



Full wwPDB EM Validation Report ⓘ

Feb 23, 2026 – 09:55 am GMT

PDB ID : 9HEU / pdb_00009heu
EMDB ID : EMD-52097
Title : Co-chaperone Bag1-bound human 26S proteasome in SBAG1 state
Authors : Cheng, T.C.; Sakata, E.; Muntaner, J.; Maestro-Lopez, M.; Cuellar, J.; Valpuesta, J.M.
Deposited on : 2024-11-14
Resolution : 3.60 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:

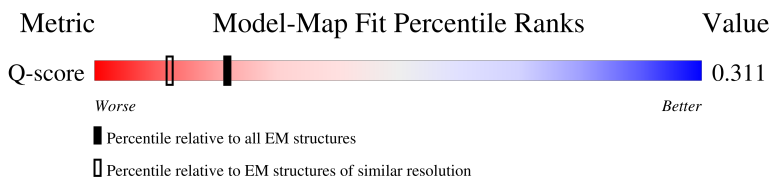
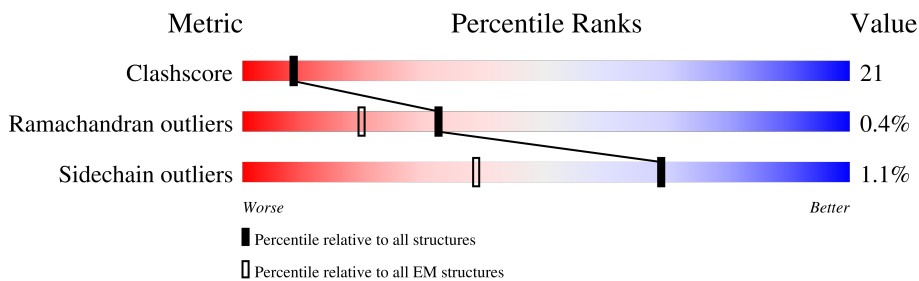
EMDB validation analysis : 0.0.1.dev132
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4-5-2 with Phenix2.0
buster-report : 1.1.7 (2018)
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up 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) : 2.48.1

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 3.60 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)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	210492	15764	-
Ramachandran outliers	207382	16835	-
Sidechain outliers	206894	16415	-
Q-score	-	25397	12797 (3.10 - 4.10)

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 $\leq 5\%$. 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	G	246	53% 42% . .
1	g	246	62% 37% .
2	H	234	45% 51% .
2	h	234	65% 34% .








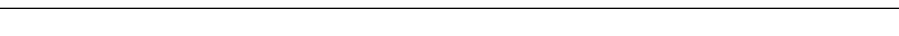
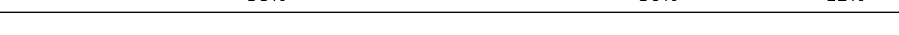
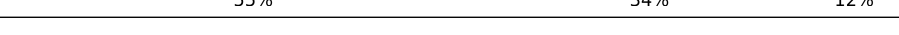
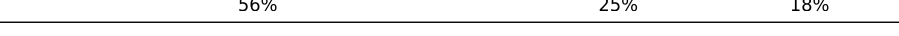







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Mol	Chain	Length	Quality of chain
3	I	261	60% 35% 5%
3	i	261	64% 32% 4%
4	J	248	47% 44% 7%
4	j	248	66% 30% 4%
5	L	269	54% 33% 13%
5	l	269	53% 35% 12%
6	M	255	56% 35% 9%
6	m	255	52% 42% 6%
7	A	433	52% 38% 10%
8	B	440	49% 38% 13%
9	C	398	45% 44% 11%
10	D	418	46% 40% 14%
11	E	403	49% 39% 12%
12	F	439	40% 38% 22%
13	K	241	56% 34% 10%
13	k	241	63% 34% 3%
14	f	908	50% 40% 10%
15	a	376	60% 39% 1%
16	b	377	29% 21% 50%
17	c	310	51% 41% 8%
18	d	350	40% 32% 28%
19	e	70	53% 19% 29%
20	N	239	58% 27% 15%
20	n	239	57% 27% 16%
21	O	277	52% 27% 21%

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Mol	Chain	Length	Quality of chain
21	o	277	 51% 28% 21%
22	P	205	 60% 39%
22	p	205	 68% 31%
23	Q	201	 58% 39% .
23	q	201	 58% 40% .
24	R	263	 50% 27% 24%
24	r	263	 49% 27% 24%
25	S	241	 58% 30% 12%
25	s	241	 55% 34% 12%
26	T	264	 56% 25% 18%
26	t	264	 53% 29% 18%
27	U	953	 54% 36% 10%
28	V	534	 . 47% 36% 17%
29	X	422	 . 61% 28% 10%
30	Y	389	 . 61% 37% ..
31	Z	324	 58% 30% 12%
32	W	456	 52% 45% .
33	x	230	 . 27% 10% 63%

2 Entry composition [i](#)

There are 35 unique types of molecules in this entry. The entry contains 104160 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 Proteasome subunit alpha type-6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	G	237	Total	C	N	O	S	0	0
			1841	1168	307	353	13		
1	g	243	Total	C	N	O	S	0	0
			1885	1194	316	362	13		

- Molecule 2 is a protein called Proteasome subunit alpha type-2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	H	226	Total	C	N	O	S	0	0
			1749	1116	297	330	6		
2	h	232	Total	C	N	O	S	0	0
			1813	1158	307	342	6		

- Molecule 3 is a protein called Proteasome subunit alpha type-4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	I	248	Total	C	N	O	S	9	0
			2025	1279	349	388	9		
3	i	250	Total	C	N	O	S	0	0
			1971	1245	339	377	10		

- Molecule 4 is a protein called Proteasome subunit alpha type-7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	J	237	Total	C	N	O	S	0	0
			1869	1171	332	361	5		
4	j	238	Total	C	N	O	S	0	0
			1878	1178	333	362	5		

- Molecule 5 is a protein called Isoform Long of Proteasome subunit alpha type-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	L	237	1864	1167	335	351	11	0	0
5	l	237	1864	1167	335	351	11	0	0

- Molecule 6 is a protein called Proteasome subunit alpha type-3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	M	238	1862	1180	318	353	11	0	0
6	m	240	1881	1193	321	356	11	0	0

- Molecule 7 is a protein called 26S protease regulatory subunit 7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	A	403	3119	1958	548	596	17	0	0

- Molecule 8 is a protein called 26S protease regulatory subunit 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	B	400	3060	1918	527	601	14	0	0

- Molecule 9 is a protein called Isoform 2 of 26S proteasome regulatory subunit 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	C	368	2839	1766	518	537	18	0	0

- Molecule 10 is a protein called 26S protease regulatory subunit 6B.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	D	372	2904	1827	506	560	11	0	0

- Molecule 11 is a protein called 26S proteasome regulatory subunit 10B.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	E	361	2775	1733	500	526	16	0	0

- Molecule 12 is a protein called 26S protease regulatory subunit 6A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	F	355	2709	1705	468	519	17	0	0

- Molecule 13 is a protein called Proteasome subunit alpha type-5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	K	222	1694	1066	280	338	10	0	0
13	k	234	1789	1125	295	358	11	0	0

- Molecule 14 is a protein called 26S proteasome non-ATPase regulatory subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	f	823	6292	3963	1077	1208	44	0	0

- Molecule 15 is a protein called 26S proteasome non-ATPase regulatory subunit 13.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
15	a	373	2969	1887	510	557	15	0	0

- Molecule 16 is a protein called 26S proteasome non-ATPase regulatory subunit 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
16	b	191	1458	910	261	279	8	0	0

- Molecule 17 is a protein called 26S proteasome non-ATPase regulatory subunit 14.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
17	c	287	2224	1398	388	419	19	0	0

- Molecule 18 is a protein called 26S proteasome non-ATPase regulatory subunit 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
18	d	252	2063	1338	335	382	8	0	0

- Molecule 19 is a protein called 26S proteasome complex subunit SEM1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
19	e	50	407	244	63	100	0	0	

- Molecule 20 is a protein called Proteasome subunit beta type-6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
20	n	202	1514	949	258	295	12	0	0
20	N	203	1521	954	259	296	12	0	0

- Molecule 21 is a protein called Proteasome subunit beta type-7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
21	o	220	1659	1044	283	320	12	0	0
21	O	220	1659	1044	283	320	12	0	0

- Molecule 22 is a protein called Proteasome subunit beta type-3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
22	p	204	1591	1013	265	294	19	0	0
22	P	204	1591	1013	265	294	19	0	0

- Molecule 23 is a protein called Proteasome subunit beta type-2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
23	q	196	1571	1006	267	289	9	0	0
23	Q	196	1571	1006	267	289	9	0	0

- Molecule 24 is a protein called Proteasome subunit beta type-5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
24	r	201	1559	982	274	294	9	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
24	R	201	Total	C	N	O	S	0	0
			1559	982	274	294	9		

- Molecule 25 is a protein called Proteasome subunit beta type-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	s	213	Total	C	N	O	S	0	0
			1654	1047	284	313	10		
25	S	212	Total	C	N	O	S	0	0
			1643	1041	280	312	10		

- Molecule 26 is a protein called Proteasome subunit beta type-4.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	t	216	Total	C	N	O	S	0	0
			1687	1064	291	320	12		
26	T	216	Total	C	N	O	S	0	0
			1687	1064	291	320	12		

- Molecule 27 is a protein called 26S proteasome non-ATPase regulatory subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	U	859	Total	C	N	O	S	0	0
			6648	4199	1136	1269	44		

- Molecule 28 is a protein called 26S proteasome non-ATPase regulatory subunit 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	V	444	Total	C	N	O	S	0	0
			3600	2289	645	653	13		

- Molecule 29 is a protein called 26S proteasome non-ATPase regulatory subunit 11.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	X	380	Total	C	N	O	S	0	0
			3002	1912	509	569	12		

- Molecule 30 is a protein called 26S proteasome non-ATPase regulatory subunit 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
30	Y	380	3021	1904	530	570	17	0	0

- Molecule 31 is a protein called 26S proteasome non-ATPase regulatory subunit 7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
31	Z	286	2248	1427	392	424	5	0	0

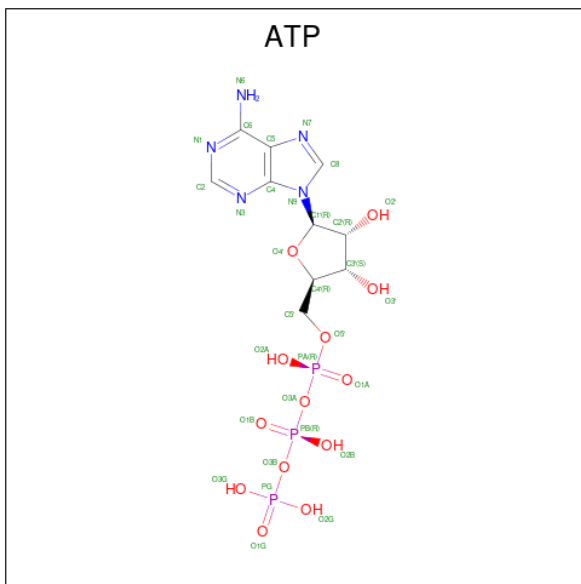
- Molecule 32 is a protein called 26S proteasome non-ATPase regulatory subunit 12.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
32	W	444	3570	2250	616	680	24	0	0

- Molecule 33 is a protein called BAG family molecular chaperone regulator 1.

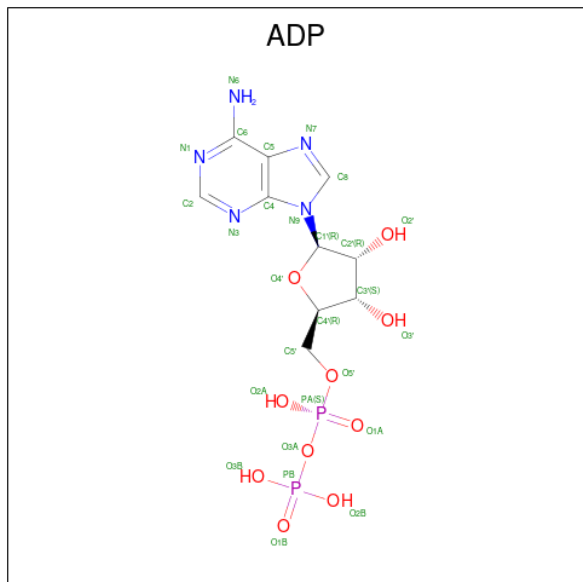
Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
33	x	85	635	397	110	125	3	0	0

- Molecule 34 is ADENOSINE-5'-TRIPHOSPHATE (CCD ID: ATP) (formula: $C_{10}H_{16}N_5O_{13}P_3$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
34	A	1	31	10	5	13	3	0

- Molecule 35 is ADENOSINE-5'-DIPHOSPHATE (CCD ID: ADP) (formula: $C_{10}H_{15}N_5O_{10}P_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
35	B	1	Total	C	N	O	P	0
			27	10	5	10	2	
35	C	1	Total	C	N	O	P	0
			27	10	5	10	2	
35	D	1	Total	C	N	O	P	0
			27	10	5	10	2	
35	E	1	Total	C	N	O	P	0
			27	10	5	10	2	
35	F	1	Total	C	N	O	P	0
			27	10	5	10	2	

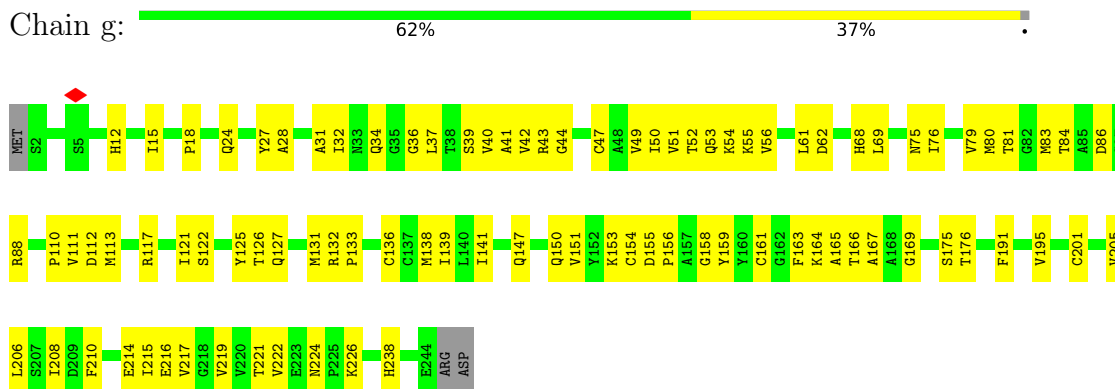
3 Residue-property plots

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.

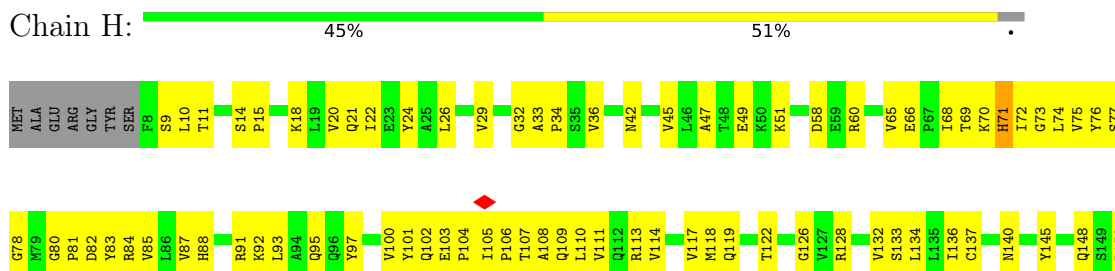
- Molecule 1: Proteasome subunit alpha type-6



- Molecule 1: Proteasome subunit alpha type-6

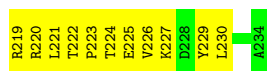


- Molecule 2: Proteasome subunit alpha type-2

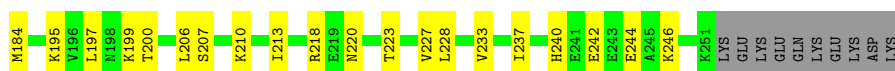
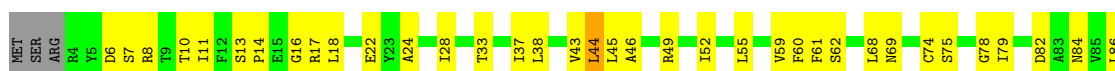




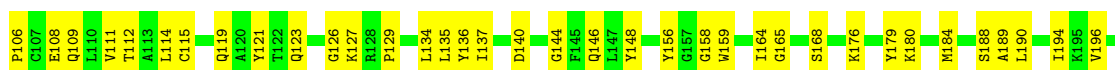
• Molecule 2: Proteasome subunit alpha type-2



• Molecule 3: Proteasome subunit alpha type-4

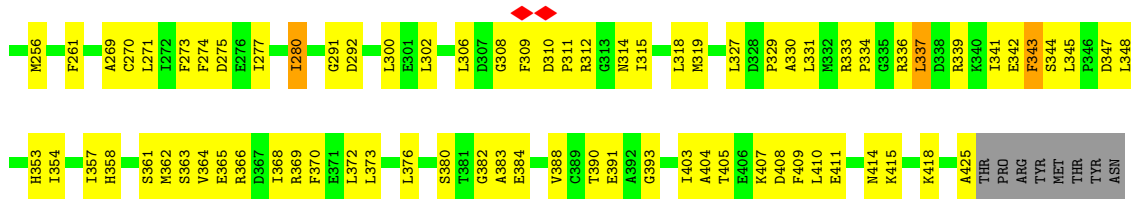


• Molecule 3: Proteasome subunit alpha type-4

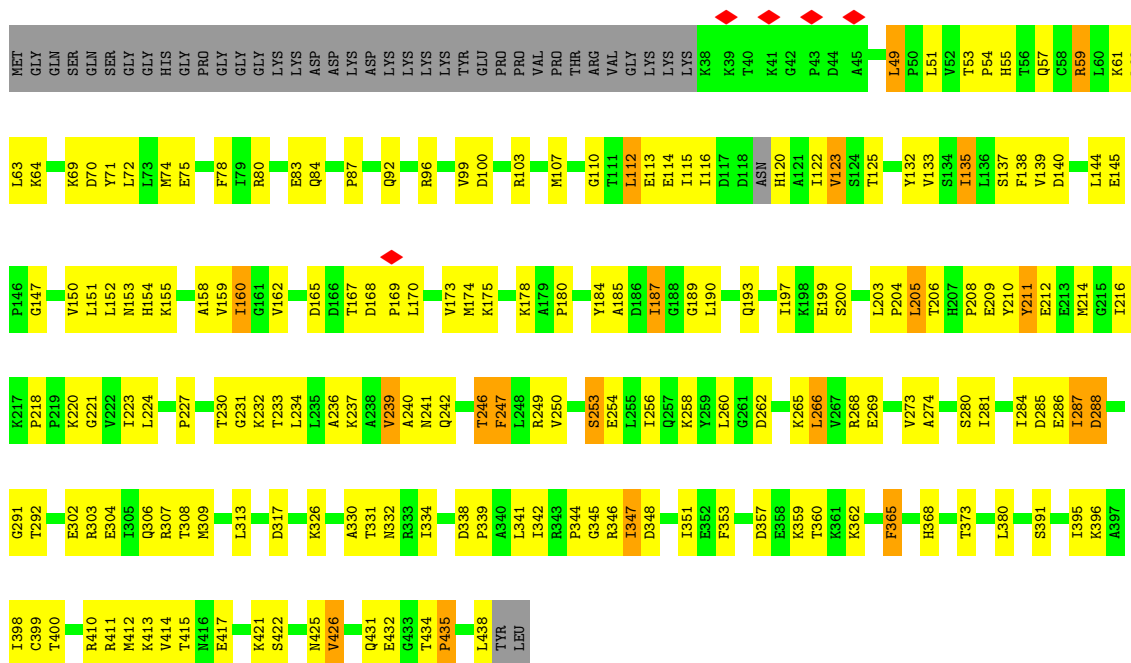


• Molecule 4: Proteasome subunit alpha type-7

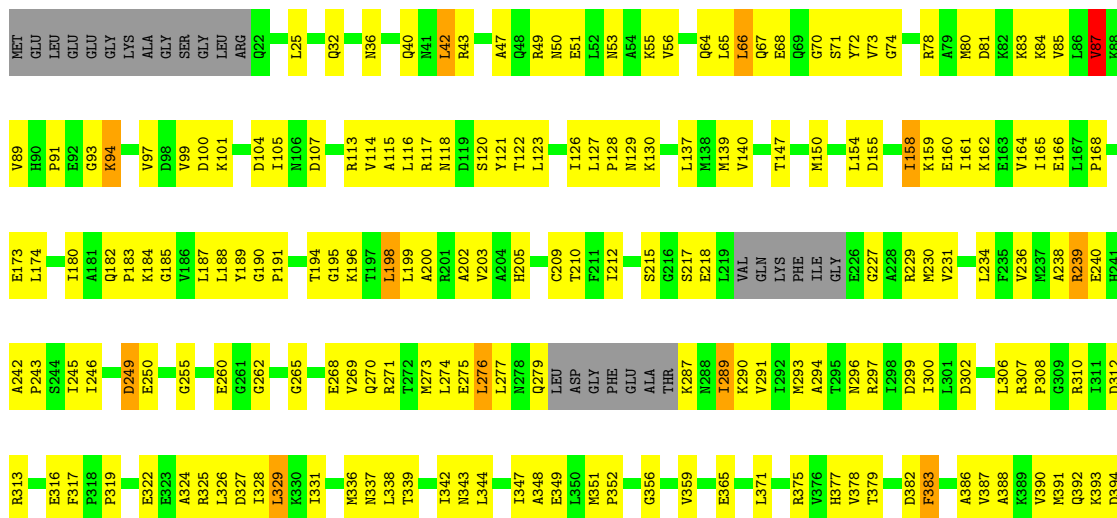


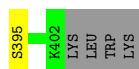


• Molecule 8: 26S protease regulatory subunit 4

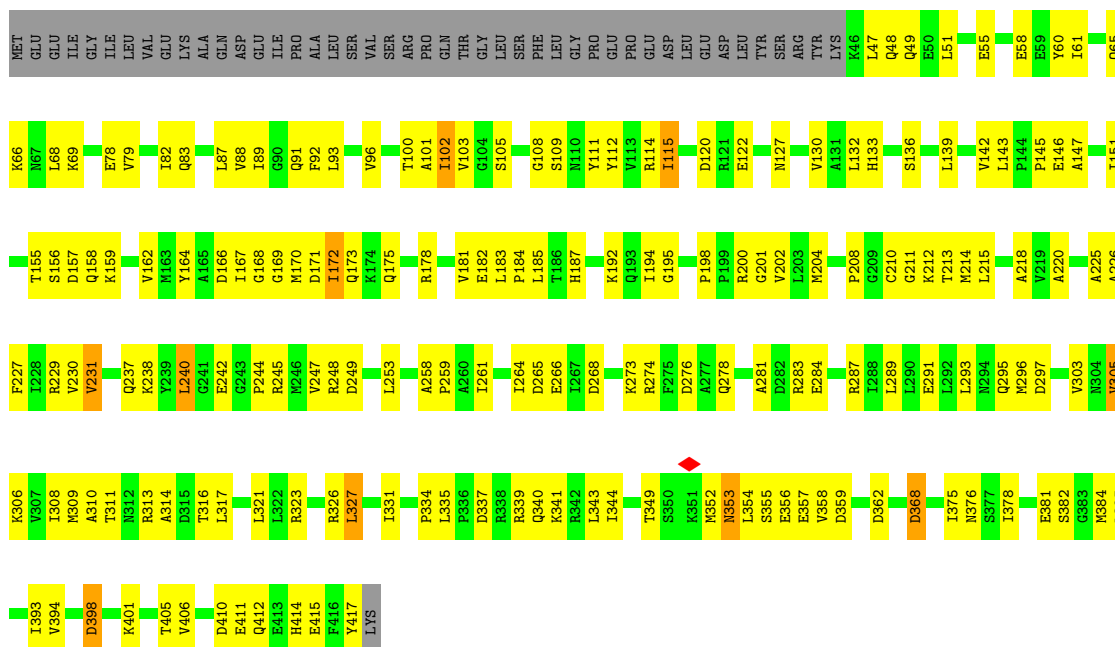


• Molecule 9: Isoform 2 of 26S proteasome regulatory subunit 8

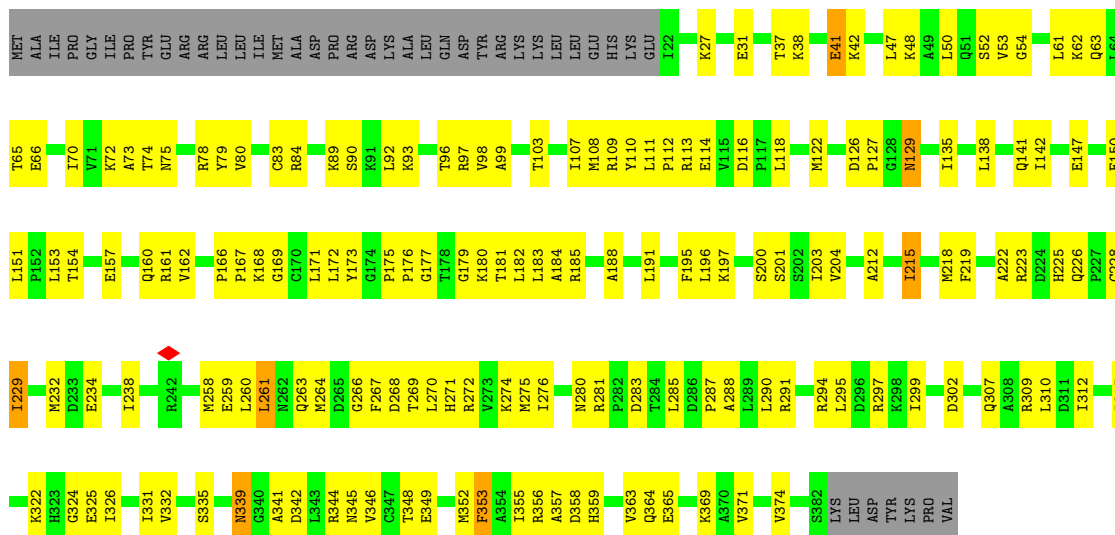




• Molecule 10: 26S protease regulatory subunit 6B

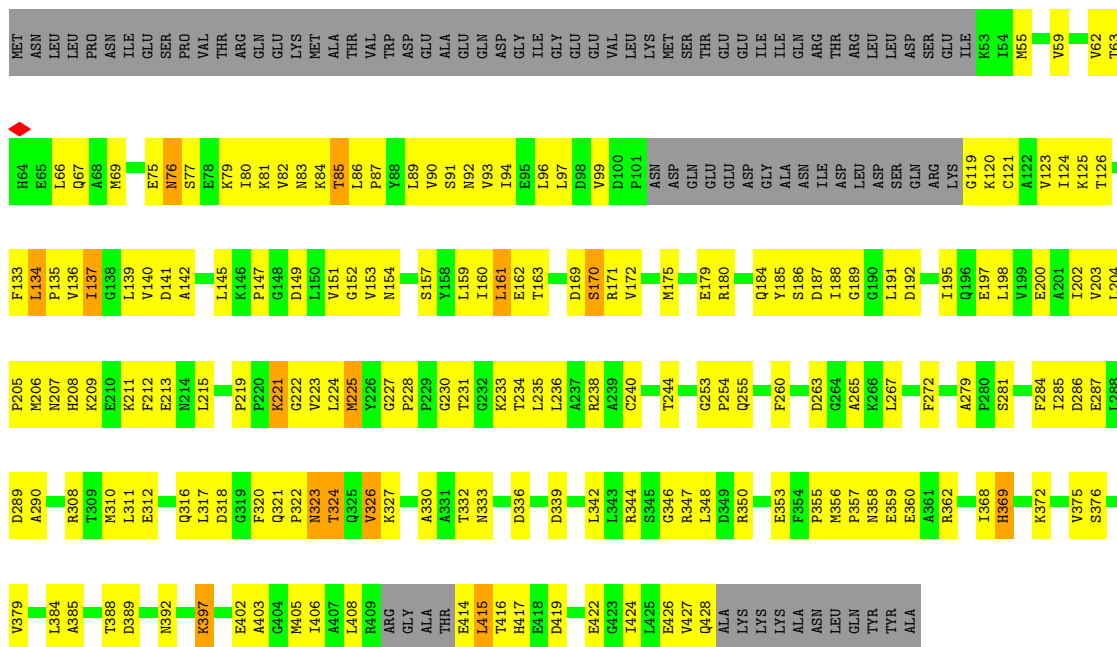


• Molecule 11: 26S proteasome regulatory subunit 10B

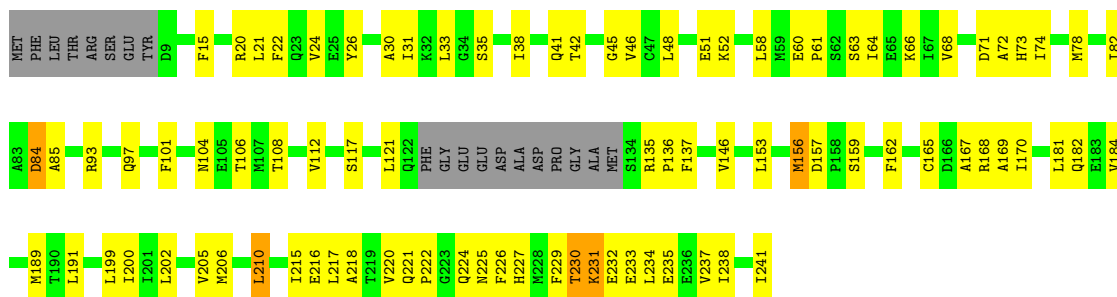


• Molecule 12: 26S protease regulatory subunit 6A

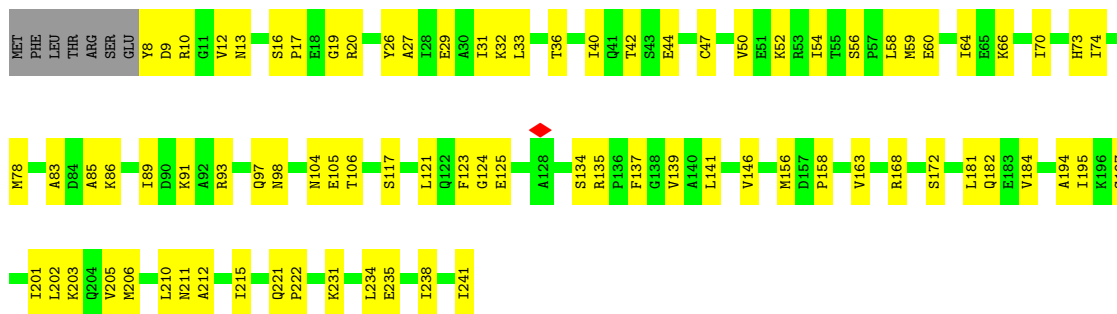




• Molecule 13: Proteasome subunit alpha type-5

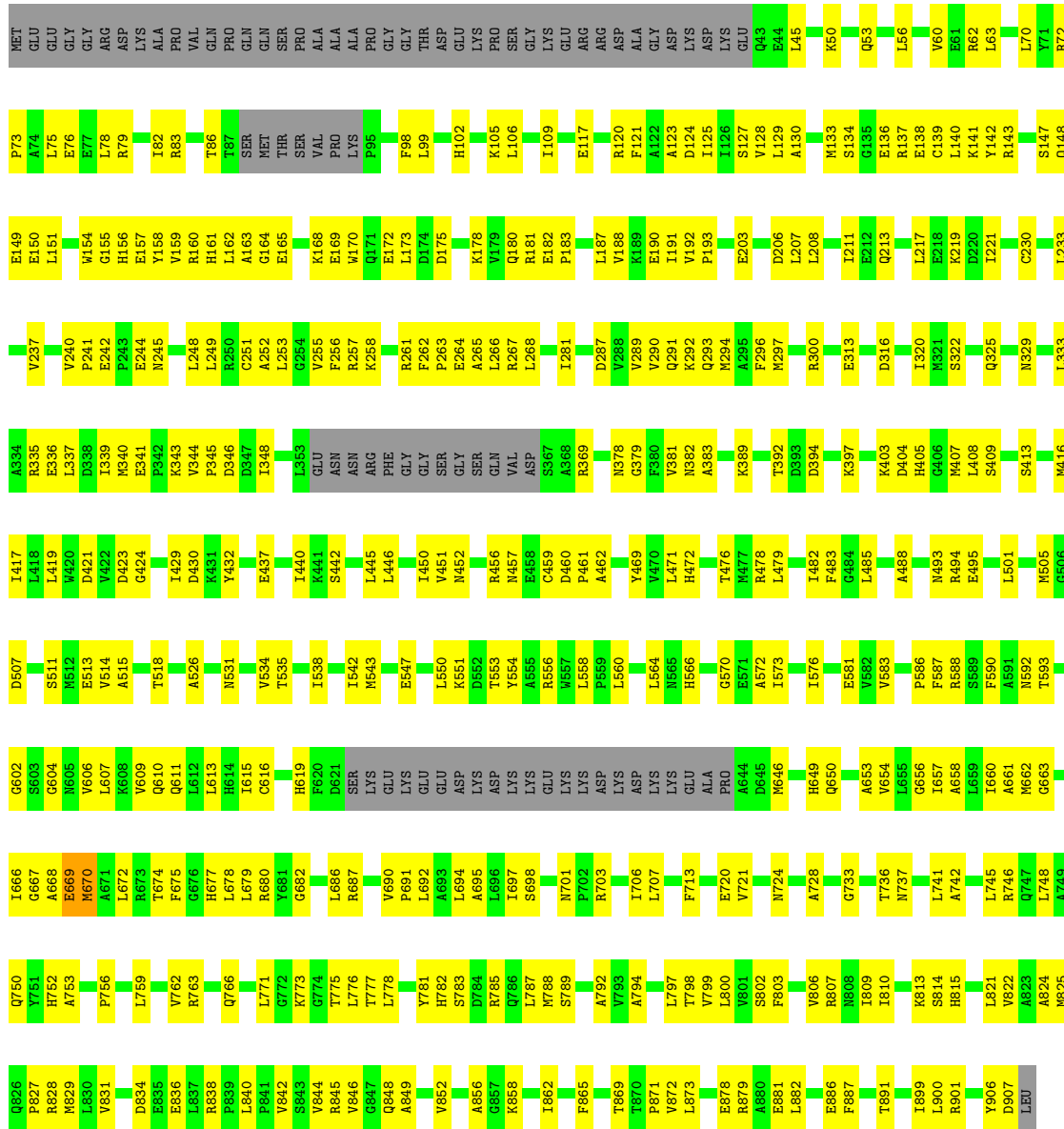


• Molecule 13: Proteasome subunit alpha type-5

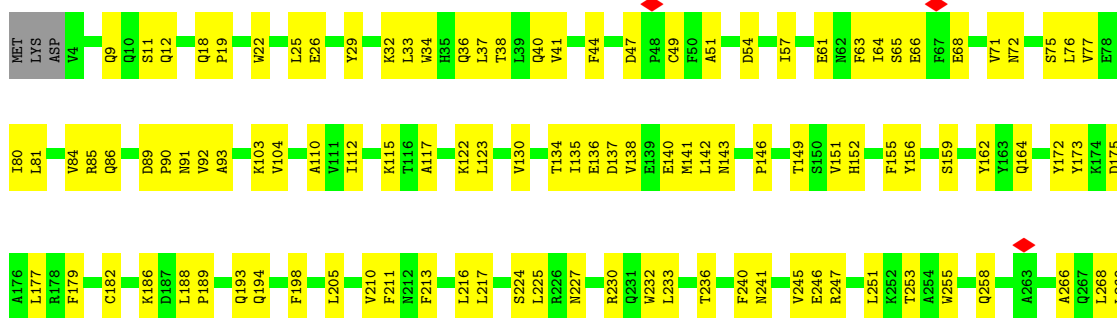


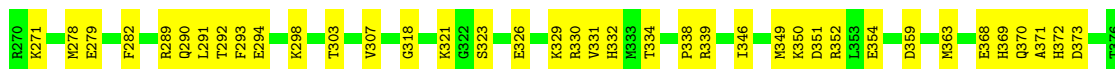
• Molecule 14: 26S proteasome non-ATPase regulatory subunit 2



