:H5"	2.39	0.57
63:R:329:PHE:CG	63:R:366:ALA:O	2.58	0.57
75:e:193:MET:N	75:e:193:MET:SD	2.77	0.57
2:AB:82:GLN:O	2:AB:83:GLN:C	2.48	0.57
4:AD:212:THR:O	4:AD:216:MET:HB2	2.04	0.57
5:AE:99:LYS:CE	12:AL:1524:U:OP1	2.50	0.57
5:AE:131:ARG:HA	5:AE:134:TRP:HB2	1.86	0.57
7:AG:166:VAL:CG2	16:g:196:PHE:HZ	2.13	0.57
9:AI:50:ARG:HE	9:AI:56:LEU:H	1.53	0.57
9:AI:56:LEU:HD21	22:m:210:VAL:O	2.02	0.57
9:AI:287:ILE:HG21	9:AI:334:PHE:CZ	2.40	0.57
10:AJ:47:TYR:CE1	18:i:103:ASN:OD1	2.58	0.57
11:AK:154:TYR:CB	25:p:57:PHE:HZ	2.17	0.57
12:AL:16:G:H5'	20:k:266:ARG:HD3	1.85	0.57
12:AL:943:U:OP1	23:n:95:PRO:HD2	2.04	0.57
12:AL:1016:G:H3'	12:AL:1017:U:H6	1.70	0.57
12:AL:1118:C:OP1	20:k:187:ARG:NH2	2.36	0.57
12:AL:1540:U:C2	12:AL:1541:U:C4	2.93	0.57
13:AM:10:G:H5'	13:AM:45:G:H4'	1.86	0.57
15:Z:46:HIS:HE1	22:m:234:HIS:C	2.13	0.57
27:r:149:LYS:O	27:r:150:PRO:C	2.47	0.57
32:w:198:LEU:O	32:w:201:ASP:HB2	2.04	0.57
46:A:25:A:H4'	46:A:26:A:OP1	2.05	0.57
46:A:818:U:H3'	46:A:819:U:H6	1.69	0.57
46:A:984:C:H2'	46:A:985:A:C8	2.38	0.57
46:A:1169:A:OP1	46:A:1170:U:H5"	2.05	0.57
46:A:1484:U:C2'	46:A:1485:A:H5'	2.34	0.57
46:A:1791:A:H2'	46:A:1792:A:H5'	1.85	0.57
46:A:2475:U:H2'	46:A:2476:C:C6	2.38	0.57
46:A:2740:A:C5	46:A:2795:U:C4	2.93	0.57
46:A:2744:A:N7	46:A:2796:G:C5	2.72	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2970:A:H2'	46:A:2971:A:C8	2.39	0.57
46:A:3029:U:H1'	65:T:37:PRO:HG3	1.85	0.57
46:A:3120:A:H8	46:A:3120:A:O5'	1.87	0.57
46:A:3156:U:H2'	46:A:3157:A:H8	1.69	0.57
47:B:248:ILE:HG12	47:B:278:LYS:HG3	1.86	0.57
4:AD:146:PHE:O	4:AD:148:SER:N	2.38	0.57
5:AE:102:LEU:HD12	5:AE:105:PHE:HB3	1.87	0.57
5:AE:281:ALA:HA	5:AE:284:LEU:HB2	1.86	0.57
5:AE:319:LEU:O	5:AE:322:LEU:HB3	2.03	0.57
7:AG:177:TYR:HE2	16:g:107:PHE:HZ	1.50	0.57
9:AI:70:GLN:HE21	9:AI:70:GLN:H	1.50	0.57
9:AI:196:LEU:O	9:AI:198:LEU:HG	2.04	0.57
9:AI:223:SER:O	9:AI:284:LYS:HD3	2.03	0.57
11:AK:169:ARG:HB3	25:p:70:GLY:O	2.04	0.57
11:AK:292:TYR:HD2	24:o:212:PHE:CZ	2.22	0.57
12:AL:41:C:O4'	27:r:57:GLN:CD	2.48	0.57
12:AL:351:A:C2	58:M:166:ARG:HG2	2.39	0.57
12:AL:843:G:O2'	26:q:210:ARG:O	2.23	0.57
12:AL:1028:G:H1'	25:p:93:PHE:CZ	2.36	0.57
12:AL:1375:U:H4'	28:s:110:THR:HG22	1.85	0.57
12:AL:1640:U:H3'	12:AL:1641:A:H8	1.70	0.57
15:Z:42:SER:OG	22:m:238:ILE:CG2	2.53	0.57
15:Z:88:ARG:NH2	16:g:74:ILE:HG12	2.19	0.57
17:h:183:ILE:HD11	17:h:375:VAL:HG11	1.86	0.57
18:i:141:ILE:HB	18:i:152:LYS:HG3	1.86	0.57
26:q:76:TYR:HB2	26:q:165:ILE:HG12	1.87	0.57
30:u:53:LYS:HD2	30:u:57:LEU:HD13	1.86	0.57
41:5:77:TYR:CD1	61:P:259:ILE:HG21	2.39	0.57
46:A:425:A:H5"	53:H:117:LYS:HZ3	1.68	0.57
46:A:880:G:C5	46:A:890:A:C2	2.92	0.57
46:A:958:A:H2'	46:A:959:U:C6	2.39	0.57
46:A:1145:U:H2'	46:A:1146:A:H8	1.69	0.57
46:A:1279:A:O2'	49:D:86:ARG:NH2	2.37	0.57
46:A:2383:A:H2'	46:A:2384:A:C8	2.39	0.57
46:A:2464:A:H2'	46:A:2465:A:C8	2.39	0.57
46:A:2801:A:C2	46:A:2802:G:H1'	2.38	0.57
63:R:138:ARG:HG3	63:R:142:LYS:NZ	2.20	0.57
3:AC:55:GLY:O	7:AG:121:ILE:HG23	2.02	0.57
3:AC:264:ILE:HG21	17:h:132:LEU:CD2	2.35	0.57
7:AG:117:SER:HB3	16:g:83:THR:HG22	1.85	0.57
8:AH:34:ASN:O	8:AH:36:VAL:N	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:60:HIS:HB3	12:AL:133:U:C5	2.39	0.57
8:AH:182:TYR:OH	32:w:180:ARG:CD	2.52	0.57
8:AH:210:ILE:O	8:AH:211:VAL:HB	2.04	0.57
9:AI:154:VAL:HA	9:AI:438:PRO:HD2	1.87	0.57
10:AJ:47:TYR:CZ	12:AL:1291:U:O2'	2.56	0.57
11:AK:107:LEU:HA	11:AK:111:GLY:HA2	1.87	0.57
11:AK:285:LEU:HD12	12:AL:1281:A:N6	2.07	0.57
12:AL:81:U:H2'	12:AL:82:A:H5'	1.85	0.57
12:AL:515:A:H3'	12:AL:516:A:H8	1.70	0.57
12:AL:642:C:N4	27:r:74:ASN:ND2	2.53	0.57
12:AL:814:A:H2'	12:AL:815:C:O4'	2.05	0.57
12:AL:825:G:H2'	12:AL:826:G:O5'	2.04	0.57
12:AL:827:G:O2'	12:AL:828:A:C5'	2.53	0.57
12:AL:1060:A:OP2	12:AL:1061:U:C4	2.50	0.57
12:AL:1219:A:H2'	12:AL:1220:A:C8	2.40	0.57
12:AL:1424:A:N3	12:AL:1425:A:N6	2.52	0.57
18:i:83:LYS:HD3	20:k:53:GLU:O	2.05	0.57
20:k:16:TYR:CZ	20:k:20:LEU:HD23	2.40	0.57
26:q:198:ILE:CG2	35:z:106:ILE:HD11	2.35	0.57
32:w:171:GLY:O	32:w:175:ASN:HB2	2.05	0.57
46:A:99:U:H2'	46:A:100:U:H6	1.68	0.57
46:A:592:C:H2'	46:A:593:G:H8	1.68	0.57
46:A:600:C:C4'	47:B:133:ARG:CZ	2.80	0.57
46:A:725:U:H2'	46:A:726:A:O4'	2.05	0.57
46:A:1145:U:H2'	46:A:1146:A:C8	2.40	0.57
46:A:1178:A:H2'	46:A:1179:U:C6	2.39	0.57
46:A:1344:U:C5	46:A:1555:A:N1	2.73	0.57
63:R:272:GLU:HA	63:R:275:LYS:HG3	1.85	0.57
2:AB:80:ASN:O	2:AB:81:ILE:C	2.48	0.57
4:AD:175:ARG:CD	4:AD:191:ILE:HG13	2.30	0.57
6:AF:52:THR:HG23	12:AL:498:A:O5'	2.05	0.57
6:AF:321:TYR:HE1	31:v:13:PHE:CE2	2.22	0.57
7:AG:1:MET:CG	17:h:329:ARG:HH12	2.18	0.57
7:AG:22:LEU:HD23	20:k:139:TYR:HD2	1.67	0.57
7:AG:217:LEU:CD2	33:x:60:PHE:CE1	2.88	0.57
8:AH:162:GLN:CG	23:n:60:PHE:CE1	2.88	0.57
8:AH:195:LYS:HB3	30:u:93:TYR:CE1	2.40	0.57
9:AI:225:GLU:O	9:AI:226:LEU:C	2.45	0.57
11:AK:226:ARG:HD3	11:AK:236:MET:HB3	1.87	0.57
12:AL:410:G:O6	12:AL:507:C:C5	2.57	0.57
12:AL:642:C:H41	27:r:74:ASN:ND2	2.02	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:729:U:C4	12:AL:731:U:C4	2.93	0.57
12:AL:1171:A:H2'	12:AL:1178:A:N6	2.20	0.57
12:AL:1218:G:H4'	24:o:260:GLU:OE2	2.05	0.57
12:AL:1380:A:H1'	12:AL:1394:U:H5	1.69	0.57
12:AL:1386:A:N6	29:t:72:THR:OG1	2.34	0.57
12:AL:1578:A:H2'	12:AL:1579:A:C8	2.40	0.57
17:h:329:ARG:O	17:h:330:ASN:C	2.48	0.57
18:i:334:ARG:HE	18:i:386:ASN:HB3	1.69	0.57
22:m:98:TRP:CB	24:o:242:LEU:CD2	2.80	0.57
25:p:21:PRO:O	25:p:22:VAL:C	2.48	0.57
26:q:135:LYS:O	26:q:138:ARG:HG2	2.05	0.57
29:t:27:LYS:HZ1	29:t:71:SER:N	2.01	0.57
46:A:77:U:H2'	46:A:78:U:C6	2.40	0.57
46:A:1349:A:N7	61:P:95:ARG:CZ	2.68	0.57
46:A:1385:U:H4'	46:A:1716:U:O2	2.05	0.57
46:A:1490:A:O5'	46:A:1490:A:H8	1.88	0.57
46:A:3263:U:H2'	46:A:3264:C:C6	2.39	0.57
63:R:53:GLU:C	63:R:55:GLN:H	2.12	0.57
63:R:295:LYS:CA	63:R:371:LEU:HB3	2.35	0.57
3:AC:133:GLU:HG2	3:AC:136:LYS:HD3	1.87	0.56
3:AC:148:LEU:HD23	4:AD:204:ALA:N	2.20	0.56
3:AC:219:MET:CE	17:h:153:HIS:CD2	2.88	0.56
5:AE:77:LYS:O	5:AE:78:ASP:C	2.45	0.56
9:AI:435:ASN:HD21	24:o:175:GLU:CA	2.17	0.56
10:AJ:32:SER:OG	12:AL:1313:U:H2'	2.04	0.56
11:AK:70:TRP:HB3	20:k:90:PHE:HB3	1.86	0.56
11:AK:134:PHE:CZ	20:k:110:VAL:CG2	2.87	0.56
12:AL:487:A:H3'	12:AL:488:A:H8	1.70	0.56
12:AL:625:A:N1	12:AL:654:G:O2'	2.36	0.56
12:AL:974:A:H1'	12:AL:1482:U:H5'	1.87	0.56
12:AL:1022:U:H4'	12:AL:1023:A:OP1	2.04	0.56
12:AL:1104:U:O2'	18:i:390:ASN:HB2	2.05	0.56
12:AL:1631:U:OP2	33:x:70:LYS:NZ	2.34	0.56
17:h:337:LYS:HZ2	20:k:203:ARG:CZ	2.17	0.56
29:t:27:LYS:NZ	29:t:70:ARG:C	2.63	0.56
46:A:678:A:H5"	46:A:679:A:H5'	1.86	0.56
46:A:971:A:H62	75:e:107:ARG:NH2	1.98	0.56
46:A:1092:G:H3'	46:A:1093:A:H8	1.70	0.56
46:A:1267:A:H3'	46:A:1268:U:C6	2.40	0.56
46:A:1869:A:O2'	46:A:1872:G:N3	2.39	0.56
46:A:1873:A:H8	46:A:1873:A:H5'	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2236:U:C2	46:A:2237:A:C8	2.93	0.56
46:A:2914:C:O2'	46:A:2915:A:H5'	2.04	0.56
46:A:3276:U:H2'	46:A:3277:A:H8	1.70	0.56
63:R:300:TYR:CE2	63:R:304:LEU:HD11	2.40	0.56
3:AC:17:SER:HA	3:AC:20:LEU:HG	1.87	0.56
3:AC:131:ASP:O	3:AC:134:VAL:HB	2.05	0.56
5:AE:58:ASP:HB3	5:AE:61:LEU:HG	1.87	0.56
5:AE:211:LEU:HD21	5:AE:245:LEU:HD11	1.86	0.56
5:AE:285:LEU:HD11	5:AE:298:GLN:N	2.20	0.56
6:AF:333:ARG:HE	6:AF:333:ARG:H	1.52	0.56
7:AG:77:THR:HG22	8:AH:179:LYS:CD	2.35	0.56
8:AH:196:LEU:O	30:u:101:PHE:HE2	1.88	0.56
9:AI:255:VAL:HG22	9:AI:259:LEU:HD13	1.86	0.56
9:AI:325:MET:O	9:AI:326:ASP:C	2.48	0.56
12:AL:861:C:H5"	26:q:215:ARG:HB3	1.87	0.56
12:AL:1179:U:O2	24:o:166:LYS:HB2	2.04	0.56
17:h:313:LYS:HG3	20:k:131:LYS:CA	2.33	0.56
18:i:195:LEU:CB	18:i:203:VAL:HG11	2.35	0.56
20:k:181:LEU:HD23	20:k:276:ILE:HG21	1.87	0.56
21:l:13:ASN:HD22	21:l:16:ALA:HB3	1.70	0.56
25:p:49:SER:HB3	25:p:55:LEU:HG	1.87	0.56
29:t:60:LEU:HB2	34:y:18:ILE:HG21	1.86	0.56
30:u:279:ARG:HB3	30:u:283:ARG:HH21	1.70	0.56
32:w:189:ARG:HH11	32:w:203:PHE:HB3	1.69	0.56
46:A:769:U:C2	46:A:770:A:C8	2.93	0.56
46:A:1006:U:H4'	46:A:1007:U:OP1	2.05	0.56
46:A:1636:C:H2'	46:A:1637:U:C6	2.40	0.56
46:A:1998:U:H2'	46:A:1999:U:O4'	2.05	0.56
46:A:2414:U:H2'	46:A:2415:A:C8	2.40	0.56
46:A:3229:U:H2'	46:A:3230:U:C6	2.40	0.56
3:AC:57:SER:O	3:AC:59:GLU:N	2.38	0.56
3:AC:94:GLU:O	3:AC:97:LEU:HB2	2.05	0.56
3:AC:113:THR:O	3:AC:253:TRP:HB2	2.05	0.56
3:AC:266:LYS:HD3	17:h:151:LEU:HD13	1.88	0.56
4:AD:253:TYR:OH	16:g:298:LEU:O	2.22	0.56
4:AD:254:GLU:HG3	16:g:226:VAL:CG2	2.35	0.56
7:AG:36:ILE:HD13	17:h:234:LYS:CB	2.32	0.56
7:AG:206:ILE:HD13	16:g:92:GLU:HG3	1.82	0.56
8:AH:16:PRO:CD	31:v:35:LYS:CG	2.76	0.56
8:AH:93:GLN:HE21	12:AL:221:U:C3'	2.16	0.56
8:AH:208:GLU:HA	30:u:134:ARG:HD3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:224:PHE:HB2	21:l:18:LYS:HG2	1.87	0.56
9:AI:372:HIS:CE1	12:AL:1279:A:OP1	2.58	0.56
9:AI:435:ASN:HD21	24:o:175:GLU:HA	1.70	0.56
9:AI:449:HIS:HB3	22:m:150:ILE:HG12	1.87	0.56
10:AJ:26:SER:HA	12:AL:1299:A:N7	2.17	0.56
11:AK:99:VAL:CB	18:i:171:TYR:HE2	2.17	0.56
11:AK:130:ARG:O	18:i:214:TYR:HE2	1.88	0.56
11:AK:136:GLU:CG	18:i:212:TYR:CE2	2.89	0.56
11:AK:140:GLN:CD	18:i:321:TYR:CG	2.83	0.56
12:AL:77:U:H2'	12:AL:78:U:H6	1.69	0.56
12:AL:111:A:H2'	12:AL:112:C:C6	2.40	0.56
12:AL:258:G:OP2	32:w:68:LYS:HD2	2.05	0.56
12:AL:541:U:H2'	12:AL:542:A:C4	2.40	0.56
12:AL:558:A:H3'	12:AL:559:U:H6	1.70	0.56
12:AL:632:C:H6	12:AL:644:G:H5'	1.67	0.56
12:AL:763:A:H8	12:AL:763:A:O5'	1.88	0.56
12:AL:784:A:H61	33:x:133:GLN:NE2	2.03	0.56
12:AL:1177:A:H61	25:p:77:LYS:NZ	2.02	0.56
12:AL:1179:U:H1'	24:o:164:THR:OG1	2.05	0.56
12:AL:1627:U:C2	35:z:158:PHE:CZ	2.89	0.56
12:AL:1634:C:N4	16:g:80:ARG:HA	2.20	0.56
13:AM:9:A:O2'	13:AM:45:G:N3	2.38	0.56
18:i:124:THR:OG1	18:i:135:ILE:HG12	2.05	0.56
18:i:166:ASN:ND2	18:i:166:ASN:C	2.63	0.56
20:k:170:VAL:HG21	20:k:194:ILE:HG23	1.88	0.56
27:r:127:ARG:O	27:r:146:GLY:HA3	2.05	0.56
32:w:189:ARG:HA	32:w:192:GLU:CG	2.35	0.56
37:1:117:TYR:HD2	38:2:67:ILE:CD1	2.18	0.56
46:A:159:C:H2'	46:A:160:U:C6	2.40	0.56
46:A:217:A:C8	64:S:47:HIS:CE1	2.93	0.56
46:A:248:A:H2'	46:A:249:C:C6	2.39	0.56
46:A:426:A:C8	46:A:1923:C:C4	2.93	0.56
46:A:451:A:H2'	46:A:452:U:C6	2.40	0.56
46:A:533:U:H5	63:R:135:THR:N	1.92	0.56
46:A:605:A:H2'	46:A:606:U:H6	1.70	0.56
46:A:685:G:H2'	46:A:686:U:H6	1.69	0.56
46:A:808:A:C4	46:A:809:C:H1'	2.40	0.56
46:A:847:U:H2'	46:A:848:U:O4'	2.05	0.56
46:A:992:U:H3	76:f:13:ILE:CA	2.18	0.56
46:A:1120:U:H2'	46:A:1121:U:H6	1.69	0.56
46:A:1309:A:H2'	46:A:1310:A:H8	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1582:A:H2'	46:A:1583:G:O4'	2.06	0.56
46:A:1627:C:O2	48:C:192:SER:OG	2.20	0.56
46:A:1702:C:H2'	46:A:1703:U:C6	2.41	0.56
46:A:1747:C:C2	46:A:1748:A:C8	2.92	0.56
46:A:2077:A:C3'	46:A:2078:U:C4'	2.83	0.56
46:A:2317:A:C2	69:X:65:PHE:HD1	1.88	0.56
46:A:2901:U:H2'	46:A:2902:C:C6	2.40	0.56
46:A:2936:U:H2'	46:A:2937:A:H8	1.70	0.56
46:A:2937:A:H2'	46:A:2938:A:H8	1.71	0.56
46:A:3050:G:H2'	46:A:3051:U:H6	1.69	0.56
47:B:250:THR:HG21	47:B:305:ILE:HD12	1.86	0.56
71:a:119:ILE:HG23	71:a:152:VAL:HG13	1.87	0.56
74:d:171:MET:HA	74:d:171:MET:HE2	1.86	0.56
75:e:66:MET:SD	75:e:149:GLN:C	2.87	0.56
75:e:102:PHE:HE1	75:e:132:LEU:HB2	1.69	0.56
75:e:144:ASP:OD1	75:e:173:ASN:ND2	2.37	0.56
76:f:35:LYS:HD3	76:f:37:ILE:HG12	1.87	0.56
76:f:40:CYS:HA	76:f:43:PHE:HB3	1.87	0.56
76:f:124:ALA:HB2	76:f:142:VAL:HA	1.86	0.56
4:AD:161:LEU:HA	4:AD:289:LYS:HD3	1.88	0.56
4:AD:198:ILE:O	16:g:214:LEU:HD12	2.04	0.56
4:AD:280:TRP:HZ3	4:AD:287:PHE:HA	1.69	0.56
5:AE:128:ILE:HA	5:AE:134:TRP:HE1	1.69	0.56
5:AE:291:ASN:HA	5:AE:294:TYR:CE2	2.40	0.56
9:AI:70:GLN:H	9:AI:70:GLN:NE2	2.03	0.56
9:AI:372:HIS:HE1	12:AL:1279:A:OP1	1.87	0.56
12:AL:510:U:O4	12:AL:608:U:H2'	2.05	0.56
12:AL:805:U:H2'	12:AL:806:A:C8	2.40	0.56
12:AL:1144:C:H2'	12:AL:1145:A:C8	2.40	0.56
12:AL:1162:C:C5'	29:t:115:TRP:HB2	2.36	0.56
12:AL:1163:A:C1'	24:o:256:TYR:OH	2.52	0.56
12:AL:1630:A:C5	15:Z:24:ARG:NH1	2.70	0.56
15:Z:16:LEU:HD21	35:z:165:LEU:CB	2.30	0.56
18:i:150:ASN:ND2	20:k:78:LEU:CB	2.67	0.56
26:q:148:SER:O	26:q:149:GLY:C	2.47	0.56
26:q:184:VAL:CG2	35:z:117:PHE:CD2	2.84	0.56
28:s:20:LEU:HB2	28:s:32:ALA:HB1	1.87	0.56
32:w:170:SER:HA	32:w:173:GLU:CB	2.35	0.56
40:4:33:TRP:CH2	46:A:1274:A:C5	2.93	0.56
46:A:330:A:O2'	46:A:331:A:H8	1.89	0.56
46:A:548:A:H2'	46:A:549:U:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:631:U:H2'	46:A:632:U:C6	2.40	0.56
46:A:696:G:H4'	46:A:697:C:OP2	2.05	0.56
46:A:850:A:H2'	46:A:851:A:C8	2.40	0.56
46:A:1149:U:H2'	46:A:1150:U:C6	2.41	0.56
46:A:1244:A:H2'	46:A:1245:U:H6	1.69	0.56
46:A:1692:A:P	46:A:1882:U:H5'	2.46	0.56
46:A:1907:U:C2	46:A:1908:A:N7	2.74	0.56
46:A:2026:G:N2	46:A:2070:U:H3	2.02	0.56
46:A:2206:U:C2	46:A:2207:A:C8	2.94	0.56
46:A:2664:A:H2'	46:A:2665:U:C6	2.40	0.56
46:A:2698:A:H2'	46:A:2699:A:C8	2.40	0.56
46:A:3129:A:H2'	46:A:3130:U:H6	1.69	0.56
63:R:313:THR:O	63:R:316:GLU:N	2.38	0.56
76:f:13:ILE:O	76:f:14:VAL:C	2.49	0.56
3:AC:185:LEU:CB	7:AG:196:MET:C	2.78	0.56
4:AD:145:SER:CB	4:AD:196:LEU:HB2	2.35	0.56
4:AD:175:ARG:HE	4:AD:177:LEU:H	1.54	0.56
4:AD:226:MET:O	4:AD:227:GLU:C	2.48	0.56
5:AE:123:TRP:CD1	5:AE:124:THR:N	2.73	0.56
6:AF:48:LYS:HG3	12:AL:490:U:OP2	2.05	0.56
7:AG:33:VAL:HG13	17:h:357:TYR:CZ	2.36	0.56
7:AG:174:TYR:HA	7:AG:177:TYR:HD2	1.69	0.56
8:AH:199:LEU:O	8:AH:203:TYR:HB2	2.05	0.56
9:AI:127:ARG:NH2	9:AI:392:PRO:O	2.38	0.56
9:AI:268:ARG:CZ	9:AI:268:ARG:HB2	2.35	0.56
10:AJ:36:ASN:ND2	12:AL:1313:U:O2'	2.38	0.56
12:AL:114:U:H2'	12:AL:115:G:C8	2.40	0.56
12:AL:329:U:H2'	12:AL:330:G:O4'	2.05	0.56
12:AL:828:A:H2'	12:AL:829:U:H6	1.67	0.56
12:AL:834:A:H4'	12:AL:1605:A:H4'	1.88	0.56
12:AL:1370:A:N1	12:AL:1372:G:C2	2.73	0.56
12:AL:1465:A:O5'	12:AL:1466:A:N7	2.38	0.56
12:AL:1594:A:H5'	12:AL:1596:A:N7	2.21	0.56
20:k:267:ASN:O	20:k:268:ASP:C	2.49	0.56
30:u:126:GLU:O	30:u:127:ASP:C	2.49	0.56
32:w:75:ALA:O	32:w:76:GLU:HB2	2.05	0.56
32:w:115:GLU:O	32:w:117:LYS:N	2.38	0.56
38:2:49:MET:HE1	50:E:160:ALA:CB	2.36	0.56
46:A:151:A:H61	46:A:160:U:H3	1.53	0.56
46:A:1358:C:O2	46:A:1358:C:H2'	2.05	0.56
46:A:1972:G:H2'	46:A:1973:C:H6	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1976:U:H5”	46:A:2264:G:H22	1.70	0.56
46:A:2944:C:O2’	46:A:2945:A:H5’	2.06	0.56
46:A:3102:A:H2’	46:A:3102:A:N3	2.19	0.56
46:A:3125:U:H4’	46:A:3126:C:OP1	2.05	0.56
46:A:3156:U:H2’	46:A:3157:A:C8	2.41	0.56
46:A:3175:A:H2’	46:A:3176:U:C6	2.40	0.56
47:B:155:ILE:O	47:B:155:ILE:HG13	2.04	0.56
48:C:215:LEU:HD13	53:H:84:PRO:HG2	1.88	0.56
5:AE:149:SER:HA	5:AE:153:ILE:CG2	2.35	0.56
5:AE:216:LYS:C	5:AE:218:VAL:N	2.58	0.56
5:AE:283:THR:HG23	5:AE:315:TYR:CZ	2.41	0.56
7:AG:22:LEU:HD22	20:k:135:VAL:CG1	2.36	0.56
11:AK:63:GLN:O	11:AK:66:LEU:HB3	2.06	0.56
12:AL:239:A:H5”	32:w:71:PHE:CE2	2.40	0.56
12:AL:520:A:H2’	12:AL:521:A:C8	2.41	0.56
12:AL:761:A:H2	12:AL:851:G:H1’	1.70	0.56
12:AL:1411:G:P	24:o:275:TRP:CB	2.79	0.56
12:AL:1495:U:H3’	12:AL:1496:A:H5”	1.86	0.56
12:AL:1633:U:C4	33:x:58:PHE:HD2	2.10	0.56
12:AL:1646:U:N3	17:h:176:TYR:CA	2.54	0.56
13:AM:33:U:C2’	24:o:278:ARG:HD3	2.35	0.56
22:m:90:PRO:CG	24:o:241:LEU:HD11	2.36	0.56
24:o:232:ALA:HB1	24:o:252:LEU:HG	1.86	0.56
28:s:85:ILE:HG13	34:y:67:ASP:OD2	2.05	0.56
34:y:53:ILE:C	34:y:59:TYR:HA	2.31	0.56
37:1:73:ILE:CD1	42:6:51:TYR:HB2	2.36	0.56
37:1:190:LYS:HB3	46:A:2361:A:C2	2.41	0.56
42:6:66:TYR:CG	46:A:2424:U:C5	2.94	0.56
45:9:98:HIS:HE1	46:A:3276:U:O2	1.88	0.56
46:A:114:U:O2	46:A:115:A:H1’	2.06	0.56
46:A:651:G:H2’	46:A:652:A:O4’	2.06	0.56
46:A:826:A:H2’	46:A:827:U:H6	1.65	0.56
46:A:1543:A:H2’	46:A:1544:A:C8	2.41	0.56
46:A:1952:A:H4’	48:C:207:GLN:O	2.06	0.56
46:A:2843:G:H1’	46:A:2846:U:OP2	2.06	0.56
46:A:3004:A:H2’	46:A:3005:A:C8	2.41	0.56
63:R:295:LYS:HB2	63:R:371:LEU:C	2.31	0.56
76:f:149:ALA:HA	76:f:154:ILE:HB	1.86	0.56
3:AC:115:PRO:HG3	3:AC:132:TRP:CD1	2.41	0.56
3:AC:228:ASP:CB	4:AD:277:PRO:HB2	2.35	0.56
3:AC:265:SER:C	17:h:128:PRO:HG2	2.31	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:226:MET:HG3	4:AD:230:ARG:HB2	1.87	0.56
5:AE:69:LYS:HE2	12:AL:1544:U:OP1	2.04	0.56
6:AF:208:MET:HG3	19:j:425:TRP:CH2	2.33	0.56
7:AG:1:MET:HE2	17:h:351:GLU:CB	2.34	0.56
7:AG:77:THR:HG22	8:AH:179:LYS:HD2	1.87	0.56
8:AH:34:ASN:O	8:AH:38:SER:N	2.34	0.56
8:AH:180:ARG:CG	12:AL:815:C:OP1	2.52	0.56
12:AL:137:U:H1'	12:AL:331:A:H1'	1.87	0.56
12:AL:529:U:H2'	12:AL:530:A:C8	2.41	0.56
12:AL:1295:A:N3	12:AL:1296:A:C8	2.73	0.56
12:AL:1628:A:H62	15:Z:21:PRO:HB3	1.69	0.56
12:AL:1642:U:OP1	16:g:41:SER:HA	2.06	0.56
13:AM:14:A:C8	13:AM:15:G:H1'	2.40	0.56
21:l:43:VAL:O	21:l:44:PRO:C	2.48	0.56
27:r:52:LEU:O	27:r:53:ASP:C	2.48	0.56
28:s:52:GLU:O	28:s:53:PRO:C	2.48	0.56
32:w:199:LYS:HA	32:w:202:GLN:HE21	1.69	0.56
46:A:787:G:O2'	46:A:788:C:H5'	2.05	0.56
46:A:827:U:H2'	46:A:828:A:C8	2.38	0.56
46:A:1210:A:H2'	46:A:1211:U:C6	2.40	0.56
46:A:1825:A:H2'	46:A:1826:U:H6	1.70	0.56
46:A:2316:A:H5'	69:X:63:LEU:CD2	2.35	0.56
46:A:2413:A:H2'	46:A:2414:U:O4'	2.06	0.56
46:A:3059:C:H2'	46:A:3060:U:H6	1.71	0.56
63:R:155:LYS:O	63:R:156:PRO:C	2.47	0.56
63:R:242:GLU:HA	63:R:245:SER:HB2	1.86	0.56
63:R:335:THR:CG2	63:R:363:SER:HB3	2.21	0.56
74:d:79:LEU:HD11	74:d:88:LEU:HD22	1.87	0.56
76:f:56:VAL:O	76:f:57:PRO:C	2.48	0.56
1:AA:80:VAL:HG21	12:AL:1462:A:C6	2.25	0.56
3:AC:228:ASP:CG	4:AD:277:PRO:HG2	2.31	0.56
4:AD:107:GLU:O	4:AD:108:CYS:C	2.49	0.56
5:AE:104:ASP:O	5:AE:108:SER:HB3	2.05	0.56
5:AE:306:ASN:C	5:AE:308:LEU:H	2.14	0.56
7:AG:75:TYR:CE2	32:w:183:ILE:HD13	2.40	0.56
7:AG:127:ILE:HG12	16:g:11:ARG:NH1	2.19	0.56
7:AG:132:TYR:CE2	7:AG:142:ARG:HB2	2.41	0.56
7:AG:153:THR:HG22	7:AG:169:TYR:HA	1.88	0.56
7:AG:206:ILE:N	16:g:92:GLU:OE2	2.37	0.56
8:AH:198:GLU:HB2	21:l:105:LEU:HD21	1.84	0.56
11:AK:86:GLU:HG2	11:AK:108:TYR:HE2	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:162:LEU:C	25:p:68:TYR:CD2	2.84	0.56
11:AK:163:PRO:HA	25:p:68:TYR:CG	2.41	0.56
12:AL:743:U:C4	12:AL:744:A:N7	2.73	0.56
12:AL:1261:A:C2	28:s:107:ASN:CG	2.83	0.56
12:AL:1410:U:H4'	24:o:275:TRP:N	2.14	0.56
17:h:257:ARG:O	17:h:258:GLY:C	2.49	0.56
18:i:148:LYS:CE	20:k:78:LEU:HA	2.31	0.56
18:i:384:ASN:ND2	18:i:387:GLY:O	2.39	0.56
20:k:237:GLY:O	20:k:238:PHE:C	2.48	0.56
29:t:56:LEU:O	29:t:57:GLU:C	2.48	0.56
32:w:13:GLN:HG3	32:w:54:GLU:H	1.71	0.56
34:y:71:HIS:CB	34:y:76:PHE:HE1	2.17	0.56
46:A:74:A:O2'	49:D:238:PRO:O	2.24	0.56
46:A:132:A:C6	46:A:133:A:C6	2.94	0.56
46:A:237:A:N6	46:A:2696:A:H2'	2.21	0.56
46:A:604:G:C5	46:A:659:G:C6	2.93	0.56
46:A:897:C:H2'	46:A:898:U:O4'	2.05	0.56
46:A:929:G:OP2	73:c:27:GLN:HG3	2.05	0.56
46:A:1941:U:H2'	46:A:1942:A:C8	2.40	0.56
46:A:2211:U:H2'	46:A:2212:A:C1'	2.36	0.56
46:A:3073:A:H2'	46:A:3074:A:C8	2.40	0.56
46:A:3087:A:H3'	46:A:3088:C:H6	1.70	0.56
46:A:3263:U:H5"	71:a:181:ALA:HB2	1.88	0.56
46:A:3268:A:H2'	46:A:3269:U:C6	2.41	0.56
62:Q:245:LYS:HA	64:S:52:ARG:HB2	1.87	0.56
63:R:155:LYS:HD2	72:b:157:PHE:CD2	2.41	0.56
3:AC:155:LEU:HB3	3:AC:222:ILE:H	1.69	0.56
3:AC:239:ASN:HA	3:AC:242:LYS:HB3	1.88	0.56
4:AD:146:PHE:HB2	4:AD:152:PHE:HB2	1.88	0.56
5:AE:77:LYS:HB2	5:AE:79:ILE:HG12	1.86	0.56
5:AE:109:VAL:HG12	5:AE:110:GLU:N	2.20	0.56
5:AE:144:LYS:O	5:AE:148:ALA:N	2.35	0.56
7:AG:27:PRO:O	7:AG:28:ALA:C	2.49	0.56
7:AG:32:VAL:HG11	17:h:235:VAL:HA	1.88	0.56
11:AK:142:GLN:OE1	18:i:154:TYR:CE2	2.58	0.56
11:AK:152:ARG:HD3	20:k:70:ASP:OD1	2.06	0.56
11:AK:298:TRP:NE1	24:o:210:ASN:ND2	2.54	0.56
12:AL:351:A:C4	58:M:166:ARG:CD	2.88	0.56
12:AL:777:U:P	21:l:55:LYS:NZ	2.78	0.56
12:AL:894:U:C4'	17:h:204:SER:OG	2.54	0.56
12:AL:1291:U:N3	29:t:89:SER:O	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1327:A:H2'	12:AL:1328:A:C8	2.41	0.56
12:AL:1494:U:O2'	12:AL:1495:U:C5'	2.44	0.56
16:g:228:PRO:CA	16:g:277:LEU:HA	2.30	0.56
18:i:177:ASN:OD1	18:i:177:ASN:N	2.39	0.56
26:q:101:HIS:C	26:q:103:ASN:H	2.14	0.56
31:v:54:GLU:HB3	31:v:59:VAL:HB	1.88	0.56
32:w:92:ALA:O	32:w:93:GLN:C	2.47	0.56
33:x:62:MET:HA	33:x:65:ILE:HG13	1.88	0.56
35:z:92:SER:O	35:z:94:GLU:N	2.36	0.56
46:A:268:C:H4'	46:A:269:A:O5'	2.05	0.56
46:A:1139:G:H2'	46:A:1140:A:H8	1.69	0.56
46:A:1404:A:H2'	46:A:1405:U:C6	2.40	0.56
46:A:1678:C:H2'	46:A:1679:A:C8	2.41	0.56
46:A:1848:C:H2'	46:A:1849:U:C6	2.41	0.56
46:A:1902:U:H2'	46:A:1903:A:C8	2.40	0.56
46:A:2378:A:N6	46:A:2422:A:C4	2.74	0.56
46:A:2390:U:H3	46:A:2411:G:H1	1.52	0.56
46:A:2465:A:H5'	50:E:267:ASN:ND2	2.21	0.56
46:A:2609:G:H2'	46:A:2610:A:H8	1.68	0.56
46:A:2811:G:H2'	46:A:2812:G:C8	2.40	0.56
46:A:2839:A:C8	48:C:209:GLN:HG2	2.41	0.56
63:R:284:GLU:O	63:R:285:ASP:C	2.46	0.56
4:AD:173:ALA:HB1	4:AD:193:TYR:CB	2.36	0.56
4:AD:211:SER:O	4:AD:212:THR:C	2.49	0.56
9:AI:309:GLU:C	9:AI:311:LYS:H	2.13	0.56
10:AJ:66:ILE:HG23	18:i:125:LEU:CB	2.34	0.56
11:AK:195:PRO:HG2	12:AL:1290:A:N7	2.21	0.56
12:AL:1207:U:H2'	12:AL:1208:A:H8	1.71	0.56
12:AL:1435:U:H2'	12:AL:1436:U:C6	2.41	0.56
12:AL:1438:C:H2'	12:AL:1439:G:H8	1.71	0.56
17:h:142:SER:OG	17:h:144:GLN:HG3	2.05	0.56
18:i:315:PRO:HB2	20:k:69:TRP:CZ2	2.40	0.56
20:k:40:ILE:CD1	25:p:22:VAL:HG11	2.05	0.56
22:m:107:PRO:CD	24:o:202:VAL:HA	2.36	0.56
24:o:203:ILE:HD11	24:o:246:LEU:HD21	1.87	0.56
24:o:245:ARG:HH11	24:o:245:ARG:HG2	1.71	0.56
30:u:174:SER:HB2	30:u:219:LEU:HD13	1.88	0.56
46:A:15:A:C6	46:A:16:A:C5	2.93	0.56
46:A:202:A:C5	46:A:203:U:C4	2.93	0.56
46:A:255:G:H8	46:A:255:G:OP2	1.88	0.56
46:A:262:A:C5	72:b:61:ARG:HD2	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:437:A:H2'	46:A:438:U:H6	1.70	0.56
46:A:513:U:H2'	46:A:514:A:C8	2.41	0.56
46:A:640:C:O2	46:A:1570:A:H2'	2.06	0.56
46:A:862:U:H2'	46:A:863:A:C8	2.40	0.56
46:A:968:U:O5'	46:A:968:U:H6	1.88	0.56
46:A:1483:U:C4	46:A:1484:U:C4	2.93	0.56
46:A:1701:A:H1'	46:A:1801:A:C2	2.41	0.56
46:A:1749:U:H2'	46:A:1750:G:C8	2.41	0.56
46:A:1993:U:H2'	46:A:1994:C:C6	2.40	0.56
46:A:2187:A:H2'	46:A:2188:A:C8	2.41	0.56
46:A:2349:A:N3	46:A:2349:A:H2'	2.21	0.56
46:A:2661:C:H5"	55:J:119:LYS:CD	2.36	0.56
75:e:72:TYR:HB3	75:e:136:PRO:HB2	1.88	0.56
4:AD:206:THR:O	4:AD:207:PRO:C	2.49	0.55
5:AE:278:TYR:C	5:AE:280:ILE:N	2.62	0.55
5:AE:301:ILE:O	5:AE:305:GLN:N	2.35	0.55
7:AG:75:TYR:HE2	8:AH:182:TYR:CD2	2.17	0.55
8:AH:199:LEU:HD21	30:u:93:TYR:CD2	2.35	0.55
11:AK:61:PRO:HG2	11:AK:64:ARG:HB2	1.88	0.55
12:AL:1045:C:O3'	29:t:23:ARG:CD	2.54	0.55
12:AL:1165:A:H5"	24:o:254:ARG:HG3	1.88	0.55
12:AL:1410:U:P	24:o:277:LYS:H	2.25	0.55
12:AL:1525:A:H5"	12:AL:1538:U:H3	1.71	0.55
15:Z:86:TYR:C	15:Z:88:ARG:H	2.14	0.55
17:h:347:ASP:CG	17:h:348:THR:H	2.14	0.55
24:o:272:MET:SD	24:o:273:PRO:HD2	2.46	0.55
37:1:188:VAL:HG22	46:A:2361:A:C5	2.40	0.55
46:A:454:A:C2	46:A:1921:A:C5	2.94	0.55
46:A:544:A:N1	46:A:2636:A:H4'	2.20	0.55
46:A:843:A:H2'	46:A:844:A:O4'	2.06	0.55
46:A:1015:A:H4'	76:f:117:LEU:HD23	1.86	0.55
46:A:2264:G:C1'	46:A:2266:U:H5	2.18	0.55
46:A:2357:U:H3	46:A:2363:A:N6	2.04	0.55
46:A:3232:U:H3'	46:A:3233:A:H8	1.71	0.55
47:B:181:ALA:O	47:B:193:TYR:HA	2.05	0.55
63:R:120:PRO:HG2	63:R:123:GLU:OE1	2.05	0.55
63:R:204:SER:HB2	63:R:214:ALA:HB1	1.88	0.55
63:R:290:GLN:O	63:R:291:HIS:C	2.49	0.55
63:R:294:THR:C	63:R:371:LEU:HB3	2.31	0.55
76:f:120:VAL:HG13	76:f:145:ILE:CB	2.35	0.55
1:AA:91:HIS:CE1	12:AL:1473:A:H4'	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:46:ASN:HB3	2:AB:53:ASN:HD22	1.70	0.55
6:AF:48:LYS:CG	12:AL:490:U:OP2	2.55	0.55
6:AF:63:GLY:O	6:AF:64:PRO:C	2.49	0.55
7:AG:72:LYS:O	7:AG:73:GLY:C	2.49	0.55
9:AI:264:HIS:O	9:AI:265:PRO:C	2.50	0.55
18:i:311:ILE:CD1	20:k:58:TYR:OH	2.50	0.55
18:i:368:LEU:O	29:t:111:LYS:CB	2.51	0.55
20:k:153:ARG:HE	20:k:166:PHE:HE1	1.53	0.55
20:k:175:LYS:HG2	20:k:252:CYS:HA	1.89	0.55
21:l:5:LEU:HA	21:l:95:SER:O	2.06	0.55
22:m:95:LEU:O	22:m:96:ALA:C	2.49	0.55
32:w:80:ASN:O	32:w:82:GLY:N	2.39	0.55
33:x:43:GLN:O	33:x:45:LEU:N	2.39	0.55
34:y:13:TRP:CD1	34:y:13:TRP:H	2.22	0.55
46:A:290:G:OP1	55:J:115:LYS:HE3	2.06	0.55
46:A:478:G:H2'	46:A:479:U:C6	2.40	0.55
46:A:495:A:H2'	46:A:496:U:C6	2.41	0.55
46:A:505:C:H2'	46:A:506:A:O4'	2.07	0.55
46:A:669:G:H2'	46:A:670:U:C6	2.41	0.55
46:A:1309:A:H2'	46:A:1310:A:C8	2.40	0.55
46:A:1316:U:H2'	46:A:1316:U:O2	2.05	0.55
46:A:1610:A:OP1	48:C:199:HIS:NE2	2.38	0.55
46:A:2575:A:OP1	50:E:132:SER:HB2	2.06	0.55
46:A:3264:C:H2'	46:A:3265:U:C5	2.41	0.55
61:P:169:ILE:HD12	68:W:148:LEU:HD11	1.87	0.55
63:R:117:LEU:N	63:R:118:PRO:HD2	2.21	0.55
3:AC:56:GLN:O	3:AC:57:SER:C	2.49	0.55
4:AD:167:GLY:CA	4:AD:202:TYR:HA	2.32	0.55
5:AE:50:GLU:HG2	5:AE:94:VAL:HG23	1.88	0.55
5:AE:147:THR:HG23	5:AE:151:PHE:CD2	2.41	0.55
5:AE:181:ILE:O	5:AE:183:HIS:N	2.38	0.55
6:AF:188:LEU:HD11	19:j:442:GLU:HG3	1.89	0.55
7:AG:36:ILE:CD1	17:h:234:LYS:CB	2.84	0.55
7:AG:220:TRP:HZ2	33:x:41:ILE:CD1	2.20	0.55
9:AI:49:LYS:HB2	12:AL:1340:U:H3'	1.87	0.55
9:AI:74:VAL:HG21	9:AI:409:SER:HA	1.88	0.55
9:AI:310:ASN:OD1	28:s:34:LYS:CB	2.45	0.55
10:AJ:26:SER:HB3	12:AL:1299:A:C6	2.41	0.55
11:AK:151:GLN:CG	18:i:83:LYS:HZ1	2.19	0.55
12:AL:15:A:C5'	20:k:261:LYS:HE2	2.26	0.55
12:AL:25:G:H5"	20:k:267:ASN:HD21	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:85:G:H5”	12:AL:90:G:H22	1.70	0.55
12:AL:669:U:H2’	12:AL:670:C:C6	2.41	0.55
12:AL:728:A:O2’	12:AL:729:U:P	2.64	0.55
12:AL:752:A:O3’	26:q:129:GLY:O	2.24	0.55
12:AL:753:A:H5”	12:AL:753:A:C8	2.41	0.55
12:AL:1417:A:P	24:o:268:LYS:HD2	2.45	0.55
12:AL:1486:A:N3	46:A:1859:G:C1’	2.69	0.55
14:AN:1:A:N3	27:r:72:LYS:C	2.65	0.55
16:g:27:LYS:HD2	33:x:50:PRO:CD	2.35	0.55
26:q:128:THR:OG1	26:q:138:ARG:HB2	2.06	0.55
28:s:84:LYS:HG2	34:y:67:ASP:OD2	2.06	0.55
30:u:128:ILE:O	30:u:132:GLU:HG3	2.06	0.55
33:x:56:ASP:H	33:x:59:ASP:CB	2.20	0.55
40:4:136:LYS:HD3	46:A:1114:U:O4	2.06	0.55
46:A:1025:A:H4’	46:A:1026:U:H5’	1.87	0.55
46:A:1040:C:H2’	46:A:1041:U:C6	2.41	0.55
46:A:1322:U:OP1	74:d:118:HIS:NE2	2.39	0.55
46:A:2247:A:H2’	46:A:2248:G:C8	2.41	0.55
46:A:2653:A:H2’	46:A:2654:U:C6	2.42	0.55
46:A:2839:A:OP2	48:C:209:GLN:CB	2.53	0.55
75:e:152:LYS:HD2	75:e:152:LYS:H	1.71	0.55
76:f:78:GLY:HA2	76:f:148:VAL:CB	2.36	0.55
2:AB:90:GLN:HB3	2:AB:100:ILE:HG22	1.88	0.55
3:AC:54:ALA:O	7:AG:143:PRO:CB	2.49	0.55
3:AC:177:PHE:HE2	3:AC:214:VAL:HG21	1.71	0.55
3:AC:191:ILE:CG2	4:AD:223:TYR:CD1	2.87	0.55
4:AD:249:THR:O	4:AD:250:LYS:C	2.49	0.55
5:AE:263:SER:OG	5:AE:266:GLU:HB2	2.06	0.55
8:AH:100:ALA:O	12:AL:143:A:C5’	2.31	0.55
9:AI:192:TYR:HE1	9:AI:197:LYS:HA	1.71	0.55
9:AI:367:TYR:CD2	11:AK:274:PRO:HB2	2.39	0.55
11:AK:112:GLU:CA	18:i:172:TYR:CE2	2.89	0.55
11:AK:128:SER:HA	18:i:156:TYR:OH	2.06	0.55
11:AK:132:PHE:CB	18:i:249:PRO:HD3	2.28	0.55
12:AL:1130:U:H2’	12:AL:1131:U:C6	2.42	0.55
12:AL:1205:A:H2’	12:AL:1206:A:C8	2.42	0.55
21:l:1:MET:SD	30:u:148:GLU:HG3	2.36	0.55
21:l:109:SER:O	21:l:110:SER:C	2.48	0.55
25:p:71:ILE:HD11	25:p:120:VAL:HG12	1.87	0.55
33:x:96:PRO:HG3	33:x:137:LEU:HB2	1.88	0.55
38:2:129:MET:O	50:E:284:GLN:NE2	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:119:A:C2	65:T:153:ARG:HD3	2.42	0.55
46:A:366:A:H2'	46:A:367:A:C8	2.41	0.55
46:A:789:A:C6	46:A:790:A:C6	2.94	0.55
46:A:1049:A:H2'	75:e:111:LEU:CD2	2.31	0.55
46:A:1658:G:H2'	46:A:1659:U:C6	2.42	0.55
46:A:1767:A:HO2'	46:A:1768:A:H8	1.51	0.55
46:A:1932:G:C2	48:C:209:GLN:HG2	2.40	0.55
46:A:2003:G:H2'	46:A:2004:U:O4'	2.07	0.55
46:A:2257:U:H2'	46:A:2258:C:H6	1.71	0.55
46:A:2842:U:C5'	48:C:208:ASN:HB3	2.36	0.55
46:A:2845:G:OP2	46:A:2845:G:H4'	2.05	0.55
47:B:173:ASP:HB3	47:B:176:ARG:HG3	1.88	0.55
47:B:253:HIS:CD2	47:B:308:VAL:HG22	2.41	0.55
47:B:312:ASP:C	47:B:314:GLN:H	2.13	0.55
63:R:53:GLU:HG3	63:R:54:GLY:N	2.21	0.55
3:AC:183:PHE:HZ	3:AC:196:THR:HB	1.70	0.55
3:AC:261:PHE:CB	17:h:141:TYR:OH	2.54	0.55
6:AF:66:ASN:HB3	6:AF:72:VAL:HG23	1.88	0.55
6:AF:207:THR:O	6:AF:210:GLU:N	2.39	0.55
7:AG:91:LEU:HD11	23:n:74:TRP:CH2	2.41	0.55
7:AG:166:VAL:HG21	16:g:195:LYS:HE2	0.59	0.55
8:AH:103:ARG:NH2	31:v:79:GLY:HA3	2.06	0.55
9:AI:56:LEU:CG	22:m:214:GLU:HG2	2.18	0.55
11:AK:137:LEU:HD13	11:AK:142:GLN:HG2	1.87	0.55
12:AL:285:C:C2	12:AL:694:A:C2	2.94	0.55
12:AL:315:G:H2'	12:AL:316:A:H8	1.71	0.55
12:AL:558:A:H3'	12:AL:559:U:C6	2.42	0.55
12:AL:785:A:N3	33:x:109:ILE:CD1	2.69	0.55
12:AL:804:U:OP1	21:l:3:TYR:OH	2.22	0.55
12:AL:816:U:C4'	30:u:172:GLY:O	2.54	0.55
12:AL:1466:A:H5"	12:AL:1469:A:H4'	1.89	0.55
12:AL:1523:A:H2	12:AL:1540:U:N3	2.00	0.55
20:k:266:ARG:HA	20:k:271:ILE:HD11	1.88	0.55
22:m:101:LEU:HD21	24:o:203:ILE:HG23	1.89	0.55
26:q:77:ILE:HD12	26:q:120:GLN:OE1	2.06	0.55
34:y:68:MET:HG2	34:y:76:PHE:CZ	2.41	0.55
39:3:30:PHE:CA	46:A:1568:U:C5	2.90	0.55
46:A:149:A:C5'	70:Y:83:ALA:HB1	2.36	0.55
46:A:406:A:H2'	46:A:407:U:O4'	2.06	0.55
46:A:789:A:H2'	46:A:790:A:H8	1.68	0.55
46:A:1035:U:H2'	46:A:1036:U:C2	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1711:A:C2'	46:A:1712:A:H5'	2.36	0.55
46:A:2383:A:H2'	46:A:2384:A:H8	1.71	0.55
63:R:261:ASN:ND2	63:R:267:HIS:HD2	2.04	0.55
63:R:329:PHE:CB	63:R:366:ALA:O	2.52	0.55
75:e:86:LYS:HE3	75:e:152:LYS:HB3	1.88	0.55
1:AA:80:VAL:HG21	12:AL:1462:A:N7	2.14	0.55
3:AC:177:PHE:CE2	3:AC:214:VAL:HG21	2.41	0.55
3:AC:178:PRO:HG3	3:AC:204:ILE:HG12	1.88	0.55
4:AD:207:PRO:O	4:AD:208:PHE:HB2	2.06	0.55
5:AE:181:ILE:C	5:AE:183:HIS:H	2.15	0.55
5:AE:227:LEU:O	5:AE:230:ILE:N	2.40	0.55
7:AG:49:LYS:NZ	23:n:58:LYS:HZ3	1.97	0.55
7:AG:142:ARG:NH1	7:AG:148:SER:HB3	2.22	0.55
7:AG:214:GLN:HB2	16:g:230:ARG:HH22	1.72	0.55
8:AH:154:MET:HG2	8:AH:154:MET:O	2.05	0.55
9:AI:145:LYS:HG2	9:AI:341:THR:HB	1.88	0.55
9:AI:151:GLU:O	9:AI:152:PRO:C	2.50	0.55
9:AI:186:GLY:HA2	9:AI:305:TYR:CZ	2.42	0.55
11:AK:149:ARG:HD2	20:k:71:TYR:HA	1.89	0.55
12:AL:90:G:H2'	12:AL:91:A:C8	2.41	0.55
12:AL:98:A:H2'	12:AL:99:U:H5"	1.89	0.55
12:AL:328:C:O2'	12:AL:329:U:H5'	2.07	0.55
12:AL:539:C:H2'	12:AL:540:A:H8	1.68	0.55
12:AL:773:A:H2'	12:AL:774:U:C6	2.40	0.55
12:AL:785:A:N3	33:x:109:ILE:HG13	2.21	0.55
12:AL:1001:U:H5'	12:AL:1001:U:H6	1.72	0.55
12:AL:1194:U:H2'	12:AL:1195:A:H8	1.72	0.55
12:AL:1630:A:C6	15:Z:24:ARG:NH2	2.72	0.55
16:g:28:LYS:H	33:x:53:THR:HG22	1.71	0.55
16:g:75:THR:HG22	35:z:177:TYR:OH	2.06	0.55
18:i:95:THR:OG1	29:t:108:PRO:HD3	2.07	0.55
22:m:245:GLN:O	22:m:246:LEU:O	2.24	0.55
29:t:5:ARG:NH2	29:t:22:LEU:HD13	2.15	0.55
30:u:283:ARG:O	30:u:286:PHE:HB2	2.07	0.55
33:x:43:GLN:C	33:x:45:LEU:H	2.14	0.55
46:A:87:U:H2'	46:A:88:U:H6	1.70	0.55
46:A:153:G:H3'	46:A:154:U:H6	1.72	0.55
46:A:304:A:C2	46:A:306:G:H2'	2.42	0.55
46:A:1411:A:C8	61:P:58:VAL:HG21	2.41	0.55
46:A:1490:A:H2	46:A:1523:A:C2	2.21	0.55
46:A:2062:G:H2'	46:A:2062:G:N3	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2575:A:H2'	46:A:2576:A:H8	1.72	0.55
46:A:2983:U:H2'	46:A:2984:A:C8	2.42	0.55
3:AC:265:SER:CB	17:h:129:TYR:HH	2.14	0.55
4:AD:77:LYS:O	4:AD:78:LYS:C	2.49	0.55
4:AD:276:SER:O	4:AD:277:PRO:C	2.50	0.55
5:AE:302:ARG:NE	5:AE:303:GLN:HG3	2.21	0.55
7:AG:147:GLU:OE2	16:g:14:GLN:HG3	1.98	0.55
7:AG:206:ILE:HD11	16:g:227:VAL:HG11	1.89	0.55
7:AG:217:LEU:HD21	33:x:60:PHE:CD1	2.42	0.55
10:AJ:24:ASN:CG	12:AL:1313:U:OP1	2.50	0.55
10:AJ:32:SER:OG	12:AL:1313:U:H5'	2.05	0.55
10:AJ:62:LEU:O	10:AJ:64:PRO:HD3	2.07	0.55
11:AK:196:ASN:N	12:AL:1290:A:C6	2.74	0.55
12:AL:81:U:C2	12:AL:82:A:C8	2.94	0.55
12:AL:318:C:H2'	12:AL:319:A:C8	2.41	0.55
15:Z:46:HIS:ND1	22:m:234:HIS:CB	2.70	0.55
26:q:76:TYR:HB3	26:q:91:PHE:CZ	2.41	0.55
46:A:496:U:H2'	46:A:497:U:H6	1.71	0.55
46:A:944:U:C2	46:A:945:A:N7	2.75	0.55
46:A:1093:A:H4'	46:A:1094:U:O5'	2.06	0.55
46:A:1411:A:C5	61:P:58:VAL:HB	2.41	0.55
46:A:1608:U:O2'	48:C:201:HIS:NE2	2.40	0.55
46:A:1772:U:H2'	46:A:1773:U:C6	2.42	0.55
46:A:1775:A:C6	46:A:1776:A:C6	2.94	0.55
46:A:1824:U:C2	46:A:1825:A:C8	2.95	0.55
46:A:2247:A:H2'	46:A:2248:G:H8	1.72	0.55
46:A:2318:U:H3	46:A:2374:A:H61	1.54	0.55
46:A:2595:U:H2'	46:A:2596:G:H8	1.72	0.55
46:A:2765:C:H6	46:A:2765:C:H5"	1.71	0.55
46:A:2777:U:H1'	46:A:2845:G:H22	1.72	0.55
46:A:3175:A:H2'	46:A:3176:U:H6	1.71	0.55
63:R:161:GLN:HB3	63:R:165:ARG:NH2	2.22	0.55
2:AB:41:VAL:HG21	2:AB:62:ASN:O	2.07	0.55
3:AC:86:ILE:HG22	17:h:162:ALA:HB2	1.88	0.55
3:AC:139:MET:HE3	3:AC:165:ILE:HD13	1.88	0.55
3:AC:176:TYR:CE1	3:AC:213:LYS:HB3	2.42	0.55
5:AE:308:LEU:HD22	5:AE:313:ASP:H	1.69	0.55
6:AF:134:LEU:HD22	6:AF:145:THR:HB	1.88	0.55
6:AF:166:LEU:O	6:AF:167:SER:C	2.50	0.55
9:AI:188:ASN:C	28:s:42:TYR:CE2	2.85	0.55
10:AJ:56:PHE:N	18:i:118:LEU:HD21	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:279:A:HO2'	12:AL:280:G:H8	1.54	0.55
12:AL:784:A:N9	26:q:206:PHE:HD2	2.04	0.55
12:AL:976:U:OP1	27:r:122:LYS:HD3	2.06	0.55
16:g:73:ARG:HG2	17:h:201:LEU:HD13	1.88	0.55
18:i:157:ASN:O	18:i:158:ASN:C	2.50	0.55
18:i:306:TYR:OH	20:k:59:LEU:CD2	2.50	0.55
21:l:82:LEU:HD22	21:l:96:ILE:HD12	1.88	0.55
30:u:192:ILE:HD12	30:u:205:LEU:HD22	1.88	0.55
30:u:198:ASP:OD2	30:u:201:ASN:HB2	2.07	0.55
46:A:169:A:H2'	46:A:170:U:C6	2.42	0.55
46:A:533:U:C5	63:R:134:LEU:HA	2.41	0.55
46:A:987:G:H1	46:A:995:C:H42	1.54	0.55
46:A:1049:A:OP2	75:e:110:HIS:ND1	2.40	0.55
46:A:1291:U:H4'	49:D:125:HIS:CE1	2.42	0.55
46:A:1489:U:H4'	46:A:1490:A:OP1	2.07	0.55
46:A:2199:U:H2'	46:A:2200:C:C6	2.41	0.55
46:A:2317:A:H2	69:X:65:PHE:CE1	2.24	0.55
46:A:2713:G:C8	46:A:2767:C:H3'	2.42	0.55
46:A:2860:A:O2'	46:A:2861:U:H5'	2.06	0.55
63:R:295:LYS:HA	63:R:371:LEU:HB3	1.88	0.55
1:AA:108:SER:HB3	1:AA:111:ARG:NH2	2.21	0.55
2:AB:94:TYR:C	2:AB:96:ASN:H	2.14	0.55
3:AC:242:LYS:O	3:AC:245:LYS:HB3	2.07	0.55
4:AD:148:SER:O	4:AD:151:GLU:N	2.40	0.55
4:AD:258:LYS:HE3	16:g:226:VAL:HG13	1.88	0.55
7:AG:124:GLU:OE2	17:h:190:SER:CA	2.55	0.55
9:AI:289:PHE:CE2	9:AI:324:MET:HA	2.42	0.55
12:AL:47:A:H61	12:AL:406:U:H3	1.53	0.55
12:AL:254:A:H4'	12:AL:255:G:O5'	2.06	0.55
12:AL:511:A:N6	12:AL:608:U:H1'	2.21	0.55
12:AL:1011:A:P	12:AL:1012:G:H22	2.30	0.55
12:AL:1179:U:C1'	24:o:164:THR:HG1	2.20	0.55
12:AL:1441:U:OP1	24:o:161:LYS:CG	2.50	0.55
12:AL:1519:U:H2'	12:AL:1520:U:O4'	2.07	0.55
12:AL:1558:U:H2'	12:AL:1559:A:C8	2.42	0.55
12:AL:1624:U:C6	35:z:154:HIS:NE2	2.75	0.55
12:AL:1646:U:H1'	12:AL:1647:A:H4'	1.88	0.55
13:AM:76:A:H2	46:A:2662:A:C6	2.07	0.55
22:m:129:LYS:O	22:m:133:ILE:HG13	2.07	0.55
22:m:244:ILE:HG23	22:m:247:LYS:CE	2.31	0.55
30:u:245:PHE:HE1	30:u:251:TYR:CD2	2.25	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:v:88:LYS:O	31:v:92:LYS:HG2	2.06	0.55
46:A:220:A:H3'	46:A:221:A:H8	1.72	0.55
46:A:420:U:H2'	46:A:421:U:H6	1.67	0.55
46:A:622:U:O2'	46:A:1652:U:OP2	2.23	0.55
46:A:833:U:O2'	46:A:834:A:H5'	2.07	0.55
46:A:1073:A:N1	46:A:1080:U:O4	2.40	0.55
46:A:1262:A:O2'	46:A:1263:A:H5'	2.07	0.55
46:A:1660:A:H2'	46:A:1661:A:C8	2.41	0.55
46:A:1784:U:H3'	46:A:1785:U:C6	2.38	0.55
46:A:2364:U:C2'	46:A:2365:A:H5'	2.37	0.55
46:A:2625:A:N1	55:J:110:GLN:NE2	2.53	0.55
46:A:2730:G:H2'	46:A:2731:C:H6	1.71	0.55
46:A:2753:U:C2	46:A:2754:A:C8	2.95	0.55
46:A:2982:U:C4	46:A:2983:U:C2	2.95	0.55
47:B:312:ASP:C	47:B:314:GLN:N	2.65	0.55
63:R:73:PRO:HD3	63:R:79:ILE:HD12	1.88	0.55
63:R:205:LEU:HD11	63:R:211:ILE:HG22	1.89	0.55
76:f:63:LYS:HG3	76:f:68:PHE:HA	1.89	0.55
3:AC:68:LEU:HD13	12:AL:1639:A:C5	2.42	0.55
3:AC:178:PRO:HB3	3:AC:204:ILE:HD13	1.89	0.55
3:AC:204:ILE:HD11	7:AG:200:LEU:CD1	2.34	0.55
4:AD:260:PHE:HA	16:g:223:GLN:HE21	1.71	0.55
5:AE:255:LEU:HD13	5:AE:300:PHE:HD2	1.72	0.55
6:AF:326:ARG:NH2	12:AL:301:A:OP2	2.39	0.55
6:AF:344:TYR:O	6:AF:345:ILE:C	2.50	0.55
8:AH:104:ARG:CZ	12:AL:142:U:O2'	2.55	0.55
8:AH:231:PHE:C	8:AH:233:ASP:N	2.65	0.55
10:AJ:69:VAL:HG21	18:i:124:THR:HB	1.88	0.55
12:AL:34:G:H2'	12:AL:35:A:C8	2.42	0.55
12:AL:58:A:N1	12:AL:320:C:H1'	2.22	0.55
12:AL:765:U:C2	12:AL:766:A:C8	2.95	0.55
12:AL:1403:A:H4'	12:AL:1405:A:H2	1.71	0.55
12:AL:1620:G:H21	12:AL:1622:G:H5'	1.72	0.55
21:l:38:VAL:HG21	30:u:141:ILE:CG1	2.36	0.55
21:l:50:LEU:H	21:l:63:ARG:HA	1.71	0.55
30:u:67:VAL:HG22	30:u:209:VAL:HG21	1.88	0.55
30:u:281:GLN:C	30:u:283:ARG:H	2.15	0.55
46:A:250:U:H2'	46:A:251:U:C6	2.41	0.55
46:A:351:C:O2'	46:A:352:A:H5'	2.06	0.55
46:A:1075:A:C2	46:A:1076:U:H1'	2.41	0.55
46:A:1871:U:H5"	47:B:353:LYS:CE	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2064:G:H8	46:A:2064:G:O5'	1.89	0.55
46:A:2183:A:H8	46:A:2183:A:O5'	1.91	0.55
46:A:2316:A:C5'	69:X:63:LEU:CD2	2.85	0.55
4:AD:224:THR:HA	4:AD:227:GLU:HG2	1.87	0.54
6:AF:150:SER:HB3	6:AF:218:VAL:CG2	2.37	0.54
8:AH:83:GLN:CB	12:AL:145:A:H5"	2.36	0.54
9:AI:156:LYS:HE2	9:AI:346:SER:HA	1.89	0.54
11:AK:115:ALA:HB2	18:i:172:TYR:CZ	2.42	0.54
12:AL:380:G:OP1	31:v:83:SER:CB	2.56	0.54
12:AL:519:A:H2'	12:AL:519:A:N3	2.20	0.54
12:AL:691:U:O2	12:AL:825:G:C6	2.58	0.54
12:AL:796:A:H3'	12:AL:797:A:O4'	2.07	0.54
12:AL:898:U:C6	12:AL:898:U:H5"	2.42	0.54
12:AL:1036:A:H4'	12:AL:1040:C:H42	1.72	0.54
12:AL:1288:U:H2'	12:AL:1289:U:C6	2.42	0.54
12:AL:1399:G:H1'	12:AL:1400:A:C4	2.42	0.54
13:AM:76:A:H1'	46:A:2662:A:H2	1.66	0.54
16:g:71:LEU:HG	17:h:200:SER:OG	2.07	0.54
16:g:272:ARG:CZ	33:x:48:LYS:HA	2.37	0.54
18:i:336:SER:O	18:i:337:ASN:C	2.49	0.54
18:i:368:LEU:CD1	29:t:111:LYS:CG	2.85	0.54
21:l:38:VAL:CG2	30:u:137:ALA:HB1	2.37	0.54
22:m:98:TRP:CD1	24:o:242:LEU:CD2	2.90	0.54
28:s:16:ILE:HG23	28:s:47:MET:HE1	1.89	0.54
28:s:52:GLU:HB3	28:s:53:PRO:HD3	1.89	0.54
30:u:37:ALA:O	30:u:41:LEU:HG	2.06	0.54
30:u:245:PHE:CZ	30:u:247:MET:HG2	2.43	0.54
33:x:49:LEU:HD13	33:x:49:LEU:H	1.71	0.54
34:y:13:TRP:O	34:y:14:LYS:C	2.50	0.54
37:1:158:ARG:NH2	46:A:2643:U:O2	2.38	0.54
46:A:261:A:C4	46:A:307:G:N7	2.75	0.54
46:A:538:A:H2'	46:A:539:U:H6	1.71	0.54
46:A:604:G:C6	46:A:659:G:C6	2.95	0.54
46:A:872:G:H2'	46:A:873:A:H8	1.71	0.54
46:A:1215:A:H2'	46:A:1216:A:C8	2.41	0.54
46:A:1293:A:O2'	46:A:1294:C:H5'	2.07	0.54
46:A:1525:A:H2'	46:A:1526:A:C8	2.41	0.54
46:A:1531:C:C2	47:B:326:TRP:CE3	2.94	0.54
46:A:1577:U:H3'	46:A:1578:A:H8	1.72	0.54
46:A:1579:A:H5'	46:A:1579:A:C8	2.42	0.54
46:A:1581:U:H2'	46:A:1582:A:C5'	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1753:U:H6	46:A:1753:U:O5'	1.89	0.54
46:A:1821:G:N3	46:A:1822:G:C8	2.75	0.54
46:A:2958:U:H4'	46:A:3240:A:O4'	2.07	0.54
46:A:3171:A:C8	58:M:67:LYS:HD3	2.43	0.54
46:A:3252:U:H4'	46:A:3253:U:O5'	2.07	0.54
2:AB:53:ASN:O	2:AB:56:LYS:HG3	2.07	0.54
2:AB:65:ASN:HB3	2:AB:69:TRP:CZ2	2.42	0.54
2:AB:82:GLN:HG2	12:AL:376:C:OP1	2.06	0.54
4:AD:21:HIS:CE1	4:AD:22:LEU:HG	2.42	0.54
4:AD:173:ALA:HB3	4:AD:268:ILE:HB	1.88	0.54
4:AD:226:MET:CG	4:AD:230:ARG:HB2	2.37	0.54
5:AE:191:CYS:O	5:AE:194:HIS:HB2	2.06	0.54
8:AH:223:VAL:CG1	21:l:44:PRO:CD	2.78	0.54
12:AL:79:A:H61	12:AL:95:U:H3	1.54	0.54
12:AL:414:A:N6	12:AL:502:A:C8	2.76	0.54
12:AL:622:A:C5'	19:j:43:GLN:HG2	2.32	0.54
12:AL:725:A:H3'	12:AL:726:A:C8	2.42	0.54
12:AL:1248:A:C2	12:AL:1250:A:N6	2.75	0.54
12:AL:1524:U:C4'	12:AL:1524:U:OP1	2.55	0.54
15:Z:81:HIS:HE1	35:z:173:LYS:HE3	1.72	0.54
16:g:103:ARG:HD2	16:g:103:ARG:H	1.70	0.54
16:g:221:VAL:HG21	16:g:224:ARG:HD3	1.88	0.54
18:i:236:ILE:O	18:i:237:LEU:C	2.51	0.54
19:j:124:PHE:HA	19:j:129:ASN:HD22	1.72	0.54
25:p:86:TRP:CZ2	29:t:91:PHE:CZ	2.95	0.54
27:r:86:THR:C	27:r:88:GLY:N	2.62	0.54
29:t:56:LEU:HD12	34:y:18:ILE:HG12	1.85	0.54
34:y:50:LYS:HA	34:y:63:GLU:HA	1.89	0.54
46:A:26:A:C6	71:a:112:TYR:C	2.84	0.54
46:A:166:U:H3'	46:A:167:U:C5	2.42	0.54
46:A:487:U:H2'	46:A:488:A:C8	2.42	0.54
46:A:613:G:O2'	47:B:97:LYS:CE	2.48	0.54
46:A:884:U:N3	56:K:84:ARG:NH1	2.55	0.54
46:A:1004:A:C5'	76:f:140:GLY:HA2	2.35	0.54
46:A:1352:A:C6	74:d:32:LEU:HB3	2.42	0.54
46:A:1430:U:H3'	46:A:1431:U:H6	1.72	0.54
46:A:1440:U:C5'	46:A:1481:A:N7	2.29	0.54
46:A:1483:U:H2'	46:A:1484:U:C6	2.42	0.54
46:A:1496:U:H3	46:A:1512:A:H61	1.53	0.54
46:A:2063:A:H8	46:A:2063:A:O5'	1.89	0.54
63:R:184:LEU:CD2	63:R:258:THR:HG22	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:110:PHE:CZ	12:AL:101:U:H5'	2.37	0.54
5:AE:73:ILE:HB	5:AE:77:LYS:NZ	2.23	0.54
5:AE:117:LEU:HD22	5:AE:162:LEU:HD12	1.90	0.54
5:AE:315:TYR:CE1	5:AE:319:LEU:HD11	2.42	0.54
7:AG:108:PHE:CE2	7:AG:149:VAL:HG21	2.42	0.54
8:AH:167:ASN:O	23:n:65:PRO:HD2	1.93	0.54
9:AI:292:ASP:O	9:AI:293:ASN:HB2	2.07	0.54
9:AI:447:LEU:O	9:AI:449:HIS:HD2	1.89	0.54
12:AL:20:A:O2'	12:AL:21:U:H5'	2.06	0.54
12:AL:738:A:H4'	21:l:93:ARG:CZ	2.37	0.54
12:AL:1153:A:H2'	12:AL:1154:C:C6	2.42	0.54
12:AL:1407:A:C4'	13:AM:41:A:H1'	2.37	0.54
13:AM:14:A:C3'	13:AM:15:G:H4'	2.36	0.54
15:Z:66:ALA:CA	22:m:184:ASN:CB	2.63	0.54
15:Z:81:HIS:HE1	35:z:173:LYS:CD	2.19	0.54
17:h:283:SER:O	17:h:285:GLU:N	2.40	0.54
21:l:111:LEU:HD12	33:x:95:ARG:HH11	1.72	0.54
26:q:147:THR:HG22	26:q:147:THR:O	2.08	0.54
26:q:205:LYS:NZ	26:q:211:SER:OG	2.40	0.54
27:r:70:PRO:CG	27:r:75:SER:HA	2.36	0.54
31:v:84:GLU:HG3	31:v:88:LYS:HE3	1.89	0.54
32:w:98:LYS:O	32:w:99:GLU:C	2.51	0.54
39:3:61:ILE:HG23	39:3:77:VAL:HG22	1.89	0.54
46:A:70:A:C6	46:A:92:A:C6	2.95	0.54
46:A:440:U:C2	46:A:441:A:C8	2.96	0.54
46:A:470:U:N3	46:A:1930:A:C5	2.75	0.54
46:A:712:A:H2'	46:A:872:G:H5"	1.89	0.54
46:A:894:A:H2'	46:A:895:A:H8	1.71	0.54
46:A:1765:A:N6	46:A:1786:A:N1	2.55	0.54
46:A:2018:C:H1'	46:A:2062:G:H1'	1.88	0.54
46:A:2333:A:N3	63:R:328:VAL:HG12	2.22	0.54
46:A:2600:U:O4	63:R:101:HIS:HB3	2.08	0.54
46:A:2660:A:H3'	46:A:2661:C:C6	2.42	0.54
46:A:2670:C:H2'	46:A:2671:U:H6	1.72	0.54
46:A:2980:A:H3'	46:A:2981:U:H6	1.71	0.54
55:J:130:LEU:HD21	55:J:193:SER:HB3	1.88	0.54
75:e:50:LYS:HA	75:e:54:ILE:HB	1.88	0.54
75:e:97:VAL:HG12	75:e:133:LEU:HD11	1.88	0.54
75:e:211:ARG:HH11	75:e:211:ARG:HG3	1.70	0.54
3:AC:99:SER:HB2	3:AC:252:ASN:ND2	2.22	0.54
3:AC:112:LYS:HD2	3:AC:252:ASN:HA	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:169:ASN:CB	7:AG:197:PHE:HE1	2.21	0.54
6:AF:58:MET:HG2	19:j:11:LEU:HD22	1.89	0.54
6:AF:323:SER:O	6:AF:324:GLY:C	2.50	0.54
8:AH:46:GLY:N	32:w:59:ARG:HD2	2.23	0.54
8:AH:78:THR:HA	12:AL:230:A:H1'	1.89	0.54
12:AL:239:A:C5'	32:w:71:PHE:CE2	2.90	0.54
12:AL:501:U:O2'	19:j:9:LYS:HE3	2.07	0.54
12:AL:1268:A:H5"	12:AL:1420:A:C6	2.43	0.54
12:AL:1322:A:H2'	12:AL:1323:A:C8	2.43	0.54
12:AL:1632:A:C6	33:x:67:LEU:CD1	2.89	0.54
17:h:313:LYS:CG	20:k:131:LYS:HA	2.36	0.54
18:i:95:THR:O	29:t:108:PRO:CB	2.55	0.54
18:i:306:TYR:CE2	25:p:28:TYR:CE2	2.95	0.54
18:i:315:PRO:O	20:k:69:TRP:CZ3	2.60	0.54
20:k:111:SER:O	20:k:112:LEU:C	2.50	0.54
22:m:97:GLN:HB3	24:o:242:LEU:CD1	2.37	0.54
26:q:131:LEU:HD21	26:q:150:ARG:CB	2.37	0.54
26:q:198:ILE:CG2	35:z:106:ILE:CG1	2.85	0.54
29:t:60:LEU:CG	34:y:20:PRO:HG3	2.34	0.54
46:A:9:U:O5'	46:A:9:U:H6	1.89	0.54
46:A:13:A:H2'	46:A:14:U:C6	2.43	0.54
46:A:110:A:H2'	46:A:111:G:H8	1.71	0.54
46:A:122:A:O2'	46:A:123:A:H5'	2.06	0.54
46:A:744:U:H2'	46:A:745:U:H6	1.70	0.54
46:A:976:A:C2	75:e:175:VAL:HG21	2.40	0.54
46:A:1015:A:O3'	76:f:158:PRO:OXT	2.25	0.54
46:A:1303:C:N4	46:A:1600:U:O4	2.41	0.54
46:A:1351:A:OP2	61:P:106:LYS:NZ	2.39	0.54
46:A:2269:U:H2'	46:A:2270:U:C6	2.43	0.54
46:A:2446:U:H4'	46:A:2447:A:OP1	2.08	0.54
46:A:2661:C:OP1	55:J:119:LYS:HG3	2.07	0.54
46:A:2842:U:H5"	48:C:208:ASN:ND2	2.13	0.54
46:A:3018:A:C6	46:A:3019:U:C4	2.95	0.54
60:O:154:ARG:HB3	61:P:231:LEU:CD1	2.37	0.54
63:R:267:HIS:CG	63:R:268:GLN:H	2.26	0.54
3:AC:104:GLY:O	3:AC:106:ASN:N	2.39	0.54
4:AD:109:PRO:O	4:AD:111:LEU:N	2.41	0.54
4:AD:130:PRO:HG2	4:AD:142:LEU:HD12	1.88	0.54
5:AE:149:SER:HB2	5:AE:156:TYR:HA	1.89	0.54
6:AF:306:GLN:O	31:v:62:ILE:HG22	2.06	0.54
7:AG:33:VAL:HG22	17:h:357:TYR:OH	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:435:ASN:ND2	24:o:175:GLU:HA	2.22	0.54
9:AI:437:ASN:O	9:AI:438:PRO:C	2.50	0.54
11:AK:195:PRO:CG	12:AL:1290:A:H2'	2.22	0.54
12:AL:268:G:H2'	12:AL:269:A:C8	2.43	0.54
12:AL:673:A:N1	20:k:266:ARG:NE	2.55	0.54
12:AL:675:U:H5	20:k:263:TYR:OH	1.90	0.54
12:AL:714:U:O2'	12:AL:715:U:H5'	2.07	0.54
12:AL:753:A:H5"	12:AL:753:A:H8	1.72	0.54
12:AL:855:C:H2'	12:AL:856:G:C8	2.43	0.54
12:AL:861:C:C4'	26:q:217:LEU:CD2	2.58	0.54
12:AL:1039:A:H5'	29:t:86:PHE:HB2	1.89	0.54
12:AL:1272:U:H1'	12:AL:1420:A:C5	2.43	0.54
12:AL:1632:A:H4'	33:x:58:PHE:HE1	1.72	0.54
15:Z:16:LEU:HD22	35:z:165:LEU:CD2	2.37	0.54
18:i:148:LYS:NZ	20:k:78:LEU:CB	2.64	0.54
18:i:224:ILE:HD13	18:i:329:ILE:HD12	1.90	0.54
21:l:27:THR:O	21:l:28:ILE:C	2.48	0.54
23:n:108:LYS:HB2	23:n:115:ILE:HD11	1.89	0.54
26:q:88:HIS:O	26:q:89:LEU:HD23	2.07	0.54
28:s:76:LYS:HG3	28:s:119:ARG:HG3	1.89	0.54
30:u:79:ILE:O	30:u:80:MET:C	2.51	0.54
30:u:105:ILE:O	30:u:109:LYS:HG3	2.08	0.54
32:w:47:ASP:C	32:w:49:GLY:N	2.58	0.54
33:x:69:ARG:HA	33:x:72:GLN:NE2	2.22	0.54
46:A:257:U:C2	46:A:258:A:C8	2.96	0.54
46:A:306:G:C2	46:A:365:A:C2	2.95	0.54
46:A:766:U:H2'	46:A:767:A:H8	1.72	0.54
46:A:940:A:H2'	46:A:941:U:H6	1.73	0.54
46:A:1608:U:H2'	46:A:1609:U:C6	2.42	0.54
46:A:1705:U:OP2	47:B:387:ARG:NH1	2.36	0.54
46:A:2740:A:H61	46:A:2795:U:H2'	1.73	0.54
76:f:81:LEU:HB3	76:f:154:ILE:HG21	1.89	0.54
2:AB:92:HIS:HD2	12:AL:524:A:H2	1.54	0.54
5:AE:119:TRP:O	5:AE:123:TRP:HB3	2.07	0.54
5:AE:284:LEU:HG	5:AE:297:LEU:HD22	1.89	0.54
6:AF:62:LEU:HD11	19:j:26:PHE:CE2	2.36	0.54
10:AJ:29:ARG:NH1	34:y:13:TRP:CE2	2.75	0.54
11:AK:252:HIS:HE1	25:p:150:LEU:H	1.55	0.54
12:AL:13:U:C4'	20:k:238:PHE:HE2	2.11	0.54
12:AL:314:C:H2'	12:AL:315:G:C8	2.43	0.54
12:AL:819:C:H1'	30:u:218:TYR:CD2	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1125:C:O4'	20:k:225:HIS:CD2	2.61	0.54
12:AL:1514:U:H2'	12:AL:1515:A:H8	1.72	0.54
12:AL:1587:U:H2'	12:AL:1588:U:C6	2.42	0.54
12:AL:1629:A:P	35:z:163:LYS:HE2	2.47	0.54
17:h:131:ASN:HB2	24:o:119:GLN:C	2.32	0.54
20:k:267:ASN:O	20:k:270:ASN:N	2.40	0.54
22:m:97:GLN:CB	24:o:242:LEU:HD11	2.37	0.54
24:o:256:TYR:O	24:o:257:ARG:C	2.50	0.54
26:q:148:SER:O	26:q:151:MET:N	2.41	0.54
27:r:137:ASN:O	27:r:139:ILE:HG13	2.08	0.54
29:t:47:ASN:O	29:t:49:ASN:N	2.40	0.54
39:3:30:PHE:HB2	46:A:1568:U:C5	2.39	0.54
46:A:494:U:H2'	46:A:495:A:C8	2.43	0.54
46:A:834:A:C2	46:A:835:A:C5	2.95	0.54
46:A:1192:A:H2'	46:A:1193:U:C6	2.43	0.54
46:A:1432:A:H2'	46:A:1433:A:H8	1.72	0.54
46:A:2019:A:N6	46:A:2060:A:N7	2.55	0.54
46:A:2331:U:OP2	63:R:322:ARG:HD3	2.08	0.54
46:A:2679:A:H2'	46:A:2680:A:O4'	2.07	0.54
46:A:3254:U:OP1	68:W:102:ASN:HB2	2.07	0.54
47:B:268:SER:H	47:B:271:THR:HG21	1.72	0.54
49:D:133:ARG:HH21	49:D:137:ASN:HD22	1.54	0.54
2:AB:59:PHE:CE1	2:AB:69:TRP:CZ3	2.96	0.54
3:AC:185:LEU:HD12	7:AG:195:GLU:C	2.33	0.54
4:AD:146:PHE:CB	4:AD:152:PHE:HB2	2.37	0.54
4:AD:208:PHE:CD2	16:g:214:LEU:CG	2.91	0.54
4:AD:302:TRP:O	4:AD:305:VAL:N	2.41	0.54
7:AG:22:LEU:HD21	20:k:205:LEU:HD12	1.90	0.54
7:AG:52:SER:O	7:AG:54:GLY:N	2.41	0.54
7:AG:117:SER:CB	16:g:83:THR:HG21	2.36	0.54
8:AH:78:THR:HG22	12:AL:230:A:C2'	2.24	0.54
11:AK:112:GLU:HA	18:i:172:TYR:CZ	2.41	0.54
12:AL:502:A:C5'	19:j:7:LEU:HD21	2.37	0.54
12:AL:534:A:H2'	12:AL:535:U:H6	1.72	0.54
12:AL:699:A:H2'	12:AL:700:U:C6	2.42	0.54
12:AL:761:A:C6	12:AL:762:U:C4	2.95	0.54
12:AL:1645:U:H4'	17:h:176:TYR:CE2	2.42	0.54
18:i:93:TRP:CB	29:t:108:PRO:CB	2.85	0.54
18:i:95:THR:O	29:t:108:PRO:HG3	2.07	0.54
18:i:311:ILE:CG1	20:k:58:TYR:CZ	2.89	0.54
28:s:21:ALA:HB2	28:s:28:GLY:HA2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:y:85:TYR:O	34:y:86:THR:C	2.50	0.54
46:A:12:A:H2'	46:A:13:A:H8	1.72	0.54
46:A:419:U:C4	46:A:420:U:C4	2.96	0.54
46:A:963:A:H61	46:A:1061:U:H3	1.55	0.54
46:A:1034:U:H1'	46:A:1037:A:N7	2.22	0.54
46:A:1490:A:C2	46:A:1523:A:H2	2.24	0.54
46:A:1971:A:H2'	46:A:1972:G:C8	2.43	0.54
46:A:1981:U:O4	46:A:2263:U:C4	2.61	0.54
46:A:2054:A:H4'	46:A:2055:U:O5'	2.08	0.54
46:A:2302:U:H5	63:R:39:MET:SD	2.30	0.54
46:A:2717:A:O2'	46:A:2718:C:H6	1.91	0.54
46:A:2798:A:H5"	51:F:194:TYR:CZ	2.43	0.54
46:A:2897:A:C2	71:a:177:LYS:NZ	2.75	0.54
46:A:3276:U:H2'	46:A:3277:A:C8	2.43	0.54
50:E:20:LYS:O	63:R:81:LYS:HA	2.08	0.54
51:F:163:PRO:CB	75:e:213:LEU:CD1	2.70	0.54
63:R:224:GLU:HA	63:R:227:ARG:CZ	2.37	0.54
3:AC:177:PHE:CE1	3:AC:200:MET:HG2	2.37	0.54
3:AC:185:LEU:HD12	7:AG:195:GLU:O	2.06	0.54
5:AE:219:LEU:HD23	5:AE:219:LEU:H	1.73	0.54
5:AE:279:LEU:HD21	5:AE:315:TYR:H	1.71	0.54
6:AF:137:PHE:CZ	19:j:468:PRO:CG	2.90	0.54
7:AG:174:TYR:CD1	16:g:107:PHE:CE2	2.95	0.54
7:AG:226:GLU:O	7:AG:230:LEU:HB3	2.08	0.54
8:AH:14:VAL:CG2	12:AL:298:A:C6	2.91	0.54
10:AJ:53:ILE:HD13	10:AJ:55:LYS:HE3	1.86	0.54
12:AL:16:G:H5'	20:k:266:ARG:HH11	1.73	0.54
12:AL:96:A:H2'	12:AL:97:A:O4'	2.07	0.54
12:AL:772:A:O3'	26:q:81:LYS:HB2	2.08	0.54
12:AL:900:A:H2'	12:AL:901:U:C6	2.42	0.54
12:AL:1123:U:H2'	12:AL:1124:G:H8	1.73	0.54
12:AL:1165:A:H2'	12:AL:1166:U:C6	2.43	0.54
12:AL:1172:A:N7	25:p:36:ILE:CD1	2.63	0.54
12:AL:1411:G:H2'	12:AL:1412:C:C6	2.43	0.54
12:AL:1616:C:H2'	12:AL:1617:G:C8	2.43	0.54
12:AL:1628:A:O3'	35:z:163:LYS:HE2	2.07	0.54
12:AL:1633:U:O4	33:x:58:PHE:CD2	2.34	0.54
13:AM:18:G:N2	13:AM:58:A:OP1	2.39	0.54
18:i:124:THR:HG22	18:i:125:LEU:N	2.22	0.54
22:m:169:PHE:CD2	22:m:179:ILE:HB	2.42	0.54
30:u:127:ASP:CB	30:u:130:LYS:HB2	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:u:206:ARG:O	30:u:207:ILE:C	2.49	0.54
46:A:265:C:O2'	46:A:297:A:H4'	2.07	0.54
46:A:716:A:H2'	46:A:717:U:C6	2.43	0.54
46:A:1520:C:H42	46:A:3021:A:N6	2.06	0.54
46:A:1710:A:H4'	47:B:371:THR:CB	2.37	0.54
46:A:1757:A:H3'	46:A:1758:U:C5	2.42	0.54
46:A:1932:G:N1	48:C:209:GLN:HG2	2.22	0.54
46:A:2062:G:C6	46:A:2065:A:H2'	2.42	0.54
46:A:2378:A:C6	46:A:2422:A:C4	2.96	0.54
46:A:2378:A:C6	46:A:2422:A:C5	2.96	0.54
46:A:2428:A:O2'	67:V:38:ARG:O	2.22	0.54
46:A:2574:G:H4'	50:E:131:TRP:HE1	1.72	0.54
46:A:2886:C:H5'	48:C:214:VAL:O	2.07	0.54
46:A:3254:U:H5"	46:A:3255:A:O4'	2.07	0.54
48:C:210:ASP:HB3	48:C:211:PRO:HD3	1.90	0.54
63:R:174:ASP:OD1	63:R:178:LYS:HE3	2.08	0.54
76:f:124:ALA:HA	76:f:141:ILE:HG22	1.89	0.54
2:AB:94:TYR:O	2:AB:97:ASN:N	2.26	0.54
3:AC:90:HIS:CG	17:h:161:GLY:CA	2.60	0.54
3:AC:264:ILE:CG2	17:h:132:LEU:HD21	2.38	0.54
4:AD:186:MET:HB3	4:AD:189:ARG:CB	2.33	0.54
6:AF:177:LEU:HD22	6:AF:181:ARG:HE	1.73	0.54
8:AH:104:ARG:HD2	12:AL:143:A:H4'	0.54	0.54
9:AI:78:LEU:HD11	9:AI:405:TYR:CE1	2.43	0.54
9:AI:236:ASN:O	9:AI:237:PRO:C	2.51	0.54
10:AJ:27:GLY:HA2	12:AL:1300:U:O4	2.08	0.54
10:AJ:27:GLY:CA	12:AL:1300:U:C5	2.91	0.54
12:AL:26:U:OP2	20:k:267:ASN:ND2	2.40	0.54
12:AL:111:A:H2'	12:AL:112:C:H6	1.73	0.54
12:AL:259:G:H2'	12:AL:260:U:C6	2.43	0.54
12:AL:418:A:H2'	12:AL:419:U:H6	1.73	0.54
12:AL:626:U:C4	12:AL:654:G:C2	2.96	0.54
12:AL:712:A:H2'	12:AL:713:U:H6	1.72	0.54
12:AL:1014:A:H3'	12:AL:1015:U:H5'	1.89	0.54
12:AL:1037:C:O2'	25:p:94:VAL:CG1	2.52	0.54
20:k:40:ILE:HG23	20:k:41:PRO:HD2	1.88	0.54
20:k:151:MET:HG2	20:k:190:MET:HE2	1.90	0.54
22:m:124:HIS:C	22:m:126:LYS:N	2.61	0.54
46:A:166:U:H3'	46:A:167:U:C6	2.42	0.54
46:A:215:A:H3'	46:A:216:U:C6	2.43	0.54
46:A:318:A:H3'	46:A:319:U:H6	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:888:G:H2'	46:A:889:U:H6	1.72	0.54
46:A:937:U:C2	46:A:938:A:C8	2.96	0.54
46:A:1490:A:C2	46:A:1523:A:C2	2.95	0.54
46:A:1959:A:OP1	49:D:112:GLY:HA2	2.08	0.54
46:A:2789:C:H2'	46:A:2790:U:C6	2.43	0.54
46:A:2897:A:C6	46:A:3262:A:H1'	2.43	0.54
47:B:268:SER:H	47:B:271:THR:CG2	2.21	0.54
51:F:73:LEU:CD2	51:F:103:VAL:HG11	2.38	0.54
6:AF:58:MET:HG2	19:j:26:PHE:CD2	2.35	0.54
7:AG:29:TRP:O	7:AG:30:TYR:C	2.51	0.54
11:AK:107:LEU:HD22	18:i:172:TYR:CE1	2.43	0.54
12:AL:259:G:C2	12:AL:277:C:C2	2.96	0.54
12:AL:655:A:C2'	12:AL:656:G:H5'	2.38	0.54
12:AL:1173:U:H4'	12:AL:1174:U:OP2	2.07	0.54
12:AL:1206:A:H2'	12:AL:1207:U:C6	2.43	0.54
12:AL:1308:U:H5'	12:AL:1310:U:H5	1.73	0.54
15:Z:41:TRP:CH2	22:m:163:LEU:HD12	2.43	0.54
17:h:203:ARG:O	17:h:205:SER:N	2.41	0.54
20:k:91:ARG:HD2	20:k:93:ASP:H	1.71	0.54
21:l:54:MET:SD	21:l:93:ARG:HG3	2.48	0.54
27:r:50:PRO:O	27:r:53:ASP:N	2.40	0.54
27:r:60:GLY:O	27:r:107:ILE:HA	2.08	0.54
29:t:4:PHE:CD2	29:t:9:LYS:HA	2.43	0.54
30:u:268:LYS:O	30:u:271:ALA:N	2.41	0.54
33:x:44:SER:O	33:x:45:LEU:HD23	2.07	0.54
33:x:51:LYS:HD3	33:x:52:GLY:N	2.22	0.54
46:A:319:U:H2'	46:A:320:U:C6	2.43	0.54
46:A:456:U:O2'	53:H:50:SER:O	2.26	0.54
46:A:2096:C:H2'	46:A:2097:U:C5	2.43	0.54
46:A:2282:U:H2'	46:A:2283:C:C6	2.43	0.54
63:R:191:ILE:O	63:R:192:GLU:C	2.49	0.54
76:f:34:ILE:HG13	76:f:66:ARG:HA	1.89	0.54
4:AD:96:SER:OG	4:AD:308:ARG:NH1	2.41	0.53
5:AE:285:LEU:HD11	5:AE:298:GLN:CA	2.38	0.53
6:AF:148:VAL:CG2	6:AF:216:PHE:HB2	2.38	0.53
7:AG:73:GLY:O	8:AH:186:LEU:HD13	2.07	0.53
7:AG:183:GLU:O	7:AG:187:GLN:HG2	2.08	0.53
8:AH:202:LEU:HD13	21:l:106:ASP:CB	2.35	0.53
11:AK:160:TYR:OH	20:k:29:LEU:HD23	2.08	0.53
11:AK:162:LEU:HB2	11:AK:163:PRO:HD3	1.89	0.53
11:AK:185:ARG:HB3	11:AK:201:VAL:HB	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:207:LYS:HG2	11:AK:216:LEU:HD11	1.89	0.53
12:AL:983:A:H2'	12:AL:984:A:O4'	2.08	0.53
12:AL:1098:U:H2'	12:AL:1099:U:C6	2.43	0.53
15:Z:81:HIS:HE1	35:z:173:LYS:CE	2.20	0.53
18:i:355:LYS:HA	18:i:358:LEU:HG	1.89	0.53
21:l:81:ILE:HG22	21:l:85:LEU:HD11	1.90	0.53
24:o:65:TYR:CD2	24:o:125:ILE:HD11	2.43	0.53
26:q:184:VAL:HG21	35:z:117:PHE:CD2	2.42	0.53
28:s:48:HIS:CE1	28:s:49:GLN:HG3	2.43	0.53
28:s:51:SER:HB3	28:s:54:GLN:HG3	1.89	0.53
29:t:58:ALA:O	29:t:59:GLN:C	2.49	0.53
30:u:36:LYS:O	30:u:39:LYS:HB2	2.08	0.53
30:u:161:ARG:CD	30:u:171:THR:HG22	2.36	0.53
30:u:184:ARG:O	30:u:185:ILE:C	2.51	0.53
42:6:217:ILE:HD12	42:6:277:LEU:HG	1.90	0.53
46:A:84:A:H2'	46:A:85:A:C8	2.43	0.53
46:A:249:C:C4'	46:A:590:A:H4'	2.37	0.53
46:A:276:U:H2'	46:A:277:U:C6	2.42	0.53
46:A:328:A:H3'	46:A:329:A:H8	1.73	0.53
46:A:820:U:C2	46:A:821:U:N3	2.76	0.53
46:A:1040:C:H2'	46:A:1041:U:C5	2.43	0.53
46:A:1172:C:H2'	46:A:1173:U:H6	1.73	0.53
46:A:1239:A:H61	46:A:1271:A:H62	1.56	0.53
46:A:2070:U:H2'	46:A:2071:A:H1'	1.90	0.53
46:A:2184:C:H2'	46:A:2185:U:C6	2.43	0.53
46:A:2472:C:H2'	46:A:2473:U:C6	2.42	0.53
46:A:2660:A:H3'	46:A:2661:C:H6	1.73	0.53
46:A:2737:A:C6	46:A:2738:G:C4	2.96	0.53
46:A:2789:C:H2'	46:A:2790:U:H6	1.73	0.53
46:A:2828:A:H2'	46:A:2829:U:O4'	2.08	0.53
46:A:2982:U:C4	46:A:3005:A:C2	2.95	0.53
63:R:261:ASN:HD22	63:R:267:HIS:CD2	2.23	0.53
75:e:111:LEU:HB3	75:e:112:PRO:HD2	1.89	0.53
3:AC:38:TRP:CE3	3:AC:93:VAL:HG21	2.42	0.53
4:AD:161:LEU:HA	4:AD:289:LYS:CD	2.38	0.53
4:AD:246:GLN:O	4:AD:249:THR:HB	2.08	0.53
5:AE:63:PRO:HG2	12:AL:1515:A:P	2.48	0.53
10:AJ:26:SER:HB2	12:AL:1299:A:C6	2.43	0.53
10:AJ:30:THR:C	10:AJ:32:SER:N	2.61	0.53
10:AJ:76:ARG:CG	12:AL:1092:C:O5'	2.56	0.53
11:AK:64:ARG:O	11:AK:65:ILE:C	2.50	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:541:U:H2'	12:AL:542:A:N9	2.24	0.53
12:AL:824:A:H2'	12:AL:825:G:C8	2.43	0.53
12:AL:828:A:OP1	30:u:249:ARG:CG	2.49	0.53
12:AL:898:U:C4	12:AL:899:U:C4	2.96	0.53
12:AL:1044:C:C2	29:t:73:GLN:NE2	2.75	0.53
12:AL:1160:U:OP1	18:i:363:ASN:HB3	2.08	0.53
12:AL:1344:A:C8	12:AL:1359:U:H2'	2.43	0.53
16:g:68:LEU:CG	17:h:217:ILE:CD1	2.85	0.53
18:i:146:LEU:O	18:i:147:ASN:C	2.52	0.53
20:k:236:PRO:HG3	20:k:301:ARG:HE	1.73	0.53
21:l:71:PHE:CZ	21:l:81:ILE:HD12	2.43	0.53
22:m:107:PRO:HD2	24:o:202:VAL:HG12	1.90	0.53
37:1:73:ILE:HG13	42:6:47:LYS:HB3	1.90	0.53
46:A:70:A:H3'	46:A:71:A:H8	1.73	0.53
46:A:288:G:C4	46:A:2697:U:H4'	2.43	0.53
46:A:353:A:C6	46:A:354:A:C5	2.96	0.53
46:A:879:U:OP2	56:K:55:ARG:HG3	2.08	0.53
46:A:992:U:C4	76:f:13:ILE:HD12	2.19	0.53
46:A:1192:A:H2'	46:A:1193:U:H6	1.72	0.53
46:A:1211:U:C2	46:A:1212:A:C8	2.97	0.53
46:A:1519:A:N3	46:A:1519:A:H5"	2.24	0.53
46:A:1546:G:H2'	46:A:1547:U:C6	2.43	0.53
46:A:2031:C:N4	46:A:2068:C:OP2	2.41	0.53
46:A:2336:G:C6	46:A:2337:A:C4	2.96	0.53
46:A:2425:A:C6	67:V:27:ARG:NH1	2.77	0.53
46:A:2474:U:H2'	46:A:2475:U:H6	1.72	0.53
46:A:2744:A:C8	46:A:2796:G:N7	2.76	0.53
46:A:2845:G:N3	48:C:203:GLY:HA3	2.22	0.53
46:A:3061:A:H8	46:A:3061:A:OP2	1.91	0.53
55:J:113:ILE:HG13	55:J:114:TYR:H	1.73	0.53
76:f:75:PRO:O	76:f:76:PRO:C	2.51	0.53
3:AC:219:MET:HE1	17:h:153:HIS:CE1	2.43	0.53
7:AG:120:LYS:NZ	16:g:14:GLN:OE1	2.31	0.53
7:AG:147:GLU:OE2	16:g:14:GLN:CB	2.54	0.53
9:AI:265:PRO:O	9:AI:267:ASN:N	2.39	0.53
10:AJ:51:PRO:O	10:AJ:52:ASP:CG	2.52	0.53
10:AJ:56:PHE:HD2	10:AJ:57:ARG:HG3	1.74	0.53
11:AK:148:HIS:HE1	11:AK:152:ARG:HH11	1.55	0.53
11:AK:252:HIS:CE1	25:p:150:LEU:H	2.27	0.53
12:AL:111:A:H61	12:AL:336:U:H5	1.56	0.53
12:AL:786:U:O2	33:x:126:SER:HB3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:900:A:C8	12:AL:900:A:OP2	2.62	0.53
12:AL:942:U:O3'	23:n:95:PRO:HD2	2.08	0.53
12:AL:1632:A:C4'	33:x:58:PHE:HE1	2.22	0.53
16:g:67:ASP:O	16:g:68:LEU:C	2.51	0.53
17:h:180:PRO:HG3	17:h:379:ALA:HB2	1.90	0.53
19:j:109:LEU:HD12	19:j:150:PHE:HD2	1.73	0.53
21:l:35:ASN:CB	47:B:72:THR:HG21	2.34	0.53
21:l:119:SER:HB3	21:l:122:GLU:CG	2.37	0.53
23:n:19:VAL:HG23	23:n:21:VAL:HG23	1.90	0.53
25:p:43:ALA:HB2	25:p:142:PHE:HD1	1.73	0.53
29:t:27:LYS:NZ	29:t:31:PHE:HB2	2.23	0.53
30:u:101:PHE:HB2	32:w:167:LEU:CD1	2.37	0.53
32:w:201:ASP:O	32:w:205:LYS:HG2	2.07	0.53
40:4:49:LEU:HD23	44:8:219:TYR:CE1	2.44	0.53
46:A:25:A:C2	71:a:151:MET:SD	3.01	0.53
46:A:829:A:OP1	50:E:117:ARG:O	2.26	0.53
46:A:899:A:O4'	46:A:1222:U:C2	2.61	0.53
46:A:1015:A:C3'	76:f:117:LEU:HD22	2.38	0.53
46:A:1070:A:H2'	46:A:1071:A:O4'	2.08	0.53
46:A:1516:U:C5	46:A:3019:U:C2	2.96	0.53
46:A:1577:U:H3'	46:A:1578:A:C8	2.44	0.53
46:A:3117:A:H2'	46:A:3118:U:H6	1.73	0.53
47:B:236:GLN:HB3	47:B:239:ASN:OD1	2.08	0.53
50:E:251:ALA:CB	67:V:63:TYR:CD1	2.92	0.53
63:R:215:ARG:HD3	63:R:255:ASN:HB3	1.90	0.53
63:R:230:ALA:HA	63:R:235:TRP:NE1	2.23	0.53
63:R:331:GLU:HA	63:R:362:ARG:CZ	2.39	0.53
75:e:147:PRO:HA	75:e:150:VAL:HG12	1.91	0.53
76:f:8:VAL:HG11	76:f:32:LYS:HD2	1.91	0.53
2:AB:86:TYR:O	2:AB:89:LYS:N	2.39	0.53
3:AC:213:LYS:O	3:AC:214:VAL:C	2.50	0.53
6:AF:107:LEU:HA	6:AF:117:PRO:HA	1.90	0.53
6:AF:172:SER:HB2	6:AF:177:LEU:O	2.07	0.53
6:AF:200:ARG:CD	12:AL:551:U:H4'	2.39	0.53
6:AF:200:ARG:NE	12:AL:551:U:H4'	2.23	0.53
7:AG:124:GLU:CD	7:AG:127:ILE:HD11	2.33	0.53
8:AH:37:LYS:HD3	12:AL:182:A:OP2	2.06	0.53
8:AH:168:ARG:HG3	23:n:65:PRO:CB	2.38	0.53
8:AH:171:GLU:HA	8:AH:174:GLU:HB2	1.91	0.53
9:AI:60:TRP:HA	22:m:210:VAL:CG2	2.38	0.53
9:AI:236:ASN:HD21	9:AI:238:LYS:HD2	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:371:TYR:CD2	9:AI:372:HIS:CE1	2.95	0.53
9:AI:409:SER:HB3	9:AI:411:VAL:HG23	1.89	0.53
10:AJ:66:ILE:HG13	18:i:125:LEU:HD22	1.90	0.53
11:AK:180:HIS:HB3	25:p:146:SER:O	2.08	0.53
12:AL:405:A:OP1	19:j:64:ARG:NH2	2.36	0.53
12:AL:530:A:C5	12:AL:532:U:H1'	2.43	0.53
12:AL:610:A:H1'	12:AL:611:U:N3	2.24	0.53
12:AL:1151:G:OP1	24:o:97:LYS:CD	2.56	0.53
12:AL:1172:A:O5'	25:p:112:ARG:NH1	2.40	0.53
18:i:100:TYR:CE2	25:p:48:ARG:HD3	2.44	0.53
23:n:130:ARG:HB2	23:n:151:LEU:HD11	1.91	0.53
32:w:79:ARG:HG2	32:w:81:LYS:HD2	1.90	0.53
32:w:196:ASN:CB	32:w:199:LYS:HB2	2.39	0.53
33:x:103:VAL:C	33:x:105:SER:N	2.65	0.53
33:x:111:HIS:C	33:x:113:ASP:H	2.16	0.53
46:A:168:A:H3'	46:A:169:A:H8	1.74	0.53
46:A:288:G:N3	46:A:2697:U:H4'	2.24	0.53
46:A:324:U:H2'	46:A:325:G:O4'	2.09	0.53
46:A:430:A:H2'	46:A:431:U:C6	2.43	0.53
46:A:605:A:H2'	46:A:606:U:C6	2.42	0.53
46:A:646:C:H2'	46:A:647:A:C8	2.44	0.53
46:A:740:A:C6	46:A:741:U:C4	2.97	0.53
46:A:1047:A:H5'	46:A:1048:A:H8	1.74	0.53
46:A:1110:A:O2'	46:A:1111:U:H5'	2.09	0.53
46:A:1111:U:C3'	46:A:1112:A:H5"	2.35	0.53
46:A:1727:A:H3'	47:B:290:GLN:CB	2.38	0.53
46:A:2974:U:H2'	46:A:2975:A:H8	1.72	0.53
46:A:3270:A:H2'	46:A:3271:A:C8	2.43	0.53
1:AA:111:ARG:O	12:AL:1486:A:OP1	2.25	0.53
2:AB:79:VAL:HB	2:AB:84:ARG:HB2	1.89	0.53
3:AC:161:LYS:CD	17:h:141:TYR:CD2	2.85	0.53
4:AD:157:ILE:HA	4:AD:293:LEU:HD13	1.90	0.53
4:AD:302:TRP:O	4:AD:303:LYS:C	2.51	0.53
6:AF:61:PHE:HD1	19:j:29:TYR:CZ	2.09	0.53
7:AG:75:TYR:HB2	8:AH:183:ASN:OD1	2.07	0.53
7:AG:96:LYS:HD2	12:AL:916:A:P	2.47	0.53
9:AI:435:ASN:ND2	24:o:176:ILE:N	2.36	0.53
10:AJ:5:LYS:HA	10:AJ:8:LEU:HD12	1.90	0.53
10:AJ:57:ARG:HB2	10:AJ:57:ARG:HH11	1.73	0.53
11:AK:154:TYR:O	20:k:54:PHE:HZ	1.90	0.53
12:AL:73:A:C2	12:AL:104:G:H1'	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:340:C:C2	12:AL:341:A:C8	2.97	0.53
12:AL:488:A:C5	12:AL:489:A:C5	2.97	0.53
12:AL:753:A:C5'	26:q:129:GLY:O	2.56	0.53
20:k:48:VAL:HA	25:p:30:ALA:HB1	1.86	0.53
21:l:30:LYS:O	21:l:34:GLN:HG3	2.09	0.53
27:r:82:ARG:HD2	27:r:91:VAL:O	2.08	0.53
32:w:128:ILE:HA	32:w:147:ILE:HG12	1.90	0.53
32:w:172:LEU:HA	32:w:175:ASN:HB3	1.91	0.53
32:w:218:ASN:C	32:w:220:LYS:N	2.61	0.53
37:1:361:VAL:HG21	63:R:144:GLU:HG3	1.89	0.53
38:2:42:VAL:CG2	50:E:154:LEU:HB3	2.34	0.53
46:A:149:A:C5	46:A:1371:A:C6	2.97	0.53
46:A:414:G:H2'	46:A:415:A:H8	1.73	0.53
46:A:487:U:H2'	46:A:488:A:H8	1.74	0.53
46:A:747:U:C2	46:A:748:U:C5	2.96	0.53
46:A:1210:A:C6	46:A:1211:U:C4	2.96	0.53
46:A:1261:U:H2'	46:A:1262:A:C8	2.44	0.53
46:A:1440:U:O4'	46:A:1481:A:N6	2.37	0.53
46:A:1680:A:H2'	46:A:1681:C:H5'	1.90	0.53
46:A:1794:U:H2'	46:A:1795:U:H6	1.72	0.53
46:A:1824:U:H2'	46:A:1825:A:C8	2.43	0.53
46:A:1924:G:H2'	46:A:1925:U:H6	1.72	0.53
46:A:2233:U:H2'	46:A:2234:U:C6	2.44	0.53
46:A:2429:G:N2	67:V:37:SER:HB3	2.23	0.53
46:A:2464:A:C5'	50:E:141:VAL:HG11	2.38	0.53
46:A:2607:G:H2'	46:A:2608:C:O4'	2.08	0.53
46:A:2919:U:O2'	46:A:2920:U:H5'	2.08	0.53
46:A:2980:A:H2'	46:A:2981:U:O4'	2.09	0.53
2:AB:104:LYS:HD2	2:AB:104:LYS:H	1.73	0.53
3:AC:60:SER:HB2	17:h:169:TYR:HE1	1.73	0.53
3:AC:177:PHE:HA	3:AC:180:ASN:ND2	2.24	0.53
7:AG:49:LYS:NZ	23:n:58:LYS:HZ2	2.07	0.53
9:AI:310:ASN:CG	28:s:34:LYS:CB	2.63	0.53
10:AJ:41:GLY:C	10:AJ:43:SER:H	2.17	0.53
11:AK:150:GLU:CB	20:k:71:TYR:OH	2.57	0.53
12:AL:274:A:H2'	12:AL:275:A:H8	1.74	0.53
12:AL:702:A:N1	12:AL:711:A:C6	2.76	0.53
12:AL:1126:A:H2'	12:AL:1127:A:C8	2.44	0.53
12:AL:1335:U:H4'	12:AL:1336:U:OP1	2.09	0.53
13:AM:35:A:H1'	13:AM:36:U:C5	2.41	0.53
15:Z:42:SER:OG	22:m:238:ILE:HG23	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:Z:55:VAL:HG11	22:m:163:LEU:CD1	2.37	0.53
16:g:85:TRP:O	16:g:89:ARG:HG3	2.08	0.53
25:p:93:PHE:O	25:p:94:VAL:C	2.52	0.53
32:w:33:ILE:CG2	32:w:35:LYS:HG2	2.38	0.53
46:A:86:U:H2'	46:A:87:U:C6	2.41	0.53
46:A:1120:U:H2'	46:A:1121:U:C6	2.43	0.53
46:A:1145:U:H3	46:A:1167:A:H61	1.56	0.53
46:A:1244:A:H2'	46:A:1245:U:C6	2.42	0.53
46:A:1439:A:N3	46:A:1440:U:C1'	2.72	0.53
46:A:1638:C:H2'	46:A:1639:A:H5'	1.89	0.53
46:A:2001:U:H3'	46:A:2002:U:C6	2.43	0.53
46:A:2276:G:N2	56:K:128:MET:CE	2.70	0.53
46:A:2940:G:C2	46:A:2941:A:C8	2.96	0.53
46:A:3270:A:H2'	46:A:3271:A:H8	1.72	0.53
48:C:211:PRO:HB3	48:C:215:LEU:HD21	1.90	0.53
63:R:298:LYS:HB2	63:R:371:LEU:CD1	2.38	0.53
75:e:100:ASN:HA	75:e:120:ARG:HD2	1.91	0.53
76:f:115:LEU:HD23	76:f:120:VAL:HG22	1.89	0.53
2:AB:44:PHE:O	2:AB:48:ILE:HG23	2.08	0.53
2:AB:74:LEU:HD13	2:AB:88:LEU:CD2	2.27	0.53
3:AC:90:HIS:HB2	17:h:161:GLY:CA	2.38	0.53
5:AE:211:LEU:HD21	5:AE:245:LEU:HD21	1.91	0.53
6:AF:100:HIS:HB2	6:AF:105:LYS:H	1.73	0.53
8:AH:37:LYS:CD	12:AL:182:A:P	2.75	0.53
8:AH:46:GLY:HA2	32:w:59:ARG:HD2	1.90	0.53
8:AH:224:PHE:CD1	21:l:18:LYS:CE	2.82	0.53
8:AH:224:PHE:HD1	21:l:18:LYS:CG	2.17	0.53
9:AI:59:ASN:O	9:AI:62:ASN:N	2.42	0.53
9:AI:118:LEU:C	22:m:146:ARG:NH1	2.66	0.53
11:AK:97:SER:HB3	18:i:167:ASN:HD22	1.74	0.53
12:AL:501:U:H4'	19:j:7:LEU:CD1	2.34	0.53
12:AL:622:A:H8	12:AL:622:A:O5'	1.91	0.53
12:AL:1179:U:O2	24:o:166:LYS:CB	2.57	0.53
18:i:316:MET:SD	18:i:316:MET:N	2.81	0.53
19:j:95:LEU:HG	19:j:471:VAL:HG22	1.91	0.53
26:q:137:ALA:C	26:q:139:GLY:N	2.67	0.53
30:u:145:ARG:HG2	47:B:69:ASP:OD2	2.09	0.53
30:u:158:GLU:O	30:u:159:LEU:C	2.50	0.53
33:x:94:ALA:O	33:x:96:PRO:N	2.41	0.53
41:5:320:VAL:HA	46:A:28:U:O2	2.09	0.53
46:A:342:A:N3	46:A:344:A:C6	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:741:U:O2'	46:A:742:A:H5'	2.09	0.53
46:A:1043:A:H3'	46:A:1044:A:C8	2.43	0.53
46:A:1049:A:H3'	75:e:110:HIS:O	2.09	0.53
46:A:2063:A:C5'	46:A:2063:A:H8	2.22	0.53
46:A:2238:U:H2'	46:A:2239:A:C8	2.43	0.53
46:A:2378:A:N6	46:A:2422:A:N7	2.57	0.53
46:A:2689:A:O2'	46:A:2690:U:H5"	2.08	0.53
46:A:2727:A:H61	46:A:2755:U:H3	1.55	0.53
46:A:3009:A:H2'	46:A:3010:U:C6	2.44	0.53
46:A:3173:U:C2	46:A:3174:U:C5	2.96	0.53
48:C:24:PRO:HG3	71:a:100:VAL:HA	1.91	0.53
56:K:58:VAL:HG11	73:c:104:LYS:CB	2.38	0.53
62:Q:270:ARG:NH2	72:b:35:LYS:O	2.42	0.53
63:R:51:LYS:HG2	63:R:57:VAL:CG1	2.39	0.53
5:AE:54:TYR:HA	5:AE:66:TYR:CE2	2.43	0.53
6:AF:48:LYS:HD2	12:AL:489:A:N9	2.19	0.53
7:AG:46:PRO:HD3	23:n:22:ALA:HB3	1.91	0.53
8:AH:46:GLY:C	32:w:5:ASN:CG	2.77	0.53
8:AH:101:GLU:HA	8:AH:104:ARG:CG	2.38	0.53
9:AI:193:ASP:O	9:AI:195:ASP:N	2.41	0.53
12:AL:34:G:H2'	12:AL:35:A:H8	1.74	0.53
12:AL:60:A:C2	12:AL:61:C:H1'	2.44	0.53
12:AL:79:A:N6	12:AL:95:U:H3	2.06	0.53
12:AL:82:A:H2'	12:AL:83:U:O4'	2.09	0.53
12:AL:116:A:N1	12:AL:319:A:O2'	2.42	0.53
12:AL:502:A:OP2	19:j:7:LEU:CD2	2.44	0.53
12:AL:632:C:H5	12:AL:644:G:OP2	1.92	0.53
12:AL:654:G:C4	12:AL:655:A:C8	2.96	0.53
12:AL:754:A:H4'	12:AL:771:U:H1'	1.91	0.53
12:AL:834:A:H2'	12:AL:835:C:H6	1.74	0.53
12:AL:1497:U:H2'	12:AL:1498:C:C6	2.44	0.53
12:AL:1588:U:H2'	12:AL:1589:G:C8	2.44	0.53
13:AM:59:A:H2'	13:AM:59:A:N3	2.24	0.53
19:j:483:ARG:HG3	19:j:486:LYS:HB3	1.90	0.53
20:k:25:TYR:CE1	25:p:21:PRO:CG	2.91	0.53
20:k:249:ILE:HD11	20:k:272:ALA:HA	1.91	0.53
21:l:13:ASN:O	21:l:14:SER:C	2.47	0.53
22:m:238:ILE:HG22	22:m:241:ARG:HH21	1.74	0.53
26:q:198:ILE:HG23	26:q:199:SER:N	2.24	0.53
27:r:58:ARG:HH12	27:r:87:ASN:HB3	1.71	0.53
27:r:96:PRO:HG2	27:r:127:ARG:CG	2.37	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:v:86:VAL:HA	31:v:89:LEU:HD12	1.90	0.53
34:y:73:LEU:HA	34:y:76:PHE:CE2	2.43	0.53
46:A:433:A:C2	46:A:457:G:C5	2.97	0.53
46:A:582:C:H5"	49:D:122:PRO:HD2	1.90	0.53
46:A:629:G:H3'	46:A:630:G:C8	2.44	0.53
46:A:1061:U:H2'	46:A:1062:U:C6	2.43	0.53
46:A:1307:A:N1	46:A:1326:C:O2'	2.36	0.53
46:A:1439:A:H5"	46:A:1439:A:H8	1.73	0.53
46:A:1498:U:C2'	46:A:1499:A:H5'	2.39	0.53
46:A:1680:A:C2'	46:A:1681:C:H5'	2.39	0.53
46:A:2351:A:H2'	46:A:2352:A:H8	1.73	0.53
46:A:2386:A:O5'	46:A:2386:A:C8	2.62	0.53
46:A:2387:U:H3	46:A:2415:A:H61	1.57	0.53
46:A:2457:G:H4'	46:A:2458:G:O5'	2.09	0.53
46:A:2462:A:H2'	46:A:2463:C:C6	2.44	0.53
46:A:3263:U:H2'	46:A:3264:C:H6	1.73	0.53
46:A:3272:U:H4'	71:a:163:MET:CG	2.38	0.53
51:F:167:SER:OG	75:e:213:LEU:C	2.50	0.53
55:J:77:LEU:HD23	55:J:85:LEU:HD13	1.90	0.53
62:Q:83:ILE:HG22	62:Q:95:LEU:HD22	1.91	0.53
63:R:209:TYR:CE1	63:R:217:ASN:ND2	2.77	0.53
75:e:146:ASN:HD22	75:e:149:GLN:HG3	1.74	0.53
1:AA:104:ARG:NH2	46:A:1740:U:H4'	2.22	0.53
2:AB:69:TRP:CZ2	2:AB:77:LYS:HE3	2.44	0.53
2:AB:71:SER:CA	2:AB:74:LEU:HD12	2.39	0.53
4:AD:253:TYR:HE2	16:g:298:LEU:O	1.91	0.53
5:AE:194:HIS:O	5:AE:197:ARG:HB3	2.09	0.53
6:AF:58:MET:HB2	19:j:11:LEU:HD13	1.86	0.53
8:AH:5:ALA:N	12:AL:298:A:H4'	2.24	0.53
9:AI:143:VAL:O	9:AI:144:LYS:C	2.50	0.53
9:AI:439:ARG:HD2	9:AI:443:LYS:HE3	1.90	0.53
11:AK:151:GLN:CG	18:i:83:LYS:NZ	2.72	0.53
11:AK:169:ARG:CB	25:p:70:GLY:O	2.57	0.53
11:AK:195:PRO:CG	12:AL:1290:A:N9	2.72	0.53
12:AL:773:A:H4'	26:q:79:HIS:HB3	1.91	0.53
12:AL:1214:A:H2	12:AL:1216:A:H62	1.57	0.53
12:AL:1218:G:O3'	24:o:263:LYS:HE2	2.09	0.53
12:AL:1515:A:H3'	12:AL:1516:U:H6	1.73	0.53
12:AL:1622:G:HO2'	12:AL:1625:U:H3	1.55	0.53
13:AM:38:A:H3'	13:AM:39:U:C6	2.44	0.53
14:AN:1:A:C4'	27:r:73:PRO:CB	2.87	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:j:3:ARG:HD3	19:j:3:ARG:H	1.74	0.53
20:k:174:ASP:O	20:k:176:ASN:N	2.36	0.53
22:m:97:GLN:O	22:m:101:LEU:N	2.35	0.53
26:q:68:LYS:O	26:q:69:PRO:C	2.52	0.53
28:s:5:ILE:HD12	28:s:58:ILE:HG21	1.90	0.53
30:u:85:GLU:CD	32:w:107:PHE:HZ	2.16	0.53
30:u:252:MET:O	30:u:256:GLU:HA	2.09	0.53
32:w:159:GLU:HG3	32:w:161:VAL:HG23	1.91	0.53
33:x:96:PRO:HD3	33:x:137:LEU:HD13	1.90	0.53
35:z:112:ASN:ND2	35:z:115:GLU:HB2	2.24	0.53
37:1:121:PHE:HA	46:A:2349:A:C8	2.44	0.53
46:A:208:A:H2'	46:A:209:U:H6	1.73	0.53
46:A:801:U:O2'	46:A:802:U:H5'	2.09	0.53
46:A:841:G:OP1	50:E:110:ASN:CB	2.53	0.53
46:A:2676:G:C6	46:A:2677:U:C4	2.97	0.53
46:A:2906:U:H2'	46:A:2907:U:H6	1.74	0.53
46:A:3163:U:C2	46:A:3164:A:C8	2.97	0.53
46:A:3240:A:O2'	46:A:3241:U:H5'	2.09	0.53
63:R:184:LEU:HD12	63:R:184:LEU:N	2.24	0.53
74:d:37:VAL:O	74:d:96:ARG:NH1	2.39	0.53
2:AB:41:VAL:CG2	2:AB:63:TRP:HA	2.39	0.53
2:AB:45:LEU:HB2	2:AB:56:LYS:HE2	1.90	0.53
3:AC:265:SER:C	17:h:128:PRO:CG	2.82	0.53
6:AF:48:LYS:CD	12:AL:489:A:H2'	2.39	0.53
7:AG:178:ALA:HA	7:AG:181:MET:HE2	1.90	0.53
8:AH:93:GLN:NE2	12:AL:222:U:P	2.78	0.53
10:AJ:48:TYR:HD2	29:t:28:ARG:HD3	1.73	0.53
10:AJ:76:ARG:HG2	12:AL:1092:C:OP2	2.09	0.53
12:AL:657:G:C2	12:AL:658:G:C8	2.97	0.53
12:AL:728:A:OP1	33:x:120:LYS:HG3	2.09	0.53
12:AL:1235:A:H2'	12:AL:1236:A:H8	1.73	0.53
12:AL:1507:U:H2'	12:AL:1508:A:C8	2.44	0.53
12:AL:1646:U:N3	17:h:176:TYR:HA	2.08	0.53
14:AN:2:U:C5	14:AN:4:A:H5'	2.43	0.53
23:n:100:HIS:CE1	23:n:149:GLU:HB2	2.44	0.53
25:p:116:THR:HG22	25:p:117:ASN:H	1.73	0.53
27:r:61:VAL:HA	27:r:106:SER:O	2.09	0.53
33:x:65:ILE:O	33:x:69:ARG:HG3	2.09	0.53
40:4:57:PRO:HB2	41:5:103:LYS:HG3	1.91	0.53
46:A:274:U:C2	46:A:275:A:C8	2.97	0.53
46:A:1308:A:C2	46:A:1309:A:C8	2.98	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1920:A:N6	46:A:1934:U:H3	2.05	0.53
46:A:2062:G:C4	46:A:2065:A:C8	2.97	0.53
46:A:2201:U:O2'	46:A:2202:U:H5'	2.09	0.53
46:A:2349:A:H3'	46:A:2350:U:H6	1.74	0.53
63:R:47:LEU:HD13	63:R:67:ARG:HG2	1.90	0.53
76:f:37:ILE:HG13	76:f:38:ASP:H	1.74	0.53
4:AD:28:LEU:O	4:AD:29:LYS:C	2.52	0.52
4:AD:171:LEU:N	4:AD:271:LEU:O	2.41	0.52
5:AE:282:ARG:HB3	5:AE:315:TYR:HB2	1.90	0.52
9:AI:147:ILE:HG22	9:AI:387:THR:O	2.09	0.52
10:AJ:54:LEU:O	10:AJ:55:LYS:C	2.52	0.52
11:AK:131:PRO:HA	18:i:247:ILE:HA	1.90	0.52
12:AL:274:A:O2'	12:AL:275:A:H5'	2.09	0.52
12:AL:657:G:P	19:j:13:ARG:HH12	2.26	0.52
12:AL:673:A:N1	20:k:266:ARG:CZ	2.70	0.52
12:AL:752:A:N3	12:AL:753:A:H1'	2.23	0.52
16:g:97:ILE:HG23	16:g:284:SER:HA	1.91	0.52
20:k:52:VAL:C	20:k:54:PHE:H	2.16	0.52
20:k:104:ASN:ND2	20:k:106:LEU:HD23	2.23	0.52
20:k:124:ASP:O	20:k:125:VAL:C	2.51	0.52
26:q:89:LEU:CD1	26:q:148:SER:HA	2.39	0.52
30:u:137:ALA:O	30:u:138:ILE:C	2.50	0.52
32:w:80:ASN:HB2	32:w:84:GLN:NE2	2.24	0.52
35:z:99:ARG:HH22	35:z:100:PHE:HD2	1.57	0.52
37:1:156:MET:HE2	37:1:156:MET:HA	1.90	0.52
46:A:170:U:H3	46:A:208:A:H61	1.57	0.52
46:A:450:U:H2'	46:A:451:A:H8	1.73	0.52
46:A:617:A:N6	46:A:1528:G:H5'	2.24	0.52
46:A:1533:G:H5"	47:B:149:ARG:O	2.04	0.52
46:A:1782:A:H3'	46:A:1783:U:C6	2.44	0.52
46:A:1825:A:H2'	46:A:1826:U:C6	2.43	0.52
46:A:1962:A:H3'	46:A:1963:C:C6	2.45	0.52
46:A:2015:C:O2'	46:A:2016:A:O5'	2.25	0.52
46:A:2383:A:C2	46:A:2384:A:C5	2.98	0.52
46:A:2941:A:C6	46:A:2942:A:C6	2.97	0.52
46:A:3010:U:H2'	46:A:3011:U:H6	1.72	0.52
50:E:23:CYS:HB2	63:R:79:ILE:CD1	2.29	0.52
60:O:97:HIS:CG	62:Q:119:MET:HE1	2.44	0.52
3:AC:135:VAL:HA	3:AC:138:GLU:HB3	1.91	0.52
3:AC:148:LEU:HD23	4:AD:203:ASN:CB	2.35	0.52
3:AC:154:PHE:HA	3:AC:222:ILE:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:244:ALA:O	4:AD:248:LYS:N	2.30	0.52
4:AD:260:PHE:CD2	16:g:222:ILE:HA	2.43	0.52
6:AF:148:VAL:HG23	6:AF:216:PHE:HB2	1.90	0.52
8:AH:184:ARG:HD3	12:AL:814:A:C2'	2.38	0.52
9:AI:424:ASN:O	9:AI:428:GLU:HG3	2.10	0.52
12:AL:15:A:C4'	20:k:261:LYS:HE2	2.39	0.52
12:AL:1612:C:H6	12:AL:1612:C:H5"	1.75	0.52
12:AL:1635:U:O4	16:g:82:GLY:HA2	2.09	0.52
18:i:101:ASN:OD1	18:i:101:ASN:N	2.38	0.52
18:i:348:LEU:H	18:i:348:LEU:HD22	1.74	0.52
24:o:156:ALA:CB	24:o:233:LYS:HB2	2.32	0.52
28:s:42:TYR:O	28:s:43:PRO:C	2.52	0.52
29:t:6:PHE:HB3	29:t:26:PHE:CE1	2.44	0.52
30:u:74:PRO:CB	32:w:100:GLU:CB	2.87	0.52
30:u:169:GLY:O	30:u:170:ASP:C	2.50	0.52
30:u:248:ASP:OD1	30:u:251:TYR:N	2.39	0.52
36:0:62:VAL:HG12	36:0:80:ILE:HD12	1.92	0.52
46:A:394:G:N1	46:A:398:G:C6	2.77	0.52
46:A:1141:A:H2'	46:A:1142:U:C6	2.44	0.52
46:A:1346:A:O2'	74:d:123:GLY:C	2.52	0.52
46:A:1989:U:H3	52:G:14:LYS:CD	2.22	0.52
46:A:2033:U:H1'	46:A:2034:A:OP2	2.08	0.52
46:A:2643:U:H2'	46:A:2644:A:O4'	2.10	0.52
46:A:2767:C:H1'	46:A:2769:A:N6	2.24	0.52
46:A:3134:U:H2'	46:A:3135:U:C6	2.43	0.52
46:A:3134:U:H2'	46:A:3135:U:H6	1.75	0.52
47:B:77:ASP:O	47:B:78:GLU:C	2.52	0.52
63:R:53:GLU:HG3	63:R:54:GLY:H	1.74	0.52
63:R:225:GLU:O	63:R:228:LEU:HB2	2.09	0.52
63:R:271:SER:O	63:R:274:GLU:N	2.42	0.52
63:R:332:THR:O	63:R:333:ASP:C	2.53	0.52
75:e:66:MET:HE3	75:e:153:LEU:HD22	1.87	0.52
2:AB:47:LYS:HG3	2:AB:100:ILE:HG13	1.91	0.52
3:AC:266:LYS:HA	17:h:128:PRO:O	2.10	0.52
7:AG:120:LYS:HB2	16:g:34:GLN:NE2	2.24	0.52
9:AI:233:SER:O	9:AI:246:VAL:HB	2.08	0.52
9:AI:345:ILE:HG22	9:AI:346:SER:N	2.24	0.52
9:AI:353:LYS:NZ	12:AL:1280:U:C6	2.77	0.52
11:AK:75:ARG:CZ	18:i:185:ASN:O	2.56	0.52
12:AL:94:A:C6	12:AL:95:U:C4	2.97	0.52
12:AL:684:G:H4'	12:AL:685:G:O5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:781:A:H2'	12:AL:782:C:C6	2.44	0.52
12:AL:911:U:O2'	12:AL:912:A:O5'	2.27	0.52
12:AL:1142:U:H1'	12:AL:1143:U:H5'	1.91	0.52
12:AL:1287:A:OP2	25:p:83:ARG:CB	2.51	0.52
12:AL:1380:A:H1'	12:AL:1394:U:C5	2.44	0.52
12:AL:1401:A:H2'	12:AL:1402:A:O4'	2.10	0.52
12:AL:1415:G:H2'	12:AL:1442:G:H2'	1.91	0.52
16:g:251:VAL:CG1	33:x:51:LYS:CB	2.82	0.52
20:k:215:THR:HA	20:k:255:ILE:HG23	1.91	0.52
21:l:56:LYS:HB3	21:l:61:HIS:CD2	2.44	0.52
25:p:91:SER:C	29:t:96:TYR:HE2	2.17	0.52
26:q:150:ARG:O	26:q:154:LEU:HG	2.09	0.52
31:v:53:ARG:H	31:v:53:ARG:HE	1.57	0.52
34:y:43:LEU:O	34:y:47:VAL:HG13	2.09	0.52
46:A:533:U:C2	63:R:132:PHE:CE2	2.98	0.52
46:A:766:U:H2'	46:A:767:A:C8	2.44	0.52
46:A:851:A:H2'	46:A:852:U:H6	1.72	0.52
46:A:981:G:C8	46:A:982:U:H2'	2.44	0.52
46:A:2458:G:N3	46:A:2458:G:H2'	2.24	0.52
46:A:2843:G:H4'	46:A:2844:A:OP1	2.09	0.52
46:A:3111:A:OP1	48:C:228:HIS:HB2	2.09	0.52
54:I:138:ILE:CG2	58:M:121:ILE:HD11	2.38	0.52
58:M:18:VAL:HG13	71:a:166:ARG:HD2	1.90	0.52
63:R:338:THR:N	63:R:361:ALA:CB	2.73	0.52
76:f:77:THR:HG22	76:f:148:VAL:CG1	2.39	0.52
2:AB:68:GLN:HA	2:AB:95:ARG:HH22	1.73	0.52
3:AC:8:ILE:O	17:h:165:SER:O	2.28	0.52
3:AC:32:SER:O	3:AC:33:GLY:C	2.52	0.52
4:AD:182:MET:N	4:AD:182:MET:SD	2.83	0.52
5:AE:117:LEU:O	5:AE:121:LYS:N	2.42	0.52
8:AH:74:LEU:O	8:AH:75:ILE:C	2.52	0.52
8:AH:156:LEU:HB2	23:n:37:TYR:HE1	1.74	0.52
8:AH:164:LEU:CD2	23:n:33:LEU:CD2	2.87	0.52
9:AI:244:PRO:HG3	46:A:2390:U:OP1	2.09	0.52
10:AJ:63:TYR:CD1	18:i:182:ILE:HG23	2.45	0.52
11:AK:143:GLU:CD	18:i:87:LEU:HD22	2.34	0.52
11:AK:149:ARG:HD3	20:k:68:PHE:O	2.09	0.52
11:AK:151:GLN:HG3	18:i:83:LYS:NZ	2.24	0.52
12:AL:13:U:H5"	12:AL:14:A:OP2	2.08	0.52
12:AL:130:G:OP1	32:w:2:ALA:HB1	2.10	0.52
12:AL:822:U:OP1	12:AL:888:A:O4'	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:875:U:H2'	12:AL:876:A:C8	2.44	0.52
12:AL:1182:U:H2'	12:AL:1183:A:C8	2.44	0.52
12:AL:1395:A:H5"	12:AL:1396:U:H5	1.74	0.52
13:AM:21:A:C2	13:AM:46:G:H2'	2.44	0.52
13:AM:63:C:H2'	13:AM:64:G:C8	2.45	0.52
14:AN:1:A:C4'	27:r:73:PRO:O	2.58	0.52
18:i:211:SER:O	18:i:212:TYR:CE2	2.57	0.52
19:j:157:VAL:HG21	19:j:448:CYS:HB3	1.92	0.52
20:k:266:ARG:C	20:k:271:ILE:HD11	2.35	0.52
25:p:86:TRP:CZ2	29:t:91:PHE:HZ	2.28	0.52
32:w:77:ILE:O	32:w:79:ARG:N	2.43	0.52
46:A:43:U:H2'	46:A:44:U:C5	2.44	0.52
46:A:90:A:H2'	46:A:91:U:H6	1.70	0.52
46:A:143:A:H2'	46:A:144:A:C8	2.45	0.52
46:A:148:U:H4'	70:Y:79:PHE:CZ	2.44	0.52
46:A:157:A:H5"	46:A:158:C:O4'	2.10	0.52
46:A:735:A:H8	46:A:735:A:OP2	1.92	0.52
46:A:841:G:N9	50:E:107:TYR:CE2	2.77	0.52
46:A:1253:U:H2'	46:A:1254:U:H6	1.74	0.52
46:A:1536:A:H2'	46:A:1537:A:N7	2.25	0.52
46:A:1878:A:H2'	46:A:1879:U:C6	2.44	0.52
46:A:2318:U:H2'	46:A:2319:A:H5'	1.91	0.52
46:A:2710:A:H2'	46:A:2711:G:O4'	2.09	0.52
46:A:2716:A:H4'	46:A:2717:A:OP1	2.09	0.52
46:A:2897:A:OP2	46:A:3262:A:N6	2.42	0.52
1:AA:90:LYS:HE3	12:AL:1612:C:N4	2.22	0.52
5:AE:213:VAL:O	5:AE:217:LYS:HG2	2.08	0.52
6:AF:58:MET:SD	19:j:30:LYS:HE2	2.47	0.52
6:AF:311:ASN:HD22	31:v:69:PHE:HD1	1.58	0.52
7:AG:13:ARG:HH21	17:h:339:ARG:HG3	1.75	0.52
8:AH:199:LEU:HD23	30:u:93:TYR:HH	1.75	0.52
9:AI:69:LEU:HB2	9:AI:117:GLU:OE1	2.09	0.52
9:AI:299:THR:OG1	9:AI:300:THR:N	2.41	0.52
10:AJ:66:ILE:CG2	18:i:125:LEU:HB3	2.37	0.52
12:AL:535:U:H2'	12:AL:536:U:C6	2.44	0.52
12:AL:658:G:OP1	19:j:50:GLN:HG3	2.08	0.52
12:AL:822:U:H3'	12:AL:822:U:H6	1.74	0.52
12:AL:1053:A:H2'	12:AL:1054:U:H4'	1.91	0.52
13:AM:5:A:H2'	13:AM:6:C:C6	2.44	0.52
14:AN:11:A:H1'	14:AN:12:A:C2	2.44	0.52
16:g:226:VAL:HG11	16:g:298:LEU:HD11	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:l:1:MET:HG2	30:u:148:GLU:CD	2.34	0.52
21:l:83:ARG:NH2	47:B:80:ILE:HG21	2.25	0.52
28:s:106:ASN:CG	28:s:107:ASN:H	2.18	0.52
29:t:42:LYS:HB3	29:t:46:ARG:HH12	1.73	0.52
36:0:74:ARG:HG2	46:A:3092:U:H5'	1.91	0.52
46:A:328:A:H2'	46:A:329:A:O4'	2.09	0.52
46:A:464:C:H2'	46:A:465:U:H6	1.74	0.52
46:A:647:A:H2'	46:A:648:U:O4'	2.09	0.52
46:A:752:U:H2'	46:A:753:A:C8	2.44	0.52
46:A:1484:U:H2'	46:A:1485:A:H5'	1.92	0.52
46:A:2202:U:H2'	46:A:2203:A:C8	2.45	0.52
46:A:3272:U:H2'	46:A:3273:A:C8	2.44	0.52
63:R:331:GLU:HA	63:R:362:ARG:NE	2.24	0.52
75:e:203:MET:SD	75:e:203:MET:N	2.82	0.52
76:f:40:CYS:O	76:f:44:ASN:N	2.32	0.52
3:AC:29:LEU:HD13	3:AC:33:GLY:HA3	1.92	0.52
3:AC:189:ILE:O	4:AD:219:LEU:HD21	2.09	0.52
5:AE:144:LYS:HB2	5:AE:147:THR:HG22	1.92	0.52
7:AG:32:VAL:CG1	17:h:235:VAL:HG13	2.39	0.52
7:AG:32:VAL:HG12	17:h:235:VAL:HG13	1.92	0.52
7:AG:217:LEU:HB3	16:g:273:MET:CG	2.38	0.52
11:AK:137:LEU:C	18:i:215:LEU:HD21	2.34	0.52
12:AL:259:G:H2'	12:AL:260:U:H6	1.75	0.52
12:AL:640:C:OP1	12:AL:978:A:H3'	2.10	0.52
12:AL:750:G:N1	12:AL:751:U:O4	2.43	0.52
12:AL:1013:C:P	28:s:107:ASN:O	2.68	0.52
12:AL:1412:C:O3'	24:o:270:ARG:HG3	2.10	0.52
16:g:80:ARG:O	16:g:81:GLY:C	2.51	0.52
16:g:251:VAL:HG21	33:x:51:LYS:HA	1.92	0.52
17:h:193:VAL:HG11	17:h:372:LEU:HD21	1.91	0.52
19:j:20:PHE:HZ	19:j:113:MET:HG2	1.73	0.52
21:l:62:PHE:CG	26:q:116:LEU:HD11	2.44	0.52
26:q:94:VAL:HG12	26:q:95:VAL:N	2.21	0.52
33:x:88:ASN:HB2	33:x:91:GLU:HG2	1.91	0.52
34:y:55:ASN:ND2	34:y:77:ALA:HB1	2.24	0.52
35:z:95:ASN:O	35:z:96:ALA:C	2.51	0.52
46:A:238:C:H1'	46:A:2700:A:H61	1.75	0.52
46:A:786:A:H1'	50:E:107:TYR:OH	2.09	0.52
46:A:841:G:H5"	46:A:841:G:C8	2.44	0.52
46:A:998:U:H2'	46:A:999:A:C8	2.44	0.52
46:A:1002:C:H2'	46:A:1003:U:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1110:A:N6	51:F:42:ILE:HD11	2.25	0.52
46:A:1216:A:OP1	66:U:69:ARG:HB2	2.09	0.52
46:A:1546:G:O2'	46:A:1547:U:H5'	2.10	0.52
46:A:1708:A:N6	46:A:2248:G:O2'	2.43	0.52
46:A:2766:U:H3'	46:A:2767:C:H4'	1.92	0.52
46:A:2922:G:N2	46:A:2931:G:C4	2.77	0.52
47:B:124:THR:HG22	47:B:153:ARG:HG2	1.91	0.52
54:I:138:ILE:HG21	58:M:121:ILE:HD11	1.90	0.52
3:AC:185:LEU:HG	7:AG:197:PHE:CA	2.40	0.52
5:AE:308:LEU:HD21	5:AE:313:ASP:HB3	1.90	0.52
6:AF:137:PHE:CE2	19:j:468:PRO:CD	2.91	0.52
11:AK:70:TRP:HD1	18:i:173:MET:CG	2.17	0.52
12:AL:486:U:H2'	12:AL:487:A:C1'	2.39	0.52
12:AL:1627:U:O4	15:Z:13:LEU:HD22	2.10	0.52
16:g:221:VAL:CG2	16:g:224:ARG:HD3	2.40	0.52
18:i:232:TYR:O	18:i:233:ASN:C	2.53	0.52
19:j:10:SER:HB3	19:j:13:ARG:CB	2.29	0.52
20:k:305:TYR:O	20:k:306:SER:C	2.51	0.52
21:l:42:ILE:HG12	21:l:69:MET:HG3	1.91	0.52
30:u:87:LEU:HD12	32:w:114:ARG:NE	2.09	0.52
35:z:135:SER:O	35:z:137:ARG:N	2.43	0.52
41:5:73:TYR:CD2	61:P:255:LEU:HD11	2.44	0.52
44:8:101:ARG:NE	46:A:74:A:OP1	2.43	0.52
46:A:96:C:H2'	46:A:97:U:C6	2.44	0.52
46:A:524:A:OP2	55:J:175:LYS:NZ	2.42	0.52
46:A:709:G:H5'	46:A:730:U:OP1	2.09	0.52
46:A:1020:U:C5	75:e:134:LYS:O	2.63	0.52
46:A:1265:A:O2'	46:A:1266:U:H5'	2.10	0.52
46:A:1534:G:H2'	46:A:1535:A:C8	2.45	0.52
46:A:1608:U:O2'	48:C:201:HIS:HE1	1.91	0.52
46:A:1832:A:C2	46:A:1869:A:C6	2.97	0.52
46:A:1938:A:H2'	46:A:1939:U:O4'	2.10	0.52
46:A:1955:C:H2'	46:A:2769:A:H5"	1.91	0.52
46:A:2258:C:H2'	46:A:2259:U:C6	2.45	0.52
46:A:3289:U:H2'	46:A:3290:A:N7	2.24	0.52
51:F:121:VAL:HG21	75:e:210:VAL:CG2	2.40	0.52
61:P:181:PHE:HB2	65:T:78:ILE:HD11	1.91	0.52
1:AA:105:ARG:HG2	46:A:1875:G:H4'	1.92	0.52
3:AC:67:LEU:HD13	3:AC:84:SER:HB2	1.91	0.52
5:AE:258:ILE:CB	5:AE:303:GLN:HB2	2.31	0.52
7:AG:67:PRO:HB2	32:w:187:GLN:OE1	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:210:ILE:HG23	16:g:230:ARG:HH21	1.74	0.52
8:AH:203:TYR:CE1	21:l:105:LEU:HB3	2.45	0.52
9:AI:220:LEU:CD1	9:AI:285:VAL:HG11	2.40	0.52
9:AI:261:VAL:HG12	9:AI:262:MET:N	2.25	0.52
11:AK:132:PHE:CB	18:i:248:MET:CE	2.83	0.52
12:AL:258:G:H5"	32:w:67:SER:OG	2.09	0.52
12:AL:796:A:H5"	12:AL:796:A:H8	1.74	0.52
12:AL:1334:U:H5'	12:AL:1335:U:H3'	1.91	0.52
18:i:169:ASN:HA	18:i:172:TYR:CD1	2.45	0.52
20:k:210:ARG:HE	20:k:213:ASN:HA	1.74	0.52
30:u:87:LEU:HB3	30:u:95:ILE:HD12	1.91	0.52
31:v:104:LYS:HB3	31:v:104:LYS:HZ2	1.75	0.52
32:w:10:VAL:HG13	32:w:55:GLY:H	1.74	0.52
37:1:264:ARG:NH2	63:R:213:ASP:CG	2.66	0.52
46:A:137:A:H2'	46:A:138:U:H6	1.74	0.52
46:A:238:C:H1'	46:A:2700:A:N6	2.24	0.52
46:A:396:A:H2'	46:A:397:A:C8	2.44	0.52
46:A:618:A:N3	47:B:96:LEU:HD23	2.25	0.52
46:A:875:U:C2	46:A:876:A:N7	2.78	0.52
46:A:958:A:H2'	46:A:959:U:H6	1.75	0.52
46:A:1316:U:O2'	46:A:1317:A:H5'	2.10	0.52
46:A:1628:A:H2'	46:A:1629:A:C8	2.44	0.52
46:A:1747:C:C4	46:A:1748:A:C5	2.98	0.52
46:A:1767:A:O2'	46:A:1768:A:H8	1.93	0.52
46:A:2253:A:H2'	46:A:2254:A:H8	1.75	0.52
46:A:2902:C:H2'	46:A:2903:A:O4'	2.09	0.52
46:A:3015:U:H2'	46:A:3016:A:C8	2.44	0.52
46:A:3258:A:H2'	46:A:3259:G:C8	2.45	0.52
47:B:155:ILE:HD11	47:B:157:PHE:CZ	2.44	0.52
58:M:16:TYR:O	71:a:166:ARG:NH1	2.43	0.52
63:R:188:ILE:O	63:R:190:ASP:N	2.43	0.52
63:R:222:LEU:HB3	63:R:247:ILE:HD13	1.91	0.52
63:R:263:LYS:O	63:R:264:LEU:HB2	2.10	0.52
3:AC:40:ASP:OD2	4:AD:286:VAL:CG2	2.55	0.52
5:AE:134:TRP:CD2	5:AE:173:ALA:HB2	2.45	0.52
5:AE:194:HIS:NE2	5:AE:315:TYR:HE1	2.08	0.52
6:AF:93:GLU:O	6:AF:95:GLY:N	2.43	0.52
6:AF:222:ASP:O	6:AF:223:ALA:C	2.53	0.52
7:AG:174:TYR:CD1	16:g:107:PHE:HE2	2.28	0.52
8:AH:14:VAL:HB	12:AL:298:A:C6	2.41	0.52
8:AH:196:LEU:CD1	32:w:169:ILE:HG12	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:180:PRO:HD2	9:AI:293:ASN:HB2	1.92	0.52
10:AJ:53:ILE:HD12	10:AJ:55:LYS:HE2	1.85	0.52
11:AK:172:TYR:HE2	25:p:115:ASP:C	2.18	0.52
12:AL:130:G:H2'	12:AL:131:A:C8	2.45	0.52
12:AL:273:A:C2'	12:AL:274:A:H5'	2.40	0.52
12:AL:539:C:C2'	12:AL:540:A:C8	2.92	0.52
12:AL:562:A:C2	12:AL:563:U:H1'	2.45	0.52
12:AL:626:U:O4	12:AL:654:G:N1	2.42	0.52
12:AL:1032:A:H5"	24:o:275:TRP:NE1	2.25	0.52
12:AL:1100:A:H62	12:AL:1231:U:H2'	1.74	0.52
12:AL:1256:A:H2'	12:AL:1256:A:N3	2.23	0.52
12:AL:1341:U:O4	22:m:210:VAL:HG11	2.09	0.52
12:AL:1368:A:H1'	12:AL:1369:U:H5	1.74	0.52
12:AL:1442:G:OP2	22:m:127:LYS:HD2	2.10	0.52
16:g:51:LYS:HG3	17:h:217:ILE:CD1	2.40	0.52
18:i:302:ILE:HD12	25:p:20:TYR:CG	2.45	0.52
18:i:306:TYR:CZ	25:p:28:TYR:CE2	2.98	0.52
19:j:423:THR:HA	19:j:425:TRP:N	2.23	0.52
20:k:217:TYR:CE2	20:k:285:THR:HG22	2.45	0.52
27:r:83:VAL:HG12	27:r:84:ARG:O	2.09	0.52
46:A:8:G:H2'	46:A:9:U:O4'	2.10	0.52
46:A:56:U:H2'	46:A:57:C:C6	2.44	0.52
46:A:115:A:H5'	46:A:116:C:OP2	2.10	0.52
46:A:177:A:H2	46:A:200:G:O6	1.93	0.52
46:A:790:A:C5	46:A:791:U:C4	2.98	0.52
46:A:830:U:H2'	46:A:831:A:H8	1.75	0.52
46:A:866:G:H8	46:A:866:G:H5"	1.74	0.52
46:A:922:A:O2'	46:A:923:U:H5'	2.09	0.52
46:A:1089:A:H2'	46:A:1090:U:H6	1.75	0.52
46:A:1111:U:H6	46:A:1111:U:OP2	1.92	0.52
46:A:1148:A:H2'	46:A:1149:U:C6	2.45	0.52
46:A:1295:A:C6	46:A:1296:U:C4	2.98	0.52
46:A:1516:U:H5"	65:T:29:LEU:HD22	1.92	0.52
46:A:1549:U:C5	61:P:62:ILE:CD1	2.92	0.52
46:A:1609:U:H2'	46:A:1610:A:H8	1.75	0.52
46:A:1676:U:H2'	46:A:1677:A:C8	2.45	0.52
46:A:2327:A:H2'	46:A:2328:A:O4'	2.09	0.52
46:A:2381:G:N1	46:A:2382:A:C5	2.78	0.52
46:A:2911:U:O2'	46:A:3069:A:N7	2.43	0.52
63:R:53:GLU:CD	63:R:94:ARG:HA	2.34	0.52
63:R:200:ARG:O	63:R:203:ALA:HB3	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:279:LYS:O	63:R:283:LEU:HD13	2.10	0.52
63:R:303:ALA:O	63:R:306:LYS:HB3	2.10	0.52
2:AB:38:VAL:HG13	2:AB:43:ALA:CB	2.39	0.52
2:AB:89:LYS:CE	12:AL:388:G:H5"	2.40	0.52
3:AC:69:LYS:HD2	12:AL:1640:U:N3	2.23	0.52
3:AC:77:SER:O	3:AC:78:ASN:C	2.52	0.52
3:AC:77:SER:CB	7:AG:190:ALA:HB1	2.39	0.52
3:AC:232:LEU:CD2	4:AD:278:LYS:HA	2.22	0.52
4:AD:304:ILE:O	4:AD:308:ARG:N	2.42	0.52
5:AE:183:HIS:O	5:AE:187:THR:HB	2.10	0.52
5:AE:227:LEU:CD1	5:AE:280:ILE:HG23	2.40	0.52
9:AI:134:PHE:HD2	9:AI:159:LEU:HD11	1.76	0.52
10:AJ:53:ILE:CD1	10:AJ:55:LYS:HE2	2.37	0.52
10:AJ:66:ILE:HG23	18:i:125:LEU:HD22	1.92	0.52
11:AK:181:PRO:CG	25:p:148:ILE:HG23	2.38	0.52
12:AL:480:U:H2'	12:AL:481:A:C8	2.45	0.52
12:AL:541:U:C4	12:AL:542:A:N6	2.78	0.52
12:AL:622:A:O2'	12:AL:623:A:H5'	2.10	0.52
12:AL:637:A:N6	27:r:117:ASP:OD1	2.41	0.52
12:AL:1030:U:H1'	12:AL:1034:C:H1'	1.91	0.52
12:AL:1046:U:C2	12:AL:1047:U:H2'	2.45	0.52
12:AL:1429:A:C5	29:t:72:THR:HB	2.41	0.52
12:AL:1626:A:O2'	35:z:158:PHE:CE1	2.46	0.52
13:AM:31:A:H2'	13:AM:32:C:O2	2.10	0.52
13:AM:52:G:N3	13:AM:52:G:H2'	2.24	0.52
18:i:251:LEU:HD22	20:k:107:PRO:HG2	1.91	0.52
20:k:36:ALA:CB	25:p:23:ASN:HD22	2.23	0.52
22:m:168:THR:CA	22:m:178:VAL:HA	2.33	0.52
32:w:203:PHE:O	32:w:204:LEU:C	2.52	0.52
37:1:121:PHE:HD1	46:A:2349:A:C5	2.27	0.52
39:3:65:THR:HG21	46:A:1412:U:H1'	1.92	0.52
46:A:528:U:OP2	55:J:181:LYS:NZ	2.42	0.52
46:A:791:U:H2'	46:A:792:U:C6	2.45	0.52
46:A:1076:U:C2'	46:A:1077:A:H5"	2.39	0.52
46:A:1109:A:O2'	53:H:66:ARG:NH2	2.43	0.52
46:A:1262:A:H2'	46:A:1263:A:C8	2.45	0.52
46:A:1318:A:N3	46:A:1318:A:H2'	2.24	0.52
46:A:1355:G:O2'	46:A:1406:A:N1	2.43	0.52
46:A:1425:U:H3	46:A:1528:G:H1	1.58	0.52
46:A:1732:G:H2'	46:A:1733:U:H6	1.74	0.52
46:A:1809:C:H2'	46:A:1810:C:H6	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1916:U:O5'	46:A:1916:U:H6	1.93	0.52
46:A:2257:U:H2'	46:A:2258:C:C6	2.45	0.52
46:A:2586:U:H5'	46:A:2586:U:C6	2.45	0.52
46:A:2717:A:O2'	46:A:2718:C:O5'	2.27	0.52
63:R:196:SER:HA	63:R:199:ILE:HG12	1.92	0.52
63:R:213:ASP:O	63:R:216:PHE:HB3	2.10	0.52
63:R:272:GLU:O	63:R:273:GLN:C	2.51	0.52
76:f:146:VAL:HA	76:f:156:VAL:HG21	1.91	0.52
2:AB:90:GLN:HB3	2:AB:100:ILE:HG21	1.92	0.51
4:AD:288:GLY:O	4:AD:289:LYS:C	2.53	0.51
5:AE:171:LEU:O	5:AE:174:GLN:HG3	2.10	0.51
7:AG:70:ASN:O	7:AG:71:ASN:C	2.52	0.51
8:AH:18:THR:CG2	31:v:38:GLU:OE1	2.56	0.51
9:AI:57:TYR:HA	22:m:205:SER:CB	2.40	0.51
9:AI:180:PRO:O	9:AI:181:GLU:C	2.53	0.51
11:AK:112:GLU:CA	18:i:172:TYR:HE2	2.23	0.51
11:AK:152:ARG:CG	20:k:62:PHE:HE2	2.23	0.51
11:AK:172:TYR:CE1	25:p:38:TYR:HE2	2.28	0.51
12:AL:19:U:H2'	12:AL:20:A:H5"	1.91	0.51
12:AL:259:G:C4'	32:w:17:GLN:HB2	2.40	0.51
12:AL:326:C:O2'	12:AL:327:U:H5'	2.10	0.51
12:AL:500:A:H4'	12:AL:501:U:O5'	2.10	0.51
12:AL:675:U:C5	20:k:263:TYR:OH	2.62	0.51
12:AL:1202:U:P	16:g:59:LYS:NZ	2.82	0.51
12:AL:1228:A:C2	18:i:341:ARG:HD3	2.46	0.51
12:AL:1372:G:N1	12:AL:1400:A:OP1	2.27	0.51
12:AL:1418:A:P	24:o:271:LYS:CE	2.98	0.51
15:Z:16:LEU:HD22	35:z:165:LEU:HG	1.92	0.51
18:i:147:ASN:HB2	25:p:129:THR:O	2.10	0.51
18:i:218:ASP:OD1	18:i:218:ASP:N	2.42	0.51
19:j:7:LEU:HB3	19:j:10:SER:HB2	1.92	0.51
19:j:419:LYS:HG3	19:j:421:PHE:H	1.75	0.51
21:l:48:ARG:NH2	21:l:66:HIS:CB	2.72	0.51
22:m:113:THR:HG21	22:m:154:GLU:HG2	1.92	0.51
30:u:201:ASN:HA	30:u:204:ASN:ND2	2.25	0.51
37:1:188:VAL:CG2	46:A:2361:A:C5	2.93	0.51
37:1:263:PRO:HB2	63:R:216:PHE:HZ	1.75	0.51
46:A:123:A:H2'	46:A:124:U:C6	2.45	0.51
46:A:600:C:O4'	47:B:133:ARG:NH2	2.42	0.51
46:A:753:A:H2'	46:A:754:A:H8	1.75	0.51
46:A:794:A:H2'	46:A:795:U:H6	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1089:A:H2'	46:A:1090:U:C6	2.45	0.51
46:A:1351:A:C4	46:A:1555:A:C8	2.98	0.51
46:A:1720:U:H2'	46:A:1721:U:C6	2.45	0.51
46:A:1790:A:H2'	46:A:1791:A:O4'	2.09	0.51
46:A:2317:A:C6	69:X:65:PHE:HB2	2.45	0.51
46:A:3268:A:C6	46:A:3269:U:C4	2.98	0.51
46:A:3290:A:C5	46:A:3291:U:C2	2.98	0.51
60:O:97:HIS:ND1	62:Q:119:MET:HE1	2.25	0.51
63:R:294:THR:H	63:R:297:ASP:CG	2.16	0.51
3:AC:61:TYR:OH	16:g:40:PRO:CD	2.58	0.51
3:AC:217:TRP:CB	17:h:149:ARG:NH2	2.73	0.51
4:AD:38:GLN:HB3	4:AD:43:ASP:CG	2.35	0.51
4:AD:181:ALA:HA	4:AD:184:ASN:HB2	1.91	0.51
4:AD:254:GLU:O	4:AD:257:GLN:N	2.43	0.51
5:AE:62:LYS:C	5:AE:64:PHE:H	2.19	0.51
5:AE:149:SER:HA	5:AE:153:ILE:CB	2.41	0.51
6:AF:32:ILE:H	6:AF:32:ILE:HD13	1.76	0.51
6:AF:46:HIS:O	6:AF:47:PRO:C	2.52	0.51
8:AH:100:ALA:O	8:AH:104:ARG:HG2	2.10	0.51
9:AI:193:ASP:C	9:AI:195:ASP:H	2.18	0.51
9:AI:450:ARG:OXT	22:m:114:LEU:HD12	2.09	0.51
12:AL:258:G:O2'	12:AL:259:G:H5'	2.11	0.51
12:AL:748:U:C3'	26:q:121:LYS:HE3	2.39	0.51
12:AL:1258:U:H6	34:y:83:PHE:HD2	1.57	0.51
17:h:269:TYR:CE2	24:o:39:PRO:HG2	2.45	0.51
20:k:289:VAL:CG1	23:n:124:GLY:HA3	2.40	0.51
27:r:148:LYS:O	27:r:149:LYS:C	2.52	0.51
28:s:85:ILE:HD13	34:y:67:ASP:CB	1.37	0.51
30:u:107:SER:HA	30:u:110:ARG:HH21	1.75	0.51
33:x:87:ALA:O	33:x:88:ASN:C	2.53	0.51
46:A:101:A:H2'	46:A:102:A:H8	1.75	0.51
46:A:110:A:H2'	46:A:111:G:C8	2.45	0.51
46:A:437:A:H2'	46:A:438:U:C6	2.45	0.51
46:A:534:A:H5"	63:R:142:LYS:HZ1	1.75	0.51
46:A:659:G:H2'	46:A:660:U:H6	1.73	0.51
46:A:962:A:H2'	46:A:963:A:C8	2.45	0.51
46:A:1038:U:H2'	46:A:1039:A:O4'	2.10	0.51
46:A:1542:U:H2'	46:A:1543:A:H8	1.73	0.51
46:A:1583:G:N2	46:A:1585:G:H3'	2.25	0.51
46:A:1706:G:H5"	46:A:1709:G:H1'	1.92	0.51
46:A:2069:U:O5'	46:A:2069:U:H6	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2461:A:N6	50:E:147:ARG:HD3	2.25	0.51
46:A:3087:A:H3'	46:A:3088:C:C6	2.46	0.51
46:A:3235:U:O2'	46:A:3236:A:H5'	2.10	0.51
63:R:301:ILE:HA	63:R:304:LEU:HD12	1.92	0.51
66:U:12:LEU:HD11	66:U:23:VAL:HG11	1.91	0.51
75:e:199:SER:O	75:e:200:VAL:C	2.53	0.51
3:AC:169:ASN:HB3	7:AG:197:PHE:CE1	2.44	0.51
5:AE:64:PHE:HB3	5:AE:74:LEU:HD13	1.92	0.51
5:AE:128:ILE:HD13	5:AE:128:ILE:H	1.75	0.51
5:AE:248:LEU:CD1	5:AE:249:GLN:H	2.24	0.51
5:AE:264:GLY:C	5:AE:266:GLU:H	2.19	0.51
5:AE:280:ILE:O	5:AE:284:LEU:HD23	2.10	0.51
6:AF:31:ARG:HD2	12:AL:625:A:OP2	2.09	0.51
6:AF:46:HIS:HB3	6:AF:49:LYS:HB2	1.92	0.51
6:AF:71:TYR:HE2	19:j:22:LYS:HZ2	1.49	0.51
6:AF:338:LYS:HZ3	31:v:50:VAL:CA	2.14	0.51
7:AG:22:LEU:CD2	20:k:139:TYR:CE2	2.93	0.51
7:AG:52:SER:C	7:AG:54:GLY:N	2.69	0.51
7:AG:156:LEU:HD23	7:AG:161:GLN:HB2	1.92	0.51
8:AH:42:LYS:HE3	8:AH:49:TYR:CZ	2.46	0.51
11:AK:107:LEU:HD11	18:i:168:ASN:CG	2.34	0.51
11:AK:303:ASP:OD2	24:o:171:ARG:CB	2.57	0.51
12:AL:269:A:H2'	12:AL:271:U:H5	1.75	0.51
12:AL:273:A:C6	12:AL:274:A:N7	2.78	0.51
12:AL:500:A:H5'	19:j:7:LEU:CD1	2.40	0.51
12:AL:561:U:H2'	12:AL:562:A:H8	1.70	0.51
12:AL:695:A:N6	12:AL:820:A:H61	2.09	0.51
12:AL:1277:U:H2'	12:AL:1278:G:C8	2.46	0.51
12:AL:1564:A:H2'	12:AL:1565:A:C8	2.45	0.51
16:g:41:SER:HB2	17:h:170:PRO:HG2	1.93	0.51
18:i:192:CYS:O	18:i:195:LEU:HB2	2.10	0.51
21:l:32:ILE:HD13	21:l:71:PHE:CB	2.40	0.51
21:l:38:VAL:HG23	30:u:140:ARG:HB2	1.92	0.51
21:l:83:ARG:O	21:l:84:THR:C	2.54	0.51
33:x:41:ILE:HG12	33:x:42:ASP:H	1.74	0.51
46:A:20:A:H2'	46:A:21:U:C6	2.45	0.51
46:A:164:U:H4'	46:A:165:A:OP2	2.10	0.51
46:A:177:A:C2	46:A:201:A:H2	2.28	0.51
46:A:566:U:H2'	46:A:567:U:C6	2.46	0.51
46:A:1016:C:OP2	76:f:117:LEU:HD13	2.10	0.51
46:A:1171:A:H2'	46:A:1172:C:H6	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1387:A:H5"	64:S:67:LYS:HD2	1.93	0.51
46:A:2445:G:H2'	46:A:2446:U:H6	1.75	0.51
46:A:2942:A:O2'	46:A:2943:U:H5'	2.10	0.51
46:A:2953:G:H2'	46:A:2954:U:C6	2.44	0.51
62:Q:133:LEU:HD12	62:Q:154:VAL:HG21	1.91	0.51
63:R:272:GLU:HA	63:R:275:LYS:CB	2.39	0.51
76:f:123:ILE:HG22	76:f:145:ILE:HD11	1.91	0.51
1:AA:92:LYS:CE	12:AL:956:U:H4'	2.23	0.51
3:AC:217:TRP:CD1	17:h:146:LEU:HD11	2.46	0.51
3:AC:266:LYS:HD3	17:h:151:LEU:CD1	2.40	0.51
4:AD:136:GLU:O	4:AD:139:GLN:HB3	2.10	0.51
5:AE:255:LEU:HD12	5:AE:300:PHE:HB2	1.89	0.51
5:AE:278:TYR:O	5:AE:281:ALA:N	2.42	0.51
5:AE:314:PRO:HB2	5:AE:318:HIS:CB	2.40	0.51
5:AE:317:THR:O	5:AE:320:LYS:HG3	2.09	0.51
7:AG:68:HIS:O	7:AG:69:ALA:C	2.52	0.51
7:AG:212:LYS:HE3	12:AL:1634:C:H4'	1.91	0.51
8:AH:147:LYS:O	8:AH:148:SER:C	2.53	0.51
9:AI:128:GLU:HG3	9:AI:132:ASN:HD22	1.76	0.51
11:AK:148:HIS:CE1	11:AK:152:ARG:HH11	2.29	0.51
12:AL:34:G:O4'	19:j:486:LYS:HG3	2.10	0.51
12:AL:516:A:H2'	12:AL:517:U:O4'	2.11	0.51
12:AL:743:U:H2'	12:AL:744:A:O4'	2.10	0.51
12:AL:873:A:OP1	30:u:197:LYS:NZ	2.26	0.51
12:AL:1011:A:H8	12:AL:1011:A:O5'	1.93	0.51
12:AL:1038:G:OP1	25:p:89:ILE:CD1	2.59	0.51
12:AL:1112:U:O4	12:AL:1221:U:N3	2.43	0.51
12:AL:1297:A:H2'	12:AL:1312:U:H3	1.75	0.51
15:Z:28:ASN:O	15:Z:31:LEU:N	2.43	0.51
17:h:249:LEU:HD13	17:h:275:TRP:HE3	1.75	0.51
18:i:253:ASP:HB3	18:i:325:VAL:HG11	1.92	0.51
20:k:61:ASP:OD1	25:p:24:VAL:HG21	2.08	0.51
26:q:215:ARG:C	26:q:217:LEU:N	2.68	0.51
30:u:188:MET:HB3	30:u:205:LEU:HD13	1.92	0.51
39:3:52:MET:HB2	46:A:155:A:N1	2.25	0.51
46:A:175:U:H2'	46:A:176:U:H6	1.67	0.51
46:A:253:A:H5"	64:S:33:ALA:N	2.25	0.51
46:A:340:A:N1	46:A:341:A:N6	2.58	0.51
46:A:456:U:H2'	46:A:457:G:C8	2.46	0.51
46:A:772:A:H2'	46:A:773:U:H6	1.76	0.51
46:A:982:U:H4'	46:A:983:U:O5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1009:U:O3'	76:f:129:SER:HA	2.10	0.51
46:A:1349:A:OP2	62:Q:5:TYR:OH	2.28	0.51
46:A:1435:A:H2'	46:A:1436:U:C5	2.45	0.51
46:A:1692:A:O2'	46:A:1693:A:H2'	2.09	0.51
46:A:1886:A:O2'	46:A:1887:C:H5'	2.11	0.51
46:A:1901:U:C2	46:A:1902:U:C5	2.99	0.51
46:A:2022:U:O2	46:A:2022:U:H2'	2.10	0.51
46:A:2301:C:H5"	63:R:39:MET:SD	2.50	0.51
46:A:2640:A:H2'	46:A:2641:C:H6	1.70	0.51
46:A:2942:A:H2'	46:A:2943:U:H6	1.76	0.51
46:A:3244:A:H2'	46:A:3245:A:O4'	2.11	0.51
47:B:134:ASN:O	47:B:135:ASN:C	2.51	0.51
47:B:265:PHE:O	47:B:266:CYS:C	2.53	0.51
63:R:199:ILE:HG13	63:R:200:ARG:N	2.25	0.51
63:R:257:SER:O	63:R:259:SER:N	2.40	0.51
63:R:272:GLU:HG2	63:R:276:GLN:OE1	2.10	0.51
76:f:43:PHE:O	76:f:47:SER:N	2.43	0.51
1:AA:105:ARG:HG2	46:A:1875:G:C4'	2.40	0.51
3:AC:266:LYS:HA	17:h:128:PRO:HG2	1.88	0.51
4:AD:20:GLU:O	4:AD:23:LYS:HG3	2.10	0.51
8:AH:130:LYS:HG3	8:AH:134:LYS:HE3	1.93	0.51
8:AH:219:LYS:O	8:AH:223:VAL:HG23	2.10	0.51
9:AI:295:SER:HA	9:AI:298:LEU:HB2	1.92	0.51
9:AI:314:TYR:CD2	9:AI:316:LEU:HB2	2.45	0.51
9:AI:413:LEU:HD13	22:m:150:ILE:CD1	2.40	0.51
10:AJ:63:TYR:CE1	18:i:182:ILE:CG2	2.93	0.51
11:AK:87:LEU:HD11	11:AK:105:LYS:HA	1.93	0.51
12:AL:784:A:C1'	26:q:206:PHE:CD2	2.77	0.51
12:AL:816:U:H2'	12:AL:817:G:O4'	2.09	0.51
12:AL:1038:G:H3'	12:AL:1039:A:H2'	1.93	0.51
12:AL:1114:A:H62	12:AL:1156:A:H5'	1.74	0.51
12:AL:1147:A:C2	12:AL:1149:A:H5'	2.45	0.51
12:AL:1624:U:C5	35:z:154:HIS:CG	2.91	0.51
12:AL:1647:A:C8	12:AL:1648:C:H1'	2.46	0.51
15:Z:46:HIS:CE1	22:m:234:HIS:C	2.88	0.51
18:i:90:MET:SD	25:p:135:GLY:HA3	2.50	0.51
19:j:56:HIS:HB3	19:j:98:PHE:CD2	2.46	0.51
24:o:202:VAL:HB	24:o:245:ARG:HH12	1.75	0.51
30:u:213:GLN:O	30:u:217:ARG:HG3	2.09	0.51
32:w:220:LYS:C	32:w:223:LEU:H	2.18	0.51
37:1:346:LYS:HB2	46:A:2360:U:O4	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:3:30:PHE:HA	46:A:1568:U:H5	1.75	0.51
40:4:60:GLN:HB3	41:5:100:THR:HG21	1.92	0.51
45:9:41:LEU:HD22	71:a:119:ILE:CD1	2.40	0.51
46:A:51:G:H2'	46:A:52:A:C8	2.46	0.51
46:A:376:A:H2'	46:A:377:U:C6	2.46	0.51
46:A:671:G:H2'	46:A:673:A:N7	2.25	0.51
46:A:746:A:C6	46:A:778:A:C8	2.98	0.51
46:A:941:U:C2	46:A:942:A:C8	2.98	0.51
46:A:1025:A:H2'	46:A:1025:A:N3	2.25	0.51
46:A:1645:U:H3'	46:A:1646:A:C8	2.46	0.51
46:A:1696:A:H2'	46:A:1697:C:O4'	2.11	0.51
46:A:1822:G:N7	46:A:1823:U:C5	2.78	0.51
46:A:2024:A:H8	46:A:2024:A:O5'	1.93	0.51
46:A:2032:C:O5'	46:A:2032:C:H6	1.93	0.51
46:A:2198:U:O4	64:S:227:TYR:CE2	2.64	0.51
46:A:2470:A:H2'	46:A:2471:A:O4'	2.10	0.51
46:A:2797:U:O2	51:F:194:TYR:CE2	2.61	0.51
46:A:3004:A:H2'	46:A:3005:A:H8	1.74	0.51
56:K:97:ILE:HG21	56:K:109:LEU:HD13	1.93	0.51
63:R:240:LEU:O	63:R:241:SER:C	2.53	0.51
63:R:293:GLU:N	63:R:297:ASP:OD1	2.43	0.51
64:S:227:TYR:O	64:S:228:LYS:C	2.54	0.51
65:T:147:THR:HA	65:T:150:TRP:CD1	2.46	0.51
3:AC:31:SER:HA	3:AC:34:PHE:HE1	1.74	0.51
3:AC:31:SER:O	3:AC:32:SER:C	2.52	0.51
4:AD:55:CYS:SG	4:AD:80:ILE:HG12	2.51	0.51
5:AE:55:HIS:HD2	5:AE:133:ILE:HB	1.75	0.51
6:AF:44:ARG:HH21	12:AL:495:U:C5'	2.24	0.51
6:AF:216:PHE:CE1	19:j:435:ALA:HB1	2.46	0.51
7:AG:94:PRO:HD3	17:h:207:GLN:OE1	2.11	0.51
9:AI:72:THR:O	9:AI:73:ALA:C	2.54	0.51
9:AI:227:SER:O	9:AI:228:LYS:HB3	2.11	0.51
9:AI:265:PRO:C	9:AI:267:ASN:H	2.19	0.51
10:AJ:4:PRO:HG2	10:AJ:7:ARG:CG	2.41	0.51
11:AK:172:TYR:HD2	25:p:116:THR:O	1.94	0.51
12:AL:57:G:O6	12:AL:365:G:H4'	2.11	0.51
12:AL:105:G:H2'	12:AL:106:U:C6	2.45	0.51
12:AL:268:G:H1'	32:w:65:PRO:HG2	1.91	0.51
12:AL:536:U:H2'	12:AL:537:A:N7	2.25	0.51
12:AL:720:U:H5"	30:u:181:MET:HE3	1.91	0.51
12:AL:725:A:C6	12:AL:726:A:C6	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:749:A:H5'	26:q:121:LYS:HZ3	1.59	0.51
12:AL:830:U:C4	12:AL:877:G:C4	2.99	0.51
12:AL:833:A:H4'	12:AL:1615:G:H21	1.75	0.51
12:AL:1099:U:H2'	12:AL:1232:C:H41	1.76	0.51
12:AL:1207:U:H2'	12:AL:1208:A:C8	2.45	0.51
12:AL:1258:U:H6	34:y:83:PHE:HB2	1.54	0.51
12:AL:1370:A:C2	12:AL:1372:G:N3	2.78	0.51
15:Z:33:LEU:HD12	15:Z:61:CYS:SG	2.51	0.51
17:h:132:LEU:HD12	17:h:144:GLN:HE22	1.76	0.51
18:i:176:MET:SD	20:k:92:TRP:HB2	2.50	0.51
25:p:36:ILE:HG23	25:p:114:TRP:HB3	1.92	0.51
25:p:94:VAL:O	25:p:95:HIS:C	2.53	0.51
30:u:284:ALA:O	30:u:285:THR:C	2.54	0.51
32:w:76:GLU:OE1	32:w:78:ILE:HB	2.11	0.51
46:A:26:A:C6	71:a:112:TYR:HA	2.44	0.51
46:A:93:U:H5'	46:A:94:A:H5"	1.93	0.51
46:A:149:A:N7	46:A:1371:A:C6	2.79	0.51
46:A:387:A:C4	46:A:403:A:C2	2.99	0.51
46:A:397:A:H2'	46:A:398:G:O4'	2.10	0.51
46:A:604:G:C6	46:A:659:G:C5	2.99	0.51
46:A:1645:U:H3'	46:A:1646:A:H8	1.74	0.51
46:A:2072:U:C6	46:A:2072:U:H3'	2.44	0.51
46:A:2425:A:N1	67:V:27:ARG:NE	2.58	0.51
54:I:48:LYS:HG3	54:I:49:PRO:HD2	1.92	0.51
75:e:96:LYS:HD3	75:e:96:LYS:H	1.75	0.51
3:AC:115:PRO:HD3	3:AC:253:TRP:CZ2	2.45	0.51
3:AC:265:SER:O	17:h:128:PRO:N	2.42	0.51
5:AE:286:ASP:HB3	5:AE:315:TYR:OH	2.10	0.51
9:AI:285:VAL:C	9:AI:336:ASN:HD22	2.19	0.51
9:AI:334:PHE:HB2	9:AI:339:SER:OG	2.11	0.51
11:AK:142:GLN:NE2	18:i:210:LEU:HD21	2.22	0.51
12:AL:30:U:H2'	12:AL:31:U:C6	2.46	0.51
12:AL:541:U:C4	12:AL:542:A:C6	2.99	0.51
12:AL:781:A:H2'	12:AL:782:C:H6	1.76	0.51
12:AL:1229:A:H2'	12:AL:1230:A:C8	2.45	0.51
13:AM:21:A:H1'	13:AM:48:C:H42	1.76	0.51
20:k:45:LYS:HD3	20:k:47:ARG:NH2	2.25	0.51
22:m:123:ARG:HA	22:m:123:ARG:NE	2.24	0.51
22:m:205:SER:CB	22:m:211:ARG:HG2	2.40	0.51
25:p:124:LEU:O	25:p:128:ILE:HB	2.11	0.51
26:q:188:GLY:O	26:q:189:ALA:C	2.52	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:s:76:LYS:HG2	28:s:118:ASP:HA	1.91	0.51
32:w:10:VAL:HG23	32:w:20:VAL:HG13	1.91	0.51
32:w:218:ASN:CG	32:w:219:ILE:H	2.18	0.51
46:A:86:U:O2'	46:A:87:U:H5'	2.10	0.51
46:A:388:A:C5	46:A:403:A:N6	2.79	0.51
46:A:478:G:C8	46:A:1917:U:C4	2.98	0.51
46:A:1244:A:O2'	46:A:1245:U:H5'	2.11	0.51
46:A:1686:U:OP2	46:A:1691:A:N6	2.42	0.51
46:A:1811:U:H2'	46:A:1812:U:H6	1.74	0.51
46:A:2022:U:C4	46:A:2065:A:N3	2.79	0.51
46:A:2473:U:C2	46:A:2474:U:C5	2.99	0.51
46:A:2842:U:H4'	48:C:208:ASN:HB2	1.93	0.51
46:A:2856:U:H2'	46:A:2857:A:C8	2.46	0.51
46:A:2981:U:H2'	46:A:2982:U:H5	1.76	0.51
46:A:3268:A:H2'	46:A:3269:U:H6	1.75	0.51
50:E:251:ALA:HB1	67:V:63:TYR:CG	2.45	0.51
3:AC:23:ASN:O	3:AC:31:SER:N	2.44	0.51
4:AD:238:GLU:O	4:AD:239:ASP:C	2.53	0.51
5:AE:63:PRO:CB	12:AL:1514:U:O3'	2.59	0.51
5:AE:200:ASP:HA	5:AE:202:LYS:HE2	1.92	0.51
7:AG:1:MET:HE1	17:h:354:LEU:HD11	1.91	0.51
7:AG:94:PRO:CG	17:h:207:GLN:OE1	2.59	0.51
10:AJ:65:ASP:C	10:AJ:66:ILE:HD12	2.35	0.51
11:AK:239:ASP:OD2	12:AL:1290:A:N1	2.43	0.51
12:AL:93:A:H4'	12:AL:214:A:P	2.50	0.51
12:AL:263:A:H2'	12:AL:264:U:C6	2.45	0.51
12:AL:351:A:C4	58:M:166:ARG:HG2	2.45	0.51
12:AL:492:G:N2	12:AL:498:A:C4	2.79	0.51
12:AL:540:A:C6	12:AL:541:U:C4	2.98	0.51
12:AL:632:C:C5'	12:AL:633:C:H6	2.23	0.51
12:AL:636:C:H1'	12:AL:650:C:C5'	2.41	0.51
12:AL:695:A:C6	12:AL:696:U:C4	2.98	0.51
12:AL:724:U:H2'	12:AL:725:A:H8	1.76	0.51
12:AL:729:U:C2	12:AL:731:U:C6	2.99	0.51
12:AL:803:A:C5'	21:l:96:ILE:O	2.52	0.51
12:AL:1119:G:H2'	12:AL:1120:U:C6	2.46	0.51
12:AL:1135:G:H4'	15:Z:79:ASN:HB3	1.93	0.51
12:AL:1180:U:P	24:o:164:THR:CG2	2.69	0.51
12:AL:1201:A:O3'	16:g:59:LYS:CE	2.59	0.51
18:i:93:TRP:CZ2	29:t:109:GLY:CA	2.73	0.51
18:i:316:MET:CE	20:k:69:TRP:CE2	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:m:124:HIS:CD2	22:m:124:HIS:H	2.29	0.51
26:q:215:ARG:C	26:q:217:LEU:H	2.18	0.51
27:r:42:ARG:HE	27:r:44:LYS:HE3	1.76	0.51
29:t:60:LEU:HD13	34:y:18:ILE:CG2	2.41	0.51
30:u:107:SER:O	30:u:111:GLU:HG2	2.10	0.51
35:z:94:GLU:C	35:z:96:ALA:N	2.66	0.51
36:0:73:ARG:CA	46:A:3093:U:C5	2.93	0.51
46:A:315:A:C6	46:A:339:A:H5"	2.46	0.51
46:A:523:U:C5'	55:J:194:ARG:CZ	2.88	0.51
46:A:526:A:OP1	55:J:178:ALA:HB3	2.11	0.51
46:A:964:A:H2'	46:A:965:U:H6	1.74	0.51
46:A:1064:A:C6	46:A:1085:G:N2	2.79	0.51
46:A:1349:A:H2'	46:A:1349:A:N3	2.26	0.51
46:A:1411:A:N7	61:P:58:VAL:CG2	2.74	0.51
46:A:1619:G:C5'	54:I:6:SER:HA	2.40	0.51
46:A:2006:U:H2'	46:A:2007:A:H8	1.73	0.51
46:A:2086:U:H2'	46:A:2087:A:H8	1.72	0.51
46:A:2276:G:N1	56:K:128:MET:HB3	2.24	0.51
46:A:2357:U:H4'	46:A:2358:A:OP1	2.11	0.51
46:A:2425:A:C6	67:V:27:ARG:CZ	2.94	0.51
46:A:2451:U:H2'	46:A:2452:U:C6	2.45	0.51
46:A:2474:U:C2	46:A:2475:U:C5	2.99	0.51
46:A:2869:A:C2	46:A:2870:G:H4'	2.46	0.51
46:A:2870:G:H5'	46:A:2870:G:H8	1.75	0.51
46:A:2935:A:H2'	46:A:2936:U:H6	1.76	0.51
46:A:3008:U:H2'	46:A:3009:A:C8	2.44	0.51
46:A:3118:U:C2	46:A:3119:A:C8	2.98	0.51
75:e:54:ILE:HD11	75:e:105:TYR:HB2	1.92	0.51
76:f:128:LYS:HD2	76:f:138:MET:HA	1.93	0.51
2:AB:113:GLY:O	2:AB:115:ARG:N	2.44	0.51
3:AC:25:VAL:HG22	3:AC:98:PRO:HD3	1.93	0.51
3:AC:161:LYS:HD3	17:h:141:TYR:CE2	2.46	0.51
4:AD:281:LEU:O	4:AD:282:THR:C	2.53	0.51
5:AE:45:LYS:O	5:AE:48:LEU:HB2	2.10	0.51
5:AE:167:GLU:O	5:AE:171:LEU:N	2.38	0.51
6:AF:200:ARG:HE	12:AL:551:U:H5'	1.75	0.51
7:AG:6:ASN:HA	7:AG:9:ASN:OD1	2.10	0.51
7:AG:122:LEU:HD21	16:g:36:ILE:HD12	1.90	0.51
7:AG:127:ILE:HD13	16:g:11:ARG:NH1	2.26	0.51
8:AH:92:ALA:HB3	12:AL:222:U:OP1	2.11	0.51
9:AI:355:LEU:O	9:AI:356:PRO:C	2.51	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:403:ILE:HG21	9:AI:425:LEU:HD21	1.92	0.51
9:AI:413:LEU:HD21	22:m:149:PRO:HG2	1.90	0.51
9:AI:425:LEU:O	9:AI:426:ILE:C	2.54	0.51
11:AK:97:SER:O	18:i:167:ASN:ND2	2.44	0.51
12:AL:513:A:H2'	12:AL:514:U:H5'	1.92	0.51
12:AL:540:A:C5	12:AL:541:U:C4	2.98	0.51
12:AL:873:A:H2'	12:AL:874:G:O4'	2.11	0.51
12:AL:1226:A:H2'	12:AL:1227:C:C6	2.46	0.51
12:AL:1271:A:H2'	12:AL:1404:A:N6	2.26	0.51
12:AL:1305:A:H1'	12:AL:1306:A:H2'	1.92	0.51
12:AL:1624:U:H3	35:z:154:HIS:HE1	1.43	0.51
18:i:228:ASP:HB2	18:i:232:TYR:CE2	2.46	0.51
18:i:306:TYR:HH	20:k:59:LEU:HD23	1.76	0.51
18:i:315:PRO:HB2	20:k:69:TRP:CH2	2.46	0.51
21:l:83:ARG:NH1	47:B:80:ILE:CG2	2.31	0.51
26:q:97:ASP:OD1	26:q:99:ASN:HB2	2.10	0.51
31:v:97:ASN:ND2	31:v:99:ALA:HB3	2.26	0.51
32:w:68:LYS:HD3	32:w:69:ARG:HG2	1.92	0.51
35:z:128:ASN:O	35:z:129:ILE:C	2.53	0.51
44:8:246:ILE:HD11	61:P:255:LEU:HD13	1.92	0.51
46:A:50:A:H2'	46:A:51:G:H8	1.75	0.51
46:A:65:A:H2'	46:A:66:U:C6	2.46	0.51
46:A:141:U:H2'	46:A:142:A:H8	1.75	0.51
46:A:155:A:C6	70:Y:71:LEU:HD23	2.45	0.51
46:A:1010:A:O5'	76:f:129:SER:CB	2.59	0.51
46:A:1027:G:C2	46:A:1029:A:H1'	2.46	0.51
46:A:1599:A:H2'	46:A:1599:A:N3	2.25	0.51
46:A:1632:A:C5	46:A:1670:A:C6	2.99	0.51
46:A:1989:U:C2	52:G:14:LYS:HD2	2.46	0.51
46:A:2070:U:C4	46:A:2071:A:C4	2.99	0.51
46:A:2351:A:H2'	46:A:2352:A:C8	2.45	0.51
46:A:2673:A:H8	46:A:2673:A:H5'	1.76	0.51
46:A:2685:A:C6	46:A:2686:U:C4	2.99	0.51
75:e:64:SER:HB2	75:e:143:GLU:HG2	1.92	0.51
3:AC:185:LEU:HD12	7:AG:196:MET:N	2.23	0.51
4:AD:149:LEU:HA	4:AD:152:PHE:HB3	1.92	0.51
4:AD:280:TRP:O	4:AD:281:LEU:C	2.52	0.51
5:AE:72:GLN:OE1	12:AL:1513:A:OP1	2.28	0.51
5:AE:96:PRO:HD3	12:AL:1541:U:C2	2.46	0.51
5:AE:123:TRP:CD1	5:AE:124:THR:HG23	2.45	0.51
5:AE:251:VAL:HG12	5:AE:252:ASP:N	2.23	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:255:LEU:CD1	5:AE:281:ALA:HB2	2.41	0.51
5:AE:291:ASN:O	5:AE:297:LEU:HD12	2.10	0.51
5:AE:326:GLU:O	5:AE:327:THR:C	2.54	0.51
6:AF:89:LYS:O	6:AF:93:GLU:HG2	2.11	0.51
6:AF:166:LEU:HD23	6:AF:171:VAL:HG23	1.92	0.51
7:AG:191:LEU:O	7:AG:195:GLU:N	2.27	0.51
12:AL:1064:U:H2'	12:AL:1065:A:C4	2.45	0.51
14:AN:1:A:N3	27:r:73:PRO:HA	2.26	0.51
17:h:140:PRO:O	17:h:141:TYR:C	2.53	0.51
17:h:329:ARG:O	17:h:332:LEU:N	2.43	0.51
20:k:59:LEU:CB	25:p:20:TYR:CZ	2.91	0.51
29:t:31:PHE:CE2	29:t:71:SER:HB3	2.45	0.51
31:v:50:VAL:HG13	31:v:61:PRO:HA	1.92	0.51
46:A:455:A:H3'	46:A:456:U:C6	2.46	0.51
46:A:471:A:H5"	46:A:472:U:OP2	2.11	0.51
46:A:645:U:H2'	46:A:646:C:H6	1.76	0.51
46:A:740:A:C2	46:A:741:U:C6	2.99	0.51
46:A:827:U:C2	46:A:828:A:C8	2.99	0.51
46:A:1060:U:C4	46:A:1061:U:C4	2.99	0.51
46:A:1413:A:C6	46:A:1546:G:C5	2.99	0.51
46:A:1414:U:H2'	46:A:1415:U:H6	1.75	0.51
46:A:1552:C:H2'	46:A:1553:G:C8	2.45	0.51
46:A:1808:G:O2'	46:A:1809:C:H5'	2.11	0.51
46:A:2000:A:H2'	46:A:2001:U:C6	2.45	0.51
46:A:2018:C:H5'	46:A:2019:A:P	2.51	0.51
46:A:2019:A:N7	46:A:2061:U:C2	2.79	0.51
46:A:2087:A:C2	46:A:2088:A:C5	2.98	0.51
46:A:2327:A:C6	46:A:2333:A:C6	2.99	0.51
46:A:2727:A:H2'	46:A:2728:U:C6	2.46	0.51
46:A:2837:U:H2'	46:A:2838:U:H6	1.75	0.51
46:A:2851:U:H3'	46:A:2852:U:H5"	1.93	0.51
46:A:3241:U:H2'	46:A:3242:A:H8	1.75	0.51
3:AC:12:PRO:CG	17:h:160:LEU:O	2.59	0.50
4:AD:111:LEU:HD13	4:AD:115:ALA:HB2	1.93	0.50
5:AE:77:LYS:C	5:AE:79:ILE:N	2.59	0.50
6:AF:131:ASP:O	6:AF:133:LEU:N	2.44	0.50
6:AF:167:SER:HB3	6:AF:170:GLN:HB2	1.93	0.50
9:AI:307:ASN:ND2	9:AI:311:LYS:HB2	2.24	0.50
9:AI:373:TYR:CE1	9:AI:378:VAL:HG21	2.46	0.50
10:AJ:93:LYS:HG2	12:AL:1058:G:N1	2.23	0.50
12:AL:94:A:H2'	12:AL:95:U:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:131:A:H2	12:AL:236:G:H22	1.58	0.50
12:AL:277:C:H2'	12:AL:278:U:O4'	2.11	0.50
12:AL:491:U:H3	12:AL:498:A:N6	2.08	0.50
12:AL:771:U:O2	26:q:88:HIS:ND1	2.35	0.50
12:AL:929:G:OP1	20:k:223:ARG:NH1	2.44	0.50
12:AL:1028:G:O2'	25:p:93:PHE:CE2	2.53	0.50
12:AL:1063:U:H2'	12:AL:1064:U:O4'	2.11	0.50
12:AL:1172:A:H3'	12:AL:1173:U:C5'	2.42	0.50
15:Z:16:LEU:HD22	35:z:165:LEU:CG	2.39	0.50
16:g:251:VAL:HB	33:x:51:LYS:CB	2.41	0.50
17:h:152:ASN:HA	17:h:155:MET:HE3	1.93	0.50
18:i:98:TYR:CE2	25:p:48:ARG:HB2	2.45	0.50
20:k:59:LEU:CG	25:p:20:TYR:OH	2.57	0.50
21:l:45:MET:HE2	21:l:67:PHE:C	2.36	0.50
22:m:101:LEU:O	22:m:103:SER:N	2.44	0.50
22:m:203:ARG:HB3	22:m:211:ARG:HE	1.76	0.50
22:m:226:ALA:O	22:m:229:LYS:HB2	2.10	0.50
30:u:100:LYS:HB3	32:w:167:LEU:HD23	1.79	0.50
31:v:68:ASP:OD1	31:v:71:ARG:HG2	2.10	0.50
39:3:30:PHE:CA	46:A:1568:U:H5	2.24	0.50
46:A:261:A:C8	46:A:307:G:O6	2.63	0.50
46:A:310:U:O4	46:A:363:C:H1'	2.12	0.50
46:A:445:U:O4	46:A:446:A:N6	2.43	0.50
46:A:600:C:O2'	47:B:133:ARG:NH1	2.44	0.50
46:A:688:U:OP1	49:D:101:SER:OG	2.27	0.50
46:A:1501:A:N1	46:A:1507:U:C5	2.79	0.50
46:A:1520:C:O2'	46:A:1521:U:H5'	2.11	0.50
46:A:1748:A:H2'	46:A:1749:U:H6	1.75	0.50
46:A:1750:G:H2'	46:A:1751:C:H6	1.74	0.50
46:A:1777:C:H3'	46:A:1778:G:O4'	2.11	0.50
46:A:1793:U:H2'	46:A:1794:U:H6	1.76	0.50
46:A:2982:U:N3	46:A:3005:A:C2	2.79	0.50
46:A:3137:A:O2'	46:A:3138:U:H5'	2.11	0.50
46:A:3145:A:C5	46:A:3146:U:C4	2.99	0.50
47:B:87:SER:O	47:B:89:GLU:N	2.44	0.50
75:e:76:SER:HB3	75:e:79:GLU:HB2	1.93	0.50
76:f:148:VAL:CG2	76:f:154:ILE:HD12	2.41	0.50
1:AA:95:LYS:HZ3	12:AL:1580:U:P	2.33	0.50
3:AC:136:LYS:O	3:AC:139:MET:HB2	2.10	0.50
3:AC:166:LEU:HD21	3:AC:180:ASN:HB3	1.94	0.50
4:AD:31:LEU:HD11	4:AD:100:CYS:H	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:112:ASN:O	5:AE:113:SER:C	2.52	0.50
5:AE:271:LEU:HD13	5:AE:304:TYR:CE2	2.47	0.50
7:AG:18:LEU:HD21	7:AG:26:THR:HA	1.93	0.50
7:AG:72:LYS:O	7:AG:74:LEU:HB2	2.11	0.50
7:AG:127:ILE:HD13	16:g:11:ARG:HH12	1.77	0.50
9:AI:126:VAL:HG13	9:AI:131:THR:OG1	2.10	0.50
11:AK:104:ILE:HG23	18:i:171:TYR:HB3	1.93	0.50
11:AK:288:LYS:NZ	12:AL:1284:A:P	2.84	0.50
12:AL:19:U:H4'	12:AL:640:C:H4'	1.93	0.50
12:AL:418:A:H2'	12:AL:419:U:C6	2.46	0.50
12:AL:510:U:H2'	12:AL:511:A:H8	1.76	0.50
12:AL:899:U:C2'	12:AL:900:A:H8	2.18	0.50
12:AL:1293:U:H3'	12:AL:1294:A:C5'	2.38	0.50
12:AL:1454:U:H2'	12:AL:1455:G:C8	2.45	0.50
18:i:368:LEU:CG	29:t:111:LYS:HG3	2.41	0.50
22:m:88:ILE:N	22:m:88:ILE:HD13	2.25	0.50
22:m:90:PRO:HB3	24:o:241:LEU:HD11	1.89	0.50
26:q:214:MET:HE1	35:z:140:MET:CA	2.41	0.50
35:z:129:ILE:N	35:z:130:PRO:HD2	2.26	0.50
37:1:199:SER:HG	72:b:156:TRP:CG	2.27	0.50
46:A:547:A:C8	46:A:548:A:C8	3.00	0.50
46:A:617:A:H4'	46:A:618:A:OP1	2.11	0.50
46:A:665:A:H3'	46:A:665:A:N3	2.26	0.50
46:A:791:U:H2'	46:A:792:U:H6	1.76	0.50
46:A:817:G:H3'	46:A:818:U:C6	2.46	0.50
46:A:939:A:H2'	46:A:940:A:C8	2.43	0.50
46:A:966:A:C6	46:A:967:U:C4	2.99	0.50
46:A:1004:A:N1	75:e:179:GLU:OE2	2.45	0.50
46:A:1500:U:H2'	46:A:1500:U:O2	2.11	0.50
46:A:1531:C:O2	47:B:326:TRP:CG	2.63	0.50
46:A:1952:A:C4'	48:C:207:GLN:O	2.60	0.50
46:A:2012:A:C8	46:A:2013:G:H3'	2.46	0.50
46:A:2026:G:N3	46:A:2026:G:H2'	2.25	0.50
46:A:2215:A:H2'	46:A:2216:U:C6	2.47	0.50
46:A:3231:A:C6	46:A:3232:U:C4	2.99	0.50
54:I:138:ILE:HD11	58:M:114:ILE:HD12	1.93	0.50
63:R:53:GLU:C	63:R:55:GLN:N	2.70	0.50
69:X:31:ALA:HB3	69:X:55:ARG:CZ	2.42	0.50
75:e:54:ILE:HD11	75:e:105:TYR:CB	2.41	0.50
2:AB:107:LYS:HE2	2:AB:110:PHE:HB3	1.92	0.50
5:AE:73:ILE:HB	5:AE:77:LYS:HZ2	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:99:LYS:O	5:AE:137:ILE:HG23	2.11	0.50
6:AF:55:LYS:HE3	12:AL:500:A:O2'	2.10	0.50
6:AF:321:TYR:HE2	31:v:36:PRO:CD	2.12	0.50
7:AG:122:LEU:CD2	16:g:36:ILE:CD1	2.82	0.50
7:AG:170:ASP:HA	7:AG:173:ARG:HB2	1.93	0.50
7:AG:224:VAL:HG12	33:x:45:LEU:CB	2.42	0.50
8:AH:215:GLN:O	8:AH:216:LEU:C	2.53	0.50
9:AI:357:VAL:HG22	9:AI:362:ILE:HG23	1.92	0.50
12:AL:497:A:H4'	12:AL:498:A:OP1	2.12	0.50
12:AL:498:A:H2'	12:AL:499:A:H5'	1.93	0.50
12:AL:658:G:C6	12:AL:659:C:C4	3.00	0.50
12:AL:687:U:H6	12:AL:687:U:O5'	1.94	0.50
12:AL:736:A:HO2'	21:l:86:LYS:HE3	1.74	0.50
12:AL:746:A:C2'	12:AL:747:A:H5'	2.41	0.50
12:AL:755:G:H8	12:AL:755:G:O5'	1.95	0.50
12:AL:784:A:H2'	12:AL:784:A:N3	2.27	0.50
12:AL:789:A:N6	12:AL:798:U:H2'	2.26	0.50
12:AL:940:U:H4'	23:n:18:LYS:HZ1	1.75	0.50
12:AL:1100:A:H5"	12:AL:1232:C:H41	1.76	0.50
12:AL:1214:A:C8	12:AL:1214:A:P	3.03	0.50
12:AL:1216:A:C8	24:o:256:TYR:CG	3.00	0.50
12:AL:1340:U:N3	28:s:13:LYS:HD3	2.20	0.50
12:AL:1348:U:H1'	12:AL:1349:A:C8	2.47	0.50
12:AL:1552:U:H2'	12:AL:1553:A:C8	2.46	0.50
13:AM:6:C:H2'	13:AM:7:G:C8	2.47	0.50
20:k:59:LEU:CG	25:p:20:TYR:CZ	2.90	0.50
25:p:96:ALA:C	25:p:98:SER:H	2.19	0.50
30:u:230:THR:O	30:u:233:LYS:HB3	2.10	0.50
30:u:237:ASN:O	30:u:240:ALA:N	2.44	0.50
31:v:14:GLY:HA3	31:v:19:PRO:HA	1.93	0.50
32:w:77:ILE:C	32:w:79:ARG:H	2.19	0.50
46:A:168:A:H61	46:A:210:U:H3	1.59	0.50
46:A:312:A:H3'	46:A:312:A:N3	2.27	0.50
46:A:325:G:O2'	46:A:331:A:N6	2.44	0.50
46:A:830:U:C2	46:A:831:A:C8	2.99	0.50
46:A:862:U:H2'	46:A:863:A:H8	1.77	0.50
46:A:904:G:C2	46:A:912:C:C2	2.99	0.50
46:A:1139:G:C2	46:A:1140:A:C5	3.00	0.50
46:A:1193:U:C2	46:A:1194:U:C5	2.99	0.50
46:A:1401:G:C2	46:A:1402:G:C8	3.00	0.50
46:A:1767:A:H8	46:A:1767:A:OP2	1.95	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1841:C:H2'	46:A:1842:C:C6	2.47	0.50
46:A:2205:G:C6	46:A:2206:U:C4	2.99	0.50
46:A:2319:A:C6	46:A:2320:A:C6	2.99	0.50
46:A:2601:A:H3'	46:A:2603:C:H41	1.74	0.50
46:A:3129:A:H2'	46:A:3130:U:C6	2.44	0.50
63:R:134:LEU:HD12	63:R:140:ALA:HA	1.93	0.50
63:R:214:ALA:O	63:R:215:ARG:C	2.54	0.50
75:e:87:ILE:HG12	75:e:142:TYR:CD1	2.45	0.50
75:e:94:LEU:HD21	75:e:138:ALA:HB1	1.92	0.50
1:AA:83:LYS:HE3	12:AL:1462:A:H61	1.77	0.50
3:AC:122:LYS:HB3	3:AC:163:LEU:HD12	1.92	0.50
5:AE:147:THR:HG23	5:AE:151:PHE:HD2	1.77	0.50
6:AF:178:LYS:O	6:AF:181:ARG:HB3	2.12	0.50
6:AF:200:ARG:CG	12:AL:552:A:OP1	2.60	0.50
7:AG:142:ARG:HH21	7:AG:147:GLU:HB3	1.76	0.50
8:AH:184:ARG:HD3	12:AL:814:A:O2'	2.10	0.50
8:AH:220:ILE:CG2	21:l:22:LYS:HG2	2.40	0.50
11:AK:159:ALA:CA	25:p:23:ASN:HB2	2.31	0.50
11:AK:163:PRO:CA	25:p:68:TYR:CD1	2.95	0.50
12:AL:71:A:C5	12:AL:99:U:C5	3.00	0.50
12:AL:487:A:H2'	12:AL:488:A:C8	2.46	0.50
12:AL:521:A:H4'	31:v:45:PRO:C	2.36	0.50
12:AL:689:C:H2'	12:AL:690:G:O4'	2.12	0.50
12:AL:990:G:H21	12:AL:1595:C:P	2.34	0.50
12:AL:995:C:C6	12:AL:995:C:H5"	2.47	0.50
12:AL:1361:U:H5'	12:AL:1362:A:H5"	1.93	0.50
12:AL:1373:A:C2	12:AL:1400:A:OP2	2.64	0.50
12:AL:1389:U:H1'	12:AL:1390:C:C6	2.47	0.50
12:AL:1553:A:H2'	12:AL:1554:U:C6	2.47	0.50
17:h:290:TRP:CZ2	24:o:49:PRO:HD3	2.45	0.50
18:i:369:ASN:CB	29:t:114:ILE:HD11	2.40	0.50
27:r:85:LEU:HD21	27:r:110:VAL:CG2	2.42	0.50
30:u:101:PHE:CB	32:w:167:LEU:CD1	2.89	0.50
30:u:174:SER:CA	30:u:215:ILE:HD11	2.16	0.50
30:u:206:ARG:HG3	30:u:247:MET:HG3	1.94	0.50
34:y:44:PRO:HA	34:y:47:VAL:HG13	1.92	0.50
34:y:52:GLN:HB3	34:y:59:TYR:O	2.11	0.50
37:1:73:ILE:HD13	42:6:51:TYR:HB2	1.92	0.50
46:A:48:A:C6	46:A:423:A:C2	3.00	0.50
46:A:89:A:O2'	46:A:90:A:H5'	2.12	0.50
46:A:971:A:H62	75:e:107:ARG:HH21	1.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1054:A:H2'	46:A:1054:A:N3	2.26	0.50
46:A:1140:A:O2'	46:A:1141:A:H5'	2.11	0.50
46:A:1242:A:H2'	46:A:1269:G:N1	2.26	0.50
46:A:1520:C:N4	46:A:3021:A:H61	2.08	0.50
46:A:1656:G:C2	46:A:1657:A:C8	3.00	0.50
46:A:1709:G:H2'	46:A:1709:G:N3	2.27	0.50
46:A:1794:U:C4	46:A:1795:U:C4	3.00	0.50
46:A:1970:C:H2'	46:A:1971:A:H8	1.77	0.50
46:A:1988:A:H2'	46:A:1991:G:H8	1.74	0.50
46:A:2088:A:C6	46:A:2089:U:C4	2.99	0.50
46:A:2213:U:H3	46:A:2235:A:H2	1.59	0.50
46:A:2368:U:P	63:R:322:ARG:HH22	2.35	0.50
46:A:2584:A:H2'	46:A:2585:A:O4'	2.10	0.50
46:A:2743:U:H4'	46:A:2746:U:O4	2.11	0.50
46:A:2785:U:O4	46:A:2808:A:H2'	2.11	0.50
46:A:2845:G:C2	48:C:203:GLY:HA3	2.45	0.50
75:e:108:ASN:OD1	75:e:108:ASN:N	2.45	0.50
76:f:114:GLU:HA	76:f:155:LYS:HB3	1.93	0.50
1:AA:78:ASP:HB3	1:AA:81:MET:HE3	1.92	0.50
2:AB:86:TYR:O	2:AB:87:ILE:C	2.54	0.50
3:AC:185:LEU:CG	7:AG:198:GLY:H	2.23	0.50
3:AC:264:ILE:H	3:AC:264:ILE:HD13	1.77	0.50
4:AD:38:GLN:O	4:AD:43:ASP:N	2.44	0.50
4:AD:209:ASN:C	4:AD:211:SER:N	2.67	0.50
6:AF:171:VAL:O	6:AF:175:TYR:N	2.45	0.50
6:AF:307:TYR:H	6:AF:307:TYR:HD1	1.58	0.50
7:AG:133:ASP:O	7:AG:139:GLN:NE2	2.45	0.50
9:AI:100:GLN:O	9:AI:104:LEU:HG	2.10	0.50
9:AI:200:ILE:HG13	9:AI:202:PRO:HD3	1.93	0.50
12:AL:780:G:H2'	12:AL:781:A:C8	2.47	0.50
12:AL:1273:A:H2	12:AL:1334:U:O2'	1.94	0.50
16:g:251:VAL:CB	33:x:51:LYS:HB2	2.40	0.50
20:k:52:VAL:C	20:k:54:PHE:N	2.70	0.50
28:s:55:ILE:O	28:s:58:ILE:HB	2.12	0.50
30:u:75:PHE:N	32:w:100:GLU:OE1	2.43	0.50
46:A:207:U:C2	46:A:208:A:C8	3.00	0.50
46:A:313:U:OP2	72:b:54:HIS:NE2	2.31	0.50
46:A:523:U:C5	55:J:246:ARG:NH1	2.79	0.50
46:A:676:A:H2'	46:A:677:C:H6	1.76	0.50
46:A:893:U:H2'	46:A:894:A:H8	1.75	0.50
46:A:905:A:H2'	46:A:908:C:N4	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1353:A:O2'	46:A:1358:C:N4	2.42	0.50
46:A:2184:C:H2'	46:A:2185:U:C5	2.47	0.50
46:A:2237:A:H2'	46:A:2238:U:O4'	2.11	0.50
46:A:2245:U:C2	46:A:2246:A:C8	3.00	0.50
46:A:2647:U:C2	46:A:2648:A:C8	2.99	0.50
46:A:2744:A:C5	46:A:2796:G:C4	2.99	0.50
46:A:2760:G:C5	46:A:2761:C:C5	3.00	0.50
46:A:2793:G:H2'	46:A:2794:U:O4'	2.11	0.50
46:A:3084:A:O2'	51:F:101:GLY:HA3	2.11	0.50
46:A:3268:A:C5	46:A:3269:U:C5	3.00	0.50
47:B:169:ARG:HD2	47:B:171:GLU:HG2	1.92	0.50
47:B:282:LYS:O	47:B:283:LYS:HB2	2.11	0.50
63:R:37:THR:C	63:R:39:MET:H	2.19	0.50
63:R:179:VAL:HG13	63:R:183:GLU:OE2	2.11	0.50
63:R:286:LEU:N	63:R:286:LEU:HD23	2.27	0.50
75:e:66:MET:SD	75:e:150:VAL:HB	2.51	0.50
76:f:40:CYS:O	76:f:44:ASN:HB2	2.10	0.50
3:AC:54:ALA:HB1	7:AG:142:ARG:C	2.35	0.50
4:AD:155:LEU:CD2	16:g:210:LEU:HB3	2.35	0.50
4:AD:249:THR:HG23	4:AD:253:TYR:HB3	1.92	0.50
5:AE:65:ILE:HG23	5:AE:90:PRO:HB3	1.94	0.50
5:AE:74:LEU:HD21	5:AE:88:LEU:CD2	2.41	0.50
5:AE:259:PRO:C	5:AE:261:SER:N	2.65	0.50
5:AE:265:ALA:O	5:AE:268:LYS:HB3	2.12	0.50
7:AG:92:TYR:OH	23:n:21:VAL:HG13	2.11	0.50
8:AH:202:LEU:HD21	21:l:105:LEU:HB2	1.93	0.50
9:AI:126:VAL:CA	9:AI:131:THR:HG21	2.37	0.50
9:AI:134:PHE:CD2	9:AI:159:LEU:HD11	2.47	0.50
9:AI:286:PRO:HB3	9:AI:338:GLU:CB	2.40	0.50
9:AI:345:ILE:CD1	9:AI:355:LEU:HD22	2.38	0.50
11:AK:62:PRO:O	11:AK:66:LEU:HB2	2.11	0.50
11:AK:141:ALA:HB2	18:i:321:TYR:O	2.11	0.50
12:AL:333:A:O2'	12:AL:335:A:H8	1.95	0.50
12:AL:839:A:H2'	12:AL:840:G:O4'	2.12	0.50
12:AL:1171:A:H2'	12:AL:1178:A:H61	1.75	0.50
12:AL:1316:A:H2'	12:AL:1317:U:C6	2.47	0.50
12:AL:1382:C:C4	12:AL:1384:G:N7	2.80	0.50
16:g:48:TRP:CD1	16:g:54:ILE:HB	2.47	0.50
30:u:223:ASN:O	30:u:226:LYS:N	2.45	0.50
32:w:232:MET:SD	32:w:232:MET:N	2.84	0.50
46:A:112:G:O2'	46:A:157:A:N1	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:172:A:N6	46:A:205:A:H61	2.10	0.50
46:A:311:A:O2'	46:A:314:A:N1	2.42	0.50
46:A:425:A:N3	46:A:425:A:C2'	2.74	0.50
46:A:914:A:OP2	73:c:121:LYS:CE	2.59	0.50
46:A:931:U:H2'	46:A:932:C:H6	1.75	0.50
46:A:1043:A:H3'	46:A:1044:A:H8	1.76	0.50
46:A:1323:U:C4	46:A:1324:U:O4	2.65	0.50
46:A:1493:U:O2'	46:A:1494:A:P	2.70	0.50
46:A:1541:U:H2'	46:A:1542:U:H6	1.71	0.50
46:A:1577:U:H6	46:A:1577:U:H5"	1.76	0.50
46:A:1745:U:H2'	46:A:1800:A:H62	1.77	0.50
46:A:1833:G:N2	46:A:1873:A:O2'	2.42	0.50
46:A:2003:G:N2	46:A:2083:U:O2	2.45	0.50
63:R:320:LEU:O	63:R:323:LYS:HB3	2.12	0.50
65:T:53:ILE:HD11	74:d:134:VAL:HG12	1.94	0.50
3:AC:217:TRP:CG	17:h:146:LEU:HD11	2.46	0.50
4:AD:155:LEU:CD1	16:g:210:LEU:HB2	2.34	0.50
6:AF:58:MET:CG	19:j:26:PHE:CB	2.87	0.50
6:AF:189:VAL:HG12	6:AF:193:ASN:HD21	1.77	0.50
6:AF:319:TYR:HD1	31:v:42:THR:HG22	1.70	0.50
6:AF:319:TYR:HB2	31:v:22:ASN:ND2	2.26	0.50
7:AG:2:LYS:HB2	12:AL:926:A:C5'	2.35	0.50
8:AH:208:GLU:HA	30:u:134:ARG:CD	2.41	0.50
9:AI:289:PHE:CE2	9:AI:327:ILE:HD12	2.46	0.50
9:AI:412:LEU:HD22	9:AI:445:LEU:HD21	1.93	0.50
10:AJ:76:ARG:HG3	12:AL:1092:C:O5'	2.11	0.50
12:AL:70:C:H4'	12:AL:384:G:H4'	1.93	0.50
12:AL:71:A:H61	12:AL:100:A:H5'	1.75	0.50
12:AL:223:U:C4	12:AL:224:A:C8	3.00	0.50
12:AL:711:A:P	32:w:79:ARG:HH11	2.34	0.50
12:AL:723:A:H2'	12:AL:724:U:H6	1.75	0.50
12:AL:1232:C:H1'	12:AL:1236:A:N6	2.27	0.50
12:AL:1232:C:H5"	12:AL:1233:A:H3'	1.92	0.50
12:AL:1273:A:N1	12:AL:1333:U:H3'	2.26	0.50
12:AL:1301:A:OP1	12:AL:1306:A:N6	2.44	0.50
12:AL:1414:A:H5'	24:o:270:ARG:NH1	2.17	0.50
16:g:51:LYS:HB2	16:g:68:LEU:HB3	1.93	0.50
16:g:228:PRO:HA	16:g:277:LEU:CA	2.35	0.50
21:l:3:TYR:O	21:l:70:LEU:HD12	2.11	0.50
30:u:64:VAL:HG11	30:u:236:LEU:HA	1.94	0.50
30:u:127:ASP:O	30:u:128:ILE:C	2.53	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:u:231:ILE:HG23	30:u:232:GLN:N	2.27	0.50
31:v:88:LYS:HA	31:v:91:ARG:HD3	1.93	0.50
46:A:165:A:H3'	46:A:166:U:H6	1.77	0.50
46:A:257:U:H2'	46:A:258:A:H8	1.76	0.50
46:A:471:A:H5'	59:N:136:ARG:NE	2.27	0.50
46:A:880:G:C5	46:A:881:C:C5	3.00	0.50
46:A:1006:U:O4	76:f:135:LEU:CA	2.50	0.50
46:A:1074:U:O2	46:A:1074:U:H2'	2.10	0.50
46:A:1130:C:H2'	46:A:1131:C:H6	1.74	0.50
46:A:1293:A:H2'	46:A:1294:C:O4'	2.12	0.50
46:A:1306:A:O2'	46:A:1307:A:H5"	2.11	0.50
46:A:1510:A:C4	46:A:1511:U:C5	2.99	0.50
46:A:2007:A:H61	46:A:2080:U:H3	1.58	0.50
46:A:2623:A:OP1	63:R:50:LYS:HE3	2.12	0.50
46:A:2938:A:H2'	46:A:2939:U:C6	2.46	0.50
46:A:3054:A:H2'	46:A:3055:U:O4'	2.12	0.50
46:A:3137:A:H2'	46:A:3138:U:H6	1.76	0.50
46:A:3241:U:H2'	46:A:3242:A:C8	2.47	0.50
55:J:111:THR:HG22	55:J:115:LYS:HB3	1.93	0.50
63:R:260:PHE:O	63:R:267:HIS:NE2	2.45	0.50
3:AC:54:ALA:CB	7:AG:143:PRO:HB3	2.42	0.50
3:AC:148:LEU:HD11	4:AD:82:ASN:CG	2.08	0.50
4:AD:96:SER:O	4:AD:301:GLU:N	2.45	0.50
5:AE:260:ASN:C	5:AE:262:SER:H	2.20	0.50
6:AF:67:TYR:HE2	12:AL:482:U:N1	2.08	0.50
8:AH:50:ALA:HB2	32:w:76:GLU:CA	2.40	0.50
8:AH:125:LEU:HA	8:AH:128:ARG:HE	1.77	0.50
11:AK:51:TYR:HB3	11:AK:71:GLU:HB3	1.93	0.50
11:AK:127:ASN:O	11:AK:128:SER:C	2.54	0.50
12:AL:100:A:C2	12:AL:104:G:C6	2.99	0.50
12:AL:682:A:H2'	12:AL:683:A:C8	2.46	0.50
12:AL:806:A:H5"	30:u:187:ASN:HD21	1.76	0.50
12:AL:1406:G:H2'	12:AL:1407:A:N7	2.19	0.50
12:AL:1426:A:H3'	12:AL:1427:U:C6	2.47	0.50
12:AL:1541:U:H3'	12:AL:1542:A:C8	2.47	0.50
12:AL:1576:U:C5'	46:A:1861:C:H4'	2.41	0.50
18:i:178:LYS:O	18:i:181:ASN:HB2	2.12	0.50
22:m:117:ILE:O	22:m:121:ILE:HG13	2.12	0.50
23:n:126:LEU:O	23:n:154:VAL:N	2.45	0.50
28:s:31:THR:HA	28:s:34:LYS:HE3	1.93	0.50
31:v:105:ASN:O	31:v:106:SER:C	2.54	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:w:107:PHE:HE2	47:B:65:PRO:HG3	1.76	0.50
34:y:84:SER:O	34:y:85:TYR:C	2.55	0.50
35:z:135:SER:C	35:z:137:ARG:N	2.70	0.50
46:A:16:A:H2'	46:A:17:U:C5	2.47	0.50
46:A:253:A:H5"	64:S:32:ILE:C	2.36	0.50
46:A:315:A:H5'	46:A:360:A:N3	2.27	0.50
46:A:409:A:H5"	46:A:410:A:OP1	2.12	0.50
46:A:830:U:H2'	46:A:831:A:C8	2.47	0.50
46:A:1010:A:O2'	46:A:1011:A:OP1	2.28	0.50
46:A:1260:U:H2'	46:A:1261:U:H6	1.77	0.50
46:A:1563:C:O2	46:A:1563:C:H2'	2.12	0.50
46:A:1809:C:H2'	46:A:1810:C:C6	2.46	0.50
46:A:1852:A:H3'	46:A:1853:A:C8	2.46	0.50
46:A:2213:U:H2'	46:A:2214:A:C8	2.47	0.50
63:R:219:ARG:NH2	63:R:248:ASP:CA	2.72	0.50
63:R:219:ARG:O	63:R:220:TYR:C	2.53	0.50
75:e:61:MET:HE2	75:e:105:TYR:CE1	2.46	0.50
3:AC:59:GLU:O	3:AC:60:SER:C	2.53	0.50
3:AC:67:LEU:HD11	3:AC:173:THR:HG23	1.94	0.50
3:AC:264:ILE:HG13	17:h:132:LEU:HD23	1.94	0.50
5:AE:67:ARG:HH12	5:AE:73:ILE:H	1.59	0.50
5:AE:215:TRP:CH2	5:AE:248:LEU:CB	2.94	0.50
5:AE:300:PHE:C	5:AE:302:ARG:N	2.70	0.50
6:AF:55:LYS:CE	12:AL:500:A:O2'	2.59	0.50
6:AF:178:LYS:HZ1	19:j:459:ARG:NH2	2.01	0.50
6:AF:185:ILE:HG22	6:AF:189:VAL:HG23	1.94	0.50
7:AG:147:GLU:CD	16:g:14:GLN:HA	2.35	0.50
7:AG:224:VAL:CG1	33:x:45:LEU:CB	2.90	0.50
8:AH:31:ASP:O	8:AH:35:LYS:N	2.28	0.50
8:AH:184:ARG:HG3	12:AL:814:A:H5"	1.89	0.50
9:AI:90:LEU:HD11	9:AI:128:GLU:OE1	2.12	0.50
11:AK:132:PHE:HB2	18:i:248:MET:CE	2.41	0.50
11:AK:182:VAL:HB	25:p:147:GLU:O	2.11	0.50
12:AL:521:A:H2'	12:AL:527:G:N1	2.27	0.50
12:AL:534:A:H2'	12:AL:535:U:C6	2.47	0.50
12:AL:729:U:N3	12:AL:731:U:C4	2.80	0.50
12:AL:788:U:C5'	35:z:153:ARG:HG3	2.42	0.50
12:AL:842:A:H2'	12:AL:843:G:C8	2.47	0.50
12:AL:945:C:P	27:r:36:ARG:HH22	2.35	0.50
12:AL:1135:G:OP1	15:Z:15:ARG:HG3	2.12	0.50
12:AL:1180:U:H2'	12:AL:1181:A:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1212:A:P	24:o:244:SER:OG	2.68	0.50
12:AL:1216:A:C8	24:o:256:TYR:CB	2.85	0.50
12:AL:1219:A:H2'	12:AL:1220:A:H8	1.76	0.50
12:AL:1373:A:H2	12:AL:1399:G:C3'	2.23	0.50
13:AM:9:A:O4'	13:AM:46:G:H1'	2.10	0.50
15:Z:42:SER:OG	22:m:241:ARG:CZ	2.60	0.50
20:k:119:LYS:O	20:k:122:SER:HB3	2.12	0.50
21:l:80:GLU:HG3	47:B:73:LEU:O	2.11	0.50
25:p:22:VAL:O	25:p:23:ASN:C	2.54	0.50
27:r:31:LEU:O	27:r:32:ASN:C	2.53	0.50
28:s:2:VAL:HG13	28:s:3:VAL:H	1.77	0.50
30:u:188:MET:O	30:u:191:HIS:HB3	2.11	0.50
30:u:253:GLN:NE2	30:u:264:ILE:N	2.59	0.50
31:v:40:LEU:HB3	31:v:67:LEU:HD12	1.93	0.50
32:w:4:GLN:C	32:w:5:ASN:HD22	2.20	0.50
34:y:26:ALA:HB1	34:y:49:LEU:HD21	1.94	0.50
36:0:73:ARG:HA	46:A:3093:U:H5	1.77	0.50
42:6:62:THR:HG22	42:6:106:ARG:HD2	1.94	0.50
45:9:114:PHE:CD2	45:9:204:LEU:HD21	2.47	0.50
46:A:151:A:N6	46:A:160:U:H3	2.09	0.50
46:A:596:C:H2'	46:A:597:U:O4'	2.12	0.50
46:A:1015:A:H62	46:A:1017:A:H1'	1.76	0.50
46:A:1182:A:C2	46:A:1183:A:C8	3.00	0.50
46:A:1206:A:H4'	46:A:1208:U:C6	2.47	0.50
46:A:1701:A:O2'	46:A:1702:C:H5'	2.12	0.50
46:A:1923:C:OP2	46:A:2884:U:H4'	2.12	0.50
46:A:2909:A:H2'	46:A:2910:A:O4'	2.11	0.50
47:B:160:TRP:O	47:B:161:GLU:C	2.54	0.50
51:F:163:PRO:HG2	75:e:213:LEU:HD22	1.94	0.50
63:R:149:ARG:C	63:R:151:ASP:N	2.63	0.50
63:R:297:ASP:OD2	63:R:297:ASP:N	2.43	0.50
3:AC:78:ASN:HD21	7:AG:186:GLU:HB3	1.77	0.49
3:AC:169:ASN:HB2	7:AG:197:PHE:CE1	2.47	0.49
4:AD:130:PRO:O	4:AD:135:ASN:N	2.43	0.49
4:AD:173:ALA:O	4:AD:174:ARG:C	2.54	0.49
5:AE:215:TRP:C	5:AE:217:LYS:N	2.67	0.49
5:AE:271:LEU:C	5:AE:274:TYR:H	2.20	0.49
5:AE:323:GLY:O	5:AE:327:THR:HG23	2.12	0.49
6:AF:72:VAL:HG11	12:AL:482:U:OP1	2.11	0.49
7:AG:33:VAL:CB	17:h:357:TYR:OH	2.60	0.49
8:AH:21:ILE:CG2	31:v:74:TYR:CE1	2.88	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:189:PHE:HB2	32:w:176:LEU:HD11	1.92	0.49
9:AI:395:ASN:O	9:AI:399:VAL:HG23	2.12	0.49
9:AI:435:ASN:ND2	24:o:175:GLU:CA	2.75	0.49
11:AK:115:ALA:HB2	18:i:168:ASN:ND2	2.08	0.49
11:AK:119:LYS:HB3	11:AK:122:ASN:HB2	1.93	0.49
11:AK:294:PHE:HZ	24:o:170:VAL:CB	2.26	0.49
12:AL:338:G:C6	12:AL:339:U:C4	3.00	0.49
12:AL:338:G:C5	12:AL:339:U:C5	3.00	0.49
12:AL:753:A:O3'	26:q:129:GLY:N	2.44	0.49
12:AL:1015:U:H6	12:AL:1016:G:N7	2.10	0.49
12:AL:1211:A:OP1	24:o:248:LYS:CD	2.50	0.49
12:AL:1218:G:H5'	24:o:260:GLU:OE2	2.12	0.49
12:AL:1382:C:OP1	12:AL:1382:C:H4'	2.12	0.49
12:AL:1395:A:H2'	12:AL:1395:A:N3	2.26	0.49
12:AL:1492:U:H2'	12:AL:1493:A:H8	1.77	0.49
13:AM:36:U:N3	14:AN:9:C:O2'	2.40	0.49
15:Z:34:MET:CG	22:m:164:MET:HE3	2.42	0.49
17:h:255:GLN:HB3	17:h:259:LEU:CD1	2.39	0.49
17:h:276:ILE:HD11	24:o:47:ALA:HA	0.71	0.49
18:i:306:TYR:HE2	25:p:28:TYR:HE2	1.59	0.49
20:k:46:PHE:O	20:k:47:ARG:C	2.55	0.49
27:r:50:PRO:HD2	27:r:123:TYR:OH	2.12	0.49
30:u:81:ALA:CB	47:B:65:PRO:HG2	2.42	0.49
30:u:224:PRO:O	30:u:225:GLU:C	2.54	0.49
37:1:84:ARG:NH1	46:A:2477:U:OP1	2.44	0.49
46:A:101:A:H2'	46:A:102:A:C8	2.47	0.49
46:A:126:A:C6	46:A:127:A:C6	3.00	0.49
46:A:222:A:H2'	46:A:223:C:C6	2.47	0.49
46:A:633:G:H2'	46:A:634:A:C8	2.47	0.49
46:A:915:G:OP1	66:U:31:ARG:HB2	2.11	0.49
46:A:1242:A:H2'	46:A:1269:G:C6	2.47	0.49
46:A:1310:A:C2	46:A:1311:A:C5	3.00	0.49
46:A:1356:U:OP2	74:d:68:ARG:NH2	2.44	0.49
46:A:1369:U:O2'	46:A:1370:A:H5'	2.12	0.49
46:A:1413:A:N6	46:A:1546:G:C5	2.80	0.49
46:A:1530:U:OP1	47:B:94:LYS:HE3	2.12	0.49
46:A:1531:C:C2	47:B:326:TRP:CG	2.99	0.49
46:A:1786:A:O2'	46:A:1787:A:H5'	2.12	0.49
46:A:2029:A:N3	46:A:2030:U:H1'	2.27	0.49
46:A:2302:U:C5	63:R:39:MET:SD	3.05	0.49
46:A:2363:A:N7	72:b:152:GLN:NE2	2.58	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2631:G:OP1	63:R:81:LYS:HE3	2.12	0.49
46:A:2917:U:H2'	46:A:2918:A:C8	2.46	0.49
63:R:213:ASP:O	63:R:216:PHE:N	2.45	0.49
1:AA:106:LYS:HG2	1:AA:110:GLY:HA3	1.94	0.49
2:AB:110:PHE:CE1	12:AL:101:U:H5"	2.46	0.49
3:AC:68:LEU:CD1	12:AL:1639:A:C5	2.94	0.49
4:AD:217:ASN:O	4:AD:221:ASN:N	2.45	0.49
5:AE:215:TRP:CH2	5:AE:218:VAL:HG21	2.47	0.49
6:AF:93:GLU:HB2	6:AF:122:ASN:HD22	1.77	0.49
7:AG:63:VAL:HG11	7:AG:77:THR:HA	1.94	0.49
7:AG:69:ALA:HB1	7:AG:74:LEU:H	1.77	0.49
8:AH:50:ALA:CB	32:w:75:ALA:CA	2.89	0.49
9:AI:307:ASN:CG	9:AI:308:THR:H	2.19	0.49
9:AI:328:ILE:HD13	9:AI:343:LEU:HD13	1.93	0.49
9:AI:407:LYS:O	9:AI:408:GLN:C	2.53	0.49
10:AJ:14:LEU:O	10:AJ:18:ILE:HG12	2.11	0.49
11:AK:112:GLU:HA	18:i:172:TYR:CE2	2.47	0.49
12:AL:269:A:O2'	12:AL:270:G:H5'	2.13	0.49
12:AL:823:G:HO2'	12:AL:824:A:P	2.34	0.49
12:AL:1543:A:OP1	12:AL:1543:A:H8	1.95	0.49
12:AL:1617:G:H2'	12:AL:1618:G:C8	2.47	0.49
12:AL:1628:A:N7	15:Z:18:VAL:CG1	2.68	0.49
12:AL:1631:U:HO2'	33:x:66:HIS:CG	2.19	0.49
12:AL:1643:U:C5'	24:o:63:ARG:CD	2.86	0.49
13:AM:59:A:H5"	13:AM:60:U:C5	2.47	0.49
23:n:39:LEU:HD21	23:n:154:VAL:HG21	1.93	0.49
26:q:126:LEU:HD21	26:q:131:LEU:HD23	1.94	0.49
30:u:75:PHE:CE2	30:u:164:PHE:CE1	2.99	0.49
30:u:276:LYS:HA	30:u:279:ARG:HH21	1.76	0.49
30:u:276:LYS:HA	30:u:279:ARG:NH2	2.27	0.49
32:w:9:LEU:HA	32:w:57:LEU:HG	1.94	0.49
32:w:58:VAL:HG11	32:w:74:ILE:HG12	1.93	0.49
32:w:219:ILE:O	32:w:223:LEU:N	2.45	0.49
46:A:44:U:H2'	46:A:45:U:C5	2.47	0.49
46:A:448:U:H2'	46:A:449:A:H8	1.76	0.49
46:A:551:U:H2'	46:A:552:A:N3	2.26	0.49
46:A:1021:A:OP1	75:e:134:LYS:HB3	2.11	0.49
46:A:1222:U:O2'	46:A:1223:A:H5'	2.12	0.49
46:A:1239:A:H61	46:A:1271:A:N6	2.11	0.49
46:A:1313:G:H5"	46:A:1314:U:C5'	2.41	0.49
46:A:1417:A:H2'	46:A:1418:U:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1439:A:N3	46:A:1440:U:N1	2.60	0.49
46:A:1529:A:H2'	46:A:1530:U:C6	2.47	0.49
46:A:1698:C:O3'	47:B:318:LEU:O	2.30	0.49
46:A:2018:C:N4	46:A:2021:A:OP2	2.45	0.49
46:A:2062:G:N2	46:A:2064:G:H3'	2.27	0.49
46:A:2351:A:O2'	46:A:2352:A:H5'	2.11	0.49
46:A:2754:A:H2'	46:A:2755:U:C6	2.47	0.49
46:A:2851:U:C4	46:A:2852:U:C6	3.00	0.49
46:A:3230:U:H2'	46:A:3231:A:H8	1.75	0.49
48:C:61:LEU:HB2	48:C:90:VAL:HG11	1.93	0.49
48:C:86:GLU:HB2	58:M:40:ILE:HD13	1.93	0.49
55:J:110:GLN:O	55:J:111:THR:C	2.55	0.49
63:R:198:LEU:HA	63:R:201:VAL:CG1	2.36	0.49
63:R:221:TYR:CE2	63:R:222:LEU:HD23	2.47	0.49
64:S:132:ILE:HD12	64:S:132:ILE:N	2.27	0.49
65:T:60:LEU:HD21	74:d:169:TRP:HB2	1.94	0.49
75:e:66:MET:SD	75:e:150:VAL:CB	3.00	0.49
3:AC:169:ASN:CG	7:AG:197:PHE:HE1	2.21	0.49
5:AE:222:LYS:O	5:AE:223:ASN:HB2	2.13	0.49
5:AE:306:ASN:H	5:AE:306:ASN:HD22	1.59	0.49
7:AG:77:THR:HG21	8:AH:179:LYS:CD	2.43	0.49
7:AG:111:GLN:O	16:g:201:ILE:HD12	2.12	0.49
7:AG:189:VAL:O	7:AG:190:ALA:C	2.54	0.49
9:AI:372:HIS:NE2	12:AL:1279:A:C2'	2.67	0.49
12:AL:73:A:N6	12:AL:100:A:C2	2.78	0.49
12:AL:666:U:C2	12:AL:667:A:C8	2.99	0.49
12:AL:802:A:H4'	21:l:97:VAL:HG12	1.94	0.49
12:AL:804:U:OP1	21:l:3:TYR:CE1	2.65	0.49
12:AL:990:G:O2'	12:AL:1597:G:N2	2.45	0.49
12:AL:1054:U:H2'	12:AL:1055:U:C6	2.47	0.49
12:AL:1632:A:H1'	33:x:58:PHE:CE1	2.48	0.49
20:k:25:TYR:CZ	25:p:21:PRO:CG	2.95	0.49
20:k:303:VAL:O	20:k:303:VAL:HG12	2.11	0.49
22:m:237:ALA:O	22:m:238:ILE:C	2.55	0.49
25:p:44:ASP:HB2	25:p:110:LEU:HD11	1.94	0.49
26:q:97:ASP:OD2	26:q:99:ASN:HB2	2.11	0.49
29:t:70:ARG:O	29:t:71:SER:C	2.55	0.49
30:u:59:ALA:O	30:u:60:SER:C	2.55	0.49
33:x:129:ILE:HG23	33:x:138:MET:HE2	1.94	0.49
46:A:290:G:O5'	55:J:115:LYS:CE	2.56	0.49
46:A:499:G:H1'	49:D:147:VAL:HG22	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:766:U:H2'	46:A:767:A:O4'	2.12	0.49
46:A:880:G:C6	46:A:881:C:C4	2.99	0.49
46:A:2237:A:H3'	46:A:2238:U:C6	2.46	0.49
46:A:2353:U:C2	46:A:2354:A:C8	3.00	0.49
46:A:2420:U:C4	46:A:2421:U:C4	2.99	0.49
46:A:2429:G:C6	67:V:32:ILE:HB	2.47	0.49
46:A:2455:A:H2'	46:A:2456:A:C8	2.47	0.49
46:A:2610:A:OP1	72:b:137:LYS:NZ	2.26	0.49
46:A:2792:G:C6	46:A:2793:G:C5	2.99	0.49
46:A:3113:U:O2'	46:A:3114:A:H5'	2.12	0.49
61:P:92:ILE:HB	61:P:108:ILE:HB	1.92	0.49
2:AB:41:VAL:HG23	2:AB:63:TRP:CE3	2.40	0.49
2:AB:44:PHE:HA	2:AB:47:LYS:HB3	1.94	0.49
2:AB:124:TRP:O	2:AB:127:GLU:HG2	2.13	0.49
5:AE:279:LEU:HD21	5:AE:314:PRO:HG2	1.93	0.49
8:AH:229:GLU:HG2	8:AH:229:GLU:O	2.11	0.49
9:AI:127:ARG:NH2	9:AI:393:LYS:O	2.45	0.49
9:AI:236:ASN:OD1	9:AI:237:PRO:HD2	2.12	0.49
12:AL:413:G:H2'	12:AL:501:U:C4	2.46	0.49
12:AL:605:U:H5"	12:AL:606:U:OP1	2.12	0.49
12:AL:637:A:C6	27:r:117:ASP:CG	2.88	0.49
12:AL:1298:U:O2'	12:AL:1299:A:H3'	2.13	0.49
12:AL:1331:C:H2'	12:AL:1332:A:H8	1.77	0.49
12:AL:1635:U:O4	16:g:82:GLY:C	2.55	0.49
13:AM:10:G:H2'	13:AM:10:G:N3	2.27	0.49
15:Z:37:LEU:O	15:Z:41:TRP:N	2.45	0.49
15:Z:42:SER:OG	22:m:241:ARG:NH2	2.46	0.49
17:h:133:ILE:O	17:h:135:SER:N	2.44	0.49
18:i:343:SER:O	18:i:345:THR:HG23	2.12	0.49
18:i:384:ASN:CG	18:i:385:LYS:H	2.19	0.49
19:j:150:PHE:N	19:j:450:ALA:O	2.42	0.49
20:k:144:LEU:HB3	20:k:172:VAL:HG22	1.94	0.49
21:l:83:ARG:NH1	47:B:80:ILE:CD1	2.74	0.49
24:o:67:LYS:HZ2	24:o:67:LYS:H	1.59	0.49
26:q:184:VAL:HG13	35:z:113:PRO:CG	2.43	0.49
27:r:103:GLN:O	27:r:104:GLU:C	2.55	0.49
30:u:103:ALA:HB3	32:w:165:LEU:HD22	1.88	0.49
30:u:187:ASN:O	30:u:188:MET:C	2.52	0.49
31:v:91:ARG:HB3	31:v:98:ASP:HA	1.94	0.49
35:z:132:ASP:O	35:z:133:LYS:C	2.54	0.49
38:2:142:HIS:CE1	67:V:84:ARG:HE	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:9:221:LEU:HA	45:9:230:VAL:HG23	1.94	0.49
46:A:376:A:H2'	46:A:377:U:H6	1.77	0.49
46:A:437:A:C6	46:A:438:U:C4	3.00	0.49
46:A:677:C:H2'	46:A:678:A:H8	1.78	0.49
46:A:820:U:O2	46:A:821:U:N3	2.46	0.49
46:A:1060:U:C2	46:A:1061:U:C6	3.00	0.49
46:A:1111:U:H2'	46:A:1112:A:C8	2.47	0.49
46:A:1682:U:OP1	46:A:1879:U:O2'	2.30	0.49
46:A:1714:G:C2	46:A:1719:G:C6	3.01	0.49
46:A:1915:A:C2	68:W:73:VAL:HG22	2.48	0.49
46:A:1993:U:H2'	46:A:1994:C:C5	2.47	0.49
46:A:2016:A:H5"	46:A:2017:G:C2	2.47	0.49
46:A:2018:C:C5	46:A:2019:A:H3'	2.47	0.49
46:A:2062:G:H4'	46:A:2062:G:OP1	2.12	0.49
46:A:2618:A:H5"	46:A:2618:A:H8	1.77	0.49
46:A:2842:U:H5'	48:C:208:ASN:CB	2.36	0.49
46:A:3232:U:C4	46:A:3233:A:N7	2.81	0.49
47:B:94:LYS:O	47:B:95:ARG:HB2	2.13	0.49
47:B:178:SER:OG	47:B:179:HIS:N	2.45	0.49
51:F:116:GLU:OE1	75:e:207:LEU:HD11	2.11	0.49
76:f:10:VAL:HB	76:f:60:ILE:HB	1.94	0.49
76:f:11:LYS:HD2	76:f:12:LEU:N	2.27	0.49
5:AE:194:HIS:HE1	5:AE:315:TYR:OH	1.94	0.49
5:AE:322:LEU:O	5:AE:323:GLY:C	2.54	0.49
6:AF:103:THR:O	6:AF:104:LYS:C	2.55	0.49
7:AG:114:TRP:NE1	16:g:87:ARG:HG3	2.24	0.49
8:AH:79:VAL:HG12	12:AL:143:A:H1'	1.93	0.49
8:AH:162:GLN:NE2	23:n:60:PHE:CD1	2.68	0.49
9:AI:210:ARG:HE	12:AL:1348:U:C4	1.70	0.49
11:AK:157:LEU:HD22	11:AK:161:GLU:HG3	1.94	0.49
12:AL:488:A:HO2'	12:AL:489:A:P	2.35	0.49
12:AL:539:C:C2'	12:AL:540:A:H8	2.26	0.49
12:AL:690:G:H5"	30:u:210:GLN:HB3	1.94	0.49
12:AL:1043:A:H1'	12:AL:1388:U:O4	2.12	0.49
12:AL:1258:U:C6	34:y:83:PHE:CD2	3.00	0.49
12:AL:1627:U:C5	15:Z:13:LEU:HD22	2.48	0.49
12:AL:1645:U:C4	17:h:175:PHE:HE1	1.88	0.49
19:j:386:ILE:HG22	19:j:387:LYS:H	1.76	0.49
22:m:194:ASN:C	22:m:196:ILE:N	2.70	0.49
27:r:142:ARG:HB3	27:r:147:ALA:HB3	1.93	0.49
30:u:95:ILE:O	30:u:98:VAL:HB	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:u:156:ALA:O	30:u:159:LEU:N	2.45	0.49
30:u:238:ASP:OD1	30:u:242:THR:CG2	2.59	0.49
33:x:111:HIS:O	33:x:113:ASP:N	2.45	0.49
37:1:73:ILE:HD11	42:6:47:LYS:O	2.13	0.49
40:4:63:VAL:HB	44:8:226:VAL:HG22	1.94	0.49
41:5:167:VAL:HG13	41:5:288:MET:HE1	1.95	0.49
46:A:168:A:C6	46:A:169:A:C6	3.00	0.49
46:A:228:U:O2'	46:A:229:G:H5'	2.12	0.49
46:A:698:U:H2'	46:A:699:G:C8	2.48	0.49
46:A:848:U:H4'	63:R:52:TYR:CD1	2.47	0.49
46:A:1324:U:C2	46:A:1325:U:C5	3.01	0.49
46:A:1386:A:H2'	46:A:1386:A:N3	2.27	0.49
46:A:1577:U:H5'	46:A:1578:A:OP2	2.12	0.49
46:A:1678:C:H2'	46:A:1679:A:H8	1.77	0.49
46:A:1692:A:OP2	46:A:1882:U:H5'	2.11	0.49
46:A:1851:U:C2	46:A:1854:U:C5	3.00	0.49
46:A:1898:C:C2	46:A:1899:C:C5	3.01	0.49
46:A:1930:A:H4'	46:A:1931:A:C8	2.48	0.49
46:A:2012:A:C5	46:A:2023:U:OP1	2.55	0.49
46:A:2019:A:N6	46:A:2061:U:H3	2.09	0.49
46:A:2071:A:C2'	46:A:2072:U:H5'	2.42	0.49
46:A:2187:A:C2	46:A:2202:U:C4	3.00	0.49
46:A:2357:U:H3	46:A:2363:A:H61	1.59	0.49
46:A:2588:A:H3'	46:A:2589:A:C8	2.37	0.49
46:A:2619:A:H2'	46:A:2620:C:O4'	2.12	0.49
46:A:2754:A:C5	46:A:2755:U:C4	3.00	0.49
46:A:2957:A:N6	46:A:3055:U:O2'	2.45	0.49
46:A:2984:A:N3	46:A:2984:A:H2'	2.28	0.49
46:A:3254:U:H5	57:L:163:ASN:HD22	1.60	0.49
47:B:179:HIS:HD2	47:B:309:SER:HB2	1.76	0.49
63:R:194:ALA:O	63:R:198:LEU:HD22	2.12	0.49
75:e:87:ILE:HB	75:e:140:ILE:HD12	1.95	0.49
75:e:168:GLY:HA3	75:e:178:VAL:HG13	1.93	0.49
2:AB:48:ILE:HG21	2:AB:90:GLN:HG3	1.93	0.49
3:AC:208:THR:OG1	3:AC:213:LYS:HA	2.13	0.49
4:AD:119:THR:HA	4:AD:122:PHE:HB3	1.93	0.49
5:AE:88:LEU:HD13	5:AE:88:LEU:C	2.38	0.49
5:AE:179:PHE:O	5:AE:219:LEU:HD21	2.13	0.49
5:AE:227:LEU:CB	5:AE:231:LEU:HB2	2.42	0.49
6:AF:58:MET:CE	19:j:30:LYS:CB	2.90	0.49
6:AF:60:GLN:C	6:AF:62:LEU:N	2.70	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:124:GLU:CB	16:g:11:ARG:HD2	2.27	0.49
8:AH:168:ARG:N	23:n:65:PRO:HG2	2.28	0.49
9:AI:181:GLU:C	9:AI:183:PHE:N	2.70	0.49
9:AI:287:ILE:O	9:AI:340:SER:N	2.43	0.49
10:AJ:27:GLY:O	12:AL:1300:U:C5	2.66	0.49
11:AK:152:ARG:HH21	20:k:70:ASP:CG	2.19	0.49
11:AK:292:TYR:CG	24:o:180:GLY:HA3	2.48	0.49
12:AL:487:A:C3'	12:AL:488:A:H8	2.24	0.49
12:AL:613:G:H2'	12:AL:614:U:C6	2.47	0.49
12:AL:753:A:C3'	26:q:129:GLY:CA	2.57	0.49
12:AL:1156:A:H2'	12:AL:1157:A:O4'	2.12	0.49
12:AL:1170:U:O2	25:p:78:PRO:HD3	2.11	0.49
12:AL:1415:G:H8	12:AL:1415:G:H5"	1.77	0.49
12:AL:1628:A:C5	15:Z:18:VAL:HG13	2.46	0.49
16:g:78:GLU:OE2	35:z:174:ARG:NH1	2.33	0.49
18:i:102:LYS:O	18:i:105:GLU:N	2.46	0.49
21:l:83:ARG:CZ	47:B:80:ILE:HD13	2.38	0.49
21:l:124:VAL:O	21:l:128:TYR:N	2.43	0.49
22:m:211:ARG:HA	22:m:214:GLU:HG2	1.94	0.49
26:q:184:VAL:HG13	35:z:113:PRO:HG2	1.93	0.49
27:r:82:ARG:NH1	27:r:92:SER:OG	2.46	0.49
27:r:142:ARG:O	27:r:146:GLY:N	2.45	0.49
28:s:111:ALA:O	28:s:115:ASN:HB2	2.13	0.49
46:A:46:A:C8	46:A:2894:A:C8	3.00	0.49
46:A:905:A:H5"	46:A:951:A:C6	2.48	0.49
46:A:1015:A:C3'	76:f:117:LEU:CD2	2.90	0.49
46:A:1016:C:OP2	76:f:117:LEU:CD1	2.60	0.49
46:A:1172:C:H2'	46:A:1173:U:C6	2.48	0.49
46:A:1579:A:C6	46:A:1580:G:C4	3.01	0.49
46:A:1733:U:H2'	46:A:1734:G:C8	2.47	0.49
46:A:1885:A:H2'	46:A:1886:A:H8	1.78	0.49
46:A:1906:C:C2	46:A:1907:U:C5	3.00	0.49
46:A:2033:U:H2'	46:A:2056:A:OP2	2.13	0.49
46:A:2098:U:H2'	46:A:2099:A:C8	2.47	0.49
46:A:2188:A:N1	46:A:2200:C:N3	2.60	0.49
46:A:2333:A:H2'	63:R:328:VAL:CG1	2.43	0.49
46:A:2822:U:OP2	46:A:2823:C:H5	1.94	0.49
46:A:3290:A:H8	46:A:3290:A:P	2.35	0.49
47:B:86:LEU:O	47:B:87:SER:C	2.55	0.49
73:c:101:THR:HG21	73:c:116:VAL:HG21	1.95	0.49
76:f:62:ILE:HA	76:f:68:PHE:HB2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:81:MET:HG2	1:AA:85:LYS:HE3	1.95	0.49
1:AA:96:ARG:HG3	1:AA:99:ARG:NH2	2.28	0.49
5:AE:181:ILE:HG12	5:AE:185:PHE:CD2	2.48	0.49
7:AG:105:ARG:HD3	16:g:13:ALA:O	2.13	0.49
7:AG:235:THR:O	7:AG:236:SER:C	2.55	0.49
9:AI:206:LYS:NZ	12:AL:1346:U:H6	2.00	0.49
9:AI:449:HIS:HB3	22:m:150:ILE:HD11	1.94	0.49
11:AK:152:ARG:NH1	20:k:69:TRP:HB3	2.28	0.49
12:AL:315:G:C2	12:AL:316:A:C5	3.00	0.49
12:AL:501:U:O3’	19:j:9:LYS:HE3	2.12	0.49
12:AL:502:A:C5’	19:j:7:LEU:HD22	2.42	0.49
12:AL:511:A:N6	12:AL:608:U:O2’	2.45	0.49
12:AL:525:A:O2’	12:AL:526:U:H5’	2.12	0.49
12:AL:613:G:O2’	12:AL:614:U:H5’	2.11	0.49
12:AL:655:A:O2’	12:AL:656:G:H5’	2.11	0.49
12:AL:763:A:H8	12:AL:763:A:P	2.36	0.49
12:AL:879:A:H4’	12:AL:1603:G:H5’	1.95	0.49
12:AL:1001:U:N3	12:AL:1448:U:O4	2.42	0.49
12:AL:1045:C:O2	29:t:73:GLN:CB	2.60	0.49
12:AL:1097:G:N7	12:AL:1242:C:N4	2.61	0.49
12:AL:1216:A:C4	24:o:256:TYR:CD2	3.00	0.49
12:AL:1282:A:N3	12:AL:1282:A:H2’	2.27	0.49
12:AL:1586:G:H2’	12:AL:1586:G:N3	2.28	0.49
15:Z:41:TRP:HH2	22:m:163:LEU:HD12	1.77	0.49
19:j:471:VAL:N	19:j:472:PRO:HD2	2.28	0.49
22:m:228:GLU:O	22:m:229:LYS:C	2.51	0.49
26:q:167:VAL:HB	26:q:198:ILE:HG13	1.93	0.49
28:s:52:GLU:HA	28:s:55:ILE:HD12	1.94	0.49
30:u:82:GLU:CG	32:w:107:PHE:CD1	2.90	0.49
30:u:223:ASN:O	30:u:224:PRO:C	2.55	0.49
31:v:34:ALA:O	31:v:35:LYS:C	2.54	0.49
31:v:90:LEU:HD12	31:v:95:ILE:HD12	1.93	0.49
33:x:93:TYR:HB3	33:x:131:ARG:HD2	1.93	0.49
34:y:21:LEU:HG	34:y:22:PRO:HD2	1.94	0.49
38:2:42:VAL:HG21	50:E:154:LEU:CG	2.42	0.49
39:3:32:GLY:HA3	46:A:1342:U:O2	2.13	0.49
40:4:33:TRP:HH2	46:A:1274:A:C8	2.26	0.49
46:A:163:A:H2’	46:A:214:A:N1	2.27	0.49
46:A:670:U:C2	46:A:671:G:C8	3.01	0.49
46:A:1015:A:P	76:f:118:LYS:HZ3	2.34	0.49
46:A:1770:U:H3’	46:A:1771:A:H8	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1890:C:H2'	46:A:1891:U:C6	2.47	0.49
46:A:2314:U:C5	69:X:34:VAL:HG23	2.47	0.49
46:A:2316:A:H5'	69:X:63:LEU:HD21	1.95	0.49
46:A:2768:G:H5"	46:A:2768:G:C4	2.47	0.49
46:A:2810:G:H2'	46:A:2811:G:H8	1.78	0.49
46:A:2837:U:C4	46:A:2838:U:C4	3.00	0.49
46:A:3032:U:H2'	46:A:3033:A:C8	2.48	0.49
69:X:51:GLU:OE1	69:X:55:ARG:HD3	2.12	0.49
3:AC:151:GLY:HA2	3:AC:170:ASN:O	2.12	0.49
3:AC:264:ILE:HG13	17:h:132:LEU:CD2	2.42	0.49
4:AD:14:SER:C	4:AD:16:ARG:H	2.21	0.49
6:AF:201:VAL:HA	6:AF:205:LEU:HD12	1.94	0.49
6:AF:330:LYS:HA	12:AL:404:U:O3'	2.12	0.49
7:AG:22:LEU:O	20:k:135:VAL:CA	2.51	0.49
7:AG:203:VAL:HA	7:AG:207:GLU:CD	2.37	0.49
9:AI:227:SER:H	9:AI:278:GLU:CD	2.20	0.49
9:AI:247:THR:O	9:AI:248:LEU:HD23	2.12	0.49
9:AI:299:THR:HB	9:AI:350:ARG:NH1	2.27	0.49
9:AI:355:LEU:HB3	9:AI:356:PRO:CD	2.42	0.49
12:AL:785:A:C4'	33:x:108:ARG:HG3	2.34	0.49
12:AL:818:A:OP1	30:u:218:TYR:OH	2.27	0.49
12:AL:827:G:C2'	12:AL:828:A:O5'	2.61	0.49
12:AL:1429:A:C5	29:t:72:THR:CG2	2.96	0.49
12:AL:1442:G:OP1	22:m:127:LYS:HB2	2.13	0.49
12:AL:1640:U:H3'	12:AL:1641:A:C8	2.47	0.49
15:Z:66:ALA:CB	22:m:184:ASN:HB3	2.02	0.49
15:Z:86:TYR:C	15:Z:88:ARG:N	2.71	0.49
18:i:124:THR:OG1	18:i:133:ASN:O	2.26	0.49
19:j:20:PHE:CD1	19:j:434:PHE:HB2	2.47	0.49
19:j:129:ASN:HB3	19:j:153:LYS:HB2	1.93	0.49
25:p:34:LEU:HB2	25:p:72:PRO:HA	1.94	0.49
29:t:112:LYS:HD3	29:t:114:ILE:HG12	1.95	0.49
32:w:175:ASN:O	32:w:179:GLN:HG3	2.13	0.49
32:w:181:SER:OG	32:w:185:ARG:NH2	2.46	0.49
33:x:65:ILE:HB	33:x:69:ARG:HH21	1.78	0.49
33:x:90:LEU:HA	33:x:128:ALA:HB2	1.94	0.49
38:2:45:GLN:CD	50:E:158:THR:HG22	2.37	0.49
46:A:76:A:C6	46:A:77:U:C4	3.01	0.49
46:A:136:A:H2'	46:A:137:A:H8	1.75	0.49
46:A:433:A:C2	46:A:457:G:C6	3.01	0.49
46:A:723:U:H5'	55:J:96:GLN:OE1	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1024:A:O2'	46:A:1026:U:C4	2.64	0.49
46:A:1111:U:O5'	46:A:1112:A:H5"	2.12	0.49
46:A:1237:U:HO2'	55:J:59:SER:HG	1.58	0.49
46:A:1241:A:H1'	46:A:1270:U:O4	2.13	0.49
46:A:1542:U:C2	46:A:1543:A:C8	3.00	0.49
46:A:1660:A:H2'	46:A:1661:A:H8	1.78	0.49
46:A:1907:U:C2	46:A:1908:A:C8	3.01	0.49
46:A:1953:G:OP1	46:A:2771:G:N1	2.46	0.49
46:A:2070:U:C2	46:A:2071:A:H1'	2.48	0.49
46:A:2421:U:H2'	46:A:2422:A:C8	2.47	0.49
46:A:2604:U:O5'	46:A:2604:U:H6	1.96	0.49
46:A:2737:A:H3'	46:A:2738:G:C8	2.42	0.49
46:A:2872:A:C2	46:A:2873:U:C4	3.01	0.49
46:A:2950:A:H1'	48:C:79:ARG:NH2	2.27	0.49
60:O:198:PHE:O	68:W:112:ARG:NH2	2.37	0.49
63:R:82:ASP:O	63:R:83:HIS:HB2	2.13	0.49
3:AC:185:LEU:CD1	7:AG:195:GLU:C	2.85	0.49
3:AC:204:ILE:HG23	3:AC:214:VAL:HG23	1.94	0.49
5:AE:151:PHE:O	5:AE:153:ILE:N	2.40	0.49
5:AE:211:LEU:HD13	5:AE:235:LEU:CD2	2.43	0.49
5:AE:267:LEU:HD22	5:AE:267:LEU:H	1.75	0.49
6:AF:172:SER:O	6:AF:176:GLY:N	2.46	0.49
7:AG:77:THR:HG21	8:AH:179:LYS:HD2	1.94	0.49
8:AH:83:GLN:N	12:AL:145:A:OP1	2.41	0.49
9:AI:447:LEU:CD2	22:m:139:TYR:CD2	2.96	0.49
12:AL:106:U:O2'	12:AL:107:G:H5'	2.13	0.49
12:AL:303:G:C2	12:AL:307:G:C6	3.01	0.49
12:AL:508:C:H2'	12:AL:509:A:C8	2.48	0.49
12:AL:525:A:H2'	12:AL:526:U:O4'	2.12	0.49
12:AL:606:U:H2'	12:AL:607:U:H6	1.78	0.49
12:AL:758:G:C8	14:AN:13:U:H3'	2.48	0.49
12:AL:860:C:O3'	26:q:216:ARG:HB2	2.13	0.49
12:AL:1181:A:O2'	25:p:80:PRO:N	2.45	0.49
12:AL:1638:A:H2'	12:AL:1638:A:N3	2.25	0.49
18:i:166:ASN:ND2	18:i:168:ASN:H	2.11	0.49
18:i:218:ASP:HA	18:i:378:TYR:HB3	1.94	0.49
18:i:237:LEU:O	18:i:238:THR:C	2.55	0.49
21:l:2:LEU:HD22	21:l:101:LEU:HD21	1.95	0.49
21:l:88:ASP:OD1	21:l:90:ARG:HB2	2.12	0.49
26:q:149:GLY:O	26:q:153:GLU:HG3	2.13	0.49
33:x:92:PHE:N	33:x:92:PHE:CD1	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:86:U:C2	46:A:87:U:C5	3.01	0.49
46:A:133:A:H4'	62:Q:168:VAL:HG11	1.95	0.49
46:A:808:A:C5	46:A:809:C:H1'	2.48	0.49
46:A:1020:U:H3'	75:e:134:LYS:HB2	1.94	0.49
46:A:1027:G:N2	46:A:1029:A:H1'	2.28	0.49
46:A:1126:A:H4'	46:A:1127:A:O5'	2.13	0.49
46:A:1439:A:H4'	46:A:1482:A:N1	2.27	0.49
46:A:1830:G:N2	46:A:1868:G:H2'	2.28	0.49
46:A:1839:U:O4'	46:A:2858:C:O2'	2.30	0.49
46:A:1866:A:H1'	46:A:2860:A:H5'	1.94	0.49
46:A:1903:A:H8	46:A:1903:A:O5'	1.95	0.49
46:A:1919:A:H2	46:A:1935:G:H22	1.56	0.49
46:A:2265:G:C6	46:A:2266:U:C2	3.00	0.49
46:A:2622:C:O4'	63:R:62:ILE:HD12	2.13	0.49
46:A:2716:A:O2'	46:A:2717:A:H5"	2.13	0.49
46:A:2842:U:C5'	48:C:208:ASN:CB	2.91	0.49
46:A:3002:U:H2'	46:A:3003:U:C6	2.48	0.49
50:E:251:ALA:CB	67:V:63:TYR:CE1	2.95	0.49
61:P:92:ILE:HG23	65:T:122:ARG:HA	1.95	0.49
74:d:165:TRP:CH2	74:d:171:MET:HE1	2.48	0.49
75:e:101:LEU:H	75:e:101:LEU:HD13	1.78	0.49
76:f:34:ILE:HG12	76:f:35:LYS:N	2.27	0.49
2:AB:59:PHE:CE1	2:AB:66:LEU:HB2	2.48	0.49
2:AB:109:SER:O	2:AB:111:PHE:N	2.46	0.49
4:AD:100:CYS:SG	4:AD:102:ARG:HB2	2.53	0.49
4:AD:260:PHE:CA	16:g:223:GLN:HE21	2.26	0.49
5:AE:62:LYS:HB2	5:AE:63:PRO:CD	2.40	0.49
5:AE:278:TYR:HE2	5:AE:313:ASP:CG	2.21	0.49
6:AF:129:PHE:O	6:AF:132:ARG:HB3	2.12	0.49
6:AF:207:THR:O	6:AF:208:MET:C	2.55	0.49
9:AI:373:TYR:HE1	9:AI:378:VAL:HG21	1.78	0.49
10:AJ:39:LEU:HA	12:AL:1292:A:C6	2.47	0.49
11:AK:133:MET:HE3	18:i:212:TYR:OH	2.13	0.49
12:AL:1046:U:O3'	29:t:77:ARG:CZ	2.53	0.49
12:AL:1052:U:H1'	12:AL:1250:A:N1	2.28	0.49
12:AL:1109:U:H2'	12:AL:1110:C:C6	2.48	0.49
12:AL:1617:G:OP2	35:z:141:LYS:HG2	2.13	0.49
12:AL:1628:A:O4'	35:z:162:PHE:HE2	1.95	0.49
15:Z:9:ARG:NH1	16:g:71:LEU:HD12	2.06	0.49
16:g:51:LYS:NZ	17:h:364:ASP:CG	2.66	0.49
16:g:283:ALA:HB1	16:g:291:VAL:HG13	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:k:14:GLN:O	20:k:15:HIS:C	2.55	0.49
21:l:6:ILE:HD12	33:x:94:ALA:HB2	1.86	0.49
22:m:98:TRP:O	22:m:102:LYS:HB2	2.13	0.49
24:o:159:LYS:H	24:o:229:HIS:HD2	1.60	0.49
32:w:102:GLN:O	32:w:105:LYS:HB2	2.13	0.49
38:2:47:SER:HB2	46:A:2425:A:H5'	1.95	0.49
46:A:12:A:C2	46:A:13:A:C5	3.00	0.49
46:A:99:U:H5'	49:D:136:PRO:HG3	1.93	0.49
46:A:242:U:H4'	46:A:327:A:C6	2.48	0.49
46:A:425:A:H62	46:A:1943:C:C5'	2.23	0.49
46:A:523:U:H5	55:J:246:ARG:NH1	2.10	0.49
46:A:670:U:H2'	46:A:671:G:H8	1.76	0.49
46:A:932:C:O2'	46:A:933:C:H5'	2.13	0.49
46:A:1144:U:C4	46:A:1145:U:C4	3.00	0.49
46:A:1537:A:H8	46:A:1537:A:O5'	1.96	0.49
46:A:1720:U:O2'	47:B:135:ASN:ND2	2.45	0.49
46:A:1732:G:H2'	46:A:1733:U:C6	2.48	0.49
46:A:1735:U:OP1	46:A:1871:U:H4'	2.13	0.49
46:A:1980:G:H2'	46:A:1981:U:O4'	2.13	0.49
46:A:2038:U:H3'	46:A:2039:U:H5"	1.94	0.49
46:A:2078:U:C2'	46:A:2079:A:C8	2.89	0.49
46:A:2239:A:H2'	46:A:2240:U:C6	2.48	0.49
46:A:2800:A:H2'	46:A:2801:A:O4'	2.13	0.49
46:A:2916:U:H2'	46:A:2917:U:H6	1.78	0.49
46:A:3014:C:H3'	46:A:3015:U:C6	2.44	0.49
46:A:3014:C:N3	46:A:3033:A:C6	2.81	0.49
46:A:3044:A:H2'	46:A:3045:U:C6	2.47	0.49
46:A:3089:A:H2'	46:A:3090:U:H6	1.78	0.49
54:I:136:ARG:HD2	58:M:114:ILE:HD13	1.93	0.49
63:R:293:GLU:OE1	63:R:365:ARG:NH1	2.45	0.49
75:e:103:GLU:CB	75:e:130:LEU:HB3	2.42	0.49
76:f:68:PHE:CE2	76:f:70:PHE:HB3	2.47	0.49
2:AB:85:LYS:O	2:AB:88:LEU:HG	2.13	0.48
3:AC:54:ALA:CB	7:AG:143:PRO:CB	2.90	0.48
5:AE:149:SER:HB2	5:AE:155:LYS:O	2.13	0.48
5:AE:154:GLY:HA2	5:AE:325:LEU:HD13	1.94	0.48
5:AE:259:PRO:HB2	5:AE:262:SER:OG	2.13	0.48
6:AF:193:ASN:O	6:AF:197:ARG:HG2	2.13	0.48
7:AG:96:LYS:HE3	12:AL:916:A:P	2.52	0.48
7:AG:184:GLU:HB3	16:g:208:TYR:O	2.13	0.48
9:AI:131:THR:HG22	9:AI:162:GLN:HE22	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:295:SER:O	9:AI:298:LEU:N	2.41	0.48
9:AI:365:ASP:O	9:AI:368:VAL:HG23	2.13	0.48
9:AI:430:TYR:HE2	24:o:174:GLY:O	1.95	0.48
10:AJ:32:SER:OG	12:AL:1313:U:C4'	2.61	0.48
11:AK:218:LYS:NZ	11:AK:264:ASP:O	2.46	0.48
12:AL:275:A:H2'	12:AL:276:C:C6	2.48	0.48
12:AL:419:U:C2	12:AL:420:A:C8	3.01	0.48
12:AL:486:U:H5'	12:AL:487:A:OP2	2.13	0.48
12:AL:612:A:C2	12:AL:661:A:C4	3.01	0.48
12:AL:690:G:H8	12:AL:823:G:O6	1.85	0.48
12:AL:835:C:C2	12:AL:836:U:C5	3.00	0.48
12:AL:898:U:H2'	12:AL:898:U:O2	2.12	0.48
12:AL:1069:U:H2'	12:AL:1070:A:C8	2.48	0.48
12:AL:1320:A:N7	25:p:79:LEU:HD23	2.26	0.48
12:AL:1332:A:O2'	12:AL:1333:U:OP1	2.24	0.48
13:AM:33:U:H1'	13:AM:35:A:OP1	2.13	0.48
15:Z:46:HIS:NE2	22:m:231:ASP:O	2.46	0.48
17:h:203:ARG:C	17:h:205:SER:N	2.71	0.48
20:k:201:ALA:O	20:k:204:ASN:N	2.46	0.48
21:l:108:ALA:O	21:l:113:ARG:NH1	2.40	0.48
25:p:57:PHE:O	25:p:58:TYR:C	2.55	0.48
25:p:96:ALA:C	25:p:98:SER:N	2.69	0.48
26:q:104:LYS:HD3	26:q:104:LYS:H	1.78	0.48
28:s:2:VAL:HA	28:s:55:ILE:HD11	1.94	0.48
30:u:105:ILE:CG2	30:u:109:LYS:HE2	2.43	0.48
32:w:160:THR:HB	32:w:164:LEU:HB2	1.94	0.48
46:A:263:A:C6	46:A:359:A:C8	3.02	0.48
46:A:451:A:H2'	46:A:452:U:H6	1.77	0.48
46:A:494:U:H2'	46:A:495:A:H8	1.77	0.48
46:A:539:U:H2'	46:A:540:A:O4'	2.13	0.48
46:A:665:A:H5"	46:A:669:G:H4'	1.95	0.48
46:A:669:G:H2'	46:A:670:U:H6	1.77	0.48
46:A:876:A:H2'	46:A:877:U:C6	2.48	0.48
46:A:937:U:O2'	46:A:938:A:H8	1.96	0.48
46:A:995:C:O5'	46:A:1036:U:H5"	2.12	0.48
46:A:1275:A:O2'	46:A:1276:U:H5'	2.13	0.48
46:A:1608:U:H4'	48:C:201:HIS:CE1	2.48	0.48
46:A:1610:A:OP1	48:C:199:HIS:CD2	2.66	0.48
46:A:2062:G:N3	46:A:2065:A:C8	2.81	0.48
46:A:2083:U:H2'	46:A:2084:G:H8	1.76	0.48
46:A:2200:C:C2	46:A:2201:U:C5	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2271:U:H2'	46:A:2702:G:OP2	2.13	0.48
46:A:2330:A:C2	63:R:321:ARG:CD	2.96	0.48
46:A:2337:A:C6	46:A:2338:A:C6	3.01	0.48
46:A:3173:U:H2'	46:A:3174:U:C6	2.48	0.48
63:R:159:LEU:CD2	72:b:157:PHE:CE1	2.95	0.48
76:f:79:TYR:HA	76:f:82:LEU:HB2	1.94	0.48
3:AC:256:VAL:HA	3:AC:259:ARG:HD2	1.94	0.48
4:AD:117:LEU:H	4:AD:117:LEU:HD12	1.77	0.48
4:AD:118:GLN:NE2	7:AG:175:GLU:HB3	2.29	0.48
7:AG:206:ILE:CG1	16:g:227:VAL:HG13	2.42	0.48
8:AH:103:ARG:HH21	31:v:79:GLY:HA3	1.73	0.48
11:AK:295:PRO:HB3	11:AK:297:HIS:CE1	2.48	0.48
12:AL:109:A:C6	12:AL:333:A:C5	3.02	0.48
12:AL:228:A:H2'	12:AL:229:U:C6	2.48	0.48
12:AL:331:A:H2'	12:AL:331:A:N3	2.27	0.48
12:AL:502:A:OP1	19:j:7:LEU:CB	2.40	0.48
12:AL:924:U:O2'	15:Z:93:PRO:CG	2.61	0.48
12:AL:1148:A:P	17:h:330:ASN:HD21	2.36	0.48
12:AL:1172:A:C5'	25:p:114:TRP:CZ2	2.91	0.48
12:AL:1492:U:C2'	12:AL:1493:A:H5'	2.39	0.48
12:AL:1595:C:H5'	12:AL:1595:C:H6	1.77	0.48
13:AM:17:U:H5'	13:AM:18:G:H4'	1.95	0.48
16:g:11:ARG:HA	16:g:14:GLN:CD	2.38	0.48
17:h:172:LYS:O	17:h:174:ILE:N	2.46	0.48
19:j:20:PHE:HD2	19:j:116:SER:HA	1.77	0.48
19:j:92:PRO:HD2	19:j:459:ARG:O	2.13	0.48
21:l:68:LEU:HD23	21:l:68:LEU:C	2.38	0.48
21:l:85:LEU:O	21:l:86:LYS:C	2.56	0.48
21:l:108:ALA:HB3	21:l:113:ARG:HG2	1.95	0.48
25:p:92:PRO:HA	29:t:96:TYR:CD2	2.49	0.48
30:u:53:LYS:O	30:u:54:GLN:C	2.55	0.48
30:u:64:VAL:HG13	30:u:69:GLY:C	2.38	0.48
32:w:9:LEU:HG	32:w:57:LEU:HG	1.94	0.48
46:A:119:A:H2	65:T:153:ARG:HD3	1.78	0.48
46:A:217:A:C5	64:S:47:HIS:NE2	2.82	0.48
46:A:318:A:C6	46:A:339:A:C8	3.00	0.48
46:A:448:U:H2'	46:A:449:A:C8	2.48	0.48
46:A:465:U:H5"	55:J:87:LYS:HZ2	1.77	0.48
46:A:601:U:OP1	47:B:146:GLY:CA	2.61	0.48
46:A:644:A:H8	46:A:644:A:OP2	1.95	0.48
46:A:752:U:H2'	46:A:753:A:H8	1.76	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1001:C:H41	46:A:1025:A:H1'	1.77	0.48
46:A:1010:A:H1'	46:A:1011:A:OP2	2.13	0.48
46:A:1066:A:H2'	46:A:1067:U:C6	2.47	0.48
46:A:1072:U:H2'	46:A:1073:A:H8	1.78	0.48
46:A:1406:A:H5"	46:A:1406:A:H8	1.77	0.48
46:A:1417:A:N6	46:A:1541:U:H3	2.11	0.48
46:A:2887:U:H2'	46:A:2888:G:O4'	2.13	0.48
46:A:3028:A:H2'	46:A:3029:U:H6	1.77	0.48
46:A:3174:U:H4'	46:A:3236:A:H4'	1.95	0.48
46:A:3271:A:C1'	58:M:17:MET:HG3	2.42	0.48
48:C:59:CYS:SG	48:C:60:GLY:N	2.86	0.48
63:R:76:ASN:HB3	63:R:89:GLU:OE1	2.13	0.48
63:R:154:ALA:O	63:R:157:ASN:N	2.46	0.48
5:AE:78:ASP:OD1	5:AE:78:ASP:N	2.45	0.48
5:AE:206:ILE:C	5:AE:208:GLN:H	2.21	0.48
6:AF:131:ASP:O	6:AF:132:ARG:C	2.56	0.48
7:AG:184:GLU:CG	16:g:209:SER:CB	2.64	0.48
8:AH:101:GLU:CA	8:AH:104:ARG:HG2	2.42	0.48
9:AI:159:LEU:O	9:AI:162:GLN:N	2.46	0.48
10:AJ:41:GLY:H	10:AJ:42:PRO:HD2	1.79	0.48
10:AJ:63:TYR:CE1	18:i:189:ASN:O	2.66	0.48
12:AL:270:G:H5"	12:AL:270:G:N3	2.29	0.48
12:AL:280:G:C6	12:AL:281:C:C4	3.01	0.48
12:AL:850:G:C6	12:AL:863:G:C6	3.02	0.48
12:AL:900:A:H8	12:AL:900:A:OP2	1.96	0.48
12:AL:1014:A:P	28:s:103:HIS:HB2	2.53	0.48
17:h:145:GLU:HA	17:h:148:LEU:HG	1.95	0.48
18:i:93:TRP:CB	29:t:108:PRO:CA	2.74	0.48
18:i:166:ASN:ND2	18:i:168:ASN:N	2.59	0.48
20:k:59:LEU:CD1	25:p:20:TYR:HE1	2.24	0.48
24:o:263:LYS:HB2	24:o:269:ALA:O	2.13	0.48
26:q:135:LYS:O	26:q:136:ALA:C	2.55	0.48
28:s:88:TYR:CE1	28:s:92:ARG:HD3	2.48	0.48
30:u:191:HIS:CE1	30:u:195:HIS:CD2	3.01	0.48
30:u:212:ARG:O	30:u:213:GLN:C	2.56	0.48
31:v:26:ALA:HA	31:v:37:ILE:HG13	1.95	0.48
32:w:46:HIS:CD2	32:w:48:GLU:HB3	2.48	0.48
41:5:188:ASN:O	41:5:192:SER:N	2.46	0.48
46:A:118:A:C5	46:A:145:A:C8	3.01	0.48
46:A:202:A:O2'	46:A:203:U:H5"	2.14	0.48
46:A:262:A:N7	72:b:61:ARG:HD2	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:317:U:C5	46:A:338:G:N2	2.81	0.48
46:A:359:A:H2'	46:A:360:A:C8	2.47	0.48
46:A:389:G:O2'	46:A:390:U:P	2.71	0.48
46:A:450:U:C2	46:A:451:A:C8	3.01	0.48
46:A:510:A:H2'	46:A:511:G:O4'	2.13	0.48
46:A:513:U:H2'	46:A:514:A:H8	1.78	0.48
46:A:620:G:H2'	46:A:620:G:N3	2.28	0.48
46:A:789:A:C8	46:A:840:C:C5	3.01	0.48
46:A:834:A:O2'	46:A:835:A:H8	1.94	0.48
46:A:1318:A:N1	46:A:1600:U:O2'	2.43	0.48
46:A:1323:U:C2	46:A:1324:U:C5	3.01	0.48
46:A:1357:A:H8	46:A:1357:A:P	2.36	0.48
46:A:1362:C:C4	46:A:1363:C:N4	2.81	0.48
46:A:1417:A:H61	46:A:1541:U:H3	1.62	0.48
46:A:1530:U:H3	46:A:1533:G:H1	1.61	0.48
46:A:1584:A:OP1	46:A:1584:A:H8	1.96	0.48
46:A:1659:U:H6	46:A:1659:U:O5'	1.97	0.48
46:A:1749:U:C2	46:A:1750:G:C8	3.01	0.48
46:A:1810:C:O2	46:A:1822:G:C2	2.66	0.48
46:A:1841:C:C4	46:A:1865:C:H1'	2.48	0.48
46:A:1986:A:C2	46:A:1987:G:C5	3.02	0.48
46:A:2007:A:O2'	46:A:2008:U:H5'	2.13	0.48
46:A:2323:A:H3'	46:A:2324:U:C5'	2.43	0.48
46:A:2666:A:C6	46:A:2667:A:C5	3.02	0.48
46:A:2798:A:C4	46:A:2799:A:C8	3.01	0.48
46:A:2860:A:C5	46:A:2861:U:C5	3.00	0.48
46:A:2956:U:H5"	46:A:2957:A:H5'	1.94	0.48
46:A:2973:A:H2'	46:A:2974:U:H6	1.77	0.48
47:B:125:VAL:HG23	47:B:154:LEU:HD21	1.94	0.48
63:R:178:LYS:HB2	63:R:178:LYS:HZ3	1.77	0.48
63:R:212:GLU:OE2	63:R:215:ARG:NH2	2.45	0.48
76:f:18:GLN:H	76:f:47:SER:HB2	1.79	0.48
2:AB:48:ILE:CG2	2:AB:90:GLN:HG3	2.44	0.48
2:AB:75:LYS:C	2:AB:77:LYS:N	2.70	0.48
2:AB:84:ARG:HG3	2:AB:88:LEU:HD21	1.95	0.48
3:AC:28:ILE:HD12	3:AC:28:ILE:H	1.78	0.48
3:AC:217:TRP:HB3	17:h:149:ARG:HH21	1.78	0.48
3:AC:253:TRP:O	3:AC:254:SER:C	2.55	0.48
4:AD:137:ARG:NH2	4:AD:309:LEU:HD23	2.28	0.48
4:AD:202:TYR:O	4:AD:204:ALA:N	2.45	0.48
5:AE:75:LEU:C	5:AE:78:ASP:H	2.21	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:86:GLU:O	5:AE:87:PRO:C	2.56	0.48
5:AE:197:ARG:NH2	5:AE:319:LEU:HD13	2.28	0.48
6:AF:61:PHE:CB	19:j:29:TYR:CZ	2.91	0.48
8:AH:155:THR:CG2	23:n:40:TYR:HE2	2.27	0.48
8:AH:160:MET:HE1	23:n:37:TYR:CZ	2.47	0.48
9:AI:164:HIS:NE2	9:AI:290:THR:HG21	2.29	0.48
9:AI:376:LYS:O	9:AI:377:PHE:C	2.57	0.48
11:AK:50:LEU:HD23	11:AK:68:LEU:HD13	1.94	0.48
11:AK:57:TRP:HZ3	11:AK:86:GLU:HG3	1.77	0.48
11:AK:150:GLU:OE1	25:p:133:MET:HE1	2.12	0.48
11:AK:174:ARG:NH1	11:AK:177:PRO:HD3	2.26	0.48
12:AL:340:C:H2'	12:AL:341:A:O4'	2.12	0.48
12:AL:689:C:N3	12:AL:827:G:C2	2.81	0.48
12:AL:749:A:C5'	26:q:121:LYS:HZ3	2.00	0.48
12:AL:753:A:P	26:q:129:GLY:O	2.71	0.48
12:AL:801:U:H4'	33:x:131:ARG:HA	1.94	0.48
12:AL:1021:U:C3'	34:y:84:SER:OG	2.60	0.48
12:AL:1038:G:H1'	25:p:93:PHE:CE1	2.48	0.48
12:AL:1153:A:H5"	18:i:351:THR:OG1	2.13	0.48
15:Z:62:THR:CA	15:Z:66:ALA:HA	2.42	0.48
16:g:229:GLY:HA3	16:g:247:ILE:HG12	1.95	0.48
18:i:305:ILE:HG22	18:i:306:TYR:CD2	2.49	0.48
27:r:35:LYS:CE	32:w:37:LEU:CD2	2.85	0.48
28:s:85:ILE:HD13	34:y:67:ASP:C	2.33	0.48
30:u:82:GLU:HA	32:w:107:PHE:CE1	2.49	0.48
30:u:88:VAL:O	30:u:89:LEU:HD23	2.14	0.48
32:w:52:SER:OG	32:w:74:ILE:HD13	2.14	0.48
32:w:57:LEU:C	32:w:58:VAL:HG22	2.38	0.48
46:A:126:A:H2'	46:A:127:A:H8	1.73	0.48
46:A:138:U:C2	46:A:139:U:C5	3.01	0.48
46:A:175:U:C2	46:A:176:U:C5	3.02	0.48
46:A:458:A:H2'	46:A:459:U:C6	2.48	0.48
46:A:674:A:N3	46:A:674:A:C2'	2.77	0.48
46:A:864:A:H2'	46:A:865:A:O4'	2.12	0.48
46:A:989:G:N3	46:A:989:G:H2'	2.27	0.48
46:A:1075:A:N1	46:A:1076:U:H1'	2.28	0.48
46:A:1077:A:H2'	46:A:1077:A:N3	2.27	0.48
46:A:1648:U:O2'	46:A:1650:A:N7	2.47	0.48
46:A:2007:A:H2'	46:A:2008:U:O4'	2.14	0.48
46:A:2209:U:H2'	46:A:2210:A:H8	1.76	0.48
46:A:2253:A:H2'	46:A:2254:A:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2885:G:H4'	48:C:213:ARG:HD2	1.95	0.48
46:A:3150:U:OP2	46:A:3150:U:H3'	2.14	0.48
46:A:3176:U:H2'	46:A:3177:A:C8	2.48	0.48
47:B:167:VAL:CG1	47:B:204:ASP:H	2.26	0.48
63:R:112:ARG:HB2	63:R:115:LEU:HD23	1.95	0.48
63:R:313:THR:O	63:R:317:GLU:N	2.36	0.48
75:e:208:GLY:O	75:e:209:LEU:C	2.56	0.48
2:AB:66:LEU:HD23	2:AB:66:LEU:C	2.39	0.48
5:AE:151:PHE:CD2	5:AE:318:HIS:CD2	3.02	0.48
6:AF:296:TYR:N	6:AF:296:TYR:CD1	2.82	0.48
8:AH:4:GLY:HA2	8:AH:7:LYS:HD2	1.95	0.48
11:AK:288:LYS:HZ3	12:AL:1284:A:P	2.37	0.48
12:AL:314:C:C2	12:AL:315:G:C8	3.01	0.48
12:AL:328:C:H2'	12:AL:329:U:O4'	2.13	0.48
12:AL:416:A:C4	12:AL:417:U:C6	3.01	0.48
12:AL:618:G:C6	12:AL:649:A:C2	3.02	0.48
12:AL:703:U:H5'	12:AL:704:A:OP2	2.13	0.48
12:AL:715:U:C4	12:AL:817:G:N3	2.81	0.48
12:AL:785:A:O2'	33:x:109:ILE:C	2.57	0.48
12:AL:794:A:OP1	30:u:203:ARG:NH2	2.46	0.48
12:AL:1043:A:N1	12:AL:1386:A:H5"	2.28	0.48
12:AL:1046:U:C2'	29:t:77:ARG:HH22	2.27	0.48
12:AL:1049:C:H3'	12:AL:1051:A:H8	1.79	0.48
12:AL:1148:A:H4'	12:AL:1149:A:O5'	2.13	0.48
12:AL:1172:A:C8	25:p:36:ILE:HD13	2.42	0.48
12:AL:1628:A:O2'	35:z:163:LYS:CD	2.54	0.48
12:AL:1632:A:N1	35:z:174:ARG:CZ	2.76	0.48
16:g:6:LEU:CD2	17:h:186:GLU:OE1	2.59	0.48
16:g:45:ARG:CD	17:h:170:PRO:CB	2.91	0.48
17:h:144:GLN:NE2	24:o:119:GLN:CB	2.76	0.48
17:h:226:LEU:HD11	17:h:230:LYS:HE2	1.95	0.48
18:i:152:LYS:HB3	18:i:206:GLU:HG3	1.94	0.48
21:l:111:LEU:CD1	33:x:95:ARG:HH11	2.27	0.48
22:m:103:SER:O	22:m:104:VAL:C	2.56	0.48
24:o:176:ILE:HD13	24:o:183:LEU:HG	1.95	0.48
30:u:133:ASP:O	30:u:134:ARG:C	2.53	0.48
30:u:203:ARG:O	30:u:207:ILE:HG13	2.13	0.48
30:u:232:GLN:NE2	32:w:96:VAL:HG11	2.19	0.48
31:v:99:ALA:O	31:v:101:ALA:N	2.47	0.48
31:v:104:LYS:HB3	31:v:104:LYS:NZ	2.28	0.48
32:w:184:ASP:O	32:w:188:THR:HG23	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:w:190:LEU:HD13	32:w:225:ARG:CG	2.44	0.48
32:w:196:ASN:OD1	32:w:199:LYS:HD2	2.13	0.48
34:y:22:PRO:O	34:y:23:ILE:C	2.54	0.48
34:y:38:ARG:HH11	34:y:55:ASN:HA	1.77	0.48
44:8:117:TRP:NE1	49:D:52:LEU:O	2.46	0.48
46:A:9:U:O2'	46:A:10:A:H5'	2.13	0.48
46:A:319:U:C2	46:A:320:U:C6	3.01	0.48
46:A:455:A:H2'	46:A:456:U:O4'	2.14	0.48
46:A:470:U:C4	46:A:1930:A:C6	3.01	0.48
46:A:632:U:H2'	46:A:633:G:C8	2.47	0.48
46:A:900:A:C4	46:A:915:G:C2	3.01	0.48
46:A:980:A:N3	46:A:980:A:H2'	2.28	0.48
46:A:1075:A:H3'	46:A:1076:U:C6	2.49	0.48
46:A:1177:U:O2'	46:A:1178:A:H5'	2.13	0.48
46:A:1210:A:H2'	46:A:1211:U:H6	1.77	0.48
46:A:1306:A:C4	46:A:1598:A:C6	3.01	0.48
46:A:1438:U:H3'	46:A:1439:A:O4'	2.14	0.48
46:A:1785:U:O2	46:A:1785:U:H2'	2.13	0.48
46:A:2070:U:H6	46:A:2070:U:O5'	1.97	0.48
46:A:2097:U:H2'	46:A:2098:U:C6	2.49	0.48
46:A:2332:U:C2	46:A:2333:A:C8	3.02	0.48
46:A:2355:U:H3	46:A:2365:A:H61	1.61	0.48
46:A:2385:U:H2'	46:A:2386:A:C8	2.49	0.48
46:A:2413:A:H2'	46:A:2414:U:C6	2.48	0.48
46:A:2574:G:H4'	50:E:131:TRP:NE1	2.28	0.48
46:A:3108:U:C2	46:A:3109:U:C5	3.02	0.48
55:J:157:MET:HE3	55:J:157:MET:HB2	1.71	0.48
3:AC:162:LYS:O	3:AC:164:PHE:N	2.47	0.48
3:AC:163:LEU:CD2	3:AC:221:ILE:HG13	2.43	0.48
3:AC:188:ALA:HB1	4:AD:73:LYS:HB2	1.92	0.48
3:AC:237:VAL:HG11	4:AD:44:ARG:CD	2.40	0.48
4:AD:162:ALA:CB	7:AG:189:VAL:CG2	2.67	0.48
5:AE:43:ILE:O	5:AE:44:ALA:C	2.55	0.48
5:AE:57:THR:O	5:AE:62:LYS:HE3	2.13	0.48
5:AE:271:LEU:O	5:AE:272:SER:C	2.54	0.48
6:AF:315:GLY:CA	8:AH:15:PHE:HE2	2.13	0.48
6:AF:330:LYS:HB3	12:AL:404:U:H5"	1.94	0.48
7:AG:184:GLU:HG2	16:g:209:SER:N	2.29	0.48
8:AH:14:VAL:CB	12:AL:298:A:C6	2.96	0.48
10:AJ:19:PHE:O	10:AJ:21:GLN:N	2.41	0.48
10:AJ:35:LEU:CD2	29:t:43:PHE:CD2	2.89	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:26:U:OP1	20:k:267:ASN:HB2	2.13	0.48
12:AL:217:U:H2'	12:AL:218:A:C8	2.48	0.48
12:AL:1012:G:C5'	28:s:107:ASN:HD22	2.24	0.48
12:AL:1212:A:OP1	24:o:244:SER:HA	2.12	0.48
13:AM:61:C:H3'	13:AM:61:C:OP2	2.14	0.48
16:g:12:ILE:HD13	17:h:195:LEU:CD2	2.40	0.48
16:g:71:LEU:C	16:g:73:ARG:H	2.21	0.48
17:h:203:ARG:C	17:h:205:SER:H	2.20	0.48
18:i:116:ASN:OD1	18:i:140:THR:HG23	2.12	0.48
18:i:136:ILE:HG21	18:i:219:ILE:HG23	1.94	0.48
18:i:315:PRO:HB2	18:i:316:MET:HE3	1.96	0.48
25:p:102:PHE:CZ	29:t:99:ARG:HG3	2.48	0.48
26:q:148:SER:O	26:q:151:MET:HB3	2.14	0.48
26:q:152:PHE:O	26:q:153:GLU:C	2.55	0.48
28:s:5:ILE:HB	28:s:55:ILE:CG2	2.44	0.48
30:u:78:ARG:O	30:u:79:ILE:C	2.55	0.48
30:u:186:GLN:O	30:u:187:ASN:C	2.51	0.48
31:v:97:ASN:HD22	31:v:99:ALA:HB3	1.78	0.48
32:w:189:ARG:HA	32:w:192:GLU:HG2	1.96	0.48
33:x:135:ILE:O	33:x:136:GLY:C	2.56	0.48
41:5:131:ILE:HD13	61:P:253:ILE:HG23	1.96	0.48
46:A:322:U:H2'	46:A:323:G:C8	2.48	0.48
46:A:692:G:H4'	46:A:693:A:OP2	2.14	0.48
46:A:901:A:H1'	46:A:916:A:C6	2.48	0.48
46:A:1771:A:H3'	46:A:1772:U:H6	1.79	0.48
46:A:1888:A:H2'	46:A:1889:A:C8	2.49	0.48
46:A:1973:C:O2'	46:A:1974:U:H5'	2.13	0.48
46:A:2056:A:H2'	46:A:2056:A:N3	2.28	0.48
46:A:2232:A:H2'	46:A:2233:U:O4'	2.13	0.48
46:A:2599:A:H5'	46:A:2601:A:H1'	1.95	0.48
47:B:208:SER:HA	47:B:240:CYS:HB3	1.95	0.48
63:R:52:TYR:N	63:R:55:GLN:OE1	2.46	0.48
75:e:197:LEU:H	75:e:197:LEU:HD22	1.77	0.48
3:AC:54:ALA:HB1	7:AG:143:PRO:CB	2.42	0.48
4:AD:226:MET:O	4:AD:229:GLN:N	2.47	0.48
4:AD:235:GLY:C	4:AD:237:LEU:H	2.21	0.48
5:AE:127:SER:O	5:AE:134:TRP:NE1	2.46	0.48
6:AF:128:ILE:O	6:AF:129:PHE:C	2.56	0.48
6:AF:137:PHE:CE2	19:j:468:PRO:CB	2.97	0.48
8:AH:32:ILE:HA	8:AH:35:LYS:CB	2.44	0.48
8:AH:79:VAL:CB	8:AH:104:ARG:HB3	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:328:ILE:HG23	9:AI:343:LEU:HD11	1.96	0.48
10:AJ:34:ILE:HG21	29:t:43:PHE:HB2	1.95	0.48
12:AL:301:A:C5	12:AL:302:U:C4	3.01	0.48
12:AL:617:U:C2	12:AL:656:G:C2	3.02	0.48
12:AL:1258:U:H2'	34:y:83:PHE:CD2	2.49	0.48
12:AL:1430:G:H4'	12:AL:1431:U:OP1	2.12	0.48
12:AL:1556:U:H2'	12:AL:1557:A:H8	1.74	0.48
16:g:51:LYS:HG3	17:h:217:ILE:HD13	1.94	0.48
18:i:367:LYS:N	18:i:371:ILE:O	2.45	0.48
20:k:174:ASP:C	20:k:176:ASN:H	2.20	0.48
21:l:119:SER:HB3	21:l:122:GLU:CD	2.39	0.48
22:m:123:ARG:HE	22:m:123:ARG:CA	2.20	0.48
25:p:62:ILE:HA	25:p:128:ILE:HD11	1.95	0.48
26:q:96:GLU:HG2	26:q:97:ASP:N	2.28	0.48
26:q:109:ASN:OD1	26:q:109:ASN:N	2.43	0.48
26:q:131:LEU:HD11	26:q:150:ARG:HB2	1.94	0.48
27:r:35:LYS:NZ	32:w:37:LEU:CD2	2.77	0.48
27:r:136:VAL:C	27:r:138:ARG:H	2.21	0.48
30:u:231:ILE:CG1	30:u:236:LEU:HB2	2.43	0.48
32:w:65:PRO:HA	32:w:71:PHE:CD1	2.49	0.48
33:x:62:MET:O	33:x:63:GLY:C	2.55	0.48
33:x:68:ASP:O	33:x:69:ARG:C	2.57	0.48
34:y:30:GLY:O	34:y:31:THR:C	2.56	0.48
38:2:85:GLU:CG	46:A:2476:C:O2	2.60	0.48
46:A:41:G:OP1	46:A:41:G:H4'	2.14	0.48
46:A:116:C:C2	61:P:89:ALA:HB2	2.49	0.48
46:A:173:U:C4	46:A:174:G:C8	3.01	0.48
46:A:669:G:C5	46:A:670:U:C4	3.01	0.48
46:A:747:U:H2'	46:A:748:U:H6	1.72	0.48
46:A:866:G:H5"	46:A:866:G:C8	2.49	0.48
46:A:1051:A:H3'	46:A:1052:A:O4'	2.13	0.48
46:A:1323:U:N3	46:A:1324:U:C4	2.82	0.48
46:A:1405:U:H2'	46:A:1406:A:N9	2.28	0.48
46:A:1669:A:O2'	46:A:1670:A:H5'	2.14	0.48
46:A:1679:A:H5"	46:A:1680:A:OP2	2.13	0.48
46:A:1720:U:C1'	47:B:135:ASN:ND2	2.76	0.48
46:A:1886:A:H2'	46:A:1887:C:H6	1.78	0.48
46:A:1998:U:C2	46:A:1999:U:C6	3.02	0.48
46:A:2031:C:N4	46:A:2057:U:OP2	2.47	0.48
46:A:2261:A:H2'	46:A:2262:U:O4'	2.13	0.48
46:A:2276:G:H2'	46:A:2276:G:N3	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2335:U:H5'	63:R:331:GLU:CD	2.39	0.48
46:A:2443:C:C2	46:A:2444:A:C8	3.01	0.48
46:A:2758:U:H2'	46:A:2759:U:C6	2.49	0.48
46:A:3238:U:O2	57:L:68:GLU:HG2	2.12	0.48
46:A:3290:A:N7	46:A:3291:U:C4	2.82	0.48
47:B:171:GLU:HB2	47:B:180:ILE:HD11	1.95	0.48
63:R:48:GLY:H	63:R:50:LYS:NZ	2.11	0.48
69:X:13:LEU:CD2	69:X:25:ILE:HG12	2.43	0.48
75:e:168:GLY:HA3	75:e:178:VAL:CG1	2.44	0.48
2:AB:48:ILE:HG22	2:AB:90:GLN:NE2	2.28	0.48
3:AC:62:TYR:HA	17:h:164:ILE:HG12	1.96	0.48
3:AC:69:LYS:NZ	12:AL:1637:A:OP1	2.47	0.48
5:AE:95:LYS:CE	12:AL:1523:A:C3'	2.91	0.48
5:AE:227:LEU:C	5:AE:231:LEU:H	2.19	0.48
6:AF:58:MET:CB	19:j:11:LEU:HD11	2.44	0.48
6:AF:185:ILE:HG22	6:AF:189:VAL:CG2	2.43	0.48
6:AF:208:MET:SD	19:j:425:TRP:CZ2	3.06	0.48
7:AG:96:LYS:CE	12:AL:916:A:P	3.02	0.48
7:AG:122:LEU:HD13	16:g:36:ILE:CD1	2.41	0.48
9:AI:226:LEU:CD2	9:AI:278:GLU:HG3	2.44	0.48
11:AK:298:TRP:CZ2	24:o:175:GLU:HB2	2.45	0.48
12:AL:515:A:C5	12:AL:516:A:C5	3.01	0.48
12:AL:696:U:H5'	23:n:96:ASN:HA	1.96	0.48
12:AL:760:A:C4	12:AL:761:A:C8	3.01	0.48
12:AL:785:A:C6	33:x:130:ARG:HD3	2.48	0.48
12:AL:846:A:C5	12:AL:867:A:C2	3.02	0.48
12:AL:1066:U:H2'	12:AL:1067:A:C8	2.48	0.48
12:AL:1172:A:H5'	25:p:114:TRP:CZ2	2.41	0.48
12:AL:1172:A:H2'	12:AL:1172:A:N3	2.29	0.48
12:AL:1234:U:H2'	12:AL:1235:A:O4'	2.14	0.48
12:AL:1335:U:N3	28:s:18:ILE:CD1	2.75	0.48
12:AL:1407:A:H4'	13:AM:41:A:H1'	1.95	0.48
12:AL:1627:U:C4	15:Z:13:LEU:HD22	2.49	0.48
15:Z:88:ARG:NH2	16:g:74:ILE:HG21	2.25	0.48
17:h:292:LYS:HA	24:o:39:PRO:HA	1.95	0.48
19:j:20:PHE:CE1	19:j:434:PHE:HB2	2.49	0.48
19:j:436:ILE:HB	19:j:466:ILE:HD13	1.96	0.48
26:q:188:GLY:C	26:q:192:VAL:HG23	2.38	0.48
26:q:198:ILE:HG21	35:z:106:ILE:CD1	2.42	0.48
29:t:27:LYS:HZ2	29:t:31:PHE:CB	2.27	0.48
30:u:255:TYR:O	30:u:256:GLU:HB2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:1:109:GLU:CB	37:1:138:VAL:HG21	2.37	0.48
43:7:124:GLN:O	49:D:70:ARG:NH1	2.46	0.48
45:9:39:ASN:ND2	46:A:3274:U:O4	2.32	0.48
46:A:341:A:H61	46:A:360:A:H61	1.62	0.48
46:A:674:A:H4'	46:A:2855:A:H4'	1.95	0.48
46:A:817:G:H8	46:A:817:G:P	2.37	0.48
46:A:962:A:H2'	46:A:963:A:H8	1.78	0.48
46:A:1014:A:O3'	76:f:118:LYS:NZ	2.30	0.48
46:A:1015:A:C4'	76:f:117:LEU:HD22	2.40	0.48
46:A:1057:A:O2'	46:A:1058:U:H5'	2.14	0.48
46:A:1439:A:C8	46:A:1439:A:H5"	2.48	0.48
46:A:1702:C:C4	46:A:1703:U:C4	3.02	0.48
46:A:2017:G:N2	46:A:2065:A:N6	2.56	0.48
46:A:2210:A:H2'	46:A:2211:U:C5	2.49	0.48
46:A:2357:U:O2'	46:A:2358:A:P	2.72	0.48
46:A:2673:A:N7	55:J:125:VAL:HG21	2.28	0.48
46:A:2750:A:C2'	46:A:2751:G:H5'	2.44	0.48
46:A:2763:A:H1'	46:A:2764:C:H5	1.78	0.48
46:A:2771:G:H1	48:C:208:ASN:ND2	2.09	0.48
46:A:2976:A:H2'	46:A:2977:U:C5	2.48	0.48
75:e:65:SER:O	75:e:66:MET:HB3	2.14	0.48
75:e:84:ARG:O	75:e:87:ILE:HG22	2.14	0.48
75:e:168:GLY:HA2	75:e:178:VAL:HG13	1.96	0.48
3:AC:148:LEU:HD23	4:AD:203:ASN:C	2.39	0.48
6:AF:31:ARG:HG2	12:AL:625:A:OP2	2.13	0.48
6:AF:61:PHE:CZ	19:j:29:TYR:CD1	2.88	0.48
6:AF:295:ILE:HD13	31:v:93:ALA:CB	2.34	0.48
7:AG:206:ILE:CD1	16:g:227:VAL:CG1	2.92	0.48
9:AI:201:GLN:O	9:AI:202:PRO:C	2.56	0.48
9:AI:366:PRO:HG3	11:AK:274:PRO:HB3	1.96	0.48
9:AI:431:PHE:C	9:AI:433:SER:H	2.22	0.48
10:AJ:63:TYR:HE1	18:i:189:ASN:O	1.97	0.48
11:AK:132:PHE:CB	18:i:249:PRO:CD	2.87	0.48
11:AK:149:ARG:HG2	20:k:70:ASP:CA	2.44	0.48
12:AL:279:A:O2'	12:AL:280:G:C8	2.64	0.48
12:AL:302:U:O5'	12:AL:302:U:H6	1.97	0.48
12:AL:324:G:H2'	12:AL:325:A:C8	2.49	0.48
12:AL:404:U:C2	12:AL:405:A:C8	3.02	0.48
12:AL:987:G:C6	12:AL:988:A:C5	3.02	0.48
12:AL:1006:A:H2'	12:AL:1007:G:H8	1.79	0.48
12:AL:1097:G:P	12:AL:1097:G:H8	2.37	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1104:U:H3'	12:AL:1105:G:C8	2.46	0.48
12:AL:1628:A:C2	35:z:166:ILE:HG23	2.49	0.48
18:i:337:ASN:O	18:i:338:ASN:C	2.57	0.48
21:l:48:ARG:O	21:l:49:TYR:C	2.55	0.48
21:l:127:ASP:O	21:l:128:TYR:C	2.56	0.48
22:m:123:ARG:O	22:m:125:GLY:N	2.47	0.48
25:p:48:ARG:HG2	25:p:108:LYS:HA	1.96	0.48
27:r:114:ARG:HH22	27:r:119:PRO:HA	1.79	0.48
31:v:86:VAL:O	31:v:90:LEU:HD13	2.13	0.48
32:w:16:MET:HB2	32:w:19:THR:HB	1.96	0.48
38:2:43:VAL:CG1	46:A:2425:A:C8	2.97	0.48
46:A:51:G:H2'	46:A:52:A:H8	1.79	0.48
46:A:134:U:H3'	46:A:135:U:C5	2.49	0.48
46:A:676:A:H2'	46:A:677:C:C6	2.48	0.48
46:A:1023:C:O2	46:A:1023:C:H2'	2.12	0.48
46:A:1075:A:H3'	46:A:1076:U:H6	1.79	0.48
46:A:1230:C:H1'	46:A:1257:U:O4	2.14	0.48
46:A:1312:G:HO2'	46:A:1313:G:P	2.37	0.48
46:A:1647:G:O2'	46:A:1649:C:H5"	2.14	0.48
46:A:1769:U:H3'	46:A:1770:U:C5'	2.39	0.48
46:A:1811:U:H2'	46:A:1812:U:C6	2.49	0.48
46:A:2016:A:H4'	46:A:2017:G:N2	2.29	0.48
46:A:2595:U:H2'	46:A:2596:G:C8	2.49	0.48
46:A:2625:A:H2'	46:A:2626:C:C6	2.48	0.48
63:R:160:LYS:HD3	63:R:161:GLN:N	2.29	0.48
1:AA:95:LYS:NZ	12:AL:1580:U:OP1	2.42	0.48
3:AC:33:GLY:O	3:AC:37:VAL:HG23	2.13	0.48
3:AC:74:PRO:HB3	7:AG:201:PHE:CD1	2.48	0.48
5:AE:107:TYR:OH	5:AE:151:PHE:HB3	2.14	0.48
5:AE:282:ARG:HG3	5:AE:313:ASP:OD2	2.14	0.48
9:AI:69:LEU:N	9:AI:70:GLN:HE21	2.12	0.48
9:AI:230:TYR:HB3	9:AI:232:PHE:CZ	2.49	0.48
9:AI:434:GLY:O	9:AI:435:ASN:HB2	2.14	0.48
11:AK:65:ILE:HG21	11:AK:89:ALA:HB1	1.96	0.48
12:AL:33:A:H61	12:AL:672:U:H1'	1.78	0.48
12:AL:310:A:H2'	12:AL:311:G:O4'	2.14	0.48
12:AL:522:A:H61	12:AL:527:G:C5'	2.22	0.48
12:AL:558:A:H2'	12:AL:559:U:O4'	2.13	0.48
12:AL:729:U:O5'	12:AL:729:U:C6	2.66	0.48
12:AL:784:A:H61	33:x:133:GLN:CD	2.22	0.48
12:AL:1176:U:H5	12:AL:1178:A:H62	1.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1439:G:H2'	12:AL:1439:G:N3	2.29	0.48
12:AL:1463:C:H2'	12:AL:1463:C:O2	2.14	0.48
14:AN:4:A:C5	14:AN:5:C:H2'	2.49	0.48
15:Z:70:ARG:NE	15:Z:70:ARG:H	2.12	0.48
21:l:29:GLY:O	21:l:30:LYS:C	2.55	0.48
22:m:92:ALA:O	22:m:93:GLU:C	2.54	0.48
22:m:98:TRP:HD1	24:o:242:LEU:CD2	2.27	0.48
25:p:119:GLU:O	25:p:120:VAL:C	2.57	0.48
30:u:74:PRO:CB	32:w:100:GLU:CG	2.92	0.48
31:v:4:GLY:O	31:v:28:SER:HB3	2.13	0.48
32:w:45:VAL:CG1	32:w:74:ILE:HG13	2.41	0.48
32:w:80:ASN:C	32:w:82:GLY:N	2.72	0.48
32:w:190:LEU:HD13	32:w:225:ARG:HG2	1.96	0.48
46:A:352:A:C6	46:A:353:A:C5	3.02	0.48
46:A:430:A:C6	46:A:460:G:C2	3.02	0.48
46:A:438:U:C2	46:A:439:A:C8	3.02	0.48
46:A:466:U:OP2	55:J:87:LYS:NZ	2.45	0.48
46:A:499:G:H1'	49:D:147:VAL:CG2	2.44	0.48
46:A:683:U:H2'	46:A:2706:C:O2	2.13	0.48
46:A:887:G:H22	73:c:15:LEU:HD13	1.79	0.48
46:A:954:A:H61	46:A:1094:U:H5	1.59	0.48
46:A:1212:A:C2	46:A:1213:A:C8	3.02	0.48
46:A:1306:A:C5	46:A:1598:A:C6	3.02	0.48
46:A:1367:A:H61	46:A:1398:G:H1'	1.78	0.48
46:A:1696:A:H2'	46:A:1697:C:C6	2.49	0.48
46:A:2083:U:C2	46:A:2084:G:C8	3.02	0.48
46:A:3124:A:H2'	46:A:3124:A:N3	2.29	0.48
46:A:3146:U:O2'	46:A:3251:A:N1	2.41	0.48
47:B:230:LEU:HA	47:B:233:LYS:HZ2	1.79	0.48
47:B:310:ASN:C	47:B:312:ASP:H	2.21	0.48
54:I:72:ILE:HD12	54:I:99:ILE:HG21	1.96	0.48
63:R:206:LYS:HG2	63:R:264:LEU:HD11	1.95	0.48
76:f:63:LYS:C	76:f:65:ASP:H	2.22	0.48
3:AC:89:ASN:O	3:AC:92:PHE:HB3	2.13	0.47
4:AD:31:LEU:HD11	4:AD:100:CYS:HB3	1.96	0.47
5:AE:193:LEU:CD2	5:AE:235:LEU:HD13	2.43	0.47
6:AF:313:LYS:N	31:v:68:ASP:OD2	2.46	0.47
9:AI:186:GLY:HA2	9:AI:305:TYR:CE1	2.49	0.47
9:AI:248:LEU:HD12	9:AI:258:LEU:HD13	1.96	0.47
9:AI:274:ALA:O	9:AI:275:ILE:C	2.53	0.47
11:AK:115:ALA:CA	18:i:168:ASN:HD21	2.23	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:268:G:C6	12:AL:269:A:C6	3.01	0.47
12:AL:723:A:H2'	12:AL:724:U:C6	2.50	0.47
12:AL:727:A:H2'	12:AL:728:A:N7	2.28	0.47
12:AL:789:A:C6	12:AL:799:A:C8	3.02	0.47
12:AL:806:A:H5"	30:u:187:ASN:ND2	2.28	0.47
12:AL:836:U:C2	12:AL:837:A:N7	2.82	0.47
12:AL:986:A:H2'	12:AL:987:G:O4'	2.14	0.47
12:AL:1191:U:H2'	12:AL:1192:U:C6	2.48	0.47
12:AL:1561:C:H2'	12:AL:1562:A:O4'	2.14	0.47
13:AM:33:U:H3'	24:o:278:ARG:CD	2.44	0.47
15:Z:34:MET:HE2	22:m:182:PRO:HB3	1.95	0.47
19:j:400:LYS:HD3	19:j:409:ASN:HB3	1.96	0.47
30:u:85:GLU:O	30:u:88:VAL:HG23	2.13	0.47
30:u:106:GLU:HA	30:u:109:LYS:HD2	1.96	0.47
32:w:42:ASP:OD1	32:w:42:ASP:N	2.46	0.47
34:y:46:PHE:HE2	34:y:49:LEU:HB2	1.78	0.47
35:z:108:VAL:HG22	35:z:116:SER:OG	2.14	0.47
37:1:361:VAL:HG21	63:R:144:GLU:HG2	1.95	0.47
42:6:27:VAL:HG11	42:6:195:ALA:HB2	1.95	0.47
46:A:149:A:C6	46:A:1371:A:C5	3.02	0.47
46:A:174:G:N2	46:A:205:A:N7	2.62	0.47
46:A:217:A:C5'	64:S:47:HIS:CE1	2.96	0.47
46:A:600:C:H5'	47:B:133:ARG:HH22	1.79	0.47
46:A:656:A:H2'	46:A:657:U:H6	1.76	0.47
46:A:770:A:C6	46:A:771:U:C4	3.02	0.47
46:A:877:U:H2'	46:A:878:G:C8	2.49	0.47
46:A:1237:U:O2'	55:J:59:SER:OG	2.27	0.47
46:A:1343:U:C4	61:P:139:HIS:CG	3.02	0.47
46:A:1773:U:H2'	46:A:1774:U:H6	1.79	0.47
46:A:1925:U:H2'	46:A:1926:A:H8	1.75	0.47
46:A:1989:U:O2	52:G:14:LYS:HD2	2.14	0.47
46:A:2319:A:H2'	46:A:2320:A:H8	1.75	0.47
46:A:2733:A:O2'	46:A:2734:A:H5'	2.14	0.47
46:A:2983:U:H3'	46:A:2984:A:H8	1.79	0.47
46:A:3274:U:O5'	71:a:150:SER:OG	2.32	0.47
46:A:3277:A:C2	46:A:3278:A:C5	3.01	0.47
49:D:133:ARG:HB3	49:D:137:ASN:HD21	1.77	0.47
51:F:115:THR:HG23	51:F:116:GLU:HG2	1.96	0.47
55:J:147:LEU:HA	55:J:163:LEU:HD13	1.96	0.47
63:R:63:ILE:HB	63:R:85:ILE:HG22	1.94	0.47
3:AC:228:ASP:HB3	3:AC:232:LEU:HD23	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:117:LEU:C	4:AD:119:THR:H	2.22	0.47
4:AD:217:ASN:HB3	4:AD:251:PHE:CE2	2.49	0.47
5:AE:99:LYS:HG2	12:AL:1524:U:H5'	1.96	0.47
5:AE:189:ILE:CG2	5:AE:235:LEU:HD22	2.39	0.47
5:AE:219:LEU:HD23	5:AE:219:LEU:N	2.29	0.47
5:AE:255:LEU:HD21	5:AE:280:ILE:HG21	1.95	0.47
5:AE:274:TYR:O	5:AE:278:TYR:N	2.29	0.47
6:AF:58:MET:CE	19:j:30:LYS:CD	2.80	0.47
7:AG:69:ALA:HB3	32:w:180:ARG:HH21	1.79	0.47
8:AH:74:LEU:HA	8:AH:77:LYS:HD2	1.96	0.47
9:AI:143:VAL:HG12	9:AI:145:LYS:HB2	1.96	0.47
9:AI:435:ASN:HD21	24:o:175:GLU:C	2.22	0.47
10:AJ:32:SER:HB2	12:AL:1313:U:C5'	2.43	0.47
11:AK:132:PHE:HD2	18:i:249:PRO:CG	2.20	0.47
11:AK:163:PRO:HB3	25:p:68:TYR:CD1	2.47	0.47
11:AK:218:LYS:HE3	11:AK:270:PHE:CD2	2.49	0.47
12:AL:180:A:O2'	12:AL:182:A:O2'	2.23	0.47
12:AL:303:G:N2	12:AL:306:A:OP2	2.47	0.47
12:AL:416:A:C2	12:AL:417:U:C2	3.02	0.47
12:AL:490:U:H2'	12:AL:491:U:H6	1.79	0.47
12:AL:805:U:H2'	12:AL:806:A:H8	1.77	0.47
12:AL:1265:G:OP2	24:o:274:THR:HG23	2.14	0.47
12:AL:1469:A:H2'	12:AL:1470:C:O4'	2.14	0.47
12:AL:1502:U:H2'	12:AL:1503:U:C6	2.49	0.47
15:Z:27:ALA:O	15:Z:29:LYS:N	2.47	0.47
18:i:167:ASN:O	18:i:168:ASN:C	2.57	0.47
19:j:27:ASN:HA	19:j:30:LYS:CG	2.43	0.47
19:j:28:LEU:HD22	19:j:434:PHE:CE2	2.49	0.47
27:r:99:GLY:O	27:r:127:ARG:NH1	2.47	0.47
27:r:115:CYS:O	27:r:115:CYS:SG	2.72	0.47
29:t:31:PHE:O	29:t:35:GLU:N	2.44	0.47
31:v:65:VAL:HG12	31:v:67:LEU:H	1.79	0.47
41:5:73:TYR:CE2	61:P:255:LEU:HD11	2.49	0.47
46:A:26:A:N3	71:a:144:ILE:HD11	2.29	0.47
46:A:33:A:C6	46:A:34:U:C4	3.02	0.47
46:A:201:A:C2'	46:A:202:A:C8	2.97	0.47
46:A:250:U:H2'	46:A:251:U:H6	1.79	0.47
46:A:717:U:H2'	46:A:719:U:O4'	2.14	0.47
46:A:754:A:C2	46:A:755:U:C2	3.02	0.47
46:A:1019:G:C6	46:A:1021:A:H1'	2.50	0.47
46:A:1316:U:C5	68:W:173:LEU:HB3	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1985:U:H2'	46:A:1986:A:H8	1.79	0.47
46:A:2239:A:H2'	46:A:2240:U:O4'	2.14	0.47
46:A:2375:U:C2	69:X:66:LEU:HD21	2.48	0.47
46:A:2455:A:H5"	50:E:237:GLY:HA3	1.97	0.47
46:A:2574:G:C2'	46:A:2575:A:H5'	2.45	0.47
46:A:2718:C:H2'	46:A:2719:A:C8	2.49	0.47
46:A:2955:G:H1'	46:A:3057:A:N6	2.29	0.47
46:A:2979:U:C2	46:A:2980:A:C8	3.02	0.47
46:A:3004:A:C4	46:A:3005:A:C8	3.02	0.47
46:A:3135:U:O2'	46:A:3136:U:P	2.73	0.47
55:J:112:PRO:O	55:J:114:TYR:N	2.47	0.47
58:M:76:VAL:HG21	58:M:94:ILE:HD11	1.96	0.47
63:R:308:ALA:O	63:R:311:PHE:N	2.38	0.47
4:AD:121:ASP:H	4:AD:124:ARG:HH21	1.61	0.47
4:AD:280:TRP:CD1	4:AD:280:TRP:H	2.31	0.47
5:AE:271:LEU:HD13	5:AE:304:TYR:CZ	2.49	0.47
6:AF:61:PHE:CD2	19:j:29:TYR:CD2	3.02	0.47
9:AI:280:SER:HA	9:AI:334:PHE:CD1	2.50	0.47
9:AI:289:PHE:CZ	9:AI:327:ILE:HD12	2.49	0.47
10:AJ:19:PHE:CD1	11:AK:226:ARG:CZ	2.97	0.47
12:AL:46:A:N1	12:AL:407:U:C2	2.82	0.47
12:AL:327:U:H5	12:AL:334:U:H6	1.62	0.47
12:AL:773:A:H4'	26:q:79:HIS:CG	2.49	0.47
12:AL:802:A:H2'	12:AL:803:A:C8	2.49	0.47
12:AL:1024:A:C5'	12:AL:1050:C:H4'	2.41	0.47
12:AL:1462:A:H1'	12:AL:1463:C:OP1	2.14	0.47
12:AL:1501:A:H2'	12:AL:1502:U:O4'	2.14	0.47
15:Z:89:ILE:CD1	35:z:168:ILE:HG21	2.23	0.47
16:g:282:GLU:O	16:g:293:MET:HA	2.14	0.47
17:h:225:THR:OG1	17:h:360:PRO:HB2	2.15	0.47
17:h:359:ILE:O	17:h:360:PRO:C	2.57	0.47
18:i:179:LEU:HD11	18:i:183:MET:HE2	1.96	0.47
21:l:2:LEU:HD23	21:l:107:ARG:HB2	1.96	0.47
22:m:194:ASN:C	22:m:196:ILE:H	2.21	0.47
32:w:223:LEU:HA	32:w:226:LYS:HB2	1.95	0.47
34:y:85:TYR:O	34:y:87:GLN:N	2.47	0.47
38:2:127:MET:CG	67:V:80:TRP:HA	2.44	0.47
46:A:152:G:C2	46:A:153:G:C4	3.03	0.47
46:A:746:A:H4'	46:A:747:U:OP1	2.15	0.47
46:A:826:A:C5	46:A:827:U:C4	3.01	0.47
46:A:852:U:H2'	46:A:853:U:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1205:U:H2'	46:A:1208:U:C4'	2.44	0.47
46:A:1288:U:H5	49:D:114:ALA:HA	1.66	0.47
46:A:1362:C:C2	46:A:1363:C:C5	3.01	0.47
46:A:1686:U:H1'	46:A:1690:A:H62	1.79	0.47
46:A:1841:C:C4	46:A:1842:C:C4	3.02	0.47
46:A:2019:A:H2'	46:A:2020:U:O2	2.14	0.47
46:A:2024:A:N6	46:A:2073:U:O2	2.47	0.47
46:A:2058:U:H2'	46:A:2058:U:O2	2.13	0.47
46:A:2076:A:H2'	46:A:2077:A:O4'	2.13	0.47
46:A:2220:U:O2	46:A:2220:U:C2'	2.55	0.47
46:A:2613:A:HO2'	46:A:2614:U:P	2.37	0.47
46:A:2751:G:OP1	56:K:89:GLN:NE2	2.45	0.47
46:A:2862:G:N2	46:A:2864:G:H3'	2.30	0.47
47:B:124:THR:HG22	47:B:153:ARG:CG	2.44	0.47
48:C:63:THR:HG22	48:C:87:VAL:HG22	1.95	0.47
66:U:15:VAL:CG1	66:U:19:THR:HB	2.44	0.47
76:f:59:LEU:HD23	76:f:71:GLU:HB2	1.96	0.47
1:AA:92:LYS:HA	1:AA:95:LYS:HD2	1.95	0.47
2:AB:110:PHE:CE1	12:AL:101:U:OP1	2.67	0.47
4:AD:198:ILE:C	16:g:214:LEU:HD13	2.34	0.47
6:AF:67:TYR:CE2	12:AL:482:U:N1	2.79	0.47
6:AF:111:TYR:CG	11:AK:120:GLY:HA2	2.48	0.47
6:AF:137:PHE:CE1	19:j:468:PRO:CG	2.96	0.47
6:AF:148:VAL:O	6:AF:218:VAL:HA	2.14	0.47
6:AF:179:ILE:H	6:AF:179:ILE:HD12	1.78	0.47
7:AG:22:LEU:HD22	20:k:135:VAL:HG11	1.96	0.47
8:AH:23:LYS:NZ	31:v:74:TYR:OH	2.44	0.47
9:AI:325:MET:O	9:AI:328:ILE:N	2.48	0.47
10:AJ:33:LYS:O	10:AJ:37:GLU:HG3	2.15	0.47
12:AL:83:U:H1'	12:AL:92:U:O4	2.14	0.47
12:AL:232:U:C1'	31:v:78:VAL:HG13	2.44	0.47
12:AL:268:G:H8	12:AL:268:G:H5'	1.78	0.47
12:AL:488:A:H2'	12:AL:489:A:C8	2.49	0.47
12:AL:515:A:C6	12:AL:516:A:C5	3.02	0.47
12:AL:632:C:H5"	12:AL:633:C:O4'	2.14	0.47
12:AL:1172:A:H5"	25:p:114:TRP:HZ2	1.79	0.47
12:AL:1213:G:C5	12:AL:1215:A:OP2	2.67	0.47
12:AL:1258:U:H2'	34:y:83:PHE:HD2	1.79	0.47
12:AL:1265:G:OP2	24:o:274:THR:CG2	2.63	0.47
12:AL:1342:U:C6	12:AL:1356:U:H5'	2.49	0.47
12:AL:1618:G:O6	35:z:141:LYS:NZ	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:Z:48:SER:HB3	15:Z:51:CYS:HB3	1.97	0.47
16:g:36:ILE:HB	16:g:63:LEU:CD2	2.44	0.47
23:n:119:LYS:O	23:n:153:ARG:NH1	2.47	0.47
24:o:156:ALA:HB1	24:o:233:LYS:CB	2.34	0.47
26:q:144:ALA:O	26:q:145:PHE:C	2.56	0.47
29:t:27:LYS:HZ2	29:t:31:PHE:HB2	1.78	0.47
29:t:50:LEU:HB3	29:t:51:PRO:CD	2.41	0.47
33:x:58:PHE:C	33:x:60:PHE:N	2.70	0.47
34:y:53:ILE:O	34:y:59:TYR:HA	2.14	0.47
35:z:109:ASN:O	35:z:110:LYS:C	2.56	0.47
41:5:141:VAL:CG2	61:P:252:LEU:HD23	2.44	0.47
46:A:11:G:C2	46:A:12:A:C8	3.03	0.47
46:A:11:G:N1	46:A:12:A:C5	2.82	0.47
46:A:102:A:C6	46:A:103:U:C4	3.02	0.47
46:A:143:A:H2'	46:A:144:A:H8	1.80	0.47
46:A:212:A:H2'	46:A:213:U:C6	2.50	0.47
46:A:627:C:O2'	46:A:628:A:H5'	2.14	0.47
46:A:1144:U:H2'	46:A:1145:U:H5'	1.96	0.47
46:A:1647:G:O4'	47:B:98:PRO:HG2	2.14	0.47
46:A:1676:U:O2'	46:A:1677:A:H5'	2.14	0.47
46:A:2010:A:N3	46:A:2076:A:N1	2.49	0.47
46:A:2257:U:C2	46:A:2258:C:C5	3.02	0.47
46:A:2416:U:H6	46:A:2416:U:O5'	1.97	0.47
46:A:2698:A:H2'	46:A:2699:A:H8	1.77	0.47
46:A:2805:A:O2'	46:A:2806:A:H5'	2.15	0.47
48:C:76:THR:O	58:M:129:LEU:HD21	2.14	0.47
63:R:184:LEU:HD22	63:R:258:THR:HG22	1.95	0.47
76:f:143:LYS:O	76:f:146:VAL:HB	2.14	0.47
3:AC:77:SER:HA	3:AC:80:PHE:HB3	1.97	0.47
3:AC:208:THR:HA	3:AC:212:GLY:N	2.28	0.47
4:AD:62:LYS:HD3	4:AD:66:THR:HG21	1.97	0.47
4:AD:175:ARG:HE	4:AD:177:LEU:N	2.12	0.47
7:AG:217:LEU:HD22	16:g:273:MET:CG	2.41	0.47
8:AH:46:GLY:CA	32:w:59:ARG:HD2	2.44	0.47
10:AJ:62:LEU:N	10:AJ:62:LEU:HD23	2.28	0.47
12:AL:109:A:H5"	12:AL:110:A:N7	2.29	0.47
12:AL:232:U:H1'	31:v:78:VAL:HG13	1.96	0.47
12:AL:509:A:H3'	12:AL:510:U:C6	2.49	0.47
12:AL:524:A:C2	12:AL:525:A:C4	3.03	0.47
12:AL:539:C:C2	12:AL:540:A:C8	3.02	0.47
12:AL:637:A:N6	27:r:117:ASP:OD2	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:781:A:H2'	12:AL:782:C:O4'	2.14	0.47
12:AL:1628:A:O4'	35:z:162:PHE:CE2	2.67	0.47
16:g:246:ALA:CB	33:x:55:TYR:CE2	2.95	0.47
18:i:101:ASN:O	18:i:104:MET:HB3	2.15	0.47
18:i:195:LEU:HB2	18:i:203:VAL:HG11	1.97	0.47
18:i:224:ILE:HG22	18:i:391:ILE:HD13	1.97	0.47
19:j:438:PRO:HG2	19:j:441:LEU:HD12	1.97	0.47
19:j:479:MET:HE3	20:k:240:LEU:O	2.14	0.47
21:l:50:LEU:HD21	21:l:64:ALA:HB3	1.95	0.47
25:p:66:GLY:O	25:p:67:TYR:C	2.57	0.47
26:q:198:ILE:CG2	35:z:106:ILE:CD1	2.92	0.47
28:s:80:ALA:O	28:s:84:LYS:N	2.38	0.47
30:u:65:ASP:OD2	30:u:69:GLY:N	2.44	0.47
32:w:4:GLN:O	32:w:5:ASN:ND2	2.47	0.47
33:x:88:ASN:OD1	33:x:88:ASN:N	2.47	0.47
34:y:59:TYR:N	34:y:59:TYR:CD1	2.82	0.47
35:z:127:ASN:HB2	35:z:129:ILE:HG13	1.95	0.47
40:4:26:ILE:HG21	40:4:98:LEU:HD11	1.97	0.47
41:5:268:TRP:HZ2	45:9:121:ILE:HD12	1.80	0.47
46:A:42:A:H2'	46:A:43:U:O4'	2.14	0.47
46:A:48:A:N1	46:A:1944:C:O2'	2.35	0.47
46:A:152:G:C4	46:A:153:G:C8	3.02	0.47
46:A:249:C:O2'	46:A:250:U:H5'	2.14	0.47
46:A:334:G:H2'	46:A:335:U:C6	2.50	0.47
46:A:628:A:H2'	46:A:629:G:O4'	2.15	0.47
46:A:632:U:O2	46:A:647:A:H2	1.98	0.47
46:A:659:G:N2	46:A:1400:U:H1'	2.29	0.47
46:A:687:U:H2'	46:A:688:U:C6	2.49	0.47
46:A:703:U:C2	46:A:1283:G:N1	2.83	0.47
46:A:1043:A:H2'	46:A:1043:A:N3	2.30	0.47
46:A:1439:A:C2	46:A:1440:U:H1'	2.50	0.47
46:A:1513:A:H2'	46:A:1514:U:C6	2.49	0.47
46:A:1971:A:H2'	46:A:1972:G:H8	1.78	0.47
46:A:1981:U:C4	46:A:2263:U:C4	3.02	0.47
46:A:2694:G:H5"	46:A:2695:A:OP1	2.14	0.47
46:A:2843:G:H2'	46:A:2843:G:N3	2.30	0.47
46:A:2918:A:C4	46:A:2919:U:C5	3.02	0.47
46:A:3292:A:H3'	46:A:3293:U:C5	2.49	0.47
48:C:31:ILE:HD13	53:H:140:ILE:HD13	1.97	0.47
48:C:207:GLN:HB2	48:C:211:PRO:HG2	1.96	0.47
56:K:82:GLY:H	73:c:109:TYR:HH	1.60	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:f:143:LYS:HD2	76:f:143:LYS:N	2.29	0.47
3:AC:215:GLN:HB2	3:AC:217:TRP:CH2	2.49	0.47
5:AE:141:HIS:C	5:AE:143:GLN:N	2.67	0.47
7:AG:32:VAL:HG21	17:h:239:VAL:N	2.29	0.47
7:AG:96:LYS:HE3	12:AL:916:A:OP2	2.15	0.47
7:AG:142:ARG:HH22	7:AG:145:ASP:HB3	1.80	0.47
8:AH:23:LYS:CE	31:v:74:TYR:OH	2.63	0.47
9:AI:156:LYS:CE	9:AI:346:SER:HA	2.44	0.47
11:AK:51:TYR:HA	11:AK:57:TRP:HZ2	1.79	0.47
12:AL:239:A:OP1	32:w:71:PHE:CE2	2.68	0.47
12:AL:511:A:C2	12:AL:512:A:H1'	2.49	0.47
12:AL:512:A:H2'	12:AL:513:A:H8	1.80	0.47
12:AL:520:A:N6	12:AL:532:U:O2	2.47	0.47
12:AL:631:G:H2'	12:AL:645:U:C5	2.49	0.47
12:AL:663:C:H2'	12:AL:664:G:O4'	2.15	0.47
12:AL:1518:U:H2'	12:AL:1519:U:C6	2.49	0.47
12:AL:1540:U:C2	12:AL:1541:U:C6	3.02	0.47
12:AL:1632:A:H1'	12:AL:1633:U:H5	1.79	0.47
15:Z:23:ILE:O	15:Z:24:ARG:CB	2.61	0.47
17:h:164:ILE:HG22	17:h:167:VAL:HG11	1.96	0.47
18:i:90:MET:HA	18:i:93:TRP:CE3	2.50	0.47
18:i:191:LEU:C	18:i:193:ASN:N	2.71	0.47
18:i:331:PHE:HE1	18:i:347:LEU:HD13	1.79	0.47
21:l:50:LEU:HD13	21:l:54:MET:SD	2.54	0.47
22:m:196:ILE:HG23	22:m:215:GLU:HG2	1.97	0.47
27:r:84:ARG:HE	27:r:88:GLY:HA2	1.79	0.47
28:s:12:GLY:HA2	28:s:48:HIS:HB3	1.97	0.47
28:s:68:GLU:C	28:s:70:ASP:H	2.21	0.47
30:u:65:ASP:OD2	30:u:68:LEU:HB2	2.14	0.47
32:w:230:MET:SD	32:w:230:MET:C	2.98	0.47
42:6:217:ILE:HG22	50:E:83:LEU:CD2	2.44	0.47
46:A:46:A:N7	46:A:2894:A:H2'	2.30	0.47
46:A:147:C:O2'	46:A:156:A:N3	2.47	0.47
46:A:213:U:C2'	46:A:214:A:H5"	2.44	0.47
46:A:368:U:H2'	46:A:369:A:H8	1.80	0.47
46:A:404:G:O3'	62:Q:29:HIS:HB2	2.14	0.47
46:A:696:G:H5'	46:A:697:C:C5	2.49	0.47
46:A:708:U:O2'	46:A:730:U:H5"	2.15	0.47
46:A:778:A:C8	46:A:778:A:H5'	2.50	0.47
46:A:844:A:C2	46:A:845:U:H1'	2.50	0.47
46:A:869:U:O2'	46:A:870:C:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1031:U:H2'	46:A:1032:G:C8	2.50	0.47
46:A:1348:U:H4'	46:A:1349:A:OP2	2.14	0.47
46:A:1423:A:H8	46:A:1423:A:P	2.38	0.47
46:A:2318:U:H5'	72:b:139:SER:HB2	1.95	0.47
46:A:2587:U:OP2	46:A:2589:A:N6	2.48	0.47
46:A:2910:A:H2'	46:A:2911:U:H6	1.80	0.47
46:A:2945:A:C6	46:A:3066:G:C6	3.02	0.47
46:A:2962:U:H2'	46:A:2963:U:C6	2.49	0.47
46:A:2971:A:H2'	46:A:2972:U:H6	1.78	0.47
63:R:51:LYS:HG2	63:R:57:VAL:HG13	1.95	0.47
1:AA:105:ARG:CG	46:A:1875:G:H4'	2.45	0.47
3:AC:49:LEU:O	3:AC:52:ALA:N	2.48	0.47
3:AC:217:TRP:HE1	17:h:146:LEU:CD2	2.17	0.47
4:AD:217:ASN:HB3	4:AD:251:PHE:CD2	2.50	0.47
5:AE:215:TRP:CG	5:AE:245:LEU:HD22	2.48	0.47
6:AF:306:GLN:HG3	31:v:60:VAL:HG21	1.97	0.47
7:AG:1:MET:HE1	17:h:354:LEU:CD1	2.45	0.47
7:AG:11:LEU:HG	7:AG:12:GLN:H	1.80	0.47
7:AG:22:LEU:HD21	20:k:139:TYR:CE2	2.49	0.47
7:AG:227:GLU:HB2	33:x:45:LEU:HD11	1.97	0.47
8:AH:76:ALA:O	8:AH:77:LYS:C	2.57	0.47
8:AH:206:ALA:O	8:AH:207:ASN:HB3	2.15	0.47
9:AI:59:ASN:ND2	9:AI:62:ASN:H	2.12	0.47
9:AI:164:HIS:O	9:AI:168:VAL:HG23	2.14	0.47
9:AI:225:GLU:H	9:AI:284:LYS:HZ2	1.62	0.47
11:AK:75:ARG:NH1	18:i:185:ASN:C	2.69	0.47
11:AK:130:ARG:O	18:i:214:TYR:CE2	2.67	0.47
11:AK:134:PHE:C	11:AK:136:GLU:H	2.23	0.47
11:AK:195:PRO:CG	12:AL:1290:A:C4	2.98	0.47
12:AL:17:A:O2'	12:AL:18:A:H5'	2.15	0.47
12:AL:258:G:C2	12:AL:259:G:C8	3.02	0.47
12:AL:409:G:C6	12:AL:509:A:C6	3.02	0.47
12:AL:414:A:N7	12:AL:502:A:N7	2.63	0.47
12:AL:492:G:C2	12:AL:498:A:C6	3.03	0.47
12:AL:760:A:OP2	26:q:136:ALA:CB	2.44	0.47
12:AL:786:U:C2	33:x:130:ARG:NH1	2.82	0.47
12:AL:810:A:O2'	12:AL:811:U:H5'	2.15	0.47
12:AL:904:U:H2'	12:AL:905:A:C2	2.50	0.47
12:AL:943:U:P	23:n:95:PRO:HD2	2.55	0.47
12:AL:1014:A:H61	12:AL:1264:U:H3	1.61	0.47
12:AL:1059:A:H1'	12:AL:1060:A:O5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1059:A:O2'	12:AL:1060:A:C8	2.68	0.47
12:AL:1105:G:H5"	18:i:390:ASN:HB3	1.96	0.47
12:AL:1222:U:H5"	12:AL:1223:A:H5'	1.97	0.47
12:AL:1302:U:O4'	12:AL:1302:U:O2	2.32	0.47
12:AL:1348:U:H4'	12:AL:1349:A:O5'	2.14	0.47
12:AL:1429:A:N7	29:t:72:THR:CA	2.76	0.47
12:AL:1440:G:H2'	12:AL:1441:U:C6	2.50	0.47
12:AL:1582:C:H2'	12:AL:1583:G:C8	2.50	0.47
12:AL:1615:G:OP1	26:q:213:LYS:CD	2.62	0.47
13:AM:76:A:H2	46:A:2688:G:C6	2.10	0.47
14:AN:1:A:N3	27:r:72:LYS:O	2.47	0.47
16:g:2:THR:O	16:g:3:LEU:C	2.58	0.47
17:h:132:LEU:HD11	17:h:145:GLU:HB3	1.97	0.47
17:h:144:GLN:HE21	24:o:119:GLN:HG3	1.80	0.47
17:h:194:HIS:CE1	17:h:195:LEU:HG	2.49	0.47
17:h:256:LYS:HE2	24:o:59:GLU:OE1	2.15	0.47
18:i:228:ASP:HB2	18:i:232:TYR:HE2	1.80	0.47
19:j:59:HIS:HB3	19:j:119:ARG:HE	1.79	0.47
21:l:46:GLY:HA2	21:l:65:TYR:CZ	2.50	0.47
21:l:47:ILE:HG12	21:l:65:TYR:CD2	2.49	0.47
21:l:67:PHE:HE2	21:l:69:MET:HE3	1.79	0.47
22:m:128:GLU:O	22:m:132:THR:HG23	2.14	0.47
22:m:226:ALA:O	22:m:227:PHE:C	2.58	0.47
24:o:164:THR:O	24:o:165:ALA:C	2.57	0.47
25:p:41:LEU:HD11	25:p:112:ARG:HB3	1.95	0.47
25:p:56:ASP:OD1	25:p:109:ARG:NH1	2.48	0.47
25:p:71:ILE:O	25:p:72:PRO:C	2.57	0.47
28:s:3:VAL:O	28:s:10:PHE:N	2.45	0.47
28:s:68:GLU:C	28:s:70:ASP:N	2.72	0.47
29:t:90:ASP:HB2	29:t:91:PHE:CD2	2.49	0.47
30:u:269:LYS:O	30:u:270:VAL:C	2.57	0.47
32:w:22:VAL:HG21	32:w:58:VAL:CG2	2.45	0.47
32:w:164:LEU:HD13	32:w:164:LEU:O	2.15	0.47
32:w:197:ASP:OD1	32:w:197:ASP:N	2.45	0.47
34:y:33:ILE:O	34:y:35:THR:HG23	2.14	0.47
35:z:131:GLY:O	35:z:134:ARG:HG2	2.14	0.47
36:0:73:ARG:CB	46:A:3093:U:C6	2.89	0.47
37:1:361:VAL:CG2	63:R:144:GLU:CG	2.93	0.47
41:5:203:TRP:CZ3	41:5:260:VAL:HG23	2.50	0.47
43:7:91:THR:HG23	43:7:135:VAL:HG22	1.97	0.47
46:A:9:U:C2'	46:A:10:A:H5'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:44:U:O2'	46:A:45:U:P	2.73	0.47
46:A:47:A:C2	46:A:423:A:C8	3.03	0.47
46:A:56:U:H2'	46:A:57:C:H6	1.80	0.47
46:A:125:U:O5'	46:A:125:U:H6	1.98	0.47
46:A:153:G:H3'	46:A:154:U:C6	2.49	0.47
46:A:168:A:N6	46:A:210:U:H3	2.12	0.47
46:A:235:A:C2	46:A:238:C:C4	3.02	0.47
46:A:339:A:C2	46:A:340:A:C4	3.02	0.47
46:A:346:G:C6	46:A:347:A:C5	3.03	0.47
46:A:474:A:C2	46:A:475:U:C6	3.03	0.47
46:A:564:A:H4'	46:A:565:A:H5'	1.96	0.47
46:A:649:C:O2	46:A:1881:A:H2	1.98	0.47
46:A:707:A:H2'	46:A:708:U:H6	1.78	0.47
46:A:788:C:H4'	46:A:789:A:H5"	1.97	0.47
46:A:789:A:N7	46:A:840:C:C4	2.83	0.47
46:A:817:G:H3'	46:A:818:U:C5	2.50	0.47
46:A:1059:A:C4	46:A:1060:U:C5	3.03	0.47
46:A:1163:A:C6	46:A:1164:U:C4	3.02	0.47
46:A:1351:A:C5	46:A:1555:A:C8	3.03	0.47
46:A:1395:U:H2'	46:A:1396:A:H8	1.75	0.47
46:A:1431:U:H2'	46:A:1432:A:H8	1.77	0.47
46:A:1438:U:C2	46:A:1482:A:N6	2.83	0.47
46:A:1439:A:C3'	46:A:1440:U:H6	2.26	0.47
46:A:1656:G:O2'	46:A:1657:A:H5'	2.15	0.47
46:A:1672:G:H2'	46:A:1673:U:C6	2.50	0.47
46:A:1702:C:H2'	46:A:1703:U:H6	1.78	0.47
46:A:1761:A:C5	46:A:1790:A:C6	3.02	0.47
46:A:2075:U:N3	46:A:2076:A:N6	2.61	0.47
46:A:2260:A:O2'	46:A:2261:A:H5'	2.15	0.47
46:A:2362:U:OP1	72:b:154:ILE:O	2.31	0.47
46:A:2469:U:H6	46:A:2469:U:OP2	1.98	0.47
46:A:2613:A:H4'	46:A:2614:U:OP2	2.15	0.47
46:A:2667:A:C5	46:A:2668:C:C5	3.03	0.47
46:A:2942:A:H2'	46:A:2943:U:C6	2.49	0.47
46:A:2949:C:H2'	46:A:2950:A:H8	1.79	0.47
46:A:3081:U:O2	51:F:176:GLN:OE1	2.32	0.47
47:B:251:ILE:CG2	47:B:272:TYR:HB2	2.44	0.47
50:E:251:ALA:HB3	67:V:63:TYR:CD1	2.50	0.47
63:R:42:SER:O	63:R:43:ALA:C	2.58	0.47
63:R:77:VAL:HG22	63:R:86:PHE:O	2.14	0.47
63:R:215:ARG:HD3	63:R:255:ASN:CB	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:224:GLU:O	63:R:225:GLU:C	2.56	0.47
63:R:283:LEU:O	63:R:284:GLU:C	2.56	0.47
69:X:40:ASP:O	69:X:41:PRO:C	2.58	0.47
75:e:132:LEU:HD13	75:e:170:LYS:HB2	1.97	0.47
3:AC:49:LEU:O	3:AC:53:THR:HG23	2.14	0.47
5:AE:51:PHE:HB2	5:AE:97:LEU:HG	1.54	0.47
5:AE:143:GLN:HA	5:AE:183:HIS:HB3	1.96	0.47
5:AE:215:TRP:C	5:AE:217:LYS:H	2.23	0.47
5:AE:279:LEU:CD2	5:AE:315:TYR:CB	2.92	0.47
7:AG:41:LYS:HE2	23:n:79:TYR:O	2.15	0.47
8:AH:91:SER:O	8:AH:94:LYS:N	2.48	0.47
8:AH:100:ALA:CA	12:AL:143:A:P	3.01	0.47
11:AK:152:ARG:HE	20:k:62:PHE:HE2	1.61	0.47
11:AK:222:LEU:HB2	11:AK:258:LEU:HD21	1.96	0.47
12:AL:664:G:H3'	12:AL:665:U:H6	1.80	0.47
12:AL:721:U:H5"	30:u:157:VAL:HG11	1.97	0.47
12:AL:1179:U:O4'	24:o:164:THR:OG1	2.32	0.47
15:Z:37:LEU:HD22	15:Z:54:LEU:HD22	1.97	0.47
16:g:18:ASN:OD1	16:g:18:ASN:N	2.47	0.47
16:g:200:ILE:HD12	16:g:287:LYS:HE2	1.80	0.47
18:i:192:CYS:HB2	18:i:203:VAL:O	2.14	0.47
25:p:93:PHE:CD2	25:p:94:VAL:HG23	2.49	0.47
32:w:41:ARG:NH1	32:w:42:ASP:O	2.48	0.47
33:x:120:LYS:O	33:x:123:ARG:HG2	2.15	0.47
36:0:73:ARG:C	46:A:3093:U:C6	2.93	0.47
38:2:81:GLN:NE2	46:A:2475:U:O2'	2.48	0.47
41:5:198:HIS:HB2	46:A:445:U:H5'	1.96	0.47
42:6:207:ILE:CD1	42:6:236:ILE:HD13	2.44	0.47
46:A:243:A:C6	46:A:244:A:N6	2.83	0.47
46:A:276:U:H2'	46:A:277:U:H6	1.79	0.47
46:A:450:U:H2'	46:A:451:A:C8	2.49	0.47
46:A:454:A:N3	46:A:1921:A:C6	2.83	0.47
46:A:506:A:C6	46:A:507:A:C5	3.03	0.47
46:A:603:U:H6	46:A:603:U:O5'	1.97	0.47
46:A:639:G:C8	60:O:249:ALA:CB	2.97	0.47
46:A:790:A:C6	46:A:791:U:C4	3.03	0.47
46:A:872:G:H2'	46:A:873:A:C8	2.50	0.47
46:A:965:U:H2'	46:A:966:A:O4'	2.15	0.47
46:A:1132:U:H6	46:A:1132:U:O5'	1.98	0.47
46:A:1276:U:H2'	46:A:1277:U:C6	2.49	0.47
46:A:1299:G:O2'	46:A:1300:U:P	2.73	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1738:A:O2'	46:A:1739:C:H5'	2.13	0.47
46:A:2333:A:H5'	46:A:2334:U:OP2	2.15	0.47
46:A:2782:A:O2'	46:A:2783:U:H5'	2.13	0.47
46:A:2799:A:C2'	46:A:2800:A:H5'	2.45	0.47
46:A:2807:G:H2'	46:A:2808:A:O4'	2.14	0.47
46:A:2843:G:C8	46:A:2845:G:H2'	2.50	0.47
46:A:2911:U:H2'	46:A:2912:C:O4'	2.13	0.47
46:A:2969:U:C2	46:A:2970:A:C8	3.03	0.47
46:A:3018:A:C5	46:A:3019:U:C4	3.02	0.47
46:A:3290:A:N7	46:A:3291:U:N3	2.63	0.47
57:L:148:LEU:HD21	57:L:169:ASN:HB2	1.97	0.47
63:R:267:HIS:CE1	63:R:270:ILE:HD13	2.49	0.47
3:AC:55:GLY:HA3	7:AG:143:PRO:CG	2.36	0.47
3:AC:114:GLU:HA	3:AC:253:TRP:CD1	2.50	0.47
3:AC:228:ASP:OD2	4:AD:277:PRO:HG2	2.10	0.47
4:AD:209:ASN:C	4:AD:211:SER:H	2.22	0.47
4:AD:258:LYS:HD3	4:AD:258:LYS:HA	1.68	0.47
6:AF:177:LEU:HB3	6:AF:181:ARG:HG2	1.97	0.47
7:AG:90:ARG:NH1	12:AL:917:U:OP2	2.47	0.47
7:AG:220:TRP:HH2	33:x:41:ILE:HD12	1.72	0.47
9:AI:148:ILE:HG23	9:AI:391:VAL:CG2	2.45	0.47
11:AK:104:ILE:CD1	18:i:171:TYR:CE2	2.97	0.47
11:AK:172:TYR:CZ	25:p:115:ASP:CB	2.87	0.47
12:AL:786:U:H4'	33:x:110:GLN:O	2.15	0.47
12:AL:1274:A:H4'	12:AL:1420:A:N3	2.30	0.47
12:AL:1279:A:O3'	12:AL:1280:U:H4'	2.15	0.47
15:Z:39:GLN:OE1	22:m:241:ARG:CD	2.63	0.47
19:j:121:ALA:O	19:j:125:ILE:HG13	2.15	0.47
21:l:123:LEU:C	21:l:126:GLU:HB3	2.39	0.47
22:m:137:ALA:O	22:m:141:VAL:HG23	2.14	0.47
26:q:180:ILE:CG2	35:z:117:PHE:CD2	2.98	0.47
26:q:192:VAL:O	26:q:193:LYS:C	2.56	0.47
27:r:71:LYS:HD3	27:r:119:PRO:HB3	1.96	0.47
30:u:94:ASN:ND2	30:u:96:GLU:HB2	2.30	0.47
31:v:12:ARG:HD2	31:v:19:PRO:HB2	1.97	0.47
35:z:106:ILE:O	35:z:107:ILE:C	2.58	0.47
42:6:94:TRP:CH2	46:A:2334:U:N3	2.83	0.47
44:8:189:ILE:HG22	44:8:194:LEU:HD23	1.96	0.47
46:A:119:A:N6	65:T:154:HIS:HA	2.30	0.47
46:A:147:C:H2'	46:A:148:U:C6	2.50	0.47
46:A:166:U:H2'	46:A:166:U:O2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:175:U:C2	46:A:204:A:N1	2.83	0.47
46:A:213:U:H2'	46:A:214:A:H5"	1.97	0.47
46:A:220:A:H2'	46:A:220:A:N3	2.29	0.47
46:A:275:A:C4	46:A:276:U:C5	3.03	0.47
46:A:336:A:OP1	64:S:120:ALA:HB3	2.15	0.47
46:A:771:U:H2'	46:A:772:A:H8	1.80	0.47
46:A:945:A:H2	51:F:47:ARG:HB2	1.73	0.47
46:A:976:A:C2	75:e:175:VAL:CG2	2.98	0.47
46:A:1488:U:C4	46:A:1489:U:C4	3.03	0.47
46:A:1583:G:H8	46:A:1583:G:OP2	1.98	0.47
46:A:1641:A:H2'	46:A:1642:A:C8	2.50	0.47
46:A:1792:A:H2'	46:A:1793:U:C6	2.50	0.47
46:A:2029:A:O2'	46:A:2030:U:OP2	2.28	0.47
46:A:2318:U:H2'	46:A:2318:U:O2	2.15	0.47
46:A:2576:A:C6	46:A:2577:A:C6	3.03	0.47
46:A:2812:G:C6	46:A:2813:U:C4	3.03	0.47
46:A:3080:A:C6	46:A:3098:A:C5	3.03	0.47
47:B:210:ARG:HA	47:B:242:PRO:HD3	1.97	0.47
47:B:318:LEU:HA	47:B:323:ARG:HD2	1.97	0.47
50:E:189:HIS:CD2	67:V:21:ARG:NE	2.83	0.47
60:O:168:TYR:CE1	61:P:207:LYS:HA	2.49	0.47
63:R:176:LEU:O	63:R:180:LEU:HB2	2.15	0.47
3:AC:198:LYS:HA	3:AC:198:LYS:HD2	1.36	0.47
4:AD:208:PHE:HB3	4:AD:267:TYR:CE2	2.50	0.47
5:AE:111:PRO:HA	5:AE:153:ILE:C	2.40	0.47
5:AE:190:MET:CG	5:AE:283:THR:HG21	2.39	0.47
8:AH:16:PRO:HG2	31:v:36:PRO:O	2.15	0.47
8:AH:19:ARG:NH2	12:AL:233:C:OP2	2.33	0.47
9:AI:179:TYR:CE1	9:AI:181:GLU:HB3	2.50	0.47
12:AL:631:G:C8	12:AL:645:U:C4	3.03	0.47
12:AL:654:G:C6	12:AL:655:A:C5	3.02	0.47
12:AL:848:A:H2'	12:AL:849:C:C6	2.50	0.47
12:AL:912:A:H1'	12:AL:913:U:OP1	2.14	0.47
12:AL:1032:A:H5"	24:o:275:TRP:CZ2	2.45	0.47
12:AL:1203:C:O2'	12:AL:1204:U:H5'	2.15	0.47
12:AL:1642:U:C5'	16:g:44:TYR:CD2	2.80	0.47
15:Z:51:CYS:O	15:Z:52:ALA:C	2.58	0.47
16:g:89:ARG:HA	16:g:92:GLU:HB3	1.97	0.47
16:g:250:PHE:N	33:x:55:TYR:CE1	2.57	0.47
19:j:49:LYS:HD3	19:j:50:GLN:HE22	1.79	0.47
19:j:124:PHE:CE1	19:j:156:LYS:HD2	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:q:215:ARG:O	26:q:217:LEU:N	2.43	0.47
27:r:104:GLU:O	27:r:105:HIS:CB	2.62	0.47
27:r:116:GLN:N	27:r:116:GLN:OE1	2.48	0.47
28:s:24:PHE:HB2	28:s:27:ILE:HG23	1.97	0.47
29:t:42:LYS:HD3	29:t:46:ARG:HH12	1.80	0.47
30:u:82:GLU:CG	32:w:107:PHE:CE1	2.96	0.47
30:u:153:ILE:HD11	30:u:187:ASN:ND2	2.30	0.47
35:z:131:GLY:HA2	35:z:134:ARG:HE	1.79	0.47
40:4:16:VAL:HG11	59:N:71:GLY:HA2	1.97	0.47
43:7:96:ILE:HG21	43:7:100:VAL:HG12	1.97	0.47
46:A:315:A:N6	46:A:339:A:H3'	2.30	0.47
46:A:352:A:H2'	46:A:353:A:C8	2.49	0.47
46:A:457:G:OP1	53:H:117:LYS:HB2	2.15	0.47
46:A:831:A:H2'	46:A:832:U:H6	1.80	0.47
46:A:900:A:C2	46:A:915:G:N3	2.83	0.47
46:A:1260:U:C2	46:A:1261:U:C5	3.03	0.47
46:A:1610:A:C2'	46:A:1611:A:H5'	2.45	0.47
46:A:1647:G:H3'	46:A:1647:G:N3	2.30	0.47
46:A:2057:U:OP2	46:A:2057:U:H2'	2.15	0.47
46:A:2722:G:O3'	73:c:13:GLY:N	2.48	0.47
46:A:2847:U:C5	46:A:2848:G:C6	3.03	0.47
46:A:2917:U:C2	46:A:2918:A:C8	3.02	0.47
46:A:3059:C:H2'	46:A:3060:U:O4'	2.15	0.47
46:A:3119:A:C4'	48:C:125:HIS:HA	2.45	0.47
46:A:3124:A:H4'	46:A:3125:U:OP1	2.14	0.47
46:A:3150:U:H1'	46:A:3151:A:OP1	2.14	0.47
46:A:3248:C:C2	46:A:3249:U:C5	3.02	0.47
47:B:153:ARG:HH11	47:B:153:ARG:HG3	1.80	0.47
49:D:200:ILE:HD11	49:D:205:VAL:CG2	2.45	0.47
50:E:30:HIS:HA	63:R:122:PHE:HE1	1.79	0.47
51:F:167:SER:HB2	75:e:213:LEU:O	2.15	0.47
55:J:155:LEU:HB3	55:J:190:LEU:HD23	1.97	0.47
63:R:258:THR:O	63:R:258:THR:OG1	2.31	0.47
69:X:13:LEU:HB3	69:X:49:PHE:HB3	1.96	0.47
75:e:54:ILE:CG1	75:e:105:TYR:HB2	2.45	0.47
3:AC:151:GLY:C	3:AC:226:LEU:HB2	2.40	0.46
5:AE:94:VAL:C	12:AL:1542:A:O5'	2.50	0.46
5:AE:107:TYR:C	5:AE:109:VAL:N	2.71	0.46
5:AE:255:LEU:HB3	5:AE:300:PHE:CG	2.50	0.46
6:AF:127:ASN:O	6:AF:128:ILE:C	2.57	0.46
6:AF:153:LEU:HD12	6:AF:157:ILE:HG12	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:199:LEU:HD13	8:AH:203:TYR:CD1	2.49	0.46
10:AJ:93:LYS:CD	12:AL:1058:G:O6	2.57	0.46
11:AK:169:ARG:HB3	25:p:70:GLY:C	2.40	0.46
11:AK:218:LYS:HE3	11:AK:270:PHE:HD2	1.80	0.46
11:AK:292:TYR:CG	24:o:180:GLY:CA	2.98	0.46
12:AL:417:U:H2'	12:AL:418:A:H8	1.80	0.46
12:AL:522:A:N7	12:AL:527:G:C6	2.84	0.46
12:AL:719:G:HO2'	30:u:177:GLN:CD	2.17	0.46
12:AL:788:U:OP1	33:x:111:HIS:NE2	2.47	0.46
12:AL:837:A:H2'	12:AL:838:G:C8	2.50	0.46
12:AL:1442:G:H4'	22:m:125:GLY:HA2	1.97	0.46
18:i:148:LYS:HB2	18:i:202:LYS:HB2	1.97	0.46
18:i:179:LEU:O	18:i:183:MET:HG2	2.15	0.46
20:k:175:LYS:HA	20:k:252:CYS:O	2.15	0.46
21:l:48:ARG:HH21	33:x:137:LEU:CD2	2.28	0.46
21:l:114:SER:O	21:l:116:GLY:N	2.48	0.46
23:n:127:ILE:HD11	23:n:153:ARG:HH11	1.80	0.46
25:p:82:ARG:O	25:p:105:HIS:HA	2.15	0.46
27:r:58:ARG:O	27:r:110:VAL:N	2.44	0.46
28:s:87:SER:O	28:s:88:TYR:C	2.58	0.46
30:u:196:ARG:NH1	30:u:261:LYS:HE3	2.29	0.46
46:A:253:A:H5'	64:S:31:LYS:O	2.14	0.46
46:A:300:A:C6	46:A:301:A:N7	2.83	0.46
46:A:632:U:H2'	46:A:633:G:H8	1.80	0.46
46:A:756:A:N1	46:A:766:U:N3	2.62	0.46
46:A:863:A:O2'	46:A:864:A:H5'	2.15	0.46
46:A:900:A:C6	46:A:1220:G:C5	3.03	0.46
46:A:937:U:C2	46:A:938:A:N7	2.82	0.46
46:A:966:A:C6	46:A:1059:A:C6	3.02	0.46
46:A:1267:A:C6	46:A:1268:U:C4	3.03	0.46
46:A:2016:A:C4'	46:A:2017:G:N2	2.78	0.46
46:A:2259:U:C2	46:A:2260:A:C8	3.03	0.46
46:A:2270:U:H2'	46:A:2271:U:O4'	2.15	0.46
46:A:2276:G:H22	56:K:128:MET:CG	2.24	0.46
46:A:2278:G:O2'	46:A:2279:G:H5'	2.16	0.46
46:A:2354:A:H2'	46:A:2355:U:C6	2.50	0.46
46:A:2611:U:P	69:X:37:VAL:HG11	2.51	0.46
46:A:2623:A:H5"	63:R:46:ARG:HG2	1.97	0.46
46:A:2932:A:C2	46:A:2933:C:C5	3.03	0.46
47:B:155:ILE:HD12	47:B:195:ILE:HG13	1.97	0.46
47:B:311:ILE:HD12	47:B:311:ILE:N	2.24	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:57:VAL:HB	63:R:58:SER:H	1.59	0.46
63:R:117:LEU:HD23	63:R:117:LEU:HA	1.57	0.46
63:R:259:SER:HB3	63:R:268:GLN:C	2.40	0.46
63:R:292:LEU:HD11	63:R:301:ILE:CG1	2.46	0.46
63:R:325:LEU:O	63:R:326:LYS:C	2.56	0.46
3:AC:191:ILE:CG2	4:AD:222:GLN:OE1	2.45	0.46
3:AC:219:MET:HG2	17:h:149:ARG:NH2	2.30	0.46
4:AD:168:PHE:HB2	4:AD:170:TRP:HE1	1.79	0.46
5:AE:68:PRO:HB2	5:AE:69:LYS:HD3	1.96	0.46
5:AE:223:ASN:ND2	5:AE:251:VAL:HG21	2.22	0.46
7:AG:10:VAL:HG13	17:h:339:ARG:HA	1.97	0.46
8:AH:187:LEU:HD13	8:AH:187:LEU:HA	1.79	0.46
9:AI:127:ARG:N	9:AI:131:THR:HG23	2.30	0.46
9:AI:149:THR:O	9:AI:156:LYS:HG2	2.15	0.46
9:AI:393:LYS:NZ	24:o:182:GLN:HG3	2.15	0.46
10:AJ:53:ILE:HG21	29:t:14:PRO:HB2	1.98	0.46
11:AK:106:LYS:HG2	11:AK:114:GLY:HA3	1.97	0.46
11:AK:162:LEU:O	25:p:68:TYR:CB	2.62	0.46
12:AL:988:A:C6	12:AL:989:C:C4	3.03	0.46
12:AL:1308:U:H5’	12:AL:1310:U:C5	2.50	0.46
13:AM:64:G:H2’	13:AM:64:G:N3	2.30	0.46
14:AN:4:A:H3’	14:AN:5:C:C5’	2.46	0.46
16:g:12:ILE:HD12	17:h:195:LEU:CD2	2.13	0.46
19:j:55:TYR:HE1	19:j:111:ARG:HH22	1.63	0.46
22:m:87:LYS:HD3	22:m:87:LYS:O	2.15	0.46
26:q:101:HIS:C	26:q:103:ASN:N	2.73	0.46
28:s:64:THR:OG1	28:s:65:MET:SD	2.73	0.46
28:s:86:GLY:O	34:y:76:PHE:HD1	1.98	0.46
29:t:39:LYS:O	29:t:40:SER:C	2.58	0.46
32:w:146:GLU:HA	32:w:149:GLN:CD	2.39	0.46
32:w:181:SER:HA	32:w:184:ASP:OD2	2.15	0.46
41:5:172:ILE:HD13	45:9:110:LEU:HD12	1.98	0.46
46:A:26:A:N1	71:a:112:TYR:C	2.73	0.46
46:A:208:A:H2’	46:A:209:U:C6	2.48	0.46
46:A:246:U:O2’	46:A:247:A:H5’	2.16	0.46
46:A:373:U:H2’	46:A:374:U:H6	1.80	0.46
46:A:1110:A:H61	51:F:42:ILE:HD11	1.81	0.46
46:A:1389:U:C2	46:A:1390:A:C8	3.03	0.46
46:A:1486:U:C2	46:A:1487:A:C8	3.03	0.46
46:A:1524:U:H2’	46:A:1525:A:C8	2.49	0.46
46:A:1724:A:H62	47:B:154:LEU:CD1	2.26	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1782:A:H3'	46:A:1783:U:H6	1.81	0.46
46:A:2024:A:C4	46:A:2074:A:N7	2.83	0.46
46:A:2084:G:H2'	46:A:2085:A:C8	2.50	0.46
46:A:2216:U:H3	46:A:2232:A:N6	2.12	0.46
46:A:2475:U:C2	46:A:2476:C:C5	3.03	0.46
46:A:2772:U:O2'	46:A:2773:C:OP1	2.31	0.46
46:A:2799:A:O2'	46:A:2800:A:H5'	2.15	0.46
46:A:2910:A:C4	46:A:2911:U:C6	3.03	0.46
46:A:2978:A:H2'	46:A:2979:U:C6	2.49	0.46
46:A:3107:U:H2'	46:A:3108:U:H6	1.79	0.46
63:R:155:LYS:NZ	72:b:157:PHE:CE2	2.82	0.46
76:f:81:LEU:HG	76:f:115:LEU:HD22	1.98	0.46
3:AC:78:ASN:N	7:AG:190:ALA:HB2	2.28	0.46
3:AC:185:LEU:HG	7:AG:197:PHE:HA	1.97	0.46
4:AD:258:LYS:O	4:AD:260:PHE:N	2.49	0.46
4:AD:305:VAL:HA	4:AD:308:ARG:HB2	1.97	0.46
6:AF:329:LYS:HE3	12:AL:300:A:O3'	2.15	0.46
7:AG:11:LEU:HG	7:AG:12:GLN:N	2.31	0.46
7:AG:90:ARG:NH2	12:AL:917:U:OP1	2.48	0.46
9:AI:210:ARG:NE	12:AL:1348:U:C2	2.82	0.46
9:AI:351:THR:O	12:AL:1280:U:OP2	2.33	0.46
12:AL:39:A:H2'	12:AL:40:G:C8	2.51	0.46
12:AL:147:A:N6	12:AL:225:U:H3	2.05	0.46
12:AL:410:G:C6	12:AL:411:A:C5	3.03	0.46
12:AL:988:A:C5	12:AL:989:C:C5	3.03	0.46
12:AL:1343:U:C4'	28:s:13:LYS:HD2	2.43	0.46
12:AL:1380:A:H5"	34:y:10:ARG:O	2.14	0.46
12:AL:1414:A:C5'	24:o:270:ARG:NH1	2.77	0.46
12:AL:1515:A:H3'	12:AL:1516:U:C6	2.51	0.46
12:AL:1644:C:C4	17:h:171:HIS:HB2	2.50	0.46
13:AM:32:C:H2'	13:AM:35:A:N1	2.31	0.46
14:AN:1:A:C1'	27:r:72:LYS:HB2	2.44	0.46
16:g:231:ILE:HG12	16:g:278:PHE:CZ	2.47	0.46
18:i:182:ILE:O	18:i:191:LEU:N	2.36	0.46
22:m:239:ALA:O	22:m:240:HIS:HB2	2.14	0.46
25:p:64:ARG:C	25:p:66:GLY:N	2.72	0.46
28:s:10:PHE:HB2	28:s:47:MET:HG2	1.98	0.46
29:t:11:LYS:H	29:t:11:LYS:CD	2.21	0.46
29:t:111:LYS:HB2	29:t:111:LYS:HE3	1.58	0.46
30:u:109:LYS:HE3	30:u:131:LEU:HD11	1.97	0.46
31:v:24:VAL:HG12	31:v:39:VAL:HG13	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:w:22:VAL:HG21	32:w:58:VAL:HG21	1.97	0.46
32:w:85:PHE:O	32:w:86:ALA:C	2.55	0.46
38:2:137:PRO:HA	67:V:55:SER:N	2.31	0.46
41:5:236:LEU:HD13	61:P:246:LEU:CD2	2.43	0.46
42:6:255:ALA:HB3	42:6:257:LEU:HD11	1.96	0.46
46:A:44:U:O5'	46:A:44:U:H6	1.98	0.46
46:A:99:U:C5'	49:D:136:PRO:HG3	2.46	0.46
46:A:106:A:C2	46:A:220:A:C6	3.04	0.46
46:A:646:C:H2'	46:A:647:A:H8	1.80	0.46
46:A:947:G:C5	46:A:1107:U:C5	3.03	0.46
46:A:1109:A:C4	51:F:44:ARG:CZ	2.98	0.46
46:A:1855:U:C4	46:A:2819:U:H1'	2.50	0.46
46:A:1870:A:H4'	46:A:1871:U:OP1	2.15	0.46
46:A:2205:G:C5	46:A:2206:U:C4	3.03	0.46
46:A:2470:A:H8	46:A:2470:A:H5'	1.81	0.46
46:A:2645:A:C5	46:A:2646:G:H1'	2.51	0.46
46:A:2979:U:H2'	46:A:2979:U:O2	2.14	0.46
46:A:3276:U:C2	46:A:3277:A:C8	3.03	0.46
47:B:82:ARG:HD3	47:B:82:ARG:HA	1.63	0.46
57:L:111:LEU:HD22	68:W:118:MET:HE1	1.96	0.46
63:R:156:PRO:O	63:R:157:ASN:C	2.59	0.46
63:R:242:GLU:CA	63:R:245:SER:HB3	2.43	0.46
63:R:308:ALA:C	63:R:310:ASN:N	2.69	0.46
76:f:76:PRO:O	76:f:77:THR:C	2.59	0.46
3:AC:62:TYR:HE2	17:h:163:THR:HG22	1.78	0.46
4:AD:20:GLU:O	4:AD:21:HIS:C	2.58	0.46
4:AD:33:SER:O	4:AD:34:ILE:C	2.57	0.46
4:AD:44:ARG:HD2	4:AD:44:ARG:HA	1.69	0.46
5:AE:32:THR:HA	5:AE:35:ARG:HE	1.81	0.46
5:AE:216:LYS:C	5:AE:216:LYS:HD2	2.40	0.46
5:AE:271:LEU:HB3	5:AE:304:TYR:OH	2.15	0.46
6:AF:58:MET:CE	19:j:30:LYS:HB3	2.45	0.46
6:AF:336:PHE:HE2	19:j:142:TYR:HD1	1.56	0.46
6:AF:337:ASN:N	6:AF:341:GLN:O	2.32	0.46
9:AI:127:ARG:HD2	9:AI:394:LEU:CD2	2.45	0.46
9:AI:141:HIS:CG	9:AI:142:PRO:HD2	2.51	0.46
9:AI:187:ARG:C	28:s:42:TYR:CD2	2.94	0.46
11:AK:134:PHE:HE1	20:k:110:VAL:HG21	1.76	0.46
12:AL:102:G:N2	12:AL:155:A:N1	2.63	0.46
12:AL:320:C:O2	12:AL:357:A:H2	1.98	0.46
12:AL:351:A:H1'	58:M:166:ARG:HH11	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:674:A:C6	12:AL:676:G:C5	3.03	0.46
12:AL:674:A:N6	12:AL:676:G:C6	2.84	0.46
12:AL:724:U:N3	12:AL:725:A:N7	2.64	0.46
12:AL:844:C:H5'	26:q:210:ARG:O	2.15	0.46
12:AL:905:A:H2	12:AL:912:A:H61	1.63	0.46
15:Z:55:VAL:CG1	22:m:163:LEU:HD13	2.36	0.46
15:Z:88:ARG:HH21	16:g:74:ILE:CG2	2.24	0.46
17:h:144:GLN:NE2	24:o:119:GLN:HB3	2.31	0.46
17:h:154:SER:O	17:h:155:MET:C	2.59	0.46
17:h:263:ALA:HB1	17:h:268:GLY:C	2.40	0.46
18:i:107:MET:HE3	18:i:107:MET:HB3	1.72	0.46
21:l:129:GLN:O	21:l:130:SER:C	2.58	0.46
22:m:224:SER:C	22:m:226:ALA:N	2.74	0.46
24:o:233:LYS:O	24:o:236:VAL:HB	2.15	0.46
25:p:48:ARG:HG2	25:p:108:LYS:HG2	1.98	0.46
27:r:35:LYS:HZ1	32:w:37:LEU:HD22	1.80	0.46
42:6:56:GLU:O	42:6:60:MET:N	2.49	0.46
46:A:451:A:O2'	46:A:452:U:H5'	2.16	0.46
46:A:675:G:C6	47:B:341:CYS:SG	3.07	0.46
46:A:746:A:O3'	46:A:747:U:H6	1.98	0.46
46:A:790:A:H2'	46:A:791:U:C6	2.51	0.46
46:A:799:U:C2	46:A:800:A:C8	3.03	0.46
46:A:835:A:C8	46:A:838:C:N4	2.83	0.46
46:A:859:U:C2	46:A:860:A:C8	3.03	0.46
46:A:1252:G:C6	46:A:1253:U:C4	3.03	0.46
46:A:1494:A:H2'	46:A:1495:U:C6	2.50	0.46
46:A:1705:U:H1'	46:A:1709:G:H21	1.79	0.46
46:A:1809:C:H2'	46:A:1810:C:O4'	2.15	0.46
46:A:2063:A:C2	46:A:2064:G:H1'	2.50	0.46
46:A:2075:U:H2'	46:A:2076:A:H8	1.76	0.46
46:A:2216:U:C2	46:A:2217:A:C8	3.04	0.46
46:A:2305:A:N3	46:A:2305:A:H5"	2.31	0.46
46:A:2472:C:H2'	46:A:2473:U:H6	1.79	0.46
46:A:2672:G:H8	46:A:2672:G:OP2	1.99	0.46
46:A:2739:U:O4	46:A:2740:A:N6	2.48	0.46
46:A:2869:A:N3	46:A:2869:A:H2'	2.29	0.46
46:A:2911:U:H2'	46:A:2912:C:C6	2.50	0.46
46:A:2915:A:H2'	46:A:2916:U:C6	2.51	0.46
55:J:81:PRO:HB2	59:N:140:ARG:HA	1.97	0.46
60:O:163:VAL:HG13	60:O:267:LEU:HB2	1.98	0.46
62:Q:103:THR:HG22	62:Q:119:MET:HG3	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:222:LEU:O	63:R:226:GLU:HG2	2.16	0.46
63:R:259:SER:HB2	63:R:269:TYR:HD1	1.81	0.46
3:AC:68:LEU:CD1	12:AL:1639:A:N7	2.78	0.46
3:AC:78:ASN:N	7:AG:190:ALA:HB1	2.30	0.46
3:AC:234:ASP:O	3:AC:235:TYR:C	2.58	0.46
4:AD:130:PRO:HB2	4:AD:139:GLN:HB2	1.97	0.46
4:AD:233:GLU:HG2	4:AD:234:ALA:N	2.31	0.46
6:AF:31:ARG:CD	12:AL:625:A:OP2	2.64	0.46
6:AF:339:LEU:HD23	31:v:52:LYS:NZ	2.26	0.46
7:AG:28:ALA:O	7:AG:30:TYR:N	2.47	0.46
9:AI:58:LYS:HE3	12:AL:1341:U:H5	1.07	0.46
11:AK:134:PHE:CE2	20:k:112:LEU:HA	2.50	0.46
12:AL:98:A:C3'	12:AL:99:U:H5"	2.45	0.46
12:AL:181:A:H4'	12:AL:182:A:H2'	1.98	0.46
12:AL:508:C:OP1	19:j:165:LYS:CB	2.59	0.46
12:AL:524:A:C6	12:AL:525:A:C6	3.04	0.46
12:AL:712:A:H2'	12:AL:713:U:C6	2.50	0.46
12:AL:831:A:H2'	12:AL:832:A:H8	1.81	0.46
12:AL:834:A:H2'	12:AL:835:C:C6	2.50	0.46
12:AL:1184:U:H4'	20:k:51:ASN:HB2	1.98	0.46
12:AL:1395:A:H5"	12:AL:1396:U:C5	2.50	0.46
12:AL:1428:U:P	29:t:76:ASN:HD22	2.38	0.46
16:g:85:TRP:HD1	16:g:86:ASN:H	1.62	0.46
17:h:332:LEU:O	17:h:336:ILE:HG13	2.15	0.46
18:i:100:TYR:CE1	25:p:139:LYS:CB	2.90	0.46
19:j:144:LEU:HB2	19:j:452:TYR:CD2	2.50	0.46
20:k:151:MET:HE3	20:k:151:MET:HB2	1.73	0.46
21:l:88:ASP:O	21:l:89:PRO:C	2.57	0.46
22:m:126:LYS:HB3	22:m:129:LYS:HG3	1.97	0.46
22:m:228:GLU:CD	22:m:229:LYS:N	2.73	0.46
26:q:106:LEU:H	26:q:106:LEU:HG	1.51	0.46
33:x:135:ILE:O	33:x:137:LEU:N	2.49	0.46
39:3:24:TYR:CD2	46:A:1911:U:H4'	2.49	0.46
41:5:203:TRP:CH2	41:5:260:VAL:HG23	2.51	0.46
46:A:35:U:O2	46:A:3270:A:H2	1.99	0.46
46:A:344:A:C4	46:A:345:G:C8	3.03	0.46
46:A:703:U:O2'	46:A:704:U:H5'	2.15	0.46
46:A:844:A:H2'	46:A:845:U:H6	1.80	0.46
46:A:1003:U:H2'	46:A:1004:A:C8	2.51	0.46
46:A:1177:U:C2'	46:A:1178:A:H5'	2.46	0.46
46:A:1188:U:O5'	46:A:1188:U:H6	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1238:G:OP2	49:D:220:ARG:NH1	2.49	0.46
46:A:1414:U:H2'	46:A:1415:U:C6	2.51	0.46
46:A:1494:A:H2'	46:A:1495:U:H6	1.80	0.46
46:A:1582:A:H5'	46:A:1582:A:N3	2.30	0.46
46:A:2066:U:O2'	46:A:2067:A:H5'	2.15	0.46
46:A:2303:G:H5'	56:K:132:LYS:CD	2.46	0.46
46:A:2328:A:C6	46:A:2329:A:C6	3.04	0.46
46:A:2736:G:C2	46:A:2737:A:C8	3.04	0.46
46:A:2947:C:H1'	48:C:251:SER:OG	2.16	0.46
46:A:3135:U:O2'	46:A:3136:U:O5'	2.33	0.46
46:A:3256:U:O2	68:W:99:HIS:HB3	2.15	0.46
51:F:169:ILE:HD13	75:e:210:VAL:HG11	1.98	0.46
63:R:276:GLN:O	63:R:279:LYS:HB3	2.15	0.46
71:a:87:MET:O	71:a:87:MET:HE3	2.15	0.46
75:e:82:HIS:HB2	75:e:156:VAL:HG11	1.97	0.46
76:f:1:MET:SD	76:f:1:MET:N	2.85	0.46
2:AB:45:LEU:CG	2:AB:56:LYS:HG2	2.33	0.46
5:AE:258:ILE:HG12	5:AE:300:PHE:HE1	1.81	0.46
7:AG:149:VAL:O	7:AG:153:THR:HG23	2.16	0.46
9:AI:173:ILE:HA	9:AI:216:ASN:OD1	2.15	0.46
9:AI:287:ILE:HG22	9:AI:288:MET:N	2.30	0.46
9:AI:305:TYR:CD1	28:s:43:PRO:HD2	2.51	0.46
10:AJ:3:VAL:HG11	10:AJ:8:LEU:HD21	1.98	0.46
10:AJ:63:TYR:CZ	18:i:182:ILE:HG22	2.51	0.46
11:AK:162:LEU:C	25:p:68:TYR:CG	2.94	0.46
11:AK:181:PRO:HB2	11:AK:204:VAL:HG23	1.98	0.46
12:AL:23:A:N1	12:AL:984:A:C2	2.83	0.46
12:AL:273:A:C2	12:AL:274:A:C8	3.04	0.46
12:AL:695:A:N6	12:AL:820:A:N6	2.63	0.46
12:AL:710:U:C2	12:AL:711:A:C8	3.03	0.46
12:AL:804:U:P	21:l:98:LYS:HD2	2.55	0.46
12:AL:845:G:OP1	26:q:212:PRO:C	2.59	0.46
12:AL:1046:U:C3'	29:t:77:ARG:HH12	2.17	0.46
12:AL:1105:G:OP1	18:i:392:LYS:HE3	2.16	0.46
12:AL:1171:A:H1'	25:p:77:LYS:HG3	1.98	0.46
12:AL:1306:A:H62	12:AL:1309:A:N6	2.14	0.46
15:Z:56:THR:HA	15:Z:59:LYS:HD2	1.96	0.46
18:i:122:MET:O	18:i:122:MET:HG2	2.16	0.46
20:k:288:GLU:O	20:k:289:VAL:C	2.57	0.46
21:l:66:HIS:CE1	33:x:137:LEU:CB	2.93	0.46
21:l:83:ARG:NH2	47:B:80:ILE:CG2	2.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:q:101:HIS:HB2	35:z:86:ALA:HB1	1.97	0.46
26:q:126:LEU:HD23	26:q:130:CYS:HB3	1.97	0.46
29:t:78:CYS:HB3	29:t:83:HIS:H	1.79	0.46
32:w:128:ILE:C	32:w:130:THR:N	2.72	0.46
34:y:42:ILE:HD11	34:y:73:LEU:HD23	1.98	0.46
34:y:46:PHE:O	34:y:47:VAL:C	2.59	0.46
38:2:40:GLN:O	38:2:44:THR:HG23	2.16	0.46
41:5:139:ALA:HB1	61:P:249:ALA:HB1	1.95	0.46
46:A:65:A:C6	46:A:66:U:C4	3.04	0.46
46:A:304:A:H2	46:A:306:G:H2'	1.80	0.46
46:A:341:A:H4'	46:A:342:A:O5'	2.15	0.46
46:A:484:A:OP1	49:D:129:ARG:NH1	2.37	0.46
46:A:488:A:H2'	46:A:489:A:C8	2.49	0.46
46:A:1010:A:N1	46:A:1011:A:N6	2.47	0.46
46:A:1129:U:C2	46:A:1130:C:C6	3.04	0.46
46:A:1322:U:C2	46:A:1323:U:C5	3.04	0.46
46:A:1349:A:C2	68:W:157:ARG:HA	2.51	0.46
46:A:1352:A:O2'	61:P:134:THR:HG21	2.16	0.46
46:A:1506:U:O2	46:A:1507:U:N3	2.49	0.46
46:A:1619:G:H8	46:A:1619:G:OP2	1.99	0.46
46:A:1910:G:H5"	60:O:202:LYS:HB2	1.98	0.46
46:A:2316:A:H5"	69:X:63:LEU:CD2	2.45	0.46
46:A:2977:U:O2'	46:A:2978:A:H5'	2.16	0.46
46:A:2978:A:H2'	46:A:2979:U:H6	1.80	0.46
46:A:3089:A:H2'	46:A:3090:U:C6	2.50	0.46
46:A:3267:U:H2'	46:A:3268:A:C8	2.48	0.46
68:W:118:MET:HE2	68:W:118:MET:HA	1.98	0.46
2:AB:89:LYS:HD2	2:AB:92:HIS:HE1	1.81	0.46
3:AC:208:THR:HA	3:AC:212:GLY:C	2.41	0.46
4:AD:148:SER:O	4:AD:149:LEU:C	2.57	0.46
5:AE:73:ILE:O	5:AE:74:LEU:C	2.57	0.46
5:AE:181:ILE:C	5:AE:183:HIS:N	2.73	0.46
6:AF:48:LYS:CE	12:AL:489:A:N9	2.74	0.46
6:AF:204:ASP:OD1	6:AF:204:ASP:N	2.47	0.46
8:AH:203:TYR:O	30:u:138:ILE:HD11	2.16	0.46
8:AH:224:PHE:O	21:l:18:LYS:NZ	2.49	0.46
9:AI:144:LYS:HA	9:AI:146:PHE:CE1	2.50	0.46
9:AI:183:PHE:HB3	9:AI:204:TYR:CZ	2.51	0.46
11:AK:196:ASN:ND2	12:AL:1318:U:C3'	2.78	0.46
11:AK:200:VAL:HG11	11:AK:248:ALA:HA	1.97	0.46
12:AL:30:U:H2'	12:AL:31:U:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:47:A:N6	12:AL:406:U:H3	2.14	0.46
12:AL:63:U:O4	12:AL:361:G:N2	2.49	0.46
12:AL:351:A:H1'	58:M:166:ARG:CD	2.31	0.46
12:AL:521:A:H5'	31:v:45:PRO:O	2.16	0.46
12:AL:522:A:C2	12:AL:526:U:C5	3.04	0.46
12:AL:632:C:C5	12:AL:643:G:H3'	2.50	0.46
12:AL:798:U:O2'	12:AL:799:A:P	2.74	0.46
12:AL:813:A:H2'	12:AL:814:A:H8	1.78	0.46
12:AL:924:U:C1'	15:Z:93:PRO:HG3	2.45	0.46
12:AL:1012:G:H3'	12:AL:1261:A:N1	2.30	0.46
12:AL:1105:G:C5'	18:i:390:ASN:HB3	2.43	0.46
12:AL:1172:A:OP1	25:p:77:LYS:HD2	2.15	0.46
12:AL:1512:A:H61	12:AL:1551:U:H3	1.63	0.46
12:AL:1558:U:H5"	30:u:35:ALA:CB	2.42	0.46
17:h:247:LEU:HA	17:h:269:TYR:O	2.15	0.46
18:i:93:TRP:CD1	29:t:108:PRO:C	2.90	0.46
18:i:335:LEU:HD23	18:i:335:LEU:HA	1.80	0.46
19:j:55:TYR:HB3	19:j:469:PHE:CZ	2.51	0.46
19:j:89:LYS:HD3	19:j:461:GLY:HA3	1.96	0.46
20:k:146:MET:HB2	20:k:170:VAL:CG1	2.45	0.46
21:l:7:GLY:C	21:l:8:LEU:HD23	2.41	0.46
21:l:42:ILE:HG22	21:l:44:PRO:HD3	1.98	0.46
24:o:61:LEU:HD11	24:o:128:GLU:HG3	1.98	0.46
26:q:97:ASP:OD1	26:q:98:LYS:N	2.48	0.46
27:r:71:LYS:HG2	27:r:117:ASP:O	2.16	0.46
30:u:141:ILE:HG22	30:u:141:ILE:O	2.14	0.46
32:w:53:ARG:O	32:w:54:GLU:C	2.59	0.46
36:0:77:ARG:NH2	46:A:3077:A:OP1	2.43	0.46
37:1:365:VAL:HG21	46:A:546:A:OP1	2.16	0.46
46:A:337:A:OP2	46:A:1992:A:H5"	2.15	0.46
46:A:342:A:H5'	72:b:53:PHE:CE2	2.51	0.46
46:A:573:U:H2'	46:A:574:A:C8	2.51	0.46
46:A:634:A:OP1	48:C:194:GLY:HA2	2.15	0.46
46:A:883:A:OP1	46:A:883:A:H8	1.98	0.46
46:A:967:U:H2'	46:A:968:U:C1'	2.46	0.46
46:A:1113:A:H5'	46:A:1114:U:OP2	2.15	0.46
46:A:1427:A:N1	46:A:1526:A:N1	2.64	0.46
46:A:1498:U:C2	46:A:1499:A:C8	3.04	0.46
46:A:1544:A:C5	46:A:1545:U:C4	3.04	0.46
46:A:1734:G:C6	46:A:1735:U:C4	3.04	0.46
46:A:1819:A:H8	46:A:1819:A:O5'	1.99	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1974:U:H2'	46:A:1975:U:O4'	2.15	0.46
46:A:2025:A:N1	46:A:2071:A:C2	2.83	0.46
46:A:2184:C:C2	46:A:2205:G:N1	2.84	0.46
46:A:2246:A:C2	46:A:2247:A:C5	3.04	0.46
46:A:2253:A:H5"	47:B:375:LYS:CG	2.46	0.46
46:A:2316:A:H5"	69:X:63:LEU:HD21	1.97	0.46
46:A:2612:A:H4'	46:A:2613:A:H5"	1.98	0.46
46:A:2916:U:C2	46:A:2917:U:C5	3.04	0.46
46:A:2956:U:H5"	46:A:2957:A:C5'	2.45	0.46
46:A:2984:A:H2	46:A:3002:U:H3	1.62	0.46
46:A:3150:U:C4	46:A:3153:U:C5	3.04	0.46
61:P:155:PRO:HG3	62:Q:9:SER:HB2	1.97	0.46
63:R:63:ILE:O	63:R:64:MET:HB2	2.16	0.46
2:AB:41:VAL:HB	2:AB:61:ASN:HA	1.97	0.46
2:AB:70:ASP:O	2:AB:71:SER:C	2.58	0.46
3:AC:185:LEU:HD12	7:AG:197:PHE:H	1.72	0.46
3:AC:208:THR:O	3:AC:211:ASN:N	2.47	0.46
4:AD:119:THR:N	4:AD:120:PRO:HD3	2.31	0.46
4:AD:138:LEU:HD13	4:AD:309:LEU:HD22	1.97	0.46
5:AE:286:ASP:HB3	5:AE:315:TYR:HH	1.81	0.46
6:AF:319:TYR:CE1	31:v:42:THR:HB	2.50	0.46
7:AG:129:ASP:OD1	7:AG:129:ASP:N	2.48	0.46
7:AG:147:GLU:CG	16:g:14:GLN:CG	2.79	0.46
8:AH:184:ARG:HG2	12:AL:814:A:C5'	2.29	0.46
10:AJ:26:SER:O	12:AL:1299:A:N3	2.49	0.46
11:AK:75:ARG:HH22	20:k:85:ASN:C	2.22	0.46
11:AK:217:HIS:ND1	11:AK:271:SER:HA	2.31	0.46
12:AL:15:A:H4'	12:AL:16:G:OP1	2.15	0.46
12:AL:40:G:C2	12:AL:41:C:C2	3.03	0.46
12:AL:479:A:H2'	12:AL:480:U:O4'	2.15	0.46
12:AL:536:U:C2'	12:AL:537:A:C8	2.99	0.46
12:AL:725:A:N6	12:AL:726:A:N6	2.63	0.46
12:AL:781:A:C2	26:q:208:GLY:HA2	2.39	0.46
12:AL:1162:C:H2'	12:AL:1163:A:C8	2.51	0.46
12:AL:1303:U:H3	12:AL:1306:A:H61	1.63	0.46
12:AL:1344:A:H2'	12:AL:1344:A:N3	2.30	0.46
12:AL:1371:U:OP2	28:s:18:ILE:HG21	2.15	0.46
12:AL:1452:A:H2'	12:AL:1453:C:C6	2.50	0.46
12:AL:1540:U:O2'	12:AL:1541:U:C5'	2.59	0.46
12:AL:1645:U:C4'	17:h:176:TYR:CE2	2.93	0.46
13:AM:33:U:C3'	24:o:278:ARG:HD3	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:h:175:PHE:O	17:h:177:PRO:HD3	2.14	0.46
18:i:149:LEU:HD12	18:i:150:ASN:H	1.80	0.46
18:i:186:ASN:O	18:i:187:MET:C	2.58	0.46
18:i:335:LEU:HD21	18:i:389:TYR:CD2	2.51	0.46
19:j:27:ASN:HA	19:j:30:LYS:HG3	1.97	0.46
20:k:63:THR:HG23	20:k:64:LYS:HG2	1.97	0.46
21:l:123:LEU:O	21:l:126:GLU:HB3	2.16	0.46
24:o:263:LYS:O	24:o:265:GLY:N	2.40	0.46
28:s:78:ASN:O	28:s:81:LEU:HB3	2.16	0.46
32:w:126:ARG:HD3	32:w:126:ARG:H	1.81	0.46
35:z:141:LYS:HE2	35:z:144:LYS:HD2	1.98	0.46
37:1:117:TYR:HB2	38:2:67:ILE:HD13	1.97	0.46
46:A:350:A:H2'	46:A:351:C:C6	2.51	0.46
46:A:633:G:H2'	46:A:634:A:H8	1.80	0.46
46:A:729:C:H2'	46:A:730:U:H6	1.80	0.46
46:A:931:U:C4	46:A:1119:A:N3	2.83	0.46
46:A:1022:A:H2'	46:A:1023:C:C2	2.51	0.46
46:A:1209:A:H2'	46:A:1210:A:C8	2.50	0.46
46:A:1363:C:O2'	46:A:1364:C:H5'	2.15	0.46
46:A:1516:U:H5	46:A:3019:U:H2'	1.81	0.46
46:A:2009:U:H3'	46:A:2010:A:C8	2.50	0.46
46:A:2056:A:H1'	46:A:2057:U:P	2.56	0.46
46:A:2088:A:C4	46:A:2089:U:C5	3.04	0.46
46:A:2304:A:C8	63:R:38:SER:HB3	2.51	0.46
46:A:2439:U:O2'	46:A:2440:G:H5'	2.15	0.46
46:A:2713:G:H2'	46:A:2767:C:O4'	2.16	0.46
46:A:3015:U:H2'	46:A:3016:A:H8	1.79	0.46
46:A:3076:A:C4	46:A:3077:A:C8	3.03	0.46
46:A:3123:A:C2	46:A:3126:C:C2	3.04	0.46
47:B:133:ARG:HH21	47:B:139:ILE:HD11	1.81	0.46
47:B:268:SER:O	47:B:271:THR:HG22	2.16	0.46
63:R:105:LYS:NZ	63:R:105:LYS:HB3	2.31	0.46
75:e:101:LEU:HD13	75:e:101:LEU:N	2.30	0.46
76:f:81:LEU:HD11	76:f:145:ILE:HG13	1.98	0.46
5:AE:194:HIS:NE2	5:AE:283:THR:HG23	2.31	0.46
5:AE:218:VAL:HG11	5:AE:221:ARG:NH2	2.31	0.46
5:AE:314:PRO:HG2	5:AE:315:TYR:H	1.80	0.46
6:AF:43:GLY:O	6:AF:44:ARG:C	2.59	0.46
6:AF:50:HIS:CA	12:AL:492:G:O6	2.55	0.46
6:AF:54:LEU:HD22	19:j:12:ALA:CA	2.34	0.46
6:AF:334:ILE:HG23	6:AF:342:MET:HG3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:86:VAL:HG22	23:n:72:ARG:HH11	1.77	0.46
7:AG:114:TRP:CZ2	16:g:87:ARG:HB2	2.51	0.46
9:AI:172:GLN:HA	9:AI:286:PRO:HD2	1.97	0.46
10:AJ:59:LEU:O	10:AJ:60:LYS:HB2	2.15	0.46
11:AK:182:VAL:HA	11:AK:204:VAL:HB	1.98	0.46
11:AK:283:LYS:HG2	11:AK:287:LYS:HE3	1.97	0.46
12:AL:539:C:C3'	12:AL:540:A:H8	2.28	0.46
12:AL:787:A:H62	12:AL:799:A:H2'	1.81	0.46
12:AL:858:U:O4	12:AL:1609:G:H5'	2.16	0.46
12:AL:946:A:OP2	27:r:36:ARG:NH1	2.46	0.46
18:i:229:MET:HE1	18:i:384:ASN:HA	1.97	0.46
19:j:175:ASP:HA	19:j:178:GLN:HE21	1.80	0.46
28:s:16:ILE:O	28:s:20:LEU:HG	2.16	0.46
33:x:64:ARG:HE	33:x:68:ASP:CG	2.24	0.46
37:1:190:LYS:NZ	46:A:2363:A:OP1	2.48	0.46
46:A:312:A:C6	62:Q:259:SER:OG	2.68	0.46
46:A:420:U:C2	46:A:421:U:C5	3.04	0.46
46:A:893:U:H2'	46:A:894:A:C8	2.50	0.46
46:A:1522:A:H2'	46:A:1523:A:H8	1.71	0.46
46:A:1582:A:H2'	46:A:1583:G:C8	2.50	0.46
46:A:1593:A:H2'	46:A:1594:G:O4'	2.16	0.46
46:A:1697:C:OP1	47:B:332:THR:N	2.44	0.46
46:A:1710:A:H4'	47:B:371:THR:HB	1.98	0.46
46:A:1819:A:C2	46:A:1820:G:N1	2.81	0.46
46:A:1833:G:H3'	46:A:1834:C:C6	2.51	0.46
46:A:2027:U:C3'	46:A:2028:A:H8	2.27	0.46
46:A:2030:U:O2	46:A:2030:U:H2'	2.14	0.46
46:A:2061:U:H5	46:A:2062:G:C1'	2.29	0.46
46:A:2083:U:C2	46:A:2084:G:N7	2.84	0.46
46:A:2244:A:H2'	46:A:2245:U:O4'	2.16	0.46
46:A:2300:U:C4	46:A:2302:U:C6	3.04	0.46
46:A:2337:A:N6	46:A:2338:A:C6	2.84	0.46
46:A:2382:A:C2	46:A:2383:A:C4	3.04	0.46
46:A:2605:G:H2'	46:A:2606:U:O4'	2.15	0.46
46:A:2640:A:N6	46:A:2648:A:N6	2.64	0.46
46:A:2769:A:O2'	46:A:2770:U:H5'	2.16	0.46
46:A:2835:U:H2'	46:A:2836:G:O4'	2.15	0.46
46:A:3280:C:C2	46:A:3281:U:C5	3.03	0.46
53:H:37:ILE:HG23	53:H:42:ARG:HB2	1.97	0.46
63:R:162:LEU:O	63:R:163:GLU:C	2.56	0.46
75:e:61:MET:HB2	75:e:105:TYR:OH	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:114:GLU:C	2:AB:116:LYS:H	2.24	0.46
3:AC:188:ALA:CB	4:AD:73:LYS:HB2	2.35	0.46
3:AC:239:ASN:HB3	3:AC:242:LYS:HD3	1.98	0.46
5:AE:184:PHE:O	5:AE:188:ASN:HB2	2.15	0.46
5:AE:216:LYS:C	5:AE:218:VAL:H	2.23	0.46
5:AE:274:TYR:HE2	5:AE:300:PHE:HZ	1.64	0.46
7:AG:204:SER:N	7:AG:207:GLU:HB2	2.28	0.46
8:AH:215:GLN:O	8:AH:218:LYS:N	2.49	0.46
9:AI:147:ILE:HG23	9:AI:388:GLU:HA	1.98	0.46
10:AJ:68:PHE:CE1	18:i:122:MET:HG3	2.51	0.46
11:AK:107:LEU:HD22	18:i:172:TYR:CD1	2.50	0.46
11:AK:172:TYR:CE1	25:p:38:TYR:CE2	3.04	0.46
11:AK:172:TYR:CG	25:p:116:THR:O	2.69	0.46
12:AL:492:G:N2	12:AL:498:A:C5	2.83	0.46
12:AL:656:G:C2	12:AL:657:G:C5	3.04	0.46
12:AL:750:G:C5'	26:q:123:LYS:CA	2.86	0.46
12:AL:831:A:OP2	12:AL:877:G:N2	2.49	0.46
12:AL:842:A:C4	12:AL:843:G:C8	3.03	0.46
12:AL:1059:A:H2'	12:AL:1093:A:O2'	2.16	0.46
12:AL:1165:A:H5'	24:o:254:ARG:CB	2.46	0.46
12:AL:1508:A:C2	12:AL:1555:U:H1'	2.51	0.46
12:AL:1628:A:O3'	35:z:163:LYS:CE	2.63	0.46
13:AM:33:U:H2'	24:o:278:ARG:HD3	1.96	0.46
13:AM:42:U:H2'	13:AM:43:G:C1'	2.45	0.46
17:h:148:LEU:HD21	24:o:120:LEU:CD1	2.45	0.46
17:h:206:THR:HG22	17:h:352:PRO:HG3	1.98	0.46
17:h:269:TYR:CZ	24:o:39:PRO:HG2	2.51	0.46
17:h:325:PRO:O	17:h:326:THR:C	2.59	0.46
18:i:228:ASP:HA	18:i:231:LYS:HD2	1.98	0.46
20:k:21:LEU:HD11	20:k:37:GLN:HE22	1.81	0.46
20:k:243:ASN:O	20:k:244:HIS:C	2.58	0.46
20:k:290:ALA:O	20:k:291:LEU:C	2.58	0.46
22:m:161:ALA:CB	22:m:188:ARG:HB3	2.44	0.46
24:o:63:ARG:HH21	24:o:66:ILE:HD12	1.80	0.46
28:s:52:GLU:HB3	28:s:53:PRO:CD	2.45	0.46
32:w:46:HIS:NE2	32:w:48:GLU:HB3	2.30	0.46
32:w:57:LEU:O	32:w:58:VAL:HG13	2.16	0.46
33:x:83:MET:HB2	33:x:102:TYR:OH	2.16	0.46
41:5:332:LYS:HE2	46:A:43:U:O2'	2.16	0.46
46:A:32:U:C2	46:A:33:A:C8	3.03	0.46
46:A:71:A:C2	46:A:72:U:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:234:G:C6	46:A:235:A:C5	3.03	0.46
46:A:237:A:C5	46:A:2696:A:C5	3.04	0.46
46:A:659:G:H22	46:A:1400:U:H1'	1.80	0.46
46:A:782:G:N2	46:A:842:A:C4	2.84	0.46
46:A:875:U:C2	46:A:876:A:C8	3.04	0.46
46:A:967:U:C4	46:A:968:U:C4	3.04	0.46
46:A:1226:A:O2'	46:A:1227:G:H5'	2.16	0.46
46:A:1260:U:H2'	46:A:1261:U:C6	2.51	0.46
46:A:1439:A:N3	46:A:1440:U:H1'	2.31	0.46
46:A:1698:C:N4	46:A:1736:G:O2'	2.49	0.46
46:A:1746:C:N3	46:A:1799:U:N3	2.64	0.46
46:A:1851:U:O2'	46:A:1853:A:N7	2.41	0.46
46:A:2016:A:H4'	46:A:2017:G:OP1	2.15	0.46
46:A:2022:U:N3	46:A:2064:G:N1	2.49	0.46
46:A:2094:A:C8	46:A:2251:A:C6	3.04	0.46
46:A:2252:C:H3'	46:A:2253:A:H8	1.81	0.46
46:A:2306:U:C2	46:A:2307:A:C8	3.04	0.46
46:A:2379:U:H2'	46:A:2380:U:O4'	2.17	0.46
46:A:2449:A:H2'	46:A:2450:A:O4'	2.16	0.46
46:A:2728:U:H3	46:A:2754:A:N6	2.14	0.46
46:A:3129:A:C6	46:A:3130:U:C4	3.04	0.46
63:R:238:GLU:O	63:R:239:LYS:C	2.58	0.46
4:AD:43:ASP:O	4:AD:46:LYS:HB2	2.16	0.45
4:AD:249:THR:C	4:AD:251:PHE:N	2.73	0.45
5:AE:227:LEU:HD11	5:AE:280:ILE:HG21	1.98	0.45
5:AE:296:GLU:HA	5:AE:299:GLU:HB3	1.98	0.45
6:AF:306:GLN:HG3	31:v:60:VAL:CG2	2.45	0.45
7:AG:83:ASP:O	23:n:70:THR:HG22	2.16	0.45
7:AG:86:VAL:CG2	23:n:72:ARG:NH1	2.71	0.45
9:AI:56:LEU:CD1	22:m:214:GLU:CG	2.91	0.45
9:AI:57:TYR:OH	12:AL:1342:U:N3	2.48	0.45
9:AI:169:ASP:C	9:AI:171:LYS:H	2.24	0.45
11:AK:75:ARG:NH1	18:i:187:MET:H	2.08	0.45
11:AK:164:LEU:HB2	20:k:32:SER:HB3	1.95	0.45
12:AL:761:A:H3'	12:AL:762:U:C6	2.44	0.45
12:AL:1016:G:H3'	12:AL:1017:U:C6	2.50	0.45
12:AL:1238:G:H5"	12:AL:1239:A:N7	2.30	0.45
12:AL:1362:A:H2'	12:AL:1362:A:N3	2.32	0.45
12:AL:1374:A:H2'	12:AL:1374:A:N3	2.31	0.45
24:o:156:ALA:CB	24:o:234:ALA:N	2.80	0.45
29:t:25:ASN:HA	29:t:28:ARG:HD2	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:w:40:ARG:O	32:w:40:ARG:HG3	2.14	0.45
33:x:99:LEU:HB3	33:x:129:ILE:HG12	1.97	0.45
41:5:87:ILE:HG21	41:5:117:SER:HB3	1.98	0.45
41:5:329:ARG:O	53:H:139:ASN:CB	2.63	0.45
46:A:10:A:C2	46:A:11:G:C5	3.04	0.45
46:A:38:A:C6	46:A:39:U:C4	3.04	0.45
46:A:57:C:H2'	46:A:58:A:O4'	2.17	0.45
46:A:238:C:C1'	46:A:2700:A:H61	2.28	0.45
46:A:321:A:H2'	46:A:322:U:O4'	2.16	0.45
46:A:657:U:C2	46:A:658:U:C5	3.04	0.45
46:A:1160:A:H2'	46:A:1161:A:H8	1.80	0.45
46:A:1245:U:C2	46:A:1246:A:N7	2.84	0.45
46:A:1437:A:C6	46:A:1438:U:C2	3.05	0.45
46:A:1725:G:C5'	47:B:176:ARG:NH2	2.79	0.45
46:A:1807:A:H61	46:A:1824:U:H3	1.63	0.45
46:A:2216:U:O2	46:A:2217:A:C8	2.69	0.45
46:A:2457:G:C2	46:A:2461:A:C8	3.04	0.45
46:A:2831:A:H8	46:A:2831:A:O5'	1.99	0.45
46:A:2934:C:C2'	46:A:2935:A:H5'	2.46	0.45
46:A:2949:C:H2'	46:A:2950:A:C8	2.51	0.45
46:A:3004:A:H2'	46:A:3005:A:O4'	2.16	0.45
46:A:3007:A:H2'	46:A:3008:U:H6	1.79	0.45
46:A:3237:U:C4'	57:L:65:ALA:HB2	2.45	0.45
47:B:149:ARG:HH21	47:B:149:ARG:HG3	1.81	0.45
63:R:292:LEU:HA	63:R:297:ASP:CB	2.44	0.45
74:d:23:PRO:HD3	74:d:211:ALA:HB1	1.97	0.45
76:f:121:TYR:O	76:f:125:LYS:HG3	2.17	0.45
3:AC:151:GLY:HA2	3:AC:170:ASN:CA	2.46	0.45
3:AC:207:SER:OG	3:AC:208:THR:N	2.49	0.45
7:AG:22:LEU:HD22	20:k:135:VAL:HG13	1.98	0.45
7:AG:108:PHE:HD2	7:AG:169:TYR:HE1	1.62	0.45
7:AG:124:GLU:OE2	17:h:189:MET:C	2.59	0.45
7:AG:154:MET:O	7:AG:158:LYS:N	2.37	0.45
8:AH:151:LEU:H	8:AH:151:LEU:HD12	1.81	0.45
8:AH:168:ARG:NH1	23:n:66:ASP:OD1	2.49	0.45
8:AH:189:PHE:HE1	32:w:173:GLU:CG	2.27	0.45
9:AI:49:LYS:HD2	12:AL:1341:U:H5'	1.67	0.45
9:AI:129:ASP:HB3	9:AI:392:PRO:HG3	1.99	0.45
9:AI:423:GLU:O	9:AI:424:ASN:C	2.58	0.45
12:AL:50:A:C6	12:AL:51:G:N7	2.84	0.45
12:AL:327:U:H5'	12:AL:1503:U:O2'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:382:U:OP2	31:v:7:ARG:NH1	2.50	0.45
12:AL:519:A:H3'	12:AL:520:A:H8	1.81	0.45
12:AL:715:U:C2	12:AL:817:G:N2	2.84	0.45
12:AL:800:U:O3'	33:x:130:ARG:HD2	2.16	0.45
12:AL:992:U:O2'	12:AL:993:U:P	2.74	0.45
12:AL:1215:A:H8	12:AL:1215:A:O5'	1.99	0.45
15:Z:43:SER:HB2	26:q:186:LYS:HZ3	1.58	0.45
16:g:251:VAL:HG11	33:x:51:LYS:HB2	1.94	0.45
18:i:100:TYR:O	18:i:102:LYS:HD2	2.16	0.45
18:i:173:MET:SD	20:k:91:ARG:HA	2.57	0.45
18:i:316:MET:CA	20:k:69:TRP:HH2	2.29	0.45
19:j:20:PHE:CD2	19:j:116:SER:HA	2.51	0.45
26:q:170:ASP:OD1	26:q:171:ASP:N	2.49	0.45
28:s:55:ILE:HA	28:s:58:ILE:HD12	1.96	0.45
30:u:209:VAL:HG11	30:u:245:PHE:CD2	2.51	0.45
34:y:48:GLY:HA2	34:y:64:ILE:HB	1.98	0.45
46:A:78:U:H2'	46:A:78:U:O2	2.15	0.45
46:A:145:A:H2'	46:A:146:C:C6	2.50	0.45
46:A:253:A:H2'	46:A:254:G:H8	1.81	0.45
46:A:277:U:H2'	46:A:278:A:C8	2.43	0.45
46:A:398:G:H2'	46:A:399:G:O4'	2.16	0.45
46:A:455:A:H3'	46:A:456:U:H6	1.81	0.45
46:A:497:U:C2	46:A:498:A:N7	2.84	0.45
46:A:567:U:C2	46:A:568:A:C8	3.04	0.45
46:A:960:U:H2'	46:A:961:A:O4'	2.16	0.45
46:A:1411:A:C8	61:P:58:VAL:HG23	2.51	0.45
46:A:1413:A:N6	46:A:1545:U:H3	2.10	0.45
46:A:1490:A:N1	46:A:1523:A:N1	2.64	0.45
46:A:1510:A:O2'	46:A:1511:U:H5'	2.17	0.45
46:A:1894:C:O2'	46:A:1895:U:H5'	2.16	0.45
46:A:1998:U:C4	46:A:1999:U:C4	3.05	0.45
46:A:2084:G:C4	46:A:2085:A:C8	3.05	0.45
46:A:2097:U:H2'	46:A:2098:U:H6	1.81	0.45
46:A:2098:U:H2'	46:A:2099:A:H8	1.82	0.45
46:A:2206:U:O2'	46:A:2207:A:H5'	2.15	0.45
46:A:2336:G:C6	46:A:2337:A:C5	3.03	0.45
46:A:2471:A:C2'	46:A:2472:C:H5'	2.47	0.45
46:A:2646:G:C6	46:A:2647:U:C4	3.03	0.45
46:A:2685:A:C5	46:A:2686:U:C5	3.04	0.45
46:A:2685:A:H2'	46:A:2686:U:C6	2.51	0.45
46:A:2961:A:C5	46:A:2962:U:C4	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:3128:G:C6	46:A:3129:A:C5	3.05	0.45
46:A:3271:A:H1'	58:M:17:MET:HG3	1.97	0.45
63:R:77:VAL:HG13	63:R:78:GLY:N	2.31	0.45
2:AB:79:VAL:O	2:AB:83:GLN:HB2	2.15	0.45
4:AD:27:PRO:HA	4:AD:33:SER:C	2.42	0.45
5:AE:62:LYS:C	5:AE:64:PHE:N	2.74	0.45
5:AE:94:VAL:CA	12:AL:1542:A:OP1	2.56	0.45
5:AE:253:ILE:O	5:AE:254:SER:HB2	2.16	0.45
6:AF:200:ARG:HD2	12:AL:552:A:OP1	2.16	0.45
6:AF:294:VAL:HB	6:AF:309:PHE:O	2.16	0.45
6:AF:344:TYR:HE2	12:AL:49:A:O2'	1.99	0.45
7:AG:124:GLU:HA	16:g:11:ARG:HD3	1.97	0.45
8:AH:93:GLN:CD	12:AL:222:U:OP2	2.59	0.45
8:AH:97:LEU:CD1	12:AL:144:U:OP1	2.65	0.45
8:AH:184:ARG:CD	12:AL:814:A:O2'	2.64	0.45
8:AH:206:ALA:O	8:AH:207:ASN:CB	2.64	0.45
9:AI:131:THR:HG22	9:AI:162:GLN:NE2	2.32	0.45
9:AI:228:LYS:HE3	9:AI:230:TYR:CE1	2.51	0.45
9:AI:376:LYS:HD2	9:AI:376:LYS:HA	1.75	0.45
10:AJ:62:LEU:HG	10:AJ:63:TYR:H	1.81	0.45
11:AK:132:PHE:CE2	18:i:251:LEU:HD11	2.50	0.45
11:AK:292:TYR:CE2	24:o:179:ASN:CA	2.97	0.45
12:AL:232:U:C2'	31:v:78:VAL:CG1	2.92	0.45
12:AL:308:U:H2'	12:AL:309:U:C6	2.51	0.45
12:AL:411:A:H2'	12:AL:412:U:C6	2.51	0.45
12:AL:490:U:H2'	12:AL:491:U:C6	2.51	0.45
12:AL:826:G:H2'	12:AL:827:G:C8	2.51	0.45
12:AL:844:C:H2'	12:AL:845:G:O4'	2.16	0.45
12:AL:925:A:H2'	12:AL:926:A:O4'	2.17	0.45
12:AL:991:G:H2'	12:AL:1597:G:N3	2.31	0.45
12:AL:1021:U:H3	12:AL:1024:A:P	2.39	0.45
12:AL:1172:A:C5'	25:p:112:ARG:NH1	2.79	0.45
12:AL:1319:A:H4'	12:AL:1321:U:H5	1.81	0.45
12:AL:1599:U:H3	12:AL:1620:G:H1	1.63	0.45
16:g:45:ARG:CD	17:h:170:PRO:HB2	2.46	0.45
16:g:101:ILE:HB	16:g:103:ARG:CZ	2.46	0.45
17:h:349:ASP:OD1	17:h:350:SER:N	2.50	0.45
20:k:295:LYS:HD2	23:n:42:GLN:O	2.15	0.45
21:l:80:GLU:HG3	47:B:73:LEU:C	2.41	0.45
22:m:90:PRO:HB2	24:o:241:LEU:HD11	1.97	0.45
24:o:160:ARG:HD3	24:o:225:GLU:CB	2.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:q:142:GLU:O	26:q:143:ALA:C	2.59	0.45
30:u:124:GLY:O	32:w:132:GLN:NE2	2.32	0.45
30:u:228:TYR:O	30:u:229:TRP:C	2.59	0.45
46:A:206:U:H3'	46:A:207:U:C6	2.52	0.45
46:A:301:A:C5	46:A:302:U:C5	3.05	0.45
46:A:465:U:H5"	55:J:87:LYS:HZ3	1.80	0.45
46:A:599:A:O2'	46:A:600:C:H5'	2.16	0.45
46:A:836:A:H2'	46:A:837:U:C6	2.52	0.45
46:A:1051:A:H1'	75:e:112:PRO:HG3	1.98	0.45
46:A:1144:U:C2	46:A:1145:U:C5	3.04	0.45
46:A:1149:U:H2'	46:A:1150:U:N1	2.31	0.45
46:A:1167:A:H3'	46:A:1168:A:C8	2.42	0.45
46:A:1344:U:H5'	46:A:1345:A:OP2	2.17	0.45
46:A:1393:U:H2'	46:A:1394:U:C6	2.51	0.45
46:A:1490:A:H2'	46:A:1491:U:O4'	2.16	0.45
46:A:1622:C:H3'	46:A:1623:U:C6	2.51	0.45
46:A:1761:A:N1	46:A:1987:G:H1'	2.30	0.45
46:A:1772:U:H2'	46:A:1773:U:H6	1.81	0.45
46:A:1902:U:O2'	46:A:1903:A:H5'	2.15	0.45
46:A:1997:A:C2	46:A:1998:U:C2	3.04	0.45
46:A:2062:G:N3	46:A:2062:G:C2'	2.80	0.45
46:A:2203:A:H2'	46:A:2204:A:O4'	2.16	0.45
46:A:2220:U:C2'	46:A:2221:A:H5"	2.43	0.45
46:A:2381:G:C2	46:A:2382:A:C4	3.04	0.45
46:A:2471:A:O2'	46:A:2472:C:H5'	2.16	0.45
46:A:2586:U:H3'	46:A:2586:U:OP2	2.16	0.45
46:A:2591:A:N7	46:A:2651:G:N2	2.65	0.45
46:A:3074:A:H2'	46:A:3075:U:O4'	2.16	0.45
46:A:3176:U:H2'	46:A:3177:A:H8	1.81	0.45
46:A:3177:A:H5"	46:A:3178:A:N7	2.31	0.45
46:A:3265:U:O5'	46:A:3265:U:H6	1.99	0.45
48:C:201:HIS:O	48:C:202:GLY:C	2.59	0.45
51:F:122:LEU:HD22	51:F:201:VAL:HG22	1.98	0.45
61:P:66:THR:HG21	74:d:197:GLY:HA2	1.98	0.45
61:P:70:ILE:HD11	61:P:131:MET:HE1	1.98	0.45
63:R:129:PHE:CZ	63:R:131:ARG:HD2	2.51	0.45
63:R:193:LEU:CD2	63:R:250:CYS:CB	2.92	0.45
2:AB:84:ARG:O	2:AB:85:LYS:C	2.60	0.45
2:AB:85:LYS:HZ1	12:AL:376:C:P	2.26	0.45
4:AD:191:ILE:HG21	4:AD:268:ILE:HD12	1.98	0.45
6:AF:330:LYS:CA	12:AL:404:U:H4'	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:224:VAL:HA	33:x:45:LEU:HD11	1.97	0.45
9:AI:449:HIS:ND1	22:m:149:PRO:HG2	2.32	0.45
11:AK:294:PHE:CD2	24:o:153:ARG:NH1	2.85	0.45
12:AL:626:U:C4	12:AL:654:G:N1	2.84	0.45
12:AL:752:A:C5	12:AL:767:A:C8	3.03	0.45
12:AL:757:U:O2'	12:AL:759:A:N7	2.47	0.45
12:AL:1335:U:H5'	28:s:44:TRP:CZ2	2.48	0.45
16:g:200:ILE:CG1	16:g:287:LYS:HE2	2.40	0.45
17:h:188:LEU:HB2	17:h:222:LEU:HD13	1.98	0.45
17:h:290:TRP:CZ3	24:o:49:PRO:CD	2.91	0.45
18:i:213:ILE:HG12	18:i:223:TYR:CB	2.46	0.45
19:j:45:LYS:HA	19:j:476:ARG:HB3	1.99	0.45
20:k:299:ASP:OD1	20:k:299:ASP:N	2.50	0.45
21:l:2:LEU:HB2	21:l:101:LEU:HD11	1.98	0.45
21:l:13:ASN:C	21:l:15:ASN:N	2.71	0.45
21:l:15:ASN:O	21:l:16:ALA:C	2.58	0.45
25:p:90:LYS:HA	29:t:99:ARG:CD	2.46	0.45
26:q:126:LEU:HD21	26:q:131:LEU:CD2	2.45	0.45
32:w:132:GLN:HG3	32:w:133:ASP:N	2.31	0.45
35:z:91:SER:O	35:z:93:VAL:N	2.50	0.45
46:A:52:A:C6	46:A:53:U:C4	3.05	0.45
46:A:349:A:C8	46:A:349:A:H5'	2.52	0.45
46:A:546:A:H2'	46:A:547:A:C2	2.51	0.45
46:A:905:A:H4'	46:A:951:A:C2	2.52	0.45
46:A:1017:A:N3	46:A:1017:A:H2'	2.31	0.45
46:A:1057:A:C6	46:A:1058:U:C4	3.03	0.45
46:A:1064:A:C5	46:A:1085:G:C2	3.04	0.45
46:A:1163:A:C4	46:A:1164:U:C5	3.05	0.45
46:A:1609:U:H5'	48:C:201:HIS:NE2	2.31	0.45
46:A:1989:U:N3	52:G:14:LYS:HD2	2.32	0.45
46:A:2013:G:H1	46:A:2024:A:P	2.38	0.45
46:A:2307:A:O2'	46:A:2655:A:N1	2.47	0.45
46:A:2588:A:C2	46:A:2589:A:H1'	2.51	0.45
46:A:2766:U:O3'	46:A:2768:G:OP1	2.34	0.45
46:A:2812:G:O2'	46:A:2832:A:N1	2.48	0.45
46:A:2962:U:H2'	46:A:2963:U:H6	1.81	0.45
46:A:3171:A:H1'	46:A:3172:U:OP2	2.16	0.45
53:H:13:ALA:HB2	60:O:294:LEU:HD11	1.98	0.45
63:R:200:ARG:NH2	63:R:221:TYR:CD2	2.85	0.45
63:R:292:LEU:HD11	63:R:301:ILE:HG12	1.98	0.45
2:AB:105:LEU:CD2	12:AL:390:U:P	2.96	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:27:ASN:O	3:AC:28:ILE:C	2.59	0.45
5:AE:88:LEU:O	5:AE:90:PRO:HD3	2.16	0.45
5:AE:255:LEU:HD13	5:AE:300:PHE:CG	2.52	0.45
5:AE:260:ASN:HD21	5:AE:303:GLN:HA	1.82	0.45
6:AF:54:LEU:CD1	12:AL:498:A:H5'	2.46	0.45
6:AF:66:ASN:OD1	6:AF:69:GLY:N	2.50	0.45
7:AG:217:LEU:CD1	16:g:273:MET:C	2.80	0.45
8:AH:165:LEU:HD12	12:AL:700:U:O4'	2.17	0.45
9:AI:224:ILE:HG23	9:AI:282:GLN:HG2	1.97	0.45
9:AI:267:ASN:O	9:AI:268:ARG:C	2.59	0.45
10:AJ:26:SER:HA	12:AL:1299:A:C8	2.51	0.45
11:AK:52:MET:HE1	11:AK:76:LEU:HD21	1.98	0.45
11:AK:87:LEU:HD13	11:AK:108:TYR:CG	2.52	0.45
11:AK:114:GLY:O	11:AK:118:ILE:HG12	2.17	0.45
11:AK:163:PRO:HD3	25:p:68:TYR:CE2	2.51	0.45
11:AK:212:GLU:O	11:AK:213:GLU:C	2.60	0.45
12:AL:46:A:C2	12:AL:407:U:O2	2.70	0.45
12:AL:62:A:C4	12:AL:63:U:C6	3.04	0.45
12:AL:338:G:C5	12:AL:339:U:C4	3.04	0.45
12:AL:377:A:C2	12:AL:528:A:C6	3.05	0.45
12:AL:416:A:H2'	12:AL:417:U:H6	1.82	0.45
12:AL:622:A:H2'	12:AL:623:A:C8	2.52	0.45
12:AL:750:G:C5'	26:q:123:LYS:C	2.90	0.45
12:AL:756:A:H2'	12:AL:757:U:C6	2.52	0.45
12:AL:900:A:H2'	12:AL:901:U:O4'	2.17	0.45
12:AL:1012:G:H2'	12:AL:1261:A:H61	1.80	0.45
12:AL:1021:U:C3'	34:y:84:SER:HG	2.30	0.45
12:AL:1351:U:H3	12:AL:1356:U:H4'	1.81	0.45
12:AL:1612:C:H2'	12:AL:1613:C:C6	2.51	0.45
12:AL:1618:G:OP2	35:z:143:GLY:N	2.48	0.45
15:Z:37:LEU:HD13	15:Z:37:LEU:HA	1.73	0.45
16:g:23:THR:O	16:g:24:TYR:C	2.58	0.45
16:g:251:VAL:HB	33:x:51:LYS:HB2	1.98	0.45
16:g:254:VAL:HA	16:g:295:ALA:HB3	1.99	0.45
19:j:442:GLU:HB2	19:j:453:LEU:HD21	1.98	0.45
20:k:240:LEU:HB3	20:k:247:PHE:HD1	1.82	0.45
21:l:26:SER:O	21:l:30:LYS:HG3	2.16	0.45
22:m:97:GLN:HB3	22:m:101:LEU:HD13	1.98	0.45
22:m:153:LEU:HD12	22:m:216:LEU:HD13	1.99	0.45
24:o:277:LYS:HG2	24:o:278:ARG:HE	1.81	0.45
28:s:79:ILE:HD12	28:s:119:ARG:HG2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:t:19:ALA:HA	29:t:22:LEU:HD12	1.97	0.45
32:w:196:ASN:CG	32:w:199:LYS:HB2	2.42	0.45
34:y:21:LEU:C	34:y:23:ILE:H	2.24	0.45
35:z:122:ARG:O	35:z:123:ILE:C	2.59	0.45
44:8:153:LEU:HD11	49:D:43:LEU:HD11	1.99	0.45
46:A:15:A:C5	46:A:3285:A:C2	3.04	0.45
46:A:118:A:C6	46:A:145:A:C4	3.04	0.45
46:A:546:A:H8	46:A:546:A:O5'	1.99	0.45
46:A:1081:A:H2'	46:A:1082:U:H6	1.77	0.45
46:A:1143:A:C6	46:A:1144:U:C4	3.04	0.45
46:A:1342:U:OP1	61:P:151:ARG:NH1	2.49	0.45
46:A:1362:C:H2'	46:A:1363:C:C6	2.52	0.45
46:A:1408:U:O2	46:A:1408:U:H2'	2.17	0.45
46:A:1413:A:C6	46:A:1546:G:C4	3.04	0.45
46:A:1531:C:O2'	46:A:1533:G:N2	2.50	0.45
46:A:1705:U:H5'	47:B:371:THR:OG1	2.16	0.45
46:A:1706:G:C2	47:B:265:PHE:CD1	3.04	0.45
46:A:1962:A:H5'	46:A:1963:C:OP2	2.17	0.45
46:A:2007:A:C2'	46:A:2008:U:H5'	2.46	0.45
46:A:2071:A:H2'	46:A:2071:A:N3	2.32	0.45
46:A:2212:A:C4	46:A:2213:U:C5	3.05	0.45
46:A:2325:A:N3	46:A:2325:A:H2'	2.31	0.45
46:A:2727:A:C6	46:A:2728:U:C4	3.04	0.45
46:A:2734:A:C2	46:A:2747:G:N3	2.85	0.45
46:A:2836:G:C6	46:A:2837:U:C4	3.05	0.45
46:A:2983:U:C3'	46:A:2984:A:H8	2.29	0.45
46:A:3076:A:C6	46:A:3077:A:C5	3.05	0.45
46:A:3078:A:H2'	46:A:3079:U:H6	1.80	0.45
46:A:3107:U:C4	46:A:3108:U:C4	3.04	0.45
47:B:320:LYS:HG3	47:B:323:ARG:H	1.80	0.45
54:I:36:VAL:HG21	54:I:119:ASP:HB2	1.99	0.45
63:R:150:LYS:O	63:R:153:LEU:HB2	2.16	0.45
76:f:81:LEU:HD22	76:f:148:VAL:HG22	1.98	0.45
76:f:109:THR:OG1	76:f:155:LYS:HA	2.16	0.45
3:AC:150:GLN:NE2	4:AD:166:ASP:HB2	2.32	0.45
3:AC:191:ILE:HG22	4:AD:223:TYR:HE1	1.73	0.45
4:AD:248:LYS:HD3	4:AD:248:LYS:HA	1.81	0.45
5:AE:274:TYR:CD1	5:AE:277:ILE:HD12	2.51	0.45
8:AH:16:PRO:HD3	31:v:35:LYS:CE	2.36	0.45
8:AH:210:ILE:CG2	21:l:39:VAL:CG2	2.92	0.45
9:AI:123:VAL:HG21	9:AI:405:TYR:CE2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:188:ASN:HD22	9:AI:188:ASN:H	1.65	0.45
9:AI:429:LYS:C	9:AI:431:PHE:N	2.73	0.45
10:AJ:56:PHE:N	18:i:118:LEU:CD2	2.80	0.45
10:AJ:72:GLU:HA	10:AJ:75:TYR:CD1	2.51	0.45
11:AK:107:LEU:HD11	18:i:168:ASN:HA	1.99	0.45
11:AK:115:ALA:HB2	18:i:172:TYR:OH	2.11	0.45
11:AK:154:TYR:CE2	25:p:57:PHE:HE2	2.29	0.45
11:AK:195:PRO:HG3	12:AL:1290:A:H3'	1.98	0.45
12:AL:818:A:H5"	30:u:218:TYR:HE2	1.81	0.45
12:AL:856:G:N2	12:AL:1589:G:O3'	2.50	0.45
12:AL:863:G:C2	12:AL:864:U:C2	3.04	0.45
12:AL:893:A:O2'	17:h:204:SER:CB	2.64	0.45
12:AL:1055:U:H2'	12:AL:1056:U:O4'	2.17	0.45
12:AL:1418:A:OP2	24:o:271:LYS:HE3	2.16	0.45
12:AL:1445:U:H2'	12:AL:1446:A:H3'	1.98	0.45
15:Z:7:VAL:O	15:Z:7:VAL:HG13	2.17	0.45
17:h:261:GLU:HA	17:h:264:LYS:HB2	1.99	0.45
17:h:295:ILE:HG13	17:h:299:ASP:HA	1.97	0.45
18:i:196:SER:C	18:i:198:TYR:H	2.23	0.45
19:j:396:PRO:HA	19:j:399:ARG:HE	1.82	0.45
19:j:419:LYS:HE2	19:j:420:PRO:HD2	1.97	0.45
20:k:61:ASP:HA	25:p:24:VAL:HG13	1.98	0.45
20:k:78:LEU:O	20:k:79:HIS:HB2	2.17	0.45
22:m:212:LEU:O	22:m:216:LEU:HG	2.16	0.45
25:p:64:ARG:O	25:p:65:THR:C	2.60	0.45
26:q:137:ALA:O	26:q:139:GLY:N	2.50	0.45
26:q:170:ASP:OD1	26:q:202:THR:HA	2.16	0.45
30:u:279:ARG:HB3	30:u:283:ARG:NH2	2.32	0.45
31:v:7:ARG:HB2	31:v:9:ARG:HH21	1.81	0.45
31:v:91:ARG:HB2	31:v:92:LYS:HZ2	1.81	0.45
32:w:53:ARG:HH21	32:w:83:GLN:CG	2.30	0.45
32:w:193:LEU:CD1	32:w:200:CYS:CB	2.95	0.45
35:z:114:ALA:O	35:z:115:GLU:C	2.57	0.45
46:A:174:G:N2	46:A:204:A:C6	2.84	0.45
46:A:201:A:C2	46:A:202:A:N6	2.85	0.45
46:A:230:A:C8	46:A:247:A:C6	3.05	0.45
46:A:304:A:H2'	46:A:306:G:OP2	2.16	0.45
46:A:305:A:H2'	46:A:306:G:H8	1.73	0.45
46:A:393:C:C2'	46:A:394:G:H5'	2.47	0.45
46:A:504:A:O2'	46:A:505:C:H5'	2.17	0.45
46:A:533:U:C2	63:R:132:PHE:CD2	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:783:U:C1’	46:A:2294:A:H5’	2.47	0.45
46:A:784:A:C6	46:A:843:A:C8	3.04	0.45
46:A:838:C:O2’	46:A:839:U:H5’	2.16	0.45
46:A:1007:U:O2’	46:A:1008:U:P	2.75	0.45
46:A:1501:A:H3’	46:A:1502:U:C6	2.51	0.45
46:A:2063:A:O5’	46:A:2063:A:C8	2.68	0.45
46:A:2392:A:H8	46:A:2392:A:O5’	2.00	0.45
46:A:2610:A:H5”	46:A:2611:U:OP1	2.16	0.45
46:A:2814:U:C5’	46:A:2833:A:C2	3.00	0.45
46:A:2836:G:C4	46:A:2837:U:C5	3.04	0.45
46:A:2886:C:H1’	48:C:214:VAL:HG11	1.98	0.45
46:A:2910:A:C5	46:A:2911:U:C5	3.05	0.45
46:A:3165:U:H2’	46:A:3166:A:C8	2.52	0.45
47:B:129:LYS:HZ1	47:B:147:GLY:C	2.25	0.45
62:Q:198:THR:HG21	65:T:93:TRP:CZ2	2.51	0.45
63:R:120:PRO:HB2	63:R:121:HIS:H	1.55	0.45
63:R:159:LEU:HD21	72:b:157:PHE:CZ	2.51	0.45
63:R:335:THR:HA	63:R:363:SER:HB2	1.98	0.45
3:AC:16:ASN:C	3:AC:18:LYS:N	2.71	0.45
3:AC:92:PHE:HA	3:AC:95:ASN:HD22	1.82	0.45
4:AD:31:LEU:HD11	4:AD:100:CYS:CB	2.46	0.45
4:AD:66:THR:O	4:AD:70:GLU:N	2.47	0.45
5:AE:52:LEU:HD23	5:AE:52:LEU:C	2.42	0.45
5:AE:123:TRP:CD1	5:AE:124:THR:H	2.34	0.45
5:AE:315:TYR:CZ	5:AE:319:LEU:HD11	2.52	0.45
7:AG:94:PRO:HG3	17:h:207:GLN:HE22	1.81	0.45
7:AG:191:LEU:O	7:AG:194:ALA:N	2.50	0.45
8:AH:46:GLY:HA2	32:w:59:ARG:NE	2.32	0.45
9:AI:206:LYS:HZ3	12:AL:1346:U:H5”	1.79	0.45
9:AI:322:LYS:HA	9:AI:322:LYS:HD2	1.53	0.45
9:AI:396:LYS:O	9:AI:399:VAL:HB	2.17	0.45
10:AJ:32:SER:HB2	12:AL:1313:U:OP2	2.16	0.45
11:AK:132:PHE:HB2	18:i:248:MET:HE3	1.93	0.45
11:AK:160:TYR:OH	20:k:29:LEU:CD2	2.65	0.45
12:AL:80:U:C4	12:AL:81:U:C4	3.05	0.45
12:AL:115:G:H1’	12:AL:116:A:N7	2.31	0.45
12:AL:240:A:C5’	32:w:43:TYR:OH	2.63	0.45
12:AL:328:C:C2	12:AL:329:U:C6	3.05	0.45
12:AL:533:A:H2’	12:AL:534:A:C8	2.52	0.45
12:AL:697:G:C5’	23:n:4:VAL:CG2	2.95	0.45
12:AL:700:U:P	23:n:1:MET:CE	3.02	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:805:U:C2	12:AL:806:A:C8	3.04	0.45
12:AL:1065:A:H2'	12:AL:1066:U:C4'	2.47	0.45
12:AL:1309:A:C2	12:AL:1394:U:H4'	2.51	0.45
12:AL:1373:A:C2	12:AL:1400:A:P	3.10	0.45
15:Z:46:HIS:O	15:Z:47:MET:C	2.59	0.45
18:i:184:ASN:HA	18:i:192:CYS:SG	2.56	0.45
18:i:332:LYS:HA	18:i:344:THR:HA	1.97	0.45
28:s:68:GLU:O	28:s:70:ASP:N	2.50	0.45
32:w:13:GLN:HG2	32:w:20:VAL:CG2	2.47	0.45
46:A:35:U:H2'	46:A:36:A:H8	1.81	0.45
46:A:243:A:C6	46:A:244:A:C6	3.04	0.45
46:A:421:U:H2'	46:A:422:U:H6	1.77	0.45
46:A:602:A:O2'	46:A:1366:A:N3	2.45	0.45
46:A:825:A:H2'	46:A:826:A:H8	1.81	0.45
46:A:937:U:OP1	46:A:937:U:H4'	2.16	0.45
46:A:947:G:C5	46:A:1107:U:H5	2.35	0.45
46:A:1303:C:C4	46:A:1600:U:C5	3.05	0.45
46:A:1313:G:C2	46:A:1321:C:C2	3.05	0.45
46:A:1424:U:H5'	46:A:1533:G:O2'	2.16	0.45
46:A:1734:G:H4'	47:B:353:LYS:HE2	1.98	0.45
46:A:1771:A:H3'	46:A:1772:U:C6	2.52	0.45
46:A:2390:U:H2'	46:A:2391:U:C6	2.52	0.45
46:A:2667:A:H2'	46:A:2668:C:H6	1.82	0.45
46:A:2744:A:N7	46:A:2796:G:C6	2.84	0.45
46:A:2745:U:H5"	46:A:2804:U:O4'	2.17	0.45
46:A:2924:A:H3'	46:A:2925:C:C6	2.52	0.45
46:A:3050:G:C4	46:A:3051:U:C5	3.05	0.45
46:A:3149:A:N6	46:A:3252:U:C5	2.84	0.45
46:A:3245:A:C6	46:A:3246:U:C4	3.05	0.45
47:B:170:ILE:HD13	47:B:181:ALA:HB2	1.98	0.45
63:R:129:PHE:HE2	63:R:131:ARG:HB2	1.80	0.45
63:R:198:LEU:CA	63:R:201:VAL:HG12	2.36	0.45
63:R:295:LYS:HE2	63:R:295:LYS:HB2	1.75	0.45
75:e:71:HIS:CD2	75:e:73:ASN:HB3	2.51	0.45
76:f:142:VAL:O	76:f:145:ILE:HB	2.17	0.45
3:AC:265:SER:O	17:h:128:PRO:CG	2.62	0.45
6:AF:44:ARG:NH2	12:AL:495:U:O5'	2.49	0.45
6:AF:58:MET:CE	19:j:30:LYS:HE2	2.10	0.45
6:AF:175:TYR:O	6:AF:177:LEU:N	2.41	0.45
7:AG:63:VAL:HG21	7:AG:77:THR:O	2.17	0.45
7:AG:149:VAL:O	7:AG:152:ARG:HB3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:151:GLU:HG2	9:AI:154:VAL:HB	1.98	0.45
9:AI:400:ASN:O	9:AI:401:GLU:C	2.57	0.45
10:AJ:69:VAL:CG2	18:i:124:THR:HB	2.47	0.45
11:AK:163:PRO:CA	25:p:68:TYR:CG	2.99	0.45
11:AK:284:SER:HA	11:AK:287:LYS:HD2	1.98	0.45
11:AK:298:TRP:CD1	24:o:210:ASN:ND2	2.85	0.45
12:AL:223:U:H3'	12:AL:224:A:O4'	2.16	0.45
12:AL:310:A:O2'	12:AL:311:G:H5'	2.17	0.45
12:AL:406:U:OP1	19:j:64:ARG:HD3	2.14	0.45
12:AL:498:A:C2'	12:AL:499:A:H5'	2.47	0.45
12:AL:523:U:O2	12:AL:525:A:C8	2.70	0.45
12:AL:771:U:H2'	26:q:88:HIS:CE1	2.52	0.45
12:AL:827:G:O2'	12:AL:828:A:O5'	2.34	0.45
12:AL:1002:A:C2	12:AL:1003:A:H1'	2.51	0.45
12:AL:1135:G:H5"	15:Z:17:LYS:HZ3	1.77	0.45
12:AL:1270:A:N6	12:AL:1371:U:O2	2.50	0.45
18:i:90:MET:HB3	18:i:96:GLN:HE21	1.81	0.45
19:j:125:ILE:O	19:j:138:LYS:HA	2.17	0.45
20:k:262:VAL:HB	20:k:266:ARG:HG2	1.97	0.45
26:q:134:ARG:O	26:q:135:LYS:HB2	2.16	0.45
30:u:94:ASN:ND2	30:u:97:GLU:OE2	2.50	0.45
31:v:31:ALA:HB3	31:v:34:ALA:HB2	1.98	0.45
41:5:304:THR:HB	46:A:28:U:C5	2.52	0.45
46:A:71:A:C4	46:A:72:U:C5	3.04	0.45
46:A:169:A:C6	46:A:170:U:C4	3.05	0.45
46:A:614:A:H4'	46:A:615:U:OP2	2.16	0.45
46:A:624:G:N2	46:A:625:A:N7	2.65	0.45
46:A:754:A:C6	46:A:755:U:C4	3.04	0.45
46:A:1013:G:C8	46:A:1013:G:H5"	2.52	0.45
46:A:1029:A:H3'	46:A:1031:U:H5	1.82	0.45
46:A:1047:A:H5'	46:A:1048:A:C8	2.50	0.45
46:A:1272:U:O2'	46:A:1273:U:OP2	2.32	0.45
46:A:1889:A:H2'	46:A:1890:C:O4'	2.15	0.45
46:A:1997:A:H61	46:A:2089:U:H3	1.63	0.45
46:A:2064:G:C8	46:A:2064:G:O5'	2.69	0.45
46:A:2208:A:N1	46:A:2239:A:N1	2.64	0.45
46:A:2213:U:H2'	46:A:2214:A:H8	1.82	0.45
46:A:2637:A:OP1	63:R:149:ARG:HB3	2.17	0.45
46:A:2754:A:C6	46:A:2755:U:C4	3.05	0.45
46:A:2786:C:O2'	46:A:2787:C:H5'	2.17	0.45
46:A:2843:G:C8	46:A:2846:U:C6	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2872:A:H2'	46:A:2873:U:C6	2.51	0.45
46:A:3041:A:H5"	46:A:3041:A:C8	2.52	0.45
46:A:3105:U:H2'	46:A:3106:G:O4'	2.17	0.45
63:R:125:THR:O	63:R:127:ARG:HG3	2.16	0.45
1:AA:83:LYS:CE	12:AL:1462:A:H61	2.30	0.45
3:AC:150:GLN:NE2	4:AD:166:ASP:N	2.65	0.45
3:AC:228:ASP:HB2	4:AD:277:PRO:CB	2.47	0.45
4:AD:157:ILE:HG23	4:AD:293:LEU:HD12	1.99	0.45
4:AD:191:ILE:HG21	4:AD:268:ILE:CD1	2.47	0.45
5:AE:52:LEU:O	5:AE:56:LYS:N	2.48	0.45
5:AE:273:LYS:HD2	5:AE:277:ILE:HD12	1.99	0.45
6:AF:61:PHE:CE2	19:j:29:TYR:CE2	3.02	0.45
6:AF:320:ARG:HD3	8:AH:13:GLY:C	2.42	0.45
7:AG:111:GLN:O	16:g:201:ILE:HB	2.17	0.45
7:AG:117:SER:OG	16:g:31:PRO:CG	2.62	0.45
7:AG:224:VAL:CA	33:x:45:LEU:HD13	2.46	0.45
9:AI:328:ILE:HG12	9:AI:343:LEU:HD21	1.98	0.45
9:AI:350:ARG:NH2	9:AI:371:TYR:CZ	2.83	0.45
10:AJ:19:PHE:CD1	11:AK:254:ILE:CG2	3.00	0.45
10:AJ:29:ARG:HH12	34:y:13:TRP:HE1	1.53	0.45
11:AK:145:VAL:HG21	20:k:68:PHE:CZ	2.51	0.45
12:AL:28:G:H2'	12:AL:29:G:C8	2.52	0.45
12:AL:34:G:C6	12:AL:671:A:C2	3.04	0.45
12:AL:214:A:H2'	12:AL:215:U:C6	2.52	0.45
12:AL:412:U:H2'	12:AL:413:G:O4'	2.17	0.45
12:AL:485:A:O2'	12:AL:486:U:P	2.75	0.45
12:AL:678:U:H1'	12:AL:683:A:H2'	1.98	0.45
12:AL:736:A:OP1	47:B:84:ARG:NH1	2.49	0.45
12:AL:753:A:C6	12:AL:766:A:C6	3.05	0.45
12:AL:1098:U:O2	12:AL:1239:A:H2	1.98	0.45
12:AL:1341:U:H4'	12:AL:1342:U:C2	2.52	0.45
12:AL:1344:A:H5"	12:AL:1356:U:N3	2.32	0.45
13:AM:29:U:H2'	13:AM:30:C:C5	2.52	0.45
18:i:190:ASN:HD21	18:i:193:ASN:HB2	1.82	0.45
18:i:307:ASN:O	18:i:308:ASN:HB3	2.16	0.45
20:k:27:GLU:C	20:k:29:LEU:N	2.75	0.45
21:l:83:ARG:NH2	47:B:80:ILE:CB	2.57	0.45
22:m:124:HIS:C	22:m:126:LYS:H	2.24	0.45
22:m:219:ILE:HG12	22:m:224:SER:CB	2.28	0.45
26:q:98:LYS:N	26:q:98:LYS:HD3	2.31	0.45
34:y:52:GLN:HA	34:y:60:VAL:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:1:188:VAL:HG11	46:A:2358:A:H2	1.81	0.45
41:5:268:TRP:HA	41:5:279:VAL:HG22	1.99	0.45
46:A:113:U:O2'	46:A:114:U:H5'	2.17	0.45
46:A:149:A:C5	46:A:1371:A:C5	3.04	0.45
46:A:308:U:HO2'	46:A:309:C:P	2.39	0.45
46:A:441:A:C6	46:A:444:A:C5	3.04	0.45
46:A:534:A:H2'	46:A:535:U:O4'	2.17	0.45
46:A:1075:A:N1	46:A:1079:A:C5	2.85	0.45
46:A:1084:U:H2'	46:A:1085:G:C8	2.51	0.45
46:A:1127:A:C2	46:A:1143:A:C2	3.04	0.45
46:A:1215:A:H2'	46:A:1216:A:H8	1.82	0.45
46:A:1434:A:C2	46:A:1488:U:C2	3.05	0.45
46:A:1439:A:O2'	46:A:1482:A:N6	2.49	0.45
46:A:1639:A:H2'	46:A:1640:U:O4'	2.17	0.45
46:A:1689:U:C5	46:A:2876:U:O4	2.70	0.45
46:A:1795:U:H2'	46:A:1796:A:C8	2.52	0.45
46:A:1946:U:O5'	68:W:86:LYS:HA	2.17	0.45
46:A:2276:G:C2	56:K:128:MET:CB	3.00	0.45
46:A:2285:U:C6	46:A:2693:C:C4	3.05	0.45
46:A:2771:G:H4'	46:A:2772:U:O5'	2.17	0.45
46:A:2782:A:C5	46:A:2783:U:C4	3.04	0.45
46:A:2814:U:C2	46:A:2815:U:C4	3.04	0.45
46:A:2870:G:H5'	46:A:2870:G:C8	2.52	0.45
46:A:2941:A:C2	46:A:2942:A:C4	3.05	0.45
46:A:3023:U:H2'	46:A:3024:U:H6	1.80	0.45
50:E:251:ALA:HB1	67:V:63:TYR:CD1	2.52	0.45
63:R:197:TYR:CD2	63:R:197:TYR:C	2.94	0.45
75:e:65:SER:CB	75:e:146:ASN:HB2	2.45	0.45
75:e:133:LEU:H	75:e:133:LEU:HG	1.56	0.45
3:AC:14:LEU:HG	3:AC:38:TRP:CD1	2.52	0.45
4:AD:118:GLN:HE22	7:AG:137:MET:HB2	1.82	0.45
7:AG:192:GLU:OE1	16:g:215:LYS:HA	2.16	0.45
7:AG:203:VAL:HG13	7:AG:207:GLU:HB3	1.99	0.45
9:AI:169:ASP:O	9:AI:171:LYS:HG3	2.16	0.45
10:AJ:76:ARG:HG2	12:AL:1092:C:O5'	2.16	0.45
11:AK:73:MET:CE	18:i:173:MET:H	2.23	0.45
12:AL:224:A:H2'	12:AL:225:U:H5'	1.98	0.45
12:AL:323:U:N3	12:AL:324:G:N7	2.65	0.45
12:AL:527:G:O2'	12:AL:529:U:O4	2.32	0.45
12:AL:766:A:C2'	12:AL:767:A:H5"	2.42	0.45
12:AL:842:A:H2'	12:AL:843:G:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1064:U:H2'	12:AL:1065:A:C5	2.52	0.45
12:AL:1401:A:H5'	12:AL:1401:A:C8	2.49	0.45
12:AL:1423:U:H2'	12:AL:1424:A:O4'	2.17	0.45
12:AL:1647:A:N7	17:h:172:LYS:NZ	2.58	0.45
18:i:104:MET:SD	18:i:107:MET:HE3	2.56	0.45
20:k:41:PRO:HG2	20:k:43:ASP:H	1.82	0.45
21:l:102:ASP:OD1	21:l:102:ASP:N	2.49	0.45
26:q:132:GLY:O	26:q:133:PHE:C	2.60	0.45
30:u:205:LEU:HD23	30:u:247:MET:SD	2.57	0.45
31:v:72:THR:O	31:v:76:ILE:HG13	2.17	0.45
34:y:23:ILE:O	34:y:27:MET:N	2.40	0.45
39:3:65:THR:HG23	46:A:1413:A:H5'	1.99	0.45
41:5:98:LEU:HG	41:5:227:GLY:HA2	1.99	0.45
41:5:331:SER:C	46:A:41:G:H21	2.25	0.45
46:A:24:G:C6	46:A:25:A:N6	2.85	0.45
46:A:177:A:C2	46:A:201:A:C2	3.05	0.45
46:A:379:A:N6	49:D:82:ASN:HB3	2.32	0.45
46:A:595:U:O2	46:A:595:U:C2'	2.63	0.45
46:A:841:G:H1'	50:E:107:TYR:CD2	2.51	0.45
46:A:936:A:H5"	71:a:32:TYR:CD2	2.51	0.45
46:A:1280:A:H3'	46:A:1281:U:H5"	1.98	0.45
46:A:1340:G:H2'	46:A:1341:G:C8	2.52	0.45
46:A:1386:A:H5"	46:A:1715:A:N6	2.32	0.45
46:A:1536:A:C6	46:A:1537:A:N6	2.85	0.45
46:A:1555:A:C6	46:A:1556:A:C5	3.05	0.45
46:A:1612:A:H5"	46:A:1612:A:H8	1.81	0.45
46:A:1708:A:H4'	46:A:1709:G:OP1	2.14	0.45
46:A:1924:G:C5	46:A:1940:G:C2	3.04	0.45
46:A:1998:U:H2'	46:A:1999:U:H6	1.82	0.45
46:A:2205:G:C2	46:A:2206:U:C2	3.06	0.45
46:A:2335:U:O4'	63:R:349:ARG:NH1	2.47	0.45
46:A:2593:A:N7	46:A:2655:A:N6	2.64	0.45
46:A:2637:A:OP1	63:R:149:ARG:CB	2.65	0.45
46:A:2860:A:C6	46:A:2861:U:C5	3.04	0.45
46:A:2959:C:H2'	46:A:2960:U:H6	1.82	0.45
46:A:2970:A:C6	46:A:3041:A:N6	2.85	0.45
46:A:3025:U:H2'	46:A:3026:A:C8	2.52	0.45
48:C:43:ASN:O	48:C:52:ARG:NH2	2.46	0.45
63:R:193:LEU:CD1	63:R:247:ILE:HG12	2.46	0.45
65:T:144:SER:O	65:T:148:THR:HG23	2.16	0.45
71:a:144:ILE:HD12	71:a:144:ILE:HA	1.92	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:e:96:LYS:HB2	75:e:98:ARG:CZ	2.47	0.45
2:AB:55:LEU:C	2:AB:57:ASP:N	2.73	0.44
3:AC:91:LEU:HD23	3:AC:259:ARG:HH11	1.81	0.44
3:AC:135:VAL:O	3:AC:136:LYS:C	2.60	0.44
3:AC:185:LEU:CG	7:AG:197:PHE:N	2.80	0.44
4:AD:258:LYS:CE	16:g:226:VAL:HG13	2.47	0.44
5:AE:117:LEU:HD21	5:AE:159:MET:HB3	1.98	0.44
6:AF:81:THR:HA	6:AF:214:ARG:HB3	1.99	0.44
6:AF:317:VAL:HB	6:AF:318:GLY:H	1.59	0.44
8:AH:215:GLN:HG3	8:AH:216:LEU:N	2.31	0.44
9:AI:56:LEU:CG	22:m:214:GLU:OE1	2.61	0.44
9:AI:70:GLN:HG2	9:AI:71:GLN:H	1.81	0.44
9:AI:181:GLU:O	9:AI:183:PHE:N	2.50	0.44
9:AI:210:ARG:NE	12:AL:1348:U:N3	2.61	0.44
10:AJ:88:LYS:HD2	10:AJ:88:LYS:HA	1.85	0.44
12:AL:66:G:C6	12:AL:358:G:C6	3.06	0.44
12:AL:99:U:H2'	12:AL:100:A:H5"	1.99	0.44
12:AL:484:U:H2'	12:AL:485:A:O4'	2.17	0.44
12:AL:539:C:H42	12:AL:556:G:H1	1.64	0.44
12:AL:639:U:H2'	12:AL:640:C:C6	2.52	0.44
12:AL:717:G:C8	12:AL:818:A:C6	3.06	0.44
12:AL:749:A:H2'	12:AL:750:G:H8	1.82	0.44
12:AL:836:U:C6	12:AL:836:U:OP2	2.70	0.44
12:AL:1021:U:C5	12:AL:1022:U:H1'	2.52	0.44
12:AL:1489:U:H2'	12:AL:1490:A:C8	2.52	0.44
15:Z:62:THR:HA	15:Z:66:ALA:CA	2.44	0.44
18:i:126:LYS:NZ	18:i:130:MET:H	2.14	0.44
18:i:332:LYS:HG2	18:i:333:GLY:H	1.82	0.44
20:k:56:PRO:HG3	20:k:62:PHE:CE1	2.52	0.44
20:k:112:LEU:O	20:k:113:PRO:C	2.60	0.44
26:q:86:ASN:HA	26:q:138:ARG:O	2.17	0.44
26:q:214:MET:HB2	26:q:214:MET:HE3	1.72	0.44
27:r:35:LYS:HD2	32:w:37:LEU:CD2	2.46	0.44
30:u:81:ALA:HB1	47:B:65:PRO:HG2	1.97	0.44
30:u:101:PHE:HB2	32:w:167:LEU:HD13	1.99	0.44
30:u:228:TYR:CD1	32:w:89:GLU:HB3	2.52	0.44
32:w:13:GLN:OE1	32:w:14:GLY:N	2.50	0.44
33:x:45:LEU:HD22	33:x:62:MET:SD	2.57	0.44
33:x:103:VAL:HG12	33:x:105:SER:H	1.82	0.44
36:0:73:ARG:CA	46:A:3093:U:H5	2.30	0.44
46:A:138:U:H2'	46:A:139:U:H6	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:278:A:H2'	46:A:279:U:C6	2.52	0.44
46:A:312:A:O4'	62:Q:260:HIS:ND1	2.49	0.44
46:A:331:A:O2'	46:A:332:A:O4'	2.35	0.44
46:A:371:U:O2'	46:A:372:A:H5'	2.16	0.44
46:A:374:U:H2'	46:A:375:A:H8	1.82	0.44
46:A:534:A:H5"	63:R:142:LYS:HZ2	1.80	0.44
46:A:643:U:H5"	70:Y:61:SER:OG	2.18	0.44
46:A:670:U:H2'	46:A:671:G:C8	2.52	0.44
46:A:991:U:H4'	46:A:1036:U:O2'	2.16	0.44
46:A:1072:U:H2'	46:A:1073:A:C8	2.52	0.44
46:A:1267:A:C5	46:A:1268:U:C4	3.05	0.44
46:A:1330:U:H3'	46:A:1591:G:C6	2.52	0.44
46:A:1533:G:H5'	47:B:150:ASN:HA	1.99	0.44
46:A:2209:U:C2	46:A:2210:A:C8	3.05	0.44
46:A:2302:U:H2'	46:A:2303:G:H8	1.81	0.44
46:A:2696:A:H2'	46:A:2696:A:N3	2.32	0.44
46:A:2778:C:H1'	48:C:204:SER:HB2	1.99	0.44
46:A:2924:A:H3'	46:A:2925:C:H6	1.82	0.44
46:A:2955:G:OP1	46:A:3049:A:N6	2.49	0.44
63:R:323:LYS:HD3	63:R:324:TYR:CE2	2.52	0.44
1:AA:79:SER:OG	12:AL:1621:G:H8	2.00	0.44
1:AA:103:GLU:HA	1:AA:107:LEU:HD13	1.98	0.44
2:AB:118:LYS:CB	12:AL:354:U:OP1	2.65	0.44
5:AE:168:HIS:CA	5:AE:171:LEU:HB2	2.41	0.44
5:AE:306:ASN:C	5:AE:308:LEU:N	2.75	0.44
7:AG:1:MET:HE2	17:h:351:GLU:HB2	1.98	0.44
7:AG:114:TRP:HZ2	16:g:87:ARG:HA	1.82	0.44
7:AG:166:VAL:HG22	16:g:196:PHE:HZ	1.64	0.44
8:AH:43:GLY:O	8:AH:44:VAL:C	2.60	0.44
8:AH:98:GLN:O	8:AH:101:GLU:HG2	2.17	0.44
9:AI:345:ILE:CG2	9:AI:346:SER:N	2.80	0.44
9:AI:412:LEU:O	9:AI:413:LEU:HG	2.17	0.44
11:AK:165:LEU:CD2	25:p:127:TYR:CD1	2.99	0.44
12:AL:69:U:O2'	12:AL:70:C:H5'	2.17	0.44
12:AL:842:A:C6	12:AL:843:G:C5	3.05	0.44
12:AL:1377:A:N6	12:AL:1396:U:O2'	2.51	0.44
12:AL:1429:A:N7	29:t:72:THR:HA	2.31	0.44
12:AL:1524:U:O2	12:AL:1524:U:H2'	2.17	0.44
12:AL:1616:C:H2'	12:AL:1617:G:H8	1.82	0.44
13:AM:10:G:C2	13:AM:26:A:N6	2.85	0.44
13:AM:29:U:H2'	13:AM:30:C:H5	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:47:U:H5'	13:AM:48:C:H4'	2.00	0.44
17:h:183:ILE:CD1	17:h:375:VAL:HG11	2.47	0.44
18:i:114:LEU:CD1	29:t:15:GLY:CA	2.94	0.44
18:i:379:ASN:HB3	18:i:392:LYS:HA	1.99	0.44
20:k:150:VAL:HG13	20:k:169:LEU:HB2	1.99	0.44
20:k:182:GLY:HA3	20:k:201:ALA:HB2	1.99	0.44
21:l:80:GLU:CG	47:B:73:LEU:CB	2.48	0.44
21:l:82:LEU:O	21:l:83:ARG:C	2.59	0.44
21:l:104:GLN:OE1	21:l:118:LYS:HG2	2.17	0.44
22:m:246:LEU:O	22:m:247:LYS:HB2	2.17	0.44
24:o:158:GLY:H	24:o:230:ALA:CB	2.24	0.44
26:q:112:MET:O	26:q:116:LEU:HG	2.17	0.44
28:s:89:SER:O	28:s:90:GLY:C	2.58	0.44
30:u:147:SER:OG	30:u:148:GLU:N	2.49	0.44
32:w:188:THR:O	32:w:192:GLU:N	2.49	0.44
37:1:54:SER:HB2	38:2:63:ARG:HG2	1.99	0.44
39:3:17:LEU:CG	46:A:1319:A:N3	2.80	0.44
40:4:40:MET:HE2	40:4:86:VAL:HG21	1.99	0.44
46:A:32:U:H2'	46:A:33:A:H8	1.82	0.44
46:A:170:U:H2'	46:A:171:A:H8	1.82	0.44
46:A:302:U:H3'	46:A:303:A:H8	1.82	0.44
46:A:330:A:C2	46:A:331:A:C4	3.06	0.44
46:A:370:C:C2	46:A:371:U:C5	3.05	0.44
46:A:573:U:H2'	46:A:574:A:H8	1.81	0.44
46:A:635:U:H2'	46:A:636:G:O4'	2.17	0.44
46:A:703:U:C4	46:A:1283:G:O6	2.70	0.44
46:A:739:A:H2	46:A:740:A:C8	2.34	0.44
46:A:1330:U:C6	46:A:1330:U:H5"	2.51	0.44
46:A:1773:U:O2'	46:A:1774:U:H5'	2.17	0.44
46:A:1892:G:H4'	46:A:1893:U:C5	2.53	0.44
46:A:2712:G:H2'	46:A:2713:G:H1'	1.99	0.44
46:A:2713:G:C5	46:A:2767:C:H3'	2.51	0.44
46:A:3248:C:O3'	57:L:101:ARG:NH1	2.50	0.44
46:A:3270:A:C2	46:A:3271:A:C5	3.05	0.44
46:A:3287:U:O5'	46:A:3287:U:H6	2.00	0.44
53:H:13:ALA:CB	60:O:294:LEU:HD11	2.47	0.44
63:R:66:GLN:NE2	63:R:85:ILE:HD13	2.32	0.44
70:Y:88:GLY:HA2	70:Y:91:ILE:HD12	1.99	0.44
75:e:197:LEU:HA	75:e:201:LEU:HD13	1.98	0.44
2:AB:81:ILE:HG23	2:AB:84:ARG:HH22	1.82	0.44
2:AB:100:ILE:O	2:AB:101:HIS:HB3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:109:SER:C	2:AB:111:PHE:N	2.75	0.44
3:AC:266:LYS:NZ	17:h:129:TYR:OH	2.49	0.44
4:AD:31:LEU:CD1	4:AD:100:CYS:H	2.30	0.44
7:AG:52:SER:OG	7:AG:53:ASN:N	2.50	0.44
8:AH:46:GLY:HA2	32:w:59:ARG:HE	1.82	0.44
8:AH:64:PRO:HG3	12:AL:133:U:H3	0.49	0.44
8:AH:104:ARG:O	8:AH:108:ILE:HG13	2.16	0.44
9:AI:175:ILE:HG23	9:AI:212:ILE:HG12	1.97	0.44
9:AI:181:GLU:O	9:AI:184:LEU:N	2.49	0.44
9:AI:202:PRO:O	9:AI:203:MET:C	2.60	0.44
9:AI:230:TYR:CZ	9:AI:274:ALA:HB1	2.52	0.44
9:AI:235:ALA:HB2	9:AI:264:HIS:CE1	2.53	0.44
9:AI:449:HIS:HB3	22:m:150:ILE:CD1	2.48	0.44
10:AJ:29:ARG:HH12	34:y:13:TRP:CD1	2.31	0.44
11:AK:132:PHE:O	20:k:113:PRO:HG2	2.17	0.44
11:AK:134:PHE:HD2	20:k:112:LEU:CD2	2.30	0.44
11:AK:292:TYR:CD2	24:o:212:PHE:CZ	3.04	0.44
12:AL:268:G:H2'	12:AL:269:A:H8	1.81	0.44
12:AL:340:C:H4'	12:AL:1502:U:C4'	2.42	0.44
12:AL:520:A:H2'	12:AL:521:A:H8	1.82	0.44
12:AL:667:A:H2'	12:AL:668:A:C8	2.51	0.44
12:AL:749:A:H4'	26:q:121:LYS:CE	2.36	0.44
12:AL:1442:G:C5'	22:m:125:GLY:HA2	2.45	0.44
12:AL:1466:A:N1	20:k:157:GLN:CD	2.60	0.44
16:g:78:GLU:C	16:g:80:ARG:H	2.26	0.44
18:i:354:ASN:HB3	18:i:357:TYR:CD2	2.53	0.44
19:j:186:VAL:HG12	19:j:190:LYS:HE3	1.98	0.44
21:l:55:LYS:HE2	21:l:58:GLN:HA	1.98	0.44
22:m:180:PRO:HD2	22:m:244:ILE:HD13	1.98	0.44
27:r:51:GLN:C	27:r:53:ASP:N	2.63	0.44
27:r:149:LYS:O	27:r:151:SER:N	2.50	0.44
29:t:41:LEU:HD23	29:t:44:ILE:HD12	2.00	0.44
41:5:99:ARG:CD	44:8:222:PRO:HB2	2.47	0.44
46:A:127:A:C2'	46:A:128:U:H5'	2.48	0.44
46:A:176:U:H3'	46:A:177:A:H8	1.83	0.44
46:A:236:A:N3	46:A:236:A:H2'	2.32	0.44
46:A:317:U:C4	46:A:338:G:N2	2.85	0.44
46:A:336:A:H2'	46:A:337:A:C8	2.53	0.44
46:A:487:U:C2	49:D:131:LEU:HD22	2.52	0.44
46:A:500:U:O2'	46:A:504:A:H5"	2.17	0.44
46:A:535:U:O3'	55:J:198:LYS:NZ	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:601:U:O2'	46:A:1367:A:H4'	2.17	0.44
46:A:661:G:OP1	70:Y:72:LYS:HG3	2.17	0.44
46:A:808:A:H2'	46:A:809:C:O4'	2.17	0.44
46:A:1096:A:N1	46:A:2836:G:O2'	2.42	0.44
46:A:1272:U:H4'	46:A:1273:U:O5'	2.17	0.44
46:A:1859:G:H2'	46:A:1860:U:O4'	2.18	0.44
46:A:2025:A:C2	46:A:2026:G:C4	3.05	0.44
46:A:2034:A:H4'	46:A:2035:U:OP1	2.14	0.44
46:A:2198:U:H2'	46:A:2199:U:O4'	2.18	0.44
46:A:2215:A:H2'	46:A:2216:U:H6	1.80	0.44
46:A:2243:U:H2'	46:A:2244:A:C8	2.51	0.44
46:A:2598:U:C4'	46:A:2602:A:H62	2.30	0.44
46:A:2803:C:H2'	46:A:2804:U:C6	2.52	0.44
46:A:2957:A:N3	46:A:3240:A:O2'	2.46	0.44
46:A:2973:A:H2'	46:A:2974:U:C6	2.52	0.44
46:A:3032:U:O2	46:A:3032:U:O4'	2.36	0.44
46:A:3103:G:C2	46:A:3104:U:C6	3.06	0.44
46:A:3269:U:C2	46:A:3270:A:N7	2.85	0.44
63:R:236:THR:O	63:R:237:ASN:C	2.59	0.44
2:AB:122:ALA:HB2	12:AL:352:G:O2'	2.18	0.44
3:AC:10:VAL:O	3:AC:11:VAL:C	2.60	0.44
3:AC:204:ILE:CD1	7:AG:200:LEU:CD1	2.96	0.44
5:AE:50:GLU:O	5:AE:51:PHE:C	2.60	0.44
6:AF:58:MET:HG2	19:j:11:LEU:CG	2.45	0.44
6:AF:124:ARG:O	6:AF:128:ILE:N	2.50	0.44
7:AG:206:ILE:CB	16:g:92:GLU:OE2	2.46	0.44
8:AH:50:ALA:HB3	32:w:75:ALA:HA	1.99	0.44
11:AK:127:ASN:O	11:AK:130:ARG:HG3	2.17	0.44
12:AL:62:A:C5	12:AL:63:U:C5	3.06	0.44
12:AL:220:A:H2'	12:AL:221:U:H6	1.81	0.44
12:AL:515:A:C4	12:AL:516:A:C8	3.05	0.44
12:AL:690:G:C2	12:AL:826:G:O6	2.70	0.44
12:AL:744:A:C5	12:AL:745:U:C4	3.05	0.44
12:AL:928:U:H2'	12:AL:929:G:O4'	2.18	0.44
12:AL:1060:A:H3'	12:AL:1061:U:O4'	2.17	0.44
18:i:150:ASN:OD1	20:k:78:LEU:N	2.50	0.44
18:i:175:MET:O	18:i:176:MET:C	2.61	0.44
18:i:260:TYR:O	18:i:264:ILE:HG12	2.18	0.44
21:l:80:GLU:OE2	47:B:80:ILE:HD11	2.17	0.44
22:m:229:LYS:O	22:m:230:ARG:C	2.61	0.44
29:t:54:LEU:HA	29:t:57:GLU:OE2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:x:92:PHE:HD2	33:x:98:ILE:HG13	1.83	0.44
39:3:89:GLU:CB	62:Q:202:ILE:HD13	2.46	0.44
40:4:19:PHE:HE1	59:N:121:VAL:HG13	1.82	0.44
46:A:18:A:C6	46:A:19:G:C6	3.05	0.44
46:A:260:G:C2	46:A:364:U:C2	3.05	0.44
46:A:270:G:H2'	46:A:271:A:H8	1.82	0.44
46:A:629:G:N2	46:A:1881:A:C2	2.86	0.44
46:A:937:U:HO2'	46:A:938:A:H8	1.66	0.44
46:A:1169:A:H4'	46:A:1170:U:OP2	2.17	0.44
46:A:1301:A:C2	46:A:1913:A:C4	3.05	0.44
46:A:1483:U:H2'	46:A:1484:U:H6	1.82	0.44
46:A:1588:U:H2'	46:A:1589:A:H8	1.82	0.44
46:A:1729:A:H2'	46:A:1730:A:C8	2.51	0.44
46:A:1795:U:H2'	46:A:1796:A:H8	1.83	0.44
46:A:1835:G:H3'	46:A:1862:C:H42	1.83	0.44
46:A:2215:A:H8	46:A:2215:A:OP2	2.00	0.44
46:A:2276:G:H1	56:K:128:MET:HG3	1.69	0.44
46:A:2310:U:C2	46:A:2656:A:C2	3.05	0.44
46:A:2326:U:O2'	46:A:2327:A:H5'	2.18	0.44
46:A:2353:U:N3	46:A:2354:A:N7	2.66	0.44
46:A:2438:A:H8	46:A:2438:A:P	2.40	0.44
46:A:2621:A:O2'	63:R:62:ILE:HG13	2.17	0.44
46:A:2682:G:HO2'	55:J:122:PHE:HD1	1.62	0.44
46:A:2711:G:OP1	49:D:115:ARG:NH2	2.50	0.44
46:A:2970:A:H2'	46:A:2971:A:H8	1.81	0.44
46:A:3232:U:O4	46:A:3233:A:N6	2.51	0.44
46:A:3257:C:C2	46:A:3258:A:C8	3.04	0.44
47:B:199:GLY:O	47:B:201:ARG:N	2.51	0.44
47:B:210:ARG:HH11	47:B:210:ARG:HG2	1.83	0.44
55:J:128:LYS:HB2	55:J:172:TYR:HB3	1.99	0.44
63:R:193:LEU:O	63:R:194:ALA:C	2.59	0.44
63:R:331:GLU:CB	63:R:362:ARG:NH1	2.71	0.44
2:AB:73:ILE:HG22	2:AB:77:LYS:HE2	2.00	0.44
3:AC:54:ALA:CA	7:AG:143:PRO:HB3	2.40	0.44
3:AC:192:ASP:O	3:AC:195:ALA:HB3	2.18	0.44
5:AE:62:LYS:O	5:AE:64:PHE:N	2.50	0.44
5:AE:194:HIS:O	5:AE:195:ARG:C	2.57	0.44
6:AF:56:THR:O	6:AF:59:ARG:HB3	2.17	0.44