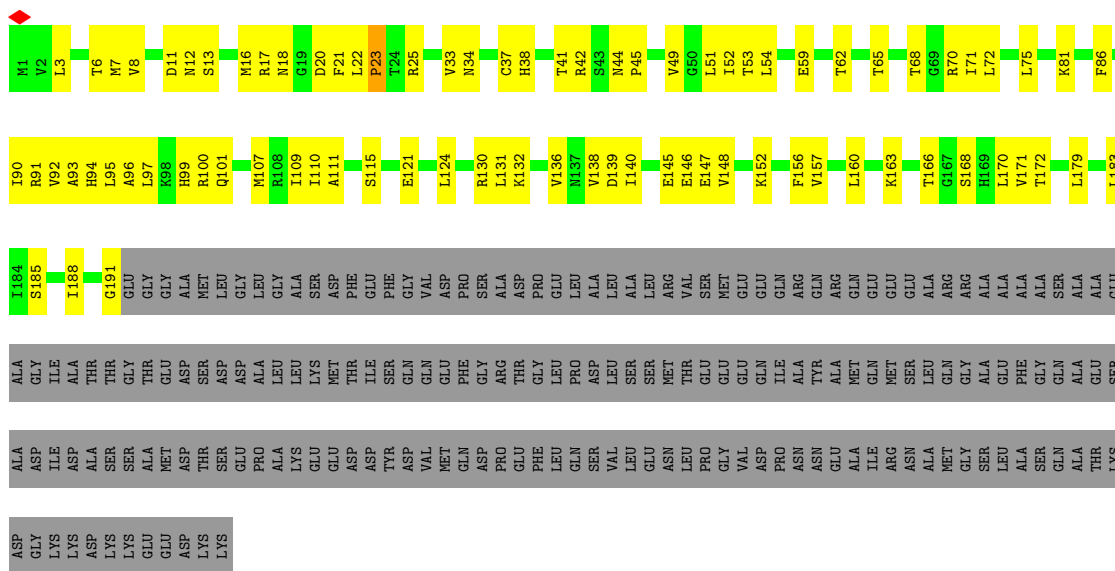
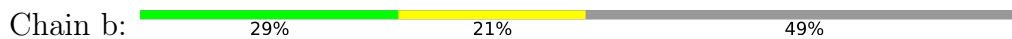


● Molecule 15: 26S proteasome non-ATPase regulatory subunit 13

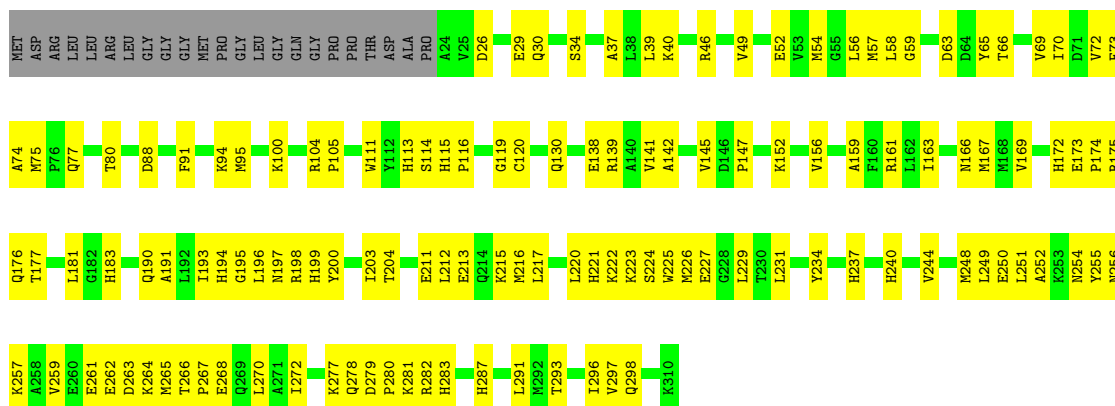




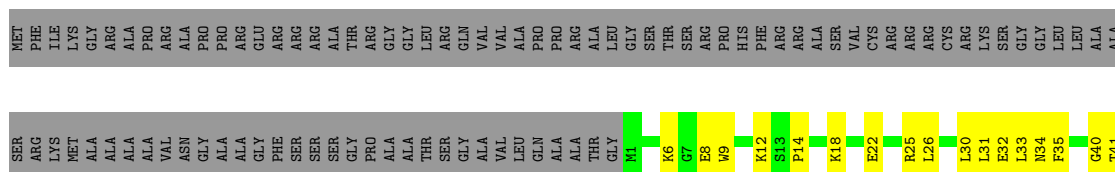
• Molecule 16: 26S proteasome non-ATPase regulatory subunit 4

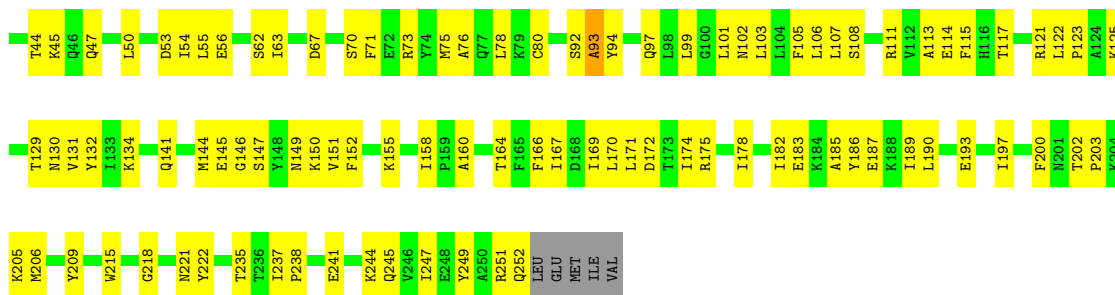


• Molecule 17: 26S proteasome non-ATPase regulatory subunit 14

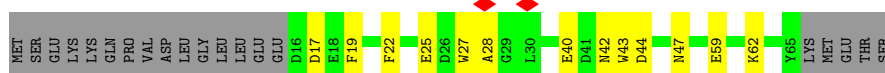


• Molecule 18: 26S proteasome non-ATPase regulatory subunit 8

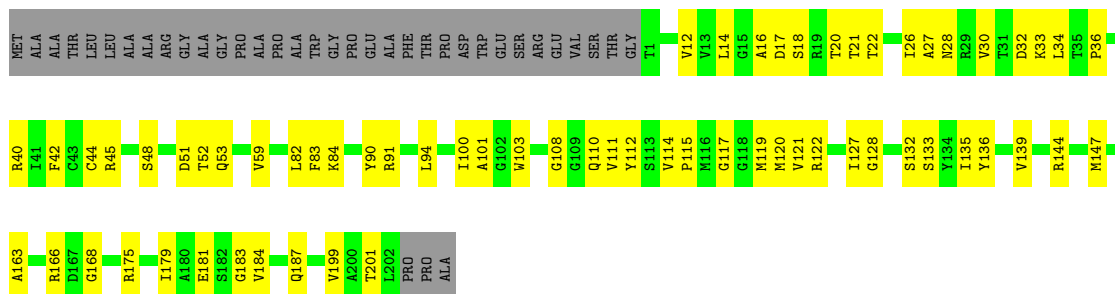




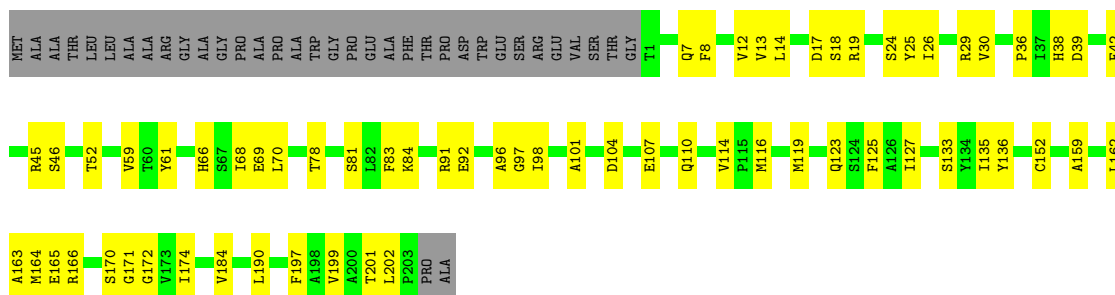
- Molecule 19: 26S proteasome complex subunit SEM1



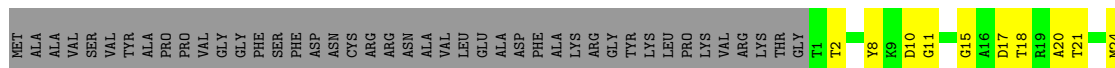
- Molecule 20: Proteasome subunit beta type-6



- Molecule 20: Proteasome subunit beta type-6

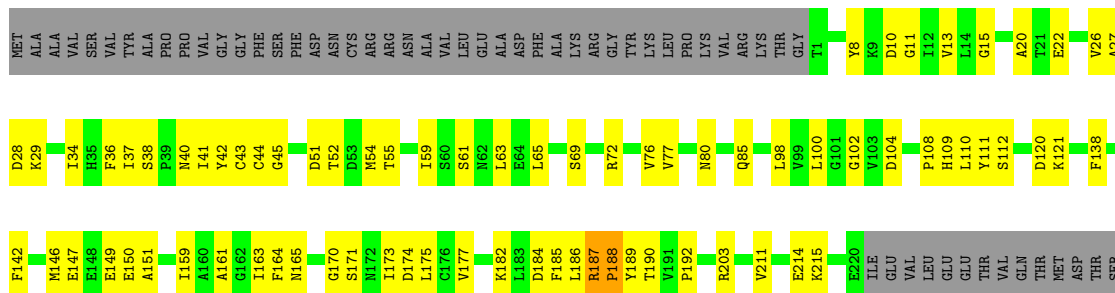


- Molecule 21: Proteasome subunit beta type-7

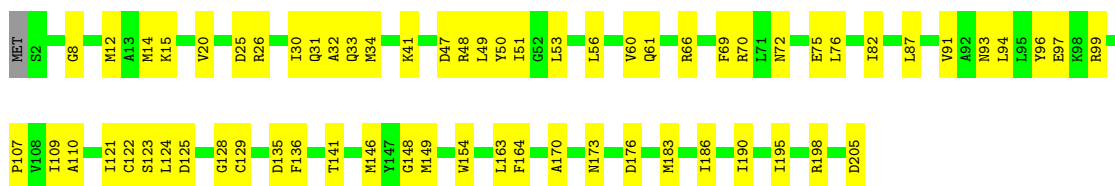




• Molecule 21: Proteasome subunit beta type-7



• Molecule 22: Proteasome subunit beta type-3

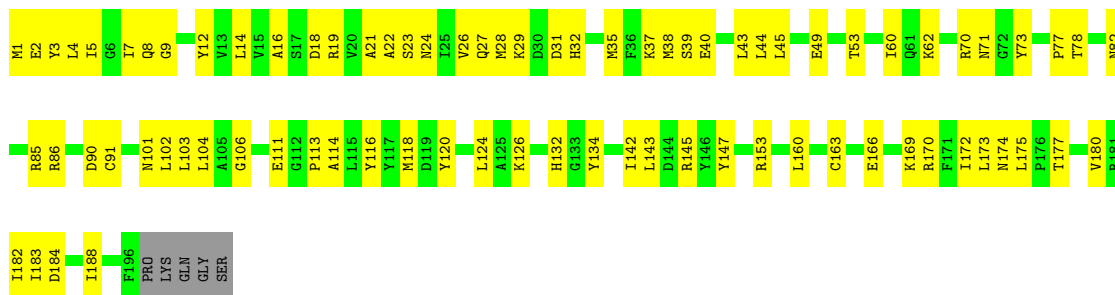


• Molecule 22: Proteasome subunit beta type-3

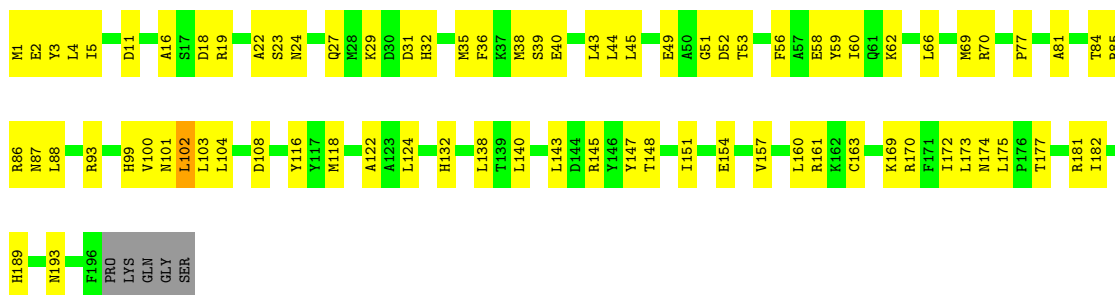


• Molecule 23: Proteasome subunit beta type-2

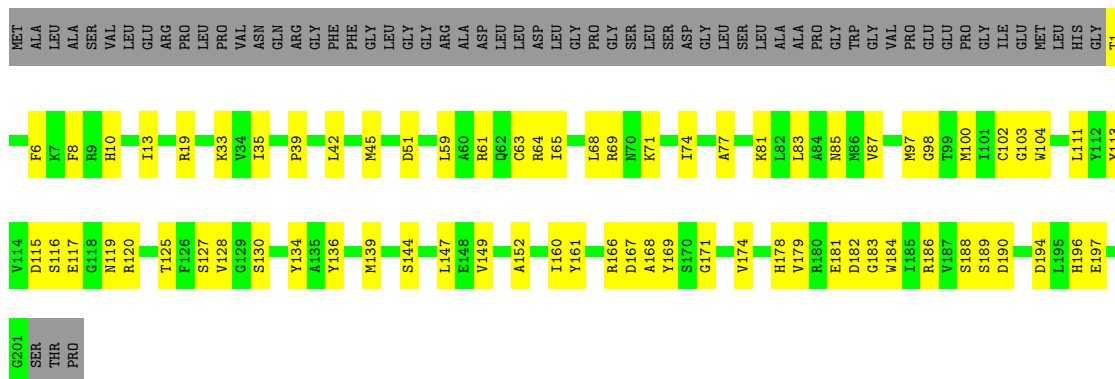




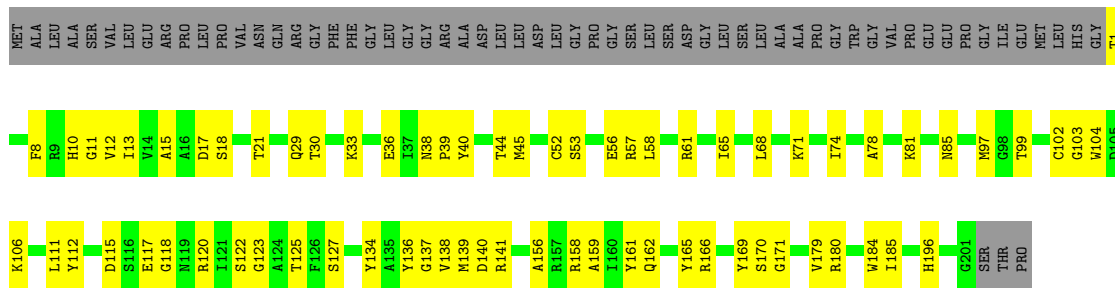
• Molecule 23: Proteasome subunit beta type-2



• Molecule 24: Proteasome subunit beta type-5

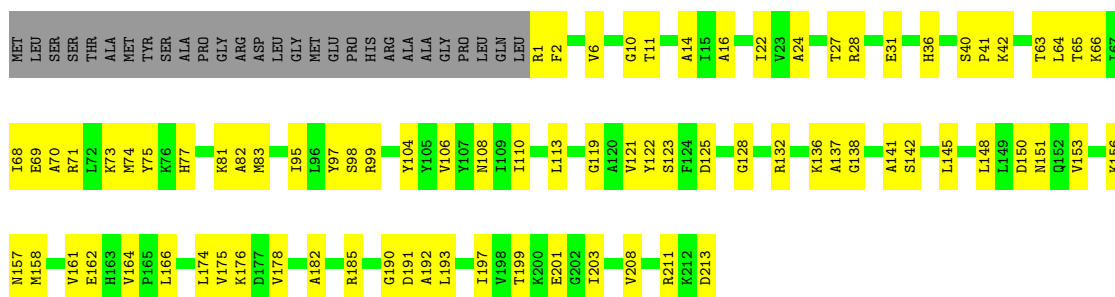


• Molecule 24: Proteasome subunit beta type-5



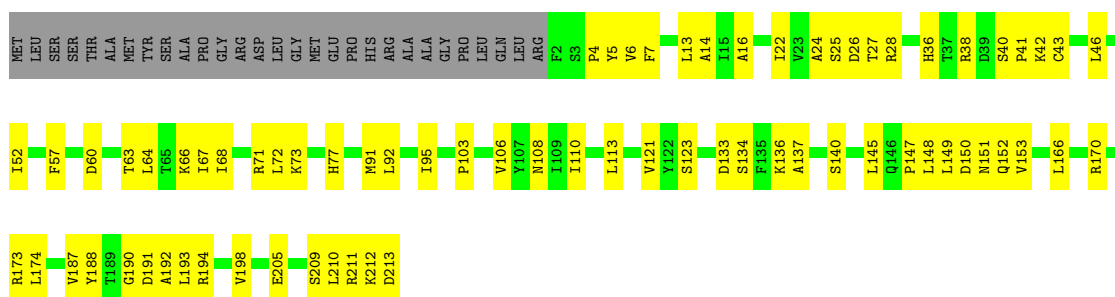
- Molecule 25: Proteasome subunit beta type-1

Chain s:  55% 34% 12%



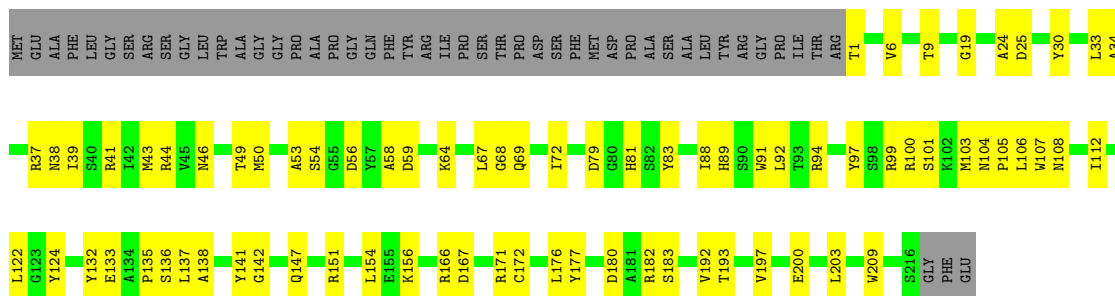
- Molecule 25: Proteasome subunit beta type-1

Chain S:  58% 30% 12%



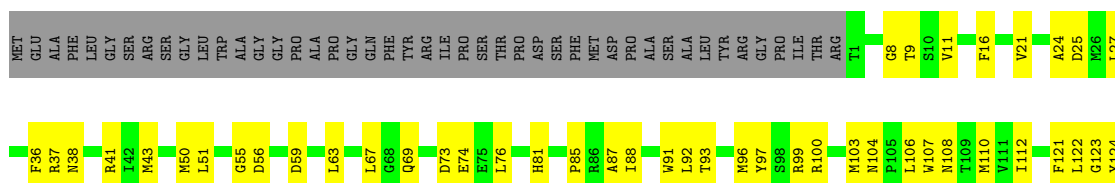
- Molecule 26: Proteasome subunit beta type-4

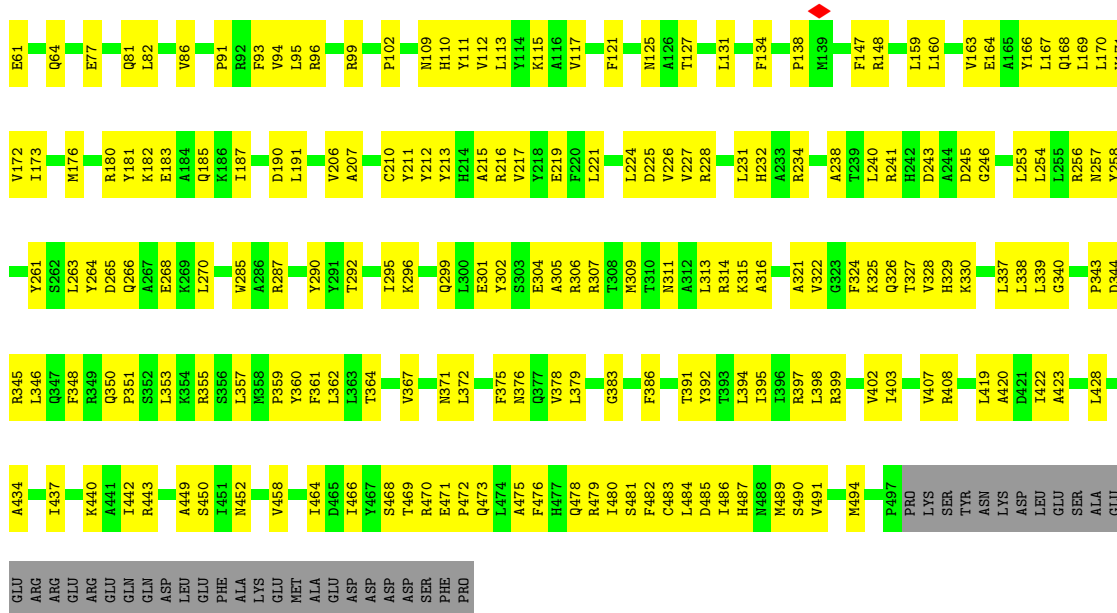
Chain t:  53% 29% 18%



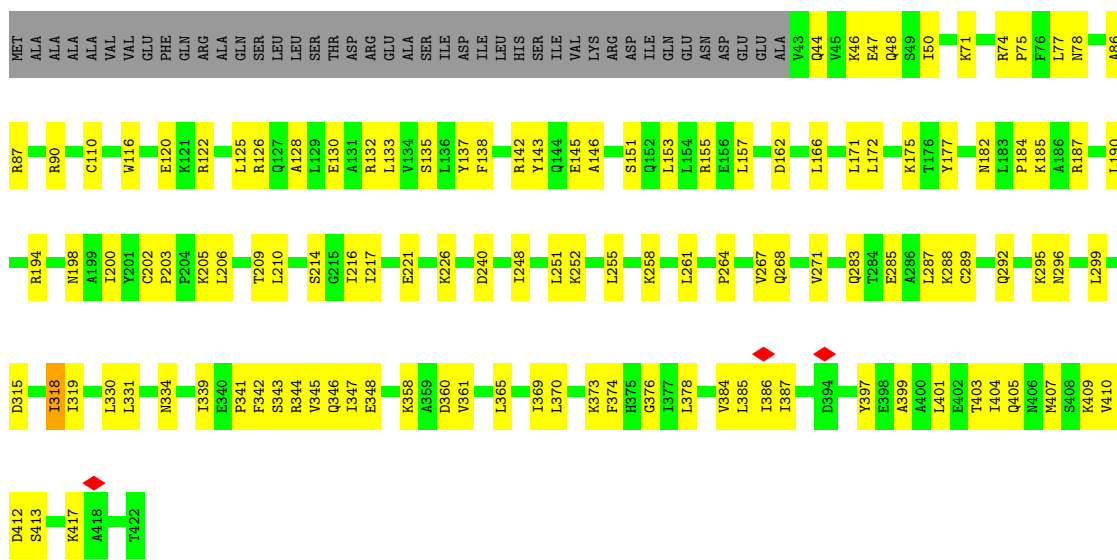
- Molecule 26: Proteasome subunit beta type-4

Chain T:  56% 25% 18%

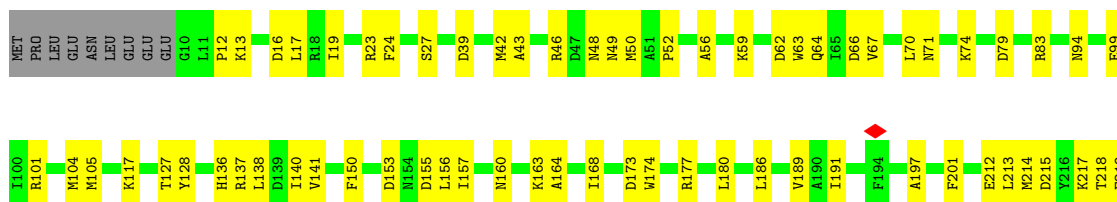


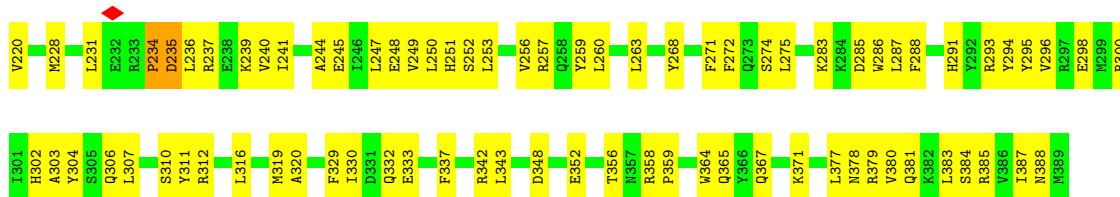


• Molecule 29: 26S proteasome non-ATPase regulatory subunit 11

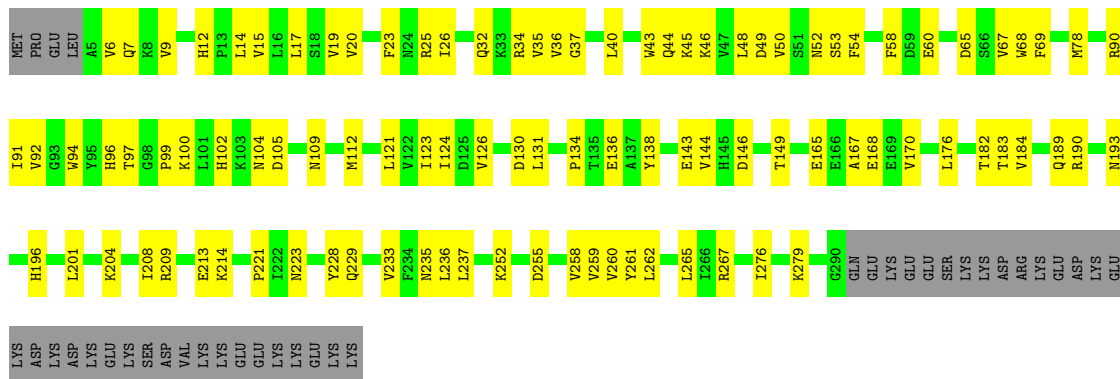


• Molecule 30: 26S proteasome non-ATPase regulatory subunit 6

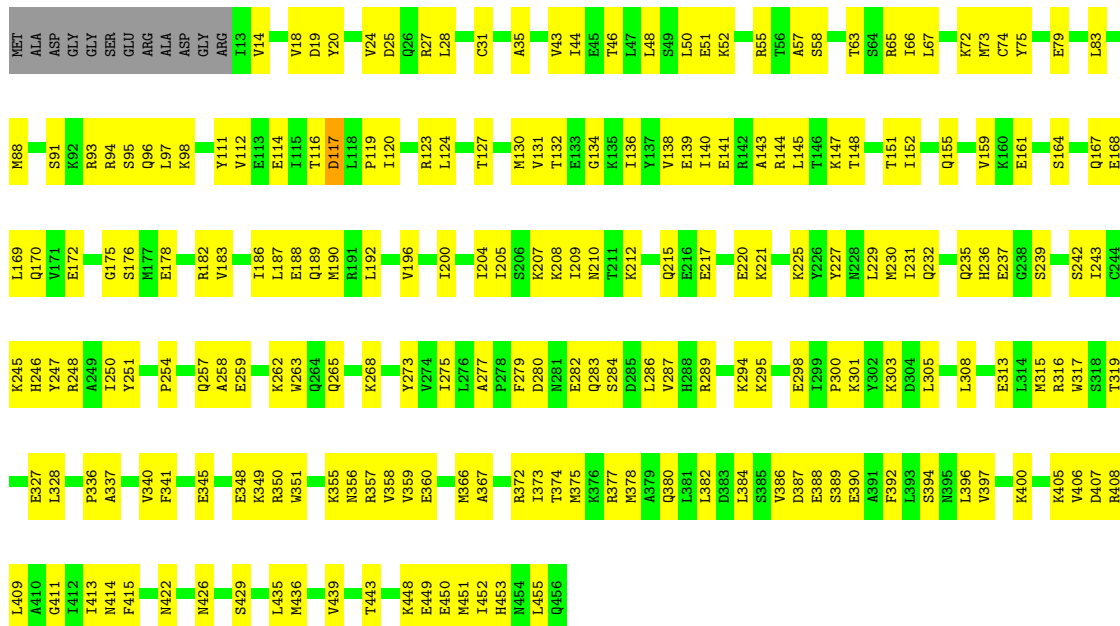




• Molecule 31: 26S proteasome non-ATPase regulatory subunit 7



• Molecule 32: 26S proteasome non-ATPase regulatory subunit 12



• Molecule 33: BAG family molecular chaperone regulator 1



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	21831	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	37	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	2.227	Depositor
Minimum map value	-1.015	Depositor
Average map value	0.008	Depositor
Map value standard deviation	0.100	Depositor
Recommended contour level	0.2	Depositor
Map size (Å)	423.9999, 423.9999, 423.9999	wwPDB
Map dimensions	300, 300, 300	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.413333, 1.413333, 1.413333	Depositor

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: ADP, ATP

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	G	0.27	0/1873	0.40	0/2533
1	g	0.13	0/1918	0.38	0/2592
2	H	0.32	0/1784	0.48	0/2416
2	h	0.13	0/1852	0.38	0/2507
3	I	0.28	0/2056	0.42	0/2770
3	i	0.14	0/2001	0.36	0/2694
4	J	0.23	0/1894	0.46	0/2555
4	j	0.13	0/1904	0.33	0/2569
5	L	0.25	0/1899	0.41	0/2567
5	l	0.13	0/1899	0.35	0/2567
6	M	0.26	0/1897	0.41	0/2555
6	m	0.16	0/1916	0.42	0/2580
7	A	0.18	0/3165	0.45	0/4273
8	B	0.21	0/3100	0.50	0/4189
9	C	0.19	0/2865	0.46	0/3851
10	D	0.20	0/2945	0.46	0/3979
11	E	0.17	0/2810	0.41	0/3789
12	F	0.17	0/2741	0.40	0/3700
13	K	0.24	0/1718	0.42	0/2319
13	k	0.12	0/1817	0.30	0/2455
14	f	0.16	0/6385	0.39	0/8637
15	a	0.14	0/3023	0.40	0/4093
16	b	0.14	0/1478	0.44	0/2001
17	c	0.16	0/2260	0.43	0/3052
18	d	0.15	0/2109	0.42	0/2851
19	e	0.13	0/415	0.37	0/563
20	N	0.18	0/1548	0.33	0/2097
20	n	0.15	0/1540	0.37	0/2085
21	O	0.20	0/1686	0.38	0/2282
21	o	0.16	0/1686	0.37	0/2282
22	P	0.21	0/1620	0.37	0/2184
22	p	0.16	0/1620	0.34	0/2184

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
23	Q	0.27	0/1603	0.46	1/2168 (0.0%)
23	q	0.16	0/1603	0.37	0/2168
24	R	0.17	0/1590	0.32	0/2147
24	r	0.16	0/1590	0.30	0/2147
25	S	0.21	0/1673	0.42	0/2254
25	s	0.17	0/1684	0.36	0/2268
26	T	0.16	0/1720	0.30	0/2328
26	t	0.18	0/1720	0.35	0/2328
27	U	0.15	0/6750	0.41	0/9116
28	V	0.15	0/3667	0.37	0/4951
29	X	0.14	0/3045	0.34	0/4104
30	Y	0.16	0/3063	0.42	0/4123
31	Z	0.15	0/2286	0.42	0/3099
32	W	0.16	0/3610	0.43	0/4853
33	x	0.11	0/643	0.31	0/868
All	All	0.18	0/105671	0.40	1/142693 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	Q	102	LEU	N-CA-C	5.83	118.55	109.52

There are no chirality outliers.

There are no planarity outliers.

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	G	1841	0	1848	107	0
1	g	1885	0	1891	77	0
2	H	1749	0	1750	143	0
2	h	1813	0	1806	66	0
3	I	2025	0	2036	99	0
3	i	1971	0	1992	79	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	J	1869	0	1891	120	0
4	j	1878	0	1899	66	0
5	L	1864	0	1852	97	0
5	l	1864	0	1852	84	0
6	M	1862	0	1840	92	0
6	m	1881	0	1868	94	0
7	A	3119	0	3162	185	0
8	B	3060	0	3090	189	0
9	C	2839	0	2942	189	0
10	D	2904	0	2925	178	0
11	E	2775	0	2814	168	0
12	F	2709	0	2760	168	0
13	K	1694	0	1691	80	0
13	k	1789	0	1773	68	0
14	f	6292	0	6314	297	0
15	a	2969	0	2984	109	0
16	b	1458	0	1505	71	0
17	c	2224	0	2240	117	0
18	d	2063	0	2078	101	0
19	e	407	0	312	15	0
20	N	1521	0	1494	59	0
20	n	1514	0	1487	64	0
21	O	1659	0	1681	63	0
21	o	1659	0	1681	62	0
22	P	1591	0	1609	78	0
22	p	1591	0	1609	51	0
23	Q	1571	0	1573	81	0
23	q	1571	0	1573	71	0
24	R	1559	0	1523	55	0
24	r	1559	0	1523	58	0
25	S	1643	0	1640	61	0
25	s	1654	0	1656	66	0
26	T	1687	0	1666	54	0
26	t	1687	0	1666	67	0
27	U	6648	0	6713	289	0
28	V	3600	0	3668	182	0
29	X	3002	0	3106	117	0
30	Y	3021	0	3022	130	0
31	Z	2248	0	2277	97	0
32	W	3570	0	3696	179	0
33	x	635	0	652	16	0
34	A	31	0	12	5	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
35	B	27	0	12	5	0
35	C	27	0	12	6	0
35	D	27	0	12	4	0
35	E	27	0	12	3	0
35	F	27	0	12	5	0
All	All	104160	0	104702	4424	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 21.