6:AF:145:THR:HG21	6:AF:216:PHE:CD1	2.53	0.44
6:AF:325:ASN:O	6:AF:327:ASP:N	2.41	0.44
7:AG:75:TYR:CZ	32:w:183:ILE:HD13	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:34:ASN:C	8:AH:36:VAL:H	2.26	0.44
8:AH:135:ALA:O	8:AH:138:LEU:HB2	2.16	0.44
8:AH:172:GLU:O	8:AH:175:LEU:HG	2.17	0.44
9:AI:56:LEU:CD1	22:m:214:GLU:HG2	2.47	0.44
9:AI:325:MET:O	9:AI:328:ILE:HB	2.17	0.44
9:AI:415:LYS:HE3	9:AI:416:ASP:OD2	2.18	0.44
9:AI:441:LEU:HD23	9:AI:441:LEU:C	2.42	0.44
10:AJ:66:ILE:HD12	10:AJ:66:ILE:N	2.32	0.44
12:AL:822:U:C3'	12:AL:822:U:C6	3.00	0.44
12:AL:1014:A:P	28:s:103:HIS:CB	3.04	0.44
12:AL:1049:C:H3'	12:AL:1051:A:C8	2.53	0.44
12:AL:1184:U:H4'	20:k:51:ASN:CB	2.47	0.44
12:AL:1213:G:N7	24:o:247:HIS:CE1	2.83	0.44
12:AL:1213:G:OP2	24:o:247:HIS:ND1	2.51	0.44
12:AL:1632:A:H5'	33:x:63:GLY:HA2	1.97	0.44
15:Z:19:LYS:HA	15:Z:19:LYS:HD2	1.78	0.44
16:g:221:VAL:HG21	16:g:224:ARG:CD	2.47	0.44
17:h:183:ILE:HD11	17:h:375:VAL:CG1	2.46	0.44
18:i:95:THR:O	29:t:108:PRO:CG	2.65	0.44
18:i:311:ILE:HA	18:i:315:PRO:CG	2.46	0.44
19:j:127:HIS:CB	19:j:129:ASN:HD21	2.30	0.44
21:l:20:GLU:O	21:l:21:ALA:C	2.60	0.44
21:l:117:LYS:HE3	21:l:126:GLU:HB2	1.99	0.44
25:p:45:ILE:HG22	25:p:47:LEU:HG	2.00	0.44
26:q:99:ASN:HA	26:q:102:LYS:HG3	1.99	0.44
27:r:83:VAL:HG12	27:r:84:ARG:N	2.32	0.44
27:r:96:PRO:O	27:r:127:ARG:HG3	2.18	0.44
28:s:10:PHE:HA	28:s:23:LYS:NZ	2.32	0.44
30:u:189:ALA:HB1	30:u:257:PHE:CZ	2.52	0.44
32:w:13:GLN:HB2	32:w:54:GLU:H	1.82	0.44
32:w:110:LYS:O	32:w:114:ARG:HB3	2.17	0.44
37:1:121:PHE:CE1	46:A:2349:A:N6	2.86	0.44
45:9:175:LYS:HE2	46:A:23:U:H5'	1.97	0.44
46:A:12:A:C2'	46:A:13:A:H8	2.31	0.44
46:A:164:U:O2'	62:Q:221:LYS:HE3	2.17	0.44
46:A:225:A:C6	46:A:252:A:C6	3.05	0.44
46:A:292:G:OP1	55:J:105:TRP:CH2	2.70	0.44
46:A:520:A:C8	46:A:2683:U:H4'	2.53	0.44
46:A:616:A:N7	46:A:1429:C:C2	2.86	0.44
46:A:656:A:C4	46:A:657:U:C5	3.06	0.44
46:A:847:U:C4	46:A:848:U:C4	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:852:U:H2'	46:A:853:U:C6	2.53	0.44
46:A:1118:A:N3	46:A:1118:A:H5'	2.33	0.44
46:A:1248:A:H2'	46:A:1249:U:H6	1.80	0.44
46:A:1263:A:H2'	46:A:1264:U:O4'	2.17	0.44
46:A:1410:U:H4'	46:A:1411:A:OP1	2.17	0.44
46:A:1609:U:H2'	46:A:1610:A:C8	2.51	0.44
46:A:1985:U:H2'	46:A:1986:A:C8	2.52	0.44
46:A:2026:G:H3'	46:A:2027:U:C5	2.53	0.44
46:A:2099:A:H2'	46:A:2100:U:C5	2.52	0.44
46:A:2216:U:H2'	46:A:2217:A:H8	1.82	0.44
46:A:2276:G:H5'	46:A:2276:G:C8	2.52	0.44
46:A:2326:U:H2'	46:A:2327:A:H8	1.83	0.44
46:A:2631:G:OP1	63:R:81:LYS:CE	2.66	0.44
46:A:2680:A:O2'	46:A:2681:G:H5'	2.17	0.44
46:A:2837:U:O2'	46:A:2838:U:H5'	2.18	0.44
46:A:2957:A:C8	46:A:3056:A:N6	2.85	0.44
46:A:3004:A:C5	46:A:3005:A:C5	3.05	0.44
46:A:3109:U:C2	46:A:3110:U:C5	3.05	0.44
46:A:3252:U:H1'	46:A:3253:U:OP2	2.17	0.44
46:A:3275:C:H2'	46:A:3276:U:H6	1.81	0.44
47:B:185:HIS:HB3	47:B:188:THR:HB	2.00	0.44
63:R:159:LEU:HD22	72:b:157:PHE:CE1	2.52	0.44
63:R:226:GLU:O	63:R:227:ARG:C	2.60	0.44
76:f:9:ILE:HG12	76:f:61:THR:HA	1.99	0.44
3:AC:148:LEU:CD2	4:AD:203:ASN:HB3	2.43	0.44
4:AD:190:ASP:O	4:AD:191:ILE:C	2.61	0.44
4:AD:241:GLU:HB3	4:AD:245:LYS:HA	2.00	0.44
5:AE:95:LYS:HZ2	12:AL:1523:A:H4'	1.81	0.44
5:AE:309:SER:O	5:AE:311:SER:O	2.36	0.44
6:AF:90:PRO:CB	19:j:29:TYR:HD1	2.30	0.44
9:AI:114:GLN:C	9:AI:116:ASN:H	2.26	0.44
9:AI:226:LEU:HD11	9:AI:248:LEU:HD13	2.00	0.44
9:AI:286:PRO:HB3	9:AI:338:GLU:O	2.18	0.44
10:AJ:32:SER:O	10:AJ:33:LYS:C	2.60	0.44
10:AJ:63:TYR:CE1	18:i:182:ILE:HG23	2.52	0.44
12:AL:258:G:OP1	32:w:69:ARG:HG2	2.18	0.44
12:AL:738:A:O3'	21:l:93:ARG:CZ	2.66	0.44
12:AL:755:G:OP2	26:q:86:ASN:HB2	2.17	0.44
12:AL:784:A:OP2	12:AL:800:U:H5'	2.17	0.44
12:AL:1216:A:C8	24:o:256:TYR:CD1	3.05	0.44
12:AL:1295:A:N6	12:AL:1296:A:N6	2.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1379:A:H2'	12:AL:1380:A:O4'	2.18	0.44
12:AL:1462:A:O2'	12:AL:1463:C:OP1	2.23	0.44
16:g:278:PHE:HB3	16:g:296:ARG:H	1.82	0.44
18:i:127:LEU:O	18:i:128:ASN:HB3	2.17	0.44
18:i:306:TYR:CZ	25:p:28:TYR:HE2	2.35	0.44
21:l:66:HIS:CE1	33:x:137:LEU:CG	3.00	0.44
21:l:69:MET:HE3	21:l:69:MET:HB2	1.89	0.44
21:l:125:ASN:HA	21:l:128:TYR:HB2	1.99	0.44
24:o:153:ARG:HD3	24:o:155:ILE:HD11	2.00	0.44
26:q:183:LEU:HD23	26:q:192:VAL:HG22	1.99	0.44
27:r:117:ASP:OD1	27:r:117:ASP:N	2.50	0.44
30:u:41:LEU:CD1	46:A:1658:G:H5'	2.47	0.44
30:u:121:GLU:HB2	30:u:122:VAL:H	1.67	0.44
30:u:266:ASP:OD1	30:u:266:ASP:N	2.51	0.44
32:w:230:MET:O	32:w:231:ASP:C	2.58	0.44
34:y:72:LYS:O	34:y:73:LEU:C	2.60	0.44
40:4:33:TRP:HH2	46:A:1274:A:N7	2.11	0.44
46:A:100:U:C2	46:A:101:A:N7	2.85	0.44
46:A:200:G:N3	46:A:200:G:C2'	2.75	0.44
46:A:339:A:C6	46:A:340:A:C6	3.06	0.44
46:A:532:A:C4	46:A:534:A:N7	2.86	0.44
46:A:820:U:H2'	46:A:821:U:C6	2.53	0.44
46:A:1015:A:H3'	46:A:1016:C:O4'	2.17	0.44
46:A:1130:C:C2	46:A:1131:C:C6	3.05	0.44
46:A:1205:U:H2'	46:A:1208:U:C5'	2.47	0.44
46:A:1369:U:H2'	46:A:1370:A:C8	2.53	0.44
46:A:1628:A:H2'	46:A:1629:A:O4'	2.17	0.44
46:A:1727:A:H3'	47:B:290:GLN:HB3	1.98	0.44
46:A:1767:A:O2'	46:A:1768:A:C8	2.66	0.44
46:A:1770:U:H3	46:A:1781:A:H61	1.65	0.44
46:A:2061:U:H5	46:A:2062:G:H1'	1.83	0.44
46:A:2248:G:C2	46:A:2249:A:C8	3.05	0.44
46:A:2763:A:H1'	46:A:2764:C:C5	2.53	0.44
46:A:2928:A:C6	46:A:2929:A:C4	3.06	0.44
47:B:100:SER:C	47:B:102:GLY:H	2.26	0.44
47:B:135:ASN:O	47:B:136:SER:C	2.61	0.44
50:E:266:ILE:HG21	50:E:280:LEU:HD21	2.00	0.44
58:M:90:PHE:CE1	58:M:121:ILE:HD12	2.53	0.44
63:R:181:ARG:HA	63:R:181:ARG:HD2	1.70	0.44
63:R:257:SER:O	63:R:269:TYR:N	2.51	0.44
65:T:86:PRO:HG2	65:T:89:HIS:CG	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:105:ARG:HD3	46:A:1875:G:C5'	2.48	0.44
4:AD:251:PHE:HA	4:AD:255:THR:CB	2.47	0.44
5:AE:94:VAL:CG2	5:AE:97:LEU:HD13	2.47	0.44
5:AE:181:ILE:HG12	5:AE:185:PHE:HD2	1.82	0.44
6:AF:40:LYS:HB2	6:AF:60:GLN:HE22	1.83	0.44
6:AF:42:LEU:HB3	6:AF:45:GLN:HE22	1.83	0.44
7:AG:52:SER:OG	7:AG:97:LEU:HA	2.18	0.44
8:AH:6:ALA:HA	8:AH:10:PHE:HA	1.98	0.44
8:AH:11:LYS:H	8:AH:11:LYS:HG3	1.56	0.44
8:AH:130:LYS:HA	8:AH:133:GLU:CD	2.43	0.44
8:AH:153:ILE:CG1	23:n:41:GLN:HE21	1.91	0.44
9:AI:60:TRP:O	9:AI:61:THR:C	2.58	0.44
9:AI:129:ASP:O	9:AI:389:PHE:CZ	2.71	0.44
10:AJ:66:ILE:HG23	18:i:125:LEU:CD2	2.47	0.44
12:AL:132:A:N1	12:AL:237:C:H1'	2.33	0.44
12:AL:257:A:N6	12:AL:279:A:C6	2.86	0.44
12:AL:1009:G:H2'	12:AL:1009:G:N3	2.33	0.44
12:AL:1165:A:C5'	24:o:254:ARG:CG	2.95	0.44
12:AL:1329:A:H3'	12:AL:1330:A:H4'	1.99	0.44
12:AL:1589:G:H2'	12:AL:1590:A:O4'	2.17	0.44
12:AL:1632:A:C1'	33:x:58:PHE:CE1	3.01	0.44
12:AL:1645:U:O4'	17:h:176:TYR:CE2	2.71	0.44
13:AM:26:A:H2'	13:AM:26:A:N3	2.32	0.44
17:h:229:LEU:HD22	17:h:372:LEU:HD22	2.00	0.44
17:h:322:VAL:O	17:h:344:ALA:HA	2.18	0.44
20:k:129:LEU:O	20:k:133:THR:N	2.51	0.44
22:m:107:PRO:CG	24:o:202:VAL:HA	2.48	0.44
23:n:127:ILE:HA	23:n:152:CYS:O	2.17	0.44
24:o:151:PHE:HD2	24:o:153:ARG:CZ	2.30	0.44
26:q:72:GLU:O	26:q:73:VAL:C	2.60	0.44
26:q:204:LEU:CD2	35:z:133:LYS:HG2	2.48	0.44
27:r:137:ASN:O	27:r:138:ARG:C	2.59	0.44
28:s:5:ILE:HG12	28:s:24:PHE:HZ	1.82	0.44
31:v:4:GLY:H	31:v:7:ARG:HE	1.65	0.44
32:w:53:ARG:NH2	32:w:83:GLN:HG2	2.33	0.44
32:w:64:ARG:O	32:w:65:PRO:C	2.59	0.44
32:w:109:ASP:O	32:w:110:LYS:C	2.61	0.44
32:w:190:LEU:HD21	32:w:225:ARG:HA	1.98	0.44
37:1:121:PHE:CE2	38:2:67:ILE:HD11	2.53	0.44
41:5:141:VAL:HG21	61:P:252:LEU:HD23	2.00	0.44
46:A:9:U:H3	46:A:3290:A:N6	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:63:G:H2'	46:A:64:U:H6	1.81	0.44
46:A:230:A:C6	46:A:231:A:C6	3.06	0.44
46:A:572:U:O5'	46:A:572:U:H6	2.01	0.44
46:A:1058:U:C2	46:A:1059:A:C8	3.05	0.44
46:A:1145:U:C2	46:A:1146:A:C8	3.05	0.44
46:A:1303:C:H2'	46:A:1600:U:H5"	1.99	0.44
46:A:1330:U:H5'	46:A:1331:A:OP1	2.18	0.44
46:A:1399:A:H1'	46:A:1400:U:C5	2.52	0.44
46:A:1553:G:N7	46:A:1554:U:C4	2.86	0.44
46:A:1563:C:H2'	46:A:1564:C:H5'	2.00	0.44
46:A:1872:G:C2	46:A:1873:A:N7	2.86	0.44
46:A:2291:G:H3'	46:A:2292:C:H2'	2.00	0.44
46:A:2328:A:H1'	63:R:327:SER:OG	2.18	0.44
46:A:2384:A:C2	46:A:2385:U:C2	3.05	0.44
46:A:2574:G:C5'	50:E:131:TRP:HZ2	2.30	0.44
46:A:2575:A:H2'	46:A:2576:A:C8	2.52	0.44
46:A:2694:G:N2	55:J:116:LEU:HD11	2.29	0.44
46:A:2907:U:O2'	46:A:2908:A:H5'	2.17	0.44
46:A:3076:A:C2	46:A:3077:A:C4	3.06	0.44
51:F:30:VAL:HG11	51:F:111:ILE:HD13	2.00	0.44
56:K:229:PHE:CD2	63:R:122:PHE:HZ	2.36	0.44
59:N:76:LEU:HD11	59:N:153:LEU:HD11	1.99	0.44
63:R:111:LEU:HD12	63:R:126:VAL:HB	1.99	0.44
63:R:251:SER:O	63:R:255:ASN:ND2	2.50	0.44
76:f:18:GLN:HE22	76:f:48:ALA:HA	1.83	0.44
4:AD:206:THR:HB	4:AD:207:PRO:HD2	2.00	0.44
5:AE:231:LEU:O	5:AE:234:THR:HB	2.17	0.44
6:AF:103:THR:O	6:AF:105:LYS:HG3	2.18	0.44
6:AF:160:GLU:OE1	6:AF:164:GLU:HG3	2.18	0.44
6:AF:305:SER:O	6:AF:306:GLN:C	2.60	0.44
7:AG:142:ARG:NH1	7:AG:143:PRO:O	2.51	0.44
8:AH:14:VAL:CG1	12:AL:298:A:N9	2.78	0.44
8:AH:200:LEU:HA	8:AH:204:HIS:HB3	1.52	0.44
9:AI:132:ASN:O	9:AI:136:LYS:HG3	2.17	0.44
9:AI:208:LEU:O	9:AI:212:ILE:HG13	2.18	0.44
10:AJ:47:TYR:O	10:AJ:48:TYR:C	2.61	0.44
12:AL:29:G:C5	12:AL:30:U:C5	3.05	0.44
12:AL:56:U:O2	12:AL:366:G:H1'	2.17	0.44
12:AL:78:U:O2	12:AL:78:U:H2'	2.18	0.44
12:AL:80:U:C3'	12:AL:81:U:H6	2.13	0.44
12:AL:329:U:C4	12:AL:330:G:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:502:A:OP1	19:j:9:LYS:C	2.61	0.44
12:AL:604:A:H2'	12:AL:605:U:O4'	2.18	0.44
12:AL:606:U:C4	12:AL:607:U:C4	3.05	0.44
12:AL:1038:G:OP1	25:p:89:ILE:HD11	2.17	0.44
12:AL:1132:U:H5"	12:AL:1133:U:C5	2.53	0.44
12:AL:1168:U:H2'	12:AL:1169:A:H8	1.82	0.44
12:AL:1289:U:H4'	12:AL:1292:A:O3'	2.18	0.44
12:AL:1294:A:H2'	12:AL:1314:U:H3	1.83	0.44
12:AL:1572:U:H2'	12:AL:1573:G:H8	1.81	0.44
15:Z:41:TRP:O	15:Z:42:SER:C	2.60	0.44
16:g:210:LEU:HD22	16:g:210:LEU:HA	1.81	0.44
18:i:98:TYR:HE2	25:p:48:ARG:HB2	1.81	0.44
20:k:161:GLY:O	20:k:162:LYS:C	2.61	0.44
21:l:81:ILE:O	21:l:85:LEU:HG	2.18	0.44
23:n:125:GLU:HG2	23:n:155:LYS:HB2	2.00	0.44
26:q:124:ILE:O	26:q:151:MET:HE1	2.18	0.44
28:s:106:ASN:CG	28:s:107:ASN:N	2.75	0.44
30:u:88:VAL:HG12	30:u:89:LEU:H	1.83	0.44
30:u:237:ASN:O	30:u:238:ASP:C	2.59	0.44
32:w:223:LEU:O	32:w:226:LYS:HB3	2.18	0.44
34:y:68:MET:HG2	34:y:76:PHE:CE1	2.53	0.44
34:y:71:HIS:CB	34:y:76:PHE:CE1	2.98	0.44
46:A:155:A:C2	70:Y:71:LEU:HA	2.52	0.44
46:A:256:A:C8	46:A:369:A:N6	2.86	0.44
46:A:259:A:H2'	46:A:260:G:O4'	2.18	0.44
46:A:753:A:H2	46:A:769:U:H3	1.66	0.44
46:A:818:U:C3'	46:A:819:U:H6	2.30	0.44
46:A:918:U:H2'	46:A:919:A:O4'	2.17	0.44
46:A:966:A:C5	46:A:967:U:C4	3.05	0.44
46:A:1020:U:O3'	46:A:1021:A:O4'	2.35	0.44
46:A:1160:A:H2'	46:A:1161:A:C8	2.52	0.44
46:A:1703:U:H4'	47:B:368:GLY:N	2.33	0.44
46:A:1737:A:C4	46:A:1738:A:C8	3.05	0.44
46:A:1763:A:C2	46:A:1990:A:C5	3.05	0.44
46:A:2474:U:O2'	46:A:2475:U:H5'	2.18	0.44
46:A:2667:A:C6	46:A:2668:C:C4	3.06	0.44
46:A:2864:G:H2'	46:A:2865:A:C8	2.53	0.44
46:A:2883:C:C2	46:A:2884:U:C5	3.05	0.44
46:A:2961:A:H2'	46:A:2962:U:H6	1.80	0.44
46:A:3014:C:C4	46:A:3033:A:C6	3.05	0.44
46:A:3018:A:H3'	46:A:3019:U:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:B:71:VAL:HG23	47:B:72:THR:H	1.83	0.44
47:B:138:LYS:O	47:B:139:ILE:C	2.61	0.44
47:B:266:CYS:C	47:B:271:THR:HG21	2.43	0.44
54:I:3:PHE:CZ	54:I:33:PRO:HB3	2.52	0.44
55:J:113:ILE:O	55:J:116:LEU:N	2.51	0.44
63:R:55:GLN:O	63:R:92:VAL:HA	2.17	0.44
63:R:159:LEU:HD21	72:b:157:PHE:CE1	2.53	0.44
63:R:193:LEU:HD22	63:R:250:CYS:CB	2.48	0.44
63:R:221:TYR:O	63:R:222:LEU:C	2.58	0.44
63:R:267:HIS:ND1	63:R:268:GLN:N	2.61	0.44
63:R:295:LYS:HA	63:R:371:LEU:CB	2.47	0.44
75:e:114:PRO:HA	75:e:118:VAL:HG21	2.00	0.44
75:e:119:LYS:O	75:e:122:GLU:HG2	2.17	0.44
2:AB:73:ILE:O	2:AB:77:LYS:N	2.51	0.44
2:AB:82:GLN:O	2:AB:85:LYS:N	2.51	0.44
3:AC:59:GLU:O	17:h:164:ILE:CG2	2.64	0.44
5:AE:266:GLU:O	5:AE:270:LEU:N	2.38	0.44
5:AE:267:LEU:O	5:AE:271:LEU:HG	2.17	0.44
6:AF:149:LEU:HB2	6:AF:154:LYS:HE3	1.99	0.44
8:AH:50:ALA:CB	32:w:76:GLU:CA	2.96	0.44
9:AI:138:LEU:HD23	9:AI:146:PHE:HE1	1.82	0.44
9:AI:295:SER:C	9:AI:298:LEU:H	2.25	0.44
9:AI:376:LYS:O	9:AI:379:GLU:N	2.51	0.44
11:AK:193:GLU:N	18:i:101:ASN:ND2	2.65	0.44
12:AL:108:U:O2	12:AL:108:U:O4'	2.36	0.44
12:AL:224:A:C5	12:AL:225:U:C5	3.05	0.44
12:AL:351:A:N3	58:M:166:ARG:CD	2.81	0.44
12:AL:384:G:N1	12:AL:388:G:O6	2.51	0.44
12:AL:1015:U:H5'	12:AL:1015:U:O2	2.17	0.44
12:AL:1329:A:H5'	12:AL:1331:C:C5	2.53	0.44
12:AL:1544:U:H2'	12:AL:1545:U:C6	2.53	0.44
13:AM:16:U:OP1	13:AM:59:A:N6	2.51	0.44
13:AM:21:A:C1'	13:AM:48:C:H42	2.31	0.44
16:g:28:LYS:H	33:x:53:THR:CG2	2.31	0.44
18:i:187:MET:HE3	18:i:187:MET:HB2	1.83	0.44
18:i:302:ILE:CD1	25:p:20:TYR:CD1	2.96	0.44
19:j:75:SER:O	19:j:76:VAL:C	2.60	0.44
19:j:187:LYS:HD2	19:j:190:LYS:HD2	2.00	0.44
20:k:300:VAL:O	20:k:300:VAL:HG12	2.18	0.44
21:l:5:LEU:O	21:l:5:LEU:HG	2.18	0.44
26:q:111:THR:O	26:q:115:TYR:HD1	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:q:153:GLU:O	26:q:157:GLU:HG3	2.18	0.44
31:v:25:VAL:HG21	31:v:75:TRP:HD1	1.80	0.44
31:v:71:ARG:O	31:v:72:THR:C	2.60	0.44
31:v:88:LYS:HE2	31:v:105:ASN:OD1	2.18	0.44
32:w:106:GLU:C	32:w:108:LEU:N	2.74	0.44
32:w:108:LEU:O	32:w:109:ASP:C	2.56	0.44
33:x:114:ILE:O	33:x:115:THR:C	2.60	0.44
35:z:108:VAL:C	35:z:110:LYS:H	2.26	0.44
46:A:175:U:C2	46:A:204:A:C2	3.06	0.44
46:A:331:A:O2'	46:A:332:A:P	2.76	0.44
46:A:373:U:H2'	46:A:374:U:C6	2.53	0.44
46:A:512:U:H2'	46:A:513:U:C6	2.53	0.44
46:A:783:U:C4	46:A:2294:A:C8	3.06	0.44
46:A:933:C:H2'	46:A:934:U:C6	2.52	0.44
46:A:956:A:H3'	46:A:957:U:H6	1.83	0.44
46:A:1015:A:H4'	76:f:117:LEU:HD22	2.00	0.44
46:A:1018:U:O3'	46:A:1021:A:N1	2.50	0.44
46:A:1352:A:N6	74:d:32:LEU:HB3	2.32	0.44
46:A:1551:C:C4	46:A:1552:C:N4	2.86	0.44
46:A:2382:A:C2	46:A:2383:A:C5	3.05	0.44
46:A:2425:A:C2	67:V:27:ARG:HG3	2.50	0.44
46:A:2573:G:C2	46:A:2574:G:C8	3.06	0.44
46:A:2615:U:H2'	46:A:2616:G:H8	1.82	0.44
46:A:3084:A:C6	46:A:3094:A:N7	2.86	0.44
46:A:3126:C:H2'	46:A:3127:U:C6	2.53	0.44
48:C:93:ILE:HD11	48:C:109:GLY:HA3	1.99	0.44
50:E:252:ASN:ND2	50:E:256:TRP:HE1	2.16	0.44
65:T:206:GLN:HB3	65:T:212:ILE:HG23	2.00	0.44
3:AC:136:LYS:NZ	3:AC:249:ASP:HA	2.32	0.43
4:AD:175:ARG:CB	4:AD:191:ILE:HG23	2.48	0.43
4:AD:249:THR:O	4:AD:251:PHE:N	2.51	0.43
5:AE:195:ARG:HG2	5:AE:196:ASN:N	2.33	0.43
6:AF:46:HIS:CD2	6:AF:47:PRO:HD2	2.53	0.43
6:AF:137:PHE:CD2	19:j:468:PRO:CB	3.01	0.43
6:AF:320:ARG:HD3	8:AH:13:GLY:O	2.18	0.43
8:AH:83:GLN:HB2	12:AL:145:A:OP1	2.18	0.43
9:AI:268:ARG:O	9:AI:271:LEU:HB3	2.18	0.43
9:AI:318:LEU:O	9:AI:319:GLN:C	2.59	0.43
10:AJ:19:PHE:CZ	11:AK:258:LEU:HD12	2.52	0.43
11:AK:99:VAL:HG23	18:i:167:ASN:HB2	1.95	0.43
11:AK:152:ARG:CD	20:k:70:ASP:OD1	2.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:190:VAL:HG21	25:p:138:MET:HE3	1.98	0.43
12:AL:625:A:H4'	12:AL:626:U:OP1	2.18	0.43
12:AL:699:A:H5'	23:n:5:LYS:NZ	2.33	0.43
12:AL:1377:A:H3'	12:AL:1378:U:C6	2.52	0.43
12:AL:1507:U:H2'	12:AL:1508:A:H8	1.82	0.43
21:l:62:PHE:CG	26:q:116:LEU:CD1	3.01	0.43
29:t:60:LEU:HD11	34:y:20:PRO:HA	2.00	0.43
30:u:142:LEU:HD23	30:u:142:LEU:HA	1.85	0.43
34:y:31:THR:O	34:y:33:ILE:N	2.50	0.43
38:2:46:LEU:HG	50:E:157:ILE:CG2	2.48	0.43
41:5:142:ASN:O	41:5:215:ARG:NH2	2.50	0.43
44:8:243:MET:HE2	61:P:251:LYS:CG	2.48	0.43
45:9:124:LEU:CD1	45:9:145:LEU:HD11	2.48	0.43
46:A:87:U:C2	46:A:88:U:C5	3.06	0.43
46:A:262:A:N6	46:A:271:A:C2	2.86	0.43
46:A:275:A:C6	46:A:276:U:C4	3.06	0.43
46:A:426:A:C8	46:A:1923:C:N4	2.85	0.43
46:A:901:A:C8	46:A:916:A:N6	2.85	0.43
46:A:1113:A:H3'	46:A:1115:A:C8	2.53	0.43
46:A:1242:A:C6	46:A:1268:U:C4	3.06	0.43
46:A:1343:U:H2'	61:P:141:LYS:CB	2.47	0.43
46:A:1433:A:C6	46:A:1434:A:N6	2.86	0.43
46:A:1561:G:H3'	46:A:1561:G:N3	2.33	0.43
46:A:1767:A:O2'	46:A:1768:A:O4'	2.36	0.43
46:A:2203:A:H2'	46:A:2204:A:H8	1.80	0.43
46:A:2207:A:C4	46:A:2208:A:C8	3.06	0.43
46:A:2735:A:H2'	46:A:2736:G:H5'	2.00	0.43
46:A:2826:C:H2'	46:A:2827:A:C8	2.52	0.43
46:A:2885:G:O2'	48:C:214:VAL:N	2.50	0.43
46:A:2904:A:H2'	46:A:2905:A:C8	2.53	0.43
46:A:3035:U:N3	46:A:3040:U:C5	2.86	0.43
46:A:3051:U:C2	46:A:3052:A:C8	3.05	0.43
47:B:166:THR:N	47:B:186:ASN:OD1	2.50	0.43
75:e:63:ASN:O	75:e:143:GLU:HB3	2.18	0.43
76:f:133:HIS:O	76:f:134:SER:C	2.61	0.43
3:AC:179:ARG:NH2	7:AG:201:PHE:HD1	2.12	0.43
4:AD:260:PHE:CE2	16:g:222:ILE:CA	2.95	0.43
5:AE:63:PRO:HB3	12:AL:1514:U:O3'	2.19	0.43
5:AE:102:LEU:C	5:AE:104:ASP:H	2.26	0.43
5:AE:110:GLU:OE2	5:AE:111:PRO:HD2	2.19	0.43
5:AE:134:TRP:CD1	5:AE:173:ALA:HB2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:31:ARG:HB3	6:AF:32:ILE:HD13	1.99	0.43
6:AF:54:LEU:H	6:AF:54:LEU:HD12	1.83	0.43
6:AF:195:TRP:O	6:AF:199:ASN:N	2.51	0.43
6:AF:326:ARG:NH2	6:AF:329:LYS:HG3	2.33	0.43
7:AG:23:LEU:HD23	7:AG:23:LEU:HA	1.86	0.43
7:AG:47:ARG:HB3	7:AG:47:ARG:NH1	2.33	0.43
7:AG:137:MET:HE1	7:AG:176:PHE:CD1	2.53	0.43
8:AH:198:GLU:HB3	21:l:105:LEU:HG	1.97	0.43
8:AH:231:PHE:CE1	21:l:48:ARG:HD3	2.52	0.43
9:AI:276:ILE:CG1	9:AI:323:LEU:HD11	2.36	0.43
12:AL:30:U:H2'	12:AL:31:U:O4'	2.17	0.43
12:AL:70:C:H4'	12:AL:384:G:C4'	2.48	0.43
12:AL:750:G:H4'	26:q:124:ILE:N	2.31	0.43
12:AL:784:A:N3	26:q:206:PHE:HE2	2.16	0.43
12:AL:796:A:H5"	12:AL:796:A:C8	2.52	0.43
12:AL:1107:U:H2'	12:AL:1108:G:H8	1.83	0.43
12:AL:1216:A:O4'	24:o:256:TYR:HB2	2.12	0.43
12:AL:1617:G:H2'	12:AL:1618:G:H8	1.82	0.43
12:AL:1627:U:H5	15:Z:13:LEU:HD11	1.65	0.43
15:Z:28:ASN:O	15:Z:29:LYS:C	2.61	0.43
15:Z:88:ARG:HH12	35:z:172:ALA:CB	2.31	0.43
16:g:272:ARG:HB2	33:x:60:PHE:CZ	2.45	0.43
17:h:144:GLN:HE21	24:o:119:GLN:CG	2.31	0.43
17:h:224:GLN:O	17:h:225:THR:C	2.61	0.43
18:i:315:PRO:O	20:k:69:TRP:CH2	2.71	0.43
19:j:8:LEU:HD22	19:j:17:ARG:CZ	2.48	0.43
26:q:68:LYS:HB3	26:q:69:PRO:HD2	2.00	0.43
26:q:178:ALA:O	26:q:181:SER:N	2.51	0.43
27:r:68:LEU:HB2	27:r:118:LEU:HD21	2.00	0.43
32:w:64:ARG:NH2	32:w:66:LEU:HA	2.33	0.43
32:w:200:CYS:SG	32:w:201:ASP:N	2.91	0.43
45:9:204:LEU:HD22	45:9:212:ALA:CB	2.48	0.43
46:A:9:U:H3	46:A:3290:A:H61	1.65	0.43
46:A:132:A:C2	46:A:133:A:C4	3.06	0.43
46:A:286:U:O2'	46:A:328:A:H5'	2.17	0.43
46:A:326:A:C4	46:A:330:A:C6	3.06	0.43
46:A:336:A:H2'	46:A:337:A:H8	1.84	0.43
46:A:418:A:C4	46:A:419:U:C5	3.07	0.43
46:A:532:A:C8	46:A:534:A:C6	3.06	0.43
46:A:568:A:C2	46:A:569:A:C4	3.06	0.43
46:A:674:A:C2	46:A:676:A:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:755:U:C2	46:A:756:A:C8	3.06	0.43
46:A:806:G:C6	46:A:819:U:O2	2.71	0.43
46:A:965:U:H3	46:A:1059:A:H61	1.66	0.43
46:A:1064:A:H5'	46:A:1065:A:N7	2.33	0.43
46:A:1162:A:C6	46:A:1163:A:C6	3.05	0.43
46:A:1250:U:C2	46:A:1251:A:N7	2.86	0.43
46:A:1288:U:C5'	46:A:1289:G:H5"	2.42	0.43
46:A:1558:G:H5'	46:A:1559:U:OP1	2.18	0.43
46:A:1784:U:O2	46:A:1784:U:H2'	2.18	0.43
46:A:1970:C:H2'	46:A:1971:A:C8	2.52	0.43
46:A:2027:U:H1'	46:A:2070:U:O2	2.19	0.43
46:A:3077:A:H61	46:A:3100:G:H1'	1.83	0.43
46:A:3159:G:C5	46:A:3160:U:C5	3.06	0.43
62:Q:133:LEU:HD13	62:Q:182:ILE:HG21	1.99	0.43
63:R:75:GLU:HB3	63:R:117:LEU:HD13	2.00	0.43
63:R:204:SER:HB3	63:R:214:ALA:HB1	1.99	0.43
69:X:31:ALA:H	69:X:55:ARG:HH22	1.66	0.43
75:e:54:ILE:HG21	75:e:114:PRO:HG2	2.00	0.43
75:e:200:VAL:O	75:e:201:LEU:C	2.60	0.43
2:AB:52:CYS:C	2:AB:54:GLU:N	2.75	0.43
3:AC:19:ALA:O	3:AC:20:LEU:C	2.60	0.43
3:AC:204:ILE:H	3:AC:204:ILE:HG13	1.63	0.43
5:AE:284:LEU:HD12	5:AE:297:LEU:HD13	1.99	0.43
6:AF:34:TYR:CE2	12:AL:496:A:C1'	2.93	0.43
6:AF:112:ASP:OD1	6:AF:113:GLY:N	2.51	0.43
7:AG:122:LEU:CG	16:g:36:ILE:HD12	2.48	0.43
7:AG:176:PHE:O	7:AG:177:TYR:C	2.62	0.43
9:AI:447:LEU:O	9:AI:449:HIS:CD2	2.70	0.43
11:AK:149:ARG:HG3	20:k:69:TRP:O	2.18	0.43
11:AK:189:TYR:CE2	18:i:100:TYR:HD1	2.36	0.43
11:AK:226:ARG:HH12	11:AK:254:ILE:HG21	1.83	0.43
12:AL:275:A:H2'	12:AL:276:C:O4'	2.18	0.43
12:AL:337:A:H2'	12:AL:338:G:O4'	2.18	0.43
12:AL:677:G:C6	12:AL:678:U:C4	3.06	0.43
12:AL:750:G:H1'	26:q:125:SER:CB	2.49	0.43
12:AL:762:U:O2	12:AL:762:U:C2'	2.66	0.43
12:AL:763:A:O5'	12:AL:763:A:C8	2.69	0.43
12:AL:1087:U:H3'	12:AL:1088:A:H5"	2.00	0.43
12:AL:1132:U:H5"	12:AL:1133:U:H5	1.83	0.43
13:AM:35:A:H4'	14:AN:9:C:N4	2.32	0.43
18:i:119:LEU:HB3	18:i:137:MET:HE1	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:i:231:LYS:O	18:i:237:LEU:HG	2.19	0.43
18:i:232:TYR:HA	18:i:235:GLY:O	2.18	0.43
19:j:9:LYS:HE3	19:j:9:LYS:HB2	1.87	0.43
20:k:266:ARG:CA	20:k:271:ILE:HD11	2.47	0.43
21:l:55:LYS:HA	21:l:60:LYS:CA	2.41	0.43
24:o:156:ALA:HB2	24:o:234:ALA:N	2.34	0.43
25:p:139:LYS:HE2	25:p:141:ASN:HD21	1.82	0.43
28:s:59:ALA:O	28:s:60:SER:C	2.62	0.43
29:t:27:LYS:HD2	29:t:74:ILE:HG13	2.01	0.43
30:u:89:LEU:HD12	30:u:93:TYR:O	2.18	0.43
32:w:67:SER:HB3	32:w:70:LYS:CB	2.42	0.43
33:x:49:LEU:HD12	33:x:59:ASP:OD1	2.18	0.43
37:1:249:LEU:HB3	37:1:252:ILE:HD11	2.00	0.43
46:A:18:A:H2'	46:A:19:G:C8	2.54	0.43
46:A:73:U:C4	46:A:90:A:N1	2.86	0.43
46:A:158:C:H2'	46:A:159:C:C6	2.53	0.43
46:A:400:G:O2'	46:A:401:A:H5"	2.19	0.43
46:A:549:U:C2	46:A:550:A:C8	3.06	0.43
46:A:623:C:H2'	46:A:624:G:O4'	2.18	0.43
46:A:1346:A:H2'	46:A:1346:A:N3	2.32	0.43
46:A:1498:U:O2'	46:A:1499:A:H5'	2.19	0.43
46:A:1915:A:N1	68:W:74:PRO:HD3	2.34	0.43
46:A:2082:A:N1	46:A:2083:U:C2	2.86	0.43
46:A:2325:A:N6	46:A:2334:U:H3	2.15	0.43
46:A:2457:G:O6	50:E:147:ARG:HD3	2.18	0.43
46:A:2575:A:C2	46:A:2576:A:C5	3.06	0.43
46:A:2576:A:C2	46:A:2577:A:C4	3.06	0.43
46:A:2790:U:H4'	46:A:3101:A:H5'	1.99	0.43
46:A:2922:G:H1'	46:A:2923:U:H5	1.83	0.43
46:A:3078:A:H2'	46:A:3079:U:C6	2.53	0.43
47:B:134:ASN:O	47:B:137:GLY:N	2.51	0.43
50:E:23:CYS:SG	63:R:73:PRO:CD	3.04	0.43
76:f:24:PRO:C	76:f:27:PRO:HD2	2.43	0.43
76:f:131:GLU:O	76:f:132:ARG:C	2.61	0.43
5:AE:53:ILE:HA	5:AE:56:LYS:HB3	1.99	0.43
5:AE:278:TYR:OH	5:AE:301:ILE:HG23	2.18	0.43
6:AF:314:VAL:CG1	8:AH:18:THR:HG21	2.45	0.43
7:AG:73:GLY:O	8:AH:186:LEU:CD1	2.66	0.43
7:AG:217:LEU:HD22	16:g:273:MET:SD	2.56	0.43
9:AI:143:VAL:O	9:AI:145:LYS:HG3	2.17	0.43
9:AI:286:PRO:CB	9:AI:338:GLU:HB3	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:94:SER:O	11:AK:95:GLU:C	2.60	0.43
11:AK:194:HIS:CE1	12:AL:1290:A:N7	2.86	0.43
11:AK:227:TYR:HA	11:AK:234:PHE:HA	1.99	0.43
11:AK:299:LYS:HG2	24:o:151:PHE:CG	2.53	0.43
12:AL:29:G:H3'	12:AL:30:U:C6	2.53	0.43
12:AL:53:A:HO2'	12:AL:369:U:H1'	1.84	0.43
12:AL:221:U:H2'	12:AL:222:U:O4'	2.18	0.43
12:AL:410:G:H2'	12:AL:410:G:N3	2.34	0.43
12:AL:536:U:O5'	12:AL:536:U:H6	2.02	0.43
12:AL:611:U:H4'	12:AL:612:A:OP1	2.18	0.43
12:AL:801:U:OP1	33:x:127:LYS:HE2	2.18	0.43
12:AL:802:A:H2'	12:AL:803:A:H8	1.83	0.43
12:AL:819:C:C1'	30:u:218:TYR:CD2	3.02	0.43
12:AL:1140:A:C2	12:AL:1142:U:H4'	2.54	0.43
12:AL:1540:U:C4	12:AL:1541:U:O4	2.71	0.43
15:Z:34:MET:HG3	22:m:164:MET:CE	2.48	0.43
17:h:142:SER:HB3	17:h:145:GLU:HG2	1.99	0.43
17:h:148:LEU:HD21	24:o:120:LEU:HD12	2.00	0.43
19:j:108:ALA:HB3	19:j:144:LEU:HD12	2.00	0.43
26:q:67:TYR:CD2	26:q:68:LYS:C	2.96	0.43
27:r:70:PRO:HD3	27:r:76:ALA:O	2.18	0.43
28:s:85:ILE:HD13	34:y:68:MET:N	2.33	0.43
30:u:253:GLN:HE21	30:u:264:ILE:H	1.61	0.43
31:v:75:TRP:O	31:v:76:ILE:C	2.58	0.43
32:w:28:VAL:HG23	32:w:37:LEU:O	2.18	0.43
32:w:189:ARG:O	32:w:193:LEU:N	2.49	0.43
34:y:26:ALA:HB2	34:y:33:ILE:HG21	2.00	0.43
36:0:73:ARG:C	46:A:3093:U:H6	2.25	0.43
37:1:121:PHE:HD1	46:A:2349:A:N7	2.16	0.43
39:3:17:LEU:HG	46:A:1319:A:N3	2.34	0.43
46:A:178:U:H6	46:A:178:U:O5'	2.01	0.43
46:A:485:A:H2	46:A:700:G:N3	2.15	0.43
46:A:606:U:O2'	46:A:607:A:H5'	2.18	0.43
46:A:644:A:O2'	46:A:645:U:H5'	2.19	0.43
46:A:860:A:C4	46:A:861:A:C8	3.06	0.43
46:A:927:A:OP1	66:U:10:ARG:NH2	2.51	0.43
46:A:1371:A:H3'	46:A:1372:A:C5'	2.49	0.43
46:A:1393:U:C4	46:A:1394:U:C4	3.07	0.43
46:A:1439:A:C3'	46:A:1440:U:C6	3.00	0.43
46:A:1510:A:C6	46:A:1511:U:C4	3.07	0.43
46:A:1565:G:C2	46:A:1571:G:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1639:A:H2'	46:A:1640:U:C6	2.53	0.43
46:A:1666:A:H2'	46:A:1667:A:H8	1.78	0.43
46:A:1790:A:H5'	46:A:1790:A:H8	1.82	0.43
46:A:1885:A:C2	46:A:1886:A:N7	2.87	0.43
46:A:1981:U:C4	46:A:2263:U:N3	2.86	0.43
46:A:1989:U:H3	52:G:14:LYS:HD2	1.81	0.43
46:A:2250:G:H4'	46:A:2252:C:C2	2.53	0.43
46:A:2436:A:C4'	46:A:2437:U:OP2	2.63	0.43
46:A:3028:A:H2'	46:A:3029:U:C6	2.53	0.43
46:A:3046:C:H2'	46:A:3047:A:O4'	2.17	0.43
46:A:3149:A:N6	46:A:3252:U:H5	2.16	0.43
48:C:205:TYR:HA	48:C:218:ARG:NH1	2.33	0.43
56:K:215:TYR:CE2	56:K:219:LEU:HD11	2.53	0.43
63:R:155:LYS:HG3	63:R:159:LEU:CD2	2.48	0.43
63:R:272:GLU:O	63:R:276:GLN:NE2	2.51	0.43
75:e:65:SER:HA	75:e:144:ASP:HB2	2.00	0.43
75:e:195:SER:HB3	75:e:198:VAL:O	2.19	0.43
2:AB:69:TRP:HB3	2:AB:70:ASP:H	1.56	0.43
3:AC:124:LYS:O	3:AC:129:GLY:N	2.52	0.43
3:AC:229:HIS:O	3:AC:233:HIS:HB3	2.17	0.43
4:AD:211:SER:O	4:AD:214:GLY:N	2.52	0.43
5:AE:285:LEU:HD21	5:AE:297:LEU:HB2	1.98	0.43
5:AE:290:HIS:O	5:AE:293:GLN:HG2	2.19	0.43
7:AG:122:LEU:O	16:g:11:ARG:CG	2.66	0.43
7:AG:137:MET:HB3	7:AG:137:MET:HE2	1.65	0.43
7:AG:188:GLN:HG2	16:g:91:GLN:NE2	2.33	0.43
8:AH:104:ARG:NE	12:AL:143:A:H5"	2.27	0.43
8:AH:104:ARG:NH1	12:AL:142:U:O2'	2.51	0.43
8:AH:203:TYR:CZ	21:l:105:LEU:O	2.71	0.43
9:AI:74:VAL:CG2	9:AI:409:SER:HA	2.48	0.43
10:AJ:30:THR:C	10:AJ:32:SER:H	2.26	0.43
10:AJ:83:LYS:HD2	10:AJ:88:LYS:O	2.18	0.43
11:AK:265:LEU:HB2	11:AK:269:ASP:HA	2.00	0.43
12:AL:20:A:C2'	12:AL:21:U:C5'	2.85	0.43
12:AL:317:U:H2'	12:AL:318:C:O4'	2.18	0.43
12:AL:506:U:C4	12:AL:507:C:N4	2.86	0.43
12:AL:785:A:N3	33:x:109:ILE:HD11	2.30	0.43
12:AL:1108:G:H2'	12:AL:1109:U:C6	2.53	0.43
12:AL:1172:A:N3	25:p:114:TRP:CH2	2.87	0.43
12:AL:1248:A:H2	12:AL:1250:A:H61	1.66	0.43
12:AL:1344:A:H5"	12:AL:1356:U:C2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:9:A:H2'	13:AM:12:U:O4	2.18	0.43
16:g:90:PHE:HA	16:g:93:MET:HE2	2.00	0.43
17:h:257:ARG:HH22	24:o:63:ARG:HG3	1.82	0.43
18:i:112:ASP:HB3	18:i:142:ASN:ND2	2.34	0.43
19:j:396:PRO:O	19:j:400:LYS:HG2	2.18	0.43
21:l:10:ARG:CB	21:l:92:ILE:HD11	2.48	0.43
22:m:184:ASN:HD22	22:m:187:GLN:HG3	1.83	0.43
27:r:136:VAL:C	27:r:138:ARG:N	2.76	0.43
32:w:65:PRO:HA	32:w:71:PHE:HD1	1.83	0.43
32:w:164:LEU:HD22	32:w:164:LEU:HA	1.75	0.43
32:w:193:LEU:O	32:w:194:LEU:C	2.61	0.43
45:9:42:ARG:HB2	46:A:25:A:O5'	2.19	0.43
46:A:58:A:H61	46:A:413:U:H3	1.65	0.43
46:A:102:A:H2'	46:A:103:U:O4'	2.19	0.43
46:A:345:G:C2	46:A:346:G:N7	2.86	0.43
46:A:346:G:C2	46:A:347:A:C4	3.06	0.43
46:A:534:A:O5'	46:A:534:A:C8	2.72	0.43
46:A:666:G:C4	46:A:685:G:C8	3.07	0.43
46:A:1010:A:H1'	46:A:1011:A:P	2.59	0.43
46:A:1052:A:N6	46:A:1055:A:O5'	2.52	0.43
46:A:1072:U:N3	46:A:1073:A:N7	2.66	0.43
46:A:1137:U:C2'	46:A:1138:G:H5'	2.48	0.43
46:A:1519:A:N7	46:A:3022:G:N2	2.66	0.43
46:A:1609:U:P	48:C:201:HIS:CD2	3.11	0.43
46:A:1770:U:C5'	46:A:1770:U:H6	2.31	0.43
46:A:1865:C:C4	46:A:1866:A:C5	3.07	0.43
46:A:1915:A:C2	68:W:73:VAL:HA	2.53	0.43
46:A:2062:G:O2'	46:A:2065:A:N6	2.51	0.43
46:A:2068:C:C4	46:A:2069:U:C4	3.07	0.43
46:A:2229:U:O2'	46:A:2230:A:H8	2.01	0.43
46:A:2350:U:H2'	46:A:2351:A:H8	1.78	0.43
46:A:2580:A:H2'	46:A:2581:U:C5	2.52	0.43
46:A:2714:A:O3'	46:A:2715:U:O4'	2.37	0.43
46:A:2901:U:O2'	46:A:2902:C:H5'	2.19	0.43
46:A:3292:A:H3'	46:A:3293:U:C6	2.54	0.43
47:B:211:ARG:HH21	47:B:211:ARG:HG3	1.83	0.43
50:E:68:ARG:CZ	67:V:57:VAL:HG21	2.48	0.43
63:R:66:GLN:HE21	63:R:85:ILE:HD13	1.83	0.43
63:R:184:LEU:O	63:R:185:LYS:C	2.59	0.43
75:e:58:LYS:HA	75:e:105:TYR:HH	1.83	0.43
1:AA:80:VAL:O	1:AA:84:ARG:HG3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:96:ASN:O	2:AB:97:ASN:HB2	2.18	0.43
4:AD:157:ILE:HG23	4:AD:293:LEU:CD1	2.49	0.43
6:AF:58:MET:HE2	19:j:26:PHE:HB3	1.99	0.43
6:AF:185:ILE:O	6:AF:186:VAL:C	2.61	0.43
9:AI:137:LYS:O	9:AI:141:HIS:N	2.48	0.43
9:AI:181:GLU:C	9:AI:183:PHE:H	2.27	0.43
10:AJ:59:LEU:HD22	10:AJ:63:TYR:HD2	1.83	0.43
11:AK:104:ILE:HD11	18:i:171:TYR:CE2	2.54	0.43
11:AK:132:PHE:CB	18:i:248:MET:CB	2.87	0.43
11:AK:148:HIS:CE1	11:AK:152:ARG:CD	3.00	0.43
11:AK:164:LEU:HD13	20:k:32:SER:HB3	2.01	0.43
12:AL:202:G:C2	12:AL:223:U:O2	2.72	0.43
12:AL:490:U:C2	12:AL:491:U:C5	3.06	0.43
12:AL:509:A:C3’	12:AL:510:U:C6	3.01	0.43
12:AL:653:A:O2’	12:AL:654:G:H5’	2.19	0.43
12:AL:831:A:H2’	12:AL:832:A:C8	2.54	0.43
12:AL:924:U:O2’	15:Z:93:PRO:HG2	2.19	0.43
12:AL:1013:C:P	28:s:107:ASN:HB3	2.52	0.43
12:AL:1200:G:N2	12:AL:1203:C:H6	2.06	0.43
12:AL:1283:U:O2	12:AL:1328:A:N6	2.52	0.43
12:AL:1344:A:O4’	12:AL:1360:A:N6	2.51	0.43
12:AL:1372:G:H1	12:AL:1400:A:P	2.37	0.43
13:AM:34:C:H3’	14:AN:8:A:H61	1.84	0.43
17:h:290:TRP:CE2	24:o:49:PRO:CD	3.01	0.43
17:h:321:VAL:HA	17:h:343:ILE:O	2.18	0.43
18:i:149:LEU:HD12	18:i:150:ASN:N	2.34	0.43
18:i:220:PHE:CD2	18:i:393:VAL:HG11	2.53	0.43
19:j:129:ASN:CG	19:j:156:LYS:HG3	2.43	0.43
19:j:149:MET:HE3	19:j:149:MET:HB3	1.84	0.43
19:j:170:GLU:HA	19:j:173:LYS:HD2	1.99	0.43
20:k:106:LEU:HD13	20:k:110:VAL:O	2.18	0.43
22:m:115:ASP:O	22:m:116:HIS:C	2.58	0.43
23:n:1:MET:CG	23:n:31:LEU:HB2	2.36	0.43
26:q:176:ARG:O	26:q:177:ALA:C	2.60	0.43
27:r:84:ARG:HG2	27:r:85:LEU:N	2.34	0.43
27:r:101:ASP:OD2	27:r:133:SER:HB3	2.19	0.43
29:t:90:ASP:HB2	29:t:91:PHE:CE2	2.54	0.43
30:u:94:ASN:OD1	30:u:95:ILE:N	2.51	0.43
30:u:108:ALA:HA	30:u:111:GLU:HG2	2.00	0.43
30:u:239:ALA:O	30:u:242:THR:N	2.41	0.43
39:3:67:PHE:HB3	46:A:1404:A:C5	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:4:33:TRP:CZ2	46:A:1274:A:C5	3.06	0.43
43:7:75:ASN:HD21	55:J:140:TRP:HH2	1.67	0.43
46:A:222:A:H2'	46:A:223:C:O4'	2.18	0.43
46:A:410:A:O2'	46:A:411:A:H5'	2.18	0.43
46:A:537:U:C2	46:A:538:A:N7	2.87	0.43
46:A:568:A:C4	46:A:569:A:C8	3.07	0.43
46:A:608:A:H2'	46:A:609:G:O4'	2.18	0.43
46:A:661:G:H5"	70:Y:71:LEU:HD12	2.01	0.43
46:A:790:A:H2'	46:A:791:U:H6	1.83	0.43
46:A:800:A:H3'	46:A:801:U:H5"	1.99	0.43
46:A:841:G:H1'	50:E:107:TYR:CG	2.54	0.43
46:A:901:A:C2	46:A:916:A:C8	3.06	0.43
46:A:932:C:C2'	46:A:933:C:H5'	2.48	0.43
46:A:987:G:H1	46:A:995:C:N4	2.16	0.43
46:A:1041:U:H3'	46:A:1042:A:H8	1.83	0.43
46:A:1060:U:H2'	46:A:1061:U:O4'	2.18	0.43
46:A:1064:A:H1'	46:A:1067:U:O4	2.18	0.43
46:A:1144:U:C2	46:A:1145:U:C6	3.06	0.43
46:A:1308:A:H5"	46:A:1308:A:C8	2.54	0.43
46:A:1493:U:O2'	46:A:1494:A:O4'	2.29	0.43
46:A:1509:U:C2	46:A:1510:A:N7	2.86	0.43
46:A:1535:A:H3'	46:A:1536:A:H8	1.84	0.43
46:A:1746:C:H5"	46:A:1800:A:N6	2.34	0.43
46:A:1883:A:H2'	46:A:1884:C:H6	1.81	0.43
46:A:1926:A:H8	46:A:1926:A:O5'	2.02	0.43
46:A:1937:U:H2'	46:A:1938:A:H8	1.83	0.43
46:A:1994:C:OP1	64:S:103:LYS:NZ	2.40	0.43
46:A:2019:A:N6	46:A:2060:A:C5	2.87	0.43
46:A:2285:U:C5	46:A:2693:C:N4	2.86	0.43
46:A:2301:C:OP1	46:A:2301:C:H2'	2.18	0.43
46:A:2392:A:N1	46:A:2410:U:C4	2.87	0.43
46:A:2441:U:C2	46:A:2442:A:N7	2.87	0.43
46:A:2659:A:C6	46:A:2660:A:C6	3.07	0.43
46:A:2683:U:H2'	46:A:2684:U:C6	2.54	0.43
46:A:2732:G:C6	46:A:2751:G:N1	2.87	0.43
46:A:2886:C:O2'	46:A:2887:U:H5'	2.18	0.43
46:A:2981:U:H2'	46:A:2982:U:C5	2.54	0.43
46:A:3025:U:H2'	46:A:3026:A:H8	1.84	0.43
46:A:3128:G:C6	46:A:3129:A:N7	2.86	0.43
46:A:3138:U:H2'	46:A:3139:A:H5"	2.00	0.43
46:A:3168:A:OP1	58:M:145:ARG:HD2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:96:TYR:HD2	63:R:97:LEU:O	2.01	0.43
63:R:242:GLU:O	63:R:246:LYS:N	2.47	0.43
75:e:72:TYR:H	75:e:137:THR:HA	1.84	0.43
76:f:58:VAL:HB	76:f:60:ILE:HG13	1.99	0.43
76:f:85:LEU:HD12	76:f:154:ILE:HG23	2.00	0.43
4:AD:30:GLY:O	4:AD:31:LEU:C	2.61	0.43
4:AD:209:ASN:O	4:AD:212:THR:HG23	2.19	0.43
5:AE:67:ARG:NH1	5:AE:74:LEU:H	2.17	0.43
5:AE:84:THR:O	5:AE:85:ARG:HB2	2.19	0.43
5:AE:206:ILE:C	5:AE:208:GLN:N	2.77	0.43
6:AF:29:ARG:HG3	6:AF:30:ARG:N	2.32	0.43
6:AF:188:LEU:HD23	6:AF:188:LEU:HA	1.88	0.43
6:AF:200:ARG:HE	12:AL:551:U:C5'	2.32	0.43
7:AG:72:LYS:HD2	7:AG:72:LYS:HA	1.84	0.43
9:AI:258:LEU:O	9:AI:261:VAL:HG23	2.19	0.43
10:AJ:66:ILE:HG12	18:i:182:ILE:HD11	2.01	0.43
11:AK:90:LEU:HB3	11:AK:104:ILE:CG2	2.49	0.43
11:AK:99:VAL:CG2	18:i:171:TYR:HE2	2.32	0.43
11:AK:225:SER:HA	11:AK:279:HIS:CD2	2.53	0.43
12:AL:66:G:C5	12:AL:358:G:C6	3.07	0.43
12:AL:263:A:C6	12:AL:273:A:C6	3.06	0.43
12:AL:480:U:H3'	12:AL:481:A:H2'	2.01	0.43
12:AL:828:A:O2'	12:AL:829:U:H5'	2.18	0.43
12:AL:992:U:OP2	12:AL:992:U:H4'	2.18	0.43
12:AL:1115:G:OP1	12:AL:1456:U:H5'	2.19	0.43
12:AL:1304:U:H4'	12:AL:1305:A:O5'	2.19	0.43
12:AL:1429:A:H2'	12:AL:1429:A:N3	2.34	0.43
12:AL:1523:A:C2	12:AL:1539:A:N6	2.84	0.43
12:AL:1583:G:H2'	12:AL:1584:A:C8	2.53	0.43
12:AL:1589:G:H1'	12:AL:1610:A:C2	2.52	0.43
13:AM:13:C:H2'	13:AM:14:A:H5"	2.01	0.43
13:AM:33:U:H5'	13:AM:34:C:OP1	2.19	0.43
16:g:232:LEU:HA	16:g:272:ARG:HG2	1.99	0.43
17:h:283:SER:C	17:h:285:GLU:N	2.76	0.43
19:j:20:PHE:CZ	19:j:113:MET:HG2	2.53	0.43
19:j:173:LYS:HA	19:j:176:LYS:HE2	2.01	0.43
19:j:457:VAL:H	19:j:464:GLU:HG3	1.83	0.43
20:k:145:THR:HG21	20:k:175:LYS:HE3	2.01	0.43
20:k:208:ILE:H	20:k:208:ILE:HG13	1.54	0.43
21:l:48:ARG:NH2	21:l:66:HIS:HB2	2.34	0.43
21:l:94:SER:O	21:l:95:SER:HB2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:m:123:ARG:CB	22:m:126:LYS:HZ1	2.27	0.43
22:m:196:ILE:O	22:m:200:ALA:N	2.42	0.43
26:q:82:PHE:CD2	26:q:176:ARG:HA	2.53	0.43
26:q:83:THR:O	26:q:173:GLY:HA3	2.18	0.43
30:u:220:LYS:O	30:u:220:LYS:HG2	2.17	0.43
31:v:8:ILE:HA	31:v:25:VAL:HA	2.00	0.43
31:v:21:TYR:CZ	31:v:45:PRO:HB3	2.53	0.43
32:w:79:ARG:HE	32:w:81:LYS:NZ	2.17	0.43
32:w:106:GLU:O	32:w:107:PHE:C	2.61	0.43
32:w:112:SER:O	32:w:113:VAL:C	2.58	0.43
32:w:143:GLU:HA	32:w:146:GLU:HB3	2.01	0.43
40:4:92:ASP:HB2	46:A:1210:A:O2'	2.18	0.43
41:5:307:LEU:HD21	41:5:340:VAL:HG11	1.99	0.43
41:5:364:THR:HG21	71:a:193:TYR:HA	1.99	0.43
46:A:58:A:C6	46:A:59:U:C4	3.06	0.43
46:A:68:A:H8	46:A:68:A:OP2	2.01	0.43
46:A:164:U:O2'	46:A:165:A:OP1	2.31	0.43
46:A:165:A:H5'	46:A:166:U:OP2	2.19	0.43
46:A:274:U:O2'	46:A:275:A:H5'	2.19	0.43
46:A:521:A:H2'	46:A:522:A:H8	1.80	0.43
46:A:589:A:H2'	46:A:590:A:C8	2.54	0.43
46:A:600:C:C4'	47:B:133:ARG:HH22	2.32	0.43
46:A:600:C:C4'	47:B:133:ARG:NH2	2.82	0.43
46:A:740:A:C6	46:A:741:U:C5	3.07	0.43
46:A:1151:U:N3	46:A:1162:A:C2	2.87	0.43
46:A:1496:U:H2'	46:A:1497:A:C8	2.54	0.43
46:A:1614:G:O2'	46:A:1615:G:H5'	2.19	0.43
46:A:1715:A:H5"	46:A:1716:U:C5	2.54	0.43
46:A:1997:A:C5	46:A:1998:U:C5	3.06	0.43
46:A:2084:G:H3'	46:A:2085:A:H8	1.84	0.43
46:A:2302:U:H2'	46:A:2303:G:C8	2.54	0.43
46:A:2390:U:C2	46:A:2391:U:C5	3.07	0.43
46:A:2448:A:H2'	46:A:2449:A:C8	2.54	0.43
46:A:2778:C:H2'	46:A:2779:A:O4'	2.19	0.43
46:A:2798:A:C6	46:A:2799:A:C5	3.07	0.43
46:A:2871:U:C2	46:A:2872:A:C8	3.07	0.43
46:A:2958:U:OP2	57:L:13:LYS:NZ	2.38	0.43
46:A:3278:A:C2	46:A:3279:U:C2	3.06	0.43
47:B:143:HIS:CD2	47:B:332:THR:HA	2.53	0.43
69:X:30:GLY:O	69:X:32:PRO:HD3	2.19	0.43
69:X:31:ALA:HB3	69:X:55:ARG:NH1	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:82:GLN:HA	2:AB:85:LYS:CD	2.49	0.43
3:AC:12:PRO:HG2	17:h:161:GLY:O	2.18	0.43
3:AC:25:VAL:CG1	3:AC:28:ILE:HD13	2.48	0.43
3:AC:153:LEU:O	3:AC:223:CYS:HA	2.18	0.43
5:AE:295:LEU:O	5:AE:296:GLU:C	2.61	0.43
7:AG:31:ASN:O	7:AG:32:VAL:C	2.62	0.43
7:AG:89:LYS:HE2	12:AL:893:A:OP2	2.19	0.43
7:AG:127:ILE:CG1	16:g:11:ARG:NH1	2.80	0.43
7:AG:224:VAL:CA	33:x:45:LEU:CD1	2.95	0.43
9:AI:187:ARG:HG2	28:s:44:TRP:CG	2.54	0.43
9:AI:437:ASN:O	9:AI:440:GLU:N	2.47	0.43
9:AI:449:HIS:CD2	9:AI:449:HIS:N	2.86	0.43
11:AK:125:ARG:O	11:AK:126:ASP:C	2.62	0.43
12:AL:303:G:N2	12:AL:307:G:C5	2.87	0.43
12:AL:682:A:H8	12:AL:682:A:H5'	1.84	0.43
12:AL:786:U:H3'	12:AL:787:A:H2'	2.00	0.43
12:AL:1102:A:HO2'	18:i:334:ARG:HG3	1.83	0.43
12:AL:1176:U:H4'	12:AL:1177:A:O5'	2.18	0.43
12:AL:1258:U:C6	34:y:83:PHE:CG	3.03	0.43
12:AL:1336:U:H3	12:AL:1338:A:N6	2.16	0.43
12:AL:1381:U:H5	34:y:11:SER:HA	1.84	0.43
17:h:251:THR:H	17:h:324:ASN:ND2	2.17	0.43
18:i:242:ARG:O	18:i:246:ASN:N	2.48	0.43
21:l:32:ILE:HD13	21:l:71:PHE:HB2	2.01	0.43
27:r:59:LYS:HA	27:r:109:TYR:HA	2.00	0.43
27:r:106:SER:HB3	27:r:131:ASP:HB2	2.01	0.43
31:v:9:ARG:CD	31:v:32:ARG:HA	2.49	0.43
33:x:43:GLN:C	33:x:45:LEU:N	2.76	0.43
35:z:124:MET:HE2	35:z:124:MET:HA	2.01	0.43
46:A:12:A:C3'	46:A:13:A:H8	2.31	0.43
46:A:111:G:C6	46:A:112:G:C5	3.06	0.43
46:A:268:C:H4'	46:A:269:A:C5'	2.48	0.43
46:A:317:U:H4'	64:S:22:ARG:HG2	2.00	0.43
46:A:425:A:O2'	46:A:426:A:P	2.77	0.43
46:A:428:C:OP1	46:A:429:A:C8	2.71	0.43
46:A:781:G:C2	46:A:2294:A:C4	3.07	0.43
46:A:1090:U:O2'	46:A:1091:A:H5'	2.19	0.43
46:A:1526:A:C6	46:A:1527:A:N7	2.86	0.43
46:A:1689:U:O2	46:A:2875:G:O2'	2.36	0.43
46:A:1833:G:H3'	46:A:1834:C:H6	1.84	0.43
46:A:1972:G:C5	46:A:1973:C:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1997:A:H2'	46:A:1998:U:O4'	2.18	0.43
46:A:2032:C:N3	46:A:2056:A:O3'	2.51	0.43
46:A:2081:A:H8	46:A:2081:A:OP2	2.02	0.43
46:A:2795:U:C5'	46:A:2796:G:C8	3.02	0.43
46:A:2921:A:C4	46:A:2923:U:N3	2.86	0.43
46:A:2946:A:C2	46:A:3065:U:C2	3.07	0.43
46:A:2951:U:C2	46:A:2952:G:C8	3.06	0.43
46:A:2982:U:O5'	46:A:2982:U:H6	2.02	0.43
46:A:3004:A:C2'	46:A:3005:A:H8	2.32	0.43
46:A:3156:U:C2	46:A:3157:A:C8	3.07	0.43
46:A:3176:U:C2	46:A:3177:A:C8	3.07	0.43
55:J:152:GLY:O	55:J:153:GLU:C	2.61	0.43
56:K:229:PHE:CD1	63:R:122:PHE:HZ	2.36	0.43
63:R:264:LEU:O	63:R:265:GLU:C	2.62	0.43
75:e:57:TYR:CD1	75:e:97:VAL:HG22	2.54	0.43
76:f:120:VAL:HG13	76:f:145:ILE:CG2	2.49	0.43
2:AB:109:SER:O	2:AB:110:PHE:C	2.61	0.43
3:AC:90:HIS:HB3	17:h:161:GLY:HA3	1.98	0.43
3:AC:163:LEU:HA	3:AC:163:LEU:HD23	1.82	0.43
3:AC:235:TYR:O	3:AC:239:ASN:ND2	2.52	0.43
4:AD:64:LEU:O	4:AD:65:GLU:C	2.61	0.43
4:AD:160:ASN:ND2	4:AD:275:ALA:HB2	2.34	0.43
4:AD:213:SER:HB2	4:AD:217:ASN:HD21	1.83	0.43
5:AE:46:ALA:HA	5:AE:49:ASP:HB2	2.00	0.43
5:AE:123:TRP:C	5:AE:125:GLY:N	2.74	0.43
5:AE:142:VAL:HG12	5:AE:145:MET:HB2	2.00	0.43
5:AE:255:LEU:HD11	5:AE:281:ALA:HB2	2.01	0.43
5:AE:257:ASP:OD1	5:AE:257:ASP:N	2.51	0.43
6:AF:135:GLN:O	6:AF:136:PRO:C	2.61	0.43
7:AG:35:SER:O	7:AG:37:PRO:HD3	2.18	0.43
9:AI:60:TRP:HD1	22:m:140:LEU:CD1	2.30	0.43
9:AI:288:MET:O	9:AI:290:THR:N	2.52	0.43
11:AK:51:TYR:HA	11:AK:57:TRP:CZ2	2.53	0.43
12:AL:112:C:H2'	12:AL:113:G:O4'	2.18	0.43
12:AL:382:U:P	31:v:7:ARG:NH2	2.91	0.43
12:AL:405:A:O2'	12:AL:406:U:H5'	2.19	0.43
12:AL:629:G:H2'	12:AL:630:U:O4'	2.19	0.43
12:AL:647:A:C5	12:AL:650:C:C4	3.07	0.43
12:AL:810:A:C6	12:AL:811:U:C4	3.07	0.43
12:AL:1016:G:N3	12:AL:1016:G:H2'	2.34	0.43
12:AL:1220:A:H2'	12:AL:1221:U:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1307:U:H4'	12:AL:1308:U:OP2	2.18	0.43
12:AL:1492:U:H2'	12:AL:1493:A:C8	2.53	0.43
13:AM:18:G:C5	13:AM:19:G:H1'	2.54	0.43
13:AM:48:C:C6	13:AM:59:A:H1'	2.54	0.43
15:Z:88:ARG:HH12	35:z:172:ALA:HB2	1.84	0.43
17:h:259:LEU:O	17:h:260:GLU:C	2.62	0.43
18:i:316:MET:HE3	20:k:69:TRP:NE1	2.31	0.43
19:j:168:PHE:CE2	19:j:392:GLU:HA	2.54	0.43
19:j:395:GLU:N	19:j:396:PRO:HD2	2.33	0.43
20:k:33:ILE:HD13	25:p:21:PRO:HB3	2.01	0.43
20:k:61:ASP:CB	25:p:24:VAL:HG11	2.48	0.43
21:l:62:PHE:CZ	26:q:112:MET:SD	3.12	0.43
26:q:89:LEU:HD12	26:q:147:THR:O	2.18	0.43
26:q:198:ILE:HD12	35:z:117:PHE:CE1	2.54	0.43
28:s:101:GLY:O	28:s:102:GLN:C	2.62	0.43
30:u:252:MET:SD	30:u:257:PHE:CB	3.06	0.43
31:v:8:ILE:HG12	31:v:25:VAL:HG13	2.01	0.43
32:w:86:ALA:O	32:w:87:LEU:C	2.61	0.43
32:w:115:GLU:C	32:w:117:LYS:N	2.77	0.43
33:x:62:MET:HE2	33:x:62:MET:HB3	1.88	0.43
41:5:111:LEU:HA	41:5:270:VAL:HG11	2.01	0.43
41:5:201:LYS:HB3	46:A:443:U:N3	2.33	0.43
46:A:70:A:C5	46:A:92:A:N6	2.86	0.43
46:A:608:A:C2	46:A:1585:G:N3	2.87	0.43
46:A:739:A:C2	46:A:740:A:C8	3.07	0.43
46:A:771:U:C2	46:A:772:A:C8	3.07	0.43
46:A:836:A:H2'	46:A:837:U:O4'	2.19	0.43
46:A:896:U:O2'	46:A:897:C:H5'	2.19	0.43
46:A:1080:U:C2	46:A:1081:A:C8	3.07	0.43
46:A:1218:A:O2'	46:A:1219:U:H5'	2.19	0.43
46:A:1319:A:P	46:A:1320:C:H41	2.41	0.43
46:A:1430:U:H2'	46:A:1431:U:O4'	2.19	0.43
46:A:1439:A:H3'	46:A:1440:U:C5	2.54	0.43
46:A:1612:A:C2	46:A:1613:G:C5	3.07	0.43
46:A:1876:U:C2	46:A:1877:A:C8	3.06	0.43
46:A:2219:A:N1	46:A:2228:A:N6	2.66	0.43
46:A:2331:U:O4	46:A:2366:U:O2'	2.33	0.43
46:A:2334:U:H4'	63:R:329:PHE:O	2.19	0.43
46:A:2441:U:C2	46:A:2442:A:C8	3.07	0.43
46:A:2474:U:H3	46:A:2576:A:H61	1.66	0.43
46:A:2643:U:C4	46:A:2644:A:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2727:A:H2'	46:A:2728:U:H6	1.83	0.43
46:A:2779:A:H2'	46:A:2780:A:H8	1.80	0.43
46:A:2810:G:N7	46:A:3102:A:C2	2.87	0.43
46:A:2821:U:N3	46:A:2822:U:O4	2.52	0.43
46:A:3102:A:N3	46:A:3102:A:C2'	2.81	0.43
46:A:3106:G:C5	46:A:3107:U:C5	3.07	0.43
46:A:3279:U:H2'	46:A:3280:C:O4'	2.18	0.43
49:D:49:PHE:O	49:D:50:PRO:C	2.60	0.43
55:J:153:GLU:O	55:J:154:VAL:C	2.62	0.43
61:P:190:MET:HE1	62:Q:42:MET:HG3	1.99	0.43
65:T:55:PRO:HB3	74:d:170:ARG:HA	2.01	0.43
65:T:117:GLN:HG3	65:T:145:ILE:HG21	2.00	0.43
66:U:6:VAL:HG23	66:U:28:LEU:HD21	2.01	0.43
69:X:31:ALA:O	69:X:33:LEU:N	2.52	0.43
75:e:200:VAL:HA	75:e:204:LEU:HB3	2.00	0.43
76:f:143:LYS:HA	76:f:146:VAL:HG23	2.01	0.43
2:AB:42:ASP:OD2	2:AB:56:LYS:HD3	2.18	0.43
2:AB:46:ASN:CB	2:AB:53:ASN:HB3	2.49	0.43
2:AB:77:LYS:HD3	2:AB:77:LYS:HA	1.84	0.43
4:AD:167:GLY:O	4:AD:275:ALA:N	2.48	0.43
5:AE:78:ASP:O	5:AE:79:ILE:C	2.59	0.43
5:AE:177:SER:O	5:AE:219:LEU:HD11	2.19	0.43
5:AE:195:ARG:C	5:AE:197:ARG:N	2.76	0.43
5:AE:215:TRP:CZ2	5:AE:248:LEU:HB2	2.54	0.43
5:AE:217:LYS:O	5:AE:218:VAL:C	2.60	0.43
6:AF:83:HIS:HB3	6:AF:217:PRO:HA	2.01	0.43
7:AG:13:ARG:NH2	17:h:336:ILE:O	2.42	0.43
9:AI:179:TYR:O	9:AI:180:PRO:C	2.62	0.43
9:AI:430:TYR:CE2	24:o:174:GLY:O	2.72	0.43
11:AK:143:GLU:OE1	18:i:87:LEU:HD22	2.19	0.43
11:AK:198:ARG:HA	11:AK:244:ALA:HB2	2.00	0.43
12:AL:16:G:C5'	20:k:266:ARG:HD3	2.49	0.43
12:AL:23:A:C2	12:AL:984:A:H2	2.36	0.43
12:AL:109:A:H5"	12:AL:110:A:C8	2.54	0.43
12:AL:308:U:O2'	12:AL:670:C:H5"	2.19	0.43
12:AL:322:U:H2'	12:AL:323:U:H6	1.84	0.43
12:AL:515:A:C3'	12:AL:516:A:H8	2.32	0.43
12:AL:522:A:C8	12:AL:527:G:C6	3.07	0.43
12:AL:539:C:H2'	12:AL:540:A:O4'	2.19	0.43
12:AL:695:A:C5	12:AL:696:U:C4	3.06	0.43
12:AL:749:A:H2'	12:AL:750:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:787:A:H62	12:AL:799:A:C2'	2.31	0.43
12:AL:1059:A:H4'	12:AL:1060:A:OP1	2.19	0.43
12:AL:1213:G:N3	12:AL:1215:A:OP2	2.51	0.43
12:AL:1411:G:C2'	24:o:272:MET:CB	2.86	0.43
12:AL:1582:C:H2'	12:AL:1583:G:H8	1.82	0.43
12:AL:1628:A:H4'	35:z:163:LYS:HE3	2.00	0.43
18:i:254:HIS:HA	18:i:355:LYS:HD2	2.01	0.43
18:i:334:ARG:HH21	18:i:386:ASN:HB3	1.84	0.43
21:l:1:MET:N	30:u:146:ASN:O	2.52	0.43
21:l:71:PHE:HE2	21:l:73:SER:OG	2.02	0.43
21:l:74:SER:O	21:l:75:ALA:C	2.59	0.43
22:m:134:LEU:HA	22:m:134:LEU:HD23	1.75	0.43
23:n:150:VAL:HG12	23:n:151:LEU:H	1.83	0.43
25:p:103:GLU:CD	29:t:113:GLY:HA2	2.44	0.43
27:r:60:GLY:O	27:r:108:VAL:N	2.44	0.43
27:r:62:VAL:CG1	27:r:65:VAL:HG22	2.48	0.43
27:r:118:LEU:O	27:r:120:GLY:N	2.51	0.43
30:u:216:LEU:HB3	30:u:241:ILE:HG21	2.00	0.43
30:u:281:GLN:C	30:u:283:ARG:N	2.76	0.43
31:v:21:TYR:O	31:v:43:TYR:N	2.52	0.43
33:x:42:ASP:OD1	33:x:42:ASP:N	2.50	0.43
35:z:124:MET:CE	35:z:129:ILE:HD12	2.49	0.43
46:A:138:U:H2'	46:A:139:U:C6	2.54	0.43
46:A:260:G:H2'	46:A:261:A:C8	2.54	0.43
46:A:429:A:H2'	46:A:429:A:N3	2.32	0.43
46:A:566:U:H2'	46:A:567:U:H6	1.83	0.43
46:A:698:U:C5	55:J:99:ARG:CZ	3.02	0.43
46:A:724:A:H2'	46:A:725:U:C6	2.53	0.43
46:A:880:G:C6	46:A:890:A:N1	2.87	0.43
46:A:926:A:C8	46:A:1175:A:N6	2.86	0.43
46:A:1087:U:O2'	46:A:1088:A:P	2.77	0.43
46:A:1250:U:C2	46:A:1251:A:C8	3.07	0.43
46:A:1350:U:H5	62:Q:5:TYR:OH	2.01	0.43
46:A:1358:C:O2'	46:A:1359:G:H8	2.02	0.43
46:A:1577:U:H5"	46:A:1577:U:C6	2.54	0.43
46:A:1807:A:N6	46:A:1825:A:C6	2.87	0.43
46:A:1951:A:C6	46:A:2881:A:C5	3.07	0.43
46:A:2366:U:H2'	46:A:2367:A:H8	1.83	0.43
46:A:3005:A:H2'	46:A:3006:U:H6	1.77	0.43
46:A:3084:A:N1	46:A:3094:A:C8	2.87	0.43
56:K:184:LEU:HD13	56:K:192:PHE:HB3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:184:LEU:HB2	63:R:186:LEU:H	1.83	0.43
63:R:228:LEU:HD23	63:R:228:LEU:HA	1.82	0.43
63:R:240:LEU:HA	63:R:243:SER:CB	2.49	0.43
64:S:105:LEU:CD1	64:S:118:MET:HE1	2.48	0.43
76:f:132:ARG:C	76:f:132:ARG:HD3	2.44	0.43
1:AA:90:LYS:CD	12:AL:1612:C:N4	2.44	0.42
2:AB:46:ASN:HA	2:AB:53:ASN:HB3	1.99	0.42
3:AC:19:ALA:O	3:AC:23:ASN:N	2.47	0.42
3:AC:217:TRP:CD1	17:h:146:LEU:CD1	3.02	0.42
4:AD:174:ARG:HA	4:AD:266:SER:O	2.19	0.42
4:AD:199:LEU:HD22	4:AD:208:PHE:HB2	2.01	0.42
5:AE:51:PHE:CA	5:AE:97:LEU:HD11	2.48	0.42
5:AE:123:TRP:O	5:AE:124:THR:C	2.62	0.42
5:AE:259:PRO:O	5:AE:262:SER:N	2.51	0.42
6:AF:307:TYR:OH	31:v:92:LYS:HD2	2.19	0.42
7:AG:122:LEU:HD11	16:g:36:ILE:CD1	2.48	0.42
7:AG:180:ARG:HA	7:AG:180:ARG:HD3	1.76	0.42
8:AH:162:GLN:CD	23:n:60:PHE:CE1	2.96	0.42
9:AI:157:THR:O	9:AI:158:VAL:C	2.62	0.42
9:AI:176:ASN:OD1	9:AI:177:ILE:N	2.52	0.42
9:AI:414:ASP:O	9:AI:415:LYS:C	2.60	0.42
10:AJ:7:ARG:O	10:AJ:11:VAL:HG23	2.18	0.42
10:AJ:61:THR:O	10:AJ:61:THR:HG22	2.18	0.42
10:AJ:83:LYS:HB3	10:AJ:89:GLY:HA2	2.01	0.42
11:AK:161:GLU:HB2	25:p:127:TYR:OH	2.04	0.42
12:AL:405:A:C4	12:AL:406:U:C5	3.07	0.42
12:AL:633:C:H2'	12:AL:634:A:O4'	2.19	0.42
12:AL:761:A:N3	12:AL:851:G:O2'	2.38	0.42
12:AL:822:U:H3'	12:AL:822:U:C6	2.54	0.42
12:AL:1028:G:N2	25:p:94:VAL:HG22	2.34	0.42
12:AL:1036:A:H5'	12:AL:1263:G:N2	2.33	0.42
12:AL:1383:U:H2'	12:AL:1384:G:C8	2.54	0.42
12:AL:1395:A:H3'	12:AL:1396:U:H6	1.84	0.42
12:AL:1558:U:H2'	12:AL:1559:A:H8	1.83	0.42
12:AL:1645:U:H5	17:h:175:PHE:CD1	2.05	0.42
13:AM:24:G:H2'	13:AM:24:G:N3	2.33	0.42
13:AM:38:A:H5"	13:AM:39:U:C5	2.53	0.42
15:Z:38:LEU:CD1	22:m:238:ILE:N	2.82	0.42
15:Z:67:LEU:O	15:Z:68:GLY:C	2.61	0.42
20:k:269:MET:HG2	20:k:270:ASN:N	2.34	0.42
21:l:20:GLU:HB3	21:l:90:ARG:HD2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:u:228:TYR:HA	30:u:231:ILE:HG22	2.01	0.42
30:u:236:LEU:HD13	30:u:241:ILE:HD11	2.00	0.42
32:w:199:LYS:O	32:w:202:GLN:HG3	2.19	0.42
34:y:50:LYS:HB3	34:y:63:GLU:HG2	2.01	0.42
39:3:54:LYS:HE3	46:A:157:A:OP1	2.19	0.42
46:A:307:G:H1'	46:A:308:U:H5'	2.01	0.42
46:A:602:A:H4'	46:A:1366:A:O2'	2.19	0.42
46:A:748:U:H2'	46:A:749:A:O4'	2.19	0.42
46:A:887:G:N2	73:c:15:LEU:HD13	2.34	0.42
46:A:970:U:H4'	46:A:971:A:O5'	2.18	0.42
46:A:1186:A:C5	46:A:1187:U:C4	3.07	0.42
46:A:1245:U:O2'	46:A:1246:A:H5'	2.19	0.42
46:A:1370:A:H61	46:A:1395:U:H3	1.66	0.42
46:A:1597:G:H4'	46:A:1598:A:C5	2.54	0.42
46:A:1617:A:H2'	46:A:1618:G:O4'	2.19	0.42
46:A:1640:U:O5'	46:A:1640:U:H6	2.02	0.42
46:A:1642:A:H2'	46:A:1643:G:O4'	2.19	0.42
46:A:1716:U:O2'	46:A:1717:A:P	2.77	0.42
46:A:1792:A:H2'	46:A:1793:U:O4'	2.19	0.42
46:A:1819:A:C4	46:A:1820:G:C6	3.07	0.42
46:A:2276:G:N2	56:K:128:MET:HE2	2.34	0.42
46:A:2426:A:P	46:A:2426:A:H8	2.42	0.42
46:A:2459:A:H2'	46:A:2460:A:C8	2.54	0.42
46:A:2611:U:OP1	69:X:37:VAL:HG11	2.19	0.42
46:A:2700:A:N3	46:A:2700:A:H2'	2.34	0.42
46:A:2896:U:H4'	46:A:2897:A:OP2	2.19	0.42
46:A:3028:A:O4'	65:T:34:ILE:HD13	2.19	0.42
46:A:3149:A:C6	57:L:168:GLN:OE1	2.72	0.42
46:A:3177:A:H61	46:A:3230:U:H3	1.67	0.42
46:A:3241:U:O2	46:A:3241:U:O4'	2.36	0.42
55:J:113:ILE:HG13	55:J:114:TYR:N	2.34	0.42
55:J:149:LEU:HD11	55:J:155:LEU:HD13	2.01	0.42
63:R:155:LYS:HB3	63:R:156:PRO:HD3	1.99	0.42
2:AB:68:GLN:O	2:AB:69:TRP:C	2.63	0.42
2:AB:81:ILE:C	2:AB:83:GLN:N	2.76	0.42
3:AC:41:TYR:O	3:AC:45:LEU:HG	2.20	0.42
4:AD:122:PHE:CG	4:AD:123:ASN:N	2.86	0.42
4:AD:220:ASN:O	4:AD:221:ASN:C	2.62	0.42
5:AE:64:PHE:O	5:AE:74:LEU:HD22	2.19	0.42
5:AE:149:SER:CA	5:AE:153:ILE:HB	2.47	0.42
5:AE:194:HIS:NE2	5:AE:315:TYR:CE1	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:274:TYR:HA	5:AE:277:ILE:CG1	2.48	0.42
5:AE:300:PHE:C	5:AE:302:ARG:H	2.26	0.42
6:AF:42:LEU:CB	6:AF:45:GLN:HE22	2.33	0.42
6:AF:88:ILE:HD13	19:j:28:LEU:CG	2.29	0.42
7:AG:142:ARG:NH2	7:AG:147:GLU:HB3	2.32	0.42
7:AG:214:GLN:OE1	16:g:273:MET:O	2.36	0.42
8:AH:69:ILE:HG21	8:AH:74:LEU:HD22	2.01	0.42
9:AI:273:LYS:O	9:AI:277:ASP:HB2	2.19	0.42
11:AK:152:ARG:CZ	20:k:69:TRP:HB3	2.49	0.42
11:AK:154:TYR:HB2	25:p:57:PHE:HZ	1.83	0.42
11:AK:195:PRO:CG	12:AL:1290:A:C8	2.84	0.42
12:AL:98:A:C2'	12:AL:99:U:H5"	2.48	0.42
12:AL:410:G:C4	12:AL:411:A:C8	3.07	0.42
12:AL:714:U:H2'	12:AL:715:U:C6	2.53	0.42
12:AL:835:C:H2'	12:AL:836:U:C5	2.54	0.42
12:AL:873:A:C5	12:AL:874:G:C8	3.07	0.42
12:AL:987:G:C6	12:AL:988:A:C6	3.07	0.42
12:AL:1030:U:H5'	12:AL:1031:A:OP1	2.19	0.42
12:AL:1238:G:H2'	12:AL:1238:G:N3	2.33	0.42
12:AL:1328:A:O2'	12:AL:1329:A:H5"	2.19	0.42
13:AM:42:U:H2'	13:AM:43:G:C8	2.54	0.42
13:AM:51:A:H2'	13:AM:52:G:O4'	2.20	0.42
15:Z:10:LEU:HD21	35:z:161:GLY:HA3	2.01	0.42
15:Z:34:MET:SD	22:m:164:MET:HE3	2.59	0.42
15:Z:65:SER:O	15:Z:66:ALA:C	2.63	0.42
16:g:52:SER:HA	17:h:364:ASP:HB3	2.01	0.42
16:g:97:ILE:HG22	16:g:99:SER:H	1.84	0.42
16:g:105:ASN:CG	16:g:108:PHE:HA	2.44	0.42
17:h:249:LEU:HD23	17:h:322:VAL:HG22	2.01	0.42
17:h:300:ASN:O	17:h:301:PRO:C	2.62	0.42
18:i:113:LYS:HE3	18:i:113:LYS:HB2	1.93	0.42
18:i:155:TYR:CE2	18:i:176:MET:HE2	2.50	0.42
18:i:355:LYS:HB3	18:i:359:TRP:CZ2	2.54	0.42
20:k:219:ASP:CG	20:k:232:ARG:HG2	2.44	0.42
21:l:6:ILE:CG1	21:l:68:LEU:HD12	2.47	0.42
21:l:58:GLN:HE21	21:l:58:GLN:HB2	1.53	0.42
26:q:70:LYS:O	26:q:97:ASP:HA	2.19	0.42
28:s:65:MET:HE3	28:s:65:MET:HB3	1.80	0.42
30:u:282:LYS:O	30:u:282:LYS:HG2	2.20	0.42
31:v:14:GLY:HA3	31:v:20:VAL:N	2.34	0.42
38:2:102:MET:HE2	42:6:215:THR:HG23	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:175:U:O4	46:A:202:A:N6	2.52	0.42
46:A:232:C:H2'	46:A:233:U:O4'	2.19	0.42
46:A:237:A:H62	46:A:2696:A:H2'	1.83	0.42
46:A:263:A:O2'	46:A:357:C:H1'	2.19	0.42
46:A:306:G:H4'	46:A:307:G:O5'	2.20	0.42
46:A:307:G:O2'	46:A:308:U:O5'	2.37	0.42
46:A:411:A:H1'	46:A:480:C:O2'	2.18	0.42
46:A:807:A:C2	46:A:818:U:N3	2.80	0.42
46:A:825:A:C6	46:A:826:A:C6	3.07	0.42
46:A:1299:G:O6	60:O:173:SER:HB2	2.19	0.42
46:A:1323:U:C4	46:A:1324:U:C4	3.07	0.42
46:A:1526:A:O2'	46:A:1527:A:H5'	2.19	0.42
46:A:1567:C:H5'	60:O:247:PHE:CE2	2.54	0.42
46:A:1707:C:OP1	47:B:378:ASN:ND2	2.52	0.42
46:A:1921:A:H4'	46:A:1922:U:OP2	2.19	0.42
46:A:1977:A:H2'	46:A:1978:C:C6	2.55	0.42
46:A:2212:A:H2'	46:A:2213:U:C6	2.54	0.42
46:A:2231:U:O2'	46:A:2232:A:H5'	2.17	0.42
46:A:2267:A:O2'	46:A:2268:G:H5'	2.18	0.42
46:A:2356:A:H2'	46:A:2357:U:C6	2.55	0.42
46:A:2382:A:C4	46:A:2383:A:C8	3.06	0.42
46:A:2461:A:O2'	50:E:145:PHE:CD2	2.68	0.42
46:A:2810:G:C4	46:A:2811:G:C8	3.06	0.42
46:A:2948:C:OP2	48:C:173:LYS:HE3	2.19	0.42
46:A:2955:G:O2'	57:L:2:THR:OG1	2.31	0.42
46:A:3111:A:P	48:C:228:HIS:HB2	2.59	0.42
46:A:3275:C:H2'	46:A:3276:U:C6	2.54	0.42
48:C:58:ARG:NH1	48:C:159:PHE:O	2.52	0.42
57:L:7:ARG:HB2	57:L:42:GLU:HG3	2.01	0.42
57:L:237:ARG:NH1	58:M:30:PRO:O	2.52	0.42
59:N:100:ARG:HB2	71:a:67:ASN:ND2	2.35	0.42
63:R:115:LEU:N	63:R:115:LEU:HD22	2.34	0.42
63:R:254:LEU:O	63:R:258:THR:OG1	2.36	0.42
63:R:333:ASP:CA	63:R:336:VAL:HG12	2.40	0.42
69:X:17:ALA:O	69:X:19:SER:N	2.52	0.42
75:e:164:LEU:H	75:e:164:LEU:HG	1.68	0.42
2:AB:75:LYS:C	2:AB:77:LYS:H	2.26	0.42
3:AC:90:HIS:O	3:AC:94:GLU:HG3	2.19	0.42
5:AE:106:ILE:O	5:AE:153:ILE:HD11	2.19	0.42
7:AG:120:LYS:HD3	16:g:34:GLN:NE2	2.33	0.42
8:AH:202:LEU:O	8:AH:206:ALA:HB2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:151:GLU:N	9:AI:154:VAL:CG1	2.79	0.42
10:AJ:53:ILE:HG21	29:t:14:PRO:CB	2.49	0.42
10:AJ:56:PHE:O	10:AJ:57:ARG:C	2.61	0.42
11:AK:107:LEU:HD12	18:i:171:TYR:HB2	2.00	0.42
11:AK:162:LEU:O	25:p:68:TYR:HB3	2.18	0.42
12:AL:521:A:H2'	12:AL:527:G:H1	1.82	0.42
12:AL:729:U:C2	12:AL:731:U:C5	3.07	0.42
12:AL:1022:U:O2'	12:AL:1023:A:O5'	2.36	0.42
12:AL:1377:A:N6	12:AL:1396:U:O2	2.53	0.42
12:AL:1495:U:C3'	12:AL:1496:A:H5"	2.48	0.42
12:AL:1592:A:H2'	12:AL:1593:U:C6	2.55	0.42
12:AL:1645:U:O4'	17:h:176:TYR:HE2	2.02	0.42
13:AM:7:G:H4'	13:AM:8:U:OP2	2.19	0.42
13:AM:13:C:H2'	13:AM:13:C:O2	2.20	0.42
13:AM:31:A:H8	13:AM:31:A:C5'	2.31	0.42
16:g:39:LYS:O	16:g:40:PRO:C	2.62	0.42
16:g:51:LYS:CG	17:h:217:ILE:CD1	2.97	0.42
17:h:251:THR:OG1	17:h:324:ASN:ND2	2.48	0.42
18:i:178:LYS:O	18:i:182:ILE:HG13	2.18	0.42
18:i:190:ASN:ND2	18:i:193:ASN:HB2	2.34	0.42
21:l:1:MET:HG2	30:u:148:GLU:OE1	2.19	0.42
22:m:179:ILE:HG23	22:m:244:ILE:HD12	2.00	0.42
25:p:148:ILE:O	25:p:149:SER:HB3	2.19	0.42
27:r:32:ASN:O	27:r:36:ARG:HG3	2.18	0.42
27:r:118:LEU:HD23	27:r:118:LEU:HA	1.86	0.42
28:s:81:LEU:O	28:s:84:LYS:HG2	2.20	0.42
30:u:57:LEU:HD12	30:u:57:LEU:HA	1.81	0.42
30:u:100:LYS:HB3	32:w:167:LEU:HG	1.98	0.42
30:u:103:ALA:O	30:u:104:ALA:C	2.62	0.42
31:v:93:ALA:HB3	31:v:95:ILE:HG13	2.00	0.42
46:A:104:A:O2'	46:A:105:G:H5'	2.19	0.42
46:A:275:A:H2'	46:A:276:U:H6	1.79	0.42
46:A:323:G:HO2'	64:S:96:TRP:HH2	1.64	0.42
46:A:352:A:C4	46:A:353:A:C8	3.07	0.42
46:A:1113:A:C8	46:A:1115:A:N7	2.87	0.42
46:A:1210:A:H2'	46:A:1211:U:O4'	2.19	0.42
46:A:1273:U:OP1	46:A:1273:U:H3'	2.19	0.42
46:A:1522:A:O2'	46:A:1523:A:P	2.77	0.42
46:A:1535:A:H5'	47:B:126:VAL:CG2	2.49	0.42
46:A:1610:A:H61	46:A:1902:U:H3	1.67	0.42
46:A:1826:U:H1'	46:A:1829:U:O4	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1956:G:N2	68:W:72:ALA:HB3	2.34	0.42
46:A:1995:G:C2	46:A:1996:A:H1'	2.54	0.42
46:A:2198:U:C5	64:S:227:TYR:CD2	3.07	0.42
46:A:2381:G:C4	46:A:2382:A:C8	3.07	0.42
46:A:2386:A:O5'	46:A:2386:A:H8	2.02	0.42
46:A:2750:A:O2'	56:K:171:LYS:O	2.23	0.42
46:A:2843:G:N7	46:A:2846:U:C6	2.87	0.42
46:A:2978:A:C6	46:A:3009:A:N1	2.87	0.42
46:A:3010:U:C4	46:A:3011:U:C4	3.07	0.42
46:A:3229:U:C2'	46:A:3230:U:C6	3.01	0.42
47:B:80:ILE:HG13	47:B:81:LYS:HD2	2.02	0.42
50:E:32:LEU:HG	56:K:229:PHE:CE1	2.54	0.42
57:L:107:ARG:HG3	57:L:125:GLU:HG2	2.00	0.42
63:R:108:GLY:HA3	63:R:117:LEU:HD12	2.01	0.42
75:e:211:ARG:HG3	75:e:211:ARG:NH1	2.34	0.42
1:AA:96:ARG:O	1:AA:100:GLU:N	2.45	0.42
1:AA:108:SER:OG	1:AA:111:ARG:NH2	2.53	0.42
3:AC:79:ILE:H	3:AC:79:ILE:HG13	1.67	0.42
4:AD:224:THR:O	4:AD:227:GLU:HB2	2.19	0.42
4:AD:235:GLY:C	4:AD:237:LEU:N	2.76	0.42
5:AE:45:LYS:HB2	5:AE:105:PHE:CE2	2.54	0.42
6:AF:331:ASP:OD1	6:AF:331:ASP:N	2.50	0.42
8:AH:76:ALA:C	8:AH:78:THR:N	2.76	0.42
9:AI:431:PHE:CZ	24:o:176:ILE:CD1	2.99	0.42
11:AK:195:PRO:HA	11:AK:198:ARG:HH21	1.83	0.42
11:AK:294:PHE:HD2	24:o:153:ARG:NH1	2.17	0.42
12:AL:53:A:O2'	12:AL:369:U:H1'	2.19	0.42
12:AL:64:G:O6	12:AL:360:A:C6	2.72	0.42
12:AL:367:A:O4'	27:r:57:GLN:O	2.37	0.42
12:AL:483:A:N1	12:AL:484:U:C4	2.88	0.42
12:AL:693:G:H2'	12:AL:695:A:H8	1.84	0.42
12:AL:721:U:H2'	12:AL:722:A:H8	1.82	0.42
12:AL:879:A:H2'	12:AL:881:A:O5'	2.19	0.42
12:AL:998:A:H4'	12:AL:999:C:OP1	2.19	0.42
12:AL:1028:G:H21	25:p:94:VAL:HG22	1.84	0.42
12:AL:1154:C:OP1	18:i:352:PHE:CB	2.57	0.42
12:AL:1630:A:O5'	35:z:170:LYS:NZ	2.47	0.42
13:AM:30:C:N4	13:AM:41:A:N1	2.67	0.42
14:AN:6:C:H1'	14:AN:7:C:O4'	2.19	0.42
15:Z:42:SER:OG	22:m:241:ARG:NE	2.52	0.42
17:h:135:SER:O	17:h:136:ALA:HB2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:i:115:ILE:HD13	18:i:115:ILE:HA	1.83	0.42
18:i:301:ASN:O	18:i:305:ILE:HG13	2.18	0.42
18:i:381:SER:HB2	18:i:388:LYS:HE2	2.01	0.42
20:k:267:ASN:C	20:k:271:ILE:HG12	2.44	0.42
21:l:6:ILE:CD1	33:x:94:ALA:CB	2.83	0.42
21:l:66:HIS:CD2	21:l:66:HIS:H	2.34	0.42
22:m:98:TRP:HD1	24:o:242:LEU:HD23	1.82	0.42
25:p:77:LYS:HD3	25:p:110:LEU:CD2	2.26	0.42
26:q:67:TYR:CD2	26:q:68:LYS:N	2.87	0.42
26:q:75:LYS:HD2	26:q:166:GLU:OE2	2.19	0.42
26:q:131:LEU:HG	26:q:146:GLN:O	2.20	0.42
27:r:42:ARG:HE	27:r:44:LYS:CE	2.32	0.42
27:r:96:PRO:HD2	27:r:127:ARG:HG2	2.01	0.42
28:s:79:ILE:CD1	28:s:119:ARG:HG2	2.49	0.42
28:s:83:ARG:HG3	28:s:90:GLY:CA	2.49	0.42
28:s:85:ILE:HG22	28:s:86:GLY:H	1.85	0.42
29:t:43:PHE:CD1	29:t:43:PHE:C	2.97	0.42
30:u:245:PHE:CE2	30:u:247:MET:HG2	2.53	0.42
39:3:17:LEU:HD11	46:A:1319:A:N3	2.34	0.42
39:3:67:PHE:C	46:A:1403:G:N2	2.78	0.42
46:A:42:A:OP1	53:H:136:TYR:OH	2.35	0.42
46:A:62:A:O2'	46:A:482:G:H5'	2.20	0.42
46:A:355:U:N3	46:A:356:U:C4	2.87	0.42
46:A:790:A:C5	46:A:791:U:C5	3.07	0.42
46:A:884:U:C2	56:K:84:ARG:NH1	2.87	0.42
46:A:946:A:H3'	46:A:946:A:N3	2.35	0.42
46:A:1161:A:C2	46:A:1162:A:C8	3.08	0.42
46:A:1211:U:O2'	46:A:1212:A:H5'	2.19	0.42
46:A:1277:U:H5"	46:A:1277:U:H6	1.85	0.42
46:A:1343:U:H2'	61:P:141:LYS:HB3	2.00	0.42
46:A:1387:A:H5"	64:S:67:LYS:CD	2.50	0.42
46:A:1522:A:O2'	46:A:1523:A:OP1	2.31	0.42
46:A:1644:U:O5'	46:A:1644:U:H6	2.02	0.42
46:A:1720:U:C2	46:A:1721:U:C5	3.07	0.42
46:A:1947:C:H2'	46:A:1948:A:C8	2.55	0.42
46:A:1989:U:N3	52:G:14:LYS:CD	2.83	0.42
46:A:2238:U:HO2'	46:A:2239:A:H8	1.64	0.42
46:A:2284:A:OP1	63:R:40:LYS:CE	2.67	0.42
46:A:2596:G:O2'	63:R:67:ARG:O	2.26	0.42
46:A:2898:U:C5	46:A:3261:U:C5	3.07	0.42
46:A:2913:U:C4	46:A:2914:C:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2951:U:C2	46:A:2952:G:N7	2.87	0.42
46:A:2976:A:H2'	46:A:2977:U:H6	1.78	0.42
46:A:3009:A:H2'	46:A:3010:U:H6	1.82	0.42
56:K:97:ILE:HG13	56:K:168:ALA:HB2	2.01	0.42
60:O:158:VAL:HG21	61:P:227:ILE:HG23	2.00	0.42
62:Q:238:LEU:HD13	62:Q:243:ILE:HD11	2.01	0.42
63:R:308:ALA:HB3	63:R:317:GLU:OE2	2.19	0.42
69:X:23:ARG:CZ	69:X:23:ARG:HB2	2.49	0.42
72:b:70:ALA:HB2	72:b:79:LEU:HD11	2.02	0.42
75:e:204:LEU:HD13	75:e:205:SER:N	2.34	0.42
1:AA:80:VAL:HA	1:AA:83:LYS:HE2	2.02	0.42
5:AE:227:LEU:C	5:AE:231:LEU:HB2	2.45	0.42
5:AE:274:TYR:O	5:AE:277:ILE:N	2.52	0.42
6:AF:48:LYS:CE	12:AL:489:A:C5	2.96	0.42
6:AF:67:TYR:CE2	12:AL:482:U:H6	2.22	0.42
6:AF:135:GLN:NE2	6:AF:137:PHE:O	2.52	0.42
7:AG:29:TRP:CD2	17:h:341:PRO:HG3	2.54	0.42
8:AH:22:LEU:HD21	8:AH:71:VAL:HG22	2.02	0.42
8:AH:23:LYS:HE2	31:v:74:TYR:OH	2.19	0.42
8:AH:189:PHE:CD2	32:w:176:LEU:HD13	2.55	0.42
9:AI:127:ARG:N	9:AI:131:THR:CG2	2.83	0.42
9:AI:148:ILE:HG23	9:AI:159:LEU:HD23	2.01	0.42
9:AI:203:MET:HE2	12:AL:1354:U:C5	2.27	0.42
9:AI:263:THR:O	9:AI:268:ARG:NH2	2.52	0.42
11:AK:57:TRP:HB3	11:AK:65:ILE:CG2	2.50	0.42
12:AL:73:A:N6	12:AL:100:A:H2	2.17	0.42
12:AL:295:U:H3	12:AL:316:A:H2	1.63	0.42
12:AL:894:U:C4'	17:h:204:SER:HG	2.32	0.42
12:AL:1151:G:OP1	24:o:97:LYS:HE2	2.18	0.42
12:AL:1332:A:C2'	12:AL:1333:U:OP1	2.67	0.42
12:AL:1540:U:N1	12:AL:1541:U:C5	2.87	0.42
12:AL:1610:A:H2'	12:AL:1611:A:O4'	2.19	0.42
15:Z:51:CYS:O	15:Z:54:LEU:N	2.53	0.42
16:g:286:GLU:O	16:g:289:GLY:N	2.52	0.42
17:h:131:ASN:C	24:o:119:GLN:HA	2.43	0.42
18:i:124:THR:HG22	18:i:125:LEU:H	1.85	0.42
19:j:118:VAL:O	19:j:122:ARG:HG3	2.20	0.42
21:l:119:SER:OG	21:l:121:LEU:HG	2.19	0.42
22:m:116:HIS:CD2	22:m:120:MET:SD	3.12	0.42
23:n:92:ILE:HD11	23:n:153:ARG:HB2	2.02	0.42
25:p:86:TRP:CD1	25:p:86:TRP:N	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:u:63:LYS:HD3	30:u:63:LYS:HA	1.73	0.42
30:u:70:ARG:HB3	30:u:71:ALA:H	1.59	0.42
30:u:145:ARG:HG2	47:B:69:ASP:CG	2.45	0.42
30:u:211:GLN:O	30:u:212:ARG:C	2.63	0.42
31:v:52:LYS:O	31:v:56:LYS:HG3	2.19	0.42
33:x:88:ASN:HB3	33:x:124:ARG:NH2	2.35	0.42
34:y:13:TRP:C	34:y:15:GLY:H	2.26	0.42
37:1:282:LYS:HE2	63:R:143:GLU:OE1	2.19	0.42
39:3:78:ARG:NH1	61:P:117:ASP:OD2	2.53	0.42
46:A:48:A:H2'	46:A:49:G:O4'	2.18	0.42
46:A:207:U:H2'	46:A:208:A:O4'	2.20	0.42
46:A:217:A:C5	64:S:47:HIS:CE1	3.07	0.42
46:A:292:G:P	55:J:105:TRP:HZ2	2.41	0.42
46:A:303:A:C2	46:A:304:A:N6	2.87	0.42
46:A:472:U:O2'	46:A:473:A:H3'	2.19	0.42
46:A:503:A:C2	46:A:504:A:C8	3.07	0.42
46:A:676:A:H4'	46:A:1686:U:H4'	2.00	0.42
46:A:724:A:H2'	46:A:725:U:H6	1.84	0.42
46:A:867:A:H2'	46:A:868:G:C8	2.55	0.42
46:A:954:A:N1	46:A:1094:U:H5	2.18	0.42
46:A:1006:U:C4'	46:A:1007:U:H4'	2.49	0.42
46:A:1016:C:P	76:f:158:PRO:OXT	2.78	0.42
46:A:1030:C:H2'	46:A:1031:U:O4'	2.20	0.42
46:A:1123:U:C4	46:A:1124:U:C5	3.08	0.42
46:A:1167:A:O3'	71:a:50:ALA:HB2	2.19	0.42
46:A:1276:U:H2'	46:A:1277:U:H6	1.83	0.42
46:A:1439:A:O2'	46:A:1440:U:O4'	2.36	0.42
46:A:1805:G:O2'	46:A:1806:C:H5'	2.19	0.42
46:A:2258:C:C2	46:A:2259:U:C5	3.07	0.42
46:A:2325:A:H5"	46:A:2326:U:OP2	2.20	0.42
46:A:2333:A:N3	46:A:2333:A:H2'	2.35	0.42
46:A:2359:U:O2'	46:A:2360:U:P	2.77	0.42
46:A:2377:A:N7	46:A:2423:G:C6	2.88	0.42
46:A:2632:A:P	63:R:81:LYS:H	2.42	0.42
46:A:2673:A:C6	55:J:125:VAL:HG11	2.54	0.42
46:A:2760:G:C4	46:A:2761:C:C6	3.08	0.42
46:A:2780:A:H2'	46:A:2781:C:O4'	2.20	0.42
46:A:2855:A:H2'	46:A:2856:U:O4'	2.20	0.42
46:A:2909:A:C4	46:A:2910:A:C8	3.07	0.42
46:A:3249:U:O5'	46:A:3249:U:H6	2.02	0.42
46:A:3290:A:N7	46:A:3291:U:C2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:58:SER:O	63:R:59:THR:C	2.59	0.42
63:R:215:ARG:CD	63:R:255:ASN:CG	2.90	0.42
63:R:300:TYR:O	63:R:303:ALA:HB3	2.19	0.42
63:R:324:TYR:C	63:R:325:LEU:HD12	2.44	0.42
75:e:85:PHE:O	75:e:89:GLN:HG3	2.20	0.42
2:AB:82:GLN:HA	2:AB:85:LYS:HG3	2.02	0.42
2:AB:105:LEU:HD13	12:AL:390:U:OP1	2.19	0.42
3:AC:62:TYR:CE2	17:h:159:LYS:CG	2.65	0.42
3:AC:63:PRO:HA	3:AC:66:ILE:HD12	2.02	0.42
3:AC:239:ASN:OD1	3:AC:239:ASN:N	2.52	0.42
4:AD:208:PHE:HE2	16:g:214:LEU:C	2.26	0.42
8:AH:194:LYS:O	8:AH:195:LYS:C	2.62	0.42
9:AI:435:ASN:ND2	24:o:175:GLU:HB3	2.34	0.42
12:AL:539:C:N4	12:AL:556:G:H1	2.18	0.42
12:AL:715:U:C4	12:AL:817:G:C2	3.07	0.42
12:AL:805:U:C2	12:AL:806:A:N7	2.87	0.42
12:AL:851:G:H2'	12:AL:852:A:H8	1.85	0.42
12:AL:1207:U:HO2'	12:AL:1208:A:H5'	1.80	0.42
12:AL:1294:A:O2'	12:AL:1315:A:N6	2.52	0.42
12:AL:1491:U:OP1	54:I:49:PRO:CG	2.67	0.42
12:AL:1568:A:H2'	12:AL:1569:A:C8	2.55	0.42
16:g:12:ILE:HD11	17:h:195:LEU:HD21	1.86	0.42
17:h:179:LEU:HB3	17:h:181:GLU:OE1	2.20	0.42
18:i:82:ASN:ND2	20:k:57:PRO:HG3	2.31	0.42
18:i:106:ILE:O	18:i:109:THR:HG22	2.19	0.42
18:i:213:ILE:HG12	18:i:223:TYR:HB2	2.01	0.42
18:i:229:MET:HE2	18:i:382:ASN:OD1	2.20	0.42
19:j:438:PRO:HD2	19:j:443:ILE:HD11	2.00	0.42
21:l:129:GLN:HB2	21:l:130:SER:H	1.70	0.42
25:p:55:LEU:HD23	25:p:55:LEU:HA	1.78	0.42
26:q:82:PHE:CD1	26:q:82:PHE:N	2.87	0.42
27:r:53:ASP:O	27:r:54:GLN:C	2.61	0.42
30:u:192:ILE:C	30:u:194:GLU:H	2.27	0.42
31:v:20:VAL:HA	31:v:45:PRO:HD3	2.02	0.42
32:w:15:LYS:C	32:w:16:MET:HG3	2.43	0.42
36:0:62:VAL:HG12	36:0:80:ILE:CD1	2.50	0.42
37:1:365:VAL:CG2	46:A:546:A:H5"	2.47	0.42
40:4:16:VAL:HG23	41:5:289:SER:HB2	2.01	0.42
46:A:52:A:C5	46:A:53:U:C4	3.07	0.42
46:A:55:A:C4	46:A:56:U:C5	3.07	0.42
46:A:550:A:H2'	46:A:551:U:H6	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:792:U:N3	46:A:793:A:C8	2.88	0.42
46:A:928:A:H2'	46:A:929:G:O4'	2.19	0.42
46:A:1025:A:H4'	46:A:1026:U:C5'	2.49	0.42
46:A:1029:A:H2'	46:A:1029:A:N3	2.35	0.42
46:A:1110:A:N6	51:F:42:ILE:CD1	2.81	0.42
46:A:1205:U:H2'	46:A:1208:U:H4'	2.00	0.42
46:A:1434:A:C8	46:A:1434:A:O5'	2.72	0.42
46:A:1507:U:H3'	46:A:1508:A:H5"	2.01	0.42
46:A:1615:G:C6	46:A:1892:G:N7	2.87	0.42
46:A:1748:A:C5	46:A:1749:U:C4	3.07	0.42
46:A:1871:U:O2'	46:A:1872:G:P	2.78	0.42
46:A:1997:A:N6	46:A:2089:U:H3	2.18	0.42
46:A:2026:G:N1	46:A:2071:A:C2	2.88	0.42
46:A:2381:G:C2	46:A:2382:A:N9	2.87	0.42
46:A:2641:C:H2'	46:A:2642:G:C8	2.55	0.42
46:A:2659:A:C5	46:A:2660:A:C5	3.08	0.42
46:A:2685:A:H2'	46:A:2686:U:H6	1.84	0.42
46:A:2722:G:C5	46:A:2723:U:C5	3.08	0.42
46:A:2831:A:H2'	46:A:2832:A:C8	2.54	0.42
46:A:3124:A:H4'	46:A:3124:A:OP2	2.19	0.42
46:A:3132:A:C6	46:A:3133:U:C4	3.07	0.42
46:A:3148:A:H2'	46:A:3149:A:O4'	2.19	0.42
48:C:42:ILE:HG21	53:H:99:LYS:O	2.20	0.42
63:R:196:SER:O	63:R:197:TYR:C	2.62	0.42
63:R:294:THR:O	63:R:297:ASP:N	2.53	0.42
69:X:33:LEU:HA	69:X:51:GLU:OE2	2.19	0.42
69:X:58:ALA:O	69:X:60:ARG:N	2.52	0.42
75:e:98:ARG:O	75:e:102:PHE:HB2	2.19	0.42
1:AA:80:VAL:CG2	12:AL:1462:A:H62	2.23	0.42
2:AB:70:ASP:OD2	2:AB:72:LYS:HB2	2.19	0.42
3:AC:200:MET:O	3:AC:201:LYS:C	2.63	0.42
3:AC:215:GLN:H	3:AC:215:GLN:HG2	1.58	0.42
5:AE:187:THR:HA	5:AE:190:MET:HE2	2.02	0.42
5:AE:282:ARG:HB3	5:AE:315:TYR:CB	2.49	0.42
6:AF:76:TYR:CZ	6:AF:88:ILE:HA	2.55	0.42
7:AG:114:TRP:CD1	7:AG:118:ARG:HE	2.38	0.42
8:AH:65:LYS:HD2	8:AH:68:PHE:CE2	2.54	0.42
9:AI:148:ILE:CG2	9:AI:159:LEU:HD23	2.48	0.42
11:AK:54:PRO:HB2	11:AK:86:GLU:HB2	2.00	0.42
11:AK:155:ASN:CG	25:p:27:VAL:HG11	2.44	0.42
12:AL:91:A:N3	12:AL:91:A:H2'	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:324:G:H2'	12:AL:325:A:H8	1.84	0.42
12:AL:488:A:N6	12:AL:489:A:C2	2.88	0.42
12:AL:542:A:H8	12:AL:542:A:O5'	2.03	0.42
12:AL:695:A:H61	12:AL:820:A:N6	2.17	0.42
12:AL:723:A:O2'	12:AL:724:U:H5'	2.20	0.42
12:AL:806:A:C6	12:AL:807:A:N6	2.87	0.42
13:AM:62:C:C4	13:AM:63:C:H1'	2.54	0.42
17:h:177:PRO:O	17:h:378:ARG:NH1	2.52	0.42
18:i:302:ILE:O	18:i:303:ASN:C	2.63	0.42
19:j:64:ARG:O	19:j:68:VAL:HG23	2.19	0.42
19:j:407:GLN:HA	19:j:410:TYR:CZ	2.55	0.42
20:k:302:LYS:C	20:k:304:TYR:N	2.78	0.42
24:o:151:PHE:HB2	24:o:153:ARG:NE	2.27	0.42
25:p:65:THR:O	25:p:69:LEU:HB2	2.19	0.42
25:p:144:GLN:HG2	25:p:145:ARG:N	2.35	0.42
28:s:88:TYR:HA	28:s:91:MET:HE2	2.02	0.42
31:v:83:SER:O	31:v:84:GLU:C	2.62	0.42
34:y:32:PRO:HD3	34:y:50:LYS:HE3	2.00	0.42
38:2:49:MET:CE	50:E:160:ALA:HB1	2.49	0.42
38:2:53:ARG:CA	46:A:2374:A:OP1	2.68	0.42
41:5:324:VAL:HG21	41:5:339:HIS:CG	2.54	0.42
46:A:36:A:C6	46:A:37:U:C4	3.07	0.42
46:A:352:A:H2'	46:A:353:A:H8	1.84	0.42
46:A:353:A:H3'	46:A:354:A:H8	1.84	0.42
46:A:452:U:O2'	46:A:453:U:H5'	2.20	0.42
46:A:497:U:C2	46:A:498:A:C8	3.07	0.42
46:A:613:G:N2	46:A:615:U:O4	2.52	0.42
46:A:718:G:H2'	46:A:1968:U:C2	2.55	0.42
46:A:1028:C:H4'	46:A:1029:A:OP1	2.19	0.42
46:A:1533:G:OP2	47:B:153:ARG:NH2	2.49	0.42
46:A:1745:U:H2'	46:A:1800:A:N6	2.35	0.42
46:A:1780:U:H2'	46:A:1781:A:O4'	2.18	0.42
46:A:1994:C:H4'	46:A:1995:G:O5'	2.20	0.42
46:A:2022:U:O2	46:A:2022:U:C2'	2.68	0.42
46:A:2084:G:C2	46:A:2085:A:C4	3.07	0.42
46:A:2308:A:O2'	46:A:2309:G:H5'	2.19	0.42
46:A:2384:A:C2'	46:A:2385:U:C6	2.91	0.42
46:A:2909:A:O2'	46:A:2910:A:H5'	2.19	0.42
46:A:3150:U:C6	46:A:3152:A:H5'	2.55	0.42
63:R:108:GLY:HA3	63:R:117:LEU:CD1	2.49	0.42
63:R:144:GLU:C	63:R:146:SER:N	2.76	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:e:161:GLN:HA	75:e:164:LEU:HD11	2.02	0.42
3:AC:62:TYR:CE1	17:h:159:LYS:HE3	2.54	0.42
4:AD:116:LEU:HD13	4:AD:116:LEU:HA	1.83	0.42
4:AD:220:ASN:O	4:AD:224:THR:HG23	2.19	0.42
5:AE:211:LEU:O	5:AE:215:TRP:N	2.53	0.42
6:AF:58:MET:O	6:AF:62:LEU:HG	2.20	0.42
6:AF:121:GLU:H	6:AF:121:GLU:CD	2.28	0.42
7:AG:29:TRP:CG	17:h:341:PRO:HG3	2.55	0.42
8:AH:162:GLN:HG3	23:n:60:PHE:HE1	1.85	0.42
9:AI:414:ASP:C	9:AI:416:ASP:N	2.75	0.42
10:AJ:93:LYS:HE3	12:AL:1058:G:O6	2.17	0.42
11:AK:96:TYR:O	11:AK:97:SER:HB2	2.18	0.42
11:AK:282:ALA:O	11:AK:286:ARG:HG3	2.20	0.42
12:AL:79:A:N6	12:AL:94:A:H61	2.18	0.42
12:AL:331:A:C3'	12:AL:332:A:H8	2.31	0.42
12:AL:505:A:H3'	12:AL:506:U:C6	2.54	0.42
12:AL:518:U:H1'	12:AL:533:A:H61	1.84	0.42
12:AL:658:G:C5	12:AL:659:C:C4	3.07	0.42
12:AL:1000:U:O2	12:AL:1000:U:O4'	2.37	0.42
12:AL:1144:C:H2'	12:AL:1145:A:H8	1.81	0.42
12:AL:1181:A:N3	25:p:78:PRO:HG2	2.33	0.42
12:AL:1206:A:H4'	12:AL:1207:U:OP1	2.19	0.42
13:AM:18:G:C6	13:AM:19:G:H1'	2.54	0.42
16:g:230:ARG:HD3	16:g:272:ARG:O	2.19	0.42
17:h:389:ALA:HA	17:h:392:ASN:HD22	1.83	0.42
20:k:48:VAL:HG23	25:p:30:ALA:HB2	2.02	0.42
20:k:55:ALA:CB	25:p:28:TYR:HA	2.50	0.42
21:l:62:PHE:CD2	26:q:116:LEU:CD1	2.99	0.42
22:m:98:TRP:HB2	24:o:242:LEU:HD21	1.95	0.42
23:n:131:ALA:HB1	23:n:146:LEU:HB3	2.01	0.42
28:s:36:CYS:O	28:s:40:GLY:N	2.53	0.42
32:w:39:HIS:HE1	32:w:41:ARG:HB2	1.85	0.42
32:w:218:ASN:C	32:w:220:LYS:H	2.28	0.42
46:A:346:G:C2	46:A:357:C:O2	2.73	0.42
46:A:350:A:H2'	46:A:351:C:H6	1.85	0.42
46:A:479:U:C2	46:A:480:C:C5	3.07	0.42
46:A:713:U:H2'	46:A:714:A:H8	1.83	0.42
46:A:841:G:C2	50:E:107:TYR:OH	2.71	0.42
46:A:926:A:C6	46:A:927:A:C6	3.07	0.42
46:A:1140:A:H8	46:A:1140:A:O5'	2.02	0.42
46:A:1432:A:C2	46:A:1433:A:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1636:C:H2'	46:A:1637:U:H6	1.81	0.42
46:A:1821:G:C2	46:A:1822:G:C8	3.08	0.42
46:A:2076:A:C6	46:A:2077:A:C4	3.08	0.42
46:A:2208:A:H2'	46:A:2209:U:H6	1.77	0.42
46:A:2318:U:C2'	46:A:2319:A:H5'	2.49	0.42
46:A:2390:U:H2'	46:A:2391:U:H6	1.84	0.42
46:A:2438:A:OP1	46:A:2438:A:H2'	2.20	0.42
46:A:2729:A:N1	46:A:2730:G:C5	2.88	0.42
46:A:2766:U:C3'	46:A:2767:C:H4'	2.50	0.42
46:A:2959:C:H2'	46:A:2960:U:C6	2.55	0.42
46:A:2980:A:C6	46:A:3007:A:C6	3.08	0.42
57:L:179:GLU:HG3	57:L:214:LEU:HD12	2.01	0.42
62:Q:208:PHE:CZ	65:T:159:ARG:HD3	2.54	0.42
62:Q:248:ALA:HB1	64:S:56:PRO:HA	2.02	0.42
63:R:82:ASP:O	63:R:83:HIS:CB	2.68	0.42
63:R:293:GLU:OE1	63:R:294:THR:HG23	2.20	0.42
63:R:332:THR:C	63:R:334:SER:N	2.75	0.42
64:S:132:ILE:N	64:S:132:ILE:CD1	2.83	0.42
76:f:18:GLN:OE1	76:f:53:GLY:HA2	2.20	0.42
3:AC:197:LEU:HD12	7:AG:200:LEU:HD21	2.02	0.42
4:AD:289:LYS:O	4:AD:292:TYR:HB3	2.20	0.42
5:AE:118:ASP:C	5:AE:120:PHE:H	2.27	0.42
6:AF:100:HIS:CD2	6:AF:107:LEU:HD11	2.54	0.42
6:AF:330:LYS:NZ	12:AL:36:U:OP2	2.53	0.42
7:AG:122:LEU:HD21	16:g:36:ILE:CD1	2.50	0.42
8:AH:104:ARG:HE	12:AL:143:A:H5"	1.83	0.42
9:AI:164:HIS:CD2	9:AI:290:THR:HG21	2.54	0.42
9:AI:422:TRP:O	9:AI:423:GLU:C	2.62	0.42
12:AL:24:U:O2'	12:AL:1126:A:N3	2.53	0.42
12:AL:56:U:C5	12:AL:368:A:C6	3.07	0.42
12:AL:394:U:H2'	12:AL:395:C:C6	2.55	0.42
12:AL:406:U:P	19:j:64:ARG:HD2	2.55	0.42
12:AL:940:U:H4'	23:n:18:LYS:HZ2	1.83	0.42
12:AL:1201:A:O3'	16:g:59:LYS:HE3	2.19	0.42
12:AL:1485:A:H2'	12:AL:1574:A:C2	2.55	0.42
12:AL:1608:G:H2'	12:AL:1610:A:OP2	2.19	0.42
12:AL:1632:A:C4'	33:x:58:PHE:CE1	3.03	0.42
16:g:12:ILE:HD11	17:h:195:LEU:HD11	2.01	0.42
17:h:290:TRP:CG	24:o:49:PRO:HG3	2.53	0.42
18:i:135:ILE:HD12	18:i:157:ASN:HB2	2.01	0.42
18:i:145:SER:O	18:i:147:ASN:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:i:310:THR:O	18:i:312:ASP:N	2.53	0.42
19:j:22:LYS:HB3	19:j:430:PHE:CE2	2.55	0.42
20:k:174:ASP:C	20:k:176:ASN:N	2.77	0.42
20:k:220:ILE:HD12	20:k:278:ALA:HB1	2.02	0.42
20:k:263:TYR:HB3	20:k:264:LYS:H	1.68	0.42
21:l:38:VAL:HG13	21:l:39:VAL:O	2.19	0.42
21:l:45:MET:HB3	21:l:48:ARG:NH1	2.25	0.42
21:l:76:ALA:O	21:l:77:VAL:C	2.60	0.42
25:p:128:ILE:HA	25:p:128:ILE:HD13	1.72	0.42
26:q:196:VAL:HB	26:q:197:LYS:H	1.50	0.42
28:s:2:VAL:HG22	28:s:48:HIS:HA	2.01	0.42
28:s:41:PHE:HB3	28:s:45:MET:SD	2.59	0.42
29:t:94:CYS:SG	29:t:95:ARG:N	2.92	0.42
38:2:45:GLN:NE2	50:E:158:THR:HG22	2.35	0.42
38:2:66:LEU:HD12	50:E:54:ILE:HG21	2.00	0.42
46:A:13:A:H2'	46:A:14:U:H6	1.83	0.42
46:A:169:A:H2'	46:A:170:U:O4'	2.20	0.42
46:A:204:A:OP2	46:A:204:A:H8	2.02	0.42
46:A:238:C:C1'	46:A:2700:A:N6	2.82	0.42
46:A:238:C:O2'	46:A:239:A:H5'	2.20	0.42
46:A:431:U:C4	46:A:432:C:C4	3.08	0.42
46:A:441:A:C2	46:A:444:A:C8	3.08	0.42
46:A:461:U:O4'	46:A:1936:C:H5'	2.20	0.42
46:A:860:A:H3'	46:A:861:A:H8	1.85	0.42
46:A:900:A:C8	46:A:1220:G:C2	3.07	0.42
46:A:948:U:H5'	46:A:948:U:C6	2.50	0.42
46:A:974:A:N1	46:A:1046:A:H2'	2.35	0.42
46:A:1116:A:H2'	46:A:1117:G:O4'	2.20	0.42
46:A:1406:A:H5"	46:A:1406:A:C8	2.53	0.42
46:A:1540:A:C5	46:A:1541:U:C5	3.07	0.42
46:A:1616:A:H1'	46:A:3062:A:N7	2.34	0.42
46:A:1664:A:O2'	46:A:1665:G:H5'	2.20	0.42
46:A:2013:G:N1	46:A:2024:A:P	2.93	0.42
46:A:2084:G:C6	46:A:2085:A:C5	3.07	0.42
46:A:2625:A:H61	55:J:110:GLN:HE21	1.53	0.42
46:A:2738:G:C2	46:A:2741:G:N7	2.88	0.42
46:A:2910:A:H2'	46:A:2911:U:O4'	2.20	0.42
46:A:3066:G:H2'	46:A:3067:A:C8	2.54	0.42
63:R:274:GLU:O	63:R:275:LYS:C	2.62	0.42
75:e:204:LEU:HD13	75:e:205:SER:H	1.85	0.42
76:f:26:GLY:O	76:f:29:LEU:HB2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:f:121:TYR:CD2	76:f:142:VAL:HG22	2.49	0.42
2:AB:50:ARG:HH12	2:AB:103:ILE:H	1.68	0.42
2:AB:120:PHE:HA	2:AB:123:LYS:HB2	2.02	0.42
3:AC:177:PHE:CD2	3:AC:178:PRO:HD3	2.55	0.42
4:AD:166:ASP:CG	4:AD:276:SER:HG	2.27	0.42
4:AD:213:SER:HB2	4:AD:217:ASN:ND2	2.34	0.42
4:AD:242:MET:O	4:AD:245:LYS:N	2.46	0.42
4:AD:284:TYR:CD2	4:AD:292:TYR:HB2	2.54	0.42
5:AE:67:ARG:O	5:AE:70:ASN:ND2	2.53	0.42
5:AE:258:ILE:HG12	5:AE:300:PHE:CE1	2.54	0.42
5:AE:267:LEU:HA	5:AE:270:LEU:HB2	2.02	0.42
6:AF:61:PHE:HB2	19:j:29:TYR:CZ	2.51	0.42
6:AF:74:ASN:O	6:AF:76:TYR:N	2.53	0.42
7:AG:217:LEU:CD2	33:x:60:PHE:CD1	3.02	0.42
9:AI:148:ILE:CG2	9:AI:391:VAL:CG2	2.98	0.42
9:AI:408:GLN:C	9:AI:410:ASN:H	2.27	0.42
9:AI:446:VAL:O	9:AI:449:HIS:NE2	2.52	0.42
10:AJ:32:SER:CB	12:AL:1313:U:H5'	2.49	0.42
10:AJ:62:LEU:HD23	10:AJ:62:LEU:H	1.85	0.42
11:AK:153:PHE:CE1	20:k:81:GLN:CD	2.98	0.42
12:AL:227:U:O5'	12:AL:227:U:H6	2.03	0.42
12:AL:600:A:O2'	12:AL:601:U:P	2.78	0.42
12:AL:677:G:H2'	12:AL:677:G:N3	2.35	0.42
12:AL:762:U:H3'	12:AL:763:A:N7	2.35	0.42
12:AL:837:A:C3'	12:AL:838:G:H8	2.33	0.42
12:AL:902:A:C2	12:AL:916:A:C2	3.08	0.42
12:AL:924:U:H1'	15:Z:93:PRO:HG3	2.02	0.42
12:AL:990:G:C6	12:AL:992:U:C4	3.07	0.42
12:AL:1053:A:H2'	12:AL:1054:U:C4'	2.49	0.42
12:AL:1088:A:H8	12:AL:1089:U:O2	2.03	0.42
12:AL:1238:G:H3'	12:AL:1239:A:C8	2.48	0.42
12:AL:1489:U:H2'	12:AL:1490:A:H8	1.84	0.42
12:AL:1609:G:H2'	12:AL:1610:A:O4'	2.20	0.42
13:AM:17:U:OP1	13:AM:17:U:H4'	2.20	0.42
13:AM:45:G:H8	13:AM:45:G:OP2	2.02	0.42
17:h:222:LEU:O	17:h:223:ASN:C	2.61	0.42
17:h:275:TRP:O	17:h:276:ILE:C	2.61	0.42
20:k:21:LEU:HD11	20:k:37:GLN:NE2	2.35	0.42
21:l:52:LYS:HE3	21:l:52:LYS:HB2	1.84	0.42
22:m:213:GLY:O	22:m:217:THR:HG23	2.19	0.42
23:n:150:VAL:HG12	23:n:151:LEU:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:q:157:GLU:C	26:q:159:ASN:H	2.28	0.42
26:q:178:ALA:O	26:q:179:PHE:C	2.61	0.42
27:r:115:CYS:SG	27:r:118:LEU:HB2	2.59	0.42
28:s:51:SER:O	28:s:53:PRO:N	2.53	0.42
29:t:32:LYS:HE2	29:t:32:LYS:HB3	1.90	0.42
29:t:60:LEU:HB2	34:y:18:ILE:CG2	2.50	0.42
30:u:76:ILE:O	30:u:77:THR:C	2.63	0.42
30:u:250:ARG:O	30:u:251:TYR:C	2.63	0.42
30:u:262:ILE:HG21	30:u:265:ARG:NE	2.35	0.42
43:7:121:VAL:HB	43:7:128:ILE:HG22	2.01	0.42
46:A:25:A:O2'	46:A:26:A:P	2.77	0.42
46:A:88:U:C2	46:A:89:A:C8	3.08	0.42
46:A:114:U:O2'	46:A:115:A:O4'	2.38	0.42
46:A:319:U:C2	46:A:320:U:C5	3.08	0.42
46:A:532:A:C4	46:A:534:A:C8	3.08	0.42
46:A:823:U:O2	46:A:823:U:C2'	2.68	0.42
46:A:955:A:C2'	46:A:956:A:C8	3.02	0.42
46:A:965:U:C2	46:A:966:A:C8	3.08	0.42
46:A:979:C:HO2'	75:e:180:LYS:CE	2.25	0.42
46:A:987:G:H2'	46:A:988:G:O4'	2.20	0.42
46:A:1313:G:H2'	46:A:1314:U:C5	2.55	0.42
46:A:1409:C:O2'	46:A:1410:U:OP1	2.37	0.42
46:A:1509:U:C2'	46:A:1510:A:H8	2.30	0.42
46:A:1775:A:P	72:b:101:LYS:HZ1	2.43	0.42
46:A:1792:A:H2'	46:A:1793:U:H6	1.85	0.42
46:A:2252:C:H2'	46:A:2253:A:O4'	2.19	0.42
46:A:2268:G:H2'	46:A:2269:U:O4'	2.20	0.42
46:A:2316:A:H4'	46:A:2317:A:O5'	2.20	0.42
46:A:2413:A:C5	46:A:2414:U:C5	3.08	0.42
46:A:2930:G:C6	46:A:2931:G:C4	3.08	0.42
47:B:229:ILE:H	47:B:229:ILE:HG12	1.65	0.42
47:B:327:LEU:HD13	47:B:327:LEU:HA	1.88	0.42
50:E:149:ALA:O	67:V:21:ARG:NH2	2.44	0.42
56:K:87:ALA:HA	56:K:115:THR:HG21	2.01	0.42
69:X:31:ALA:H	69:X:55:ARG:NH2	2.18	0.42
1:AA:94:ARG:CZ	12:AL:1611:A:OP2	2.68	0.41
3:AC:176:TYR:CE2	3:AC:178:PRO:HB2	2.54	0.41
4:AD:124:ARG:HG3	4:AD:125:THR:H	1.84	0.41
5:AE:80:ARG:HD3	5:AE:85:ARG:HB3	2.02	0.41
6:AF:40:LYS:HD2	6:AF:109:LEU:HD23	2.03	0.41
6:AF:46:HIS:O	6:AF:49:LYS:N	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:105:LYS:HA	6:AF:106:PRO:HD3	1.90	0.41
7:AG:137:MET:HE1	7:AG:176:PHE:HD1	1.82	0.41
8:AH:104:ARG:CD	12:AL:143:A:H5"	2.41	0.41
8:AH:185:SER:C	32:w:176:LEU:HD21	2.45	0.41
9:AI:187:ARG:C	28:s:42:TYR:CE2	2.78	0.41
9:AI:206:LYS:NZ	12:AL:1346:U:H5'	2.35	0.41
9:AI:385:ASN:OD1	9:AI:385:ASN:N	2.53	0.41
9:AI:389:PHE:O	9:AI:390:GLU:C	2.60	0.41
10:AJ:24:ASN:HB3	12:AL:1313:U:OP1	2.13	0.41
10:AJ:59:LEU:HD11	18:i:122:MET:HE2	2.02	0.41
12:AL:223:U:H3'	12:AL:224:A:C4'	2.50	0.41
12:AL:487:A:C2	12:AL:488:A:C5	3.08	0.41
12:AL:786:U:O2	33:x:109:ILE:HD12	2.19	0.41
12:AL:1057:U:H4'	12:AL:1058:G:H5'	2.01	0.41
12:AL:1175:U:H3'	12:AL:1176:U:O2	2.19	0.41
12:AL:1386:A:C5'	12:AL:1387:A:OP2	2.63	0.41
12:AL:1428:U:H5'	12:AL:1429:A:OP2	2.19	0.41
12:AL:1522:A:H2	12:AL:1542:A:H1'	1.83	0.41
16:g:273:MET:CE	33:x:60:PHE:CE1	2.91	0.41
18:i:190:ASN:N	18:i:190:ASN:HD22	2.16	0.41
18:i:195:LEU:HB3	18:i:203:VAL:HG11	2.00	0.41
18:i:331:PHE:HB3	18:i:335:LEU:CD1	2.49	0.41
18:i:382:ASN:HB3	18:i:389:TYR:CZ	2.55	0.41
19:j:186:VAL:O	19:j:190:LYS:HG3	2.20	0.41
20:k:133:THR:HG23	20:k:135:VAL:H	1.85	0.41
24:o:156:ALA:HB3	24:o:230:ALA:O	2.19	0.41
27:r:131:ASP:OD1	27:r:131:ASP:N	2.52	0.41
30:u:74:PRO:O	30:u:76:ILE:N	2.52	0.41
30:u:202:THR:HG23	30:u:247:MET:CE	2.50	0.41
30:u:251:TYR:O	30:u:252:MET:C	2.63	0.41
30:u:252:MET:O	30:u:256:GLU:N	2.53	0.41
39:3:24:TYR:HD1	46:A:1911:U:HO2'	1.67	0.41
39:3:70:TYR:CE2	46:A:1550:A:H1'	2.55	0.41
46:A:176:U:O2	46:A:176:U:H2'	2.20	0.41
46:A:207:U:O2'	46:A:208:A:H5'	2.20	0.41
46:A:329:A:OP2	46:A:329:A:C8	2.73	0.41
46:A:642:A:C5	60:O:251:THR:HB	2.55	0.41
46:A:674:A:H2'	46:A:675:G:H4'	2.01	0.41
46:A:770:A:C5	46:A:771:U:C5	3.07	0.41
46:A:783:U:N3	46:A:2294:A:C8	2.88	0.41
46:A:947:G:C6	46:A:1106:C:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1073:A:H2'	46:A:1074:U:H6	1.83	0.41
46:A:1241:A:N6	46:A:1271:A:OP2	2.51	0.41
46:A:1484:U:C2	46:A:1485:A:N7	2.88	0.41
46:A:1526:A:H2'	46:A:1527:A:O5'	2.19	0.41
46:A:1609:U:H5'	48:C:201:HIS:HE2	1.85	0.41
46:A:1649:C:H2'	46:A:1650:A:O4'	2.20	0.41
46:A:1761:A:N6	46:A:1790:A:C4	2.88	0.41
46:A:1855:U:H5	46:A:2824:G:N2	2.18	0.41
46:A:2032:C:H2'	46:A:2056:A:H5'	2.02	0.41
46:A:2032:C:H42	46:A:2057:U:P	2.43	0.41
46:A:2276:G:N2	56:K:128:MET:HE3	2.33	0.41
46:A:2337:A:C6	46:A:2338:A:C5	3.08	0.41
46:A:2362:U:C2	72:b:151:ASN:OD1	2.73	0.41
46:A:2434:A:H2'	46:A:2435:A:H8	1.85	0.41
46:A:2440:G:C6	46:A:2441:U:C4	3.07	0.41
46:A:2672:G:C6	72:b:109:HIS:CE1	3.08	0.41
46:A:2893:A:H2'	46:A:2894:A:H5"	2.02	0.41
46:A:2897:A:C5	46:A:3262:A:C4	3.08	0.41
46:A:2924:A:H2'	46:A:2925:C:O4'	2.19	0.41
46:A:3107:U:C2	46:A:3108:U:C6	3.08	0.41
46:A:3175:A:C2	46:A:3176:U:C4	3.07	0.41
63:R:236:THR:HG22	63:R:238:GLU:HG3	2.00	0.41
75:e:60:LEU:O	75:e:143:GLU:O	2.38	0.41
2:AB:45:LEU:HD12	2:AB:52:CYS:O	2.20	0.41
3:AC:42:GLN:HG3	3:AC:46:CYS:SG	2.59	0.41
3:AC:124:LYS:HD3	3:AC:124:LYS:HA	1.87	0.41
4:AD:177:LEU:HD23	4:AD:192:GLU:H	1.85	0.41
6:AF:319:TYR:HB2	31:v:22:ASN:HD21	1.84	0.41
6:AF:330:LYS:NZ	12:AL:36:U:P	2.93	0.41
7:AG:120:LYS:CD	16:g:34:GLN:NE2	2.73	0.41
7:AG:215:GLU:O	7:AG:218:ASP:HB2	2.20	0.41
9:AI:115:PHE:HZ	9:AI:447:LEU:HD11	1.82	0.41
9:AI:169:ASP:C	9:AI:171:LYS:N	2.77	0.41
9:AI:411:VAL:O	9:AI:411:VAL:HG12	2.20	0.41
10:AJ:1:MET:CE	11:AK:278:ARG:HH21	2.16	0.41
10:AJ:4:PRO:HG2	10:AJ:7:ARG:HG2	2.02	0.41
10:AJ:18:ILE:HG21	11:AK:258:LEU:HG	2.01	0.41
12:AL:28:G:H2'	12:AL:29:G:H8	1.85	0.41
12:AL:134:U:O2'	12:AL:266:A:H1'	2.20	0.41
12:AL:483:A:C6	12:AL:484:U:C4	3.08	0.41
12:AL:505:A:C8	12:AL:506:U:H5	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:743:U:O4	12:AL:744:A:N6	2.53	0.41
12:AL:945:C:P	27:r:36:ARG:NH2	2.92	0.41
15:Z:89:ILE:HD13	35:z:168:ILE:CB	2.46	0.41
16:g:231:ILE:O	16:g:271:ILE:HG22	2.19	0.41
17:h:171:HIS:HE2	17:h:176:TYR:HE1	1.67	0.41
17:h:225:THR:HG23	17:h:360:PRO:O	2.20	0.41
18:i:166:ASN:ND2	18:i:168:ASN:CB	2.43	0.41
19:j:440:HIS:HB2	19:j:454:ARG:HG2	2.02	0.41
21:l:82:LEU:HD13	21:l:82:LEU:HA	1.78	0.41
24:o:159:LYS:HD3	24:o:160:ARG:N	2.35	0.41
25:p:36:ILE:HG22	25:p:39:GLY:HA2	2.02	0.41
30:u:127:ASP:O	30:u:130:LYS:N	2.53	0.41
31:v:77:GLY:O	31:v:78:VAL:C	2.63	0.41
35:z:120:LEU:HD12	35:z:120:LEU:HA	1.65	0.41
38:2:69:HIS:CE1	50:E:54:ILE:HD13	2.55	0.41
46:A:210:U:C2	46:A:211:A:C8	3.07	0.41
46:A:305:A:C6	46:A:306:G:C6	3.08	0.41
46:A:380:G:O2'	46:A:381:U:H5'	2.21	0.41
46:A:384:A:H8	46:A:384:A:H5'	1.85	0.41
46:A:399:G:OP2	70:Y:98:LYS:NZ	2.45	0.41
46:A:467:U:OP1	55:J:94:LYS:HD2	2.20	0.41
46:A:748:U:C2	46:A:749:A:C8	3.08	0.41
46:A:787:G:H2'	46:A:788:C:C6	2.56	0.41
46:A:817:G:H2'	46:A:818:U:C6	2.54	0.41
46:A:928:A:N7	73:c:30:ARG:NE	2.68	0.41
46:A:947:G:C6	46:A:1106:C:N3	2.88	0.41
46:A:1531:C:O4'	47:B:326:TRP:CE3	2.73	0.41
46:A:1841:C:C4	46:A:1865:C:C1'	3.04	0.41
46:A:1971:A:C2	46:A:1972:G:C5	3.08	0.41
46:A:1977:A:H2'	46:A:1978:C:H6	1.86	0.41
46:A:2002:U:H2'	46:A:2003:G:N7	2.35	0.41
46:A:2209:U:H2'	46:A:2210:A:O4'	2.20	0.41
46:A:2322:U:H5"	46:A:2323:A:C4	2.55	0.41
46:A:2335:U:O2'	46:A:2336:G:H5'	2.19	0.41
46:A:2386:A:H2'	46:A:2387:U:C6	2.55	0.41
46:A:2839:A:OP1	46:A:2841:G:O2'	2.38	0.41
46:A:2843:G:C6	46:A:2845:G:C6	3.08	0.41
46:A:2843:G:H8	46:A:2845:G:H3'	1.85	0.41
46:A:2922:G:C2	46:A:2931:G:C5	3.08	0.41
46:A:2942:A:C6	46:A:2943:U:C4	3.08	0.41
46:A:2945:A:H2'	46:A:2946:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2964:G:H2'	46:A:2965:A:C8	2.55	0.41
46:A:3028:A:H8	46:A:3028:A:O5'	2.03	0.41
46:A:3068:U:H4'	46:A:3069:A:O5'	2.17	0.41
46:A:3270:A:C2	46:A:3271:A:N7	2.88	0.41
63:R:155:LYS:CE	72:b:157:PHE:CE2	3.03	0.41
63:R:295:LYS:NZ	63:R:371:LEU:H	2.18	0.41
66:U:31:ARG:HH21	66:U:31:ARG:HD2	1.71	0.41
75:e:50:LYS:HE2	75:e:104:VAL:HG11	2.03	0.41
75:e:70:VAL:HG21	75:e:164:LEU:HD13	2.02	0.41
76:f:85:LEU:HD11	76:f:115:LEU:HB2	2.02	0.41
3:AC:185:LEU:HD11	7:AG:195:GLU:O	2.15	0.41
5:AE:31:SER:HB2	5:AE:34:TRP:HB2	2.02	0.41
5:AE:150:PHE:HD1	5:AE:150:PHE:HA	1.73	0.41
5:AE:289:GLN:C	5:AE:291:ASN:N	2.75	0.41
6:AF:212:LEU:HD11	19:j:445:PHE:HB3	1.94	0.41
7:AG:77:THR:HG22	8:AH:179:LYS:HD3	2.02	0.41
8:AH:86:LYS:O	8:AH:87:SER:C	2.62	0.41
8:AH:210:ILE:HG12	8:AH:215:GLN:HE21	1.85	0.41
9:AI:127:ARG:HE	9:AI:127:ARG:HB3	1.68	0.41
9:AI:294:PHE:O	9:AI:295:SER:C	2.61	0.41
9:AI:336:ASN:OD1	9:AI:338:GLU:HB2	2.20	0.41
9:AI:425:LEU:O	9:AI:428:GLU:N	2.54	0.41
11:AK:299:LYS:HE2	24:o:151:PHE:CA	2.49	0.41
12:AL:81:U:N3	12:AL:82:A:N7	2.68	0.41
12:AL:485:A:H4'	12:AL:486:U:OP1	2.20	0.41
12:AL:1201:A:N3	12:AL:1201:A:H2'	2.35	0.41
12:AL:1373:A:H2	12:AL:1374:A:H62	1.68	0.41
12:AL:1417:A:H5"	12:AL:1418:A:C8	2.55	0.41
15:Z:46:HIS:HD1	22:m:234:HIS:HB3	1.85	0.41
16:g:45:ARG:CD	17:h:170:PRO:HB3	2.49	0.41
16:g:244:LEU:HA	16:g:253:ASP:HA	2.03	0.41
17:h:169:TYR:C	17:h:171:HIS:N	2.77	0.41
19:j:111:ARG:HB3	19:j:438:PRO:HG2	2.02	0.41
27:r:40:PRO:HA	27:r:41:PRO:HD3	1.95	0.41
28:s:19:ALA:C	28:s:21:ALA:H	2.29	0.41
30:u:37:ALA:O	30:u:38:VAL:C	2.64	0.41
34:y:19:VAL:CG2	34:y:40:ALA:HB2	2.49	0.41
34:y:48:GLY:HA2	34:y:64:ILE:CB	2.50	0.41
36:0:61:SER:CB	46:A:2732:G:H5"	2.51	0.41
37:1:252:ILE:HG21	37:1:261:ILE:HD12	2.01	0.41
39:3:43:LEU:CD1	70:Y:74:LYS:HE2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:8:104:GLU:HB3	49:D:200:ILE:HG21	2.01	0.41
46:A:163:A:C6	46:A:213:U:C4	3.07	0.41
46:A:372:A:C4	46:A:373:U:C5	3.08	0.41
46:A:378:A:C2	46:A:380:G:C5	3.08	0.41
46:A:470:U:C2	46:A:1930:A:C5	3.08	0.41
46:A:530:A:C2	46:A:552:A:H8	2.38	0.41
46:A:846:A:C4	46:A:847:U:C5	3.08	0.41
46:A:900:A:C2	46:A:915:G:C4	3.07	0.41
46:A:931:U:C2	46:A:932:C:C5	3.08	0.41
46:A:970:U:OP1	46:A:971:A:C6	2.74	0.41
46:A:984:C:OP1	46:A:993:G:C5'	2.62	0.41
46:A:1075:A:C6	46:A:1079:A:C6	3.07	0.41
46:A:1424:U:H2'	46:A:1425:U:H6	1.82	0.41
46:A:1701:A:H1'	46:A:1801:A:N3	2.35	0.41
46:A:1877:A:H2'	46:A:1878:A:C8	2.54	0.41
46:A:2054:A:H4'	46:A:2055:U:H5'	2.01	0.41
46:A:2067:A:OP2	46:A:2068:C:H5'	2.19	0.41
46:A:2376:A:H8	46:A:2376:A:O5'	2.03	0.41
46:A:2716:A:OP2	46:A:2767:C:N4	2.54	0.41
46:A:2802:G:C6	46:A:2803:C:C4	3.08	0.41
46:A:3050:G:C6	46:A:3051:U:C4	3.09	0.41
46:A:3292:A:H2'	46:A:3292:A:N3	2.35	0.41
47:B:160:TRP:O	47:B:162:GLY:N	2.54	0.41
47:B:167:VAL:HG12	47:B:204:ASP:O	2.20	0.41
63:R:139:ALA:HA	63:R:142:LYS:NZ	2.35	0.41
63:R:173:GLN:HE21	63:R:173:GLN:HB3	1.61	0.41
3:AC:19:ALA:HB1	3:AC:23:ASN:HB2	2.01	0.41
3:AC:94:GLU:HB2	3:AC:259:ARG:NH1	2.34	0.41
5:AE:56:LYS:HA	5:AE:129:ARG:NH2	2.30	0.41
5:AE:74:LEU:HA	5:AE:79:ILE:HG13	2.02	0.41
5:AE:142:VAL:HB	5:AE:184:PHE:HB2	2.03	0.41
5:AE:274:TYR:C	5:AE:277:ILE:H	2.28	0.41
5:AE:295:LEU:HD22	5:AE:299:GLU:HB2	2.02	0.41
6:AF:314:VAL:HA	6:AF:317:VAL:HG21	2.02	0.41
7:AG:21:GLY:O	20:k:136:ASP:HB3	2.21	0.41
7:AG:96:LYS:HG3	12:AL:916:A:OP2	2.20	0.41
7:AG:206:ILE:CG1	16:g:92:GLU:CD	2.79	0.41
8:AH:28:LYS:HE2	8:AH:71:VAL:H	1.85	0.41
8:AH:221:ASP:O	8:AH:225:ASN:ND2	2.53	0.41
9:AI:144:LYS:HA	9:AI:146:PHE:CZ	2.55	0.41
9:AI:265:PRO:C	9:AI:267:ASN:N	2.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:299:THR:O	9:AI:301:ALA:N	2.54	0.41
9:AI:336:ASN:CG	9:AI:338:GLU:HB2	2.45	0.41
9:AI:425:LEU:O	9:AI:428:GLU:HB2	2.20	0.41
11:AK:292:TYR:CE2	24:o:179:ASN:C	2.99	0.41
12:AL:258:G:OP2	32:w:68:LYS:CG	2.69	0.41
12:AL:329:U:H3'	12:AL:330:G:C8	2.50	0.41
12:AL:760:A:C6	12:AL:761:A:C5	3.09	0.41
12:AL:851:G:C4	12:AL:852:A:C8	3.08	0.41
12:AL:901:U:C2'	12:AL:902:A:C8	2.97	0.41
12:AL:957:A:H2'	12:AL:958:C:O4'	2.20	0.41
12:AL:998:A:O2'	12:AL:999:C:P	2.77	0.41
12:AL:1102:A:OP1	12:AL:1232:C:N4	2.53	0.41
12:AL:1249:U:O2	12:AL:1250:A:N7	2.53	0.41
12:AL:1407:A:O4'	13:AM:41:A:H1'	2.20	0.41
12:AL:1585:A:H1'	12:AL:1586:G:N7	2.34	0.41
16:g:12:ILE:HD13	17:h:195:LEU:HD22	2.02	0.41
16:g:281:LEU:O	16:g:282:GLU:HB3	2.21	0.41
17:h:226:LEU:O	17:h:230:LYS:HG2	2.21	0.41
18:i:368:LEU:HD12	29:t:111:LYS:HG3	2.02	0.41
19:j:410:TYR:HB2	19:j:415:GLN:HA	2.02	0.41
19:j:482:LEU:HD23	19:j:482:LEU:HA	1.92	0.41
20:k:181:LEU:HD23	20:k:276:ILE:CG2	2.50	0.41
22:m:224:SER:O	22:m:225:SER:C	2.63	0.41
30:u:237:ASN:OD1	30:u:239:ALA:HB3	2.20	0.41
31:v:20:VAL:HA	31:v:45:PRO:CD	2.50	0.41
34:y:42:ILE:HD13	34:y:71:HIS:O	2.20	0.41
35:z:92:SER:C	35:z:94:GLU:N	2.78	0.41
37:1:121:PHE:HE1	46:A:2349:A:N6	2.18	0.41
40:4:11:ILE:HA	46:A:445:U:O2	2.20	0.41
46:A:12:A:C2'	46:A:13:A:C8	3.02	0.41
46:A:23:U:C2'	46:A:24:G:C8	3.01	0.41
46:A:324:U:H3	46:A:332:A:H61	1.68	0.41
46:A:332:A:H2'	46:A:333:U:C6	2.55	0.41
46:A:615:U:O2'	46:A:616:A:P	2.79	0.41
46:A:720:A:N7	46:A:2273:G:O2'	2.50	0.41
46:A:804:G:C2	46:A:805:G:C8	3.09	0.41
46:A:914:A:C6	66:U:13:ILE:HG21	2.56	0.41
46:A:1060:U:H2'	46:A:1061:U:H6	1.85	0.41
46:A:1063:A:C6	46:A:1086:U:N3	2.89	0.41
46:A:1072:U:C2	46:A:1073:A:N7	2.88	0.41
46:A:1160:A:C4	46:A:1161:A:C8	3.07	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1178:A:C6	46:A:1179:U:C4	3.08	0.41
46:A:1251:A:N1	46:A:1262:A:C6	2.88	0.41
46:A:1315:A:C8	68:W:126:HIS:CG	3.08	0.41
46:A:1427:A:H2	46:A:1526:A:C2	2.38	0.41
46:A:1669:A:C6	46:A:1670:A:C5	3.09	0.41
46:A:1677:A:H4'	46:A:1838:A:OP1	2.19	0.41
46:A:1722:U:H4'	47:B:141:VAL:HG11	2.01	0.41
46:A:1889:A:H2'	46:A:1890:C:C6	2.55	0.41
46:A:1912:G:OP1	60:O:258:HIS:HA	2.20	0.41
46:A:2321:A:N3	46:A:2322:U:C5	2.83	0.41
46:A:2328:A:C6	46:A:2329:A:C5	3.09	0.41
46:A:2328:A:C5	46:A:2329:A:C5	3.09	0.41
46:A:2331:U:H5	63:R:318:VAL:HG11	1.84	0.41
46:A:3159:G:H2'	46:A:3160:U:O4'	2.20	0.41
46:A:3290:A:P	46:A:3290:A:C8	3.14	0.41
47:B:229:ILE:HG13	47:B:230:LEU:HG	2.01	0.41
47:B:359:MET:HE2	47:B:363:GLY:HA2	2.01	0.41
56:K:189:LEU:CD1	73:c:108:GLY:HA2	2.50	0.41
63:R:242:GLU:C	63:R:245:SER:H	2.27	0.41
76:f:145:ILE:HG22	76:f:156:VAL:CG2	2.50	0.41
2:AB:88:LEU:HD23	2:AB:88:LEU:N	2.36	0.41
3:AC:20:LEU:O	3:AC:21:LEU:C	2.63	0.41
3:AC:125:ASP:OD1	3:AC:125:ASP:N	2.53	0.41
4:AD:155:LEU:HB2	16:g:210:LEU:CD2	2.51	0.41
4:AD:210:PHE:CE2	7:AG:196:MET:HG3	2.50	0.41
5:AE:88:LEU:C	5:AE:90:PRO:HD3	2.46	0.41
5:AE:109:VAL:CG1	5:AE:110:GLU:N	2.83	0.41
5:AE:190:MET:HG2	5:AE:191:CYS:N	2.32	0.41
5:AE:215:TRP:HH2	5:AE:221:ARG:HE	1.67	0.41
5:AE:267:LEU:O	5:AE:268:LYS:C	2.63	0.41
6:AF:185:ILE:O	6:AF:189:VAL:HG23	2.21	0.41
6:AF:188:LEU:HD11	19:j:442:GLU:CG	2.50	0.41
7:AG:70:ASN:C	7:AG:72:LYS:N	2.73	0.41
7:AG:224:VAL:HG11	33:x:45:LEU:HB3	2.02	0.41
8:AH:37:LYS:O	8:AH:38:SER:C	2.62	0.41
8:AH:180:ARG:CG	12:AL:814:A:O3'	2.68	0.41
9:AI:100:GLN:HA	9:AI:168:VAL:HG11	2.02	0.41
9:AI:159:LEU:O	9:AI:162:GLN:HB2	2.21	0.41
9:AI:202:PRO:HB3	9:AI:268:ARG:HH12	1.84	0.41
10:AJ:67:GLU:O	18:i:125:LEU:HA	2.20	0.41
11:AK:218:LYS:HD3	11:AK:262:SER:HA	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:227:TYR:CZ	11:AK:229:HIS:HA	2.55	0.41
12:AL:149:U:C2	12:AL:164:A:C2	3.08	0.41
12:AL:266:A:H2'	12:AL:267:A:C4	2.55	0.41
12:AL:335:A:H2'	12:AL:337:A:N7	2.36	0.41
12:AL:679:U:H1'	12:AL:885:U:C4	2.55	0.41
12:AL:851:G:C2	12:AL:862:C:C2	3.08	0.41
12:AL:897:U:C2	12:AL:898:U:C6	3.08	0.41
12:AL:1019:A:N7	12:AL:1258:U:H4'	2.35	0.41
13:AM:33:U:C3'	24:o:278:ARG:CD	2.98	0.41
13:AM:51:A:H8	13:AM:64:G:N1	2.18	0.41
13:AM:75:C:H3'	13:AM:76:A:H5'	2.02	0.41
18:i:302:ILE:CD1	25:p:25:GLU:CB	2.97	0.41
19:j:114:PHE:HE1	19:j:445:PHE:HA	1.85	0.41
20:k:59:LEU:HD13	20:k:59:LEU:HA	1.83	0.41
25:p:62:ILE:O	25:p:63:LEU:C	2.64	0.41
25:p:92:PRO:CA	29:t:95:ARG:HH21	2.33	0.41
30:u:267:SER:OG	30:u:268:LYS:N	2.54	0.41
31:v:10:LEU:O	31:v:12:ARG:NH2	2.53	0.41
32:w:56:ASP:O	32:w:57:LEU:HD12	2.20	0.41
33:x:90:LEU:HB3	33:x:124:ARG:HH21	1.85	0.41
40:4:27:THR:HB	40:4:73:ARG:HG3	2.03	0.41
41:5:120:LEU:CD2	41:5:205:ILE:HG23	2.49	0.41
43:7:56:ILE:HD13	49:D:42:ALA:HB2	2.03	0.41
43:7:66:TYR:CE1	43:7:103:LEU:HD13	2.55	0.41
46:A:149:A:C4	46:A:1371:A:C2	3.08	0.41
46:A:221:A:H2'	46:A:222:A:C8	2.55	0.41
46:A:279:U:H3	46:A:298:A:H61	1.68	0.41
46:A:344:A:H2'	46:A:345:G:O4'	2.20	0.41
46:A:436:A:H2'	46:A:437:A:C8	2.56	0.41
46:A:504:A:C5	46:A:505:C:C5	3.09	0.41
46:A:511:G:C4	46:A:512:U:C5	3.09	0.41
46:A:547:A:N7	46:A:548:A:C5	2.88	0.41
46:A:648:U:H2'	46:A:649:C:C6	2.56	0.41
46:A:779:A:H2'	46:A:780:U:C6	2.55	0.41
46:A:935:A:N3	46:A:1173:U:O2'	2.52	0.41
46:A:973:U:C4	46:A:3087:A:N7	2.88	0.41
46:A:986:U:H2'	46:A:987:G:H8	1.81	0.41
46:A:1005:A:C5	46:A:1022:A:H4'	2.55	0.41
46:A:1076:U:H2'	46:A:1076:U:O2	2.20	0.41
46:A:1084:U:H2'	46:A:1085:G:H8	1.84	0.41
46:A:1293:A:H2'	46:A:1294:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1427:A:C2	46:A:1526:A:N1	2.89	0.41
46:A:1520:C:N3	46:A:1521:U:C5	2.88	0.41
46:A:1674:U:H2'	46:A:1675:G:H8	1.85	0.41
46:A:1747:C:O2	46:A:1747:C:C2'	2.60	0.41
46:A:1826:U:H2'	46:A:1828:A:OP2	2.20	0.41
46:A:2071:A:C2	46:A:2072:U:C5	3.09	0.41
46:A:2273:G:H2'	46:A:2274:A:H8	1.79	0.41
46:A:2276:G:N2	56:K:128:MET:CG	2.78	0.41
46:A:2442:A:C4	46:A:2443:C:C5	3.07	0.41
46:A:2576:A:C6	46:A:2577:A:C5	3.09	0.41
46:A:2732:G:C6	46:A:2733:A:C5	3.08	0.41
46:A:2956:U:O2'	57:L:13:LYS:HB2	2.21	0.41
46:A:3075:U:H2'	46:A:3076:A:H5'	2.02	0.41
47:B:243:ILE:C	47:B:245:MET:H	2.29	0.41
50:E:244:LYS:HB3	50:E:253:GLN:HE22	1.85	0.41
63:R:215:ARG:O	63:R:216:PHE:C	2.61	0.41
63:R:233:GLU:O	63:R:235:TRP:CD1	2.74	0.41
65:T:54:PRO:HD3	68:W:141:GLN:HG3	2.03	0.41
74:d:92:LEU:HD21	74:d:137:LEU:HA	2.03	0.41
2:AB:107:LYS:HD3	2:AB:107:LYS:N	2.33	0.41
2:AB:109:SER:HA	12:AL:101:U:P	2.60	0.41
3:AC:123:ILE:HG23	3:AC:127:PHE:CD2	2.50	0.41
4:AD:268:ILE:HG21	4:AD:310:PRO:HG3	2.01	0.41
5:AE:76:THR:OG1	5:AE:77:LYS:HD2	2.20	0.41
7:AG:14:THR:O	7:AG:15:SER:C	2.62	0.41
7:AG:28:ALA:C	7:AG:30:TYR:N	2.78	0.41
9:AI:60:TRP:HE1	22:m:140:LEU:HG	1.84	0.41
9:AI:289:PHE:HE2	9:AI:324:MET:HA	1.82	0.41
10:AJ:22:ASN:HB3	12:AL:1314:U:OP1	2.21	0.41
10:AJ:51:PRO:O	10:AJ:52:ASP:OD2	2.39	0.41
11:AK:132:PHE:CG	18:i:249:PRO:CD	2.97	0.41
11:AK:152:ARG:NH2	18:i:311:ILE:HD13	2.36	0.41
11:AK:162:LEU:HB2	11:AK:163:PRO:CD	2.50	0.41
12:AL:40:G:C6	12:AL:41:C:C4	3.08	0.41
12:AL:263:A:C6	12:AL:273:A:N6	2.88	0.41
12:AL:275:A:H2'	12:AL:276:C:H6	1.85	0.41
12:AL:275:A:C6	12:AL:276:C:C4	3.09	0.41
12:AL:843:G:H2'	12:AL:844:C:H6	1.84	0.41
12:AL:850:G:C2	12:AL:851:G:C8	3.09	0.41
12:AL:1162:C:H4'	29:t:115:TRP:CB	2.34	0.41
12:AL:1249:U:O4'	12:AL:1250:A:C8	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1628:A:N3	35:z:166:ILE:CB	2.84	0.41
12:AL:1630:A:C6	15:Z:24:ARG:CZ	3.03	0.41
13:AM:65:U:H2'	13:AM:66:C:C6	2.55	0.41
16:g:272:ARG:HH12	33:x:48:LYS:CA	2.23	0.41
17:h:235:VAL:HG21	17:h:357:TYR:CE2	2.56	0.41
17:h:263:ALA:HB1	17:h:268:GLY:O	2.20	0.41
18:i:230:ASP:C	18:i:232:TYR:N	2.77	0.41
19:j:440:HIS:ND1	19:j:464:GLU:HB3	2.35	0.41
20:k:104:ASN:OD1	20:k:104:ASN:N	2.46	0.41
22:m:138:LEU:O	22:m:141:VAL:HB	2.20	0.41
25:p:123:MET:O	25:p:126:ALA:N	2.53	0.41
26:q:82:PHE:CE2	26:q:179:PHE:HB3	2.56	0.41
28:s:87:SER:O	28:s:90:GLY:N	2.53	0.41
31:v:75:TRP:HA	31:v:75:TRP:CE3	2.55	0.41
32:w:53:ARG:O	32:w:56:ASP:HB2	2.20	0.41
32:w:146:GLU:HA	32:w:149:GLN:CG	2.51	0.41
33:x:95:ARG:H	33:x:95:ARG:HG2	1.70	0.41
34:y:52:GLN:HG2	34:y:61:PRO:HB3	2.03	0.41
46:A:90:A:C6	46:A:91:U:C4	3.08	0.41
46:A:170:U:H3	46:A:208:A:N6	2.17	0.41
46:A:437:A:C5	46:A:438:U:C5	3.08	0.41
46:A:662:G:O2'	46:A:1368:U:H4'	2.20	0.41
46:A:676:A:H4'	46:A:1686:U:C4'	2.49	0.41
46:A:756:A:N1	46:A:767:A:C5	2.89	0.41
46:A:1253:U:C2	46:A:1254:U:C5	3.08	0.41
46:A:1409:C:O2'	46:A:1410:U:P	2.78	0.41
46:A:1434:A:O5'	46:A:1434:A:H8	2.03	0.41
46:A:1703:U:O3'	47:B:368:GLY:HA2	2.21	0.41
46:A:2062:G:N1	46:A:2065:A:H3'	2.36	0.41
46:A:2085:A:C4	46:A:2086:U:C5	3.08	0.41
46:A:2317:A:C2	46:A:2318:U:H1'	2.55	0.41
46:A:2348:A:H8	46:A:2348:A:OP2	2.03	0.41
46:A:2588:A:H5'	46:A:2589:A:OP2	2.21	0.41
46:A:2799:A:H2'	46:A:2800:A:O4'	2.20	0.41
46:A:3258:A:H2'	46:A:3259:G:H8	1.84	0.41
47:B:62:LYS:O	47:B:63:ILE:C	2.63	0.41
47:B:99:VAL:HG23	47:B:100:SER:H	1.85	0.41
48:C:68:MET:HE2	48:C:81:ALA:HB1	2.02	0.41
49:D:49:PHE:HB3	49:D:50:PRO:HD3	2.03	0.41
56:K:189:LEU:HD13	73:c:108:GLY:HA2	2.02	0.41
63:R:120:PRO:O	63:R:121:HIS:CB	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:186:LEU:HG	63:R:187:ASP:N	2.36	0.41
63:R:229:LYS:HB2	63:R:229:LYS:HZ2	1.83	0.41
75:e:84:ARG:HB3	75:e:88:LYS:HE3	2.03	0.41
76:f:132:ARG:NH1	76:f:136:LEU:HD11	2.36	0.41
3:AC:162:LYS:HD3	3:AC:162:LYS:HA	1.84	0.41
5:AE:88:LEU:HD12	5:AE:90:PRO:HG3	1.85	0.41
6:AF:83:HIS:HA	6:AF:216:PHE:O	2.20	0.41
6:AF:181:ARG:O	6:AF:185:ILE:HG13	2.21	0.41
6:AF:296:TYR:N	6:AF:296:TYR:HD1	2.19	0.41
7:AG:33:VAL:CG2	17:h:357:TYR:OH	2.68	0.41
7:AG:116:LEU:O	16:g:34:GLN:HG3	2.21	0.41
7:AG:180:ARG:HB3	16:g:208:TYR:CG	2.55	0.41
7:AG:220:TRP:HZ2	33:x:41:ILE:HD13	1.85	0.41
8:AH:31:ASP:HA	8:AH:34:ASN:ND2	2.34	0.41
8:AH:42:LYS:HB3	8:AH:49:TYR:O	2.20	0.41
10:AJ:57:ARG:HD3	12:AL:1061:U:O5'	2.21	0.41
11:AK:132:PHE:CB	18:i:248:MET:SD	3.04	0.41
11:AK:212:GLU:N	11:AK:215:SER:OG	2.49	0.41
12:AL:75:G:C6	12:AL:76:U:C4	3.09	0.41
12:AL:267:A:OP2	12:AL:267:A:C8	2.74	0.41
12:AL:268:G:O2'	32:w:64:ARG:NH2	2.54	0.41
12:AL:404:U:H2'	12:AL:405:A:H8	1.85	0.41
12:AL:558:A:N6	12:AL:560:A:C2	2.89	0.41
12:AL:720:U:H2'	12:AL:721:U:H6	1.82	0.41
12:AL:825:G:H2'	12:AL:826:G:H5'	1.80	0.41
12:AL:1025:U:H4'	12:AL:1254:G:H21	1.86	0.41
12:AL:1374:A:H3'	12:AL:1375:U:H6	1.86	0.41
12:AL:1492:U:C2'	12:AL:1493:A:C5'	2.98	0.41
12:AL:1575:A:H2	46:A:1859:G:H2'	1.81	0.41
15:Z:47:MET:HE3	22:m:230:ARG:HD2	2.03	0.41
17:h:145:GLU:O	17:h:146:LEU:C	2.62	0.41
18:i:156:TYR:CD1	18:i:157:ASN:N	2.89	0.41
20:k:126:ALA:O	20:k:127:ALA:C	2.62	0.41
25:p:53:GLU:O	25:p:54:ASN:C	2.62	0.41
26:q:99:ASN:O	26:q:102:LYS:N	2.46	0.41
27:r:62:VAL:HG13	27:r:81:CYS:HB2	2.03	0.41
28:s:57:SER:O	28:s:58:ILE:C	2.64	0.41
28:s:82:LYS:HB2	28:s:87:SER:CB	2.51	0.41
30:u:35:ALA:O	30:u:36:LYS:C	2.64	0.41
32:w:128:ILE:HG13	32:w:147:ILE:HG12	2.03	0.41
33:x:109:ILE:HG22	33:x:110:GLN:H	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:z:101:ASN:N	35:z:101:ASN:HD22	2.18	0.41
35:z:129:ILE:O	35:z:130:PRO:C	2.61	0.41
37:1:166:PRO:HB3	50:E:30:HIS:CD2	2.55	0.41
39:3:99:PRO:O	62:Q:204:ARG:NH1	2.53	0.41
46:A:315:A:C8	46:A:317:U:N3	2.89	0.41
46:A:374:U:C2	46:A:375:A:C8	3.08	0.41
46:A:380:G:H2'	46:A:381:U:C6	2.56	0.41
46:A:454:A:C2	46:A:1921:A:C6	3.08	0.41
46:A:590:A:H2'	46:A:591:A:O4'	2.21	0.41
46:A:701:U:C2	55:J:87:LYS:O	2.74	0.41
46:A:756:A:C2	46:A:767:A:C5	3.08	0.41
46:A:789:A:C2	46:A:790:A:C4	3.08	0.41
46:A:841:G:C5	50:E:107:TYR:CE2	3.09	0.41
46:A:933:C:C2	46:A:1103:G:C2	3.09	0.41
46:A:1006:U:C4	76:f:135:LEU:CB	3.04	0.41
46:A:1075:A:N6	46:A:1079:A:C6	2.89	0.41
46:A:1227:G:O2'	46:A:1228:A:H5'	2.21	0.41
46:A:1261:U:H2'	46:A:1262:A:H8	1.83	0.41
46:A:1309:A:C4	46:A:1310:A:C8	3.09	0.41
46:A:1309:A:O2'	57:L:26:GLN:OE1	2.38	0.41
46:A:1484:U:H2'	46:A:1484:U:O2	2.19	0.41
46:A:1499:A:C8	46:A:1499:A:OP2	2.74	0.41
46:A:1501:A:H61	46:A:1507:U:H5	1.67	0.41
46:A:1551:C:O2	46:A:1551:C:H2'	2.21	0.41
46:A:1579:A:C2	46:A:1580:G:H1'	2.55	0.41
46:A:1588:U:O2'	46:A:1667:A:N3	2.40	0.41
46:A:1641:A:H2'	46:A:1642:A:H8	1.85	0.41
46:A:1660:A:C4	65:T:19:PHE:CE1	3.09	0.41
46:A:1762:A:H2	46:A:1988:A:O4'	2.04	0.41
46:A:1915:A:H2'	46:A:1916:U:H5'	2.02	0.41
46:A:2070:U:H3'	46:A:2071:A:O4'	2.21	0.41
46:A:2076:A:H8	46:A:2076:A:O5'	2.03	0.41
46:A:2095:U:H3'	46:A:2096:C:H6	1.85	0.41
46:A:2097:U:O2	46:A:2247:A:H2	2.04	0.41
46:A:2314:U:H5"	69:X:32:PRO:HB2	2.01	0.41
46:A:2413:A:C6	46:A:2414:U:C4	3.09	0.41
46:A:2657:U:O2'	46:A:2658:G:H5'	2.20	0.41
46:A:2668:C:H3'	46:A:2669:A:C8	2.56	0.41
46:A:2727:A:C5	46:A:2728:U:C4	3.09	0.41
46:A:2886:C:O2	48:C:220:MET:SD	2.78	0.41
46:A:2924:A:C4	46:A:2932:A:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:3163:U:H2'	46:A:3164:A:H8	1.86	0.41
63:R:117:LEU:N	63:R:118:PRO:CD	2.84	0.41
63:R:253:LEU:HD23	63:R:253:LEU:C	2.46	0.41
63:R:308:ALA:O	63:R:309:CYS:C	2.61	0.41
63:R:333:ASP:C	63:R:335:THR:N	2.77	0.41
71:a:62:ALA:HB1	71:a:70:THR:HG23	2.02	0.41
3:AC:239:ASN:O	3:AC:240:ARG:C	2.63	0.41
4:AD:111:LEU:HB3	4:AD:115:ALA:CB	2.47	0.41
5:AE:94:VAL:HG22	5:AE:95:LYS:H	1.86	0.41
5:AE:152:LYS:O	5:AE:153:ILE:HD13	2.21	0.41
5:AE:207:ALA:O	5:AE:210:LYS:HB2	2.20	0.41
5:AE:221:ARG:H	5:AE:221:ARG:HG3	1.57	0.41
6:AF:37:TYR:CD2	6:AF:95:GLY:HA3	2.55	0.41
6:AF:153:LEU:HD13	6:AF:220:ASP:OD2	2.20	0.41
8:AH:104:ARG:NH2	12:AL:143:A:O4'	2.51	0.41
8:AH:124:TYR:HA	8:AH:127:LYS:NZ	2.36	0.41
8:AH:210:ILE:CG2	21:l:39:VAL:O	2.68	0.41
11:AK:238:SER:HB3	11:AK:247:ASN:HB3	2.02	0.41
12:AL:79:A:C6	12:AL:80:U:C4	3.09	0.41
12:AL:217:U:O5'	12:AL:217:U:H6	2.04	0.41
12:AL:296:C:H42	12:AL:315:G:H1	1.68	0.41
12:AL:351:A:N3	58:M:166:ARG:HG2	2.35	0.41
12:AL:416:A:C5	12:AL:417:U:C5	3.09	0.41
12:AL:697:G:H5"	23:n:4:VAL:CG2	2.51	0.41
12:AL:858:U:H2'	12:AL:1608:G:H4'	2.03	0.41
12:AL:859:A:H2'	12:AL:860:C:H6	1.86	0.41
12:AL:900:A:H2'	12:AL:901:U:H6	1.86	0.41
12:AL:1246:U:O2	12:AL:1246:U:H2'	2.21	0.41
12:AL:1385:A:C2	34:y:17:ASN:OD1	2.74	0.41
12:AL:1565:A:H2'	12:AL:1566:A:C8	2.56	0.41
12:AL:1572:U:H2'	12:AL:1573:G:C8	2.55	0.41
14:AN:12:A:H4'	14:AN:13:U:OP1	2.21	0.41
15:Z:31:LEU:HD23	15:Z:31:LEU:HA	1.83	0.41
16:g:231:ILE:HB	16:g:271:ILE:HG22	2.03	0.41
18:i:94:ASN:HD22	18:i:94:ASN:HA	1.64	0.41
18:i:276:ILE:HA	18:i:279:LEU:HB2	2.02	0.41
20:k:302:LYS:C	20:k:304:TYR:H	2.28	0.41
21:l:63:ARG:CZ	26:q:108:TYR:OH	2.64	0.41
22:m:140:LEU:O	22:m:141:VAL:C	2.62	0.41
22:m:185:LYS:HD3	22:m:185:LYS:C	2.45	0.41
26:q:173:GLY:O	26:q:174:LYS:C	2.60	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:q:211:SER:O	26:q:212:PRO:C	2.63	0.41
27:r:72:LYS:HA	27:r:74:ASN:N	2.35	0.41
30:u:225:GLU:HA	32:w:88:TYR:CG	2.56	0.41
30:u:238:ASP:OD1	30:u:242:THR:HG23	2.20	0.41
32:w:30:ASN:CG	32:w:32:LYS:H	2.28	0.41
33:x:92:PHE:O	33:x:99:LEU:HD11	2.21	0.41
39:3:17:LEU:HD21	46:A:1319:A:N3	2.32	0.41
45:9:145:LEU:HD12	45:9:145:LEU:N	2.36	0.41
46:A:52:A:O2'	46:A:53:U:H5'	2.21	0.41
46:A:72:U:C2	46:A:73:U:C5	3.08	0.41
46:A:115:A:H3'	46:A:116:C:H5"	2.02	0.41
46:A:220:A:C5	46:A:221:A:C5	3.09	0.41
46:A:415:A:O2'	46:A:416:U:H5'	2.20	0.41
46:A:691:A:N1	46:A:693:A:C8	2.88	0.41
46:A:734:U:H2'	46:A:735:A:C8	2.56	0.41
46:A:735:A:H3'	46:A:736:A:H5"	2.02	0.41
46:A:880:G:C4	46:A:890:A:C2	3.08	0.41
46:A:886:A:O5'	46:A:886:A:H8	2.04	0.41
46:A:1160:A:C6	46:A:1161:A:C5	3.09	0.41
46:A:1332:A:C4	46:A:1334:A:C8	3.09	0.41
46:A:1416:A:C6	46:A:1543:A:N1	2.89	0.41
46:A:1437:A:H2'	46:A:1438:U:O4'	2.20	0.41
46:A:1501:A:N1	46:A:1507:U:C4	2.89	0.41
46:A:1688:C:N4	70:Y:62:ARG:CG	2.84	0.41
46:A:1740:U:C4	46:A:1741:C:C5	3.09	0.41
46:A:1772:U:C4	46:A:1773:U:C4	3.08	0.41
46:A:1779:A:H2'	46:A:1780:U:C5	2.53	0.41
46:A:1865:C:H5"	46:A:1866:A:C2'	2.48	0.41
46:A:1999:U:C2	46:A:2088:A:C2	3.08	0.41
46:A:2069:U:C4	46:A:2070:U:C4	3.08	0.41
46:A:2234:U:H3'	46:A:2235:A:H8	1.86	0.41
46:A:2258:C:C2	46:A:2259:U:C6	3.09	0.41
46:A:2354:A:H2'	46:A:2355:U:H6	1.84	0.41
46:A:2786:C:H2'	46:A:2787:C:C6	2.55	0.41
46:A:2787:C:O2'	46:A:2788:U:H5'	2.20	0.41
46:A:3008:U:C2	46:A:3009:A:C8	3.08	0.41
46:A:3044:A:H2'	46:A:3045:U:H6	1.85	0.41
46:A:3045:U:O2'	46:A:3046:C:H5'	2.20	0.41
46:A:3067:A:H2'	46:A:3068:U:C5	2.55	0.41
46:A:3119:A:H5"	48:C:128:SER:OG	2.20	0.41
46:A:3273:A:OP2	71:a:135:ARG:HD3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:C:26:LEU:HD22	53:H:144:ALA:HA	2.03	0.41
55:J:135:LEU:HG	55:J:177:LEU:O	2.21	0.41
63:R:79:ILE:O	63:R:79:ILE:HG23	2.20	0.41
63:R:106:PHE:N	63:R:106:PHE:CD1	2.88	0.41
63:R:280:ALA:O	63:R:281:LYS:C	2.63	0.41
63:R:313:THR:H	63:R:316:GLU:HB2	1.84	0.41
69:X:33:LEU:HD13	69:X:51:GLU:HG3	2.02	0.41
74:d:130:CYS:O	74:d:134:VAL:HG23	2.21	0.41
75:e:66:MET:HB2	75:e:146:ASN:HB3	2.03	0.41
75:e:146:ASN:HD21	75:e:148:GLN:HB3	1.85	0.41
1:AA:91:HIS:NE2	12:AL:1473:A:H4'	2.36	0.41
2:AB:84:ARG:CG	2:AB:88:LEU:HD21	2.51	0.41
2:AB:116:LYS:O	2:AB:117:ARG:C	2.64	0.41
3:AC:23:ASN:O	3:AC:30:SER:C	2.64	0.41
3:AC:160:GLU:O	3:AC:161:LYS:C	2.63	0.41
3:AC:191:ILE:O	4:AD:223:TYR:CE1	2.74	0.41
4:AD:169:THR:N	4:AD:273:ILE:O	2.54	0.41
4:AD:277:PRO:O	4:AD:278:LYS:C	2.64	0.41
5:AE:94:VAL:C	12:AL:1542:A:P	3.04	0.41
5:AE:150:PHE:HE2	5:AE:191:CYS:O	2.04	0.41
5:AE:151:PHE:HE1	5:AE:319:LEU:HD23	1.82	0.41
5:AE:164:TYR:C	5:AE:166:ILE:N	2.79	0.41
5:AE:182:GLU:C	5:AE:183:HIS:CG	2.98	0.41
5:AE:255:LEU:HD12	5:AE:296:GLU:O	2.20	0.41
5:AE:270:LEU:O	5:AE:273:LYS:HE3	2.21	0.41
6:AF:60:GLN:C	6:AF:62:LEU:H	2.29	0.41
6:AF:62:LEU:CG	19:j:26:PHE:HZ	2.17	0.41
6:AF:296:TYR:C	6:AF:298:GLU:H	2.29	0.41
7:AG:32:VAL:HG11	17:h:235:VAL:O	2.21	0.41
7:AG:71:ASN:C	7:AG:73:GLY:H	2.27	0.41
7:AG:91:LEU:CD2	23:n:54:MET:O	2.37	0.41
7:AG:152:ARG:HG2	7:AG:172:ALA:CB	2.51	0.41
7:AG:160:LYS:HD2	7:AG:160:LYS:HA	1.97	0.41
7:AG:217:LEU:HD12	16:g:273:MET:HB3	2.02	0.41
7:AG:224:VAL:HA	33:x:45:LEU:HD13	2.01	0.41
8:AH:164:LEU:CD2	23:n:33:LEU:HD22	2.51	0.41
8:AH:165:LEU:HD22	8:AH:167:ASN:H	1.85	0.41
8:AH:189:PHE:CZ	8:AH:193:LYS:HD2	2.56	0.41
8:AH:202:LEU:HD13	21:l:106:ASP:N	2.35	0.41
9:AI:132:ASN:OD1	9:AI:136:LYS:HE3	2.21	0.41
10:AJ:49:GLY:HA3	29:t:25:ASN:OD1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:59:LEU:HD23	10:AJ:59:LEU:HA	1.83	0.41
11:AK:104:ILE:HD13	18:i:171:TYR:CD2	2.56	0.41
11:AK:124:ASN:HB2	18:i:158:ASN:OD1	2.20	0.41
11:AK:149:ARG:HG2	20:k:70:ASP:C	2.46	0.41
11:AK:149:ARG:HG2	20:k:69:TRP:C	2.45	0.41
11:AK:294:PHE:CZ	24:o:170:VAL:HB	2.56	0.41
11:AK:298:TRP:CE2	24:o:210:ASN:ND2	2.89	0.41
12:AL:148:A:C2	12:AL:225:U:O2	2.74	0.41
12:AL:279:A:H4'	12:AL:280:G:O5'	2.20	0.41
12:AL:314:C:H2'	12:AL:315:G:O4'	2.21	0.41
12:AL:515:A:C6	12:AL:537:A:C2	3.08	0.41
12:AL:532:U:C2'	12:AL:533:A:H5'	2.51	0.41
12:AL:726:A:H2'	12:AL:727:A:O4'	2.21	0.41
12:AL:751:U:O4	12:AL:769:A:O2'	2.25	0.41
12:AL:756:A:O2'	12:AL:757:U:H5'	2.20	0.41
12:AL:792:U:H3	12:AL:797:A:H61	1.68	0.41
12:AL:804:U:OP1	21:l:3:TYR:HE1	2.03	0.41
12:AL:847:A:C2'	12:AL:848:A:H5'	2.51	0.41
12:AL:999:C:H2'	12:AL:1412:C:C5	2.56	0.41
12:AL:1104:U:C2'	12:AL:1105:G:H5'	2.51	0.41
12:AL:1169:A:H2'	12:AL:1170:U:C6	2.56	0.41
12:AL:1182:U:O2'	25:p:109:ARG:CZ	2.69	0.41
12:AL:1270:A:H2	12:AL:1334:U:H3	1.68	0.41
12:AL:1299:A:H4'	12:AL:1300:U:OP2	2.21	0.41
12:AL:1341:U:H4'	12:AL:1342:U:N3	2.36	0.41
12:AL:1486:A:C2	46:A:1859:G:O2'	2.72	0.41
12:AL:1514:U:C2	12:AL:1515:A:C8	3.09	0.41
12:AL:1643:U:H5'	24:o:63:ARG:CD	2.41	0.41
12:AL:1648:C:H4'	12:AL:1648:C:OP1	2.20	0.41
15:Z:34:MET:HE3	15:Z:34:MET:HB3	1.87	0.41
17:h:335:ALA:O	17:h:336:ILE:C	2.63	0.41
18:i:122:MET:HE3	18:i:122:MET:HB3	1.77	0.41
19:j:168:PHE:HE2	19:j:392:GLU:HA	1.84	0.41
19:j:394:ASP:HB3	19:j:397:LYS:HB3	2.03	0.41
20:k:71:TYR:CG	20:k:77:HIS:CE1	3.09	0.41
20:k:244:HIS:ND1	20:k:245:VAL:N	2.68	0.41
22:m:98:TRP:HA	24:o:242:LEU:HD22	1.78	0.41
22:m:237:ALA:C	22:m:239:ALA:O	2.64	0.41
24:o:160:ARG:O	24:o:162:SER:N	2.54	0.41
27:r:129:ALA:O	27:r:130:GLY:C	2.63	0.41
30:u:72:ASP:O	30:u:74:PRO:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:u:101:PHE:HA	32:w:167:LEU:HD12	2.03	0.41
32:w:113:VAL:O	32:w:114:ARG:C	2.63	0.41
32:w:176:LEU:HA	32:w:179:GLN:OE1	2.21	0.41
32:w:219:ILE:O	32:w:222:ASN:HB2	2.21	0.41
38:2:134:ASP:CB	67:V:57:VAL:HA	2.51	0.41
42:6:217:ILE:HG22	50:E:83:LEU:HD21	2.03	0.41
46:A:89:A:C2	46:A:90:A:C5	3.09	0.41
46:A:161:U:O2	46:A:161:U:H2'	2.20	0.41
46:A:225:A:O2'	46:A:226:A:H5'	2.21	0.41
46:A:270:G:H2'	46:A:271:A:C8	2.55	0.41
46:A:426:A:N7	46:A:1923:C:C4	2.89	0.41
46:A:485:A:N1	46:A:700:G:O2'	2.38	0.41
46:A:523:U:H5'	55:J:194:ARG:NH1	2.33	0.41
46:A:533:U:N3	63:R:132:PHE:HD2	2.18	0.41
46:A:565:A:H2'	46:A:566:U:C6	2.56	0.41
46:A:602:A:O2'	46:A:603:U:H5'	2.20	0.41
46:A:658:U:O2'	46:A:659:G:H5'	2.21	0.41
46:A:666:G:C6	46:A:678:A:C2	3.09	0.41
46:A:672:A:HO2'	46:A:1695:C:HO2'	1.68	0.41
46:A:696:G:H5'	46:A:697:C:H5	1.85	0.41
46:A:722:G:C6	46:A:723:U:C4	3.09	0.41
46:A:790:A:H8	46:A:790:A:O5'	2.04	0.41
46:A:829:A:H2'	46:A:830:U:C6	2.56	0.41
46:A:836:A:H1'	46:A:2290:A:O2'	2.20	0.41
46:A:860:A:C6	46:A:861:A:C5	3.08	0.41
46:A:878:G:C6	46:A:879:U:C5	3.08	0.41
46:A:878:G:H22	46:A:891:A:H2	1.66	0.41
46:A:902:G:H4'	46:A:1176:A:N7	2.36	0.41
46:A:931:U:C5	46:A:1119:A:C4	3.09	0.41
46:A:941:U:O2	46:A:1122:A:C2	2.74	0.41
46:A:1120:U:C2	46:A:1121:U:C5	3.09	0.41
46:A:1343:U:O4'	46:A:1344:U:C5	2.74	0.41
46:A:1372:A:H2'	46:A:1373:U:C6	2.56	0.41
46:A:1482:A:H2'	46:A:1483:U:H6	1.77	0.41
46:A:1631:G:C6	46:A:1671:A:C4	3.08	0.41
46:A:1645:U:H4'	46:A:1646:A:OP2	2.21	0.41
46:A:1757:A:C2	46:A:1758:U:H1'	2.56	0.41
46:A:1800:A:H3'	46:A:1800:A:N3	2.36	0.41
46:A:1837:A:H2'	46:A:1839:U:OP2	2.21	0.41
46:A:2002:U:H2'	46:A:2003:G:C8	2.56	0.41
46:A:2017:G:H22	46:A:2065:A:N6	2.00	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2018:C:C4	46:A:2021:A:N7	2.89	0.41
46:A:2031:C:H2'	46:A:2032:C:O4'	2.21	0.41
46:A:2185:U:C2	46:A:2186:U:C5	3.09	0.41
46:A:2272:U:H2'	46:A:2273:G:C8	2.55	0.41
46:A:2277:G:N3	46:A:2277:G:H2'	2.36	0.41
46:A:2314:U:C6	69:X:34:VAL:HG23	2.56	0.41
46:A:2322:U:H4'	46:A:2323:A:O4'	2.21	0.41
46:A:2424:U:HO2'	46:A:2425:A:P	2.44	0.41
46:A:2609:G:C6	46:A:2610:A:C6	3.09	0.41
46:A:2656:A:O5'	46:A:2657:U:H5'	2.20	0.41
46:A:2734:A:H4'	46:A:2735:A:OP1	2.21	0.41
46:A:2743:U:O5'	46:A:2743:U:H6	2.03	0.41
46:A:2763:A:H8	46:A:2763:A:O5'	2.04	0.41
46:A:2797:U:C2	51:F:194:TYR:OH	2.51	0.41
46:A:2803:C:C4	46:A:2804:U:C4	3.09	0.41
46:A:2818:C:H2'	46:A:2819:U:C6	2.56	0.41
46:A:2823:C:H2'	46:A:2824:G:O4'	2.19	0.41
46:A:2886:C:H5"	48:C:216:PRO:CA	2.50	0.41
46:A:2922:G:C2	46:A:2931:G:C4	3.08	0.41
47:B:77:ASP:HA	47:B:80:ILE:HG12	2.02	0.41
57:L:148:LEU:HD21	57:L:169:ASN:CB	2.51	0.41
61:P:168:PHE:CD2	65:T:68:LEU:HD23	2.56	0.41
61:P:227:ILE:HG22	61:P:232:LYS:HB2	2.02	0.41
63:R:201:VAL:C	63:R:203:ALA:N	2.73	0.41
63:R:236:THR:O	63:R:238:GLU:N	2.53	0.41
63:R:262:ASN:C	63:R:264:LEU:H	2.29	0.41
65:T:60:LEU:CD2	74:d:169:TRP:HB2	2.51	0.41
66:U:19:THR:HA	66:U:22:ILE:HD12	2.03	0.41
75:e:68:PHE:CZ	75:e:70:VAL:HB	2.56	0.41
76:f:43:PHE:CD2	76:f:70:PHE:HD2	2.39	0.41
1:AA:95:LYS:HZ1	12:AL:1580:U:P	2.42	0.41
2:AB:92:HIS:HD2	12:AL:524:A:C2	2.38	0.41
3:AC:90:HIS:HB2	17:h:161:GLY:HA2	1.96	0.41
4:AD:111:LEU:O	4:AD:114:GLU:N	2.48	0.41
4:AD:253:TYR:CZ	16:g:298:LEU:O	2.73	0.41
5:AE:69:LYS:HB2	5:AE:69:LYS:NZ	2.36	0.41
5:AE:315:TYR:O	5:AE:319:LEU:N	2.51	0.41
6:AF:31:ARG:HB3	6:AF:32:ILE:H	1.54	0.41
6:AF:165:GLY:O	6:AF:166:LEU:C	2.64	0.41
8:AH:91:SER:O	8:AH:92:ALA:C	2.64	0.41
9:AI:352:ASN:ND2	9:AI:354:THR:OG1	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:357:VAL:O	9:AI:358:ALA:C	2.64	0.41
9:AI:429:LYS:O	9:AI:430:TYR:C	2.63	0.41
11:AK:64:ARG:HD2	11:AK:64:ARG:HA	1.89	0.41
11:AK:70:TRP:O	11:AK:71:GLU:C	2.64	0.41
11:AK:115:ALA:CA	18:i:168:ASN:ND2	2.81	0.41
11:AK:132:PHE:N	18:i:247:ILE:O	2.52	0.41
11:AK:259:LEU:HD22	11:AK:263:LYS:HE3	2.03	0.41
11:AK:267:GLU:CD	11:AK:267:GLU:H	2.29	0.41
12:AL:327:U:H5	12:AL:334:U:C6	2.39	0.41
12:AL:540:A:H3'	12:AL:541:U:H5"	2.02	0.41
12:AL:616:C:O2'	12:AL:617:U:H5'	2.21	0.41
12:AL:689:C:C2	12:AL:827:G:C2	3.01	0.41
12:AL:787:A:OP2	33:x:112:ARG:CG	2.47	0.41
12:AL:897:U:N3	12:AL:898:U:C5	2.89	0.41
12:AL:1001:U:H6	12:AL:1001:U:C5'	2.33	0.41
12:AL:1097:G:O2'	12:AL:1098:U:H5'	2.20	0.41
12:AL:1100:A:H5"	12:AL:1232:C:N4	2.35	0.41
12:AL:1165:A:H5'	24:o:254:ARG:HB3	2.02	0.41
12:AL:1423:U:H3'	12:AL:1424:A:C8	2.56	0.41
12:AL:1429:A:C4	29:t:72:THR:HG22	2.52	0.41
12:AL:1563:G:H2'	12:AL:1564:A:C8	2.56	0.41
12:AL:1567:U:H2'	12:AL:1568:A:C8	2.56	0.41
12:AL:1575:A:H1'	46:A:1859:G:H21	1.86	0.41
12:AL:1644:C:H3'	17:h:176:TYR:OH	2.21	0.41
13:AM:6:C:H42	13:AM:67:G:H1	1.68	0.41
13:AM:33:U:H3'	24:o:278:ARG:NE	2.34	0.41
13:AM:76:A:O2'	46:A:2662:A:N3	2.47	0.41
16:g:48:TRP:CZ3	16:g:63:LEU:HB3	2.56	0.41
17:h:131:ASN:O	24:o:119:GLN:C	2.62	0.41
17:h:292:LYS:HB2	17:h:311:THR:HG22	2.03	0.41
19:j:49:LYS:C	19:j:51:GLU:N	2.79	0.41
21:l:35:ASN:CG	21:l:77:VAL:HG21	2.46	0.41
22:m:233:ILE:O	22:m:234:HIS:C	2.62	0.41
24:o:255:ASP:C	24:o:257:ARG:N	2.77	0.41
26:q:181:SER:OG	26:q:182:ALA:N	2.54	0.41
26:q:191:VAL:O	26:q:193:LYS:N	2.54	0.41
28:s:76:LYS:HE2	28:s:118:ASP:HB3	2.02	0.41
29:t:11:LYS:HD2	29:t:11:LYS:N	2.30	0.41
30:u:231:ILE:HG13	30:u:236:LEU:HB2	2.03	0.41
31:v:9:ARG:HD3	31:v:32:ARG:HA	2.03	0.41
35:z:116:SER:O	35:z:119:ARG:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:z:118:LYS:HE2	35:z:118:LYS:HB3	1.84	0.41
45:9:33:HIS:NE2	45:9:36:PRO:O	2.54	0.41
46:A:98:A:O2'	49:D:136:PRO:HB3	2.20	0.41
46:A:118:A:C4	46:A:145:A:N7	2.89	0.41
46:A:135:U:H6	46:A:135:U:O5'	2.03	0.41
46:A:216:U:H4'	46:A:217:A:OP2	2.20	0.41
46:A:281:A:N1	46:A:295:A:H5"	2.35	0.41
46:A:315:A:N6	46:A:339:A:H5"	2.35	0.41
46:A:526:A:N1	46:A:550:A:O2'	2.53	0.41
46:A:707:A:H2'	46:A:708:U:C6	2.54	0.41
46:A:841:G:C4	50:E:107:TYR:CZ	3.09	0.41
46:A:1020:U:OP1	75:e:134:LYS:CG	2.67	0.41
46:A:1110:A:H2'	46:A:1111:U:H5'	2.03	0.41
46:A:1167:A:C5	46:A:1168:A:C5	3.09	0.41
46:A:1214:U:H2'	46:A:1215:A:H8	1.85	0.41
46:A:1311:A:C6	46:A:1312:G:C6	3.09	0.41
46:A:1499:A:H2'	46:A:1500:U:H6	1.81	0.41
46:A:1669:A:C5	46:A:1670:A:C5	3.09	0.41
46:A:1749:U:N3	46:A:1750:G:C5	2.89	0.41
46:A:1793:U:O2'	46:A:1794:U:H5'	2.21	0.41
46:A:1983:A:H2'	46:A:1984:U:C6	2.56	0.41
46:A:2022:U:C4	46:A:2065:A:C2	3.08	0.41
46:A:2188:A:H5'	64:S:169:PRO:CB	2.51	0.41
46:A:2216:U:H2'	46:A:2217:A:C8	2.56	0.41
46:A:2621:A:C2	63:R:62:ILE:HD11	2.55	0.41
46:A:2667:A:C4	46:A:2668:C:C6	3.09	0.41
46:A:2725:A:C2	46:A:2726:U:H1'	2.56	0.41
46:A:3006:U:O2'	46:A:3007:A:H5'	2.21	0.41
46:A:3283:U:C4	46:A:3284:U:C5	3.09	0.41
47:B:276:LEU:HD11	47:B:288:ARG:HB2	2.02	0.41
48:C:40:PRO:HD2	53:H:130:ASP:HB3	2.01	0.41
50:E:218:ARG:HG3	50:E:219:GLU:H	1.85	0.41
62:Q:192:VAL:HG22	65:T:89:HIS:HB3	2.03	0.41
63:R:151:ASP:N	63:R:151:ASP:OD1	2.53	0.41
63:R:317:GLU:HG3	63:R:321:ARG:HD2	2.02	0.41
75:e:66:MET:CB	75:e:149:GLN:CD	2.81	0.41
3:AC:38:TRP:O	3:AC:42:GLN:HB3	2.21	0.40
3:AC:169:ASN:HB2	3:AC:181:GLN:O	2.21	0.40
3:AC:196:THR:HA	3:AC:199:GLN:OE1	2.21	0.40
4:AD:115:ALA:O	4:AD:116:LEU:C	2.64	0.40
5:AE:129:ARG:H	5:AE:129:ARG:HG3	1.70	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:56:THR:HA	6:AF:59:ARG:HB3	2.03	0.40
6:AF:73:MET:HE1	6:AF:100:HIS:HD2	1.86	0.40
6:AF:320:ARG:HH11	8:AH:13:GLY:C	2.15	0.40
6:AF:328:ASN:OD1	6:AF:328:ASN:N	2.54	0.40
6:AF:337:ASN:HB3	6:AF:341:GLN:H	1.85	0.40
8:AH:46:GLY:O	32:w:5:ASN:OD1	2.39	0.40
8:AH:100:ALA:CA	12:AL:143:A:OP1	2.67	0.40
8:AH:100:ALA:HA	12:AL:143:A:P	2.60	0.40
8:AH:104:ARG:NE	12:AL:143:A:O4'	2.52	0.40
9:AI:229:ASP:O	9:AI:230:TYR:CD1	2.74	0.40
9:AI:263:THR:HB	9:AI:267:ASN:HB2	2.03	0.40
9:AI:316:LEU:HD21	9:AI:325:MET:HG3	2.02	0.40
11:AK:132:PHE:HE2	18:i:251:LEU:CD2	2.10	0.40
12:AL:109:A:C5	12:AL:333:A:C6	3.09	0.40
12:AL:304:A:H2'	12:AL:305:A:H8	1.74	0.40
12:AL:305:A:H8	12:AL:305:A:O5'	2.04	0.40
12:AL:729:U:H6	12:AL:729:U:P	2.43	0.40
12:AL:746:A:H2'	12:AL:747:A:H5'	2.03	0.40
12:AL:791:G:H2'	12:AL:792:U:C6	2.55	0.40
12:AL:1006:A:H2'	12:AL:1007:G:C8	2.56	0.40
12:AL:1021:U:O3'	34:y:84:SER:HB3	2.21	0.40
12:AL:1540:U:C4	12:AL:1541:U:C4	3.10	0.40
12:AL:1628:A:C2	35:z:166:ILE:HG21	2.48	0.40
15:Z:75:LYS:HB3	15:Z:76:SER:H	1.65	0.40
19:j:158:LEU:O	19:j:162:GLY:N	2.55	0.40
19:j:411:VAL:CG2	19:j:414:ARG:HB2	2.44	0.40
20:k:52:VAL:O	20:k:54:PHE:N	2.53	0.40
21:l:9:VAL:HG12	21:l:10:ARG:N	2.36	0.40
21:l:49:TYR:H	21:l:49:TYR:HD1	1.69	0.40
28:s:85:ILE:HD12	34:y:67:ASP:C	2.40	0.40
29:t:87:VAL:HG13	29:t:93:LEU:O	2.21	0.40
31:v:19:PRO:O	31:v:20:VAL:C	2.64	0.40
35:z:120:LEU:O	35:z:121:ASN:C	2.63	0.40
41:5:331:SER:CA	46:A:41:G:H21	2.34	0.40
46:A:12:A:C8	46:A:12:A:H5"	2.56	0.40
46:A:26:A:C4	71:a:112:TYR:HA	2.56	0.40
46:A:34:U:O2'	46:A:35:U:H5'	2.21	0.40
46:A:72:U:N3	46:A:73:U:C5	2.88	0.40
46:A:257:U:H2'	46:A:258:A:C8	2.55	0.40
46:A:261:A:O2'	46:A:307:G:N7	2.41	0.40
46:A:600:C:H4'	47:B:133:ARG:CZ	2.49	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:716:A:H1'	55:J:110:GLN:NE2	2.36	0.40
46:A:726:A:N3	46:A:726:A:H2'	2.36	0.40
46:A:837:U:C4	56:K:51:LYS:NZ	2.88	0.40
46:A:932:C:C2	46:A:1104:A:C2	3.09	0.40
46:A:999:A:H2'	46:A:1000:A:C8	2.56	0.40
46:A:1323:U:H2'	46:A:1324:U:H6	1.85	0.40
46:A:1325:U:H2'	46:A:1326:C:C6	2.56	0.40
46:A:1775:A:C2	46:A:1776:A:C4	3.09	0.40
46:A:1835:G:N2	46:A:1864:G:C8	2.89	0.40
46:A:1932:G:N3	48:C:209:GLN:NE2	2.69	0.40
46:A:1993:U:O2'	64:S:101:VAL:HG21	2.21	0.40
46:A:2082:A:C6	46:A:2083:U:C4	3.09	0.40
46:A:2290:A:O2'	46:A:2291:G:H5'	2.20	0.40
46:A:2388:G:N3	46:A:2388:G:C2'	2.82	0.40
46:A:2582:U:H2'	46:A:2583:A:O4'	2.20	0.40
46:A:2660:A:N6	46:A:2689:A:C2	2.88	0.40
46:A:2666:A:H3'	46:A:2667:A:H8	1.86	0.40
46:A:2761:C:C5'	56:K:127:ARG:CD	2.87	0.40
46:A:2768:G:H3'	46:A:2768:G:N3	2.36	0.40
46:A:3292:A:H4'	46:A:3292:A:OP1	2.21	0.40
59:N:90:ASN:O	66:U:78:PHE:HA	2.21	0.40
63:R:101:HIS:CD2	63:R:106:PHE:CZ	3.09	0.40
63:R:226:GLU:C	63:R:228:LEU:N	2.78	0.40
63:R:290:GLN:O	63:R:292:LEU:HG	2.21	0.40
63:R:292:LEU:CD2	63:R:301:ILE:HB	2.51	0.40
3:AC:93:VAL:HA	3:AC:96:ILE:CG1	2.50	0.40
4:AD:133:THR:HG21	4:AD:302:TRP:HD1	1.87	0.40
4:AD:168:PHE:O	4:AD:170:TRP:HD1	2.05	0.40
4:AD:236:ASN:O	4:AD:237:LEU:HB2	2.21	0.40
4:AD:301:GLU:HG3	4:AD:304:ILE:HG13	2.03	0.40
5:AE:255:LEU:HD13	5:AE:300:PHE:HB3	1.99	0.40
5:AE:315:TYR:CE2	5:AE:316:ASP:OD1	2.74	0.40
5:AE:315:TYR:O	5:AE:318:HIS:N	2.55	0.40
6:AF:34:TYR:HE2	12:AL:496:A:C1'	2.32	0.40
6:AF:58:MET:CG	19:j:11:LEU:HD11	2.45	0.40
7:AG:81:SER:O	7:AG:82:SER:C	2.64	0.40
9:AI:399:VAL:O	9:AI:400:ASN:C	2.63	0.40
10:AJ:57:ARG:HG3	10:AJ:57:ARG:H	1.54	0.40
12:AL:271:U:O2'	12:AL:272:U:O5'	2.39	0.40
12:AL:415:U:O2	12:AL:415:U:H2'	2.20	0.40
12:AL:484:U:H2'	12:AL:485:A:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:485:A:C4	12:AL:486:U:C5	3.09	0.40
12:AL:500:A:H5'	19:j:7:LEU:HD12	2.02	0.40
12:AL:660:G:OP1	19:j:63:LYS:HG2	2.21	0.40
12:AL:717:G:C5	12:AL:818:A:C5	3.09	0.40
12:AL:911:U:HO2'	12:AL:912:A:P	2.43	0.40
12:AL:1259:A:C8	28:s:112:ARG:HD3	2.56	0.40
12:AL:1289:U:H2'	12:AL:1319:A:N6	2.36	0.40
12:AL:1317:U:H4'	12:AL:1321:U:H2'	2.02	0.40
16:g:27:LYS:HD2	33:x:50:PRO:CG	2.51	0.40
16:g:87:ARG:C	16:g:89:ARG:N	2.79	0.40
16:g:246:ALA:HB1	33:x:55:TYR:CD2	2.56	0.40
16:g:258:GLN:HE21	16:g:258:GLN:HA	1.87	0.40
17:h:295:ILE:HG13	17:h:299:ASP:C	2.46	0.40
17:h:313:LYS:HG3	20:k:131:LYS:O	2.21	0.40
18:i:225:SER:HB3	18:i:382:ASN:HB2	2.03	0.40
22:m:243:TYR:O	22:m:244:ILE:C	2.64	0.40
26:q:183:LEU:HA	26:q:188:GLY:HA3	2.03	0.40
27:r:45:LYS:O	27:r:46:ILE:C	2.63	0.40
30:u:219:LEU:HD12	30:u:219:LEU:HA	1.79	0.40
32:w:190:LEU:HG	32:w:228:VAL:HG11	2.03	0.40
33:x:131:ARG:O	33:x:135:ILE:HG12	2.21	0.40
37:1:361:VAL:CG2	63:R:144:GLU:HG2	2.50	0.40
41:5:198:HIS:NE2	46:A:445:U:C6	2.89	0.40
45:9:42:ARG:HB3	46:A:25:A:H3'	2.03	0.40
46:A:51:G:N2	46:A:453:U:O3'	2.53	0.40
46:A:210:U:C2	46:A:211:A:N7	2.89	0.40
46:A:256:A:C8	46:A:369:A:C6	3.10	0.40
46:A:302:U:H3'	46:A:303:A:C8	2.56	0.40
46:A:395:U:C2	46:A:679:A:C6	3.08	0.40
46:A:603:U:P	47:B:149:ARG:NH2	2.95	0.40
46:A:633:G:H4'	46:A:1627:C:O2'	2.22	0.40
46:A:702:U:C4	55:J:79:ARG:NE	2.89	0.40
46:A:806:G:C6	46:A:807:A:C5	3.08	0.40
46:A:808:A:H3'	46:A:809:C:C6	2.46	0.40
46:A:867:A:C6	46:A:868:G:C5	3.09	0.40
46:A:977:A:H2	46:A:1044:A:C6	2.39	0.40
46:A:1266:U:H2'	46:A:1267:A:H8	1.78	0.40
46:A:1358:C:C6	46:A:1359:G:C8	3.10	0.40
46:A:1498:U:H2'	46:A:1499:A:O4'	2.21	0.40
46:A:1551:C:OP1	61:P:115:LYS:HB2	2.21	0.40
46:A:1768:A:C2'	46:A:1769:U:C6	2.97	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1784:U:C4	46:A:1785:U:C4	3.09	0.40
46:A:1787:A:N6	46:A:1990:A:C6	2.90	0.40
46:A:2024:A:N7	46:A:2074:A:N6	2.68	0.40
46:A:2285:U:O4'	46:A:2693:C:H2'	2.21	0.40
46:A:2476:C:C2	46:A:2477:U:C6	3.09	0.40
46:A:2622:C:H2'	46:A:2623:A:O4'	2.22	0.40
46:A:2670:C:H2'	46:A:2671:U:C6	2.54	0.40
46:A:2673:A:H5'	46:A:2673:A:C8	2.54	0.40
46:A:2940:G:N3	46:A:2941:A:C8	2.89	0.40
46:A:3068:U:H4'	46:A:3069:A:OP2	2.19	0.40
46:A:3111:A:H2'	46:A:3112:A:H8	1.86	0.40
46:A:3244:A:C6	46:A:3245:A:C5	3.09	0.40
46:A:3267:U:C2	46:A:3268:A:N7	2.89	0.40
57:L:151:SER:HA	68:W:106:SER:HA	2.03	0.40
63:R:162:LEU:HA	63:R:165:ARG:NH1	2.36	0.40
63:R:190:ASP:OD1	63:R:192:GLU:HB2	2.21	0.40
63:R:227:ARG:HB3	63:R:240:LEU:CD1	2.51	0.40
63:R:268:GLN:CD	63:R:269:TYR:N	2.79	0.40
63:R:312:LEU:HD12	63:R:312:LEU:HA	1.76	0.40
75:e:62:GLU:HB3	75:e:63:ASN:H	1.58	0.40
76:f:61:THR:HB	76:f:69:THR:O	2.22	0.40
76:f:146:VAL:HG22	76:f:156:VAL:HG11	2.03	0.40
2:AB:41:VAL:O	2:AB:44:PHE:N	2.55	0.40
2:AB:114:GLU:C	2:AB:116:LYS:N	2.79	0.40
3:AC:45:LEU:HG	3:AC:45:LEU:H	1.61	0.40
3:AC:49:LEU:O	3:AC:50:THR:C	2.64	0.40
3:AC:70:THR:HB	3:AC:80:PHE:HB2	2.03	0.40
3:AC:97:LEU:HD23	3:AC:97:LEU:HA	1.86	0.40
3:AC:211:ASN:N	3:AC:211:ASN:OD1	2.54	0.40
4:AD:58:GLU:O	4:AD:62:LYS:N	2.55	0.40
5:AE:283:THR:HA	5:AE:315:TYR:CE1	2.53	0.40
5:AE:295:LEU:C	5:AE:297:LEU:N	2.79	0.40
5:AE:302:ARG:HH21	5:AE:303:GLN:HA	1.87	0.40
5:AE:306:ASN:O	5:AE:308:LEU:N	2.44	0.40
6:AF:307:TYR:OH	31:v:92:LYS:CD	2.69	0.40
7:AG:173:ARG:NH2	16:g:107:PHE:CZ	2.89	0.40
7:AG:174:TYR:HD1	16:g:107:PHE:HE2	1.66	0.40
8:AH:8:TYR:HE1	12:AL:298:A:O4'	2.03	0.40
8:AH:21:ILE:H	8:AH:21:ILE:HD12	1.86	0.40
9:AI:130:ALA:O	9:AI:134:PHE:HB3	2.21	0.40
9:AI:307:ASN:CG	9:AI:308:THR:N	2.77	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:324:MET:HE3	9:AI:324:MET:HB2	1.95	0.40
10:AJ:7:ARG:CZ	10:AJ:10:LYS:HD3	2.51	0.40
11:AK:163:PRO:N	25:p:68:TYR:CD2	2.89	0.40
12:AL:118:U:O4	12:AL:294:A:H4'	2.21	0.40
12:AL:274:A:H2'	12:AL:275:A:C8	2.53	0.40
12:AL:417:U:C2	12:AL:418:A:N7	2.90	0.40
12:AL:754:A:H5"	26:q:86:ASN:ND2	2.37	0.40
12:AL:757:U:H6	12:AL:757:U:O5'	2.04	0.40
12:AL:1017:U:H4'	12:AL:1262:C:C5	2.56	0.40
12:AL:1104:U:H2'	12:AL:1105:G:H5'	2.03	0.40
12:AL:1157:A:H2'	12:AL:1158:A:O4'	2.21	0.40
12:AL:1190:U:H2'	12:AL:1191:U:C6	2.56	0.40
12:AL:1429:A:H8	29:t:72:THR:HA	1.79	0.40
12:AL:1472:C:H2'	12:AL:1473:A:C8	2.57	0.40
12:AL:1484:A:H2'	12:AL:1485:A:C8	2.56	0.40
12:AL:1624:U:H1'	12:AL:1626:A:N3	2.37	0.40
12:AL:1638:A:C6	12:AL:1641:A:H1'	2.57	0.40
12:AL:1641:A:O3'	16:g:41:SER:HA	2.21	0.40
15:Z:42:SER:CA	22:m:238:ILE:HG23	2.50	0.40
16:g:84:GLN:HA	16:g:87:ARG:NH1	2.37	0.40
17:h:198:SER:C	17:h:200:SER:H	2.29	0.40
18:i:334:ARG:HH11	18:i:340:GLY:HA2	1.87	0.40
19:j:406:TRP:H	19:j:406:TRP:CD1	2.39	0.40
22:m:166:THR:HB	22:m:178:VAL:HG12	2.03	0.40
22:m:212:LEU:HD23	22:m:212:LEU:HA	1.78	0.40
23:n:108:LYS:CB	23:n:115:ILE:HD11	2.52	0.40
24:o:158:GLY:N	24:o:230:ALA:HB2	2.28	0.40
25:p:96:ALA:O	25:p:98:SER:N	2.54	0.40
26:q:109:ASN:O	26:q:113:LEU:HG	2.20	0.40
29:t:23:ARG:HH12	29:t:26:PHE:HD2	1.69	0.40
32:w:168:ASP:O	32:w:171:GLY:N	2.49	0.40
42:6:94:TRP:CZ2	46:A:2334:U:C4	3.09	0.40
46:A:242:U:H4'	46:A:327:A:N6	2.37	0.40
46:A:326:A:O4'	46:A:330:A:N6	2.55	0.40
46:A:428:C:H5"	46:A:429:A:C4	2.56	0.40
46:A:454:A:C2	46:A:1921:A:C4	3.09	0.40
46:A:686:U:H2'	46:A:687:U:H6	1.82	0.40
46:A:706:U:H2'	46:A:707:A:C8	2.56	0.40
46:A:768:U:HO2'	46:A:769:U:H6	1.65	0.40
46:A:800:A:C3'	46:A:801:U:H5"	2.50	0.40
46:A:1239:A:N6	46:A:1271:A:N6	2.66	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1307:A:H4'	46:A:1308:A:OP1	2.20	0.40
46:A:1609:U:OP1	48:C:201:HIS:HD2	2.04	0.40
46:A:1694:A:N3	46:A:1694:A:H2'	2.36	0.40
46:A:1713:C:H2'	46:A:1714:G:O4'	2.21	0.40
46:A:1715:A:H2	46:A:1716:U:C2	2.39	0.40
46:A:1952:A:C5'	48:C:207:GLN:O	2.69	0.40
46:A:1995:G:H2'	46:A:1996:A:O4'	2.21	0.40
46:A:2245:U:C2	46:A:2246:A:N7	2.89	0.40
46:A:2336:G:C5	46:A:2337:A:N7	2.90	0.40
46:A:2425:A:N1	67:V:27:ARG:CZ	2.85	0.40
46:A:2666:A:C2	46:A:2685:A:C4	3.10	0.40
46:A:2744:A:H3'	46:A:2745:U:H6	1.86	0.40
46:A:2761:C:OP1	56:K:127:ARG:NE	2.55	0.40
46:A:2971:A:N6	46:A:3034:A:H62	2.18	0.40
46:A:3018:A:C2	46:A:3019:U:C2	3.09	0.40
46:A:3171:A:H4'	46:A:3172:U:O5'	2.20	0.40
47:B:96:LEU:O	47:B:97:LYS:C	2.64	0.40
47:B:103:LEU:HD23	47:B:103:LEU:HA	1.90	0.40
50:E:249:ILE:HA	50:E:256:TRP:NE1	2.37	0.40
63:R:219:ARG:NH1	63:R:252:ASP:OD1	2.54	0.40
65:T:98:LEU:HD22	65:T:152:ILE:HG12	2.02	0.40
69:X:48:LEU:CD1	72:b:136:LYS:HG3	2.51	0.40
76:f:34:ILE:HD11	76:f:68:PHE:CD1	2.56	0.40
76:f:46:ARG:NH1	76:f:70:PHE:O	2.54	0.40
76:f:152:MET:N	76:f:152:MET:SD	2.93	0.40
3:AC:153:LEU:N	3:AC:224:VAL:O	2.54	0.40
3:AC:177:PHE:CD1	3:AC:177:PHE:C	3.00	0.40
3:AC:217:TRP:O	17:h:149:ARG:NH2	2.39	0.40
4:AD:19:LEU:HB2	4:AD:21:HIS:ND1	2.36	0.40
4:AD:37:LEU:HD12	4:AD:37:LEU:HA	1.84	0.40
4:AD:208:PHE:HB3	4:AD:267:TYR:CZ	2.56	0.40
5:AE:73:ILE:C	5:AE:76:THR:H	2.28	0.40
5:AE:102:LEU:C	5:AE:104:ASP:N	2.79	0.40
5:AE:265:ALA:HB1	5:AE:268:LYS:HD2	2.04	0.40
5:AE:299:GLU:HA	5:AE:302:ARG:HB2	2.02	0.40
6:AF:71:TYR:O	6:AF:72:VAL:C	2.64	0.40
7:AG:63:VAL:O	7:AG:64:THR:C	2.64	0.40
7:AG:90:ARG:HH22	12:AL:917:U:H4'	1.86	0.40
8:AH:131:GLU:H	8:AH:131:GLU:HG3	1.75	0.40
9:AI:60:TRP:CD1	22:m:140:LEU:HD11	2.49	0.40
9:AI:134:PHE:HZ	9:AI:342:ILE:HD13	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:193:ASP:C	9:AI:195:ASP:N	2.78	0.40
9:AI:221:LEU:C	9:AI:223:SER:N	2.74	0.40
9:AI:271:LEU:O	9:AI:275:ILE:HG13	2.21	0.40
9:AI:357:VAL:CG2	9:AI:362:ILE:HG23	2.52	0.40
9:AI:420:LYS:NZ	9:AI:428:GLU:CD	2.79	0.40
9:AI:440:GLU:O	9:AI:444:SER:N	2.54	0.40
11:AK:115:ALA:HA	18:i:168:ASN:ND2	2.37	0.40
11:AK:154:TYR:HB3	20:k:54:PHE:HE1	1.85	0.40
11:AK:305:PRO:HD2	24:o:148:LEU:HB2	2.04	0.40
12:AL:41:C:H1'	27:r:57:GLN:OE1	2.22	0.40
12:AL:71:A:OP1	12:AL:386:A:N6	2.55	0.40
12:AL:328:C:C2'	12:AL:329:U:H5'	2.51	0.40
12:AL:349:U:O2'	12:AL:350:A:OP2	2.24	0.40
12:AL:556:G:H3'	12:AL:557:G:H8	1.86	0.40
12:AL:558:A:C2	12:AL:559:U:H1'	2.57	0.40
12:AL:826:G:H2'	12:AL:827:G:H8	1.86	0.40
12:AL:843:G:H2'	12:AL:844:C:C6	2.56	0.40
12:AL:998:A:O2'	12:AL:999:C:OP1	2.33	0.40
12:AL:1062:A:H2'	12:AL:1063:U:C6	2.56	0.40
12:AL:1128:A:OP1	20:k:156:ASN:CA	2.70	0.40
12:AL:1155:A:OP1	12:AL:1155:A:H4'	2.21	0.40
12:AL:1278:G:H1	12:AL:1331:C:H42	1.68	0.40
12:AL:1289:U:O2	12:AL:1293:U:H1'	2.20	0.40
12:AL:1384:G:N2	12:AL:1387:A:H62	2.19	0.40
12:AL:1632:A:O4'	33:x:58:PHE:CE1	2.74	0.40
12:AL:1643:U:H5"	24:o:63:ARG:CD	2.51	0.40
17:h:241:GLU:OE2	17:h:390:ARG:NH1	2.55	0.40
17:h:295:ILE:HG23	17:h:296:ASP:O	2.21	0.40
18:i:379:ASN:HB2	18:i:390:ASN:OD1	2.21	0.40
19:j:96:GLN:OE1	19:j:456:PRO:HB2	2.21	0.40
19:j:160:ALA:O	19:j:428:ARG:HD2	2.21	0.40
20:k:77:HIS:O	20:k:78:LEU:C	2.64	0.40
21:l:45:MET:HE3	21:l:66:HIS:HB3	2.02	0.40
22:m:184:ASN:N	22:m:187:GLN:HB2	2.37	0.40
25:p:47:LEU:HD11	25:p:62:ILE:CD1	2.46	0.40
27:r:111:ARG:HG2	27:r:124:HIS:C	2.46	0.40
28:s:73:ALA:HA	28:s:76:LYS:HB2	2.03	0.40
34:y:31:THR:HA	34:y:32:PRO:HD2	1.92	0.40
41:5:160:LYS:HA	41:5:261:ARG:HD3	2.04	0.40
46:A:11:G:O6	46:A:3288:C:N3	2.54	0.40
46:A:133:A:C2	46:A:134:U:C6	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:174:G:N2	46:A:204:A:N1	2.69	0.40
46:A:310:U:H4'	46:A:311:A:OP1	2.21	0.40
46:A:316:G:N2	46:A:338:G:C5	2.90	0.40
46:A:406:A:C6	46:A:407:U:N3	2.90	0.40
46:A:807:A:H2	46:A:818:U:N3	2.14	0.40
46:A:1009:U:C6	46:A:1009:U:H5"	2.57	0.40
46:A:1171:A:H2'	46:A:1172:C:C6	2.54	0.40
46:A:1195:A:C2	46:A:1206:A:C5	3.10	0.40
46:A:1316:U:O2	46:A:1316:U:C2'	2.70	0.40
46:A:1555:A:C4	46:A:1556:A:C8	3.09	0.40
46:A:1590:U:H2'	46:A:1591:G:O4'	2.21	0.40
46:A:2639:U:H2'	46:A:2640:A:H8	1.86	0.40
46:A:2804:U:H2'	46:A:2805:A:C8	2.56	0.40
46:A:2857:A:C4	46:A:2858:C:C5	3.09	0.40
47:B:276:LEU:HD23	47:B:276:LEU:HA	1.91	0.40
48:C:208:ASN:O	48:C:210:ASP:N	2.51	0.40
51:F:121:VAL:HG21	75:e:210:VAL:CB	2.49	0.40
63:R:199:ILE:HG13	63:R:200:ARG:H	1.86	0.40
66:U:26:LEU:HD21	66:U:47:LEU:CD2	2.52	0.40
75:e:109:SER:O	75:e:110:HIS:C	2.64	0.40
3:AC:115:PRO:HD3	3:AC:253:TRP:CE2	2.57	0.40
3:AC:155:LEU:HD12	3:AC:165:ILE:HG12	2.03	0.40
4:AD:202:TYR:CE1	7:AG:193:GLU:HG2	2.56	0.40
5:AE:315:TYR:CD1	5:AE:315:TYR:C	2.93	0.40
6:AF:315:GLY:CA	8:AH:15:PHE:CE2	2.95	0.40
7:AG:136:HIS:CE1	7:AG:139:GLN:HE22	2.39	0.40
8:AH:37:LYS:HA	8:AH:37:LYS:HD2	1.93	0.40
8:AH:110:ALA:HA	8:AH:113:LYS:HZ2	1.86	0.40
8:AH:192:HIS:HE1	32:w:169:ILE:HD11	1.87	0.40
9:AI:221:LEU:O	9:AI:222:LYS:C	2.62	0.40
11:AK:162:LEU:HD13	25:p:64:ARG:CB	2.45	0.40
12:AL:219:U:O2'	12:AL:220:A:H8	2.05	0.40
12:AL:523:U:O2	12:AL:526:U:H5	2.04	0.40
12:AL:788:U:O2'	12:AL:790:U:H5'	2.22	0.40
12:AL:1139:A:H2'	12:AL:1140:A:C8	2.57	0.40
12:AL:1199:U:H2'	12:AL:1200:G:C2	2.56	0.40
12:AL:1411:G:OP1	24:o:273:PRO:O	2.40	0.40
12:AL:1575:A:C2	46:A:1860:U:C4'	3.05	0.40
12:AL:1588:U:H2'	12:AL:1589:G:H8	1.86	0.40
13:AM:33:U:H3'	24:o:278:ARG:HD3	2.01	0.40
15:Z:86:TYR:O	15:Z:90:ASN:ND2	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:k:25:TYR:CZ	25:p:21:PRO:CD	3.03	0.40
20:k:66:HIS:ND1	20:k:69:TRP:HD1	2.20	0.40
20:k:208:ILE:HG22	20:k:279:PHE:HB3	2.03	0.40
20:k:238:PHE:HE1	20:k:241:ARG:HB2	1.86	0.40
25:p:69:LEU:HD23	25:p:69:LEU:HA	1.95	0.40
26:q:151:MET:O	26:q:155:ILE:HG13	2.21	0.40
27:r:96:PRO:CG	27:r:127:ARG:HG2	2.49	0.40
28:s:34:LYS:HA	28:s:37:SER:OG	2.22	0.40
28:s:83:ARG:HA	28:s:90:GLY:HA3	2.02	0.40
29:t:27:LYS:HZ1	29:t:71:SER:CA	2.35	0.40
29:t:77:ARG:CZ	29:t:84:ALA:HB2	2.51	0.40
30:u:58:LYS:O	30:u:61:THR:N	2.55	0.40
30:u:131:LEU:HD23	30:u:131:LEU:HA	1.84	0.40
32:w:163:GLN:C	32:w:165:LEU:N	2.79	0.40
34:y:31:THR:O	34:y:32:PRO:C	2.65	0.40
42:6:62:THR:HG22	42:6:106:ARG:CD	2.50	0.40
42:6:94:TRP:HD1	46:A:2324:U:N3	2.20	0.40
46:A:30:U:H3	48:C:21:SER:C	2.27	0.40
46:A:93:U:H3’	46:A:94:A:H5”	2.03	0.40
46:A:136:A:C2	46:A:137:A:C4	3.09	0.40
46:A:174:G:N2	46:A:205:A:C5	2.90	0.40
46:A:206:U:C2	46:A:207:U:C6	3.09	0.40
46:A:354:A:H2’	46:A:355:U:C6	2.57	0.40
46:A:474:A:O2’	46:A:2767:C:OP2	2.38	0.40
46:A:505:C:C4	46:A:506:A:C5	3.10	0.40
46:A:516:A:N6	46:A:526:A:OP2	2.44	0.40
46:A:529:A:H1’	46:A:530:A:P	2.61	0.40
46:A:603:U:P	47:B:149:ARG:HH22	2.44	0.40
46:A:751:A:H2’	46:A:752:U:O4’	2.21	0.40
46:A:998:U:H2’	46:A:999:A:H8	1.86	0.40
46:A:1004:A:H5’	76:f:140:GLY:HA2	1.96	0.40
46:A:1020:U:H6	46:A:1020:U:H2’	1.75	0.40
46:A:1026:U:H4’	46:A:1043:A:N3	2.37	0.40
46:A:1274:A:H2’	46:A:1275:A:O4’	2.20	0.40
46:A:1745:U:C4	46:A:1800:A:C6	3.10	0.40
46:A:1898:C:C2	46:A:1899:C:C6	3.10	0.40
46:A:1898:C:H4’	46:A:3060:U:O2’	2.21	0.40
46:A:1998:U:H2’	46:A:1999:U:C6	2.57	0.40
46:A:2032:C:N3	46:A:2057:U:P	2.95	0.40
46:A:2049:U:O2’	46:A:2050:U:OP1	2.38	0.40
46:A:2188:A:C2	46:A:2201:U:C4	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2219:A:H2'	46:A:2220:U:C6	2.56	0.40
46:A:2377:A:N6	46:A:2423:G:C8	2.90	0.40
46:A:2384:A:C2'	46:A:2385:U:H6	2.30	0.40
46:A:2408:A:C6	46:A:2409:U:C2	3.09	0.40
46:A:2439:U:C2'	46:A:2440:G:H5'	2.51	0.40
46:A:2446:U:H6	46:A:2446:U:OP2	2.05	0.40
46:A:2723:U:OP1	73:c:13:GLY:N	2.54	0.40
46:A:2785:U:N3	46:A:2808:A:C2	2.90	0.40
46:A:2924:A:C4	46:A:2932:A:C5	3.09	0.40
47:B:232:VAL:HG13	47:B:233:LYS:H	1.87	0.40
48:C:206:GLY:HA3	48:C:214:VAL:HA	2.04	0.40
60:O:288:ARG:NH2	71:a:180:ILE:HG23	2.36	0.40
63:R:333:ASP:C	63:R:335:THR:H	2.29	0.40
75:e:51:THR:H	75:e:115:CYS:HA	1.86	0.40
75:e:104:VAL:O	75:e:107:ARG:HB3	2.21	0.40
76:f:79:TYR:CE2	76:f:83:LYS:HB2	2.56	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	AA	32/34 (94%)	31 (97%)	1 (3%)	0	100 100
2	AB	93/95 (98%)	71 (76%)	14 (15%)	8 (9%)	0 4
3	AC	257/259 (99%)	208 (81%)	34 (13%)	15 (6%)	1 9
4	AD	299/301 (99%)	219 (73%)	62 (21%)	18 (6%)	1 9
5	AE	296/298 (99%)	215 (73%)	64 (22%)	17 (6%)	1 9
6	AF	248/320 (78%)	182 (73%)	46 (18%)	20 (8%)	1 5
7	AG	234/236 (99%)	197 (84%)	30 (13%)	7 (3%)	3 21

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
8	AH	232/234 (99%)	192 (83%)	33 (14%)	7 (3%)	3 21
9	AI	403/405 (100%)	319 (79%)	60 (15%)	24 (6%)	1 9
10	AJ	94/96 (98%)	70 (74%)	13 (14%)	11 (12%)	0 1
11	AK	262/264 (99%)	235 (90%)	24 (9%)	3 (1%)	12 40
15	Z	83/91 (91%)	63 (76%)	17 (20%)	3 (4%)	3 18
16	g	190/298 (64%)	158 (83%)	29 (15%)	3 (2%)	8 32
17	h	265/267 (99%)	214 (81%)	39 (15%)	12 (4%)	2 13
18	i	287/320 (90%)	233 (81%)	38 (13%)	16 (6%)	1 10
19	j	281/485 (58%)	255 (91%)	23 (8%)	3 (1%)	12 40
20	k	281/293 (96%)	219 (78%)	52 (18%)	10 (4%)	3 18
21	l	129/131 (98%)	103 (80%)	17 (13%)	9 (7%)	1 7
22	m	159/161 (99%)	136 (86%)	16 (10%)	7 (4%)	2 14
23	n	153/155 (99%)	150 (98%)	3 (2%)	0	100 100
24	o	220/244 (90%)	196 (89%)	17 (8%)	7 (3%)	3 20
25	p	132/134 (98%)	100 (76%)	24 (18%)	8 (6%)	1 9
26	q	150/152 (99%)	115 (77%)	25 (17%)	10 (7%)	1 7
27	r	120/125 (96%)	87 (72%)	25 (21%)	8 (7%)	1 7
28	s	115/120 (96%)	92 (80%)	17 (15%)	6 (5%)	1 11
29	t	111/113 (98%)	99 (89%)	10 (9%)	2 (2%)	7 30
30	u	251/253 (99%)	205 (82%)	35 (14%)	11 (4%)	2 14
31	v	104/106 (98%)	93 (89%)	10 (10%)	1 (1%)	13 42
32	w	194/204 (95%)	156 (80%)	28 (14%)	10 (5%)	1 11
33	x	87/99 (88%)	66 (76%)	13 (15%)	8 (9%)	0 3
34	y	78/80 (98%)	51 (65%)	17 (22%)	10 (13%)	0 1
35	z	90/92 (98%)	72 (80%)	12 (13%)	6 (7%)	1 7
36	0	36/38 (95%)	33 (92%)	3 (8%)	0	100 100
37	1	346/348 (99%)	329 (95%)	17 (5%)	0	100 100
38	2	111/113 (98%)	106 (96%)	5 (4%)	0	100 100
39	3	128/130 (98%)	122 (95%)	6 (5%)	0	100 100
40	4	136/138 (99%)	130 (96%)	6 (4%)	0	100 100
41	5	322/324 (99%)	306 (95%)	16 (5%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
42	6	228/259 (88%)	221 (97%)	7 (3%)	0	100	100
43	7	104/106 (98%)	97 (93%)	7 (7%)	0	100	100
44	8	195/199 (98%)	192 (98%)	3 (2%)	0	100	100
45	9	198/215 (92%)	186 (94%)	12 (6%)	0	100	100
47	B	317/328 (97%)	267 (84%)	41 (13%)	9 (3%)	4	22
48	C	247/249 (99%)	232 (94%)	14 (6%)	1 (0%)	30	61
49	D	250/252 (99%)	236 (94%)	10 (4%)	4 (2%)	8	32
50	E	272/274 (99%)	254 (93%)	15 (6%)	3 (1%)	12	40
51	F	194/196 (99%)	183 (94%)	10 (5%)	1 (0%)	25	56
52	G	72/74 (97%)	70 (97%)	2 (3%)	0	100	100
53	H	158/160 (99%)	152 (96%)	6 (4%)	0	100	100
54	I	123/138 (89%)	114 (93%)	9 (7%)	0	100	100
55	J	218/220 (99%)	193 (88%)	19 (9%)	6 (3%)	4	22
56	K	193/195 (99%)	185 (96%)	8 (4%)	0	100	100
57	L	225/237 (95%)	217 (96%)	8 (4%)	0	100	100
58	M	149/151 (99%)	139 (93%)	10 (7%)	0	100	100
59	N	116/118 (98%)	106 (91%)	10 (9%)	0	100	100
60	O	223/225 (99%)	211 (95%)	12 (5%)	0	100	100
61	P	205/207 (99%)	196 (96%)	9 (4%)	0	100	100
62	Q	280/296 (95%)	268 (96%)	12 (4%)	0	100	100
63	R	327/337 (97%)	269 (82%)	44 (14%)	14 (4%)	2	14
64	S	181/185 (98%)	171 (94%)	10 (6%)	0	100	100
65	T	210/225 (93%)	199 (95%)	11 (5%)	0	100	100
66	U	80/82 (98%)	78 (98%)	2 (2%)	0	100	100
67	V	63/76 (83%)	61 (97%)	2 (3%)	0	100	100
68	W	110/112 (98%)	105 (96%)	5 (4%)	0	100	100
69	X	62/64 (97%)	50 (81%)	8 (13%)	4 (6%)	1	8
70	Y	44/46 (96%)	41 (93%)	3 (7%)	0	100	100
71	a	175/177 (99%)	163 (93%)	12 (7%)	0	100	100
72	b	153/155 (99%)	146 (95%)	7 (5%)	0	100	100
73	c	117/119 (98%)	112 (96%)	4 (3%)	1 (1%)	14	44