All (4424) 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)
6:M:36:ALA:HB1	6:M:49:VAL:HG22	1.32	1.11
5:L:49:LEU:HD21	5:L:199:LEU:HD11	1.31	1.09
2:H:68:ILE:HD11	2:H:74:LEU:HD22	1.35	1.07
9:C:140:VAL:HG11	9:C:234:LEU:CD2	1.84	1.07
10:D:83:GLN:HG2	17:c:152:LYS:HG3	1.36	1.07
6:M:36:ALA:CB	6:M:49:VAL:HG22	1.83	1.06
9:C:199:LEU:O	9:C:203:VAL:HG22	1.56	1.05
2:H:72:ILE:HG13	2:H:107:THR:HG23	1.36	1.05
4:J:196:LEU:CD1	4:J:206:ILE:HD11	1.85	1.05
2:H:100:VAL:HG13	22:P:93:ASN:HD22	1.20	1.03
14:f:803:PHE:HA	14:f:806:VAL:HG13	1.41	1.02
11:E:357:ALA:HB1	11:E:359:HIS:ND1	1.73	1.01
12:F:235:LEU:HD11	35:F:501:ADP:H2'	1.41	1.01
12:F:310:MET:HE1	12:F:339:ASP:OD1	1.60	1.00
27:U:342:LEU:O	27:U:346:ASN:HB2	1.61	0.99
13:K:191:LEU:HD22	13:K:221:GLN:NE2	1.78	0.99
11:E:357:ALA:HB1	11:E:359:HIS:CE1	2.00	0.97
2:H:26:LEU:HA	2:H:29:VAL:HG12	1.46	0.97
7:A:190:VAL:HG11	7:A:212:VAL:HG22	1.43	0.97
4:J:196:LEU:HD13	4:J:206:ILE:HD11	1.46	0.97
7:A:403:ILE:O	7:A:407:LYS:HG3	1.64	0.97
5:L:19:ILE:HD11	5:L:22:ILE:CG1	1.95	0.97
9:C:140:VAL:HG11	9:C:234:LEU:HD22	1.42	0.97
29:X:74:ARG:CG	29:X:75:PRO:HD3	1.95	0.97
8:B:241:ASN:ND2	8:B:281:ILE:HG21	1.80	0.96
11:E:168:LYS:NZ	11:E:264:MET:HA	1.79	0.96
27:U:685:GLN:HB2	27:U:729:GLY:HA3	1.48	0.95
5:L:49:LEU:CD2	5:L:199:LEU:HD11	1.97	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:95:ARG:HG3	23:Q:62:LYS:HZ1	1.32	0.95
12:F:416:THR:HG22	12:F:417:HIS:CD2	2.02	0.94
2:H:150:ASP:OD2	2:H:156:PHE:CZ	2.20	0.94
5:L:49:LEU:CD2	5:L:199:LEU:HD21	1.96	0.94
10:D:411:GLU:HG2	10:D:412:GLN:H	1.28	0.94
4:J:40:ILE:HD13	4:J:184:ASP:OD1	1.68	0.94
8:B:241:ASN:HD22	8:B:281:ILE:HG21	1.32	0.94
7:A:190:VAL:HG11	7:A:212:VAL:CG2	1.96	0.94
9:C:140:VAL:CG1	9:C:234:LEU:CD2	2.46	0.94
3:I:49:ARG:CB	3:I:52:ILE:HD11	1.99	0.93
10:D:93:LEU:HD23	10:D:102:ILE:HD13	1.50	0.93
7:A:190:VAL:CG1	7:A:212:VAL:CG2	2.47	0.93
10:D:381:GLU:O	10:D:385:LEU:HG	1.69	0.93
12:F:416:THR:HG22	12:F:417:HIS:HD2	1.31	0.93
13:K:35:SER:HB2	13:K:66:LYS:HE2	1.51	0.93
21:O:187:ARG:HB3	21:O:188:PRO:HD2	1.50	0.92
31:Z:252:LYS:HG3	31:Z:255:ASP:HB2	1.50	0.92
1:G:70:PHE:HZ	1:G:88:ARG:NH1	1.68	0.92
14:f:130:ALA:O	14:f:134:SER:HB2	1.69	0.92
3:I:49:ARG:HB3	3:I:52:ILE:HD11	1.51	0.92
24:r:166:ARG:HH21	23:Q:140:LEU:HD13	1.33	0.92
23:q:26:VAL:HG11	24:r:136:TYR:HE2	1.35	0.92
2:H:100:VAL:HG13	22:P:93:ASN:ND2	1.84	0.91
2:H:9:SER:O	2:H:10:LEU:HD12	1.70	0.91
6:M:59:GLU:HG2	6:M:60:GLU:H	1.33	0.91
18:d:41:THR:HG22	18:d:44:THR:H	1.36	0.91
12:F:206:MET:HE2	12:F:327:LYS:HG2	1.51	0.91
2:H:179:ASN:ND2	3:I:55:LEU:HD22	1.86	0.90
12:F:362:ARG:HD2	12:F:388:THR:HG22	1.52	0.90
1:G:88:ARG:HG3	6:M:156:VAL:HG21	1.53	0.90
2:H:74:LEU:HD13	2:H:136:ILE:HG12	1.54	0.89
5:L:19:ILE:HD11	5:L:22:ILE:HG12	1.53	0.89
8:B:122:ILE:CD1	8:B:132:TYR:CB	2.51	0.89
1:G:49:VAL:CG2	1:G:194:THR:HG22	2.04	0.88
11:E:38:LYS:HE2	11:E:42:LYS:HE3	1.55	0.88
1:G:49:VAL:HG22	1:G:194:THR:HG22	1.55	0.88
2:H:133:SER:OG	2:H:163:MET:HE2	1.74	0.88
9:C:140:VAL:CG1	9:C:234:LEU:HD22	2.04	0.88
28:V:302:TYR:HB3	28:V:339:LEU:HD21	1.55	0.88
6:M:63:ASN:HB2	6:M:81:LEU:HD21	1.53	0.87
27:U:554:LEU:HD13	27:U:761:VAL:HG21	1.52	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:72:ILE:CG1	2:H:107:THR:HG23	2.03	0.87
4:J:196:LEU:HD12	4:J:206:ILE:HD11	1.57	0.87
10:D:393:ILE:HG22	10:D:394:VAL:N	1.90	0.87
30:Y:101:ARG:NH1	30:Y:105:MET:SD	2.47	0.87
10:D:168:GLY:H	35:D:501:ADP:HN62	1.22	0.86
23:Q:101:ASN:HB3	23:Q:132:HIS:CE1	2.10	0.86
27:U:583:MET:HE3	27:U:618:ALA:HA	1.56	0.86
6:m:62:SER:O	6:m:63:ASN:OD1	1.93	0.86
6:M:51:LYS:HG2	6:M:210:GLU:OE2	1.76	0.86
4:J:88:ARG:HH11	23:Q:70:ARG:HA	1.41	0.85
6:M:51:LYS:HB3	6:M:210:GLU:CG	2.06	0.85
12:F:362:ARG:HD2	12:F:388:THR:CG2	2.05	0.85
3:I:61:PHE:CZ	3:I:227:VAL:HG21	2.12	0.85
9:C:236:VAL:CG2	9:C:276:LEU:HD11	2.06	0.85
23:q:26:VAL:HG11	24:r:136:TYR:CE2	2.11	0.85
23:q:145:ARG:HG2	24:R:158:ARG:HE	1.41	0.85
2:H:71:HIS:HB2	2:H:107:THR:HG21	1.59	0.85
28:V:353:LEU:HB3	28:V:357:LEU:HD23	1.58	0.84
5:L:207:THR:HB	5:L:226:ASP:HA	1.59	0.84
7:A:312:ARG:HD3	7:A:314:ASN:HD22	1.40	0.84
2:H:179:ASN:ND2	3:I:55:LEU:CD2	2.40	0.84
29:X:74:ARG:HG3	29:X:75:PRO:HD3	1.60	0.84
9:C:83:LYS:C	9:C:99:VAL:HG23	2.03	0.84
14:f:720:GLU:HB2	14:f:807:ARG:HD3	1.59	0.84
8:B:133:VAL:HG11	8:B:158:ALA:CB	2.07	0.84
10:D:303:VAL:HG23	10:D:305:VAL:HG13	1.60	0.84
12:F:206:MET:CE	12:F:327:LYS:HG2	2.08	0.84
5:L:19:ILE:CD1	5:L:22:ILE:HG12	2.07	0.84
33:x:82:LEU:HD11	33:x:89:LEU:HD21	1.58	0.84
7:A:140:VAL:HG11	7:A:149:ILE:HG23	1.58	0.83
10:D:83:GLN:CG	17:c:152:LYS:HG3	2.08	0.83
12:F:154:ASN:HB2	12:F:159:LEU:H	1.41	0.83
9:C:140:VAL:CG1	9:C:234:LEU:HD21	2.09	0.83
16:b:3:LEU:HD11	16:b:44:ASN:HD22	1.43	0.83
10:D:237:GLN:HG2	10:D:238:LYS:H	1.41	0.83
8:B:431:GLN:O	8:B:432:GLU:HG3	1.79	0.83
4:J:95:ARG:HG3	23:Q:62:LYS:NZ	1.94	0.83
26:T:63:LEU:HD21	26:T:106:LEU:HD13	1.58	0.83
8:B:412:MET:HB2	8:B:415:THR:HA	1.60	0.82
13:K:191:LEU:HD22	13:K:221:GLN:HE22	1.40	0.82
27:U:619:VAL:HG23	27:U:651:GLY:HA3	1.61	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:196:LEU:HD13	4:J:206:ILE:CD1	2.09	0.82
6:M:36:ALA:HB1	6:M:49:VAL:CG2	2.10	0.82
1:g:52:THR:HG21	1:g:79:VAL:HG21	1.60	0.82
5:L:49:LEU:HD21	5:L:199:LEU:CD1	2.08	0.82
11:E:357:ALA:CB	11:E:359:HIS:ND1	2.42	0.82
10:D:69:LYS:HZ1	18:d:251:ARG:HG3	1.44	0.82
3:I:28:ILE:HG21	3:I:133:SER:HB3	1.62	0.81
2:h:88:HIS:NE2	2:h:92:LYS:HE2	1.94	0.81
8:B:175:LYS:HG2	8:B:178:LYS:HD3	1.61	0.81
18:d:203:PRO:HG2	18:d:205:LYS:HB3	1.59	0.81
29:X:74:ARG:HG2	29:X:75:PRO:HD3	1.59	0.81
31:Z:193:ASN:HA	31:Z:196:HIS:CE1	2.15	0.81
7:A:182:GLU:O	7:A:186:LYS:HG2	1.81	0.81
10:D:376:ASN:ND2	35:D:501:ADP:N3	2.28	0.81
28:V:399:ARG:HH21	28:V:402:VAL:HG11	1.45	0.81
5:L:49:LEU:HD21	5:L:199:LEU:HD21	1.63	0.81
9:C:25:LEU:HG	10:D:51:LEU:HD12	1.61	0.80
10:D:349:THR:HG23	10:D:355:SER:HB2	1.61	0.80
10:D:357:GLU:O	10:D:393:ILE:HG23	1.81	0.80
2:H:92:LYS:HG2	21:O:65:LEU:HD11	1.64	0.80
4:J:40:ILE:HD12	4:J:212:ARG:HG2	1.62	0.80
5:L:77:LEU:HD21	5:L:79:ALA:HB3	1.64	0.80
17:c:211:GLU:HB3	17:c:215:LYS:HE3	1.63	0.80
14:f:538:ILE:HG23	14:f:558:LEU:HD12	1.61	0.80
2:h:88:HIS:CD2	2:h:92:LYS:HE2	2.17	0.80
5:L:226:ASP:OD1	5:L:227:ASP:N	2.15	0.80
11:E:326:ILE:HG22	11:E:326:ILE:O	1.81	0.80
9:C:140:VAL:HG11	9:C:234:LEU:HD21	1.64	0.80
5:L:13:TRP:HA	5:L:19:ILE:HG22	1.63	0.79
12:F:81:LYS:HA	12:F:84:LYS:HB3	1.64	0.79
27:U:521:LEU:HD13	27:U:554:LEU:HD12	1.63	0.79
1:G:72:ILE:HG13	1:G:78:CYS:SG	2.21	0.79
4:J:67:ASP:HB3	23:Q:69:MET:HE1	1.62	0.79
5:L:19:ILE:HD11	5:L:22:ILE:HG13	1.63	0.79
9:C:25:LEU:HD11	10:D:47:LEU:HB3	1.63	0.79
13:K:35:SER:CB	13:K:66:LYS:HE2	2.12	0.79
6:M:51:LYS:CG	6:M:210:GLU:OE2	2.31	0.79
8:B:365:PHE:CE1	8:B:399:CYS:SG	2.76	0.79
10:D:358:VAL:HG23	10:D:394:VAL:HB	1.65	0.79
10:D:393:ILE:HG22	10:D:394:VAL:H	1.48	0.79
5:l:126:ARG:HB3	13:k:13:ASN:HB3	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A:244:GLU:OE2	8:B:265:LYS:HD3	1.82	0.78
18:d:131:VAL:HA	18:d:134:LYS:HG2	1.64	0.78
13:K:78:MET:SD	13:K:85:ALA:CB	2.71	0.78
5:l:125:ARG:HH21	5:l:126:ARG:HG2	1.48	0.78
31:Z:99:PRO:HA	31:Z:123:ILE:HD13	1.64	0.78
7:A:363:SER:O	7:A:405:THR:HG23	1.83	0.78
14:f:461:PRO:HA	33:x:76:ILE:HG21	1.66	0.78
2:H:74:LEU:CD1	2:H:136:ILE:HG12	2.13	0.78
25:s:27:THR:HB	25:s:40:SER:H	1.47	0.78
10:D:393:ILE:CG2	10:D:394:VAL:H	1.97	0.78
6:m:198:TYR:HB3	6:m:243:LEU:HD21	1.66	0.78
17:c:141:VAL:HG12	17:c:161:ARG:HE	1.48	0.77
7:A:404:ALA:HA	7:A:407:LYS:HB2	1.65	0.77
8:B:53:THR:H	8:B:64:LYS:HZ3	1.31	0.77
8:B:211:TYR:HA	8:B:214:MET:HB2	1.65	0.77
28:V:340:GLY:HA3	28:V:408:ARG:HH12	1.47	0.77
10:D:93:LEU:CD2	10:D:102:ILE:HD13	2.15	0.77
14:f:672:LEU:HD11	14:f:706:ILE:HG12	1.66	0.77
3:I:10[B]:THR:O	3:I:10[B]:THR:HG23	1.83	0.77
18:d:155:LYS:HD3	18:d:170:LEU:HD22	1.67	0.77
6:M:150:MET:HE1	6:M:152:ASP:OD1	1.85	0.77
11:E:285:LEU:O	11:E:285:LEU:HG	1.82	0.77
2:H:15:PRO:HG2	2:H:18:LYS:HB2	1.65	0.77
14:f:369:ARG:HH12	14:f:756:PRO:HB2	1.49	0.77
17:c:88:ASP:HB3	17:c:91:PHE:HB3	1.66	0.77
17:c:234:TYR:HA	17:c:237:HIS:HB2	1.67	0.77
31:Z:90:ARG:HE	31:Z:91:ILE:H	1.30	0.77
32:W:117:ASP:HB3	32:W:120:ILE:HG12	1.66	0.77
2:H:150:ASP:OD2	2:H:156:PHE:HZ	1.66	0.76
9:C:117:ARG:HG2	9:C:118:ASN:H	1.48	0.76
11:E:168:LYS:HZ1	11:E:264:MET:HA	1.47	0.76
3:I:133:SER:HB2	3:I:152:PRO:HD3	1.67	0.76
24:R:125:THR:OG1	24:R:139:MET:SD	2.42	0.76
10:D:244:PRO:HB3	10:D:291:GLU:HG3	1.68	0.76
21:o:193:ASN:HD21	25:S:211:ARG:HB3	1.48	0.76
25:s:158:MET:SD	22:P:169:GLN:NE2	2.59	0.76
27:U:205:TYR:HB3	27:U:215:ASN:HB2	1.67	0.76
2:H:148:GLN:OE1	2:H:156:PHE:HD2	1.68	0.76
9:C:164:VAL:HG21	9:C:313:ARG:HG3	1.67	0.76
31:Z:94:TRP:HB3	31:Z:112:MET:HE3	1.66	0.76
5:L:189:LYS:HE2	5:L:234:GLU:O	1.86	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:U:159:ARG:HB3	27:U:162:VAL:HB	1.68	0.76
1:G:70:PHE:CZ	1:G:88:ARG:NH1	2.53	0.76
8:B:133:VAL:HG11	8:B:158:ALA:HB1	1.67	0.75
11:E:268:ASP:OD1	11:E:269:THR:N	2.17	0.75
7:A:56:LEU:O	7:A:60:ASN:ND2	2.20	0.75
2:H:34:PRO:HG2	2:H:49:GLU:CD	2.10	0.75
20:n:122:ARG:HH22	20:N:202:LEU:HB2	1.50	0.75
29:X:255:LEU:HD11	29:X:267:VAL:HG13	1.68	0.75
18:d:122:LEU:HB3	18:d:125:LYS:HB3	1.66	0.75
7:A:115:VAL:CG2	7:A:121:PHE:HB3	2.16	0.75
12:F:388:THR:HG22	12:F:388:THR:O	1.87	0.75
15:a:251:LEU:HG	15:a:255:TRP:HE1	1.50	0.75
24:R:161:TYR:HH	24:R:196:HIS:HD1	1.30	0.75
2:H:104:PRO:HD2	2:H:106:PRO:HD3	1.69	0.74
3:I:179:TYR:CE1	3:I:184:MET:HE1	2.21	0.74
15:a:352:ARG:HH12	31:Z:235:ASN:HB3	1.51	0.74
27:U:12:LEU:HB3	27:U:48:LEU:HD21	1.68	0.74
31:Z:102:HIS:HE1	31:Z:104:ASN:HB3	1.51	0.74
5:l:81:ALA:HB2	5:l:130:VAL:HG21	1.68	0.74
3:i:146:GLN:NE2	3:i:148:TYR:OH	2.20	0.74
24:r:8:PHE:HE1	24:r:13:ILE:HG12	1.49	0.74
32:W:152:ILE:HD13	32:W:161:GLU:HB3	1.69	0.74
32:W:186:ILE:HG21	32:W:209:ILE:HG21	1.68	0.74
27:U:610:VAL:HA	27:U:615:ARG:HE	1.52	0.74
9:C:236:VAL:HG23	9:C:276:LEU:HD11	1.67	0.74
12:F:235:LEU:CD1	35:F:501:ADP:H2'	2.17	0.74
27:U:637:VAL:HG21	27:U:656:LEU:HD11	1.66	0.74
6:M:47:PHE:HB2	6:M:214:SER:HB3	1.69	0.74
9:C:160:GLU:OE1	9:C:313:ARG:NH2	2.21	0.74
15:a:71:VAL:HG21	15:a:76:LEU:HD22	1.70	0.74
27:U:237:VAL:HG13	27:U:321:GLN:H	1.51	0.74
6:M:20:VAL:HG23	6:M:23:VAL:HG22	1.69	0.74
26:T:99:ARG:NH2	26:T:104:ASN:OD1	2.20	0.74
30:Y:256:VAL:HA	30:Y:259:TYR:CE1	2.23	0.74
32:W:51:GLU:OE1	32:W:55:ARG:NH1	2.20	0.74
21:o:104:ASP:O	21:o:180:LYS:NZ	2.20	0.74
27:U:202:VAL:HG21	27:U:223:LEU:HD22	1.68	0.74
1:G:43:ARG:HB3	1:G:164:LYS:HA	1.70	0.73
7:A:70:THR:HG22	7:A:71:GLY:H	1.53	0.73
27:U:619:VAL:HG11	27:U:648:VAL:HG13	1.69	0.73
32:W:360:GLU:HG3	32:W:396:LEU:HD21	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:B:122:ILE:HD13	8:B:132:TYR:CB	2.17	0.73
19:e:27:TRP:NE1	28:V:351:PRO:O	2.20	0.73
1:G:41:ALA:CB	1:G:50:ILE:HG22	2.17	0.73
11:E:234:GLU:OE1	11:E:280:ASN:ND2	2.22	0.73
2:H:105:ILE:HG22	2:H:105:ILE:O	1.88	0.73
8:B:233:THR:N	35:B:501:ADP:O1A	2.20	0.73
8:B:421:LYS:O	8:B:425:ASN:ND2	2.21	0.73
11:E:309:ARG:HE	11:E:332:VAL:HG13	1.54	0.73
15:a:177:LEU:HD11	15:a:216:LEU:HD23	1.71	0.73
7:A:66:LYS:HE2	9:C:81:ASP:HB3	1.71	0.73
8:B:72:LEU:HD12	14:f:670:MET:HE2	1.69	0.73
25:S:57:PHE:HD1	25:S:60:ASP:H	1.37	0.73
6:M:59:GLU:HG2	6:M:60:GLU:N	2.02	0.73
9:C:83:LYS:O	9:C:99:VAL:HG23	1.87	0.73
7:A:277:ILE:HG12	7:A:319:MET:CE	2.18	0.73
1:g:163:PHE:HA	2:h:58:ASP:H	1.53	0.73
31:Z:34:ARG:NH1	31:Z:97:THR:O	2.21	0.73
7:A:269:ALA:HB1	7:A:315:ILE:HG12	1.71	0.73
9:C:270:GLN:NE2	9:C:273:MET:SD	2.62	0.73
16:b:109:ILE:HB	16:b:138:VAL:HG22	1.69	0.73
2:H:106:PRO:HB2	2:H:110:LEU:HB2	1.71	0.72
12:F:208:HIS:HB3	12:F:211:LYS:CG	2.18	0.72
10:D:393:ILE:CG2	10:D:394:VAL:N	2.52	0.72
10:D:170:MET:HE2	29:X:198:ASN:HB3	1.72	0.72
20:n:30:VAL:HG21	26:T:212:ALA:HA	1.71	0.72
26:T:43:MET:HE1	26:T:67:LEU:HD23	1.72	0.72
28:V:215:ALA:HB3	28:V:253:LEU:HD22	1.70	0.72
8:B:53:THR:OG1	8:B:54:PRO:HD3	1.90	0.72
8:B:114:GLU:HB3	8:B:122:ILE:HB	1.72	0.72
5:l:123:TYR:HH	3:i:2:SER:N	1.87	0.72
15:a:149:THR:H	15:a:152:HIS:HD2	1.35	0.72
23:q:12:TYR:CG	23:q:153:ARG:HG2	2.24	0.72
25:s:185:ARG:HG3	22:P:147:TYR:HB3	1.70	0.72
23:Q:85:ARG:HH22	22:P:62:THR:N	1.87	0.72
27:U:571:CYS:SG	27:U:601:ARG:NH1	2.63	0.72
32:W:243:ILE:HA	32:W:246:HIS:CE1	2.24	0.72
20:n:121:VAL:HG21	26:t:39:ILE:HG22	1.72	0.72
24:r:97:MET:H	24:r:116:SER:HB3	1.53	0.72
6:M:186:CYS:O	6:M:190:VAL:HG23	1.90	0.72
9:C:209:CYS:HA	9:C:243:PRO:HB2	1.72	0.72
12:F:379:VAL:HG22	12:F:416:THR:HG23	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:e:27:TRP:HA	28:V:355:ARG:HE	1.55	0.72
32:W:178:GLU:H	32:W:182:ARG:HB2	1.53	0.72
9:C:297:ARG:HG3	9:C:297:ARG:O	1.90	0.72
1:G:49:VAL:HG22	1:G:194:THR:CG2	2.20	0.71
3:I:49:ARG:HB2	3:I:52:ILE:HD11	1.72	0.71
7:A:101:ILE:HG22	7:A:139:ARG:HG2	1.70	0.71
10:D:60:TYR:OH	27:U:599:ILE:HG22	1.90	0.71
13:K:229:PHE:HD2	13:K:234:LEU:HB2	1.54	0.71
4:j:92:GLN:HB3	23:q:62:LYS:HD2	1.72	0.71
21:o:211:VAL:HG21	22:p:198:ARG:HD3	1.72	0.71
17:c:216:MET:HG2	17:c:220:LEU:HD12	1.70	0.71
5:l:52:ALA:HB1	5:l:57:ALA:HB3	1.71	0.71
3:i:18:LEU:HD12	3:i:20:GLN:HE22	1.54	0.71
3:i:111:VAL:HG22	3:i:136:TYR:HD2	1.54	0.71
33:x:74:LYS:HB2	33:x:103:ILE:HB	1.73	0.71
1:G:78:CYS:SG	1:G:140:LEU:HB3	2.29	0.71
6:M:190:VAL:HG21	6:M:215:TRP:NE1	2.06	0.71
7:A:333:ARG:O	7:A:337:LEU:N	2.23	0.71
9:C:234:LEU:HA	9:C:238:ALA:HB3	1.72	0.71
9:C:312:ASP:O	9:C:313:ARG:HG2	1.89	0.71
9:C:250:GLU:HG3	9:C:296:ASN:H	1.54	0.71
9:C:322:GLU:HB2	9:C:349:GLU:HG2	1.73	0.71
14:f:836:GLU:HG3	14:f:838:ARG:HG2	1.71	0.71
2:h:174:LEU:O	2:h:178:TYR:HB2	1.90	0.71
27:U:619:VAL:HG21	27:U:648:VAL:HA	1.71	0.71
4:J:40:ILE:HD11	4:J:210:VAL:HG13	1.71	0.71
5:L:67:ASP:OD1	5:L:68:ASN:N	2.22	0.71
7:A:383:ALA:HB1	8:B:346:ARG:HH21	1.56	0.71
17:c:220:LEU:HB3	31:Z:134:PRO:HB3	1.72	0.71
20:n:119:MET:HE3	26:t:58:ALA:HB2	1.72	0.71
2:H:109:GLN:NE2	22:P:78:GLU:OE2	2.24	0.71
7:A:277:ILE:HG12	7:A:319:MET:HE3	1.72	0.71
5:l:85:CYS:SG	5:l:89:ARG:NH2	2.64	0.71
3:i:180:LYS:H	3:i:184:MET:HE2	1.56	0.71
29:X:142:ARG:NH2	29:X:145:GLU:OE1	2.24	0.71
15:a:205:LEU:HB3	15:a:268:LEU:HD11	1.71	0.71
22:p:15:LYS:HE3	22:p:121:ILE:HG12	1.71	0.71
26:t:209:TRP:HB2	20:N:190:LEU:HD12	1.73	0.71
29:X:404:ILE:HG12	31:Z:262:LEU:HD21	1.72	0.71
3:I:28:ILE:HG21	3:I:133:SER:CB	2.21	0.71
13:K:38:ILE:HD12	13:K:202:LEU:CD2	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:c:254:ASN:O	17:c:278:GLN:NE2	2.24	0.71
9:C:325:ARG:NH2	9:C:351:MET:O	2.24	0.70
21:O:41:ILE:HG22	21:O:102:GLY:HA3	1.73	0.70
7:A:70:THR:HG22	7:A:71:GLY:N	2.04	0.70
9:C:195:GLY:N	35:C:501:ADP:O2A	2.23	0.70
27:U:475:HIS:NE2	27:U:507:VAL:O	2.24	0.70
31:Z:60:GLU:OE2	31:Z:102:HIS:NE2	2.25	0.70
2:H:74:LEU:HD11	2:H:134:LEU:HD12	1.74	0.70
3:I:33:THR:HA	3:I:165:GLY:HA3	1.73	0.70
3:I:52:ILE:O	3:I:52:ILE:HG22	1.90	0.70
8:B:241:ASN:ND2	8:B:281:ILE:CG2	2.53	0.70
30:Y:250:LEU:HB3	30:Y:257:ARG:HB2	1.71	0.70
30:Y:237:ARG:HA	30:Y:241:ILE:HB	1.73	0.70
32:W:96:GLN:HG2	32:W:97:LEU:H	1.57	0.70
8:B:365:PHE:HE1	8:B:399:CYS:SG	2.13	0.70
1:g:176:THR:HG23	2:h:56:LEU:HD21	1.74	0.70
27:U:583:MET:HE1	27:U:621:SER:HB2	1.74	0.70
28:V:315:LYS:HA	30:Y:385:ARG:HG3	1.74	0.70
5:L:39:LYS:HG2	5:L:40:SER:H	1.55	0.70
7:A:369:ARG:HB3	7:A:372:LEU:HD13	1.73	0.70
23:Q:56:PHE:HE2	23:Q:102:LEU:HD11	1.57	0.70
31:Z:20:VAL:HG13	31:Z:126:VAL:HG13	1.74	0.70
32:W:390:GLU:OE1	32:W:408:ARG:NH1	2.25	0.70
2:H:159:LYS:NZ	2:H:180:GLU:O	2.22	0.70
2:h:11:THR:HB	2:h:21:GLN:HE21	1.57	0.70
2:h:134:LEU:HB2	2:h:149:SER:OG	1.92	0.70
26:t:43:MET:HE1	26:t:67:LEU:HD23	1.72	0.70
30:Y:231:LEU:HD11	30:Y:236:LEU:HD13	1.73	0.70
14:f:241:PRO:O	14:f:245:ASN:HB2	1.92	0.69
15:a:146:PRO:HB3	31:Z:143:GLU:HG3	1.74	0.69
17:c:255:TYR:HD1	17:c:280:PRO:HG3	1.57	0.69
22:P:15:LYS:HB2	22:P:121:ILE:HD13	1.74	0.69
3:I:206:LEU:HD12	3:I:206:LEU:O	1.92	0.69
10:D:411:GLU:HG2	10:D:412:GLN:N	2.03	0.69
12:F:353:GLU:HG3	12:F:355:PRO:HD3	1.74	0.69
26:T:122:LEU:HG	26:T:137:LEU:HD12	1.74	0.69
2:H:26:LEU:HA	2:H:29:VAL:CG1	2.19	0.69
8:B:99:VAL:HG23	8:B:137:SER:HB2	1.74	0.69
8:B:113:GLU:H	8:B:123:VAL:HA	1.57	0.69
3:I:79:ILE:HD11	3:I:82:ASP:CG	2.17	0.69
6:M:51:LYS:HB3	6:M:210:GLU:HG2	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A:64:GLY:HA3	14:f:680:ARG:NE	2.08	0.69
28:V:367:VAL:HA	28:V:402:VAL:HG23	1.74	0.69
32:W:183:VAL:HG11	32:W:215:GLN:HE22	1.56	0.69
2:H:180:GLU:OE1	2:H:182:LEU:N	2.25	0.69
8:B:70:ASP:OD2	27:U:835:ILE:HG22	1.93	0.69
1:g:31:ALA:HA	1:g:34:GLN:HG2	1.74	0.69
23:q:169:LYS:O	23:Q:27:GLN:NE2	2.26	0.69
21:O:37:ILE:HB	21:O:41:ILE:HG13	1.74	0.69
5:L:129:GLY:HA2	5:L:149:PRO:HB3	1.75	0.69
9:C:202:ALA:O	9:C:205:HIS:ND1	2.26	0.69
10:D:185:LEU:O	10:D:187:HIS:ND1	2.26	0.69
21:O:43:CYS:SG	21:O:98:LEU:HD12	2.33	0.69
23:Q:35:MET:HG3	23:Q:181:ARG:HH11	1.58	0.69
24:R:17:ASP:OD2	24:R:171:GLY:N	2.26	0.69
25:S:27:THR:HB	25:S:40:SER:H	1.57	0.69
2:H:9:SER:C	2:H:10:LEU:HD12	2.18	0.69
7:A:97:ARG:HG3	7:A:144:ARG:H	1.56	0.69
14:f:378:ASN:OD1	14:f:382:ASN:ND2	2.26	0.69
24:r:63:CYS:HB2	24:r:74:ILE:HG21	1.75	0.69
8:B:114:GLU:HG2	8:B:115:ILE:H	1.58	0.69
7:A:64:GLY:HA3	14:f:680:ARG:HE	1.57	0.68
7:A:76:ALA:HA	7:A:80:LEU:HB2	1.75	0.68
12:F:310:MET:HE1	12:F:339:ASP:CG	2.18	0.68
5:L:226:ASP:CG	5:L:227:ASP:H	2.01	0.68
8:B:220:LYS:NZ	8:B:345:GLY:O	2.25	0.68
15:a:33:LEU:HD21	16:b:145:GLU:HG3	1.75	0.68
18:d:117:THR:HG21	28:V:265:ASP:HB3	1.75	0.68
18:d:129:THR:HG22	18:d:130:ASN:H	1.58	0.68
25:S:52:ILE:HG22	25:S:110:ILE:HG12	1.75	0.68
30:Y:141:VAL:HG22	30:Y:163:LYS:HZ3	1.56	0.68
4:J:196:LEU:CD1	4:J:206:ILE:CD1	2.67	0.68
30:Y:157:ILE:HG22	30:Y:186:LEU:HD12	1.75	0.68
12:F:134:LEU:HB2	12:F:159:LEU:HD12	1.74	0.68
17:c:46:ARG:HH21	31:Z:167:ALA:HB2	1.58	0.68
22:P:78:GLU:HG2	22:P:80:ARG:H	1.58	0.68
30:Y:23:ARG:NH2	30:Y:52:PRO:O	2.26	0.68
32:W:242:SER:O	32:W:246:HIS:ND1	2.25	0.68
6:M:77:VAL:HG23	6:M:135:PHE:HB3	1.76	0.68
17:c:163:ILE:HD12	17:c:167:MET:HB2	1.76	0.68
21:o:121:LYS:NZ	26:T:215:ILE:O	2.25	0.68
21:O:13:VAL:HG22	21:O:177:VAL:HG12	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:X:343:SER:HB2	32:W:405:LYS:HB3	1.74	0.68
32:W:169:LEU:O	32:W:182:ARG:NH2	2.26	0.68
3:I:61:PHE:CE2	3:I:227:VAL:HG21	2.28	0.68
4:J:104:VAL:HG21	4:J:143:ARG:HB2	1.75	0.68
10:D:147:ALA:HB2	10:D:253:LEU:HD22	1.76	0.68
11:E:154:THR:O	11:E:272:ARG:NH2	2.26	0.68
11:E:168:LYS:HZ3	11:E:264:MET:HA	1.57	0.68
17:c:58:LEU:HD13	17:c:73:PHE:HE2	1.58	0.68
7:A:388:VAL:CG1	7:A:415:LYS:HG2	2.23	0.68
14:f:809:ILE:HG12	14:f:814:SER:HB3	1.76	0.68
5:l:200:PRO:O	5:l:239:ARG:NH1	2.26	0.68
30:Y:247:LEU:O	30:Y:251:HIS:ND1	2.26	0.68
31:Z:90:ARG:HH21	31:Z:91:ILE:HG13	1.59	0.68
2:H:102:GLN:N	22:P:89:SER:OG	2.25	0.68
9:C:139:MET:HG3	9:C:234:LEU:HD11	1.76	0.68
9:C:191:PRO:HG3	9:C:319:PRO:HG3	1.74	0.68