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
74	d	202/215 (94%)	189 (94%)	13 (6%)	0	100 100
75	e	163/165 (99%)	131 (80%)	26 (16%)	6 (4%)	2 17
76	f	134/138 (97%)	104 (78%)	20 (15%)	10 (8%)	1 6
All	All	12997/13751 (94%)	11366 (88%)	1292 (10%)	339 (3%)	6 23

All (339) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	82	GLN
2	AB	95	ARG
3	AC	33	GLY
3	AC	59	GLU
3	AC	170	ASN
4	AD	111	LEU
4	AD	203	ASN
4	AD	208	PHE
4	AD	212	THR
5	AE	228	ALA
5	AE	310	GLU
5	AE	314	PRO
7	AG	3	ILE
7	AG	67	PRO
7	AG	86	VAL
7	AG	126	GLU
8	AH	201	ASN
8	AH	211	VAL
8	AH	231	PHE
9	AI	71	GLN
9	AI	154	VAL
9	AI	194	ASP
9	AI	228	LYS
9	AI	349	ASP
10	AJ	52	ASP
10	AJ	56	PHE
10	AJ	59	LEU
10	AJ	60	LYS
15	Z	7	VAL
15	Z	19	LYS
16	g	226	VAL
17	h	135	SER
17	h	136	ALA

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Mol	Chain	Res	Type
17	h	155	MET
17	h	156	ARG
17	h	364	ASP
18	i	146	LEU
18	i	175	MET
18	i	212	TYR
18	i	338	ASN
20	k	28	SER
20	k	60	ASP
20	k	268	ASP
21	l	15	ASN
21	l	129	GLN
21	l	130	SER
22	m	103	SER
22	m	246	LEU
24	o	249	ALA
25	p	22	VAL
26	q	67	TYR
27	r	56	PRO
27	r	116	GLN
30	u	174	SER
30	u	267	SER
32	w	78	ILE
33	x	44	SER
33	x	104	THR
33	x	136	GLY
34	y	14	LYS
34	y	16	PRO
34	y	34	ARG
35	z	99	ARG
47	B	95	ARG
55	J	113	ILE
55	J	169	PRO
63	R	120	PRO
63	R	121	HIS
63	R	147	ILE
76	f	136	LEU
2	AB	68	GLN
2	AB	109	SER
2	AB	114	GLU
3	AC	31	SER
3	AC	58	LEU

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Mol	Chain	Res	Type
4	AD	41	TRP
4	AD	109	PRO
4	AD	110	ARG
4	AD	147	GLY
4	AD	216	MET
4	AD	259	GLY
5	AE	71	ALA
5	AE	137	ILE
5	AE	182	GLU
5	AE	263	SER
6	AF	30	ARG
6	AF	128	ILE
6	AF	130	LYS
6	AF	163	VAL
6	AF	296	TYR
6	AF	317	VAL
6	AF	324	GLY
7	AG	53	ASN
7	AG	73	GLY
8	AH	35	LYS
8	AH	85	ILE
9	AI	115	PHE
9	AI	238	LYS
9	AI	300	THR
9	AI	301	ALA
9	AI	303	SER
9	AI	421	LYS
10	AJ	18	ILE
10	AJ	57	ARG
10	AJ	58	HIS
11	AK	181	PRO
11	AK	213	GLU
16	g	81	GLY
17	h	204	SER
17	h	284	THR
17	h	319	LEU
18	i	192	CYS
19	j	7	LEU
20	k	41	PRO
20	k	61	ASP
20	k	85	ASN
21	l	36	ARG