17:c:54:MET:HG2	17:c:113:HIS:HD2	1.59	0.68
22:p:149:MET:HG2	22:p:170:ALA:HA	1.76	0.68
31:Z:102:HIS:CE1	31:Z:104:ASN:HB3	2.28	0.68
32:W:248:ARG:HH12	32:W:289:ARG:HD2	1.59	0.68
3:I:38:LEU:HD23	3:I:160:LYS:CG	2.23	0.68
9:C:117:ARG:HG2	9:C:118:ASN:N	2.09	0.68
11:E:172:LEU:HG	11:E:299:ILE:HD11	1.76	0.68
16:b:37:CYS:HG	16:b:68:THR:HG1	1.33	0.68
30:Y:288:PHE:HB2	30:Y:295:TYR:OH	1.94	0.68
2:H:200:GLU:HB3	10:D:339:ARG:HD3	1.75	0.68
3:I:46:ALA:HA	3:I:213:ILE:HG22	1.75	0.68
3:I:61:PHE:CZ	3:I:227:VAL:CG2	2.76	0.68
4:J:29:GLY:HA2	8:B:438:LEU:HD22	1.76	0.68
9:C:67:GLN:HA	10:D:136:SER:HA	1.75	0.68
9:C:306:LEU:HG	9:C:308:PRO:HD2	1.74	0.68
15:a:368:GLU:O	15:a:372:HIS:ND1	2.26	0.68
3:i:48:GLU:OE2	3:i:210:LYS:NZ	2.27	0.68
13:k:52:LYS:NZ	13:k:64:ILE:O	2.27	0.68
3:I:11[B]:ILE:O	3:I:18:LEU:CD2	2.41	0.67
14:f:505:MET:SD	14:f:518:THR:OG1	2.51	0.67
27:U:806:CYS:O	27:U:874:ASN:ND2	2.27	0.67
28:V:191:LEU:HD21	28:V:210:CYS:HB3	1.76	0.67
2:H:26:LEU:CA	2:H:29:VAL:HG12	2.20	0.67
3:I:38:LEU:HD23	3:I:160:LYS:HG2	1.74	0.67
10:D:303:VAL:CG2	10:D:305:VAL:HG13	2.24	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:f:469:TYR:HA	14:f:472:HIS:HB2	1.76	0.67
14:f:886:GLU:HB3	14:f:906:TYR:HD1	1.58	0.67
6:m:141:SER:HB2	6:m:144:ASP:HB3	1.76	0.67
25:s:24:ALA:HB1	25:s:193:LEU:HD11	1.75	0.67
7:A:102:ILE:HA	7:A:113:ILE:HG23	1.76	0.67
8:B:434:THR:HG23	8:B:434:THR:O	1.93	0.67
9:C:73:VAL:H	10:D:111:TYR:HA	1.60	0.67
16:b:13:SER:OG	16:b:16:MET:SD	2.53	0.67
5:l:107:ARG:HH12	26:t:83:TYR:HE1	1.43	0.67
6:m:236:GLU:OE2	6:m:240:LYS:NZ	2.26	0.67
29:X:182:ASN:HD21	30:Y:248:GLU:HB2	1.58	0.67
7:A:274:PHE:HB2	7:A:319:MET:HG2	1.76	0.67
9:C:89:VAL:HG12	9:C:91:PRO:HD2	1.75	0.67
16:b:124:LEU:HD13	16:b:152:LYS:HB3	1.76	0.67
20:N:98:ILE:HB	20:N:114:VAL:HG23	1.76	0.67
25:S:27:THR:HG22	25:S:41:PRO:HA	1.74	0.67
7:A:101:ILE:HG22	7:A:139:ARG:CG	2.24	0.67
14:f:138:GLU:HA	14:f:141:LYS:HG2	1.76	0.67
14:f:409:SER:HB2	14:f:815:HIS:ND1	2.09	0.67
4:j:116:GLN:OE1	13:k:135:ARG:NH2	2.27	0.67
6:m:70:ASP:OD1	6:m:99:ARG:NH2	2.27	0.67
20:n:12:VAL:HG11	20:n:101:ALA:HB1	1.76	0.67
30:Y:197:ALA:O	30:Y:201:PHE:CB	2.43	0.67
3:I:28:ILE:HG13	3:I:152:PRO:HG2	1.75	0.67
7:A:219:GLY:N	34:A:501:ATP:O2G	2.27	0.67
27:U:265:ILE:HD11	27:U:326:ILE:HA	1.77	0.67
8:B:253:SER:OG	8:B:254:GLU:N	2.21	0.67
13:K:237:VAL:O	13:K:237:VAL:HG12	1.93	0.67
14:f:344:VAL:HG12	14:f:346:ASP:H	1.58	0.67
22:p:34:MET:O	24:R:166:ARG:NH1	2.26	0.67
6:M:36:ALA:CB	6:M:49:VAL:CG2	2.68	0.67
10:D:89:ILE:HB	11:E:78:ARG:HG2	1.76	0.67
25:s:28:ARG:NH2	25:s:213:ASP:O	2.28	0.67
1:G:106:GLY:HA3	21:O:77:VAL:HG12	1.77	0.67
4:J:34:GLY:N	4:J:159:ASN:OD1	2.28	0.67
3:i:109:GLN:OE1	23:q:71:ASN:ND2	2.28	0.67
6:m:46:VAL:HG12	6:m:215:TRP:HB3	1.76	0.67
23:q:172:ILE:HG23	23:q:173:LEU:HD12	1.76	0.67
26:T:25:ASP:O	26:T:41:ARG:NH1	2.28	0.67
28:V:296:LYS:HB3	28:V:301:GLU:HB2	1.77	0.67
6:M:214:SER:OG	6:M:224:HIS:NE2	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A:211:GLY:HA3	7:A:337:LEU:HA	1.78	0.66
2:h:160:ALA:HB3	3:i:55:LEU:HD22	1.77	0.66
2:h:177:ARG:HG3	2:h:177:ARG:O	1.94	0.66
24:r:167:ASP:OD1	24:r:168:ALA:N	2.27	0.66
25:S:28:ARG:NH1	25:S:187:VAL:O	2.28	0.66
27:U:367:THR:HB	27:U:403:THR:HG21	1.77	0.66
12:F:231:THR:OG1	12:F:233:LYS:NZ	2.27	0.66
14:f:482:ILE:HD13	14:f:518:THR:HG22	1.76	0.66
3:I:84:ASN:O	3:I:88:ASN:ND2	2.26	0.66
28:V:473:GLN:HB2	31:Z:260:VAL:HG21	1.76	0.66
30:Y:128:TYR:HB2	30:Y:140:ILE:HD13	1.76	0.66
32:W:55:ARG:HH11	32:W:96:GLN:HG3	1.59	0.66
10:D:264:ILE:HB	10:D:309:MET:HG3	1.76	0.66
14:f:289:VAL:HA	14:f:292:LYS:HE2	1.76	0.66
26:t:91:TRP:HE3	26:t:92:LEU:HD22	1.61	0.66
27:U:446:LEU:O	27:U:450:HIS:ND1	2.24	0.66
2:H:95:GLN:HG3	21:O:61:SER:HB3	1.77	0.66
10:D:411:GLU:CG	10:D:412:GLN:H	2.07	0.66
11:E:229:ILE:HD11	11:E:276:ILE:HG13	1.77	0.66
15:a:72:ASN:HA	16:b:17:ARG:HH22	1.61	0.66
27:U:376:MET:HE2	27:U:738:ASP:HB3	1.78	0.66
30:Y:94:ASN:ND2	30:Y:99:GLU:OE2	2.29	0.66
12:F:172:VAL:O	12:F:172:VAL:HG12	1.94	0.66
17:c:130:GLN:HG3	17:c:142:ALA:HB2	1.77	0.66
13:k:42:THR:HG21	13:k:194:ALA:HB2	1.75	0.66
31:Z:15:VAL:HG11	31:Z:50:VAL:HG12	1.76	0.66
9:C:338:LEU:HA	9:C:378:VAL:H	1.61	0.66
10:D:69:LYS:NZ	18:d:251:ARG:HG3	2.09	0.66
13:K:231:LYS:C	13:K:233:GLU:H	2.03	0.66
1:g:37:LEU:HG	1:g:53:GLN:HE21	1.59	0.66
1:g:61:LEU:HA	6:m:160:TYR:HA	1.77	0.66
26:t:122:LEU:HG	26:t:137:LEU:HD12	1.76	0.66
29:X:182:ASN:HA	30:Y:244:ALA:HB1	1.77	0.66
13:K:78:MET:SD	13:K:85:ALA:HB1	2.36	0.66
13:k:85:ALA:HB2	13:k:139:VAL:HG21	1.78	0.66
6:m:183:GLU:OE1	6:m:183:GLU:N	2.29	0.66
20:n:83:PHE:CD2	20:n:100:ILE:HG12	2.30	0.66
32:W:236:HIS:ND1	32:W:237:GLU:OE2	2.27	0.66
1:G:191:PHE:CZ	1:G:219:VAL:HG11	2.31	0.66
10:D:162:VAL:HG13	10:D:166:ASP:OD2	1.96	0.66
23:q:173:LEU:HA	23:Q:173:LEU:HA	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:O:187:ARG:HB3	21:O:188:PRO:CD	2.24	0.66
27:U:510:GLU:HA	27:U:547:GLY:HA3	1.78	0.66
27:U:880:ASN:OD1	27:U:881:PRO:HD3	1.95	0.66
28:V:212:TYR:HA	28:V:253:LEU:HD11	1.78	0.66
30:Y:291:HIS:HA	30:Y:295:TYR:CZ	2.31	0.66
4:J:45:VAL:HG11	4:J:61:LYS:HG2	1.76	0.66
7:A:365:GLU:HG3	7:A:366:ARG:H	1.59	0.66
11:E:161:ARG:HH11	32:W:208:LYS:HA	1.61	0.66
14:f:856:ALA:HB3	14:f:858:LYS:HE3	1.77	0.66
3:i:12:PHE:HE2	4:j:126:PRO:HD2	1.61	0.66
25:S:68:ILE:HD11	25:S:92:LEU:HD13	1.78	0.66
26:T:69:GLN:NE2	26:T:73:ASP:OD1	2.29	0.66
28:V:314:ARG:NH1	30:Y:378:ASN:OD1	2.29	0.66
2:h:119:GLN:NE2	3:i:82:ASP:OD1	2.30	0.65
10:D:355:SER:HB3	10:D:358:VAL:HB	1.78	0.65
12:F:260:PHE:HB3	12:F:263:ASP:HB2	1.79	0.65
14:f:456:ARG:NH2	14:f:488:ALA:O	2.29	0.65
17:c:172:HIS:CG	17:c:173:GLU:H	2.14	0.65
24:r:113:TYR:CE1	24:r:128:VAL:HG21	2.31	0.65
25:S:26:ASP:OD2	25:S:190:GLY:N	2.22	0.65
27:U:616:ARG:HB3	27:U:647:HIS:HB2	1.78	0.65
28:V:82:LEU:HD11	28:V:166:TYR:HE2	1.61	0.65
9:C:155:ASP:O	9:C:159:LYS:HG3	1.95	0.65
9:C:255:GLY:N	9:C:302:ASP:O	2.28	0.65
5:l:79:ALA:HB3	13:k:121:LEU:HD23	1.78	0.65
25:s:36:HIS:O	26:t:151:ARG:NH1	2.29	0.65
27:U:215:ASN:OD1	27:U:216:VAL:N	2.30	0.65
10:D:127:ASN:HB3	10:D:248:ARG:HD3	1.78	0.65
11:E:322:LYS:HE2	12:F:215:LEU:HD22	1.78	0.65
11:E:363:VAL:HG12	11:E:364:GLN:N	2.12	0.65
18:d:106:LEU:HG	18:d:111:ARG:HB3	1.79	0.65
22:p:14:MET:HG3	22:p:163:LEU:HD11	1.77	0.65
27:U:347:ASN:HB2	27:U:741:GLY:HA3	1.79	0.65
27:U:524:LYS:HA	27:U:556:MET:HE2	1.78	0.65
1:g:12:HIS:O	1:g:24:GLN:NE2	2.29	0.65
13:k:146:VAL:HG11	13:k:222:PRO:HA	1.77	0.65
27:U:792:ASN:HB3	27:U:914:LEU:HB3	1.78	0.65
5:L:144:ILE:HG22	5:L:156:CYS:SG	2.37	0.65
8:B:230:THR:HG23	8:B:391:SER:HB2	1.79	0.65
11:E:353:PHE:O	11:E:356:ARG:HG2	1.96	0.65
23:q:4:LEU:HD11	23:q:45:LEU:HB3	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:s:66:LYS:HG3	26:t:94:ARG:NH2	2.12	0.65
5:L:49:LEU:CD2	5:L:199:LEU:CD2	2.73	0.65
8:B:338:ASP:OD1	8:B:339:PRO:HD2	1.97	0.65
33:x:35:HIS:HB3	33:x:102:LEU:HB3	1.78	0.65
7:A:115:VAL:HG21	7:A:121:PHE:CB	2.26	0.65
2:h:79:MET:HG3	2:h:81:PRO:HD2	1.79	0.65
23:Q:19:ARG:NH2	23:Q:31:ASP:OD1	2.29	0.65
22:P:113:ASP:OD2	22:P:116:THR:N	2.28	0.65
28:V:375:PHE:HA	28:V:378:VAL:HG22	1.77	0.65
32:W:167:GLN:O	32:W:170:GLN:NE2	2.28	0.65
2:H:34:PRO:HA	2:H:164:GLY:HA3	1.79	0.65
7:A:232:ARG:HH22	7:A:271:LEU:HB3	1.61	0.65
8:B:258:LYS:O	8:B:307:ARG:NH1	2.29	0.65
9:C:234:LEU:HD23	9:C:238:ALA:HB3	1.78	0.65
9:C:379:THR:HG23	9:C:382:ASP:H	1.62	0.65
12:F:89:LEU:HD22	12:F:126:THR:HB	1.79	0.65
13:K:104:ASN:OD1	24:R:57:ARG:NH2	2.30	0.65
14:f:849:ALA:HB3	14:f:879:ARG:HD3	1.79	0.65
17:c:29:GLU:OE1	17:c:161:ARG:NH2	2.29	0.65
1:g:86:ASP:OD1	6:m:120:HIS:NE2	2.30	0.65
21:o:37:ILE:HG23	21:o:60:SER:HA	1.78	0.65
25:s:123:SER:HB3	25:s:136:LYS:HG2	1.78	0.65
28:V:219:GLU:OE1	28:V:256:ARG:NH1	2.30	0.65
2:H:148:GLN:OE1	2:H:158:TRP:NE1	2.23	0.65
5:L:193:ARG:HG2	5:L:196:ARG:HH21	1.61	0.65
7:A:112:ILE:HA	7:A:122:VAL:HG22	1.79	0.65
7:A:115:VAL:HG21	7:A:121:PHE:HB3	1.77	0.65
7:A:291:GLY:O	7:A:292:ASP:OD1	2.14	0.65
11:E:27:LYS:O	11:E:31:GLU:HG3	1.96	0.65
12:F:208:HIS:HB3	12:F:211:LYS:HG3	1.78	0.65
1:g:24:GLN:NE2	6:m:13:THR:OG1	2.30	0.65
27:U:347:ASN:ND2	27:U:741:GLY:O	2.27	0.65
3:I:22:GLU:HG2	8:B:435:PRO:HG2	1.78	0.64
5:L:225:ASP:H	5:L:228:ASP:HB2	1.62	0.64
28:V:338:LEU:HD11	28:V:397:ARG:HD2	1.78	0.64
1:G:72:ILE:CG1	1:G:78:CYS:SG	2.85	0.64
12:F:189:GLY:H	35:F:501:ADP:HN62	1.43	0.64
14:f:720:GLU:O	14:f:724:ASN:ND2	2.29	0.64
18:d:189:ILE:O	18:d:222:TYR:N	2.30	0.64
22:p:20:VAL:HG11	22:p:110:ALA:HB1	1.79	0.64
21:O:182:LYS:HD2	21:O:184:ASP:HB2	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:X:413:SER:HB3	30:Y:379:ARG:HH22	1.61	0.64
1:G:153:LYS:HZ1	1:G:168:ALA:HB2	1.62	0.64
2:H:93:LEU:HD13	2:H:117:VAL:HG12	1.79	0.64
3:I:116:ASP:OD1	4:J:81:ARG:NH1	2.30	0.64
10:D:337:ASP:O	10:D:340:GLN:N	2.31	0.64
14:f:408:LEU:HB3	14:f:815:HIS:HE1	1.61	0.64
26:t:166:ARG:NH1	26:t:200:GLU:OE1	2.29	0.64
27:U:13:ASP:OD2	27:U:44:LYS:NZ	2.30	0.64
28:V:464:ILE:HG23	28:V:468:SER:HB3	1.79	0.64
10:D:202:VAL:HB	10:D:308:ILE:HG12	1.79	0.64
11:E:297:ARG:HD2	32:W:138:VAL:HG22	1.79	0.64
18:d:32:GLU:HG3	18:d:33:LEU:H	1.62	0.64
4:J:41:VAL:CG1	4:J:142:PRO:HB2	2.27	0.64
6:M:59:GLU:CG	6:M:60:GLU:H	2.08	0.64
8:B:309:MET:N	8:B:309:MET:SD	2.70	0.64
9:C:150:MET:N	9:C:150:MET:SD	2.71	0.64
16:b:132:LYS:HD2	16:b:163:LYS:HD3	1.78	0.64
23:Q:85:ARG:NH2	22:P:58:THR:O	2.31	0.64
28:V:225:ASP:HB3	28:V:261:TYR:HE2	1.62	0.64
32:W:265:GLN:HB2	32:W:336:PRO:HD3	1.79	0.64
5:L:107:ARG:NH2	26:T:74:GLU:OE2	2.30	0.64
15:a:33:LEU:HD13	16:b:18:ASN:HD22	1.61	0.64
30:Y:268:TYR:HA	30:Y:271:PHE:HB3	1.78	0.64
1:G:50:ILE:O	1:G:217:VAL:HG23	1.97	0.64
4:J:155:ALA:HB3	13:K:63:SER:HB2	1.80	0.64
12:F:120:LYS:HE2	12:F:142:ALA:HB3	1.80	0.64
12:F:221:LYS:NZ	12:F:346:GLY:O	2.27	0.64
13:K:42:THR:HG23	13:K:45:GLY:H	1.61	0.64
14:f:151:LEU:HD12	14:f:158:TYR:HE2	1.63	0.64
14:f:581:GLU:HA	14:f:588:ARG:HD2	1.77	0.64
2:h:204:THR:HG22	2:h:205:GLU:N	2.12	0.64
27:U:571:CYS:HA	27:U:579:ARG:HA	1.78	0.64
4:J:160:ALA:HB1	4:J:168:VAL:HG13	1.80	0.64
10:D:375:ILE:HG12	10:D:378:ILE:HG12	1.78	0.64
17:c:56:LEU:HA	17:c:111:TRP:HA	1.79	0.64
4:J:80:ALA:HB2	4:J:129:ILE:HG12	1.79	0.64
16:b:171:VAL:HG11	16:b:183:LEU:HD22	1.78	0.64
27:U:229:VAL:HA	27:U:232:ILE:HG12	1.80	0.64
30:Y:259:TYR:HB3	30:Y:274:SER:HB2	1.77	0.64
5:L:39:LYS:HG2	5:L:40:SER:N	2.13	0.64
8:B:103:ARG:HG2	8:B:160:ILE:HB	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:T:16:PHE:HE2	26:T:21:VAL:HG23	1.63	0.64
31:Z:252:LYS:O	31:Z:255:ASP:N	2.31	0.64
7:A:36:TYR:O	14:f:161:HIS:CE1	2.51	0.63
9:C:234:LEU:HD23	9:C:238:ALA:CB	2.28	0.63
30:Y:250:LEU:HD21	30:Y:260:LEU:HD13	1.79	0.63
13:K:235:GLU:HA	13:K:238:ILE:HG12	1.80	0.63
1:g:49:VAL:HG21	1:g:195:VAL:HG12	1.79	0.63
2:h:106:PRO:HB2	2:h:109:GLN:HG2	1.78	0.63
3:i:123:GLN:NE2	4:j:125:ARG:O	2.31	0.63
23:Q:35:MET:SD	23:Q:45:LEU:HD21	2.39	0.63
26:T:124:TYR:HB2	26:T:137:LEU:HD13	1.81	0.63
5:L:49:LEU:CD2	5:L:199:LEU:CD1	2.74	0.63
24:r:71:LYS:O	24:r:71:LYS:HG2	1.98	0.63
26:T:25:ASP:HA	26:T:187:PHE:HA	1.78	0.63
27:U:21:GLU:HB2	27:U:54:PHE:HZ	1.63	0.63
32:W:18:VAL:H	32:W:57:ALA:HB1	1.62	0.63
9:C:185:GLY:HA2	9:C:291:VAL:O	1.98	0.63
18:d:12:LYS:HG2	18:d:14:PRO:HD3	1.80	0.63
20:n:14:LEU:HD21	20:n:101:ALA:HB3	1.79	0.63
21:o:62:ASN:ND2	21:o:82:MET:SD	2.72	0.63
27:U:21:GLU:HG3	27:U:25:HIS:CE1	2.34	0.63
27:U:583:MET:HA	27:U:586:VAL:HG12	1.80	0.63
7:A:217:PRO:HD2	7:A:344:SER:HB2	1.81	0.63
11:E:177:GLY:HA2	11:E:339:ASN:HB2	1.81	0.63
13:K:229:PHE:O	13:K:234:LEU:HB3	1.99	0.63
18:d:249:TYR:HB3	28:V:480:ILE:HG12	1.80	0.63
2:h:68:ILE:HG21	2:h:110:LEU:HD11	1.81	0.63
23:q:78:THR:O	23:q:82:ASN:ND2	2.31	0.63
1:G:163:PHE:O	1:G:164:LYS:C	2.42	0.63
2:H:133:SER:CB	2:H:163:MET:HE2	2.28	0.63
8:B:250:VAL:HB	8:B:284:ILE:HG22	1.80	0.63
9:C:117:ARG:HD2	9:C:120:SER:OG	1.97	0.63
11:E:97:ARG:NH2	11:E:112:PRO:O	2.31	0.63
15:a:34:TRP:HB3	15:a:71:VAL:HA	1.81	0.63
23:q:12:TYR:CD1	23:q:153:ARG:HG2	2.33	0.63
27:U:218:GLN:HG3	27:U:222:PHE:CE2	2.33	0.63
28:V:228:ARG:NH1	28:V:258:TYR:OH	2.32	0.63
32:W:227:TYR:O	32:W:231:ILE:HG23	1.99	0.63
5:L:49:LEU:HD23	5:L:199:LEU:HD21	1.78	0.63
7:A:115:VAL:HG23	7:A:121:PHE:HB3	1.80	0.63
8:B:365:PHE:HE1	8:B:399:CYS:HG	1.44	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:f:313:GLU:HG3	14:f:316:ASP:HB2	1.79	0.63
24:R:44:THR:H	24:R:99:THR:HG23	1.63	0.63
27:U:529:ILE:HG12	27:U:566:LEU:HD21	1.80	0.63
32:W:24:VAL:HG12	32:W:50:LEU:HD21	1.79	0.63
8:B:175:LYS:CG	8:B:178:LYS:HD3	2.28	0.63
14:f:494:ARG:HH21	14:f:495:GLU:HG2	1.62	0.63
1:g:68:HIS:NE2	1:g:80:MET:O	2.32	0.63
22:p:135:ASP:OD1	22:p:136:PHE:N	2.31	0.63
23:Q:93:ARG:NH1	22:P:101:GLY:O	2.32	0.63
2:H:145:TYR:CE1	3:I:59:VAL:HG21	2.34	0.63
7:A:70:THR:CG2	7:A:71:GLY:H	2.10	0.63
12:F:81:LYS:O	12:F:85:THR:N	2.31	0.63
12:F:120:LYS:CD	12:F:142:ALA:CB	2.77	0.63
16:b:139:ASP:HB3	16:b:168:SER:HB3	1.81	0.63
17:c:52:GLU:O	17:c:77:GLN:NE2	2.31	0.63
20:n:91:ARG:NH1	26:t:59:ASP:OD1	2.31	0.63
23:q:35:MET:HE2	23:q:43:LEU:HD21	1.80	0.63
32:W:407:ASP:O	32:W:411:GLY:N	2.31	0.63
4:J:41:VAL:HG13	4:J:142:PRO:HB2	1.79	0.62
10:D:130:VAL:HG12	10:D:142:VAL:HG13	1.81	0.62
14:f:208:LEU:HD23	14:f:211:ILE:HD11	1.81	0.62
21:o:122:LEU:HD12	21:o:123:PRO:HD2	1.80	0.62
22:P:135:ASP:OD1	22:P:136:PHE:N	2.32	0.62
27:U:401:LYS:HZ3	27:U:438:GLN:HA	1.64	0.62
29:X:412:ASP:OD1	29:X:413:SER:N	2.31	0.62
9:C:66:LEU:HD21	10:D:114:ARG:H	1.65	0.62
11:E:288:ALA:HA	11:E:291:ARG:HE	1.64	0.62
16:b:11:ASP:HA	16:b:54:LEU:HD21	1.81	0.62
20:n:59:VAL:HG13	20:n:82:LEU:HD22	1.82	0.62
23:Q:138:LEU:HD21	23:Q:170:ARG:HB2	1.81	0.62
22:P:138:VAL:HG11	22:P:146:MET:HB3	1.80	0.62
25:S:36:HIS:HB3	26:T:132:TYR:CZ	2.34	0.62
2:H:179:ASN:HD21	3:I:55:LEU:CD2	2.12	0.62
2:H:222:THR:N	2:H:225:GLU:OE1	2.32	0.62
10:D:297:ASP:OD2	10:D:326:ARG:NH1	2.32	0.62
10:D:382:SER:HA	10:D:385:LEU:HD12	1.79	0.62
12:F:140:VAL:HG12	12:F:141:ASP:N	2.14	0.62
17:c:26:ASP:H	17:c:176:GLN:HE21	1.45	0.62
4:j:8:THR:HG23	4:j:16:LEU:HD12	1.81	0.62
6:m:214:SER:HB3	6:m:226:ILE:HD12	1.80	0.62
27:U:62:LEU:HD12	27:U:87:LEU:HB3	1.79	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:V:371:ASN:O	28:V:399:ARG:NH2	2.31	0.62
2:H:65:VAL:O	2:H:220:ARG:NH1	2.31	0.62
4:J:183:THR:HG22	4:J:184:ASP:N	2.14	0.62
5:L:39:LYS:CG	5:L:40:SER:H	2.12	0.62
9:C:49:ARG:O	9:C:53:ASN:ND2	2.32	0.62
10:D:341:LYS:NZ	10:D:368:ASP:O	2.29	0.62
12:F:308:ARG:O	12:F:312:GLU:HG2	1.99	0.62
12:F:416:THR:O	12:F:417:HIS:CG	2.52	0.62
20:n:166:ARG:HH11	26:T:37:ARG:HD3	1.64	0.62
26:T:11:VAL:HG23	26:T:24:ALA:HB2	1.81	0.62
30:Y:117:LYS:NZ	30:Y:153:ASP:OD2	2.33	0.62
31:Z:105:ASP:O	31:Z:109:ASN:ND2	2.31	0.62
9:C:231:VAL:HG21	9:C:269:VAL:HG22	1.82	0.62
9:C:287:LYS:HG3	9:C:287:LYS:O	1.99	0.62
11:E:38:LYS:HE2	11:E:42:LYS:CE	2.28	0.62
11:E:345:ASN:O	11:E:349:GLU:HG2	1.99	0.62
17:c:281:LYS:HZ2	17:c:282:ARG:HD3	1.65	0.62
18:d:235:THR:HG23	18:d:238:PRO:HG2	1.81	0.62
13:k:50:VAL:HG11	13:k:66:LYS:HB2	1.80	0.62
23:q:5:ILE:HD11	23:q:143:LEU:HD11	1.82	0.62
27:U:575:ASP:HB2	27:U:578:LEU:HD23	1.82	0.62
28:V:225:ASP:HB3	28:V:261:TYR:CE2	2.34	0.62
29:X:157:LEU:HB3	29:X:166:LEU:HD21	1.81	0.62
7:A:101:ILE:CG2	7:A:139:ARG:HG2	2.28	0.62
8:B:155:LYS:HD3	17:c:194:HIS:CD2	2.35	0.62
17:c:175:ARG:HB3	17:c:181:LEU:HD11	1.80	0.62
2:h:208:ILE:HD12	2:h:230:LEU:HD21	1.81	0.62
7:A:306:LEU:O	7:A:336:ARG:NE	2.33	0.62
8:B:165:ASP:O	8:B:167:THR:N	2.32	0.62
6:m:62:SER:O	6:m:63:ASN:CG	2.41	0.62
20:n:22:THR:HG23	20:n:27:ALA:HB2	1.82	0.62
26:t:99:ARG:HG2	26:t:106:LEU:HG	1.82	0.62
27:U:21:GLU:O	27:U:25:HIS:ND1	2.33	0.62
27:U:536:ALA:HB1	27:U:578:LEU:HD21	1.82	0.62
27:U:802:TYR:HA	27:U:895:PRO:HG3	1.81	0.62
30:Y:137:ARG:HD2	30:Y:168:ILE:HD12	1.81	0.62
2:H:33:ALA:N	10:D:417:TYR:OH	2.26	0.62
9:C:260:GLU:HG2	9:C:262:GLY:H	1.63	0.62
13:K:191:LEU:CD2	13:K:221:GLN:NE2	2.57	0.62
14:f:535:THR:HG21	14:f:566:HIS:HE1	1.65	0.62
16:b:18:ASN:HD21	16:b:25:ARG:HH12	1.47	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:k:44:GLU:HG2	13:k:44:GLU:O	1.99	0.62
6:m:93:GLU:OE2	6:m:97:ASN:ND2	2.33	0.62
1:G:21:ARG:NH1	1:G:26:GLU:OE1	2.33	0.62
6:M:45:VAL:HG23	6:M:146:ALA:HB1	1.82	0.62
6:M:140:TYR:HB3	6:M:216:VAL:HG22	1.82	0.62
9:C:139:MET:CG	9:C:234:LEU:HD11	2.28	0.62
10:D:218:ALA:O	10:D:220:ALA:N	2.33	0.62
13:K:221:GLN:HB2	13:K:224:GLN:HB2	1.80	0.62
1:g:161:CYS:SG	2:h:52:GLN:NE2	2.72	0.62
21:o:70:THR:HG23	21:o:72:ARG:H	1.64	0.62
24:r:81:LYS:NZ	24:r:85:ASN:OD1	2.31	0.62
27:U:247:GLN:NE2	27:U:911:ILE:O	2.32	0.62
27:U:405:THR:HG21	27:U:441:GLY:HA2	1.82	0.62
27:U:471:ASP:HB2	27:U:472:ILE:HD12	1.82	0.62
5:L:82:ARG:NH2	13:K:117:SER:OG	2.33	0.62
7:A:418:LYS:NZ	8:B:348:ASP:OD1	2.33	0.62
12:F:200:GLU:HA	12:F:204:LEU:HD23	1.81	0.62
2:h:134:LEU:HB2	2:h:149:SER:HG	1.65	0.62
3:i:190:LEU:HD11	3:i:236:LEU:HD21	1.81	0.62
25:S:26:ASP:OD1	25:S:27:THR:N	2.30	0.62
27:U:564:ASP:OD1	27:U:565:ALA:N	2.32	0.62
5:L:82:ARG:O	5:L:86:ASN:ND2	2.33	0.61
8:B:357:ASP:OD1	8:B:359:LYS:N	2.33	0.61
9:C:83:LYS:HG2	9:C:105:ILE:HG12	1.82	0.61
10:D:273:LYS:HE3	10:D:276:ASP:HB2	1.81	0.61
14:f:244:GLU:O	14:f:248:LEU:HG	2.00	0.61
4:J:70:CYS:SG	4:J:134:VAL:HG22	2.40	0.61
8:B:114:GLU:HG2	8:B:115:ILE:N	2.15	0.61
9:C:199:LEU:HA	9:C:202:ALA:HB3	1.80	0.61
11:E:339:ASN:OD1	11:E:342:ASP:N	2.31	0.61
13:K:68:VAL:HG11	13:K:93:ARG:HH22	1.64	0.61
14:f:230:CYS:HA	14:f:233:LEU:HD12	1.82	0.61
17:c:254:ASN:HB3	17:c:278:GLN:HB3	1.82	0.61
18:d:241:GLU:OE1	18:d:245:GLN:NE2	2.33	0.61
26:t:89:HIS:HA	26:t:112:ILE:HD12	1.81	0.61
28:V:110:HIS:HB2	28:V:138:PRO:HD3	1.81	0.61
29:X:410:VAL:HG23	29:X:411:VAL:HG13	1.83	0.61
30:Y:164:ALA:HA	30:Y:168:ILE:HB	1.82	0.61
3:I:107:CYS:SG	3:I:138:GLY:HA3	2.40	0.61
16:b:34:ASN:HB3	16:b:72:LEU:HD11	1.82	0.61
18:d:25:ARG:HH21	18:d:50:LEU:HB2	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:g:132:ARG:NH2	6:m:123:THR:O	2.33	0.61
2:h:177:ARG:HG3	2:h:190:THR:HG22	1.82	0.61
26:t:54:SER:O	26:t:108:ASN:ND2	2.32	0.61
23:Q:154:GLU:OE1	23:Q:154:GLU:N	2.33	0.61
22:P:143:ALA:HA	22:P:146:MET:HE2	1.82	0.61
3:I:90:LEU:HD13	3:I:114:LEU:HD22	1.80	0.61
4:J:66:ASP:OD2	4:J:102:VAL:CG1	2.48	0.61
11:E:266:GLY:O	11:E:271:HIS:ND1	2.32	0.61
5:l:196:ARG:NH1	5:l:237:GLU:O	2.33	0.61
1:g:88:ARG:NH2	6:m:157:SER:O	2.33	0.61
20:N:17:ASP:OD1	20:N:18:SER:N	2.31	0.61
5:L:49:LEU:HD21	5:L:199:LEU:CD2	2.30	0.61
5:L:77:LEU:CD2	5:L:80:ASP:H	2.14	0.61
6:M:150:MET:SD	6:M:152:ASP:OD1	2.58	0.61
16:b:13:SER:O	16:b:16:MET:HG2	2.00	0.61
21:o:193:ASN:ND2	25:S:213:ASP:OD1	2.33	0.61
26:t:100:ARG:O	26:t:103:MET:N	2.26	0.61
25:S:60:ASP:OD1	26:T:100:ARG:NH2	2.33	0.61
2:H:74:LEU:CD1	2:H:136:ILE:CG1	2.78	0.61
2:H:205:GLU:HB3	2:H:227:LYS:HB2	1.82	0.61
3:I:24:ALA:O	3:I:28:ILE:HG12	2.00	0.61
9:C:196:LYS:N	35:C:501:ADP:O1B	2.33	0.61