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Mol	Chain	Res	Type
21	l	37	GLY
22	m	124	HIS
22	m	225	SER
25	p	53	GLU
25	p	94	VAL
26	q	119	PRO
26	q	185	GLY
26	q	189	ALA
26	q	196	VAL
27	r	53	ASP
27	r	63	LEU
27	r	146	GLY
28	s	43	PRO
28	s	52	GLU
28	s	81	LEU
28	s	106	ASN
29	t	49	ASN
30	u	72	ASP
30	u	74	PRO
30	u	75	PHE
30	u	247	MET
32	w	33	ILE
32	w	48	GLU
32	w	81	LYS
32	w	161	VAL
32	w	184	ASP
33	x	102	TYR
34	y	49	LEU
34	y	86	THR
35	z	111	ASN
35	z	128	ASN
47	B	70	ILE
47	B	88	LYS
47	B	99	VAL
49	D	52	LEU
49	D	195	VAL
50	E	218	ARG
55	J	124	ASN
55	J	147	LEU
63	R	54	GLY
63	R	189	LYS
69	X	59	GLU

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Mol	Chain	Res	Type
75	e	105	TYR
75	e	200	VAL
76	f	11	LYS
76	f	14	VAL
76	f	48	ALA
2	AB	81	ILE
2	AB	110	PHE
3	AC	23	ASN
3	AC	30	SER
3	AC	115	PRO
3	AC	163	LEU
4	AD	28	LEU
5	AE	98	SER
5	AE	178	VAL
6	AF	78	THR
6	AF	136	PRO
6	AF	164	GLU
6	AF	303	GLU
6	AF	326	ARG
7	AG	191	LEU
9	AI	67	ALA
9	AI	131	THR
9	AI	202	PRO
9	AI	265	PRO
10	AJ	55	LYS
11	AK	66	LEU
17	h	134	PRO
18	i	312	ASP
18	i	322	LYS
18	i	324	LEU
19	j	79	LEU
21	l	95	SER
21	l	115	LEU
22	m	90	PRO
24	o	161	LYS
24	o	257	ARG
24	o	265	GLY
25	p	19	PRO
25	p	149	SER
26	q	74	VAL
26	q	199	SER
26	q	212	PRO

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Mol	Chain	Res	Type
28	s	8	LYS
28	s	115	ASN
29	t	68	TYR
30	u	55	ALA
32	w	129	ARG
34	y	28	THR
34	y	68	MET
35	z	113	PRO
47	B	161	GLU
55	J	109	GLY
63	R	122	PHE
63	R	261	ASN
69	X	33	LEU
3	AC	105	THR
4	AD	29	LYS
4	AD	78	LYS
4	AD	112	GLY
4	AD	156	LEU
4	AD	207	PRO
4	AD	282	THR
5	AE	112	ASN
5	AE	123	TRP
5	AE	145	MET
6	AF	167	SER
8	AH	170	PRO
9	AI	70	GLN
9	AI	336	ASN
10	AJ	64	PRO
16	g	260	PRO
17	h	313	LYS
17	h	353	SER
18	i	128	ASN
18	i	147	ASN
18	i	187	MET
18	i	228	ASP
18	i	314	ILE
18	i	337	ASN
20	k	214	ARG
20	k	265	SER
21	l	34	GLN
21	l	118	LYS
22	m	89	LYS

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Mol	Chain	Res	Type
22	m	173	VAL
24	o	165	ALA
24	o	239	ASN
25	p	21	PRO
25	p	72	PRO
26	q	192	VAL
27	r	138	ARG
30	u	78	ARG
32	w	116	ASN
33	x	95	ARG
33	x	101	ARG
33	x	112	ARG
35	z	136	GLN
47	B	160	TRP
47	B	200	LEU
50	E	257	PRO
63	R	311	PHE
63	R	326	LYS
75	e	209	LEU
76	f	22	SER
76	f	76	PRO
4	AD	235	GLY
5	AE	251	VAL
5	AE	307	ALA
6	AF	64	PRO
6	AF	94	ARG
6	AF	95	GLY
6	AF	132	ARG
9	AI	266	HIS
9	AI	280	SER
10	AJ	48	TYR
15	Z	24	ARG
17	h	173	ASP
20	k	267	ASN
24	o	271	LYS
25	p	77	LYS
27	r	128	GLY
30	u	58	LYS
30	u	70	ARG
32	w	226	LYS
34	y	32	PRO
34	y	47	VAL

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Mol	Chain	Res	Type
35	z	93	VAL
47	B	139	ILE
47	B	283	LYS
48	C	197	ILE
49	D	49	PHE
50	E	42	PRO
63	R	38	SER
63	R	109	VAL
63	R	155	LYS
63	R	257	SER
73	c	124	ILE
75	e	201	LEU
3	AC	28	ILE
3	AC	114	GLU
5	AE	63	PRO
6	AF	176	GLY
9	AI	302	TYR
9	AI	335	ALA
18	i	129	ASN
20	k	91	ARG
27	r	120	GLY
31	v	100	TRP
69	X	11	ILE
69	X	32	PRO
75	e	69	PHE
76	f	4	ALA
76	f	19	ALA
76	f	57	PRO
6	AF	201	VAL
6	AF	217	PRO
51	F	196	GLY
55	J	112	PRO
63	R	57	VAL
3	AC	37	VAL
3	AC	214	VAL
5	AE	142	VAL
26	q	124	ILE
32	w	77	ILE
34	y	69	VAL
76	f	58	VAL
3	AC	111	VAL
5	AE	93	PRO

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Mol	Chain	Res	Type
9	AI	374	GLU
18	i	311	ILE
19	j	424	PRO
49	D	31	PRO
9	AI	179	TYR
9	AI	368	VAL
30	u	223	ASN
75	e	112	PRO
2	AB	99	PRO
8	AH	75	ILE
10	AJ	42	PRO
33	x	86	GLY

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	AA	32/32 (100%)	29 (91%)	3 (9%)	7 25
2	AB	86/86 (100%)	73 (85%)	13 (15%)	2 10
3	AC	234/234 (100%)	205 (88%)	29 (12%)	4 16
4	AD	265/265 (100%)	235 (89%)	30 (11%)	4 18
5	AE	266/266 (100%)	213 (80%)	53 (20%)	1 5
6	AF	230/290 (79%)	193 (84%)	37 (16%)	2 9
7	AG	211/211 (100%)	191 (90%)	20 (10%)	7 25
8	AH	211/211 (100%)	173 (82%)	38 (18%)	1 7
9	AI	371/371 (100%)	349 (94%)	22 (6%)	16 43
10	AJ	84/84 (100%)	66 (79%)	18 (21%)	1 4
11	AK	241/241 (100%)	219 (91%)	22 (9%)	7 27
15	Z	78/82 (95%)	65 (83%)	13 (17%)	2 8
16	g	173/267 (65%)	143 (83%)	30 (17%)	1 7
17	h	234/234 (100%)	209 (89%)	25 (11%)	5 21

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
18	i	287/313 (92%)	231 (80%)	56 (20%)	1 5
19	j	256/436 (59%)	236 (92%)	20 (8%)	10 33
20	k	248/252 (98%)	221 (89%)	27 (11%)	5 20
21	l	120/120 (100%)	110 (92%)	10 (8%)	9 31
22	m	138/138 (100%)	123 (89%)	15 (11%)	5 20
23	n	142/142 (100%)	137 (96%)	5 (4%)	31 58
24	o	196/215 (91%)	178 (91%)	18 (9%)	7 26
25	p	121/121 (100%)	103 (85%)	18 (15%)	2 11
26	q	131/131 (100%)	122 (93%)	9 (7%)	13 38
27	r	103/104 (99%)	94 (91%)	9 (9%)	8 29
28	s	99/100 (99%)	80 (81%)	19 (19%)	1 5
29	t	102/102 (100%)	90 (88%)	12 (12%)	4 17
30	u	220/220 (100%)	207 (94%)	13 (6%)	16 43
31	v	91/91 (100%)	87 (96%)	4 (4%)	24 52
32	w	187/187 (100%)	162 (87%)	25 (13%)	3 14
33	x	80/87 (92%)	64 (80%)	16 (20%)	1 5
34	y	69/69 (100%)	56 (81%)	13 (19%)	1 6
35	z	81/81 (100%)	70 (86%)	11 (14%)	3 14
36	0	36/36 (100%)	36 (100%)	0	100 100
37	1	323/323 (100%)	308 (95%)	15 (5%)	23 52
38	2	106/106 (100%)	100 (94%)	6 (6%)	17 44
39	3	112/112 (100%)	110 (98%)	2 (2%)	54 74
40	4	121/121 (100%)	116 (96%)	5 (4%)	26 54
41	5	284/284 (100%)	278 (98%)	6 (2%)	48 70
42	6	213/236 (90%)	203 (95%)	10 (5%)	22 51
43	7	95/95 (100%)	90 (95%)	5 (5%)	19 47
44	8	182/182 (100%)	174 (96%)	8 (4%)	24 52
45	9	176/186 (95%)	168 (96%)	8 (4%)	23 52
47	B	272/277 (98%)	236 (87%)	36 (13%)	3 14
48	C	210/210 (100%)	197 (94%)	13 (6%)	15 41
49	D	218/218 (100%)	196 (90%)	22 (10%)	6 23

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
50	E	242/242 (100%)	227 (94%)	15 (6%)	15 41
51	F	172/172 (100%)	167 (97%)	5 (3%)	37 63
52	G	68/68 (100%)	65 (96%)	3 (4%)	24 52
53	H	138/138 (100%)	131 (95%)	7 (5%)	20 48
54	I	108/117 (92%)	104 (96%)	4 (4%)	29 56
55	J	181/181 (100%)	167 (92%)	14 (8%)	10 33
56	K	167/167 (100%)	151 (90%)	16 (10%)	7 25
57	L	203/211 (96%)	195 (96%)	8 (4%)	27 55
58	M	136/136 (100%)	131 (96%)	5 (4%)	29 56
59	N	107/107 (100%)	102 (95%)	5 (5%)	22 51
60	O	200/200 (100%)	187 (94%)	13 (6%)	14 40
61	P	185/185 (100%)	180 (97%)	5 (3%)	40 65
62	Q	256/267 (96%)	244 (95%)	12 (5%)	22 51
63	R	303/308 (98%)	270 (89%)	33 (11%)	5 20
64	S	167/167 (100%)	157 (94%)	10 (6%)	16 42
65	T	204/213 (96%)	197 (97%)	7 (3%)	32 59
66	U	73/73 (100%)	68 (93%)	5 (7%)	13 38
67	V	60/69 (87%)	58 (97%)	2 (3%)	33 60
68	W	104/104 (100%)	102 (98%)	2 (2%)	52 72
69	X	56/56 (100%)	45 (80%)	11 (20%)	1 5
70	Y	40/40 (100%)	39 (98%)	1 (2%)	42 67
71	a	158/158 (100%)	150 (95%)	8 (5%)	20 48
72	b	144/144 (100%)	138 (96%)	6 (4%)	25 53
73	c	110/110 (100%)	108 (98%)	2 (2%)	54 74
74	d	191/199 (96%)	186 (97%)	5 (3%)	41 66
75	e	154/154 (100%)	127 (82%)	27 (18%)	1 7
76	f	113/113 (100%)	96 (85%)	17 (15%)	2 11
All	All	11775/12268 (96%)	10738 (91%)	1037 (9%)	11 28

All (1037) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	AA	81	MET

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Mol	Chain	Res	Type
1	AA	101	LYS
1	AA	103	GLU
2	AB	37	GLN
2	AB	46	ASN
2	AB	55	LEU
2	AB	59	PHE
2	AB	60	GLU
2	AB	75	LYS
2	AB	88	LEU
2	AB	90	GLN
2	AB	100	ILE
2	AB	102	GLU
2	AB	107	LYS
2	AB	108	LYS
2	AB	110	PHE
3	AC	10	VAL
3	AC	37	VAL
3	AC	45	LEU
3	AC	49	LEU
3	AC	61	TYR
3	AC	67	LEU
3	AC	85	SER
3	AC	101	VAL
3	AC	117	ARG
3	AC	118	LEU
3	AC	122	LYS
3	AC	125	ASP
3	AC	131	ASP
3	AC	132	TRP
3	AC	144	GLU
3	AC	152	TRP
3	AC	163	LEU
3	AC	177	PHE
3	AC	181	GLN
3	AC	192	ASP
3	AC	198	LYS
3	AC	204	ILE
3	AC	208	THR
3	AC	211	ASN
3	AC	239	ASN
3	AC	251	LEU
3	AC	255	VAL

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Mol	Chain	Res	Type
3	AC	264	ILE
3	AC	266	LYS
4	AD	35	GLU
4	AD	71	ASN
4	AD	73	LYS
4	AD	92	PHE
4	AD	94	MET
4	AD	100	CYS
4	AD	110	ARG
4	AD	116	LEU
4	AD	124	ARG
4	AD	138	LEU
4	AD	156	LEU
4	AD	171	LEU
4	AD	175	ARG
4	AD	182	MET
4	AD	191	ILE
4	AD	199	LEU
4	AD	217	ASN
4	AD	218	GLU
4	AD	220	ASN
4	AD	226	MET
4	AD	238	GLU
4	AD	239	ASP
4	AD	248	LYS
4	AD	249	THR
4	AD	258	LYS
4	AD	260	PHE
4	AD	264	GLU
4	AD	265	VAL
4	AD	281	LEU
4	AD	287	PHE
5	AE	34	TRP
5	AE	37	PHE
5	AE	57	THR
5	AE	60	LYS
5	AE	69	LYS
5	AE	78	ASP
5	AE	79	ILE
5	AE	81	ASP
5	AE	95	LYS
5	AE	104	ASP

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Mol	Chain	Res	Type
5	AE	107	TYR
5	AE	128	ILE
5	AE	131	ARG
5	AE	133	ILE
5	AE	134	TRP
5	AE	140	ILE
5	AE	142	VAL
5	AE	143	GLN
5	AE	147	THR
5	AE	150	PHE
5	AE	159	MET
5	AE	160	VAL
5	AE	164	TYR
5	AE	166	ILE
5	AE	169	LYS
5	AE	174	GLN
5	AE	178	VAL
5	AE	187	THR
5	AE	190	MET
5	AE	193	LEU
5	AE	195	ARG
5	AE	198	LEU
5	AE	200	ASP
5	AE	205	GLU
5	AE	211	LEU
5	AE	218	VAL
5	AE	219	LEU
5	AE	221	ARG
5	AE	231	LEU
5	AE	251	VAL
5	AE	267	LEU
5	AE	274	TYR
5	AE	280	ILE
5	AE	284	LEU
5	AE	288	ASP
5	AE	293	GLN
5	AE	295	LEU
5	AE	302	ARG
5	AE	306	ASN
5	AE	313	ASP
5	AE	318	HIS
5	AE	320	LYS

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Mol	Chain	Res	Type
5	AE	325	LEU
6	AF	30	ARG
6	AF	32	ILE
6	AF	39	PHE
6	AF	41	LYS
6	AF	45	GLN
6	AF	48	LYS
6	AF	58	MET
6	AF	73	MET
6	AF	76	TYR
6	AF	79	VAL
6	AF	81	THR
6	AF	91	ASP
6	AF	100	HIS
6	AF	115	LEU
6	AF	127	ASN
6	AF	130	LYS
6	AF	143	CYS
6	AF	147	TYR
6	AF	153	LEU
6	AF	157	ILE
6	AF	163	VAL
6	AF	171	VAL
6	AF	181	ARG
6	AF	204	ASP
6	AF	209	ASP
6	AF	218	VAL
6	AF	295	ILE
6	AF	296	TYR
6	AF	298	GLU
6	AF	300	VAL
6	AF	303	GLU
6	AF	307	TYR
6	AF	309	PHE
6	AF	317	VAL
6	AF	320	ARG
6	AF	333	ARG
6	AF	339	LEU
7	AG	2	LYS
7	AG	5	THR
7	AG	45	GLU
7	AG	47	ARG

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Mol	Chain	Res	Type
7	AG	71	ASN
7	AG	74	LEU
7	AG	103	ARG
7	AG	104	LEU
7	AG	121	ILE
7	AG	129	ASP
7	AG	130	GLU
7	AG	136	HIS
7	AG	137	MET
7	AG	162	TYR
7	AG	165	MET
7	AG	171	HIS
7	AG	203	VAL
7	AG	206	ILE
7	AG	207	GLU
7	AG	230	LEU
8	AH	1	MET
8	AH	8	TYR
8	AH	11	LYS
8	AH	14	VAL
8	AH	15	PHE
8	AH	22	LEU
8	AH	27	THR
8	AH	30	THR
8	AH	32	ILE
8	AH	33	ILE
8	AH	37	LYS
8	AH	40	LYS
8	AH	62	LEU
8	AH	70	ASP
8	AH	79	VAL
8	AH	104	ARG
8	AH	112	ARG
8	AH	119	LEU
8	AH	128	ARG
8	AH	130	LYS
8	AH	137	GLU
8	AH	141	GLU
8	AH	143	LEU
8	AH	144	ASN
8	AH	150	ASP
8	AH	153	ILE

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Mol	Chain	Res	Type
8	AH	160	MET
8	AH	165	LEU
8	AH	166	ARG
8	AH	174	GLU
8	AH	175	LEU
8	AH	187	LEU
8	AH	199	LEU
8	AH	202	LEU
8	AH	208	GLU
8	AH	215	GLN
8	AH	230	GLU
8	AH	231	PHE
9	AI	49	LYS
9	AI	52	THR
9	AI	56	LEU
9	AI	61	THR
9	AI	70	GLN
9	AI	131	THR
9	AI	138	LEU
9	AI	147	ILE
9	AI	154	VAL
9	AI	174	ILE
9	AI	232	PHE
9	AI	246	VAL
9	AI	290	THR
9	AI	298	LEU
9	AI	323	LEU
9	AI	343	LEU
9	AI	349	ASP
9	AI	354	THR
9	AI	362	ILE
9	AI	407	LYS
9	AI	425	LEU
9	AI	449	HIS
10	AJ	3	VAL
10	AJ	14	LEU
10	AJ	39	LEU
10	AJ	43	SER
10	AJ	44	VAL
10	AJ	50	ASN
10	AJ	52	ASP
10	AJ	53	ILE

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Mol	Chain	Res	Type
10	AJ	54	LEU
10	AJ	55	LYS
10	AJ	56	PHE
10	AJ	57	ARG
10	AJ	62	LEU
10	AJ	68	PHE
10	AJ	71	LEU
10	AJ	76	ARG
10	AJ	81	GLU
10	AJ	93	LYS
11	AK	65	ILE
11	AK	96	TYR
11	AK	102	ASN
11	AK	125	ARG
11	AK	126	ASP
11	AK	129	LEU
11	AK	134	PHE
11	AK	137	LEU
11	AK	151	GLN
11	AK	164	LEU
11	AK	167	GLN
11	AK	169	ARG
11	AK	172	TYR
11	AK	173	LYS
11	AK	174	ARG
11	AK	187	THR
11	AK	199	LYS
11	AK	216	LEU
11	AK	236	MET
11	AK	265	LEU
11	AK	267	GLU
11	AK	290	ARG
15	Z	15	ARG
15	Z	17	LYS
15	Z	23	ILE
15	Z	34	MET
15	Z	37	LEU
15	Z	38	LEU
15	Z	39	GLN
15	Z	51	CYS
15	Z	54	LEU
15	Z	55	VAL

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Mol	Chain	Res	Type
15	Z	70	ARG
15	Z	80	TYR
15	Z	89	ILE
16	g	5	GLU
16	g	11	ARG
16	g	18	ASN
16	g	29	PHE
16	g	43	LEU
16	g	51	LYS
16	g	63	LEU
16	g	64	VAL
16	g	70	THR
16	g	71	LEU
16	g	72	GLU
16	g	83	THR
16	g	84	GLN
16	g	92	GLU
16	g	105	ASN
16	g	109	LYS
16	g	203	THR
16	g	210	LEU
16	g	213	LYS
16	g	226	VAL
16	g	254	VAL
16	g	255	VAL
16	g	256	PHE
16	g	267	MET
16	g	273	MET
16	g	281	LEU
16	g	282	GLU
16	g	293	MET
16	g	296	ARG
16	g	297	LEU
17	h	133	ILE
17	h	135	SER
17	h	144	GLN
17	h	150	GLN
17	h	155	MET
17	h	156	ARG
17	h	159	LYS
17	h	167	VAL
17	h	171	HIS

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Mol	Chain	Res	Type
17	h	176	TYR
17	h	180	PRO
17	h	181	GLU
17	h	184	THR
17	h	213	GLU
17	h	247	LEU
17	h	249	LEU
17	h	295	ILE
17	h	311	THR
17	h	313	LYS
17	h	327	GLU
17	h	337	LYS
17	h	342	THR
17	h	348	THR
17	h	356	THR
17	h	394	LYS
18	i	80	ILE
18	i	87	LEU
18	i	90	MET
18	i	94	ASN
18	i	101	ASN
18	i	107	MET
18	i	114	LEU
18	i	115	ILE
18	i	118	LEU
18	i	119	LEU
18	i	122	MET
18	i	125	LEU
18	i	126	LYS
18	i	137	MET
18	i	146	LEU
18	i	152	LYS
18	i	158	ASN
18	i	166	ASN
18	i	170	ASN
18	i	175	MET
18	i	176	MET
18	i	177	ASN
18	i	179	LEU
18	i	182	ILE
18	i	184	ASN
18	i	187	MET

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Mol	Chain	Res	Type
18	i	190	ASN
18	i	191	LEU
18	i	206	GLU
18	i	209	LYS
18	i	215	LEU
18	i	218	ASP
18	i	220	PHE
18	i	230	ASP
18	i	243	MET
18	i	244	LEU
18	i	276	ILE
18	i	278	LEU
18	i	306	TYR
18	i	310	THR
18	i	312	ASP
18	i	316	MET
18	i	318	ILE
18	i	319	LEU
18	i	324	LEU
18	i	329	ILE
18	i	331	PHE
18	i	334	ARG
18	i	342	THR
18	i	348	LEU
18	i	368	LEU
18	i	374	ASN
18	i	377	LEU
18	i	379	ASN
18	i	384	ASN
18	i	386	ASN
19	j	3	ARG
19	j	18	THR
19	j	29	TYR
19	j	47	THR
19	j	50	GLN
19	j	67	THR
19	j	72	LYS
19	j	90	GLU
19	j	100	VAL
19	j	109	LEU
19	j	119	ARG
19	j	150	PHE

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Mol	Chain	Res	Type
19	j	164	LYS
19	j	188	GLU
19	j	386	ILE
19	j	388	LEU
19	j	419	LYS
19	j	457	VAL
19	j	474	HIS
19	j	483	ARG
20	k	15	HIS
20	k	20	LEU
20	k	27	GLU
20	k	59	LEU
20	k	60	ASP
20	k	83	GLU
20	k	94	GLN
20	k	99	LEU
20	k	104	ASN
20	k	106	LEU
20	k	150	VAL
20	k	152	LYS
20	k	157	GLN
20	k	163	ILE
20	k	169	LEU
20	k	207	GLU
20	k	208	ILE
20	k	242	VAL
20	k	245	VAL
20	k	248	GLU
20	k	258	LEU
20	k	262	VAL
20	k	269	MET
20	k	287	ASP
20	k	297	LEU
20	k	299	ASP
20	k	301	ARG
21	l	1	MET
21	l	8	LEU
21	l	18	LYS
21	l	35	ASN
21	l	38	VAL
21	l	58	GLN
21	l	82	LEU

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Mol	Chain	Res	Type
21	l	102	ASP
21	l	105	LEU
21	l	131	ILE
22	m	88	ILE
22	m	123	ARG
22	m	126	LYS
22	m	129	LYS
22	m	134	LEU
22	m	145	THR
22	m	164	MET
22	m	166	THR
22	m	168	THR
22	m	175	LYS
22	m	184	ASN
22	m	212	LEU
22	m	214	GLU
22	m	228	GLU
22	m	246	LEU
23	n	1	MET
23	n	29	THR
23	n	75	VAL
23	n	82	ASN
23	n	147	ASP
24	o	55	ILE
24	o	63	ARG
24	o	67	LYS
24	o	91	LEU
24	o	98	LEU
24	o	106	LEU
24	o	117	ASP
24	o	120	LEU
24	o	183	LEU
24	o	215	THR
24	o	225	GLU
24	o	228	MET
24	o	233	LYS
24	o	251	VAL
24	o	261	ARG
24	o	267	LYS
24	o	270	ARG
24	o	272	MET
25	p	18	ARG

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Mol	Chain	Res	Type
25	p	22	VAL
25	p	44	ASP
25	p	51	ASP
25	p	54	ASN
25	p	56	ASP
25	p	62	ILE
25	p	64	ARG
25	p	86	TRP
25	p	87	THR
25	p	94	VAL
25	p	116	THR
25	p	117	ASN
25	p	121	LEU
25	p	128	ILE
25	p	133	MET
25	p	147	GLU
25	p	148	ILE
26	q	66	VAL
26	q	83	THR
26	q	106	LEU
26	q	108	TYR
26	q	109	ASN
26	q	126	LEU
26	q	169	MET
26	q	187	GLU
26	q	214	MET
27	r	43	ARG
27	r	66	MET
27	r	67	VAL
27	r	100	HIS
27	r	101	ASP
27	r	117	ASP
27	r	135	VAL
27	r	137	ASN
27	r	144	LYS
28	s	2	VAL
28	s	4	HIS
28	s	5	ILE
28	s	6	LEU
28	s	15	VAL
28	s	27	ILE
28	s	34	LYS

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Mol	Chain	Res	Type
28	s	35	ILE
28	s	47	MET
28	s	50	LEU
28	s	56	MET
28	s	62	LEU
28	s	65	MET
28	s	67	ILE
28	s	85	ILE
28	s	93	HIS
28	s	97	LEU
28	s	116	LYS
28	s	120	ARG
29	t	11	LYS
29	t	12	LEU
29	t	23	ARG
29	t	53	LYS
29	t	56	LEU
29	t	70	ARG
29	t	90	ASP
29	t	95	ARG
29	t	111	LYS
29	t	112	LYS
29	t	114	ILE
29	t	115	TRP
30	u	40	PHE
30	u	50	ASN
30	u	53	LYS
30	u	65	ASP
30	u	83	LEU
30	u	91	LYS
30	u	119	ASN
30	u	123	VAL
30	u	170	ASP
30	u	175	GLU
30	u	183	VAL
30	u	203	ARG
30	u	243	ASP
31	v	53	ARG
31	v	63	LYS
31	v	72	THR
31	v	104	LYS
32	w	12	SER

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Mol	Chain	Res	Type
32	w	20	VAL
32	w	24	VAL
32	w	28	VAL
32	w	37	LEU
32	w	42	ASP
32	w	48	GLU
32	w	56	ASP
32	w	57	LEU
32	w	58	VAL
32	w	68	LYS
32	w	79	ARG
32	w	91	GLU
32	w	108	LEU
32	w	114	ARG
32	w	127	ASP
32	w	131	ILE
32	w	144	LEU
32	w	146	GLU
32	w	164	LEU
32	w	193	LEU
32	w	197	ASP
32	w	198	LEU
32	w	223	LEU
32	w	225	ARG
33	x	41	ILE
33	x	49	LEU
33	x	51	LYS
33	x	62	MET
33	x	81	ASP
33	x	82	ILE
33	x	88	ASN
33	x	92	PHE
33	x	93	TYR
33	x	95	ARG
33	x	104	THR
33	x	110	GLN
33	x	115	THR
33	x	117	LEU
33	x	137	LEU
33	x	138	MET
34	y	21	LEU
34	y	24	ARG

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Mol	Chain	Res	Type
34	y	25	GLU
34	y	42	ILE
34	y	47	VAL
34	y	49	LEU
34	y	51	PHE
34	y	58	GLU
34	y	59	TYR
34	y	62	ILE
34	y	76	PHE
34	y	80	ARG
34	y	82	ARG
35	z	88	ILE
35	z	93	VAL
35	z	99	ARG
35	z	101	ASN
35	z	106	ILE
35	z	133	LYS
35	z	138	PHE
35	z	144	LYS
35	z	156	LYS
35	z	165	LEU
35	z	171	ASP
37	1	32	LEU
37	1	45	GLN
37	1	62	ILE
37	1	102	ASP
37	1	105	LEU
37	1	155	LEU
37	1	165	ILE
37	1	171	THR
37	1	173	VAL
37	1	216	LEU
37	1	243	THR
37	1	246	CYS
37	1	290	VAL
37	1	296	GLN
37	1	315	LEU
38	2	36	SER
38	2	46	LEU
38	2	64	GLU
38	2	100	ARG
38	2	104	LEU

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Mol	Chain	Res	Type
38	2	124	ARG
39	3	25	ARG
39	3	47	GLN
40	4	11	ILE
40	4	13	ARG
40	4	100	LEU
40	4	102	LYS
40	4	132	LEU
41	5	70	LEU
41	5	244	LEU
41	5	271	THR
41	5	279	VAL
41	5	295	THR
41	5	320	VAL
42	6	44	LEU
42	6	111	LYS
42	6	159	GLU
42	6	160	ARG
42	6	161	GLN
42	6	170	VAL
42	6	198	GLU
42	6	213	SER
42	6	266	VAL
42	6	277	LEU
43	7	47	LEU
43	7	84	ASN
43	7	111	LEU
43	7	121	VAL
43	7	144	LYS
44	8	51	HIS
44	8	123	ILE
44	8	124	THR
44	8	179	LEU
44	8	191	GLU
44	8	202	LEU
44	8	238	LYS
44	8	258	LEU
45	9	56	LEU
45	9	86	LEU
45	9	104	ASN
45	9	108	ASN
45	9	118	GLN