13:k:73:HIS:CE1	13:k:106:THR:HB	2.36	0.61
13:k:98:ASN:OD1	24:r:61:ARG:NH1	2.34	0.61
20:n:40:ARG:HG2	20:n:103:TRP:HE3	1.65	0.61
32:W:172:GLU:HB2	32:W:182:ARG:HH21	1.65	0.61
32:W:205:ILE:HA	32:W:208:LYS:HG2	1.81	0.61
1:G:219:VAL:HG23	1:G:230:LEU:HD13	1.81	0.61
8:B:284:ILE:HB	8:B:287:ILE:HG22	1.82	0.61
12:F:82:VAL:HG11	17:c:80:THR:HA	1.83	0.61
12:F:403:ALA:HA	12:F:406:ILE:HG22	1.82	0.61
14:f:485:LEU:HD13	14:f:501:LEU:HD21	1.82	0.61
14:f:560:LEU:HD21	14:f:798:THR:HA	1.82	0.61
15:a:194:GLN:NE2	15:a:225:LEU:O	2.30	0.61
17:c:217:LEU:HD21	31:Z:17:LEU:HD13	1.83	0.61
6:m:179:LEU:HD21	6:m:189:ILE:HD12	1.83	0.61
22:p:176:ASP:O	24:R:29:GLN:NE2	2.33	0.61
23:Q:102:LEU:HD12	23:Q:118:MET:HE2	1.82	0.61
30:Y:387:ILE:HD13	31:Z:276:ILE:HG22	1.81	0.61
3:I:79:ILE:HD11	3:I:82:ASP:OD2	2.00	0.61
4:J:40:ILE:HG21	4:J:184:ASP:OD1	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:f:707:LEU:HD22	14:f:741:LEU:HD13	1.83	0.61
1:g:12:HIS:C	1:g:24:GLN:HE21	2.07	0.61
23:q:12:TYR:CD1	23:q:153:ARG:CG	2.83	0.61
27:U:218:GLN:HG3	27:U:222:PHE:HE2	1.65	0.61
27:U:342:LEU:O	27:U:346:ASN:CB	2.45	0.61
32:W:52:LYS:HD3	32:W:55:ARG:HH21	1.65	0.61
32:W:280:ASP:OD1	32:W:283:GLN:N	2.30	0.61
4:J:98:VAL:HG13	24:R:78:ALA:HB1	1.82	0.61
7:A:388:VAL:HG12	7:A:415:LYS:HG2	1.82	0.61
12:F:310:MET:HE3	12:F:342:LEU:HG	1.82	0.61
28:V:357:LEU:HA	28:V:360:TYR:HB2	1.83	0.61
31:Z:255:ASP:HA	31:Z:258:VAL:HG22	1.82	0.61
27:U:360:VAL:O	27:U:361:ARG:NH1	2.33	0.61
8:B:185:ALA:HB1	14:f:852:VAL:HG22	1.83	0.60
10:D:220:ALA:HB2	10:D:261:ILE:HD11	1.82	0.60
12:F:206:MET:HE2	12:F:327:LYS:CG	2.29	0.60
14:f:60:VAL:O	14:f:105:LYS:NZ	2.30	0.60
10:D:237:GLN:HG2	10:D:238:LYS:N	2.14	0.60
1:g:141:ILE:HG22	1:g:151:VAL:HG22	1.82	0.60
6:m:50:GLU:OE2	6:m:209:PHE:HB2	2.01	0.60
23:Q:85:ARG:NH2	22:P:61:GLN:HB2	2.15	0.60
23:Q:101:ASN:HB3	23:Q:132:HIS:NE2	2.16	0.60
24:R:33:LYS:HG3	24:R:45:MET:HB2	1.81	0.60
27:U:799:LYS:HB2	27:U:923:GLU:HB3	1.82	0.60
30:Y:104:MET:HE2	30:Y:127:THR:HB	1.82	0.60
31:Z:9:VAL:HG12	31:Z:48:LEU:HB3	1.82	0.60
2:H:110:LEU:HD12	2:H:113:ARG:HB2	1.83	0.60
11:E:346:VAL:HG22	11:E:374:VAL:HG21	1.84	0.60
12:F:357:PRO:O	12:F:362:ARG:NE	2.34	0.60
13:K:52:LYS:NZ	13:K:64:ILE:O	2.34	0.60
1:g:40:VAL:HG23	1:g:167:ALA:HB2	1.81	0.60
21:O:163:ILE:HG12	21:O:170:GLY:HA2	1.84	0.60
29:X:132:ARG:NH1	29:X:135:SER:OG	2.33	0.60
30:Y:245:GLU:OE1	30:Y:245:GLU:N	2.31	0.60
2:H:34:PRO:HG2	2:H:49:GLU:OE1	2.01	0.60
4:J:132:LEU:HD22	4:J:159:ASN:HD22	1.65	0.60
12:F:134:LEU:HD12	12:F:137:ILE:HA	1.83	0.60
6:m:164:ALA:O	6:m:173:LYS:NZ	2.35	0.60
23:Q:56:PHE:CE2	23:Q:102:LEU:HD11	2.35	0.60
3:I:68:LEU:C	3:I:68:LEU:HD12	2.26	0.60
5:L:132:LEU:HB2	5:L:147:THR:HB	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A:245:LEU:HA	7:A:256:MET:HE3	1.84	0.60
11:E:219:PHE:O	11:E:223:ARG:HG3	2.01	0.60
13:K:181:LEU:HA	13:K:184:VAL:HG22	1.84	0.60
4:j:87:ALA:HA	4:j:90:GLU:HG2	1.82	0.60
28:V:86:VAL:HG21	28:V:160:LEU:HD13	1.83	0.60
28:V:207:ALA:HB1	28:V:211:TYR:CZ	2.37	0.60
29:X:401:LEU:HB2	30:Y:365:GLN:HE22	1.66	0.60
4:J:87:ALA:HB1	4:J:107:ILE:HD11	1.82	0.60
5:L:46:LEU:HD21	5:L:135:ALA:HB2	1.84	0.60
8:B:287:ILE:HD12	8:B:291:GLY:H	1.66	0.60
10:D:60:TYR:CZ	27:U:599:ILE:HG22	2.36	0.60
10:D:237:GLN:CG	10:D:238:LYS:H	2.14	0.60
12:F:151:VAL:HG13	12:F:163:THR:HA	1.84	0.60
14:f:720:GLU:HG2	14:f:724:ASN:HD21	1.66	0.60
14:f:806:VAL:HA	14:f:809:ILE:HG22	1.82	0.60
18:d:171:LEU:HA	18:d:174:ILE:HG22	1.84	0.60
5:l:56:LEU:HD21	13:k:182:GLN:HB2	1.83	0.60
4:j:47:LYS:HZ1	4:j:59:VAL:HG13	1.66	0.60
24:R:38:ASN:HB2	24:R:39:PRO:HD2	1.83	0.60
25:S:24:ALA:HB1	25:S:193:LEU:HD11	1.83	0.60
27:U:457:ILE:HA	27:U:460:TYR:CE1	2.36	0.60
30:Y:155:ASP:OD1	30:Y:156:LEU:N	2.34	0.60
32:W:340:VAL:HA	32:W:350:ARG:HH11	1.65	0.60
7:A:190:VAL:HG12	7:A:212:VAL:CG2	2.29	0.60
8:B:234:LEU:HD13	8:B:330:ALA:HB1	1.84	0.60
10:D:143:LEU:HG	10:D:145:PRO:HD2	1.82	0.60
10:D:398:ASP:N	10:D:398:ASP:OD1	2.33	0.60
14:f:678:LEU:HD13	14:f:686:LEU:HD11	1.84	0.60
20:n:110:GLN:HE21	20:n:122:ARG:HG3	1.64	0.60
1:G:204:THR:O	11:E:291:ARG:NH1	2.33	0.60
6:M:66:LEU:HD13	6:M:214:SER:HB2	1.84	0.60
8:B:431:GLN:O	8:B:432:GLU:CG	2.49	0.60
1:g:110:PRO:HG2	1:g:113:MET:HB2	1.83	0.60
24:r:127:SER:HB3	24:r:136:TYR:CE1	2.36	0.60
8:B:53:THR:HG23	8:B:64:LYS:NZ	2.17	0.60
9:C:113:ARG:HE	9:C:130:LYS:H	1.50	0.60
15:a:138:VAL:O	15:a:142:LEU:HG	2.02	0.60
4:j:47:LYS:NZ	4:j:59:VAL:HG13	2.16	0.60
22:P:125:ASP:OD1	22:P:129:CYS:N	2.29	0.60
28:V:372:LEU:O	28:V:376:ASN:ND2	2.32	0.60
17:c:119:GLY:HA3	17:c:190:GLN:HE21	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:e:19:PHE:HB2	28:V:321:ALA:HA	1.83	0.60
6:m:40:ARG:HD2	6:m:148:LEU:HB3	1.82	0.60
25:s:110:ILE:HB	25:s:122:TYR:HB2	1.84	0.60
30:Y:13:LYS:HA	30:Y:16:ASP:HB2	1.83	0.60
2:H:102:GLN:HB3	22:P:89:SER:OG	2.01	0.59
8:B:415:THR:HG22	8:B:417:GLU:H	1.67	0.59
10:D:314:ALA:HA	10:D:317:LEU:HD13	1.81	0.59
14:f:782:HIS:CD2	14:f:789:SER:HB3	2.37	0.59
17:c:244:VAL:HG13	17:c:291:LEU:HD13	1.82	0.59
13:k:52:LYS:HE3	13:k:54:ILE:HD11	1.84	0.59
21:o:93:TYR:O	22:p:99:ARG:NH2	2.34	0.59
21:O:51:ASP:OD2	22:P:99:ARG:NH2	2.32	0.59
22:P:27:ARG:NH1	22:P:180:VAL:O	2.35	0.59
3:I:49:ARG:HB3	3:I:52:ILE:CD1	2.27	0.59
7:A:206:ILE:HD11	12:F:372:LYS:HB3	1.83	0.59
7:A:300:LEU:HD21	12:F:255:GLN:HG3	1.84	0.59
8:B:51:LEU:O	8:B:64:LYS:NZ	2.28	0.59
15:a:91:ASN:OD1	15:a:92:VAL:N	2.35	0.59
17:c:54:MET:HG2	17:c:113:HIS:CD2	2.37	0.59
5:l:153:TYR:H	6:m:85:ARG:HH12	1.50	0.59
28:V:307:ARG:O	28:V:311:ASN:ND2	2.29	0.59
29:X:397:TYR:HB3	30:Y:365:GLN:OE1	2.02	0.59
1:G:50:ILE:HG23	1:G:141:ILE:HD13	1.85	0.59
2:H:232:ALA:HB1	29:X:87:ARG:HG3	1.83	0.59
10:D:261:ILE:HG22	10:D:306:LYS:HB3	1.84	0.59
11:E:258:MET:HG3	11:E:261:LEU:HD23	1.84	0.59
12:F:134:LEU:HD13	12:F:160:ILE:H	1.67	0.59
13:K:101:PHE:HD1	24:R:57:ARG:HG2	1.68	0.59
1:g:42:VAL:HG23	1:g:165:ALA:HB2	1.85	0.59
22:P:203:ARG:NH2	22:P:205:ASP:OD2	2.35	0.59
5:L:93:LEU:HD21	25:S:73:LYS:HG2	1.85	0.59
9:C:190:GLY:HA3	9:C:317:PHE:HB2	1.85	0.59
11:E:98:VAL:HA	11:E:110:TYR:HA	1.85	0.59
11:E:188:ALA:HA	11:E:191:LEU:HB2	1.84	0.59
12:F:235:LEU:HD23	12:F:238:ARG:HH21	1.67	0.59
13:K:38:ILE:HD12	13:K:202:LEU:HD22	1.83	0.59
13:K:168:ARG:NH1	13:K:169:ALA:O	2.36	0.59
14:f:437:GLU:HB2	14:f:440:ILE:HG13	1.85	0.59
24:R:103:GLY:HA2	24:R:179:VAL:HG11	1.83	0.59
2:H:172:THR:O	2:H:176:LYS:HG2	2.01	0.59
7:A:36:TYR:O	14:f:161:HIS:HE1	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:l:157:ARG:HG3	6:m:59:GLU:OE1	2.01	0.59
21:o:70:THR:O	21:o:72:ARG:NH1	2.35	0.59
24:R:17:ASP:OD1	24:R:18:SER:N	2.35	0.59
28:V:440:LYS:HE3	28:V:443:ARG:HH21	1.68	0.59
6:M:150:MET:CE	6:M:152:ASP:OD1	2.49	0.59
11:E:66:GLU:HA	11:E:89:LYS:HD2	1.83	0.59
17:c:39:LEU:HD13	31:Z:14:LEU:HD12	1.83	0.59
6:m:173:LYS:O	6:m:177:GLU:HG2	2.01	0.59
6:m:213:LEU:HG	6:m:227:VAL:HG21	1.83	0.59
25:S:13:LEU:HD11	25:S:149:LEU:HD13	1.84	0.59
4:J:198:VAL:O	4:J:199:VAL:HG22	2.02	0.59
10:D:68:LEU:HD21	27:U:607:VAL:HB	1.85	0.59
13:K:78:MET:SD	13:K:85:ALA:HB3	2.42	0.59
14:f:56:LEU:HD12	14:f:98:PHE:HD2	1.67	0.59
15:a:205:LEU:O	15:a:271:LYS:NZ	2.35	0.59
1:g:54:LYS:N	1:g:214:GLU:O	2.33	0.59
2:h:159:LYS:N	3:i:55:LEU:O	2.29	0.59
23:Q:93:ARG:HH22	22:P:103:TYR:HA	1.68	0.59
31:Z:109:ASN:HD21	31:Z:121:LEU:HD21	1.67	0.59
32:W:55:ARG:NH1	32:W:96:GLN:HG3	2.17	0.59
4:J:139:ASP:OD1	24:R:106:LYS:HD3	2.03	0.59
4:J:140:GLY:HA2	4:J:213:ARG:HH12	1.68	0.59
6:M:15:SER:OG	6:M:19:ARG:N	2.35	0.59
9:C:50:ASN:OD1	27:U:644:TYR:N	2.36	0.59
10:D:352:MET:O	10:D:353:ASN:C	2.45	0.59
20:n:119:MET:HE2	26:t:6:VAL:HG22	1.84	0.59
29:X:74:ARG:O	29:X:78:ASN:ND2	2.36	0.59
30:Y:197:ALA:O	30:Y:201:PHE:HB2	2.03	0.59
1:G:73:THR:HG22	1:G:76:ILE:HB	1.85	0.59
5:L:225:ASP:O	5:L:226:ASP:C	2.43	0.59
6:M:69:VAL:HA	6:M:92:ARG:HG2	1.84	0.59
6:M:190:VAL:CG2	6:M:215:TRP:HE1	2.15	0.59
7:A:190:VAL:HG21	7:A:339:ARG:HG2	1.84	0.59
9:C:242:ALA:HB3	9:C:243:PRO:HD3	1.83	0.59
14:f:130:ALA:O	14:f:134:SER:CB	2.46	0.59
14:f:472:HIS:O	14:f:478:ARG:NE	2.35	0.59
16:b:20:ASP:OD1	16:b:21:PHE:N	2.32	0.59
17:c:234:TYR:C	32:W:426:ASN:HD21	2.10	0.59
24:R:1:THR:N	24:R:169:TYR:O	2.36	0.59
27:U:352:ILE:HG21	27:U:376:MET:HE1	1.85	0.59
27:U:620:GLU:HB3	27:U:651:GLY:HA2	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:C:25:LEU:CG	10:D:51:LEU:HD12	2.33	0.59
12:F:93:VAL:HB	12:F:147:PRO:HA	1.84	0.59
14:f:748:LEU:O	14:f:752:HIS:ND1	2.21	0.59
15:a:291:LEU:HB2	15:a:331:VAL:HB	1.85	0.59
20:n:122:ARG:NH1	20:N:202:LEU:O	2.36	0.59
27:U:611:ASN:HB3	27:U:614:VAL:HG12	1.85	0.59
31:Z:138:TYR:HE1	32:W:448:LYS:HD3	1.68	0.59
2:H:11:THR:HG23	2:H:11:THR:O	2.02	0.58
2:H:32:GLY:HA2	2:H:165:LYS:HB3	1.85	0.58
2:H:107:THR:O	2:H:111:VAL:N	2.35	0.58
14:f:337:LEU:HB3	14:f:339:ILE:HG12	1.85	0.58
14:f:775:THR:HA	14:f:873:LEU:HD11	1.84	0.58
5:l:60:GLN:CD	13:k:163:VAL:HA	2.28	0.58
3:i:86:LEU:O	3:i:90:LEU:HD23	2.03	0.58
4:j:36:ARG:HH21	4:j:157:LYS:HG2	1.68	0.58
13:k:40:ILE:HD11	13:k:181:LEU:HD11	1.84	0.58
20:n:127:ILE:HG22	20:n:132:SER:HB2	1.83	0.58
26:t:100:ARG:HG3	26:t:101:SER:N	2.18	0.58
22:P:45:MET:HG3	22:P:87:LEU:HD11	1.85	0.58
24:R:58:LEU:HD12	24:R:61:ARG:HD3	1.84	0.58
26:T:51:LEU:HD11	26:T:110:MET:HE2	1.83	0.58
27:U:650:TYR:HB2	27:U:683:VAL:HA	1.85	0.58
27:U:880:ASN:CG	27:U:881:PRO:HD3	2.27	0.58
29:X:137:TYR:HB3	29:X:146:ALA:HB2	1.85	0.58
3:I:38:LEU:HD23	3:I:160:LYS:CD	2.33	0.58
12:F:99:VAL:HA	12:F:119:GLY:CA	2.32	0.58
5:l:203:GLN:O	5:l:239:ARG:NH1	2.36	0.58
20:n:28:ASN:HD21	21:o:122:LEU:HD13	1.68	0.58
23:q:19:ARG:HB2	23:q:177:THR:HG23	1.85	0.58
26:t:19:GLY:HA3	26:t:193:THR:HG22	1.84	0.58
30:Y:234:PRO:C	30:Y:236:LEU:H	2.11	0.58
2:H:32:GLY:N	10:D:417:TYR:OH	2.36	0.58
10:D:412:GLN:O	10:D:412:GLN:NE2	2.36	0.58
14:f:845:ARG:NH2	14:f:882:LEU:O	2.37	0.58
15:a:258:GLN:CD	15:a:258:GLN:H	2.11	0.58
6:m:14:PHE:HB3	6:m:18:GLY:HA2	1.86	0.58
25:S:25:SER:HB2	25:S:42:LYS:HB2	1.85	0.58
10:D:69:LYS:HZ1	18:d:251:ARG:CG	2.13	0.58
20:n:144:ARG:H	20:n:147:MET:HE3	1.68	0.58
25:s:75:TYR:CD1	25:s:83:MET:HG2	2.38	0.58
32:W:51:GLU:OE2	32:W:93:ARG:NH1	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:114:VAL:O	2:H:118:MET:HG2	2.03	0.58
7:A:235:ALA:HB1	7:A:270:CYS:HA	1.83	0.58
8:B:75:GLU:OE2	14:f:677:HIS:ND1	2.37	0.58
8:B:422:SER:O	8:B:426:VAL:HB	2.03	0.58
15:a:61:GLU:OE1	15:a:65:SER:OG	2.21	0.58
16:b:16:MET:SD	16:b:115:SER:OG	2.60	0.58
5:l:95:SER:HB2	5:l:103:LEU:HD12	1.85	0.58
2:h:22:ILE:HD13	2:h:152:SER:HA	1.85	0.58
4:j:56:GLU:HA	4:j:59:VAL:HG12	1.86	0.58
4:j:173:GLU:HA	13:k:58:LEU:HD21	1.86	0.58
21:o:15:GLY:HA3	21:o:159:ILE:HD11	1.85	0.58
22:p:30:ILE:HG22	22:p:33:GLN:HG2	1.86	0.58
21:O:138:PHE:O	21:O:142:PHE:HB2	2.04	0.58
27:U:552:ILE:O	27:U:585:THR:OG1	2.20	0.58
27:U:567:ILE:HG13	27:U:586:VAL:HB	1.84	0.58
28:V:313:LEU:HD13	28:V:328:VAL:HG11	1.85	0.58
3:I:121:TYR:HA	3:I:127:LYS:HD2	1.86	0.58
13:K:84:ASP:OD1	13:K:84:ASP:N	2.33	0.58
26:T:93:THR:HA	26:T:125:VAL:HG21	1.84	0.58
27:U:135:ASN:HA	27:U:138:PHE:CE1	2.37	0.58
28:V:258:TYR:O	28:V:263:LEU:N	2.37	0.58
1:G:219:VAL:HB	1:G:230:LEU:HD11	1.85	0.58
5:L:99:PHE:HB2	26:T:87:ALA:HB1	1.84	0.58
6:M:152:ASP:HB3	6:M:153:PRO:HD2	1.85	0.58
7:A:64:GLY:CA	14:f:680:ARG:HE	2.16	0.58
7:A:241:ILE:HG22	7:A:244:GLU:H	1.67	0.58
7:A:365:GLU:HG3	7:A:366:ARG:N	2.19	0.58
9:C:250:GLU:CG	9:C:296:ASN:H	2.16	0.58
10:D:229:ARG:O	10:D:231:VAL:N	2.37	0.58
3:i:108:GLU:HA	3:i:148:TYR:HE2	1.68	0.58
6:m:99:ARG:NH1	26:t:69:GLN:OE1	2.35	0.58
27:U:453:HIS:HB3	27:U:457:ILE:HG13	1.86	0.58
29:X:74:ARG:HG3	29:X:75:PRO:CD	2.32	0.58
33:x:56:GLN:HE22	33:x:86:GLU:HA	1.69	0.58
2:H:36:VAL:HG12	2:H:162:ALA:HB2	1.86	0.58
7:A:403:ILE:O	7:A:407:LYS:CG	2.44	0.58
12:F:323:ASN:O	12:F:324:THR:C	2.46	0.58
15:a:240:PHE:HE2	15:a:271:LYS:HE2	1.68	0.58
17:c:263:ASP:OD1	17:c:264:LYS:N	2.37	0.58
18:d:187:GLU:OE1	28:V:452:ASN:ND2	2.37	0.58
5:l:44:ALA:HB1	5:l:144:ILE:HD11	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:P:122:CYS:SG	22:P:123:SER:N	2.76	0.58
27:U:580:ARG:NE	27:U:584:TYR:OH	2.36	0.58
28:V:245:ASP:OD1	28:V:246:GLY:N	2.37	0.58
32:W:316:ARG:HG2	32:W:319:THR:HG23	1.86	0.58
3:I:174:MET:HE3	3:I:199:LYS:HG3	1.85	0.58
4:J:42:VAL:HG23	4:J:191:VAL:HG21	1.86	0.58
8:B:292:THR:HA	8:B:309:MET:HE3	1.85	0.58
10:D:210:CYS:N	10:D:376:ASN:OD1	2.37	0.58
11:E:109:ARG:HD2	11:E:111:LEU:HD11	1.84	0.58
24:r:33:LYS:HG3	24:r:45:MET:HG3	1.86	0.58
23:Q:102:LEU:HB2	23:Q:118:MET:HG3	1.86	0.58
32:W:25:ASP:HA	32:W:65:ARG:HH22	1.69	0.58
1:G:80:MET:HE2	1:G:87:SER:HA	1.86	0.58
9:C:238:ALA:O	9:C:239:ARG:C	2.47	0.58
27:U:798:PRO:HB2	27:U:800:VAL:HG23	1.85	0.58
1:G:196:GLU:HB3	1:G:242:LEU:HD13	1.86	0.57
4:J:125:ARG:HG2	4:J:126:PRO:HD2	1.85	0.57
5:L:100:ASP:OD2	25:S:66:LYS:NZ	2.31	0.57
8:B:112:LEU:O	8:B:147:GLY:N	2.28	0.57
9:C:189:TYR:CG	9:C:300:ILE:HD11	2.39	0.57
14:f:120:ARG:HD3	14:f:147:SER:HB3	1.85	0.57
14:f:325:GLN:O	14:f:329:ASN:ND2	2.37	0.57
18:d:175:ARG:HE	18:d:205:LYS:HD3	1.69	0.57
28:V:482:PHE:O	28:V:486:ILE:HG12	2.04	0.57
5:L:50:LYS:HD2	5:L:211:SER:HB2	1.86	0.57
6:M:35:THR:HA	6:M:166:GLY:HA3	1.86	0.57
7:A:302:LEU:O	7:A:306:LEU:HG	2.04	0.57
8:B:246:THR:OG1	8:B:247:PHE:N	2.37	0.57
12:F:197:GLU:OE2	12:F:350:ARG:NH2	2.33	0.57
14:f:143:ARG:NE	14:f:158:TYR:OH	2.36	0.57
17:c:172:HIS:CD2	17:c:173:GLU:H	2.22	0.57
25:S:4:PRO:HB2	26:T:100:ARG:HH11	1.69	0.57
27:U:405:THR:OG1	27:U:445:ALA:HB2	2.04	0.57
31:Z:204:LYS:HD2	32:W:443:THR:HG21	1.86	0.57
8:B:304:GLU:O	8:B:308:THR:N	2.37	0.57
9:C:229:ARG:O	9:C:231:VAL:N	2.37	0.57
10:D:208:PRO:HB2	10:D:375:ILE:HD12	1.85	0.57
11:E:326:ILE:O	11:E:326:ILE:CG2	2.51	0.57
5:l:146:GLN:HG3	5:l:159:MET:HG2	1.86	0.57
5:l:152:ASN:HA	6:m:85:ARG:HH12	1.69	0.57
4:j:8:THR:CG2	4:j:16:LEU:HD12	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:o:63:LEU:HD11	21:o:79:ALA:HB2	1.85	0.57
29:X:184:PRO:HD2	30:Y:244:ALA:HB2	1.87	0.57
32:W:448:LYS:O	32:W:452:ILE:HG12	2.04	0.57
8:B:125:THR:HG21	8:B:152:LEU:HD22	1.85	0.57
9:C:287:LYS:O	9:C:289:ILE:HG22	2.04	0.57
14:f:668:ALA:HB1	14:f:697:ILE:HG23	1.87	0.57
14:f:675:PHE:HB3	14:f:690:VAL:HG13	1.85	0.57
18:d:34:ASN:OD1	18:d:35:PHE:N	2.37	0.57
18:d:147:SER:HB3	18:d:150:LYS:HB2	1.86	0.57
21:o:166:ASP:OD1	21:o:168:GLY:N	2.36	0.57
25:S:13:LEU:HD22	25:S:145:LEU:HD21	1.85	0.57
27:U:378:CYS:SG	27:U:783:TYR:OH	2.58	0.57
27:U:835:ILE:HD12	27:U:838:LYS:HB3	1.86	0.57
30:Y:300:ARG:NH1	30:Y:333:GLU:OE2	2.37	0.57
10:D:49:GLN:HB3	27:U:187:LEU:HD23	1.86	0.57
11:E:103:THR:HG21	17:c:49:VAL:HG11	1.85	0.57
27:U:799:LYS:HG2	27:U:925:VAL:HB	1.86	0.57
28:V:265:ASP:OD1	28:V:266:GLN:N	2.35	0.57
30:Y:197:ALA:O	30:Y:201:PHE:HB3	2.04	0.57
30:Y:231:LEU:HD21	30:Y:236:LEU:HD13	1.84	0.57
32:W:98:LYS:H	32:W:98:LYS:HD2	1.68	0.57
26:t:43:MET:HE2	26:t:64:LYS:HA	1.85	0.57
26:t:99:ARG:NH1	26:t:104:ASN:OD1	2.36	0.57
22:P:12:MET:HA	22:P:138:VAL:HG12	1.85	0.57
4:J:108:THR:HG21	4:J:145:TYR:HB2	1.87	0.57
5:L:200:PRO:HG2	5:L:203:GLN:HG2	1.86	0.57
7:A:277:ILE:HG21	7:A:319:MET:CE	2.35	0.57
9:C:184:LYS:HD2	9:C:277:LEU:HB3	1.86	0.57
9:C:236:VAL:HG22	9:C:276:LEU:HD11	1.87	0.57
17:c:277:LYS:HD2	17:c:282:ARG:HG2	1.86	0.57
5:l:82:ARG:NH1	13:k:117:SER:OG	2.37	0.57
20:n:53:GLN:NE2	21:o:119:THR:O	2.38	0.57
28:V:219:GLU:HA	28:V:224:LEU:HB3	1.86	0.57
32:W:317:TRP:HB3	32:W:358:VAL:HG21	1.87	0.57
1:G:112:ASP:OD2	21:O:72:ARG:NH2	2.32	0.57
2:H:49:GLU:CD	2:H:199:PHE:HD2	2.13	0.57
2:H:122:THR:OG1	2:H:152:SER:HA	2.04	0.57
4:J:150:SER:OG	4:J:151:GLY:N	2.37	0.57
14:f:419:LEU:HA	14:f:451:VAL:HA	1.87	0.57
4:j:90:GLU:OE1	4:j:110:TYR:HD2	1.87	0.57
25:s:138:GLY:HA2	25:s:142:SER:HB3	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:O:112:SER:OG	21:O:120:ASP:OD1	2.23	0.57
25:S:106:VAL:HG23	25:S:108:ASN:HD21	1.69	0.57
26:T:88:ILE:HG22	26:T:112:ILE:HD13	1.85	0.57
5:L:77:LEU:CD2	5:L:79:ALA:HB3	2.34	0.57
7:A:40:THR:CG2	14:f:164:GLY:HA3	2.35	0.57
8:B:122:ILE:HD13	8:B:132:TYR:HA	1.87	0.57
14:f:781:TYR:O	14:f:785:ARG:NH1	2.26	0.57
20:n:59:VAL:HG11	20:n:83:PHE:CZ	2.40	0.57
22:p:66:ARG:HH12	22:p:70:ARG:HB3	1.68	0.57
27:U:685:GLN:HG2	27:U:725:MET:HG3	1.87	0.57
28:V:339:LEU:O	28:V:408:ARG:NH1	2.38	0.57
1:G:153:LYS:NZ	1:G:168:ALA:HB2	2.20	0.57
7:A:103:ASN:HB2	7:A:114:ASN:H	1.70	0.57
8:B:239:VAL:HA	8:B:242:GLN:HB2	1.87	0.57
9:C:195:GLY:HA2	35:C:501:ADP:O3B	2.04	0.57
12:F:92:ASN:HB3	12:F:125:LYS:HB3	1.87	0.57
1:g:111:VAL:HG21	1:g:150:GLN:HB2	1.87	0.57
23:Q:124:LEU:O	22:P:61:GLN:NE2	2.32	0.57
28:V:225:ASP:OD1	28:V:226:VAL:N	2.38	0.57
32:W:186:ILE:O	32:W:189:GLN:NE2	2.38	0.57
7:A:347:ASP:OD1	7:A:348:LEU:N	2.35	0.56
13:K:146:VAL:HG21	13:K:222:PRO:HA	1.86	0.56
5:l:50:LYS:HB2	5:l:59:HIS:HB3	1.85	0.56
3:i:159:TRP:HA	4:j:54:GLN:HA	1.87	0.56
6:m:151:ILE:HG12	6:m:157:SER:HB2	1.87	0.56
26:t:192:VAL:HG22	26:t:197:VAL:HG12	1.86	0.56
22:P:28:PHE:HD2	22:P:36:THR:HG22	1.70	0.56
29:X:299:LEU:HD22	29:X:331:LEU:HD12	1.86	0.56
6:M:20:VAL:HG23	6:M:23:VAL:CG2	2.35	0.56
6:M:190:VAL:HG21	6:M:215:TRP:HE1	1.68	0.56
8:B:265:LYS:HB3	8:B:268:ARG:NH2	2.20	0.56
9:C:375:ARG:HG2	9:C:377:HIS:H	1.69	0.56
11:E:324:GLY:HA2	11:E:363:VAL:HA	1.87	0.56
12:F:357:PRO:HB2	12:F:362:ARG:HG3	1.86	0.56
14:f:450:ILE:HG23	14:f:822:VAL:HG11	1.87	0.56
15:a:338:PRO:HG3	31:Z:233:VAL:HG23	1.87	0.56
18:d:132:TYR:HD1	18:d:160:ALA:HA	1.70	0.56
24:R:11:GLY:HA2	24:R:104:TRP:HZ3	1.70	0.56
32:W:356:ASN:OD1	32:W:357:ARG:N	2.37	0.56
1:G:70:PHE:HZ	1:G:88:ARG:CZ	2.18	0.56
4:J:158:ALA:HB3	13:K:58:LEU:HD13	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A:110:LYS:HE3	12:F:85:THR:HG23	1.87	0.56
10:D:352:MET:O	10:D:355:SER:N	2.38	0.56
11:E:348:THR:O	11:E:352:MET:HG2	2.05	0.56
14:f:792:ALA:HB1	14:f:824:ALA:HA	1.86	0.56
17:c:57:MET:H	17:c:111:TRP:HA	1.70	0.56
1:g:224:ASN:O	1:g:226:LYS:N	2.38	0.56
3:i:218:ARG:NH1	3:i:223:THR:OG1	2.37	0.56
13:k:203:LYS:HG3	13:k:210:LEU:HD21	1.88	0.56
21:o:38:SER:HB2	21:o:74:PRO:HG2	1.86	0.56
26:t:25:ASP:OD1	26:t:41:ARG:NH2	2.37	0.56
23:Q:85:ARG:O	23:Q:86:ARG:C	2.47	0.56
22:P:12:MET:HE3	22:P:150:CYS:SG	2.45	0.56
24:R:36:GLU:OE1	24:R:36:GLU:N	2.39	0.56
27:U:78:LEU:HD11	27:U:104:CYS:HB2	1.87	0.56
30:Y:27:SER:HB3	30:Y:59:LYS:HD3	1.86	0.56
30:Y:62:ASP:OD1	30:Y:63:TRP:N	2.37	0.56
30:Y:286:TRP:CD1	30:Y:286:TRP:H	2.24	0.56
32:W:94:ARG:HD2	32:W:94:ARG:O	2.05	0.56
2:H:84:ARG:O	2:H:87:VAL:HG12	2.05	0.56
8:B:53:THR:HG23	8:B:64:LYS:HZ2	1.69	0.56
9:C:47:ALA:HA	27:U:642:GLU:OE2	2.06	0.56
9:C:215:SER:HA	9:C:249:ASP:HB2	1.88	0.56
12:F:172:VAL:HG22	12:F:175:MET:CE	2.36	0.56
17:c:250:GLU:OE2	17:c:254:ASN:ND2	2.38	0.56
17:c:257:LYS:O	17:c:261:GLU:HG2	2.05	0.56
19:e:40:GLU:O	30:Y:293:ARG:NH1	2.39	0.56
5:l:14:SER:OG	5:l:16:GLN:OE1	2.23	0.56
2:h:193:LEU:HA	2:h:196:LYS:HE3	1.87	0.56
3:i:67:LYS:HE2	3:i:225:ILE:HD12	1.86	0.56