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Mol	Chain	Res	Type
45	9	124	LEU
45	9	210	GLU
45	9	223	LYS
47	B	61	LEU
47	B	62	LYS
47	B	66	ASN
47	B	71	VAL
47	B	72	THR
47	B	73	LEU
47	B	76	GLN
47	B	78	GLU
47	B	81	LYS
47	B	83	ARG
47	B	93	MET
47	B	99	VAL
47	B	127	ARG
47	B	152	THR
47	B	154	LEU
47	B	159	ARG
47	B	169	ARG
47	B	176	ARG
47	B	180	ILE
47	B	190	GLU
47	B	191	LEU
47	B	194	ILE
47	B	229	ILE
47	B	230	LEU
47	B	232	VAL
47	B	235	THR
47	B	237	ARG
47	B	239	ASN
47	B	241	LEU
47	B	283	LYS
47	B	294	HIS
47	B	302	VAL
47	B	311	ILE
47	B	316	ARG
47	B	327	LEU
47	B	338	MET
48	C	23	ARG
48	C	27	VAL
48	C	61	LEU

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Mol	Chain	Res	Type
48	C	86	GLU
48	C	97	THR
48	C	106	CYS
48	C	148	LEU
48	C	164	GLN
48	C	175	LYS
48	C	234	VAL
48	C	248	VAL
48	C	258	SER
48	C	263	GLN
49	D	30	ASN
49	D	52	LEU
49	D	56	THR
49	D	58	VAL
49	D	62	THR
49	D	65	VAL
49	D	103	ARG
49	D	115	ARG
49	D	124	ARG
49	D	142	GLU
49	D	143	LEU
49	D	156	LEU
49	D	161	LYS
49	D	182	LEU
49	D	199	GLU
49	D	200	ILE
49	D	216	LEU
49	D	222	LEU
49	D	235	SER
49	D	237	ASP
49	D	244	ASP
49	D	260	GLN
50	E	38	SER
50	E	82	LEU
50	E	83	LEU
50	E	138	GLU
50	E	154	LEU
50	E	165	GLN
50	E	189	HIS
50	E	200	LYS
50	E	209	LEU
50	E	249	ILE

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Mol	Chain	Res	Type
50	E	250	ASP
50	E	252	ASN
50	E	254	ASP
50	E	258	LYS
50	E	259	THR
51	F	48	THR
51	F	80	LYS
51	F	86	VAL
51	F	143	LYS
51	F	185	LEU
52	G	12	LEU
52	G	31	GLN
52	G	80	LEU
53	H	19	VAL
53	H	46	VAL
53	H	60	THR
53	H	83	ARG
53	H	99	LYS
53	H	123	LEU
53	H	160	ASN
54	I	4	LEU
54	I	18	LEU
54	I	26	ARG
54	I	109	THR
55	J	60	ILE
55	J	97	LYS
55	J	115	LYS
55	J	130	LEU
55	J	132	GLU
55	J	157	MET
55	J	161	ARG
55	J	193	SER
55	J	209	LYS
55	J	227	GLN
55	J	241	ARG
55	J	243	THR
55	J	261	VAL
55	J	273	GLU
56	K	68	THR
56	K	94	ASP
56	K	98	MET
56	K	104	LEU

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Mol	Chain	Res	Type
56	K	113	LEU
56	K	114	CYS
56	K	127	ARG
56	K	139	MET
56	K	150	GLU
56	K	158	GLU
56	K	163	GLU
56	K	167	LYS
56	K	184	LEU
56	K	191	SER
56	K	196	LYS
56	K	227	LYS
57	L	8	LYS
57	L	51	ILE
57	L	62	ASN
57	L	68	GLU
57	L	69	LEU
57	L	138	VAL
57	L	177	LYS
57	L	194	LEU
58	M	28	VAL
58	M	102	LEU
58	M	109	LEU
58	M	110	LEU
58	M	161	LEU
59	N	46	THR
59	N	97	LEU
59	N	105	VAL
59	N	109	ILE
59	N	130	THR
60	O	103	GLN
60	O	107	LEU
60	O	110	GLN
60	O	112	LEU
60	O	140	LEU
60	O	159	LEU
60	O	163	VAL
60	O	203	ILE
60	O	212	GLN
60	O	228	LEU
60	O	276	ARG
60	O	293	GLN

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Mol	Chain	Res	Type
60	O	302	VAL
61	P	72	GLN
61	P	88	LYS
61	P	113	PHE
61	P	161	THR
61	P	231	LEU
62	Q	11	VAL
62	Q	14	ARG
62	Q	51	GLU
62	Q	103	THR
62	Q	129	LYS
62	Q	131	LEU
62	Q	196	LEU
62	Q	216	ASN
62	Q	243	ILE
62	Q	246	LEU
62	Q	276	THR
62	Q	293	LYS
63	R	45	ARG
63	R	57	VAL
63	R	62	ILE
63	R	77	VAL
63	R	117	LEU
63	R	126	VAL
63	R	147	ILE
63	R	153	LEU
63	R	159	LEU
63	R	160	LYS
63	R	168	LYS
63	R	175	LYS
63	R	180	LEU
63	R	183	GLU
63	R	184	LEU
63	R	188	ILE
63	R	192	GLU
63	R	198	LEU
63	R	206	LYS
63	R	227	ARG
63	R	229	LYS
63	R	240	LEU
63	R	242	GLU
63	R	265	GLU

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Mol	Chain	Res	Type
63	R	272	GLU
63	R	278	LEU
63	R	293	GLU
63	R	294	THR
63	R	297	ASP
63	R	313	THR
63	R	328	VAL
63	R	332	THR
63	R	346	VAL
64	S	67	LYS
64	S	79	VAL
64	S	95	LYS
64	S	96	TRP
64	S	102	LYS
64	S	116	ILE
64	S	124	LYS
64	S	126	ILE
64	S	132	ILE
64	S	150	THR
65	T	17	THR
65	T	45	ASN
65	T	115	ARG
65	T	131	VAL
65	T	161	LEU
65	T	170	LEU
65	T	203	THR
66	U	6	VAL
66	U	8	LEU
66	U	24	LYS
66	U	31	ARG
66	U	60	GLU
67	V	61	SER
67	V	62	GLN
68	W	167	LYS
68	W	173	LEU
69	X	11	ILE
69	X	13	LEU
69	X	27	ILE
69	X	32	PRO
69	X	33	LEU
69	X	37	VAL
69	X	43	VAL

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Mol	Chain	Res	Type
69	X	46	HIS
69	X	47	VAL
69	X	55	ARG
69	X	63	LEU
70	Y	71	LEU
71	a	25	LYS
71	a	45	LEU
71	a	70	THR
71	a	85	LEU
71	a	105	SER
71	a	126	ARG
71	a	144	ILE
71	a	173	ARG
72	b	32	THR
72	b	46	LYS
72	b	75	VAL
72	b	88	LEU
72	b	119	LEU
72	b	152	GLN
73	c	113	ILE
73	c	121	LYS
74	d	22	ILE
74	d	66	LEU
74	d	68	ARG
74	d	192	LEU
74	d	213	LEU
75	e	51	THR
75	e	54	ILE
75	e	60	LEU
75	e	70	VAL
75	e	87	ILE
75	e	94	LEU
75	e	101	LEU
75	e	106	LEU
75	e	111	LEU
75	e	126	LYS
75	e	133	LEU
75	e	134	LYS
75	e	139	THR
75	e	142	TYR
75	e	145	THR
75	e	164	LEU

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Mol	Chain	Res	Type
75	e	165	MET
75	e	171	VAL
75	e	178	VAL
75	e	187	LEU
75	e	190	LYS
75	e	193	MET
75	e	203	MET
75	e	204	LEU
75	e	207	LEU
75	e	209	LEU
75	e	210	VAL
76	f	1	MET
76	f	8	VAL
76	f	11	LYS
76	f	14	VAL
76	f	29	LEU
76	f	34	ILE
76	f	39	PHE
76	f	50	TYR
76	f	54	VAL
76	f	56	VAL
76	f	72	MET
76	f	132	ARG
76	f	137	GLU
76	f	138	MET
76	f	139	GLU
76	f	148	VAL
76	f	150	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (301) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	37	GLN
2	AB	46	ASN
2	AB	83	GLN
2	AB	92	HIS
2	AB	96	ASN
2	AB	101	HIS
2	AB	128	ASN
3	AC	9	HIS
3	AC	56	GLN
3	AC	76	GLN

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Mol	Chain	Res	Type
3	AC	90	HIS
3	AC	95	ASN
3	AC	169	ASN
3	AC	180	ASN
4	AD	21	HIS
4	AD	118	GLN
4	AD	160	ASN
4	AD	256	GLN
4	AD	257	GLN
5	AE	70	ASN
5	AE	100	GLN
5	AE	141	HIS
5	AE	143	GLN
5	AE	229	ASN
5	AE	249	GLN
5	AE	260	ASN
5	AE	298	GLN
5	AE	306	ASN
5	AE	318	HIS
6	AF	60	GLN
6	AF	74	ASN
6	AF	108	GLN
6	AF	135	GLN
6	AF	146	ASN
6	AF	193	ASN
6	AF	199	ASN
6	AF	311	ASN
6	AF	337	ASN
7	AG	4	GLN
7	AG	68	HIS
7	AG	125	ASN
7	AG	136	HIS
7	AG	139	GLN
8	AH	34	ASN
8	AH	93	GLN
8	AH	120	HIS
8	AH	126	GLN
8	AH	181	ASN
8	AH	207	ASN
8	AH	215	GLN
8	AH	225	ASN
9	AI	59	ASN

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Mol	Chain	Res	Type
9	AI	62	ASN
9	AI	70	GLN
9	AI	82	ASN
9	AI	98	ASN
9	AI	116	ASN
9	AI	120	GLN
9	AI	132	ASN
9	AI	141	HIS
9	AI	188	ASN
9	AI	201	GLN
9	AI	234	ASN
9	AI	267	ASN
9	AI	372	HIS
9	AI	435	ASN
9	AI	449	HIS
10	AJ	21	GLN
11	AK	63	GLN
11	AK	98	ASN
11	AK	122	ASN
11	AK	124	ASN
11	AK	127	ASN
11	AK	142	GLN
11	AK	148	HIS
11	AK	151	GLN
11	AK	155	ASN
11	AK	170	GLN
11	AK	194	HIS
11	AK	196	ASN
11	AK	229	HIS
11	AK	252	HIS
15	Z	28	ASN
15	Z	46	HIS
15	Z	81	HIS
15	Z	90	ASN
15	Z	94	HIS
16	g	34	GLN
16	g	223	GLN
16	g	258	GLN
16	g	294	HIS
17	h	144	GLN
17	h	153	HIS
17	h	255	GLN

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Mol	Chain	Res	Type
17	h	298	ASN
17	h	328	ASN
17	h	385	GLN
17	h	392	ASN
18	i	79	ASN
18	i	82	ASN
18	i	86	HIS
18	i	88	ASN
18	i	91	ASN
18	i	94	ASN
18	i	99	ASN
18	i	108	ASN
18	i	142	ASN
18	i	166	ASN
18	i	167	ASN
18	i	184	ASN
18	i	185	ASN
18	i	259	ASN
18	i	263	ASN
18	i	265	ASN
18	i	280	ASN
18	i	375	HIS
18	i	384	ASN
18	i	390	ASN
18	i	396	ASN
19	j	66	GLN
19	j	127	HIS
19	j	129	ASN
19	j	178	GLN
19	j	403	ASN
19	j	407	GLN
19	j	409	ASN
19	j	415	GLN
19	j	439	HIS
20	k	15	HIS
20	k	86	ASN
20	k	157	GLN
20	k	176	ASN
20	k	230	HIS
20	k	267	ASN
20	k	283	GLN
21	l	13	ASN

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Mol	Chain	Res	Type
21	l	34	GLN
21	l	58	GLN
21	l	61	HIS
22	m	97	GLN
22	m	116	HIS
22	m	119	ASN
22	m	131	GLN
22	m	144	GLN
22	m	201	ASN
22	m	232	GLN
22	m	234	HIS
23	n	14	GLN
23	n	41	GLN
23	n	42	GLN
23	n	82	ASN
23	n	100	HIS
24	o	119	GLN
24	o	201	GLN
24	o	229	HIS
24	o	247	HIS
25	p	23	ASN
25	p	52	ASN
25	p	95	HIS
25	p	101	ASN
25	p	141	ASN
26	q	79	HIS
26	q	85	ASN
26	q	88	HIS
26	q	120	GLN
27	r	57	GLN
28	s	48	HIS
28	s	78	ASN
28	s	96	HIS
28	s	102	GLN
28	s	106	ASN
28	s	107	ASN
29	t	34	ASN
29	t	76	ASN
29	t	106	ASN
30	u	187	ASN
30	u	195	HIS
30	u	201	ASN

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Mol	Chain	Res	Type
30	u	232	GLN
30	u	246	ASN
30	u	253	GLN
31	v	27	ASN
32	w	5	ASN
32	w	84	GLN
32	w	102	GLN
32	w	187	GLN
32	w	202	GLN
33	x	110	GLN
33	x	111	HIS
33	x	133	GLN
34	y	17	ASN
34	y	87	GLN
35	z	97	GLN
35	z	101	ASN
35	z	154	HIS
37	1	120	GLN
37	1	141	HIS
37	1	145	GLN
37	1	201	ASN
37	1	212	GLN
37	1	222	GLN
37	1	230	ASN
37	1	253	ASN
38	2	70	GLN
38	2	80	GLN
38	2	81	GLN
38	2	83	GLN
38	2	90	GLN
38	2	142	HIS
39	3	118	GLN
39	3	132	GLN
40	4	115	ASN
40	4	138	HIS
41	5	78	GLN
41	5	102	HIS
41	5	147	ASN
41	5	277	GLN
42	6	194	HIS
42	6	281	ASN
43	7	53	HIS

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Mol	Chain	Res	Type
43	7	58	ASN
44	8	149	GLN
44	8	235	GLN
45	9	118	GLN
45	9	141	GLN
45	9	231	ASN
47	B	66	ASN
47	B	76	GLN
47	B	130	HIS
47	B	135	ASN
47	B	148	HIS
47	B	179	HIS
47	B	310	ASN
47	B	314	GLN
47	B	376	ASN
48	C	95	HIS
48	C	107	GLN
48	C	164	GLN
48	C	209	GLN
48	C	228	HIS
48	C	232	GLN
48	C	243	ASN
48	C	263	GLN
49	D	137	ASN
49	D	185	ASN
49	D	260	GLN
50	E	110	ASN
50	E	252	ASN
50	E	253	GLN
50	E	267	ASN
50	E	284	GLN
51	F	74	HIS
51	F	176	GLN
53	H	43	HIS
53	H	145	HIS
54	I	80	ASN
55	J	110	GLN
55	J	158	ASN
55	J	227	GLN
55	J	239	GLN
56	K	39	HIS
56	K	124	ASN

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Mol	Chain	Res	Type
56	K	202	ASN
57	L	72	GLN
57	L	154	ASN
58	M	139	HIS
59	N	107	HIS
60	O	90	ASN
60	O	166	GLN
60	O	197	HIS
61	P	82	ASN
61	P	136	GLN
61	P	237	ASN
62	Q	206	GLN
63	R	157	ASN
63	R	255	ASN
63	R	267	HIS
63	R	276	GLN
64	S	47	HIS
64	S	64	ASN
65	T	89	HIS
65	T	117	GLN
66	U	61	HIS
67	V	74	GLN
68	W	123	GLN
71	a	47	HIS
71	a	96	GLN
71	a	99	ASN
71	a	159	HIS
71	a	194	GLN
72	b	151	ASN
73	c	27	GLN
73	c	40	GLN
73	c	44	GLN
74	d	36	GLN
74	d	91	ASN
74	d	147	ASN
75	e	71	HIS
75	e	99	ASN
75	e	146	ASN
75	e	196	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
12	AL	1487/1498 (99%)	622 (41%)	140 (9%)
13	AM	75/76 (98%)	46 (61%)	8 (10%)
14	AN	13/13 (100%)	10 (76%)	6 (46%)
46	A	2849/2876 (99%)	978 (34%)	184 (6%)
All	All	4424/4463 (99%)	1656 (37%)	338 (7%)

All (1656) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
12	AL	14	A
12	AL	15	A
12	AL	16	G
12	AL	20	A
12	AL	39	A
12	AL	40	G
12	AL	46	A
12	AL	51	G
12	AL	54	C
12	AL	55	A
12	AL	57	G
12	AL	58	A
12	AL	59	C
12	AL	61	C
12	AL	66	G
12	AL	71	A
12	AL	72	U
12	AL	73	A
12	AL	76	U
12	AL	77	U
12	AL	78	U
12	AL	79	A
12	AL	80	U
12	AL	81	U
12	AL	82	A
12	AL	84	U
12	AL	85	G
12	AL	90	G
12	AL	91	A
12	AL	94	A
12	AL	95	U
12	AL	96	A
12	AL	97	A
12	AL	99	U

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Mol	Chain	Res	Type
12	AL	100	A
12	AL	101	U
12	AL	102	G
12	AL	105	G
12	AL	108	U
12	AL	109	A
12	AL	110	A
12	AL	111	A
12	AL	115	G
12	AL	116	A
12	AL	119	A
12	AL	121	U
12	AL	123	U
12	AL	124	U
12	AL	126	U
12	AL	129	G
12	AL	130	G
12	AL	132	A
12	AL	133	U
12	AL	134	U
12	AL	135	A
12	AL	136	A
12	AL	137	U
12	AL	138	G
12	AL	139	A
12	AL	141	C
12	AL	143	A
12	AL	144	U
12	AL	146	G
12	AL	148	A
12	AL	156	A
12	AL	158	U
12	AL	159	A
12	AL	161	U
12	AL	163	A
12	AL	164	A
12	AL	182	A
12	AL	197	A
12	AL	198	A
12	AL	208	U
12	AL	209	A
12	AL	215	U

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Mol	Chain	Res	Type
12	AL	216	A
12	AL	218	A
12	AL	219	U
12	AL	220	A
12	AL	223	U
12	AL	224	A
12	AL	227	U
12	AL	229	U
12	AL	232	U
12	AL	234	A
12	AL	235	A
12	AL	241	U
12	AL	243	A
12	AL	244	U
12	AL	247	U
12	AL	248	U
12	AL	251	G
12	AL	254	A
12	AL	255	G
12	AL	256	U
12	AL	257	A
12	AL	266	A
12	AL	267	A
12	AL	268	G
12	AL	269	A
12	AL	270	G
12	AL	271	U
12	AL	272	U
12	AL	273	A
12	AL	280	G
12	AL	284	A
12	AL	285	C
12	AL	286	G
12	AL	288	U
12	AL	294	A
12	AL	298	A
12	AL	299	U
12	AL	307	G
12	AL	308	U
12	AL	311	G
12	AL	312	A
12	AL	334	U

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Mol	Chain	Res	Type
12	AL	335	A
12	AL	337	A
12	AL	347	U
12	AL	348	A
12	AL	350	A
12	AL	351	A
12	AL	352	G
12	AL	356	C
12	AL	371	U
12	AL	376	C
12	AL	377	A
12	AL	380	G
12	AL	389	A
12	AL	392	G
12	AL	393	A
12	AL	401	A
12	AL	406	U
12	AL	409	G
12	AL	410	G
12	AL	414	A
12	AL	415	U
12	AL	481	A
12	AL	482	U
12	AL	486	U
12	AL	487	A
12	AL	488	A
12	AL	489	A
12	AL	492	G
12	AL	495	U
12	AL	496	A
12	AL	497	A
12	AL	498	A
12	AL	501	U
12	AL	502	A
12	AL	506	U
12	AL	507	C
12	AL	508	C
12	AL	509	A
12	AL	510	U
12	AL	511	A
12	AL	518	U
12	AL	519	A

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Mol	Chain	Res	Type
12	AL	523	U
12	AL	524	A
12	AL	529	U
12	AL	531	U
12	AL	532	U
12	AL	533	A
12	AL	537	A
12	AL	538	C
12	AL	539	C
12	AL	541	U
12	AL	544	A
12	AL	545	U
12	AL	552	A
12	AL	553	U
12	AL	556	G
12	AL	557	G
12	AL	558	A
12	AL	601	U
12	AL	602	A
12	AL	603	U
12	AL	604	A
12	AL	606	U
12	AL	610	A
12	AL	611	U
12	AL	612	A
12	AL	623	A
12	AL	624	U
12	AL	625	A
12	AL	629	G
12	AL	632	C
12	AL	633	C
12	AL	638	G
12	AL	641	G
12	AL	644	G
12	AL	645	U
12	AL	646	A
12	AL	647	A
12	AL	648	C
12	AL	651	A
12	AL	655	A
12	AL	656	G
12	AL	661	A

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Mol	Chain	Res	Type
12	AL	668	A
12	AL	669	U
12	AL	673	A
12	AL	674	A
12	AL	676	G
12	AL	682	A
12	AL	683	A
12	AL	684	G
12	AL	685	G
12	AL	686	A
12	AL	687	U
12	AL	694	A
12	AL	696	U
12	AL	698	A
12	AL	704	A
12	AL	709	A
12	AL	711	A
12	AL	715	U
12	AL	716	A
12	AL	717	G
12	AL	720	U
12	AL	727	A
12	AL	728	A
12	AL	729	U
12	AL	731	U
12	AL	732	A
12	AL	740	A
12	AL	741	A
12	AL	746	A
12	AL	747	A
12	AL	752	A
12	AL	753	A
12	AL	760	A
12	AL	761	A
12	AL	762	U
12	AL	763	A
12	AL	764	A
12	AL	765	U
12	AL	767	A
12	AL	768	U
12	AL	769	A
12	AL	770	A

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Mol	Chain	Res	Type
12	AL	774	U
12	AL	775	U
12	AL	780	G
12	AL	783	U
12	AL	784	A
12	AL	788	U
12	AL	789	A
12	AL	791	G
12	AL	793	G
12	AL	794	A
12	AL	796	A
12	AL	797	A
12	AL	798	U
12	AL	799	A
12	AL	800	U
12	AL	817	G
12	AL	820	A
12	AL	822	U
12	AL	823	G
12	AL	824	A
12	AL	825	G
12	AL	827	G
12	AL	836	U
12	AL	839	A
12	AL	853	U
12	AL	859	A
12	AL	870	U
12	AL	874	G
12	AL	877	G
12	AL	878	U
12	AL	880	A
12	AL	882	C
12	AL	891	C
12	AL	892	A
12	AL	898	U
12	AL	899	U
12	AL	900	A
12	AL	912	A
12	AL	913	U
12	AL	914	A
12	AL	915	U
12	AL	916	A

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Mol	Chain	Res	Type
12	AL	917	U
12	AL	918	A
12	AL	923	A
12	AL	924	U
12	AL	931	A
12	AL	933	A
12	AL	934	U
12	AL	936	A
12	AL	937	A
12	AL	938	A
12	AL	949	U
12	AL	950	G
12	AL	952	A
12	AL	972	A
12	AL	979	A
12	AL	991	G
12	AL	992	U
12	AL	993	U
12	AL	994	A
12	AL	998	A
12	AL	999	C
12	AL	1000	U
12	AL	1001	U
12	AL	1003	A
12	AL	1004	G
12	AL	1005	C
12	AL	1008	U
12	AL	1009	G
12	AL	1010	G
12	AL	1011	A
12	AL	1012	G
12	AL	1013	C
12	AL	1015	U
12	AL	1017	U
12	AL	1019	A
12	AL	1020	U
12	AL	1022	U
12	AL	1023	A
12	AL	1024	A
12	AL	1025	U
12	AL	1026	U
12	AL	1027	C

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Mol	Chain	Res	Type
12	AL	1028	G
12	AL	1030	U
12	AL	1034	C
12	AL	1036	A
12	AL	1037	C
12	AL	1039	A
12	AL	1040	C
12	AL	1041	U
12	AL	1042	A
12	AL	1043	A
12	AL	1044	C
12	AL	1045	C
12	AL	1046	U
12	AL	1047	U
12	AL	1048	A
12	AL	1049	C
12	AL	1050	C
12	AL	1051	A
12	AL	1052	U
12	AL	1054	U
12	AL	1056	U
12	AL	1057	U
12	AL	1058	G
12	AL	1059	A
12	AL	1060	A
12	AL	1061	U
12	AL	1062	A
12	AL	1065	A
12	AL	1066	U
12	AL	1082	U
12	AL	1083	A
12	AL	1084	U
12	AL	1088	A
12	AL	1089	U
12	AL	1090	U
12	AL	1091	A
12	AL	1092	C
12	AL	1093	A
12	AL	1094	G
12	AL	1095	G
12	AL	1097	G
12	AL	1098	U

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Mol	Chain	Res	Type
12	AL	1100	A
12	AL	1103	U
12	AL	1111	U
12	AL	1112	U
12	AL	1114	A
12	AL	1115	G
12	AL	1117	U
12	AL	1134	A
12	AL	1141	G
12	AL	1142	U
12	AL	1143	U
12	AL	1148	A
12	AL	1155	A
12	AL	1172	A
12	AL	1173	U
12	AL	1174	U
12	AL	1175	U
12	AL	1176	U
12	AL	1177	A
12	AL	1178	A
12	AL	1179	U
12	AL	1183	A
12	AL	1185	A
12	AL	1189	U
12	AL	1197	U
12	AL	1198	A
12	AL	1199	U
12	AL	1201	A
12	AL	1202	U
12	AL	1203	C
12	AL	1204	U
12	AL	1205	A
12	AL	1207	U
12	AL	1214	A
12	AL	1216	A
12	AL	1223	A
12	AL	1228	A
12	AL	1229	A
12	AL	1232	C
12	AL	1233	A
12	AL	1238	G
12	AL	1239	A

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Mol	Chain	Res	Type
12	AL	1242	C
12	AL	1243	U
12	AL	1244	U
12	AL	1245	A
12	AL	1246	U
12	AL	1247	A
12	AL	1248	A
12	AL	1249	U
12	AL	1250	A
12	AL	1252	G
12	AL	1255	U
12	AL	1256	A
12	AL	1257	A
12	AL	1258	U
12	AL	1259	A
12	AL	1260	G
12	AL	1261	A
12	AL	1262	C
12	AL	1263	G
12	AL	1264	U
12	AL	1265	G
12	AL	1268	A
12	AL	1270	A
12	AL	1271	A
12	AL	1272	U
12	AL	1273	A
12	AL	1274	A
12	AL	1275	A
12	AL	1279	A
12	AL	1280	U
12	AL	1282	A
12	AL	1283	U
12	AL	1284	A
12	AL	1285	A
12	AL	1287	A
12	AL	1290	A
12	AL	1291	U
12	AL	1292	A
12	AL	1293	U
12	AL	1294	A
12	AL	1298	U
12	AL	1299	A

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Mol	Chain	Res	Type
12	AL	1300	U
12	AL	1301	A
12	AL	1303	U
12	AL	1304	U
12	AL	1305	A
12	AL	1306	A
12	AL	1307	U
12	AL	1308	U
12	AL	1309	A
12	AL	1311	A
12	AL	1312	U
12	AL	1313	U
12	AL	1314	U
12	AL	1315	A
12	AL	1318	U
12	AL	1319	A
12	AL	1320	A
12	AL	1322	A
12	AL	1325	A
12	AL	1326	U
12	AL	1327	A
12	AL	1328	A
12	AL	1329	A
12	AL	1330	A
12	AL	1331	C
12	AL	1333	U
12	AL	1334	U
12	AL	1336	U
12	AL	1337	A
12	AL	1339	U
12	AL	1340	U
12	AL	1341	U
12	AL	1343	U
12	AL	1344	A
12	AL	1345	A
12	AL	1346	U
12	AL	1347	A
12	AL	1348	U
12	AL	1349	A
12	AL	1350	U
12	AL	1352	U
12	AL	1353	U

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Mol	Chain	Res	Type
12	AL	1354	U
12	AL	1355	U
12	AL	1356	U
12	AL	1358	U
12	AL	1359	U
12	AL	1360	A
12	AL	1361	U
12	AL	1362	A
12	AL	1368	A
12	AL	1370	A
12	AL	1371	U
12	AL	1372	G
12	AL	1376	U
12	AL	1377	A
12	AL	1378	U
12	AL	1380	A
12	AL	1381	U
12	AL	1382	C
12	AL	1383	U
12	AL	1385	A
12	AL	1387	A
12	AL	1388	U
12	AL	1389	U
12	AL	1390	C
12	AL	1391	G
12	AL	1394	U
12	AL	1395	A
12	AL	1396	U
12	AL	1397	A
12	AL	1398	U
12	AL	1399	G
12	AL	1400	A
12	AL	1401	A
12	AL	1402	A
12	AL	1403	A
12	AL	1404	A
12	AL	1406	G
12	AL	1410	U
12	AL	1411	G
12	AL	1413	U
12	AL	1415	G
12	AL	1416	U

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Mol	Chain	Res	Type
12	AL	1417	A
12	AL	1418	A
12	AL	1419	U
12	AL	1420	A
12	AL	1421	C
12	AL	1425	A
12	AL	1426	A
12	AL	1427	U
12	AL	1429	A
12	AL	1431	U
12	AL	1432	A
12	AL	1433	U
12	AL	1434	G
12	AL	1435	U
12	AL	1439	G
12	AL	1440	G
12	AL	1442	G
12	AL	1443	A
12	AL	1445	U
12	AL	1446	A
12	AL	1447	U
12	AL	1448	U
12	AL	1450	U
12	AL	1451	A
12	AL	1462	A
12	AL	1463	C
12	AL	1464	U
12	AL	1465	A
12	AL	1466	A
12	AL	1467	U
12	AL	1468	C
12	AL	1478	G
12	AL	1496	A
12	AL	1497	U
12	AL	1501	A
12	AL	1507	U
12	AL	1508	A
12	AL	1511	U
12	AL	1512	A
12	AL	1513	A
12	AL	1516	U
12	AL	1517	U

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Mol	Chain	Res	Type
12	AL	1518	U
12	AL	1520	U
12	AL	1521	U
12	AL	1522	A
12	AL	1524	U
12	AL	1525	A
12	AL	1526	A
12	AL	1528	U
12	AL	1538	U
12	AL	1539	A
12	AL	1543	A
12	AL	1547	A
12	AL	1548	U
12	AL	1563	G
12	AL	1575	A
12	AL	1585	A
12	AL	1586	G
12	AL	1587	U
12	AL	1595	C
12	AL	1598	U
12	AL	1599	U
12	AL	1609	G
12	AL	1612	C
12	AL	1620	G
12	AL	1621	G
12	AL	1622	G
12	AL	1624	U
12	AL	1625	U
12	AL	1626	A
12	AL	1628	A
12	AL	1629	A
12	AL	1631	U
12	AL	1633	U
12	AL	1636	U
12	AL	1637	A
12	AL	1638	A
12	AL	1639	A
12	AL	1640	U
12	AL	1645	U
12	AL	1646	U
12	AL	1647	A
12	AL	1648	C

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Mol	Chain	Res	Type
13	AM	8	U
13	AM	9	A
13	AM	10	G
13	AM	14	A
13	AM	15	G
13	AM	16	U
13	AM	17	U
13	AM	18	G
13	AM	20	U
13	AM	21	A
13	AM	22	G
13	AM	24	G
13	AM	25	C
13	AM	27	C
13	AM	28	A
13	AM	30	C
13	AM	31	A
13	AM	32	C
13	AM	33	U
13	AM	34	C
13	AM	35	A
13	AM	37	A
13	AM	38	A
13	AM	39	U
13	AM	43	G
13	AM	44	G
13	AM	45	G
13	AM	46	G
13	AM	47	U
13	AM	48	C
13	AM	49	A
13	AM	51	A
13	AM	53	G
13	AM	54	U
13	AM	55	U
13	AM	56	C
13	AM	57	G
13	AM	58	A
13	AM	59	A
13	AM	60	U
13	AM	61	C
13	AM	63	C

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Mol	Chain	Res	Type
13	AM	64	G
13	AM	65	U
13	AM	67	G
13	AM	76	A
14	AN	2	U
14	AN	3	G
14	AN	5	C
14	AN	6	C
14	AN	7	C
14	AN	8	A
14	AN	9	C
14	AN	10	C
14	AN	12	A
14	AN	13	U
46	A	10	A
46	A	17	U
46	A	21	U
46	A	22	U
46	A	26	A
46	A	27	A
46	A	28	U
46	A	29	A
46	A	30	U
46	A	36	A
46	A	38	A
46	A	41	G
46	A	43	U
46	A	44	U
46	A	45	U
46	A	46	A
46	A	47	A
46	A	48	A
46	A	49	G
46	A	50	A
46	A	53	U
46	A	58	A
46	A	68	A
46	A	69	U
46	A	70	A
46	A	76	A
46	A	77	U
46	A	85	A

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Mol	Chain	Res	Type
46	A	93	U
46	A	94	A
46	A	95	A
46	A	106	A
46	A	117	U
46	A	119	A
46	A	120	U
46	A	122	A
46	A	124	U
46	A	128	U
46	A	133	A
46	A	134	U
46	A	135	U
46	A	136	A
46	A	149	A
46	A	150	A
46	A	151	A
46	A	152	G
46	A	153	G
46	A	155	A
46	A	161	U
46	A	162	U
46	A	163	A
46	A	165	A
46	A	166	U
46	A	167	U
46	A	171	A
46	A	174	G
46	A	177	A
46	A	178	U
46	A	201	A
46	A	203	U
46	A	204	A
46	A	205	A
46	A	207	U
46	A	209	U
46	A	212	A
46	A	214	A
46	A	216	U
46	A	217	A
46	A	218	A
46	A	219	U

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Mol	Chain	Res	Type
46	A	220	A
46	A	221	A
46	A	236	A
46	A	239	A
46	A	244	A
46	A	245	G
46	A	255	G
46	A	256	A
46	A	261	A
46	A	262	A
46	A	264	U
46	A	266	A
46	A	268	C
46	A	269	A
46	A	270	G
46	A	283	U
46	A	288	G
46	A	292	G
46	A	301	A
46	A	302	U
46	A	307	G
46	A	308	U
46	A	310	U
46	A	311	A
46	A	312	A
46	A	314	A
46	A	316	G
46	A	321	A
46	A	327	A
46	A	329	A
46	A	330	A
46	A	331	A
46	A	332	A
46	A	337	A
46	A	341	A
46	A	342	A
46	A	343	U
46	A	348	U
46	A	349	A
46	A	350	A
46	A	359	A
46	A	365	A

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Mol	Chain	Res	Type
46	A	372	A
46	A	380	G
46	A	382	A
46	A	383	U
46	A	384	A
46	A	387	A
46	A	388	A
46	A	401	A
46	A	420	U
46	A	423	A
46	A	425	A
46	A	426	A
46	A	427	G
46	A	428	C
46	A	429	A
46	A	430	A
46	A	435	G
46	A	442	U
46	A	443	U
46	A	445	U
46	A	447	U
46	A	454	A
46	A	455	A
46	A	462	A
46	A	472	U
46	A	474	A
46	A	479	U
46	A	485	A
46	A	496	U
46	A	502	A
46	A	503	A
46	A	507	A
46	A	508	U
46	A	509	A
46	A	516	A
46	A	518	A
46	A	520	A
46	A	526	A
46	A	527	A
46	A	528	U
46	A	529	A
46	A	530	A

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Mol	Chain	Res	Type
46	A	531	U
46	A	532	A
46	A	547	A
46	A	552	A
46	A	562	U
46	A	563	U
46	A	564	A
46	A	565	A
46	A	577	U
46	A	578	G
46	A	579	A
46	A	586	A
46	A	592	C
46	A	594	A
46	A	595	U
46	A	600	C
46	A	607	A
46	A	609	G
46	A	614	A
46	A	615	U
46	A	616	A
46	A	617	A
46	A	618	A
46	A	619	C
46	A	621	A
46	A	627	C
46	A	629	G
46	A	637	U
46	A	638	U
46	A	643	U
46	A	644	A
46	A	655	A
46	A	665	A
46	A	667	U
46	A	673	A
46	A	675	G
46	A	681	U
46	A	682	C
46	A	683	U
46	A	684	G
46	A	692	G
46	A	696	G

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Mol	Chain	Res	Type
46	A	702	U
46	A	703	U
46	A	710	A
46	A	718	G
46	A	719	U
46	A	721	A
46	A	722	G
46	A	726	A
46	A	734	U
46	A	735	A
46	A	736	A
46	A	737	A
46	A	747	U
46	A	767	A
46	A	768	U
46	A	769	U
46	A	776	A
46	A	777	G
46	A	778	A
46	A	781	G
46	A	782	G
46	A	788	C
46	A	789	A
46	A	790	A
46	A	793	A
46	A	796	A
46	A	797	U
46	A	798	A
46	A	799	U
46	A	800	A
46	A	801	U
46	A	803	A
46	A	804	G
46	A	808	A
46	A	820	U
46	A	825	A
46	A	835	A
46	A	836	A
46	A	840	C
46	A	841	G
46	A	843	A
46	A	856	A

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Mol	Chain	Res	Type
46	A	857	U
46	A	858	A
46	A	864	A
46	A	865	A
46	A	867	A
46	A	872	G
46	A	874	U
46	A	879	U
46	A	883	A
46	A	884	U
46	A	887	G
46	A	891	A
46	A	899	A
46	A	900	A
46	A	908	C
46	A	911	C
46	A	915	G
46	A	916	A
46	A	917	U
46	A	918	U
46	A	919	A
46	A	920	A
46	A	925	U
46	A	929	G
46	A	933	C
46	A	942	A
46	A	943	A
46	A	947	G
46	A	948	U
46	A	951	A
46	A	952	A
46	A	954	A
46	A	955	A
46	A	961	A
46	A	962	A
46	A	966	A
46	A	968	U
46	A	969	A
46	A	970	U
46	A	971	A
46	A	972	A
46	A	973	U

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Mol	Chain	Res	Type
46	A	976	A
46	A	977	A
46	A	978	U
46	A	979	C
46	A	983	U
46	A	984	C
46	A	991	U
46	A	992	U
46	A	1001	C
46	A	1006	U
46	A	1007	U
46	A	1008	U
46	A	1009	U
46	A	1010	A
46	A	1011	A
46	A	1012	U
46	A	1013	G
46	A	1014	A
46	A	1015	A
46	A	1016	C
46	A	1017	A
46	A	1018	U
46	A	1019	G
46	A	1020	U
46	A	1021	A
46	A	1024	A
46	A	1025	A
46	A	1026	U
46	A	1028	C
46	A	1029	A
46	A	1030	C
46	A	1035	U
46	A	1036	U
46	A	1041	U
46	A	1043	A
46	A	1044	A
46	A	1045	U
46	A	1046	A
46	A	1047	A
46	A	1048	A
46	A	1049	A
46	A	1050	A

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Mol	Chain	Res	Type
46	A	1051	A
46	A	1052	A
46	A	1053	U
46	A	1055	A
46	A	1056	A
46	A	1058	U
46	A	1059	A
46	A	1060	U
46	A	1062	U
46	A	1065	A
46	A	1074	U
46	A	1075	A
46	A	1076	U
46	A	1077	A
46	A	1078	U
46	A	1079	A
46	A	1080	U
46	A	1086	U
46	A	1087	U
46	A	1088	A
46	A	1094	U
46	A	1095	A
46	A	1096	A
46	A	1097	U
46	A	1101	C
46	A	1105	U
46	A	1109	A
46	A	1110	A
46	A	1111	U
46	A	1112	A
46	A	1113	A
46	A	1114	U
46	A	1115	A
46	A	1116	A
46	A	1118	A
46	A	1119	A
46	A	1127	A
46	A	1138	G
46	A	1139	G
46	A	1140	A
46	A	1145	U
46	A	1151	U

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Mol	Chain	Res	Type
46	A	1169	A
46	A	1170	U
46	A	1171	A
46	A	1176	A
46	A	1182	A
46	A	1184	A
46	A	1190	U
46	A	1191	U
46	A	1192	A
46	A	1206	A
46	A	1207	A
46	A	1242	A
46	A	1243	U
46	A	1244	A
46	A	1255	A
46	A	1256	U
46	A	1257	U
46	A	1258	A
46	A	1263	A
46	A	1267	A
46	A	1269	G
46	A	1271	A
46	A	1272	U
46	A	1273	U
46	A	1278	A
46	A	1280	A
46	A	1281	U
46	A	1286	A
46	A	1287	A
46	A	1289	G
46	A	1304	G
46	A	1305	A
46	A	1306	A
46	A	1308	A
46	A	1311	A
46	A	1313	G
46	A	1314	U
46	A	1315	A
46	A	1316	U
46	A	1317	A
46	A	1318	A
46	A	1331	A

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Mol	Chain	Res	Type
46	A	1332	A
46	A	1333	A
46	A	1337	U
46	A	1342	U
46	A	1345	A
46	A	1346	A
46	A	1350	U
46	A	1352	A
46	A	1358	C
46	A	1365	U
46	A	1370	A
46	A	1371	A
46	A	1374	U
46	A	1386	A
46	A	1389	U
46	A	1399	A
46	A	1400	U
46	A	1406	A
46	A	1407	A
46	A	1408	U
46	A	1410	U
46	A	1411	A
46	A	1412	U
46	A	1424	U
46	A	1426	U
46	A	1428	U
46	A	1429	C
46	A	1438	U
46	A	1439	A
46	A	1440	U
46	A	1482	A
46	A	1484	U
46	A	1485	A
46	A	1487	A
46	A	1488	U
46	A	1490	A
46	A	1491	U
46	A	1492	A
46	A	1493	U
46	A	1494	A
46	A	1498	U
46	A	1499	A

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Mol	Chain	Res	Type
46	A	1500	U
46	A	1501	A
46	A	1507	U
46	A	1508	A
46	A	1509	U
46	A	1510	A
46	A	1515	A
46	A	1516	U
46	A	1517	A
46	A	1519	A
46	A	1523	A
46	A	1524	U
46	A	1528	G
46	A	1531	C
46	A	1532	A
46	A	1534	G
46	A	1536	A
46	A	1542	U
46	A	1547	U
46	A	1548	A
46	A	1549	U
46	A	1552	C
46	A	1558	G
46	A	1559	U
46	A	1560	A
46	A	1563	C
46	A	1564	C
46	A	1568	U
46	A	1569	C
46	A	1570	A
46	A	1579	A
46	A	1582	A
46	A	1583	G
46	A	1586	A
46	A	1592	A
46	A	1596	U
46	A	1597	G
46	A	1598	A
46	A	1600	U
46	A	1605	U
46	A	1606	A
46	A	1611	A

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Mol	Chain	Res	Type
46	A	1618	G
46	A	1619	G
46	A	1626	G
46	A	1627	C
46	A	1632	A
46	A	1633	U
46	A	1634	A
46	A	1635	G
46	A	1636	C
46	A	1639	A
46	A	1648	U
46	A	1649	C
46	A	1653	A
46	A	1655	A
46	A	1662	U
46	A	1664	A
46	A	1666	A
46	A	1667	A
46	A	1671	A
46	A	1672	G
46	A	1679	A
46	A	1680	A
46	A	1687	A
46	A	1688	C
46	A	1689	U
46	A	1698	C
46	A	1706	G
46	A	1707	C
46	A	1708	A
46	A	1709	G
46	A	1710	A
46	A	1712	A
46	A	1715	A
46	A	1716	U
46	A	1717	A
46	A	1724	A
46	A	1727	A
46	A	1728	U
46	A	1734	G
46	A	1741	C
46	A	1742	U
46	A	1747	C

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Mol	Chain	Res	Type
46	A	1750	G
46	A	1756	U
46	A	1757	A
46	A	1761	A
46	A	1764	U
46	A	1765	A
46	A	1767	A
46	A	1770	U
46	A	1771	A
46	A	1775	A
46	A	1778	G
46	A	1779	A
46	A	1781	A
46	A	1782	A
46	A	1783	U
46	A	1785	U
46	A	1786	A
46	A	1789	U
46	A	1790	A
46	A	1797	G
46	A	1803	U
46	A	1807	A
46	A	1812	U
46	A	1813	A
46	A	1814	U
46	A	1815	U
46	A	1818	G
46	A	1819	A
46	A	1820	G
46	A	1821	G
46	A	1823	U
46	A	1825	A
46	A	1829	U
46	A	1830	G
46	A	1831	U
46	A	1833	G
46	A	1836	A
46	A	1837	A
46	A	1838	A
46	A	1843	U
46	A	1851	U
46	A	1855	U

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Mol	Chain	Res	Type
46	A	1863	C
46	A	1864	G
46	A	1865	C
46	A	1866	A
46	A	1867	U
46	A	1869	A
46	A	1870	A
46	A	1871	U
46	A	1872	G
46	A	1873	A
46	A	1877	A
46	A	1882	U
46	A	1891	U
46	A	1893	U
46	A	1894	C
46	A	1896	C
46	A	1897	C
46	A	1909	A
46	A	1920	A
46	A	1923	C
46	A	1930	A
46	A	1931	A
46	A	1932	G
46	A	1933	A
46	A	1943	C
46	A	1952	A
46	A	1955	C
46	A	1956	G
46	A	1959	A
46	A	1960	A
46	A	1961	G
46	A	1963	C
46	A	1965	C
46	A	1967	A
46	A	1968	U
46	A	1969	G
46	A	1989	U
46	A	1991	G
46	A	1992	A
46	A	1995	G
46	A	1996	A
46	A	2003	G

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Mol	Chain	Res	Type
46	A	2007	A
46	A	2008	U
46	A	2009	U
46	A	2011	U
46	A	2012	A
46	A	2013	G
46	A	2014	U
46	A	2015	C
46	A	2016	A
46	A	2017	G
46	A	2018	C
46	A	2019	A
46	A	2020	U
46	A	2021	A
46	A	2022	U
46	A	2023	U
46	A	2024	A
46	A	2026	G
46	A	2027	U
46	A	2029	A
46	A	2030	U
46	A	2033	U
46	A	2034	A
46	A	2035	U
46	A	2036	U
46	A	2037	A
46	A	2038	U
46	A	2039	U
46	A	2040	A
46	A	2041	G
46	A	2042	G
46	A	2043	U
46	A	2044	A
46	A	2045	A
46	A	2046	U
46	A	2047	C
46	A	2048	G
46	A	2049	U
46	A	2050	U
46	A	2051	U
46	A	2052	A
46	A	2053	G

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Mol	Chain	Res	Type
46	A	2054	A
46	A	2055	U
46	A	2056	A
46	A	2057	U
46	A	2058	U
46	A	2059	A
46	A	2060	A
46	A	2061	U
46	A	2062	G
46	A	2063	A
46	A	2064	G
46	A	2066	U
46	A	2067	A
46	A	2068	C
46	A	2069	U
46	A	2071	A
46	A	2072	U
46	A	2073	U
46	A	2074	A
46	A	2075	U
46	A	2076	A
46	A	2077	A
46	A	2082	A
46	A	2084	G
46	A	2085	A
46	A	2086	U
46	A	2093	A
46	A	2184	C
46	A	2204	A
46	A	2205	G
46	A	2212	A
46	A	2213	U
46	A	2215	A
46	A	2216	U
46	A	2219	A
46	A	2220	U
46	A	2229	U
46	A	2231	U
46	A	2232	A
46	A	2251	A
46	A	2252	C
46	A	2263	U

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Mol	Chain	Res	Type
46	A	2264	G
46	A	2265	G
46	A	2272	U
46	A	2275	U
46	A	2276	G
46	A	2277	G
46	A	2280	C
46	A	2295	A
46	A	2301	C
46	A	2304	A
46	A	2305	A
46	A	2306	U
46	A	2309	G
46	A	2310	U
46	A	2316	A
46	A	2317	A
46	A	2319	A
46	A	2321	A
46	A	2322	U
46	A	2323	A
46	A	2324	U
46	A	2325	A
46	A	2332	U
46	A	2333	A
46	A	2347	A
46	A	2348	A
46	A	2349	A
46	A	2350	U
46	A	2356	A
46	A	2358	A
46	A	2359	U
46	A	2360	U
46	A	2361	A
46	A	2362	U
46	A	2363	A
46	A	2364	U
46	A	2365	A
46	A	2372	U
46	A	2373	U
46	A	2374	A
46	A	2376	A
46	A	2379	U

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Mol	Chain	Res	Type
46	A	2380	U
46	A	2381	G
46	A	2389	U
46	A	2390	U
46	A	2392	A
46	A	2414	U
46	A	2418	U
46	A	2422	A
46	A	2424	U
46	A	2425	A
46	A	2426	A
46	A	2427	U
46	A	2430	A
46	A	2431	U
46	A	2432	A
46	A	2433	A
46	A	2436	A
46	A	2437	U
46	A	2438	A
46	A	2439	U
46	A	2446	U
46	A	2447	A
46	A	2453	G
46	A	2455	A
46	A	2458	G
46	A	2461	A
46	A	2462	A
46	A	2463	C
46	A	2469	U
46	A	2470	A
46	A	2472	C
46	A	2574	G
46	A	2575	A
46	A	2580	A
46	A	2586	U
46	A	2587	U
46	A	2588	A
46	A	2589	A
46	A	2590	U
46	A	2591	A
46	A	2599	A
46	A	2600	U

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Mol	Chain	Res	Type
46	A	2601	A
46	A	2603	C
46	A	2611	U
46	A	2612	A
46	A	2614	U
46	A	2617	U
46	A	2618	A
46	A	2621	A
46	A	2640	A
46	A	2646	G
46	A	2650	G
46	A	2652	C
46	A	2656	A
46	A	2660	A
46	A	2662	A
46	A	2664	A
46	A	2666	A
46	A	2669	A
46	A	2670	C
46	A	2672	G
46	A	2673	A
46	A	2674	U
46	A	2677	U
46	A	2691	A
46	A	2695	A
46	A	2696	A
46	A	2701	A
46	A	2705	A
46	A	2707	G
46	A	2711	G
46	A	2713	G
46	A	2714	A
46	A	2715	U
46	A	2716	A
46	A	2717	A
46	A	2718	C
46	A	2727	A
46	A	2734	A
46	A	2735	A
46	A	2738	G
46	A	2740	A
46	A	2741	G

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Mol	Chain	Res	Type
46	A	2742	A
46	A	2744	A
46	A	2747	G
46	A	2748	U
46	A	2753	U
46	A	2756	G
46	A	2757	U
46	A	2758	U
46	A	2760	G
46	A	2764	C
46	A	2766	U
46	A	2767	C
46	A	2768	G
46	A	2769	A
46	A	2770	U
46	A	2771	G
46	A	2772	U
46	A	2773	C
46	A	2779	A
46	A	2784	U
46	A	2785	U
46	A	2786	C
46	A	2795	U
46	A	2796	G
46	A	2797	U
46	A	2798	A
46	A	2800	A
46	A	2802	G
46	A	2814	U
46	A	2815	U
46	A	2817	A
46	A	2821	U
46	A	2828	A
46	A	2829	U
46	A	2833	A
46	A	2834	A
46	A	2838	U
46	A	2839	A
46	A	2840	C
46	A	2841	G
46	A	2843	G
46	A	2844	A

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Mol	Chain	Res	Type
46	A	2848	G
46	A	2849	G
46	A	2850	G
46	A	2852	U
46	A	2853	A
46	A	2869	A
46	A	2870	G
46	A	2876	U
46	A	2877	U
46	A	2878	C
46	A	2880	U
46	A	2890	A
46	A	2894	A
46	A	2896	U
46	A	2897	A
46	A	2898	U
46	A	2906	U
46	A	2912	C
46	A	2913	U
46	A	2918	A
46	A	2925	C
46	A	2928	A
46	A	2929	A
46	A	2930	G
46	A	2931	G
46	A	2939	U
46	A	2940	G
46	A	2950	A
46	A	2951	U
46	A	2956	U
46	A	2957	A
46	A	2968	A
46	A	2979	U
46	A	2980	A
46	A	2981	U
46	A	2982	U
46	A	2983	U
46	A	3003	U
46	A	3006	U
46	A	3013	U
46	A	3014	C
46	A	3018	A

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Mol	Chain	Res	Type
46	A	3019	U
46	A	3020	U
46	A	3021	A
46	A	3032	U
46	A	3034	A
46	A	3042	U
46	A	3043	U
46	A	3044	A
46	A	3048	U
46	A	3049	A
46	A	3050	G
46	A	3061	A
46	A	3062	A
46	A	3067	A
46	A	3069	A
46	A	3076	A
46	A	3080	A
46	A	3092	U
46	A	3093	U
46	A	3094	A
46	A	3098	A
46	A	3102	A
46	A	3103	G
46	A	3106	G
46	A	3121	U
46	A	3122	U
46	A	3123	A
46	A	3124	A
46	A	3125	U
46	A	3126	C
46	A	3136	U
46	A	3137	A
46	A	3138	U
46	A	3141	U
46	A	3148	A
46	A	3149	A
46	A	3150	U
46	A	3151	A
46	A	3152	A
46	A	3153	U
46	A	3154	U
46	A	3169	U

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Mol	Chain	Res	Type
46	A	3171	A
46	A	3172	U
46	A	3174	U
46	A	3177	A
46	A	3231	A
46	A	3232	U
46	A	3233	A
46	A	3234	A
46	A	3235	U
46	A	3236	A
46	A	3244	A
46	A	3248	C
46	A	3251	A
46	A	3252	U
46	A	3253	U
46	A	3256	U
46	A	3257	C
46	A	3261	U
46	A	3262	A
46	A	3274	U
46	A	3280	C
46	A	3288	C
46	A	3289	U
46	A	3291	U
46	A	3292	A
46	A	3293	U

All (338) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
12	AL	13	U
12	AL	58	A
12	AL	71	A
12	AL	101	U
12	AL	109	A
12	AL	115	G
12	AL	119	A
12	AL	120	A
12	AL	122	U
12	AL	133	U
12	AL	136	A
12	AL	138	G

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Mol	Chain	Res	Type
12	AL	139	A
12	AL	196	A
12	AL	218	A
12	AL	219	U
12	AL	247	U
12	AL	254	A
12	AL	255	G
12	AL	271	U
12	AL	279	A
12	AL	284	A
12	AL	285	C
12	AL	286	G
12	AL	298	A
12	AL	333	A
12	AL	336	U
12	AL	349	U
12	AL	388	G
12	AL	392	G
12	AL	485	A
12	AL	488	A
12	AL	494	U
12	AL	496	A
12	AL	500	A
12	AL	501	U
12	AL	506	U
12	AL	507	C
12	AL	509	A
12	AL	544	A
12	AL	600	A
12	AL	603	U
12	AL	610	A
12	AL	632	C
12	AL	673	A
12	AL	682	A
12	AL	684	G
12	AL	703	U
12	AL	727	A
12	AL	728	A
12	AL	739	G
12	AL	761	A
12	AL	768	U
12	AL	783	U

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Mol	Chain	Res	Type
12	AL	798	U
12	AL	822	U
12	AL	823	G
12	AL	898	U
12	AL	911	U
12	AL	912	A
12	AL	937	A
12	AL	949	U
12	AL	971	G
12	AL	998	A
12	AL	999	C
12	AL	1004	G
12	AL	1007	G
12	AL	1022	U
12	AL	1024	A
12	AL	1025	U
12	AL	1036	A
12	AL	1040	C
12	AL	1044	C
12	AL	1059	A
12	AL	1089	U
12	AL	1093	A
12	AL	1096	C
12	AL	1111	U
12	AL	1114	A
12	AL	1141	G
12	AL	1171	A
12	AL	1173	U
12	AL	1177	A
12	AL	1182	U
12	AL	1197	U
12	AL	1202	U
12	AL	1204	U
12	AL	1206	A
12	AL	1222	U
12	AL	1228	A
12	AL	1232	C
12	AL	1247	A
12	AL	1249	U
12	AL	1251	U
12	AL	1259	A
12	AL	1262	C

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Mol	Chain	Res	Type
12	AL	1263	G
12	AL	1274	A
12	AL	1282	A
12	AL	1284	A
12	AL	1290	A
12	AL	1298	U
12	AL	1299	A
12	AL	1305	A
12	AL	1306	A
12	AL	1307	U
12	AL	1314	U
12	AL	1318	U
12	AL	1319	A
12	AL	1327	A
12	AL	1330	A
12	AL	1335	U
12	AL	1339	U
12	AL	1346	U
12	AL	1348	U
12	AL	1355	U
12	AL	1367	A
12	AL	1387	A
12	AL	1389	U
12	AL	1393	U
12	AL	1399	G
12	AL	1401	A
12	AL	1426	A
12	AL	1430	G
12	AL	1432	A
12	AL	1433	U
12	AL	1439	G
12	AL	1447	U
12	AL	1462	A
12	AL	1464	U
12	AL	1467	U
12	AL	1520	U
12	AL	1525	A
12	AL	1538	U
12	AL	1547	A
12	AL	1585	A
12	AL	1620	G
12	AL	1625	U

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Mol	Chain	Res	Type
12	AL	1638	A
12	AL	1645	U
13	AM	7	G
13	AM	9	A
13	AM	31	A
13	AM	33	U
13	AM	37	A
13	AM	43	G
13	AM	44	G
13	AM	53	G
14	AN	1	A
14	AN	6	C
14	AN	7	C
14	AN	9	C
14	AN	10	C
14	AN	12	A
46	A	25	A
46	A	29	A
46	A	44	U
46	A	69	U
46	A	163	A
46	A	164	U
46	A	268	C
46	A	289	U
46	A	306	G
46	A	311	A
46	A	330	A
46	A	349	A
46	A	382	A
46	A	388	A
46	A	429	A
46	A	454	A
46	A	507	A
46	A	516	A
46	A	529	A
46	A	563	U
46	A	578	G
46	A	614	A
46	A	615	U
46	A	616	A
46	A	617	A
46	A	637	U

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Mol	Chain	Res	Type
46	A	643	U
46	A	653	U
46	A	691	A
46	A	702	U
46	A	718	G
46	A	733	A
46	A	746	A
46	A	768	U
46	A	797	U
46	A	798	A
46	A	800	A
46	A	857	U
46	A	883	A
46	A	915	G
46	A	951	A
46	A	954	A
46	A	970	U
46	A	972	A
46	A	976	A
46	A	978	U
46	A	1006	U
46	A	1007	U
46	A	1010	A
46	A	1013	G
46	A	1015	A
46	A	1016	C
46	A	1020	U
46	A	1023	C
46	A	1029	A
46	A	1035	U
46	A	1047	A
46	A	1048	A
46	A	1049	A
46	A	1053	U
46	A	1055	A
46	A	1059	A
46	A	1062	U
46	A	1064	A
46	A	1076	U
46	A	1078	U
46	A	1087	U
46	A	1093	A

Continued on next page...

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Mol	Chain	Res	Type
46	A	1100	A
46	A	1114	U
46	A	1205	U
46	A	1242	A
46	A	1272	U
46	A	1280	A
46	A	1307	A
46	A	1312	G
46	A	1317	A
46	A	1331	A
46	A	1349	A
46	A	1409	C
46	A	1410	U
46	A	1411	A
46	A	1428	U
46	A	1439	A
46	A	1489	U
46	A	1492	A
46	A	1493	U
46	A	1522	A
46	A	1527	A
46	A	1547	U
46	A	1569	C
46	A	1591	G
46	A	1626	G
46	A	1632	A
46	A	1635	G
46	A	1687	A
46	A	1688	C
46	A	1706	G
46	A	1707	C
46	A	1708	A
46	A	1727	A
46	A	1770	U
46	A	1789	U
46	A	1801	A
46	A	1812	U
46	A	1813	A
46	A	1818	G
46	A	1837	A
46	A	1863	C
46	A	1892	G

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Mol	Chain	Res	Type
46	A	1967	A
46	A	1994	C
46	A	2009	U
46	A	2016	A
46	A	2022	U
46	A	2026	G
46	A	2033	U
46	A	2034	A
46	A	2036	U
46	A	2039	U
46	A	2043	U
46	A	2044	A
46	A	2048	G
46	A	2049	U
46	A	2053	G
46	A	2054	A
46	A	2056	A
46	A	2057	U
46	A	2058	U
46	A	2065	A
46	A	2066	U
46	A	2072	U
46	A	2204	A
46	A	2251	A
46	A	2276	G
46	A	2279	G
46	A	2309	G
46	A	2316	A
46	A	2324	U
46	A	2357	U
46	A	2359	U
46	A	2361	A
46	A	2373	U
46	A	2378	A
46	A	2423	G
46	A	2424	U
46	A	2437	U
46	A	2446	U
46	A	2469	U
46	A	2586	U
46	A	2590	U
46	A	2599	A

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Mol	Chain	Res	Type
46	A	2600	U
46	A	2610	A
46	A	2613	A
46	A	2713	G
46	A	2716	A
46	A	2717	A
46	A	2734	A
46	A	2740	A
46	A	2757	U
46	A	2767	C
46	A	2768	G
46	A	2771	G
46	A	2772	U
46	A	2839	A
46	A	2843	G
46	A	2848	G
46	A	2868	C
46	A	2876	U
46	A	2956	U
46	A	2979	U
46	A	3018	A
46	A	3048	U
46	A	3061	A
46	A	3068	U
46	A	3122	U
46	A	3124	A
46	A	3125	U
46	A	3135	U
46	A	3150	U
46	A	3171	A
46	A	3234	A
46	A	3252	U

5.4 Non-standard residues in protein, DNA, RNA chains (i)

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
46	A	22
12	AL	17
32	w	4
44	8	1
76	f	1
64	S	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A	1418:U	O3'	1423:A	P	30.32
1	8	52:GLN	C	81:LYS	N	26.49
1	A	2100:U	O3'	2183:A	P	21.91
1	AL	563:U	O3'	600:A	P	20.02
1	AL	210:U	O3'	214:A	P	18.58
1	f	86:LYS	C	107:GLY	N	18.16
1	AL	905:A	O3'	911:U	P	18.01
1	AL	182:A	O3'	185:A	P	17.60
1	A	810:U	O3'	816:A	P	17.52
1	A	178:U	O3'	200:G	P	17.40
1	A	2221:A	O3'	2227:U	P	16.89
1	A	1152:U	O3'	1160:A	P	16.87
1	A	2188:A	O3'	2198:U	P	16.37
1	w	150:ARG	C	159:GLU	N	16.34
1	AL	1362:A	O3'	1367:A	P	16.02
1	A	128:U	O3'	132:A	P	15.83
1	AL	704:A	O3'	708:U	P	15.70
1	A	2478:C	O3'	2573:G	P	15.69
1	A	553:U	O3'	560:A	P	15.28
1	w	208:GLY	C	218:ASN	N	15.18

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A	79:U	O3'	84:A	P	14.91
1	AL	166:A	O3'	172:U	P	14.60
1	AL	420:A	O3'	478:U	P	14.11
1	AL	1072:U	O3'	1081:U	P	14.03
1	S	171:LYS	C	203:ARG	N	13.81
1	A	1502:U	O3'	1506:U	P	13.78
1	A	106:A	O3'	110:A	P	12.78
1	A	2240:U	O3'	2243:U	P	12.72
1	AL	545:U	O3'	550:U	P	12.40
1	A	2338:A	O3'	2345:A	P	12.23
1	A	1374:U	O3'	1380:A	P	12.07
1	AL	85:G	O3'	89:A	P	11.73
1	A	1195:A	O3'	1205:U	P	11.60
1	AL	1528:U	O3'	1536:A	P	10.23
1	w	117:LYS	C	124:LEU	N	9.18
1	AL	1070:A	O3'	1072:U	P	8.12
1	w	135:LEU	C	140:THR	N	7.75
1	AL	194:A	O3'	195:U	P	6.91
1	A	2077:A	O3'	2078:U	P	6.07
1	A	3035:U	O3'	3040:U	P	5.97
1	A	1537:A	O3'	1540:A	P	5.00
1	A	821:U	O3'	823:U	P	4.14
1	AL	195:U	O3'	196:A	P	3.65
1	AL	193:A	O3'	194:A	P	3.39
1	AL	958:C	O3'	959:G	P	3.15
1	A	2012:A	O3'	2013:G	P	2.89

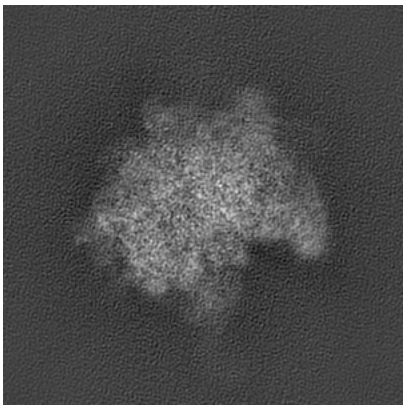
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-42687. These allow visual inspection of the internal detail of the map and identification of artifacts.

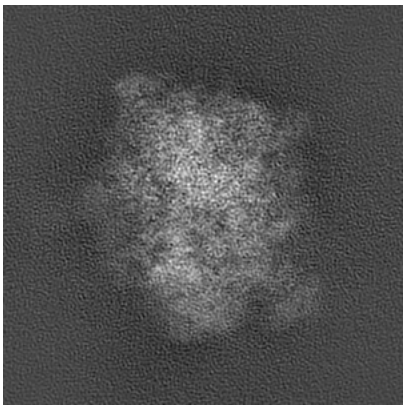
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

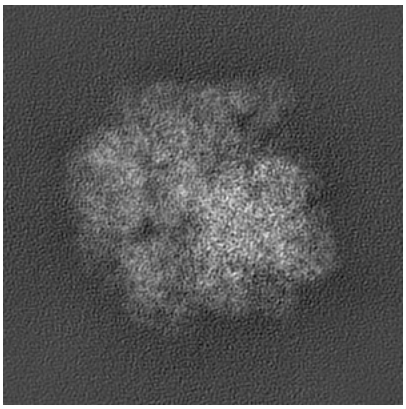
6.1.1 Primary map



X

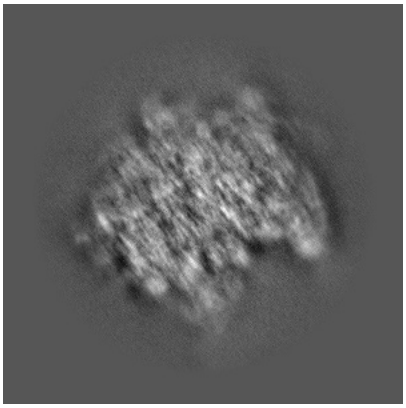


Y

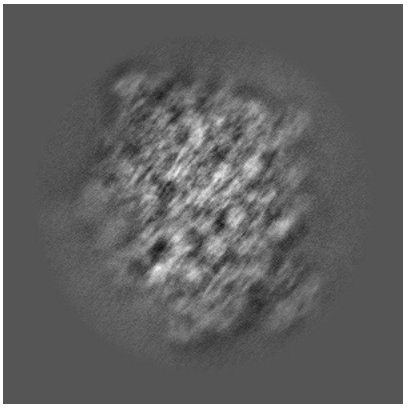


Z

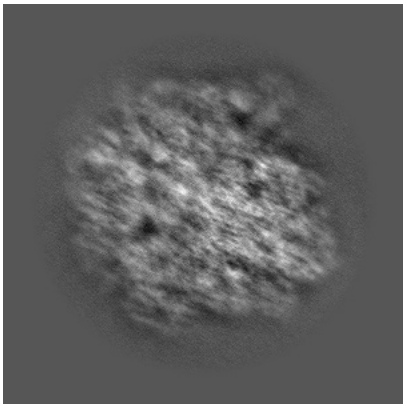
6.1.2 Raw map



X



Y

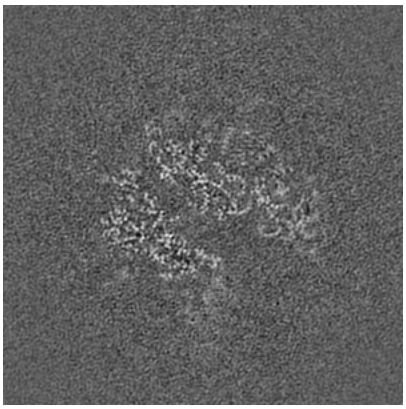


Z

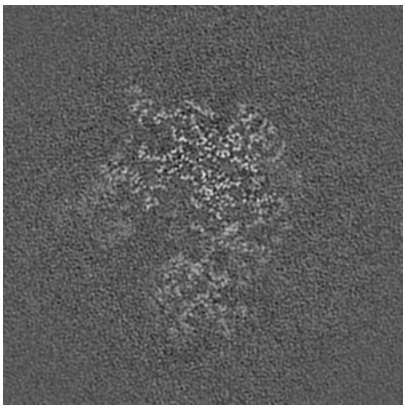
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

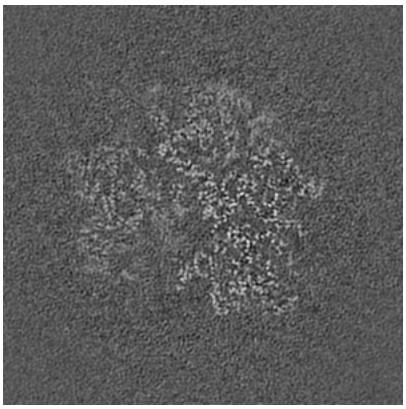
6.2.1 Primary map



X Index: 256

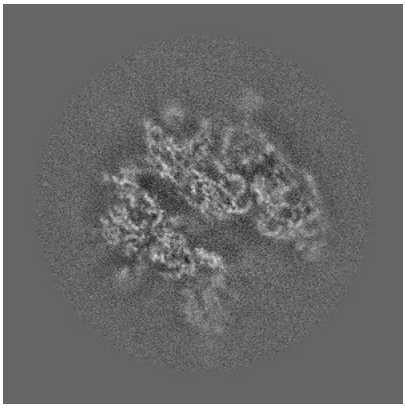


Y Index: 256

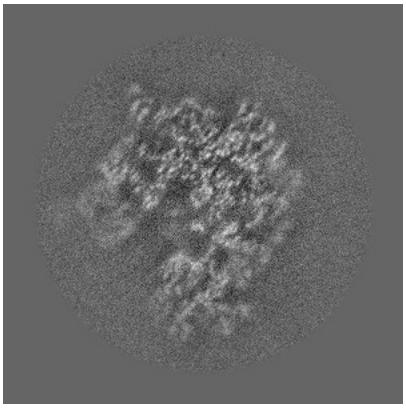


Z Index: 256

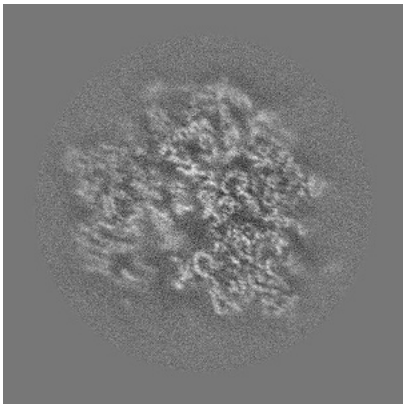
6.2.2 Raw map



X Index: 256



Y Index: 256

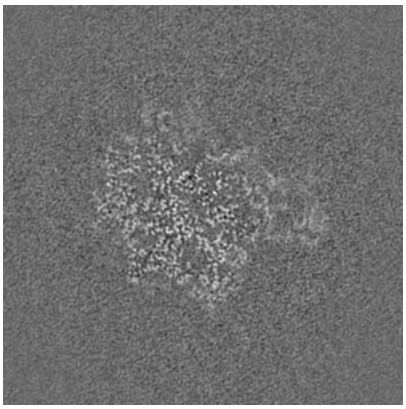


Z Index: 256

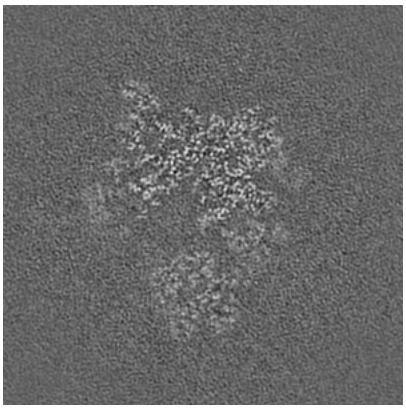
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

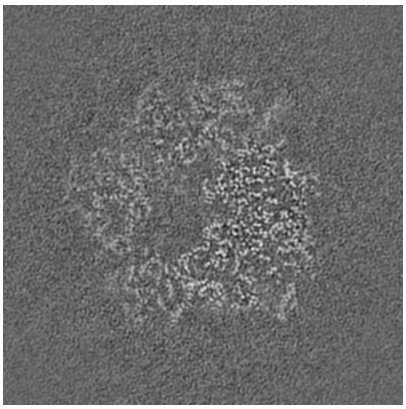
6.3.1 Primary map



X Index: 296

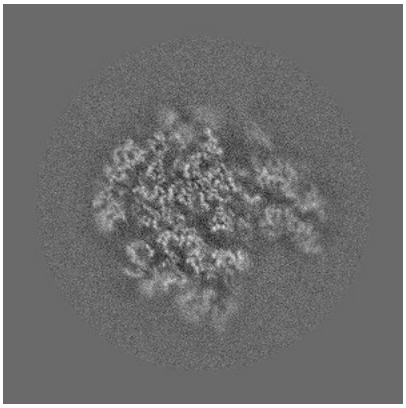


Y Index: 249

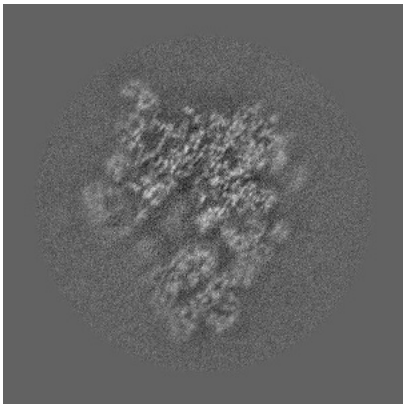


Z Index: 238

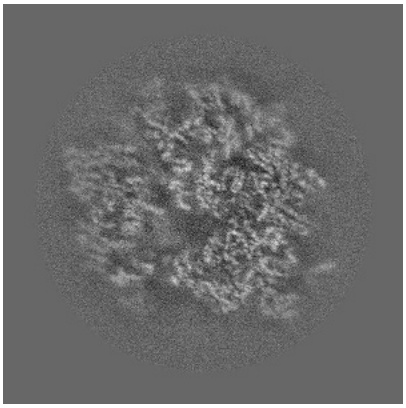
6.3.2 Raw map



X Index: 276



Y Index: 249

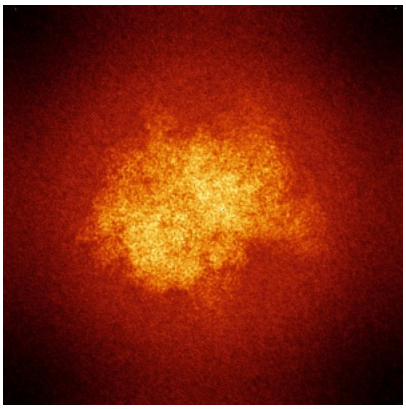


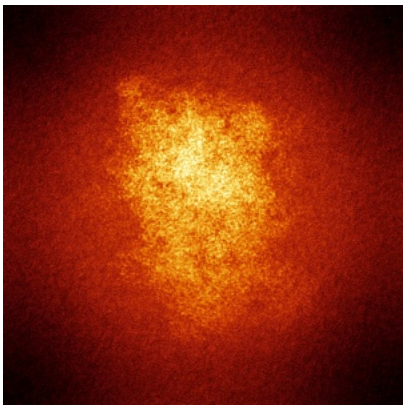
Z Index: 250

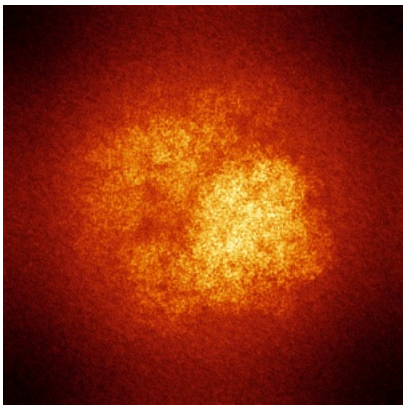
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

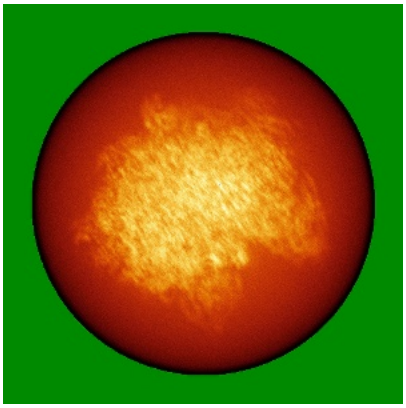
6.4.1 Primary map

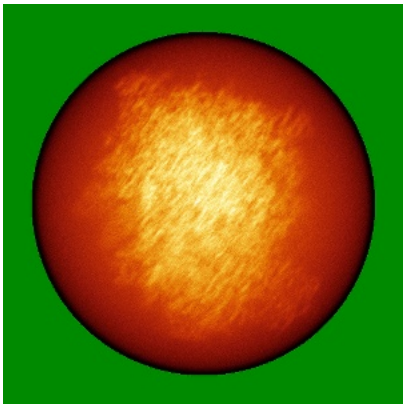

X

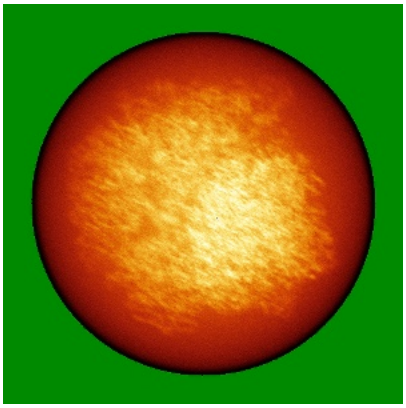

Y


Z

6.4.2 Raw map


X

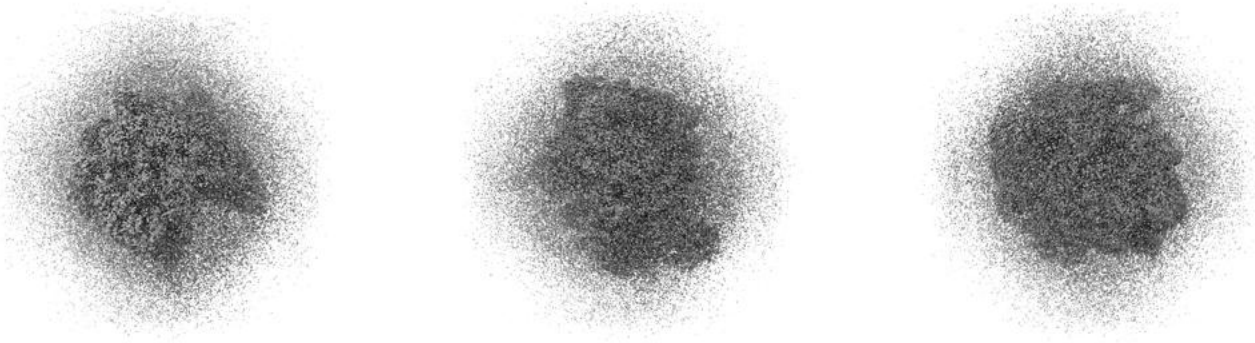

Y


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 4.3. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map

X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

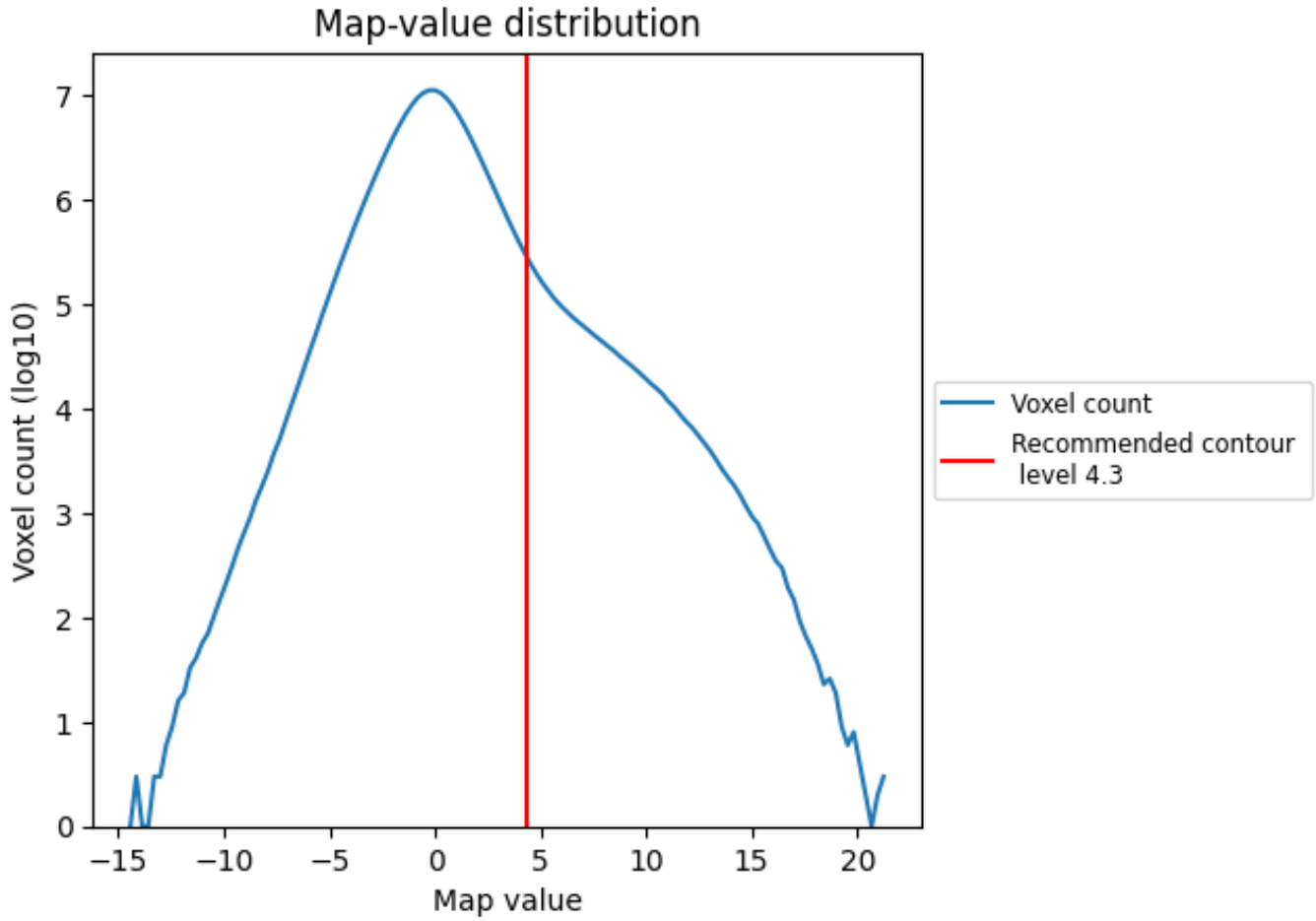
6.6 Mask visualisation (i)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

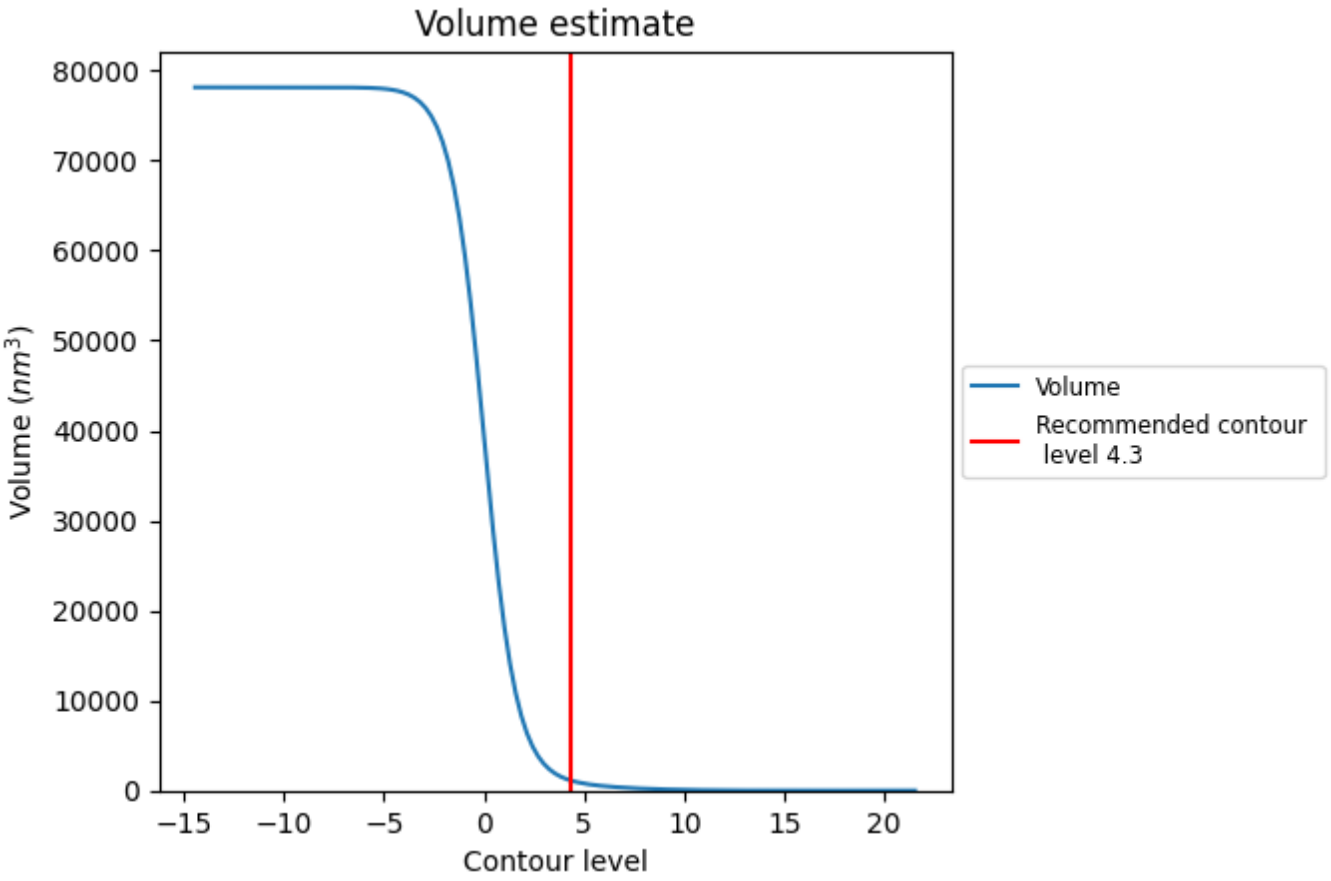
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

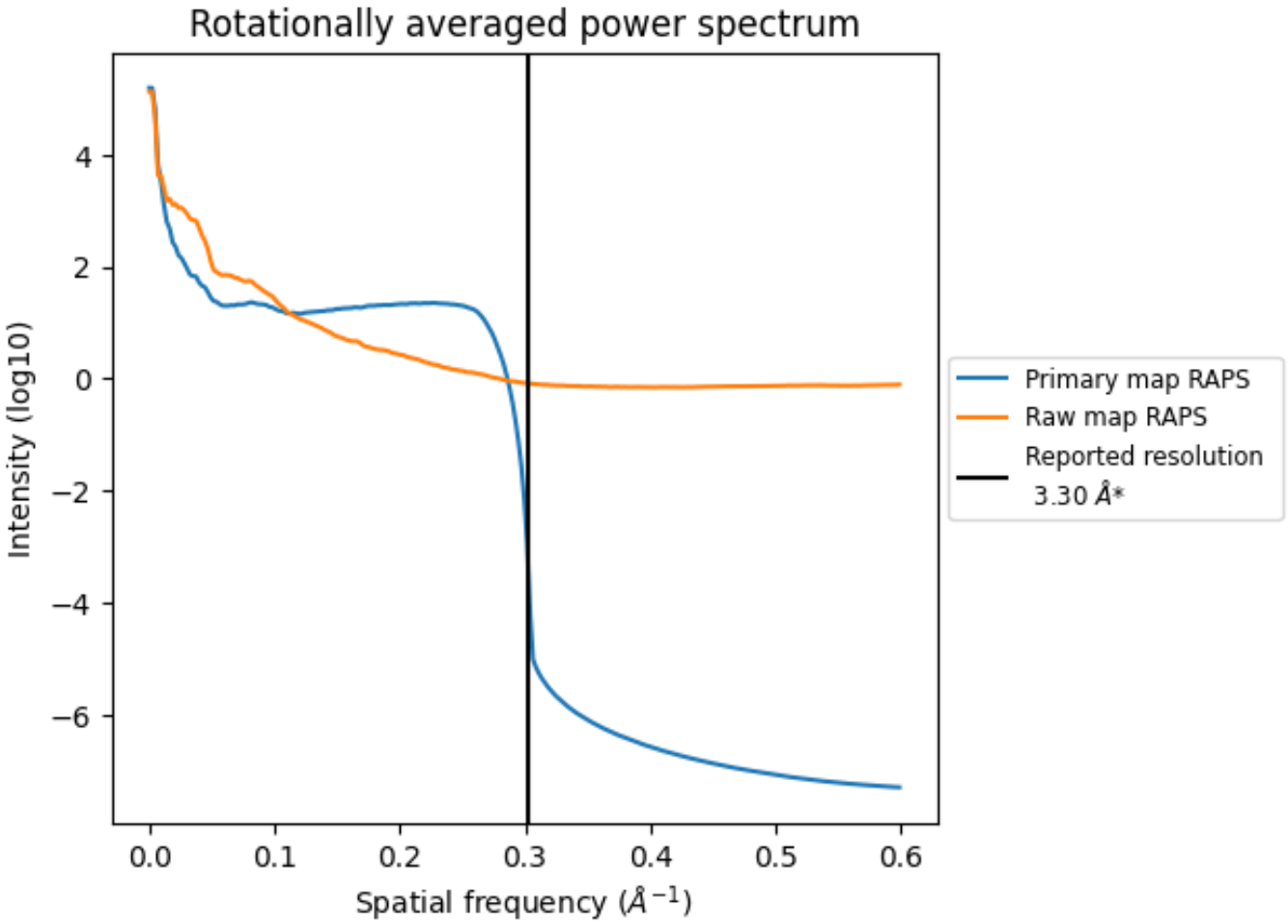
7.2 Volume estimate



The volume at the recommended contour level is 1149 nm^3; this corresponds to an approximate mass of 1038 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)

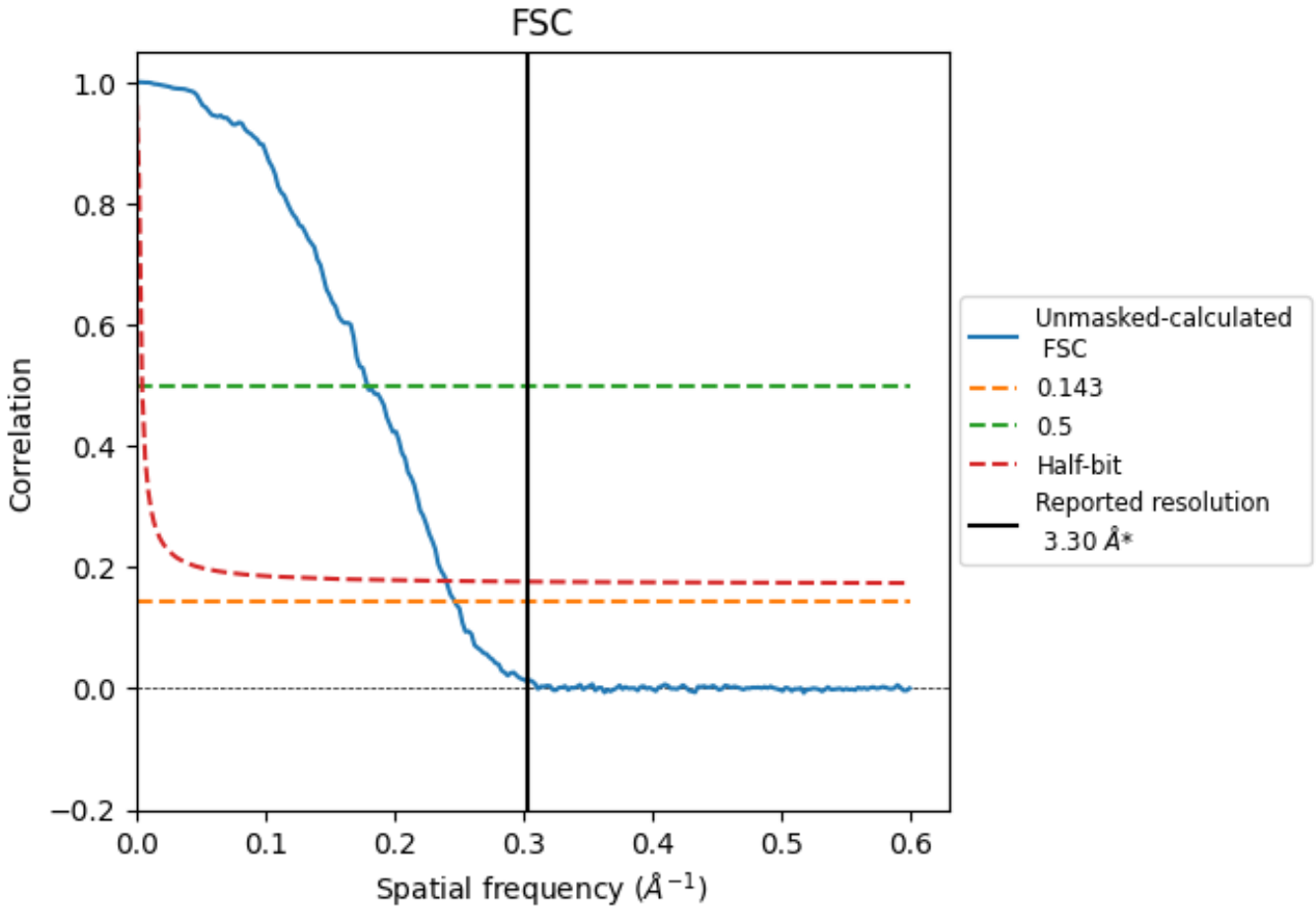


*Reported resolution corresponds to spatial frequency of 0.303 Å^{-1}

8 Fourier-Shell correlation

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.303 Å^{-1}

8.2 Resolution estimates (i)

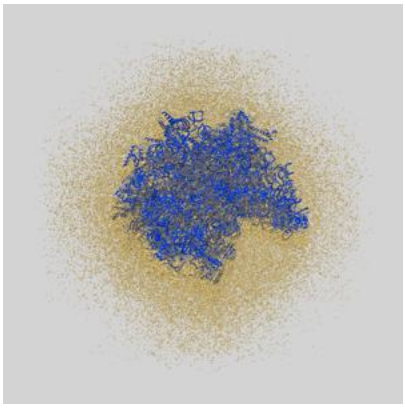
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.30	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.05	5.59	4.17

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.05 differs from the reported value 3.3 by more than 10 %

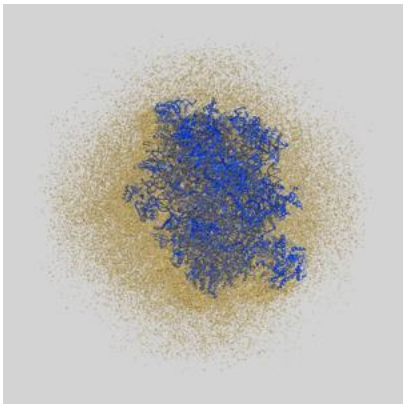
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-42687 and PDB model 8UX4. Per-residue inclusion information can be found in section 3 on page 17.

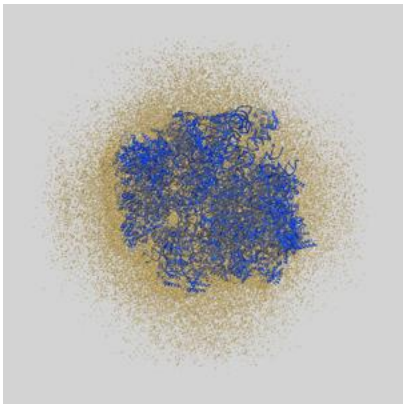
9.1 Map-model overlay



X



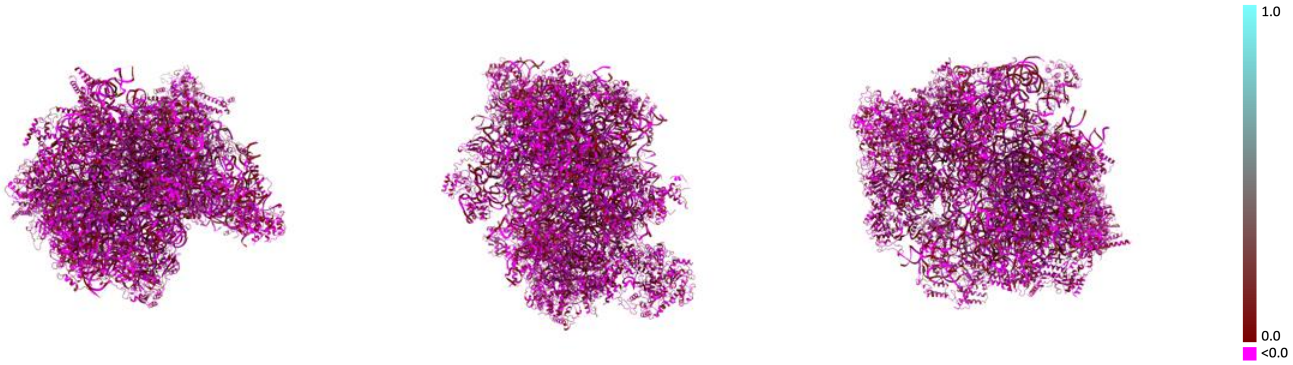
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 4.3 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

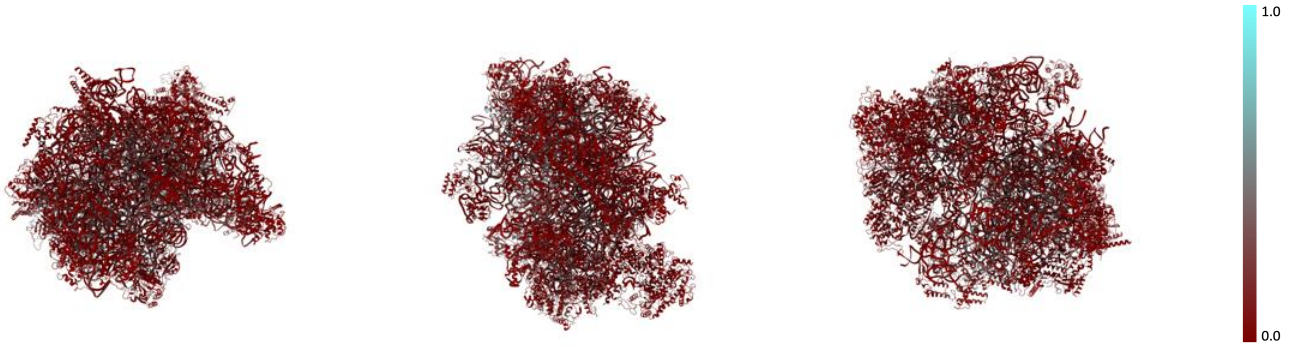
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

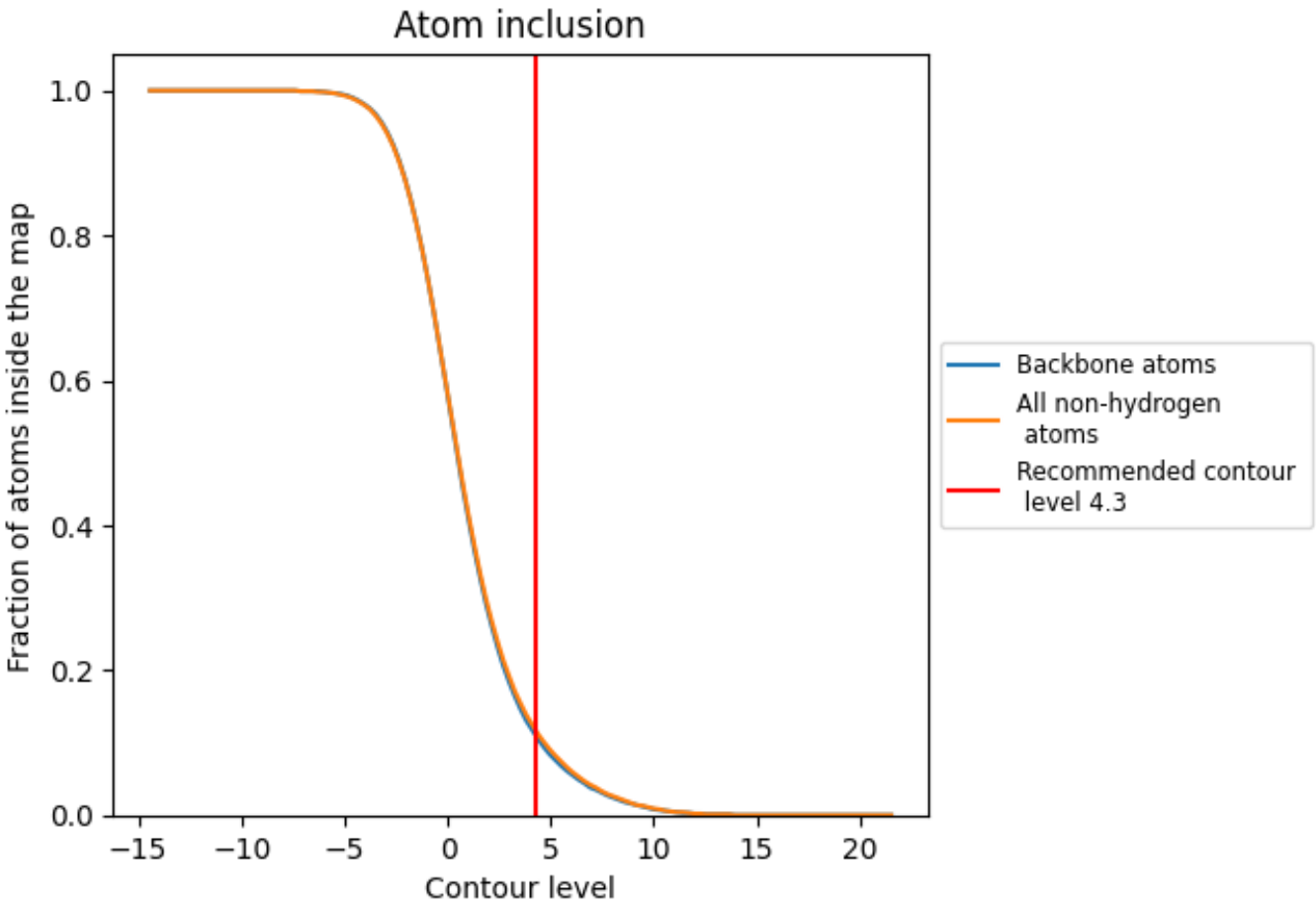
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (4.3).

9.4 Atom inclusion (i)



At the recommended contour level, 11% of all backbone atoms, 12% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (4.3) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.1160	-0.0060
0	0.2770	0.0530
1	0.1680	-0.0120
2	0.1040	-0.0210
3	0.0890	-0.0140
4	0.0940	-0.0020
5	0.0930	-0.0010
6	0.1130	-0.0240
7	0.1680	0.0050
8	0.0450	-0.0130
9	0.0690	0.0040
A	0.1500	-0.0120
AA	0.2520	0.0100
AB	0.1110	0.0130
AC	0.0800	0.0130
AD	0.0180	0.0060
AE	0.0470	-0.0140
AF	0.0760	-0.0060
AG	0.0600	0.0020
AH	0.0180	-0.0010
AI	0.0610	-0.0040
AJ	0.1270	-0.0180
AK	0.1140	-0.0030
AL	0.1190	-0.0030
AM	0.1130	0.0110
AN	0.1630	-0.0530
B	0.1110	-0.0140
C	0.1810	-0.0070
D	0.0820	0.0030
E	0.1340	-0.0060
F	0.0700	-0.0090
G	0.0960	0.0200
H	0.1950	0.0050
I	0.1650	-0.0220
J	0.1320	-0.0210

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Chain	Atom inclusion	Q-score
K	0.1850	-0.0060
L	0.0690	0.0030
M	0.0820	-0.0310
N	0.2130	-0.0010
O	0.0590	-0.0090
P	0.0640	0.0100
Q	0.0520	0.0050
R	0.0760	0.0090
S	0.1160	-0.0010
T	0.0220	0.0040
U	0.2060	-0.0340
V	0.1690	0.0190
W	0.0880	-0.0060
X	0.1090	-0.0150
Y	0.2630	0.0130
Z	0.0660	-0.0120
a	0.0920	-0.0120
b	0.0910	0.0280
c	0.2150	-0.0240
d	0.0740	-0.0050
e	0.0860	-0.0020
f	0.0420	-0.0060
g	0.0370	-0.0020
h	0.1160	-0.0030
i	0.1330	-0.0030
j	0.0740	0.0060
k	0.1200	-0.0160
l	0.0290	0.0080
m	0.0680	0.0030
n	0.1230	0.0120
o	0.0870	-0.0080
p	0.1310	-0.0100
q	0.0600	0.0080
r	0.1600	-0.0100
s	0.0450	0.0080
t	0.1930	-0.0160
u	0.0540	-0.0000
v	0.1290	-0.0010
w	0.0130	0.0050
x	0.0880	0.0190
y	0.0790	-0.0220
z	0.0990	0.0170