27:U:545:LEU:HB3	27:U:577:ILE:HG21	1.88	0.56
2:H:14:SER:OG	3:I:128:ARG:NH2	2.38	0.56
6:M:8:ASP:OD1	6:M:8:ASP:N	2.33	0.56
7:A:358:HIS:O	7:A:361:SER:OG	2.23	0.56
11:E:176:PRO:O	11:E:339:ASN:ND2	2.39	0.56
12:F:362:ARG:HD2	12:F:388:THR:HG21	1.88	0.56
26:t:34:ALA:O	20:N:166:ARG:NH1	2.38	0.56
29:X:271:VAL:HB	29:X:288:LYS:HE2	1.87	0.56
3:I:38:LEU:CD2	3:I:160:LYS:HG2	2.36	0.56
10:D:158:GLN:O	10:D:159:LYS:HD3	2.04	0.56
12:F:265:ALA:CB	12:F:312:GLU:HG3	2.35	0.56
17:c:298:GLN:HB2	31:Z:252:LYS:NZ	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:k:117:SER:HB2	13:k:156:MET:HE1	1.86	0.56
20:N:17:ASP:OD2	20:N:171:GLY:N	2.39	0.56
20:N:92:GLU:OE1	20:N:92:GLU:N	2.30	0.56
27:U:643:SER:O	27:U:649:ARG:NE	2.25	0.56
31:Z:130:ASP:OD1	31:Z:131:LEU:N	2.35	0.56
3:I:68:LEU:HD22	3:I:90:LEU:HD23	1.87	0.56
3:I:207:SER:O	3:I:210:LYS:HG2	2.06	0.56
4:J:88:ARG:NH1	23:Q:70:ARG:HA	2.16	0.56
6:M:35:THR:N	6:M:50:GLU:OE2	2.39	0.56
7:A:33:LEU:HA	7:A:36:TYR:HB2	1.87	0.56
5:l:72:ILE:HG21	5:l:88:MET:HE1	1.88	0.56
20:N:116:MET:SD	20:N:116:MET:N	2.78	0.56
28:V:167:LEU:O	28:V:171:VAL:HG23	2.06	0.56
30:Y:234:PRO:HD2	30:Y:236:LEU:HB2	1.88	0.56
8:B:189:GLY:HA3	8:B:360:THR:HG23	1.87	0.56
10:D:66:LYS:O	10:D:69:LYS:HG2	2.05	0.56
3:i:66:TYR:HB2	3:i:74:CYS:SG	2.46	0.56
23:q:183:ILE:HD12	23:q:188:ILE:HG12	1.88	0.56
25:s:16:ALA:HB2	25:s:121:VAL:HG23	1.88	0.56
29:X:360:ASP:OD1	29:X:361:VAL:N	2.38	0.56
32:W:152:ILE:HA	32:W:155:GLN:HE21	1.70	0.56
4:J:6:ALA:O	4:J:18:GLN:NE2	2.39	0.56
4:J:192:ILE:C	4:J:194:ALA:H	2.13	0.56
7:A:96:ALA:HB2	8:B:133:VAL:HG23	1.88	0.56
7:A:380:SER:O	7:A:384:GLU:HB2	2.06	0.56
8:B:107:MET:HG2	8:B:151:LEU:HD13	1.88	0.56
11:E:50:LEU:HD23	11:E:52:SER:H	1.71	0.56
11:E:353:PHE:HA	11:E:356:ARG:HG2	1.87	0.56
18:d:93:ALA:O	18:d:97:GLN:NE2	2.39	0.56
13:k:83:ALA:HA	13:k:86:LYS:HE3	1.86	0.56
21:o:104:ASP:OD2	21:o:109:HIS:ND1	2.38	0.56
25:s:174:LEU:O	25:s:178:VAL:HG13	2.06	0.56
32:W:112:VAL:HG21	32:W:147:LYS:HE2	1.88	0.56
1:G:103:TYR:HB2	20:N:61:TYR:CD1	2.40	0.56
11:E:288:ALA:O	11:E:294:ARG:NE	2.38	0.56
14:f:886:GLU:HB3	14:f:906:TYR:CD1	2.40	0.56
16:b:52:ILE:HG13	16:b:93:ALA:HA	1.88	0.56
17:c:211:GLU:O	17:c:212:LEU:HB2	2.06	0.56
1:g:53:GLN:HA	1:g:215:ILE:HG22	1.88	0.56
13:k:235:GLU:HA	13:k:238:ILE:HG22	1.87	0.56
21:o:186:LEU:HD23	21:o:189:TYR:HD1	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:P:56:LEU:HD13	22:P:104:TYR:HB2	1.88	0.56
22:P:149:MET:HG2	22:P:170:ALA:HA	1.88	0.56
30:Y:294:TYR:HD1	30:Y:298:GLU:HB2	1.71	0.56
7:A:408:ASP:OD1	7:A:409:PHE:N	2.37	0.55
8:B:190:LEU:HG	8:B:193:GLN:HB2	1.86	0.55
8:B:414:VAL:O	8:B:415:THR:C	2.49	0.55
11:E:142:ILE:CG1	11:E:183:LEU:HD13	2.36	0.55
11:E:268:ASP:OD1	11:E:269:THR:HG23	2.05	0.55
17:c:57:MET:HA	17:c:72:VAL:HG23	1.87	0.55
3:i:158:GLY:O	4:j:55:ASP:N	2.33	0.55
26:t:37:ARG:NH1	20:N:165:GLU:OE1	2.39	0.55
20:N:135:ILE:HD13	20:N:163:ALA:HB2	1.88	0.55
25:S:194:ARG:NH1	25:S:205:GLU:OE1	2.38	0.55
27:U:177:LEU:O	27:U:205:TYR:OH	2.24	0.55
27:U:519:VAL:HG23	27:U:520:MET:SD	2.46	0.55
27:U:524:LYS:HD3	27:U:559:ARG:HE	1.70	0.55
27:U:550:VAL:HG22	27:U:768:GLN:HE22	1.72	0.55
2:H:113:ARG:O	2:H:117:VAL:HG23	2.06	0.55
3:I:28:ILE:HG13	3:I:152:PRO:CG	2.35	0.55
10:D:168:GLY:N	35:D:501:ADP:HN62	1.99	0.55
14:f:165:GLU:HA	14:f:168:LYS:HD2	1.88	0.55
5:l:82:ARG:O	5:l:86:ASN:ND2	2.34	0.55
3:i:45:LEU:HG	3:i:137:ILE:HD13	1.87	0.55
24:r:144:SER:HB3	24:r:147:LEU:HG	1.87	0.55
25:s:1:ARG:HH11	25:s:2:PHE:H	1.54	0.55
22:P:84:PRO:HB2	22:P:120:PHE:CD2	2.42	0.55
28:V:212:TYR:O	28:V:216:ARG:HG2	2.06	0.55
30:Y:127:THR:HG23	30:Y:140:ILE:HD12	1.89	0.55
7:A:167:GLU:HG3	7:A:239:ARG:HB3	1.87	0.55
10:D:88:VAL:HA	11:E:79:TYR:HA	1.87	0.55
12:F:416:THR:O	12:F:417:HIS:CD2	2.59	0.55
18:d:200:PHE:CG	18:d:205:LYS:HG2	2.41	0.55
3:i:6:ASP:OD1	3:i:7:SER:N	2.39	0.55
24:r:134:TYR:OH	22:P:33:GLN:OE1	2.24	0.55
21:O:138:PHE:O	21:O:142:PHE:CB	2.54	0.55
28:V:176:MET:HG3	28:V:217:VAL:HG22	1.89	0.55
28:V:490:SER:O	28:V:494:MET:HG2	2.06	0.55
32:W:451:MET:O	32:W:455:LEU:HG	2.06	0.55
4:J:42:VAL:HG12	4:J:210:VAL:HG22	1.87	0.55
4:J:118:TYR:HA	4:J:124:ARG:HE	1.72	0.55
6:M:184:MET:HB3	6:M:188:ASP:OD1	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A:363:SER:O	7:A:405:THR:CG2	2.54	0.55
9:C:250:GLU:OE2	9:C:296:ASN:ND2	2.40	0.55
11:E:83:CYS:HA	11:E:107:ILE:HB	1.88	0.55
11:E:263:GLN:O	11:E:266:GLY:N	2.40	0.55
12:F:184:GLN:OE1	12:F:186:SER:N	2.31	0.55
14:f:237:VAL:O	14:f:245:ASN:ND2	2.39	0.55
17:c:281:LYS:HG2	17:c:282:ARG:HH11	1.70	0.55
18:d:158:ILE:HD11	18:d:167:ILE:HG23	1.89	0.55
2:h:120:GLU:O	2:h:124:SER:OG	2.21	0.55
4:j:116:GLN:OE1	4:j:119:THR:OG1	2.24	0.55
6:m:214:SER:HA	6:m:227:VAL:HG23	1.89	0.55
20:n:90:TYR:HB3	20:n:94:LEU:HD23	1.89	0.55
28:V:82:LEU:HD11	28:V:166:TYR:CE2	2.42	0.55
1:G:56:VAL:HG13	1:G:56:VAL:O	2.06	0.55
9:C:306:LEU:O	9:C:310:ARG:NE	2.39	0.55
9:C:371:LEU:HD11	10:D:187:HIS:HD2	1.72	0.55
11:E:72:LYS:NZ	11:E:73:ALA:O	2.39	0.55
12:F:212:PHE:CD1	12:F:219:PRO:HG3	2.41	0.55
14:f:405:HIS:CE1	14:f:813:LYS:HE2	2.41	0.55
14:f:479:LEU:HD21	14:f:514:VAL:HA	1.87	0.55
17:c:234:TYR:O	32:W:422:ASN:ND2	2.39	0.55
2:h:219:ARG:NH1	2:h:221:LEU:HA	2.21	0.55
22:p:173:ASN:ND2	25:S:151:ASN:HD22	2.04	0.55
24:r:42:LEU:HD21	24:r:184:TRP:HB3	1.86	0.55
26:T:8:GLY:N	26:T:55:GLY:O	2.29	0.55
27:U:439:GLU:HB2	27:U:473:VAL:HG12	1.89	0.55
27:U:790:GLY:HA3	27:U:800:VAL:HG21	1.87	0.55
28:V:121:PHE:CZ	28:V:167:LEU:HD22	2.41	0.55
32:W:231:ILE:HG22	32:W:246:HIS:NE2	2.22	0.55
33:x:89:LEU:HB3	33:x:94:ILE:HD12	1.89	0.55
5:L:39:LYS:HG3	5:L:142:PRO:HG2	1.89	0.55
6:M:20:VAL:HG23	6:M:20:VAL:O	2.06	0.55
6:M:51:LYS:HB3	6:M:210:GLU:HG3	1.87	0.55
6:M:106:ILE:HG12	6:M:111:LEU:HB2	1.89	0.55
8:B:262:ASP:H	8:B:265:LYS:NZ	2.05	0.55
10:D:353:ASN:CB	29:X:226:LYS:HZ1	2.19	0.55
11:E:287:PRO:HA	11:E:290:LEU:HD23	1.89	0.55
15:a:90:PRO:HA	15:a:93:ALA:HB3	1.87	0.55
17:c:163:ILE:HG23	17:c:199:HIS:HB3	1.88	0.55
6:m:215:TRP:CE3	6:m:227:VAL:HG22	2.42	0.55
27:U:108:TYR:OH	27:U:159:ARG:NH1	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:Y:191:ILE:HD12	30:Y:293:ARG:HD2	1.87	0.55
30:Y:359:PRO:HG2	30:Y:364:TRP:HD1	1.72	0.55
1:G:53:GLN:OE1	1:G:206:LEU:CD1	2.54	0.55
14:f:86:THR:HB	14:f:155:GLY:HA3	1.89	0.55
3:i:90:LEU:HD21	3:i:114:LEU:HD22	1.89	0.55
7:A:362:MET:HB2	7:A:364:VAL:HG22	1.87	0.55
8:B:139:VAL:HG13	8:B:139:VAL:O	2.07	0.55
9:C:71:SER:HB2	9:C:115:ALA:HB1	1.89	0.55
9:C:100:ASP:OD1	9:C:101:LYS:N	2.34	0.55
11:E:167:PRO:HB3	11:E:297:ARG:HH21	1.71	0.55
27:U:82:LEU:HG	27:U:129:ARG:HG3	1.88	0.55
27:U:374:SER:OG	27:U:407:SER:HB2	2.07	0.55
28:V:314:ARG:NH1	30:Y:378:ASN:O	2.40	0.55
5:L:172:LEU:O	5:L:176:MET:HB3	2.06	0.55
7:A:411:GLU:HA	7:A:414:ASN:HD21	1.71	0.55
10:D:204:MET:HG3	10:D:310:ALA:HA	1.88	0.55
14:f:78:LEU:O	14:f:82:ILE:HG12	2.07	0.55
14:f:771:LEU:HD22	14:f:778:LEU:HD21	1.89	0.55
16:b:91:ARG:NH1	16:b:130:ARG:HD3	2.22	0.55
2:h:39:LYS:HD3	2:h:159:LYS:HA	1.88	0.55
26:T:67:LEU:HD11	26:T:88:ILE:HD12	1.88	0.55
4:J:69:VAL:HG22	4:J:104:VAL:HG12	1.88	0.55
6:M:102:PHE:HB3	20:N:78:THR:HG23	1.88	0.55
8:B:59:ARG:HB2	14:f:206:ASP:CG	2.32	0.55
9:C:43:ARG:HH11	10:D:65:GLN:HE22	1.55	0.55
9:C:65:LEU:HG	9:C:70:GLY:HA2	1.88	0.55
11:E:212:ALA:HB2	11:E:259:GLU:HG2	1.89	0.55
14:f:840:LEU:HB3	14:f:842:VAL:HG23	1.89	0.55
17:c:212:LEU:H	17:c:215:LYS:HG2	1.72	0.55
18:d:205:LYS:HZ1	18:d:209:TYR:HB2	1.71	0.55
2:H:84:ARG:O	2:H:85:VAL:C	2.49	0.54
10:D:172:ILE:HD12	10:D:334:PRO:HD2	1.89	0.54
10:D:311:THR:HG21	10:D:317:LEU:HD11	1.89	0.54
12:F:414:GLU:HG3	12:F:415:LEU:HG	1.88	0.54
21:o:24:MET:HE2	25:S:188:TYR:CZ	2.42	0.54
21:O:187:ARG:O	21:O:189:TYR:N	2.39	0.54
27:U:789:ILE:HB	27:U:911:ILE:HG13	1.88	0.54
27:U:925:VAL:HG13	27:U:927:PRO:HD3	1.89	0.54
29:X:203:PRO:HB2	29:X:206:LEU:HB3	1.89	0.54
29:X:268:GLN:HE21	29:X:295:LYS:HE3	1.73	0.54
8:B:262:ASP:O	8:B:266:LEU:HB3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:C:42:LEU:HD21	10:D:66:LYS:HB2	1.88	0.54
12:F:169:ASP:O	12:F:171:ARG:N	2.41	0.54
12:F:389:ASP:N	12:F:389:ASP:OD1	2.38	0.54
26:t:56:ASP:N	26:t:107:TRP:O	2.36	0.54
27:U:492:ASP:OD1	27:U:493:VAL:N	2.40	0.54
29:X:339:ILE:HD11	29:X:387:ILE:HD11	1.89	0.54
30:Y:298:GLU:OE2	30:Y:302:HIS:NE2	2.39	0.54
32:W:217:GLU:N	32:W:217:GLU:OE1	2.40	0.54
1:G:153:LYS:HE2	1:G:166:THR:HG21	1.88	0.54
2:H:179:ASN:OD1	2:H:180:GLU:N	2.39	0.54
4:J:90:GLU:HG3	4:J:110:TYR:CE1	2.43	0.54
11:E:47:LEU:HD22	12:F:139:LEU:HA	1.89	0.54
11:E:215:ILE:HD12	11:E:260:LEU:HD12	1.87	0.54
14:f:692:LEU:HB3	14:f:800:LEU:HD12	1.88	0.54
15:a:41:VAL:HG12	15:a:79:ILE:HG21	1.89	0.54
16:b:8:VAL:HA	16:b:110:ILE:O	2.07	0.54
2:h:93:LEU:HD13	2:h:113:ARG:HB3	1.90	0.54
21:o:144:PRO:HB3	26:T:214:MET:HE3	1.90	0.54
27:U:265:ILE:HD11	27:U:326:ILE:HG12	1.88	0.54
27:U:483:LEU:HD11	27:U:781:LEU:HD13	1.89	0.54
28:V:314:ARG:HH12	30:Y:381:GLN:HB2	1.72	0.54
32:W:212:LYS:NZ	32:W:215:GLN:OE1	2.40	0.54
1:G:116:LYS:HE3	2:H:84:ARG:HD2	1.90	0.54
2:H:71:HIS:C	2:H:107:THR:HG21	2.32	0.54
5:L:39:LYS:HD2	5:L:142:PRO:O	2.06	0.54
8:B:114:GLU:CG	8:B:115:ILE:H	2.21	0.54
10:D:146:GLU:HB3	10:D:249:ASP:HB3	1.90	0.54
11:E:171:LEU:HD22	11:E:285:LEU:CD2	2.37	0.54
11:E:267:PHE:HB2	11:E:271:HIS:CE1	2.43	0.54
12:F:422:GLU:O	12:F:426:GLU:HG3	2.08	0.54
14:f:151:LEU:HD12	14:f:158:TYR:CE2	2.42	0.54
2:h:88:HIS:NE2	2:h:92:LYS:CE	2.68	0.54
23:q:16:ALA:HB2	23:q:180:VAL:HG12	1.89	0.54
23:q:101:ASN:OD1	23:q:120:TYR:N	2.41	0.54
27:U:82:LEU:O	27:U:129:ARG:HD2	2.06	0.54
28:V:372:LEU:HA	28:V:399:ARG:CZ	2.37	0.54
28:V:482:PHE:HA	28:V:485:ASP:OD2	2.07	0.54
30:Y:79:ASP:HB3	30:Y:83:ARG:HH21	1.72	0.54
30:Y:173:ASP:OD1	30:Y:174:TRP:N	2.32	0.54
31:Z:121:LEU:HB2	31:Z:138:TYR:HB2	1.89	0.54
32:W:148:THR:OG1	32:W:168:GLU:OE1	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:C:209:CYS:HB2	9:C:245:ILE:HG23	1.89	0.54
11:E:297:ARG:HD2	32:W:138:VAL:CG2	2.37	0.54
13:K:74:ILE:CD1	13:K:112:VAL:HG21	2.38	0.54
18:d:175:ARG:HH21	18:d:205:LYS:HD2	1.72	0.54
18:d:190:LEU:HA	18:d:221:ASN:HA	1.89	0.54
21:O:215:LYS:HE2	21:O:215:LYS:HA	1.90	0.54
27:U:474:ARG:HB3	27:U:508:THR:HG21	1.89	0.54
30:Y:348:ASP:O	30:Y:352:GLU:N	2.41	0.54
30:Y:379:ARG:O	30:Y:383:LEU:HG	2.07	0.54
3:I:10[B]:THR:O	3:I:10[B]:THR:CG2	2.56	0.54
5:L:49:LEU:CD2	5:L:199:LEU:CG	2.86	0.54
5:L:66:VAL:C	25:S:77:HIS:HE2	2.15	0.54
9:C:50:ASN:CG	27:U:643:SER:HA	2.33	0.54
12:F:94:ILE:HB	12:F:123:VAL:HB	1.90	0.54
14:f:679:LEU:HG	14:f:690:VAL:HG11	1.90	0.54
15:a:134:THR:O	15:a:138:VAL:HG23	2.07	0.54
17:c:225:TRP:N	17:c:227:GLU:OE1	2.37	0.54
5:l:157:ARG:NE	5:l:176:MET:SD	2.80	0.54
2:h:43:GLY:HA3	2:h:184:LEU:HD21	1.89	0.54
4:j:83:VAL:HG21	4:j:129:ILE:HD11	1.90	0.54
25:s:158:MET:HE3	25:s:161:VAL:HG21	1.89	0.54
21:O:203:ARG:HH21	22:P:162:HIS:CD2	2.25	0.54
31:Z:209:ARG:NH1	31:Z:213:GLU:OE1	2.40	0.54
32:W:263:TRP:CZ2	32:W:295:LYS:HB3	2.42	0.54
2:H:233:ILE:C	29:X:87:ARG:HH12	2.16	0.54
3:I:181:GLU:HA	3:I:184:MET:SD	2.48	0.54
5:L:39:LYS:CG	5:L:40:SER:N	2.71	0.54
7:A:70:THR:CG2	7:A:71:GLY:N	2.67	0.54
10:D:258:ALA:HA	10:D:305:VAL:HG12	1.89	0.54
11:E:50:LEU:HD11	12:F:135:PRO:HG2	1.90	0.54
14:f:606:VAL:HA	14:f:609:VAL:HG22	1.90	0.54
17:c:120:CYS:O	17:c:197:ASN:ND2	2.41	0.54
2:h:53:LYS:HD2	2:h:56:LEU:HD11	1.89	0.54
3:i:112:THR:HG23	4:j:81:ARG:HD2	1.90	0.54
21:O:146:MET:HE2	21:O:151:ALA:HA	1.88	0.54
27:U:843:GLU:HA	27:U:846:LYS:HG2	1.90	0.54
28:V:392:TYR:HA	28:V:395:ILE:HB	1.88	0.54
30:Y:24:PHE:CE2	30:Y:286:TRP:HA	2.43	0.54
32:W:394:SER:HA	32:W:397:VAL:HG22	1.89	0.54
1:G:147:GLN:HB3	1:G:150:GLN:HE21	1.73	0.54
2:H:213:CYS:HB2	2:H:218:PHE:HD1	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A:159:PRO:O	7:A:162:THR:OG1	2.22	0.54
9:C:352:PRO:HD2	9:C:390:VAL:HG11	1.90	0.54
14:f:407:MET:HB3	14:f:440:ILE:HG12	1.89	0.54
14:f:799:VAL:HG21	14:f:821:LEU:HD12	1.90	0.54
17:c:114:SER:HB2	17:c:147:PRO:HG3	1.89	0.54
5:l:126:ARG:HH12	13:k:121:LEU:HD11	1.72	0.54
1:g:206:LEU:HD23	1:g:208:ILE:HD13	1.88	0.54
4:j:56:GLU:OE2	4:j:60:ARG:NH2	2.40	0.54
6:m:169:ARG:HB2	6:m:173:LYS:HZ3	1.73	0.54
20:n:33:LYS:HD3	20:n:45:ARG:HE	1.72	0.54
23:Q:19:ARG:HD3	23:Q:177:THR:HG23	1.90	0.54
27:U:583:MET:CE	27:U:618:ALA:HA	2.35	0.54
32:W:259:GLU:OE2	32:W:262:LYS:HD3	2.07	0.54
1:G:70:PHE:HB3	1:G:95:ARG:HH12	1.72	0.54
5:L:66:VAL:O	25:S:77:HIS:NE2	2.41	0.54
7:A:248:LYS:HE3	8:B:260:LEU:HD22	1.88	0.54
7:A:327:LEU:HB3	7:A:329:PRO:HD2	1.90	0.54
10:D:192:LYS:O	10:D:194:ILE:N	2.39	0.54
14:f:887:PHE:HB3	14:f:900:LEU:HD12	1.89	0.54
16:b:96:ALA:O	16:b:99:HIS:ND1	2.41	0.54
17:c:261:GLU:HB3	17:c:270:LEU:HD21	1.89	0.54
26:t:41:ARG:NH1	26:t:53:ALA:O	2.40	0.54
28:V:475:ALA:O	28:V:478:GLN:NE2	2.36	0.54
31:Z:34:ARG:HH21	31:Z:102:HIS:HE2	1.56	0.54
6:M:36:ALA:HB2	6:M:49:VAL:HG22	1.86	0.54
8:B:110:GLY:HA3	8:B:125:THR:HA	1.89	0.54
8:B:285:ASP:O	8:B:286:GLU:HB2	2.08	0.54
8:B:362:LYS:HG3	8:B:380:LEU:HD21	1.90	0.54
11:E:99:ALA:HB3	11:E:109:ARG:HG3	1.88	0.54
12:F:91:SER:O	12:F:149:ASP:HA	2.08	0.54
12:F:99:VAL:HG13	12:F:119:GLY:HA2	1.90	0.54
12:F:358:ASN:OD1	12:F:360:GLU:N	2.39	0.54
12:F:362:ARG:CD	12:F:388:THR:HG22	2.32	0.54
13:K:71:ASP:OD1	13:K:72:ALA:N	2.35	0.54
17:c:255:TYR:CD2	29:X:411:VAL:HG11	2.43	0.54
3:i:140:ASP:OD1	3:i:144:GLY:N	2.41	0.54
4:j:212:ARG:HB2	4:j:215:GLN:HB2	1.90	0.54
26:T:91:TRP:HE3	26:T:92:LEU:HD22	1.72	0.54
27:U:413:LYS:HA	27:U:449:ILE:HA	1.90	0.54
27:U:466:LYS:HZ2	27:U:496:LEU:HD22	1.73	0.54
1:G:77:GLY:HA3	1:G:227:PHE:CD1	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:108:ALA:H	2:H:140:ASN:HB3	1.73	0.53
4:J:35:VAL:HG21	4:J:187:THR:HG23	1.88	0.53
13:K:46:VAL:HB	13:K:220:VAL:HB	1.90	0.53
13:K:82:ILE:H	13:K:82:ILE:HD12	1.73	0.53
14:f:553:THR:HG23	14:f:554:TYR:CD1	2.43	0.53
18:d:30:LEU:HA	18:d:47:GLN:HE22	1.73	0.53
6:m:8:ASP:O	6:m:22:GLN:NE2	2.37	0.53
6:m:37:ILE:HD11	6:m:193:VAL:HG13	1.90	0.53
6:m:164:ALA:HB3	6:m:173:LYS:HZ2	1.72	0.53
20:n:199:VAL:HG13	20:n:201:THR:HG23	1.89	0.53
27:U:360:VAL:HG11	27:U:393:LEU:HD21	1.90	0.53
29:X:341:PRO:HB3	32:W:397:VAL:HG21	1.89	0.53
4:J:158:ALA:HB1	4:J:172:LEU:HD13	1.90	0.53
12:F:120:LYS:CE	12:F:142:ALA:HB3	2.38	0.53
15:a:123:LEU:HD12	15:a:162:TYR:CD1	2.44	0.53
15:a:186:LYS:HA	15:a:193:GLN:HE22	1.73	0.53
18:d:172:ASP:O	18:d:175:ARG:HG2	2.09	0.53
2:h:222:THR:N	2:h:225:GLU:OE2	2.41	0.53
25:s:175:VAL:HA	25:s:178:VAL:HG22	1.89	0.53
27:U:532:MET:HB3	27:U:548:LEU:HD11	1.89	0.53
27:U:550:VAL:O	27:U:554:LEU:HD23	2.08	0.53
30:Y:46:ARG:NH1	30:Y:46:ARG:HA	2.23	0.53
32:W:44:ILE:O	32:W:48:LEU:HG	2.08	0.53
1:G:49:VAL:HG21	1:G:194:THR:HG22	1.88	0.53
2:H:69:THR:OG1	2:H:70:LYS:N	2.41	0.53
2:H:200:GLU:OE1	10:D:339:ARG:HG2	2.08	0.53
8:B:140:ASP:OD1	8:B:140:ASP:N	2.41	0.53
9:C:72:TYR:O	9:C:116:LEU:N	2.42	0.53
11:E:172:LEU:CD1	11:E:276:ILE:HG23	2.38	0.53
11:E:285:LEU:O	11:E:285:LEU:CG	2.55	0.53
12:F:192:ASP:HA	12:F:195:ILE:HG12	1.90	0.53
15:a:251:LEU:HG	15:a:255:TRP:NE1	2.22	0.53
17:c:63:ASP:OD2	17:c:66:THR:OG1	2.20	0.53
17:c:211:GLU:C	17:c:213:GLU:H	2.15	0.53
3:i:37:ILE:HD12	3:i:189:ALA:HB1	1.90	0.53
6:m:51:LYS:HE2	6:m:210:GLU:HB3	1.90	0.53
21:O:111:TYR:CE2	21:O:121:LYS:HB2	2.43	0.53
24:R:102:CYS:HB3	24:R:111:LEU:HG	1.90	0.53
28:V:258:TYR:CE1	28:V:263:LEU:HD23	2.44	0.53
29:X:330:LEU:O	29:X:334:ASN:ND2	2.26	0.53
31:Z:40:LEU:HG	31:Z:91:ILE:HG12	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:W:248:ARG:HA	32:W:251:TYR:HB3	1.91	0.53
1:G:103:TYR:OH	21:O:85:GLN:NE2	2.41	0.53
4:J:74:ALA:O	4:J:129:ILE:HD12	2.08	0.53
5:L:152:ASN:OD1	6:M:81:LEU:HD23	2.07	0.53
7:A:312:ARG:HD3	7:A:314:ASN:ND2	2.16	0.53
8:B:135:ILE:HG12	8:B:139:VAL:HB	1.90	0.53
8:B:223:ILE:HD11	8:B:347:ILE:HB	1.91	0.53
9:C:140:VAL:HB	9:C:212:ILE:HG12	1.90	0.53
11:E:142:ILE:HG13	11:E:183:LEU:HD13	1.90	0.53
13:K:191:LEU:HD22	13:K:221:GLN:HE21	1.69	0.53
14:f:844:VAL:HG12	14:f:882:LEU:HD13	1.91	0.53
17:c:251:LEU:HD22	17:c:279:ASP:HB2	1.90	0.53
2:h:45:VAL:HG22	2:h:212:ILE:HG22	1.90	0.53
20:n:48:SER:HB2	20:n:51:ASP:HB2	1.90	0.53
21:o:147:GLU:HG3	21:o:150:GLU:H	1.73	0.53
23:Q:51:GLY:HA3	24:R:118:GLY:HA3	1.91	0.53
27:U:202:VAL:HG12	27:U:219:CYS:HB2	1.90	0.53
3:I:240:HIS:O	3:I:244:GLU:HG2	2.08	0.53
4:J:23:GLN:O	4:J:26:VAL:HG12	2.08	0.53
4:J:80:ALA:HB2	4:J:129:ILE:CD1	2.38	0.53
7:A:96:ALA:HB2	8:B:133:VAL:CG2	2.38	0.53
10:D:173:GLN:C	10:D:175:GLN:H	2.17	0.53
17:c:256:ASN:O	17:c:259:VAL:HG12	2.09	0.53
20:N:123:GLN:NE2	20:N:125:PHE:O	2.41	0.53
32:W:298:GLU:OE1	32:W:298:GLU:N	2.41	0.53
2:H:33:ALA:H	10:D:417:TYR:HH	1.55	0.53
8:B:317:ASP:OD1	8:B:346:ARG:NH1	2.42	0.53
10:D:412:GLN:HE22	10:D:415:GLU:HB3	1.74	0.53
14:f:188:VAL:O	14:f:192:VAL:HG23	2.08	0.53
16:b:138:VAL:HB	16:b:160:LEU:HD13	1.90	0.53
2:h:65:VAL:O	2:h:220:ARG:NH2	2.41	0.53
23:q:8:GLN:NE2	23:q:113:PRO:O	2.42	0.53
23:q:143:LEU:O	23:q:147:TYR:CB	2.57	0.53
31:Z:94:TRP:CZ3	31:Z:96:HIS:HB3	2.44	0.53
32:W:79:GLU:O	32:W:79:GLU:HG2	2.08	0.53
32:W:300:PRO:HA	32:W:303:LYS:HE2	1.89	0.53
32:W:387:ASP:O	32:W:390:GLU:HG2	2.09	0.53
7:A:176:ASP:HA	7:A:227:ARG:HG2	1.90	0.53
8:B:49:LEU:HG	14:f:666:ILE:HD13	1.91	0.53
8:B:135:ILE:HD12	8:B:159:VAL:HG12	1.90	0.53
8:B:200:SER:O	8:B:326:LYS:NZ	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:C:260:GLU:HG2	9:C:262:GLY:N	2.23	0.53
9:C:327:ASP:O	9:C:331:ILE:HG12	2.07	0.53
12:F:427:VAL:HG23	12:F:428:GLN:HG3	1.90	0.53
15:a:224:SER:HA	15:a:227:ASN:HB2	1.91	0.53
19:e:25:GLU:N	28:V:326:GLN:OE1	2.42	0.53
1:g:36:GLY:O	1:g:55:LYS:NZ	2.41	0.53
23:q:37:LYS:HD3	23:q:188:ILE:HD12	1.91	0.53
7:A:410:LEU:O	7:A:414:ASN:ND2	2.41	0.53
14:f:127:SER:HA	14:f:139:CYS:HA	1.91	0.53
6:m:40:ARG:NH2	6:m:146:ALA:O	2.25	0.53
20:n:20:THR:O	20:n:27:ALA:N	2.41	0.53
29:X:401:LEU:HB2	30:Y:365:GLN:NE2	2.24	0.53
30:Y:156:LEU:O	30:Y:160:ASN:ND2	2.42	0.53
30:Y:312:ARG:HA	30:Y:356:THR:HG22	1.91	0.53
1:G:99:ALA:C	20:N:61:TYR:HE1	2.17	0.53
5:L:115:LYS:HE3	5:L:128:TYR:HE2	1.73	0.53
9:C:329:LEU:HD22	9:C:359:VAL:HG13	1.90	0.53
11:E:97:ARG:NH2	12:F:96:LEU:HD22	2.24	0.53
13:K:35:SER:HB2	13:K:66:LYS:CE	2.32	0.53
14:f:423:ASP:OD1	14:f:424:GLY:N	2.41	0.53
19:e:42:ASN:OD1	19:e:43:TRP:N	2.42	0.53
23:Q:59:TYR:HE2	23:Q:87:ASN:HD21	1.56	0.53
23:Q:101:ASN:HB3	23:Q:132:HIS:HE1	1.70	0.53
27:U:602:LEU:HD22	27:U:603:LEU:HD22	1.91	0.53
33:x:56:GLN:NE2	33:x:85:MET:O	2.42	0.53
33:x:58:LEU:HD12	33:x:89:LEU:HD12	1.91	0.53
14:f:846:VAL:HG11	14:f:872:VAL:HG11	1.90	0.53
5:l:34:ALA:O	5:l:62:LYS:NZ	2.41	0.53
22:p:164:PHE:CE1	22:p:198:ARG:HD2	2.44	0.53
26:T:112:ILE:O	26:T:123:GLY:N	2.40	0.53
27:U:465:LEU:HD11	27:U:477:GLY:HA3	1.90	0.53
1:G:78:CYS:SG	1:G:140:LEU:CB	2.98	0.52
1:G:163:PHE:O	1:G:165:ALA:N	2.42	0.52
3:I:7[B]:SER:HB2	3:I:11[B]:ILE:HD13	1.91	0.52
6:M:174:THR:HG22	6:M:175:GLU:OE1	2.10	0.52
7:A:148:GLN:HB2	7:A:150:HIS:CE1	2.44	0.52
7:A:190:VAL:HG13	7:A:209:PRO:HB2	1.90	0.52
7:A:384:GLU:O	7:A:388:VAL:HG23	2.08	0.52
8:B:92:GLN:OE1	8:B:96:ARG:HB2	2.09	0.52
9:C:74:GLY:O	9:C:114:VAL:N	2.38	0.52
4:j:88:ARG:CZ	23:q:70:ARG:HA	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:o:75:ARG:HD2	21:o:104:ASP:HB2	1.91	0.52
28:V:466:ILE:HG22	28:V:470:ARG:HH12	1.74	0.52
29:X:413:SER:O	29:X:417:LYS:HB2	2.09	0.52
1:G:69:LEU:HD11	1:G:216:GLU:HG2	1.91	0.52
3:I:13:SER:HG	3:I:17:ARG:H	1.55	0.52
9:C:287:LYS:C	9:C:289:ILE:H	2.17	0.52
11:E:138:LEU:O	11:E:142:ILE:HD12	2.09	0.52
13:K:42:THR:OG1	13:K:189:MET:O	2.26	0.52
14:f:136:GLU:HG3	14:f:137:ARG:H	1.74	0.52
14:f:383:ALA:HA	14:f:417:ILE:HA	1.91	0.52
14:f:703:ARG:HB3	14:f:706:ILE:HG13	1.90	0.52
15:a:77:VAL:HG21	15:a:110:ALA:HB1	1.90	0.52
15:a:293:PHE:HB2	15:a:329:LYS:HG2	1.89	0.52
16:b:94:HIS:HD2	16:b:136:VAL:HG13	1.74	0.52
19:e:28:ALA:H	28:V:355:ARG:HE	1.58	0.52
21:o:173:ILE:HD11	21:o:190:THR:HB	1.90	0.52
23:q:77:PRO:HB3	23:q:106:GLY:HA3	1.91	0.52
24:r:174:VAL:O	24:r:189:SER:HA	2.09	0.52
22:P:138:VAL:HG21	22:P:146:MET:HB2	1.90	0.52
24:R:52:CYS:O	24:R:56:GLU:HG2	2.09	0.52
29:X:370:LEU:HD21	30:Y:306:GLN:HE21	1.74	0.52
30:Y:39:ASP:HA	30:Y:42:MET:HE3	1.91	0.52
3:I:124:PHE:O	3:I:127:LYS:NZ	2.37	0.52
9:C:68:GLU:O	9:C:118:ASN:ND2	2.42	0.52
11:E:363:VAL:CG1	11:E:364:GLN:N	2.72	0.52
13:K:156:MET:HG2	13:K:162:PHE:HB3	1.91	0.52
13:K:237:VAL:O	13:K:237:VAL:CG1	2.57	0.52
24:r:97:MET:O	24:r:116:SER:N	2.40	0.52
25:S:153:VAL:HG22	25:S:166:LEU:HD21	1.90	0.52
27:U:183:LEU:HD22	27:U:187:LEU:HD22	1.90	0.52
27:U:546:ARG:HE	27:U:771:PHE:HB3	1.73	0.52
30:Y:157:ILE:HA	30:Y:160:ASN:HD21	1.73	0.52
32:W:94:ARG:O	32:W:95:SER:HB2	2.10	0.52
2:H:107:THR:HB	2:H:140:ASN:HB2	1.91	0.52
7:A:190:VAL:CG1	7:A:212:VAL:HG23	2.37	0.52
8:B:180:PRO:HD2	8:B:242:GLN:HB3	1.90	0.52
12:F:140:VAL:CG1	12:F:141:ASP:N	2.73	0.52
14:f:292:LYS:HE3	14:f:899:ILE:HD13	1.91	0.52
15:a:279:GLU:HA	15:a:282:PHE:CE1	2.44	0.52
20:n:168:GLY:HA3	26:T:182:ARG:HH21	1.74	0.52
28:V:109:ASN:O	28:V:113:LEU:HD23	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:V:168:GLN:NE2	28:V:190:ASP:OD2	2.38	0.52
29:X:44:GLN:OE1	29:X:48:GLN:NE2	2.30	0.52
29:X:292:GLN:O	29:X:296:ASN:ND2	2.34	0.52
2:H:108:ALA:O	2:H:111:VAL:HG12	2.09	0.52
3:I:92:LEU:HD21	3:I:96:ARG:HH22	1.74	0.52
4:J:66:ASP:OD2	4:J:102:VAL:HG11	2.10	0.52
4:J:115:LYS:HD3	4:J:149:PRO:HA	1.91	0.52
6:M:190:VAL:HG13	6:M:213:LEU:HD23	1.92	0.52
9:C:36:ASN:O	9:C:40:GLN:HG2	2.09	0.52
11:E:74:THR:OG1	11:E:75:ASN:OD1	2.26	0.52
12:F:77:SER:O	12:F:81:LYS:HB2	2.09	0.52
12:F:369:HIS:NE2	12:F:397:LYS:HD3	2.25	0.52
15:a:26:GLU:HA	15:a:29:TYR:CE2	2.44	0.52
15:a:159:SER:OG	15:a:175:ASP:OD2	2.23	0.52
15:a:193:GLN:HB3	15:a:225:LEU:HD13	1.92	0.52
4:j:148:ASP:OD2	4:j:152:THR:OG1	2.28	0.52
28:V:321:ALA:HB1	28:V:324:PHE:HB3	1.91	0.52
29:X:369:ILE:HD11	29:X:376:GLY:H	1.75	0.52
30:Y:231:LEU:HD23	30:Y:231:LEU:H	1.74	0.52
31:Z:52:ASN:OD1	31:Z:53:SER:N	2.42	0.52
32:W:123:ARG:NH1	32:W:123:ARG:O	2.42	0.52
3:I:227:VAL:HG23	3:I:227:VAL:O	2.10	0.52
4:J:96:LEU:HA	23:Q:62:LYS:HE3	1.92	0.52
9:C:271:ARG:O	9:C:275:GLU:HG2	2.10	0.52
17:c:100:LYS:HA	17:c:105:PRO:HG3	1.90	0.52
18:d:31:LEU:HD11	27:U:19:LEU:HD12	1.91	0.52
1:g:44:GLY:N	1:g:47:CYS:O	2.34	0.52
6:m:72:HIS:ND1	6:m:139:SER:OG	2.32	0.52
20:n:179:ILE:HG13	20:n:184:VAL:HG23	1.91	0.52
25:s:106:VAL:HG23	25:s:108:ASN:HD21	1.75	0.52
23:Q:35:MET:HG3	23:Q:181:ARG:HD2	1.91	0.52
25:S:170:ARG:HA	25:S:173:ARG:HE	1.73	0.52
28:V:115:LYS:HZ2	28:V:147:PHE:HZ	1.57	0.52
5:L:105:VAL:HG21	5:L:136:GLY:HA3	1.91	0.52
14:f:105:LYS:HZ3	14:f:109:ILE:HD11	1.75	0.52
14:f:698:SER:HB2	14:f:703:ARG:HH21	1.73	0.52
16:b:95:LEU:HB3	31:Z:69:PHE:CD1	2.44	0.52
5:l:24:TYR:HB3	13:k:19:GLY:HA2	1.91	0.52
5:l:37:GLY:HA3	5:l:46:LEU:HD23	1.92	0.52
6:m:15:SER:HB3	6:m:19:ARG:H	1.74	0.52
6:m:134:SER:HB2	6:m:153:PRO:HD3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:p:91:VAL:HG13	22:p:124:LEU:HD11	1.91	0.52
23:q:16:ALA:HB2	23:q:160:LEU:HD11	1.92	0.52
23:q:143:LEU:O	23:q:147:TYR:HB2	2.08	0.52
24:r:13:ILE:HG13	24:r:152:ALA:HB1	1.90	0.52
25:s:176:LYS:HE2	25:s:208:VAL:HG21	1.90	0.52
26:t:44:ARG:HG3	26:t:197:VAL:HG21	1.92	0.52
20:N:8:PHE:HE2	20:N:13:VAL:HG23	1.75	0.52
28:V:440:LYS:HA	28:V:443:ARG:HG2	1.92	0.52
32:W:327:GLU:HG2	32:W:337:ALA:HB1	1.90	0.52
7:A:207:GLU:HG3	7:A:311:PRO:HB3	1.92	0.52
8:B:175:LYS:HG2	8:B:175:LYS:O	2.09	0.52
8:B:224:LEU:HD23	8:B:351:ILE:HB	1.91	0.52
8:B:338:ASP:HB3	8:B:341:LEU:HD23	1.92	0.52
11:E:309:ARG:HG2	11:E:332:VAL:HG22	1.92	0.52
12:F:152:GLY:N	12:F:162:GLU:O	2.42	0.52
15:a:156:TYR:HB3	15:a:179:PHE:HB2	1.92	0.52
16:b:109:ILE:O	16:b:138:VAL:HA	2.10	0.52
17:c:259:VAL:HG11	29:X:411:VAL:HG12	1.92	0.52
18:d:101:LEU:HD23	18:d:166:PHE:CE1	2.44	0.52
1:g:163:PHE:HA	2:h:58:ASP:N	2.21	0.52
25:S:27:THR:OG1	25:S:192:ALA:HB3	2.10	0.52
28:V:240:LEU:HG	28:V:241:ARG:HE	1.75	0.52
30:Y:250:LEU:HD23	30:Y:257:ARG:HA	1.91	0.52
6:M:7:TYR:CZ	6:M:16:PRO:HG3	2.45	0.52
8:B:54:PRO:HG2	8:B:61:LYS:HB2	1.92	0.52
11:E:182:LEU:HD22	35:E:501:ADP:H2'	1.92	0.52
11:E:339:ASN:ND2	11:E:341:ALA:H	2.08	0.52
12:F:222:GLY:HA3	12:F:348:LEU:HA	1.91	0.52
13:K:225:ASN:HB2	13:K:227:HIS:CE1	2.45	0.52
17:c:251:LEU:HD21	17:c:283:HIS:CG	2.45	0.52
18:d:30:LEU:HD13	18:d:54:ILE:HD11	1.92	0.52
18:d:76:ALA:O	27:U:7:GLY:N	2.42	0.52
1:g:122:SER:OG	1:g:156:PRO:O	2.28	0.52
20:n:32:ASP:O	20:n:45:ARG:NH2	2.42	0.52
22:p:190:ILE:HA	22:p:195:ILE:HG22	1.91	0.52
3:I:175:LEU:O	3:I:179:TYR:HB2	2.10	0.52
6:M:150:MET:HE1	6:M:152:ASP:CG	2.35	0.52
7:A:205:GLY:O	7:A:207:GLU:N	2.42	0.52
11:E:166:PRO:HD2	11:E:268:ASP:OD2	2.10	0.52
11:E:169:GLY:HA3	11:E:275:MET:O	2.10	0.52
11:E:188:ALA:HA	11:E:191:LEU:HD22	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:E:331:ILE:HG23	11:E:371:VAL:HG21	1.91	0.52
16:b:131:LEU:HD22	16:b:136:VAL:HG21	1.92	0.52
27:U:742:HIS:O	27:U:883:ARG:NE	2.43	0.52
32:W:27:ARG:NH2	32:W:46:THR:OG1	2.42	0.52
2:H:108:ALA:HB3	2:H:140:ASN:C	2.35	0.51
6:M:192:GLU:O	6:M:196:ILE:HG12	2.10	0.51
14:f:394:ASP:HB2	14:f:397:LYS:HE3	1.92	0.51
16:b:37:CYS:SG	16:b:68:THR:OG1	2.49	0.51
4:j:65:LEU:HD13	4:j:88:ARG:HG3	1.92	0.51
22:p:122:CYS:SG	22:p:123:SER:N	2.83	0.51
25:s:199:THR:HG23	25:s:201:GLU:H	1.75	0.51
22:P:149:MET:HE2	22:P:173:ASN:ND2	2.25	0.51
27:U:628:ARG:NH1	27:U:753:GLY:O	2.35	0.51
30:Y:359:PRO:HB2	30:Y:364:TRP:HB2	1.93	0.51
32:W:263:TRP:CH2	32:W:295:LYS:HB3	2.46	0.51
2:H:26:LEU:O	2:H:29:VAL:HG12	2.10	0.51
7:A:215:PHE:CE1	7:A:342:GLU:HB3	2.44	0.51
9:C:188:LEU:HB2	9:C:293:MET:O	2.10	0.51
9:C:238:ALA:O	9:C:240:GLU:HG3	2.10	0.51
9:C:297:ARG:O	9:C:297:ARG:CG	2.59	0.51
11:E:47:LEU:HD13	12:F:139:LEU:HD12	1.92	0.51
11:E:84:ARG:NE	11:E:108:MET:O	2.40	0.51
13:K:229:PHE:CD2	13:K:234:LEU:HB2	2.41	0.51
15:a:136:GLU:O	15:a:140:GLU:HG3	2.11	0.51
17:c:195:GLY:O	17:c:199:HIS:N	2.43	0.51
13:k:70:ILE:HA	13:k:93:ARG:HG2	1.92	0.51
24:r:102:CYS:HB3	24:r:111:LEU:HD13	1.91	0.51
30:Y:141:VAL:HG21	30:Y:168:ILE:HG21	1.92	0.51
30:Y:296:VAL:HB	30:Y:300:ARG:HH21	1.75	0.51
2:H:126:GLY:O	2:H:128:ARG:N	2.43	0.51
5:L:56:LEU:HD11	13:K:182:GLN:HA	1.92	0.51
9:C:195:GLY:O	9:C:296:ASN:ND2	2.43	0.51
18:d:114:GLU:HA	18:d:117:THR:HG22	1.91	0.51
1:g:163:PHE:CE2	1:g:166:THR:HG22	2.45	0.51
27:U:649:ARG:HB2	27:U:683:VAL:HG21	1.91	0.51
27:U:838:LYS:NZ	27:U:842:LYS:HE3	2.26	0.51
28:V:376:ASN:ND2	28:V:399:ARG:HD3	2.25	0.51
28:V:407:VAL:HG22	28:V:422:ILE:HD11	1.91	0.51
5:L:56:LEU:HD13	13:K:167:ALA:HB3	1.92	0.51
7:A:312:ARG:C	7:A:314:ASN:H	2.18	0.51
9:C:25:LEU:HD11	10:D:47:LEU:CB	2.37	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:f:570:GLY:O	14:f:572:ALA:N	2.42	0.51
17:c:161:ARG:NE	17:c:203:ILE:HD11	2.24	0.51
18:d:121:ARG:O	18:d:123:PRO:HD3	2.10	0.51
2:h:223:PRO:HA	2:h:226:VAL:HB	1.91	0.51
3:i:69:ASN:ND2	3:i:71:ASP:OD1	2.35	0.51
3:i:73:ALA:HB2	3:i:225:ILE:HD13	1.92	0.51
6:m:36:ALA:HB2	6:m:49:VAL:HG23	1.91	0.51
22:p:30:ILE:HG23	22:p:32:ALA:H	1.76	0.51
25:s:185:ARG:NE	22:P:151:GLU:OE2	2.39	0.51
20:N:19:ARG:HB2	20:N:171:GLY:O	2.09	0.51
23:Q:49:GLU:O	23:Q:53:THR:HG23	2.10	0.51
27:U:260:PHE:O	27:U:264:VAL:HG23	2.10	0.51
31:Z:165:GLU:HB3	31:Z:168:GLU:HG2	1.91	0.51
7:A:219:GLY:H	34:A:501:ATP:PG	2.33	0.51
7:A:329:PRO:C	7:A:333:ARG:HE	2.19	0.51
8:B:274:ALA:HB1	8:B:280:SER:HB3	1.92	0.51
8:B:434:THR:O	8:B:434:THR:CG2	2.59	0.51
10:D:162:VAL:HG21	10:D:214:MET:HE1	1.92	0.51
14:f:446:LEU:HD13	14:f:483:PHE:HB3	1.93	0.51
14:f:777:THR:HB	14:f:828:ARG:HD3	1.93	0.51
17:c:222:LYS:HE3	31:Z:176:LEU:HD11	1.92	0.51
2:h:196:LYS:HB3	2:h:203:MET:SD	2.50	0.51
2:h:204:THR:CG2	2:h:205:GLU:N	2.73	0.51
3:i:196:VAL:O	3:i:200:THR:HG22	2.10	0.51
6:m:185:THR:O	6:m:189:ILE:HG12	2.11	0.51
22:P:118:LYS:HD3	22:P:119:PRO:HD2	1.93	0.51
27:U:693:LEU:HD12	27:U:696:ILE:HD13	1.92	0.51
28:V:268:GLU:HB3	28:V:295:ILE:HD11	1.92	0.51
28:V:301:GLU:O	28:V:305:ALA:HB2	2.10	0.51
31:Z:146:ASP:HB2	31:Z:149:THR:CG2	2.41	0.51
6:M:136:MET:HB3	6:M:148:LEU:HD11	1.93	0.51
9:C:147:THR:HA	9:C:205:HIS:CE1	2.45	0.51
17:c:237:HIS:HA	17:c:240:HIS:HB3	1.93	0.51
22:p:148:GLY:C	25:S:148:LEU:HD11	2.36	0.51
23:q:85:ARG:HB2	23:q:118:MET:HE1	1.92	0.51
21:O:8:TYR:CD1	21:O:13:VAL:HG23	2.46	0.51
26:T:50:MET:HE3	26:T:192:VAL:HB	1.91	0.51
27:U:16:GLU:HB2	27:U:19:LEU:HB2	1.93	0.51
27:U:368:ALA:HB1	27:U:731:ILE:HB	1.92	0.51
27:U:557:TYR:HA	27:U:589:ALA:HA	1.91	0.51
30:Y:220:VAL:HG11	30:Y:249:VAL:HG21	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:Y:310:SER:H	30:Y:358:ARG:NH1	2.08	0.51
32:W:375:MET:HE3	32:W:408:ARG:NH2	2.25	0.51
1:G:191:PHE:CE1	1:G:219:VAL:HG11	2.45	0.51
2:H:145:TYR:HE1	3:I:59:VAL:HG21	1.72	0.51
4:J:40:ILE:HD13	4:J:184:ASP:CG	2.35	0.51
16:b:70:ARG:HG3	16:b:71:ILE:HD12	1.93	0.51
17:c:37:ALA:HA	17:c:72:VAL:HG12	1.93	0.51
1:g:175:SER:HA	1:g:205:VAL:HG21	1.93	0.51
3:i:111:VAL:HG22	3:i:136:TYR:CD2	2.42	0.51
26:t:176:LEU:O	26:t:180:ASP:HB3	2.11	0.51
20:N:39:ASP:OD1	20:N:39:ASP:N	2.42	0.51
3:I:220:ASN:OD1	3:I:220:ASN:N	2.44	0.51
5:L:52:ALA:HA	5:L:59:HIS:HA	1.92	0.51
7:A:229:VAL:O	7:A:232:ARG:HG2	2.11	0.51
9:C:78:ARG:HE	9:C:80:MET:HE3	1.75	0.51
9:C:239:ARG:O	9:C:240:GLU:HB2	2.10	0.51
11:E:167:PRO:HB3	11:E:297:ARG:NH2	2.26	0.51
11:E:175:PRO:HB2	11:E:176:PRO:HD3	1.92	0.51
5:l:144:ILE:HB	5:l:156:CYS:O	2.11	0.51
2:h:66:GLU:O	2:h:74:LEU:HD23	2.11	0.51
26:t:124:TYR:HB2	26:t:137:LEU:HD13	1.92	0.51
22:P:155:GLU:HB2	22:P:158:MET:HE3	1.91	0.51
4:J:74:ALA:C	4:J:129:ILE:HD12	2.36	0.51
4:J:157:LYS:HB3	4:J:176:TYR:CZ	2.46	0.51
5:L:224:TYR:HB3	5:L:228:ASP:HB3	1.92	0.51
7:A:220:THR:O	7:A:223:THR:OG1	2.29	0.51
12:F:172:VAL:O	12:F:172:VAL:CG1	2.58	0.51
12:F:414:GLU:O	12:F:416:THR:N	2.44	0.51
13:K:121:LEU:HD23	13:K:136:PRO:HB3	1.92	0.51
14:f:471:LEU:O	14:f:471:LEU:HD23	2.10	0.51
14:f:869:THR:HG23	14:f:871:PRO:HD2	1.92	0.51
14:f:887:PHE:HB3	14:f:900:LEU:HB3	1.93	0.51
13:k:210:LEU:HD23	13:k:210:LEU:H	1.76	0.51
23:q:27:GLN:NE2	23:Q:169:LYS:O	2.43	0.51
21:O:159:ILE:HG21	21:O:173:ILE:HG23	1.93	0.51
25:S:147:PRO:HA	25:S:150:ASP:OD1	2.10	0.51
5:L:52:ALA:HB2	5:L:59:HIS:ND1	2.25	0.51
14:f:162:LEU:HD21	14:f:187:LEU:HD21	1.93	0.51
14:f:337:LEU:HD21	14:f:871:PRO:HB2	1.93	0.51
15:a:11:SER:HB3	15:a:22:TRP:CZ2	2.46	0.51
15:a:232:TRP:CE3	15:a:253:THR:HA	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:l:56:LEU:HD11	13:k:182:GLN:HB2	1.92	0.51
5:l:167:SER:HB2	5:l:197:GLU:HG2	1.93	0.51
1:g:155:ASP:OD2	1:g:158:GLY:N	2.43	0.51
30:Y:177:ARG:HA	30:Y:180:LEU:HD22	1.93	0.51
5:L:166:GLN:H	5:L:166:GLN:CD	2.20	0.50
17:c:59:GLY:HA3	17:c:69:VAL:HG22	1.93	0.50
17:c:142:ALA:O	17:c:159:ALA:HA	2.11	0.50
17:c:190:GLN:HA	17:c:193:ILE:HG22	1.93	0.50
18:d:26:LEU:HD22	18:d:30:LEU:HD22	1.93	0.50
18:d:55:LEU:HD13	18:d:78:LEU:HA	1.92	0.50
1:g:112:ASP:OD2	21:o:72:ARG:NH2	2.35	0.50
13:k:70:ILE:HD11	13:k:89:ILE:HD12	1.92	0.50
13:k:104:ASN:O	13:k:105:GLU:HG3	2.11	0.50
6:m:175:GLU:OE1	6:m:196:ILE:HD13	2.11	0.50
21:o:216:ILE:HG22	21:o:218:PRO:HD3	1.93	0.50
24:r:100:MET:HB2	24:r:111:LEU:HD11	1.93	0.50
25:s:1:ARG:NH1	25:s:2:PHE:H	2.08	0.50
28:V:180:ARG:NH1	28:V:183:GLU:OE1	2.43	0.50
29:X:194:ARG:HH21	29:X:214:SER:HB2	1.76	0.50
29:X:248:ILE:HD13	29:X:251:LEU:HD21	1.92	0.50
30:Y:291:HIS:HA	30:Y:295:TYR:CE2	2.46	0.50
32:W:239:SER:HG	32:W:242:SER:HG	1.59	0.50
3:I:242:GLU:O	3:I:246:LYS:HG2	2.11	0.50
4:J:136:PHE:HA	4:J:142:PRO:HA	1.92	0.50
4:J:183:THR:CG2	4:J:184:ASP:N	2.75	0.50
11:E:129:ASN:ND2	11:E:185:ARG:O	2.44	0.50
12:F:191:LEU:O	12:F:195:ILE:HG23	2.10	0.50
14:f:289:VAL:HG11	14:f:901:ARG:CZ	2.42	0.50
14:f:423:ASP:HB2	33:x:37:ASN:H	1.76	0.50
1:g:131:MET:HE2	6:m:125:TYR:HE1	1.75	0.50
6:m:119:VAL:HG13	6:m:131:PHE:HD2	1.76	0.50
23:q:14:LEU:HD13	23:q:182:ILE:HG12	1.93	0.50
25:s:11:THR:HG22	25:s:141:ALA:H	1.76	0.50
23:Q:4:LEU:HD22	23:Q:45:LEU:HB3	1.93	0.50
23:Q:56:PHE:CD2	23:Q:100:VAL:HG21	2.47	0.50
25:S:38:ARG:HH12	25:S:212:LYS:HG3	1.77	0.50
27:U:179:TYR:O	27:U:183:LEU:HG	2.10	0.50
32:W:35:ALA:HB3	32:W:73:MET:HE1	1.93	0.50
33:x:70:GLN:NE2	33:x:85:MET:SD	2.77	0.50
3:I:11[B]:ILE:O	3:I:18:LEU:HD23	2.11	0.50
4:J:70:CYS:SG	4:J:134:VAL:CG2	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:B:237:LYS:HZ1	8:B:353:PHE:HB2	1.75	0.50
10:D:115:ILE:HG13	10:D:139:LEU:HD23	1.93	0.50
12:F:375:VAL:HG13	12:F:376:SER:N	2.26	0.50
14:f:543:MET:HE1	14:f:583:VAL:HG22	1.94	0.50
4:j:40:ILE:HG22	4:j:212:ARG:HG3	1.94	0.50
20:N:91:ARG:NH2	26:T:56:ASP:OD2	2.35	0.50
26:T:193:THR:HG23	26:T:195:LYS:H	1.76	0.50
27:U:558:GLY:H	27:U:589:ALA:HA	1.76	0.50
32:W:220:GLU:OE1	32:W:220:GLU:N	2.44	0.50
3:I:175:LEU:O	3:I:179:TYR:CB	2.59	0.50
4:J:198:VAL:C	4:J:199:VAL:HG22	2.36	0.50
7:A:277:ILE:HG12	7:A:319:MET:HE2	1.90	0.50
10:D:93:LEU:HD23	10:D:102:ILE:CD1	2.35	0.50
10:D:156:SER:HB3	10:D:227:PHE:HB3	1.94	0.50
11:E:48:LYS:HD3	12:F:76:ASN:HB2	1.93	0.50
14:f:296:PHE:HE2	14:f:899:ILE:HG13	1.75	0.50
14:f:674:THR:O	14:f:678:LEU:HG	2.11	0.50
16:b:111:ALA:HB3	16:b:140:ILE:HG13	1.94	0.50
18:d:218:GLY:N	18:d:221:ASN:O	2.38	0.50
1:g:62:ASP:N	6:m:159:GLY:O	2.44	0.50
24:R:15:ALA:HB2	24:R:156:ALA:HB1	1.94	0.50
24:R:21:THR:HG21	24:R:169:TYR:HD1	1.74	0.50
27:U:451:ALA:HB2	27:U:483:LEU:HD21	1.93	0.50
29:X:171:LEU:HD13	29:X:210:LEU:HD13	1.92	0.50
30:Y:377:LEU:HA	30:Y:380:VAL:HG22	1.93	0.50
32:W:367:ALA:HA	32:W:415:PHE:CD2	2.47	0.50
1:G:217:VAL:HG13	1:G:230:LEU:HB2	1.93	0.50
5:L:4:ASN:O	5:L:6:TYR:N	2.41	0.50
8:B:220:LYS:HB3	8:B:348:ASP:H	1.76	0.50
8:B:288:ASP:OD2	8:B:331:THR:HB	2.11	0.50
10:D:89:ILE:HD11	11:E:70:ILE:HD12	1.92	0.50
10:D:92:PHE:CD1	10:D:103:VAL:HG12	2.46	0.50
10:D:337:ASP:HB2	10:D:340:GLN:HB3	1.94	0.50
11:E:215:ILE:CD1	11:E:260:LEU:HD12	2.42	0.50
11:E:353:PHE:HA	11:E:356:ARG:CD	2.41	0.50
14:f:75:LEU:HD21	14:f:121:PHE:HB3	1.94	0.50
14:f:140:LEU:HD22	14:f:169:GLU:HG3	1.93	0.50
14:f:163:ALA:HB1	14:f:207:LEU:HD22	1.93	0.50
14:f:669:GLU:O	14:f:672:LEU:HB3	2.12	0.50
14:f:753:ALA:HA	14:f:759:LEU:HD22	1.93	0.50
15:a:51:ALA:O	15:a:86:GLN:NE2	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:m:73:VAL:HG22	6:m:139:SER:HB2	1.93	0.50
23:q:29:LYS:HG2	23:q:31:ASP:H	1.77	0.50
20:N:19:ARG:HD3	20:N:26:ILE:HD12	1.93	0.50
21:O:147:GLU:OE1	21:O:149:GLU:N	2.43	0.50
27:U:552:ILE:HB	27:U:581:SER:OG	2.11	0.50
27:U:580:ARG:HD3	27:U:771:PHE:CZ	2.47	0.50
28:V:211:TYR:OH	28:V:234:ARG:NH2	2.43	0.50
31:Z:48:LEU:HD11	31:Z:92:VAL:HB	1.93	0.50
3:I:102:GLN:HG3	3:I:102:GLN:O	2.11	0.50
7:A:123:VAL:HA	12:F:85:THR:O	2.12	0.50
11:E:219:PHE:CE2	11:E:260:LEU:HG	2.47	0.50
11:E:342:ASP:O	11:E:346:VAL:HG23	2.11	0.50
13:K:30:ALA:O	13:K:33:LEU:HG	2.12	0.50
13:K:220:VAL:HA	13:K:226:PHE:CD1	2.46	0.50
14:f:157:GLU:O	14:f:161:HIS:ND1	2.30	0.50
14:f:333:LEU:HD13	14:f:871:PRO:HB3	1.92	0.50
14:f:698:SER:OG	14:f:701:ASN:HB3	2.12	0.50
18:d:144:MET:C	28:V:440:LYS:HZ1	2.20	0.50
19:e:22:PHE:HZ	28:V:287:ARG:HG2	1.76	0.50
4:j:16:LEU:O	4:j:20:GLU:HG2	2.12	0.50
22:p:125:ASP:OD1	22:p:129:CYS:N	2.29	0.50
23:q:142:ILE:HD12	24:R:141:ARG:HG3	1.93	0.50
23:q:166:GLU:CD	24:R:137:GLY:HA2	2.36	0.50
26:t:133:GLU:OE1	26:t:133:GLU:N	2.45	0.50
27:U:701:ILE:HD13	27:U:809:SER:HA	1.92	0.50
30:Y:320:ALA:HB1	30:Y:330:ILE:HD13	1.93	0.50
31:Z:94:TRP:HE1	31:Z:109:ASN:CG	2.19	0.50
32:W:111:TYR:O	32:W:114:GLU:HG3	2.11	0.50
4:J:26:VAL:O	4:J:27:LYS:C	2.54	0.50
4:J:45:VAL:HG11	4:J:61:LYS:CG	2.41	0.50
4:J:80:ALA:HB2	4:J:129:ILE:CG1	2.42	0.50
6:M:69:VAL:HG11	6:M:75:MET:HE3	1.93	0.50
8:B:187:ILE:HA	35:B:501:ADP:C2	2.47	0.50
9:C:117:ARG:CG	9:C:118:ASN:H	2.19	0.50
9:C:161:ILE:HD12	9:C:199:LEU:HD13	1.93	0.50
10:D:166:ASP:OD1	10:D:166:ASP:N	2.42	0.50
12:F:140:VAL:CG1	12:F:141:ASP:H	2.24	0.50
14:f:616:CYS:HA	14:f:650:GLN:HG2	1.93	0.50
14:f:650:GLN:O	14:f:654:VAL:HG23	2.11	0.50
14:f:745:LEU:HA	14:f:748:LEU:HD12	1.93	0.50
15:a:236:THR:HG21	15:a:253:THR:HG21	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:g:83:MET:HE3	1:g:84:THR:H	1.76	0.50
6:m:215:TRP:CZ3	6:m:227:VAL:HG22	2.47	0.50
24:r:122:SER:OG	24:r:123:GLY:N	2.44	0.50
27:u:208:LEU:HD12	27:u:215:ASN:ND2	2.27	0.50
27:u:350:LEU:O	27:u:354:LYS:HG2	2.12	0.50
1:g:62:ASP:N	6:m:159:GLY:O	2.44	0.50
2:h:77:SER:OG	2:h:78:GLY:N	2.44	0.50
5:l:219:LEU:HD21	5:l:224:TYR:OH	2.11	0.50
10:d:230:VAL:HG11	10:d:264:ILE:HG12	1.93	0.50
10:d:242:GLU:OE2	11:e:78:ARG:NH1	2.44	0.50
11:e:353:PHE:C	11:e:356:ARG:HG2	2.37	0.50
14:f:137:ARG:NE	14:f:169:GLU:OE2	2.35	0.50
14:f:175:ASP:O	14:f:178:LYS:NZ	2.40	0.50
16:b:145:GLU:H	16:b:145:GLU:CD	2.19	0.50
4:j:169:ARG:NH2	13:k:56:SER:OG	2.36	0.50
13:k:141:LEU:HB2	13:k:156:MET:HB3	1.94	0.50
21:o:75:ARG:HB3	21:o:77:VAL:HG22	1.94	0.50
22:p:149:MET:HE2	25:s:148:LEU:HD12	1.93	0.50
21:o:20:ALA:HB3	21:o:28:ASP:HB3	1.94	0.50
23:q:85:ARG:HA	23:q:118:MET:HE1	1.94	0.50
26:t:207:THR:OG1	26:t:209:TRP:NE1	2.44	0.50
28:v:164:GLU:O	28:v:167:LEU:HG	2.12	0.50
32:w:138:VAL:HG12	32:w:139:GLU:HG2	1.94	0.50
32:w:188:GLU:O	32:w:192:LEU:HD23	2.12	0.50
32:w:231:ILE:O	32:w:235:GLN:HG2	2.11	0.50
1:g:211:LYS:O	1:g:213:SER:N	2.39	0.50
3:i:68:LEU:HD22	3:i:90:LEU:CD2	2.42	0.50
6:m:48:GLY:O	6:m:49:VAL:HG23	2.12	0.50
8:b:154:HIS:CG	8:b:155:LYS:H	2.30	0.50
10:d:323:ARG:HD3	10:d:326:ARG:HH21	1.77	0.50
13:k:231:LYS:C	13:k:233:GLU:N	2.66	0.50
14:f:219:LYS:HD3	14:f:258:LYS:NZ	2.27	0.50
15:a:138:VAL:HG11	15:a:155:PHE:HB2	1.93	0.50
15:a:149:THR:H	15:a:152:HIS:CD2	2.24	0.50
20:n:199:VAL:HG11	26:t:186:ARG:HH22	1.77	0.50
24:r:19:ARG:NH1	24:r:168:ALA:O	2.44	0.50
23:q:16:ALA:HB2	23:q:160:LEU:HD11	1.92	0.50
23:q:143:LEU:O	23:q:147:TYR:CB	2.60	0.50
27:u:347:ASN:HB3	27:u:813:TYR:CD1	2.47	0.50
28:v:362:LEU:HD23	28:v:378:VAL:HG11	1.93	0.50
3:i:38:LEU:HD23	3:i:160:LYS:HD2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:B:227:PRO:HD2	8:B:353:PHE:HD2	1.76	0.49
9:C:215:SER:OG	9:C:218:GLU:OE2	2.27	0.49
9:C:312:ASP:O	9:C:313:ARG:CG	2.59	0.49
11:E:195:PHE:HA	11:E:229:ILE:HG23	1.94	0.49
13:K:24:VAL:HG22	13:K:159:SER:OG	2.12	0.49
14:f:478:ARG:NH1	14:f:507:ASP:OD2	2.44	0.49
16:b:18:ASN:ND2	16:b:25:ARG:HH12	2.09	0.49
17:c:104:ARG:HB2	31:Z:25:ARG:HD2	1.94	0.49
5:l:126:ARG:HH22	13:k:121:LEU:HG	1.76	0.49
3:i:75:SER:OG	3:i:135:LEU:HB3	2.12	0.49
20:n:26:ILE:O	26:T:179:ARG:NH1	2.42	0.49
24:r:1:THR:N	24:r:169:TYR:O	2.45	0.49
23:Q:58:GLU:O	23:Q:62:LYS:HG2	2.12	0.49
27:U:9:ILE:HB	27:U:44:LYS:HE3	1.94	0.49
27:U:46:GLU:OE2	27:U:80:TYR:OH	2.24	0.49
27:U:802:TYR:CD2	27:U:892:LEU:HD11	2.47	0.49
29:X:46:LYS:O	29:X:50:ILE:HG12	2.11	0.49
8:B:247:PHE:HD1	8:B:281:ILE:HD11	1.77	0.49
10:D:87:LEU:HB2	11:E:80:VAL:HB	1.94	0.49
11:E:171:LEU:CD2	11:E:285:LEU:HD22	2.43	0.49
11:E:261:LEU:HD13	11:E:294:ARG:HD3	1.93	0.49
12:F:342:LEU:HB3	12:F:348:LEU:HD12	1.94	0.49
14:f:698:SER:OG	14:f:701:ASN:O	2.30	0.49
15:a:81:LEU:O	15:a:85:ARG:HG2	2.12	0.49
15:a:290:GLN:HG2	15:a:290:GLN:O	2.12	0.49
16:b:146:GLU:HG2	16:b:147:GLU:N	2.27	0.49
18:d:22:GLU:O	18:d:26:LEU:HG	2.12	0.49
2:h:221:LEU:HD22	2:h:225:GLU:HG3	1.93	0.49
4:j:37:GLY:HA2	4:j:181:ILE:HD12	1.94	0.49
24:r:115:ASP:OD1	24:r:119:ASN:N	2.39	0.49
29:X:347:ILE:HG13	29:X:358:LYS:HZ3	1.76	0.49
32:W:227:TYR:HA	32:W:230:MET:HG3	1.94	0.49
2:H:187:ALA:O	2:H:190:THR:OG1	2.30	0.49
2:H:202:GLN:HB2	29:X:202:CYS:HB2	1.94	0.49
5:L:40:SER:HG	5:L:43:HIS:H	1.55	0.49
6:M:110:HIS:CE1	6:M:114:ARG:HG3	2.47	0.49
13:K:84:ASP:HB3	13:K:137:PHE:HD1	1.77	0.49
14:f:83:ARG:HD2	14:f:83:ARG:O	2.11	0.49
14:f:535:THR:HG21	14:f:566:HIS:CE1	2.46	0.49
15:a:77:VAL:HA	15:a:80:ILE:HG12	1.93	0.49
16:b:148:VAL:HG23	16:b:172:THR:HG23	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:e:27:TRP:HB2	28:V:355:ARG:HB3	1.94	0.49
5:l:124:GLY:O	13:k:13:ASN:ND2	2.42	0.49
13:k:212:ALA:HB1	13:k:231:LYS:HD2	1.94	0.49
20:n:14:LEU:HD23	20:n:44:CYS:SG	2.52	0.49
21:o:187:ARG:HB3	21:o:188:PRO:HD3	1.93	0.49
26:t:99:ARG:HG3	26:t:104:ASN:O	2.11	0.49
22:P:149:MET:HE2	22:P:173:ASN:HD22	1.78	0.49
27:U:36:ALA:HB2	28:V:270:LEU:HB2	1.94	0.49
27:U:461:LEU:O	27:U:465:LEU:HD23	2.12	0.49
30:Y:16:ASP:HB3	30:Y:150:PHE:CE1	2.47	0.49
32:W:413:ILE:HD12	32:W:415:PHE:CZ	2.47	0.49
1:G:161:CYS:SG	1:G:162:GLY:N	2.82	0.49
1:G:224:ASN:OD1	1:G:228:ARG:HD2	2.12	0.49
7:A:232:ARG:HH21	7:A:236:CYS:HA	1.76	0.49
8:B:96:ARG:HA	8:B:100:ASP:HB3	1.95	0.49
10:D:60:TYR:CE2	27:U:599:ILE:HG22	2.48	0.49
12:F:91:SER:HA	12:F:124:ILE:HG23	1.93	0.49
13:K:52:LYS:NZ	13:K:61:PRO:O	2.31	0.49
14:f:296:PHE:CE1	14:f:320:ILE:HD12	2.47	0.49
3:i:190:LEU:O	3:i:194:ILE:HG13	2.13	0.49
27:U:700:GLU:HA	27:U:706:VAL:HB	1.93	0.49
27:U:727:LYS:O	27:U:731:ILE:HG13	2.12	0.49
29:X:378:LEU:HD23	30:Y:311:TYR:CE2	2.47	0.49
30:Y:46:ARG:HA	30:Y:46:ARG:CZ	2.43	0.49
30:Y:213:LEU:HD12	30:Y:219:PHE:HD1	1.77	0.49
10:D:120:ASP:N	10:D:122:GLU:OE2	2.43	0.49
11:E:109:ARG:HH22	12:F:135:PRO:HB3	1.78	0.49
12:F:224:LEU:HD11	12:F:332:THR:HG22	1.94	0.49
14:f:127:SER:OG	14:f:143:ARG:NH2	2.46	0.49
1:g:88:ARG:NH1	6:m:113:ASP:OD1	2.46	0.49
6:m:158:TYR:HB2	6:m:160:TYR:HE1	1.77	0.49
20:n:166:ARG:NH1	26:T:37:ARG:HD3	2.27	0.49
22:p:50:TYR:HD2	22:p:190:ILE:HD11	1.77	0.49
23:q:142:ILE:HD11	24:R:137:GLY:C	2.37	0.49
21:O:36:PHE:HA	21:O:42:TYR:CD1	2.48	0.49
22:P:73:LEU:O	22:P:77:LYS:HG2	2.12	0.49
27:U:694:ILE:O	27:U:698:GLN:NE2	2.45	0.49
32:W:52:LYS:HD3	32:W:55:ARG:NH2	2.27	0.49
6:M:48:GLY:O	6:M:49:VAL:CG2	2.60	0.49
9:C:87:VAL:O	9:C:94:LYS:HA	2.11	0.49
9:C:265:GLY:O	9:C:268:GLU:HG3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:F:140:VAL:HG12	12:F:141:ASP:H	1.77	0.49
12:F:203:VAL:O	12:F:207:ASN:ND2	2.45	0.49
17:c:52:GLU:HG2	17:c:116:PRO:HD2	1.94	0.49
4:j:118:TYR:OH	4:j:124:ARG:NH2	2.45	0.49
6:m:180:GLN:O	6:m:184:MET:HG2	2.13	0.49
27:U:720:LYS:HA	27:U:727:LYS:HD2	1.94	0.49
28:V:258:TYR:CD1	28:V:263:LEU:HD23	2.48	0.49
28:V:350:GLN:HG2	28:V:353:LEU:HD23	1.95	0.49
32:W:91:SER:OG	32:W:130:MET:SD	2.71	0.49
1:G:49:VAL:HG11	1:G:195:VAL:HG22	1.94	0.49
1:G:153:LYS:HE2	1:G:166:THR:CG2	2.42	0.49
1:G:189:TRP:HB2	1:G:194:THR:OG1	2.12	0.49
2:H:26:LEU:C	2:H:29:VAL:HG12	2.38	0.49
2:H:49:GLU:OE2	2:H:199:PHE:HB2	2.12	0.49
4:J:198:VAL:O	4:J:199:VAL:CG2	2.61	0.49
5:L:71:GLY:HA3	5:L:221:PHE:CZ	2.47	0.49
9:C:127:LEU:HD11	10:D:96:VAL:HG21	1.94	0.49
9:C:324:ALA:O	9:C:328:ILE:HG12	2.13	0.49
10:D:245:ARG:HA	10:D:248:ARG:HD2	1.95	0.49
11:E:171:LEU:HD21	11:E:285:LEU:HD22	1.94	0.49
12:F:356:MET:N	12:F:356:MET:SD	2.84	0.49
13:K:199:LEU:HD11	13:K:215:ILE:HG21	1.94	0.49
14:f:99:LEU:HD23	14:f:106:LEU:HD11	1.95	0.49
16:b:179:LEU:O	16:b:183:LEU:HG	2.13	0.49
20:n:36:PRO:HB3	20:n:42:PHE:CZ	2.48	0.49
24:r:188:SER:OG	24:r:190:ASP:OD1	2.28	0.49
25:s:99:ARG:HG3	25:s:104:TYR:CZ	2.48	0.49
26:t:1:THR:N	26:t:105:PRO:O	2.30	0.49
26:t:138:ALA:HB3	26:t:147:GLN:HB2	1.95	0.49
20:N:81:SER:HA	20:N:84:LYS:HG2	1.93	0.49
22:P:12:MET:SD	22:P:167:ILE:HG13	2.52	0.49
26:T:92:LEU:O	26:T:96:MET:HG2	2.12	0.49
27:U:440:GLY:HA3	27:U:472:ILE:HG22	1.93	0.49
31:Z:65:ASP:OD2	31:Z:102:HIS:HB2	2.11	0.49
32:W:14:VAL:HG23	32:W:58:SER:HB3	1.93	0.49
3:I:28:ILE:CG2	3:I:133:SER:HB3	2.38	0.49
6:M:35:THR:O	6:M:49:VAL:HG13	2.13	0.49
7:A:190:VAL:HG12	7:A:212:VAL:HG23	1.94	0.49
9:C:164:VAL:HG13	9:C:165:ILE:HG12	1.95	0.49
9:C:312:ASP:C	9:C:313:ARG:HG2	2.38	0.49
9:C:388:ALA:O	9:C:392:GLN:NE2	2.39	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:D:349:THR:O	10:D:349:THR:HG22	2.13	0.49
12:F:286:ASP:OD1	12:F:287:GLU:N	2.45	0.49
14:f:297:MET:HB3	14:f:300:ARG:HH21	1.76	0.49
14:f:827:PRO:HB2	14:f:829:MET:SD	2.52	0.49
14:f:846:VAL:HG21	14:f:872:VAL:HG21	1.94	0.49
24:r:35:ILE:HD11	24:r:45:MET:HE3	1.95	0.49
20:N:59:VAL:HG11	20:N:83:PHE:CE2	2.48	0.49
23:Q:23:SER:O	23:Q:24:ASN:HB2	2.12	0.49
28:V:227:VAL:O	28:V:231:LEU:HG	2.12	0.49
28:V:449:ALA:HA	28:V:458:VAL:HG13	1.94	0.49
29:X:271:VAL:HG11	29:X:288:LYS:HG2	1.94	0.49
32:W:236:HIS:HD1	32:W:237:GLU:CD	2.19	0.49
32:W:375:MET:HG3	32:W:386:VAL:HG22	1.95	0.49
1:G:41:ALA:HA	1:G:50:ILE:HG22	1.94	0.49
2:H:179:ASN:HD22	3:I:55:LEU:HD22	1.76	0.49
3:I:143:TYR:HB2	3:I:146:GLN:NE2	2.28	0.49
4:J:92:GLN:HG3	23:Q:66:LEU:HB2	1.95	0.49
6:M:68:ASN:O	6:M:92:ARG:NH1	2.40	0.49
8:B:205:LEU:O	8:B:208:PRO:HD3	2.13	0.49
9:C:154:LEU:O	9:C:158:ILE:HG23	2.12	0.49
11:E:112:PRO:HG2	12:F:96:LEU:HD11	1.94	0.49
13:K:93:ARG:HD3	24:R:68:LEU:HB3	1.95	0.49
16:b:6:THR:OG1	16:b:49:VAL:HG22	2.13	0.49
16:b:136:VAL:HG12	16:b:138:VAL:HG23	1.94	0.49
18:d:8:GLU:HB3	18:d:18:LYS:NZ	2.28	0.49
19:e:59:GLU:HA	19:e:62:LYS:NZ	2.28	0.49
5:l:125:ARG:HE	5:l:126:ARG:H	1.60	0.49
1:g:18:PRO:HA	2:h:24:TYR:CE1	2.48	0.49
1:g:28:ALA:O	1:g:32:ILE:HG12	2.13	0.49
23:q:2:GLU:OE2	23:q:2:GLU:N	2.41	0.49
25:s:71:ARG:HD2	25:s:95:ILE:HD11	1.94	0.49
24:R:8:PHE:CE2	24:R:10:HIS:HB2	2.47	0.49
24:R:161:TYR:OH	24:R:196:HIS:ND1	2.32	0.49
27:U:620:GLU:HA	27:U:651:GLY:O	2.13	0.49
28:V:111:TYR:CE2	28:V:115:LYS:HE2	2.47	0.49
32:W:141:GLU:OE1	32:W:141:GLU:N	2.46	0.49
1:G:79:VAL:CG1	1:G:139:ILE:HB	2.42	0.49
2:H:47:ALA:HB1	2:H:195:LEU:HD11	1.95	0.49
3:I:37:ILE:HD11	3:I:184:MET:HE1	1.95	0.49
3:I:218:ARG:NH1	3:I:223:THR:OG1	2.45	0.49
4:J:40:ILE:HD12	4:J:184:ASP:OD2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:225:ASP:CA	5:L:229:VAL:HG23	2.42	0.49
7:A:40:THR:HG21	14:f:164:GLY:CA	2.43	0.49
7:A:55:LEU:HB2	8:B:72:LEU:HD23	1.94	0.49
8:B:236:ALA:O	8:B:239:VAL:HG22	2.12	0.49
12:F:120:LYS:CD	12:F:142:ALA:HB3	2.43	0.49
12:F:209:LYS:O	12:F:213:GLU:HG2	2.13	0.49
14:f:560:LEU:HD11	14:f:797:LEU:HG	1.95	0.49
14:f:776:LEU:HA	14:f:827:PRO:HA	1.94	0.49
2:h:21:GLN:HG2	2:h:22:ILE:N	2.27	0.49
3:i:99:LEU:HD12	22:p:69:PHE:HB2	1.94	0.49
3:i:176:LYS:HA	4:j:53:LEU:HD11	1.95	0.49
25:S:166:LEU:HG	25:S:170:ARG:HH11	1.77	0.49
29:X:190:LEU:HD21	29:X:214:SER:HA	1.94	0.49
1:G:100:ASN:HA	20:N:61:TYR:HE1	1.77	0.48
2:H:75:VAL:HG22	2:H:76:TYR:H	1.77	0.48
4:J:173:GLU:HA	13:K:58:LEU:HD21	1.93	0.48
5:L:155:ASP:OD1	5:L:156:CYS:N	2.45	0.48
7:A:176:ASP:H	7:A:227:ARG:HE	1.60	0.48
9:C:273:MET:HE2	9:C:277:LEU:HD12	1.94	0.48
18:d:40:GLY:O	18:d:45:LYS:NZ	2.45	0.48
18:d:147:SER:HB2	18:d:151:VAL:HG23	1.94	0.48
21:O:54:MET:HG2	22:P:96:TYR:CE1	2.48	0.48
23:Q:35:MET:HB3	23:Q:43:LEU:HD11	1.95	0.48
22:P:88:MET:HG3	22:P:122:CYS:SG	2.53	0.48
25:S:7:PHE:HZ	25:S:140:SER:HB2	1.78	0.48
29:X:240:ASP:OD1	29:X:240:ASP:N	2.46	0.48
31:Z:58:PHE:CE1	31:Z:68:TRP:HB2	2.47	0.48
4:J:7:ILE:HG22	4:J:8:THR:H	1.78	0.48
4:J:99:GLU:OE2	24:R:120:ARG:NH1	2.46	0.48
8:B:80:ARG:O	8:B:83:GLU:HG2	2.13	0.48
9:C:113:ARG:HG2	9:C:130:LYS:HB2	1.95	0.48
10:D:211:GLY:C	10:D:213:THR:H	2.20	0.48
15:a:278:MET:HE3	15:a:339:ARG:HD3	1.95	0.48
17:c:287:HIS:O	17:c:291:LEU:HG	2.12	0.48
18:d:107:LEU:HD21	18:d:115:PHE:HB2	1.93	0.48
18:d:149:ASN:HA	18:d:152:PHE:CD2	2.47	0.48
1:g:37:LEU:HG	1:g:53:GLN:NE2	2.27	0.48
2:h:177:ARG:O	2:h:177:ARG:CG	2.62	0.48
13:k:206:MET:HG3	13:k:210:LEU:HB3	1.95	0.48
6:m:51:LYS:NZ	6:m:61:GLY:H	2.11	0.48
6:m:71:ARG:HH11	6:m:105:ASN:HB3	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:n:16:ALA:HB1	20:n:33:LYS:HB2	1.95	0.48
24:r:113:TYR:O	24:r:120:ARG:HA	2.13	0.48
26:t:46:ASN:OD1	26:t:49:THR:N	2.44	0.48
22:P:138:VAL:HG22	22:P:147:TYR:CE1	2.48	0.48
27:U:750:SER:OG	27:U:751:ARG:N	2.46	0.48
8:B:133:VAL:HG11	8:B:158:ALA:HB2	1.89	0.48
8:B:287:ILE:HD12	8:B:291:GLY:N	2.28	0.48
11:E:172:LEU:HD13	11:E:276:ILE:CG2	2.43	0.48
14:f:180:GLN:C	14:f:183:PRO:HD2	2.38	0.48
14:f:691:PRO:HA	14:f:694:LEU:HD12	1.94	0.48
14:f:806:VAL:O	14:f:810:ILE:HG22	2.13	0.48
17:c:255:TYR:CD1	17:c:280:PRO:HG3	2.43	0.48
2:h:182:LEU:HB2	2:h:186:ASP:HB3	1.95	0.48
13:k:202:LEU:O	13:k:206:MET:HG2	2.14	0.48
22:P:78:GLU:OE2	22:P:80:ARG:HB2	2.14	0.48
27:U:30:VAL:HG12	27:U:34:PHE:HB2	1.95	0.48
27:U:92:ASP:OD2	27:U:140:ARG:NH2	2.46	0.48
27:U:368:ALA:HB2	27:U:728:PHE:CD1	2.48	0.48
32:W:159:VAL:HG12	32:W:196:VAL:HG22	1.96	0.48
32:W:220:GLU:HG2	32:W:221:LYS:H	1.78	0.48
32:W:359:VAL:HG13	32:W:382:LEU:HD22	1.94	0.48
6:M:77:VAL:HG21	6:M:84:ALA:HB1	1.94	0.48
7:A:102:ILE:HB	7:A:113:ILE:HG12	1.94	0.48
11:E:312:ILE:HA	11:E:315:ILE:HG12	1.94	0.48
13:K:217:LEU:HD23	13:K:229:PHE:CG	2.48	0.48
14:f:173:LEU:O	14:f:181:ARG:NH2	2.46	0.48
14:f:551:LYS:HD2	14:f:586:PRO:HB2	1.95	0.48
16:b:3:LEU:HD11	16:b:44:ASN:ND2	2.22	0.48
18:d:105:PHE:O	18:d:108:SER:OG	2.21	0.48
25:s:148:LEU:HD23	25:s:178:VAL:HG12	1.95	0.48
26:t:1:THR:OG1	26:t:59:ASP:OD2	2.30	0.48
26:t:30:TYR:N	26:t:33:LEU:O	2.43	0.48
27:U:682:TYR:O	27:U:685:GLN:HG3	2.14	0.48
28:V:182:LYS:O	28:V:185:GLN:HG2	2.13	0.48
28:V:254:LEU:HD21	28:V:270:LEU:HD13	1.95	0.48
29:X:347:ILE:HG13	29:X:358:LYS:NZ	2.27	0.48
32:W:151:THR:O	32:W:155:GLN:HG3	2.13	0.48
1:G:119:ALA:HB2	1:G:160:TYR:HB3	1.95	0.48
2:H:180:GLU:CD	2:H:182:LEU:H	2.21	0.48
7:A:121:PHE:CE1	7:A:123:VAL:HB	2.49	0.48
7:A:224:LEU:H	7:A:224:LEU:HD22	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:B:209:GLU:HA	8:B:212:GLU:HB3	1.95	0.48
8:B:218:PRO:HB2	8:B:220:LYS:HG2	1.95	0.48
10:D:247:VAL:HG12	10:D:295:GLN:HG3	1.96	0.48
14:f:266:LEU:HD22	14:f:294:MET:SD	2.53	0.48
14:f:287:ASP:O	14:f:291:GLN:HG2	2.13	0.48
18:d:182:ILE:HG22	18:d:186:TYR:HE2	1.79	0.48
3:i:148:TYR:CE1	4:j:58:THR:HG21	2.48	0.48
13:k:73:HIS:CD2	13:k:74:ILE:HG13	2.49	0.48
21:o:75:ARG:O	21:o:78:THR:HG22	2.13	0.48
23:q:19:ARG:O	23:q:32:HIS:N	2.44	0.48
26:t:43:MET:HG3	26:t:64:LYS:HG3	1.95	0.48
26:t:79:ASP:OD2	26:t:81:HIS:ND1	2.46	0.48
21:O:76:VAL:N	21:O:104:ASP:OD2	2.38	0.48
23:Q:52:ASP:OD2	23:Q:99:HIS:N	2.47	0.48
22:P:138:VAL:HG11	22:P:146:MET:CB	2.43	0.48
25:S:28:ARG:NH2	25:S:213:ASP:O	2.46	0.48
27:U:560:MET:HA	27:U:590:TYR:CE2	2.48	0.48
28:V:306:ARG:HA	28:V:309:MET:HG2	1.95	0.48
29:X:200:ILE:HB	29:X:203:PRO:HG3	1.95	0.48
32:W:74:CYS:CB	32:W:83:LEU:HD13	2.43	0.48
1:G:53:GLN:OE1	1:G:206:LEU:HD12	2.13	0.48
2:H:78:GLY:HA2	10:D:417:TYR:CE1	2.49	0.48
4:J:16:LEU:O	4:J:20:GLU:HG2	2.13	0.48
5:L:225:ASP:O	5:L:228:ASP:N	2.47	0.48
5:L:238:GLU:HG2	5:L:240:PRO:HD3	1.95	0.48
11:E:215:ILE:HD13	11:E:259:GLU:HB3	1.94	0.48
14:f:607:LEU:O	14:f:610:GLN:HG3	2.13	0.48
5:l:130:VAL:C	5:l:149:PRO:HG3	2.39	0.48
3:i:18:LEU:HD12	3:i:20:GLN:NE2	2.24	0.48
3:i:179:TYR:CD2	4:j:53:LEU:HD22	2.49	0.48
13:k:66:LYS:HA	13:k:78:MET:HE2	1.95	0.48
23:q:86:ARG:NH1	23:q:90:ASP:HB3	2.29	0.48
23:q:103:LEU:HG	23:q:132:HIS:CD2	2.49	0.48
23:q:160:LEU:HA	23:q:163:CYS:SG	2.54	0.48
25:S:28:ARG:NE	25:S:191:ASP:OD2	2.46	0.48
26:T:124:TYR:HE1	26:T:139:THR:HG22	1.79	0.48
27:U:437:TYR:HA	27:U:472:ILE:HG21	1.95	0.48
28:V:117:VAL:HG13	28:V:121:PHE:CE2	2.48	0.48
28:V:134:PHE:HD2	28:V:187:ILE:HD11	1.78	0.48
28:V:168:GLN:HB3	28:V:191:LEU:HB2	1.95	0.48
29:X:185:LYS:NZ	30:Y:244:ALA:HB3	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:X:285:GLU:HA	29:X:288:LYS:HD2	1.96	0.48
30:Y:384:SER:HA	30:Y:387:ILE:HG22	1.94	0.48
2:H:101:TYR:HE2	22:P:90:MET:HE2	1.79	0.48
4:J:48:LYS:O	4:J:49:SER:HB2	2.13	0.48
8:B:170:LEU:HD23	8:B:173:VAL:HG21	1.95	0.48
9:C:50:ASN:ND2	27:U:643:SER:HA	2.29	0.48
9:C:189:TYR:CZ	9:C:316:GLU:HB3	2.49	0.48
11:E:99:ALA:N	11:E:109:ARG:O	2.42	0.48
12:F:123:VAL:HG22	12:F:133:PHE:HD1	1.79	0.48
13:K:230:THR:HG22	13:K:233:GLU:HB2	1.94	0.48
5:l:47:VAL:HG13	5:l:212:ILE:HG22	1.96	0.48
3:i:119:GLN:HB2	4:j:78:ALA:HB1	1.95	0.48
4:j:36:ARG:HB2	4:j:144:LEU:HB2	1.95	0.48
20:n:30:VAL:HG22	20:n:175:ARG:NH2	2.29	0.48
23:q:106:GLY:O	23:q:114:ALA:N	2.40	0.48
20:N:107:GLU:HB2	20:N:110:GLN:NE2	2.29	0.48
23:Q:157:VAL:HG12	23:Q:161:ARG:HH12	1.79	0.48
27:U:206:MET:SD	27:U:220:LEU:HD21	2.54	0.48
27:U:457:ILE:HA	27:U:460:TYR:HE1	1.76	0.48
27:U:685:GLN:HB3	27:U:726:ALA:HA	1.96	0.48
27:U:751:ARG:H	27:U:751:ARG:HD2	1.79	0.48
32:W:145:LEU:HD21	32:W:172:GLU:CD	2.38	0.48
32:W:345:GLU:O	32:W:348:GLU:HG2	2.14	0.48
1:G:100:ASN:HA	20:N:61:TYR:CE1	2.49	0.48
1:G:175:SER:HB3	1:G:205:VAL:HG21	1.96	0.48
3:I:14:PRO:HA	4:J:21:TYR:CE1	2.48	0.48
3:I:37:ILE:HG23	3:I:44:LEU:HG	1.95	0.48
7:A:64:GLY:N	14:f:680:ARG:HE	2.11	0.48
7:A:229:VAL:HG21	7:A:237:PHE:CG	2.49	0.48
8:B:153:ASN:HB3	8:B:160:ILE:HD12	1.95	0.48
8:B:265:LYS:O	8:B:269:GLU:HG3	2.14	0.48
10:D:66:LYS:HE2	10:D:69:LYS:CE	2.44	0.48
15:a:326:GLU:CD	32:W:373:ILE:HG13	2.38	0.48
16:b:51:LEU:HD11	16:b:71:ILE:HG23	1.95	0.48
1:g:43:ARG:HG2	1:g:164:LYS:O	2.14	0.48
3:i:194:ILE:HG12	3:i:236:LEU:HD23	1.95	0.48
20:n:40:ARG:HG2	20:n:103:TRP:CE3	2.47	0.48
21:O:161:ALA:O	21:O:165:ASN:ND2	2.47	0.48
22:P:178:ASP:OD2	22:P:181:SER:HB2	2.14	0.48
28:V:228:ARG:O	28:V:232:HIS:ND1	2.33	0.48
31:Z:204:LYS:O	31:Z:208:ILE:HG13	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:W:148:THR:O	32:W:152:ILE:HG12	2.13	0.48
2:H:45:VAL:HG22	2:H:212:ILE:HG22	1.95	0.48
8:B:122:ILE:HD13	8:B:132:TYR:CA	2.43	0.48
8:B:184:TYR:CE2	8:B:240:ALA:HB1	2.49	0.48
8:B:232:LYS:N	35:B:501:ADP:O2B	2.39	0.48
8:B:373:THR:O	8:B:414:VAL:HG12	2.13	0.48
11:E:54:GLY:HA2	12:F:135:PRO:HD3	1.96	0.48
12:F:202:ILE:C	12:F:205:PRO:HD2	2.39	0.48
15:a:350:LYS:HE2	31:Z:213:GLU:HA	1.96	0.48
16:b:68:THR:HG22	16:b:72:LEU:HD13	1.96	0.48
2:h:52:GLN:HB3	2:h:57:TYR:HD2	1.77	0.48
2:h:71:HIS:NE2	2:h:105:ILE:O	2.37	0.48
4:j:210:VAL:HG13	4:j:212:ARG:HH11	1.78	0.48
23:q:102:LEU:HB2	23:q:118:MET:HB3	1.96	0.48
25:S:71:ARG:NH1	25:S:95:ILE:HD11	2.28	0.48
27:U:243:LEU:HA	27:U:913:ILE:HG21	1.95	0.48
27:U:436:ALA:HB1	27:U:472:ILE:HD13	1.96	0.48
27:U:813:TYR:CE2	27:U:815:ALA:HB2	2.49	0.48
28:V:170:LEU:HA	28:V:173:ILE:HG12	1.96	0.48
29:X:74:ARG:HA	29:X:77:LEU:HD12	1.95	0.48
32:W:127:THR:HG21	32:W:147:LYS:NZ	2.29	0.48
32:W:294:LYS:HD3	32:W:294:LYS:N	2.28	0.48
32:W:336:PRO:O	32:W:340:VAL:HG23	2.14	0.48
4:J:20:GLU:O	4:J:24:GLU:HG2	2.14	0.48
5:L:11:THR:HG23	6:M:129:ARG:HB3	1.94	0.48
6:M:190:VAL:CG2	6:M:215:TRP:NE1	2.72	0.48
7:A:211:GLY:HA3	7:A:337:LEU:HD22	1.95	0.48
7:A:403:ILE:HG22	7:A:407:LYS:HG2	1.96	0.48
8:B:199:GLU:O	8:B:203:LEU:HG	2.14	0.48
8:B:339:PRO:HA	8:B:342:ILE:HD12	1.95	0.48
9:C:25:LEU:HD12	10:D:48:GLN:HA	1.95	0.48
11:E:157:GLU:H	11:E:157:GLU:CD	2.22	0.48
13:K:73:HIS:NE2	13:K:106:THR:HB	2.29	0.48
13:K:231:LYS:O	13:K:233:GLU:N	2.47	0.48
14:f:809:ILE:HG12	14:f:814:SER:CB	2.44	0.48
15:a:211:PHE:O	15:a:339:ARG:NH1	2.47	0.48
17:c:145:VAL:HA	17:c:156:VAL:O	2.14	0.48
18:d:41:THR:HG22	18:d:44:THR:N	2.18	0.48
18:d:158:ILE:HD12	18:d:164:THR:HA	1.96	0.48
5:l:72:ILE:HD12	5:l:132:LEU:HD22	1.96	0.48
4:j:87:ALA:O	4:j:90:GLU:HG2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:n:101:ALA:HB2	20:n:111:VAL:HG13	1.95	0.48
25:S:133:ASP:OD1	25:S:134:SER:N	2.46	0.48
28:V:125:ASN:HD22	28:V:159:LEU:HG	1.79	0.48
7:A:66:LYS:HG2	7:A:66:LYS:O	2.14	0.47
7:A:96:ALA:CB	8:B:133:VAL:HG23	2.43	0.47
7:A:312:ARG:HG2	7:A:314:ASN:HB2	1.95	0.47
8:B:116:ILE:CG2	8:B:120:HIS:O	2.62	0.47
9:C:56:VAL:HG21	10:D:79:VAL:HG21	1.95	0.47
9:C:80:MET:HE2	9:C:80:MET:HA	1.96	0.47
13:K:200:ILE:HG22	13:K:241:ILE:HG23	1.96	0.47
14:f:137:ARG:HH22	14:f:172:GLU:HG3	1.78	0.47
14:f:511:SER:HB3	14:f:514:VAL:HG23	1.96	0.47
16:b:91:ARG:HA	16:b:91:ARG:HD2	1.71	0.47
17:c:65:TYR:OH	27:U:543:LYS:HD3	2.13	0.47
18:d:105:PHE:HE1	18:d:169:ILE:HG12	1.79	0.47
6:m:90:ILE:HG21	6:m:118:TYR:CE2	2.49	0.47
6:m:239:ALA:O	6:m:243:LEU:HG	2.14	0.47
25:s:10:GLY:HA3	25:s:42:LYS:HE2	1.95	0.47
26:t:49:THR:HG21	26:t:88:ILE:HG13	1.96	0.47
21:O:109:HIS:HB3	21:O:111:TYR:HE1	1.79	0.47
27:U:179:TYR:CZ	27:U:183:LEU:HD11	2.49	0.47
27:U:202:VAL:HG11	27:U:223:LEU:HB2	1.96	0.47
27:U:404:ALA:O	27:U:407:SER:OG	2.23	0.47
29:X:342:PHE:HB3	29:X:345:VAL:HB	1.96	0.47
29:X:399:ALA:O	29:X:403:THR:HG23	2.14	0.47
32:W:143:ALA:O	32:W:147:LYS:HG2	2.14	0.47
1:G:106:GLY:HA3	21:O:77:VAL:CG1	2.43	0.47
3:I:91:ARG:HD3	22:P:76:LEU:HB3	1.96	0.47
7:A:115:VAL:O	7:A:118:PHE:N	2.45	0.47
7:A:229:VAL:HG22	7:A:232:ARG:CZ	2.43	0.47
8:B:84:GLN:OE1	27:U:828:VAL:HG11	2.13	0.47
9:C:250:GLU:HG2	9:C:296:ASN:HB2	1.96	0.47
11:E:66:GLU:HG2	11:E:89:LYS:HZ3	1.79	0.47
14:f:257:ARG:HH21	14:f:281:ILE:HA	1.79	0.47
15:a:64:ILE:HG22	15:a:68:GLU:OE2	2.14	0.47
5:l:67:ASP:OD1	5:l:68:ASN:N	2.47	0.47
4:j:79:ASP:HA	4:j:82:ILE:HG12	1.96	0.47
21:o:40:ASN:ND2	21:o:103:VAL:O	2.37	0.47
22:p:72:ASN:HA	22:p:75:GLU:HG2	1.96	0.47
23:q:116:TYR:HB3	23:q:124:LEU:HD11	1.96	0.47
32:W:98:LYS:HB3	32:W:139:GLU:HG3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:W:359:VAL:HG11	32:W:392:PHE:HD2	1.79	0.47
2:H:188:ILE:HD11	2:H:210:VAL:HG21	1.97	0.47
3:I:114:LEU:O	3:I:117:ILE:HG22	2.14	0.47
4:J:198:VAL:O	4:J:201:SER:OG	2.32	0.47
7:A:277:ILE:HG23	7:A:280:ILE:HG23	1.95	0.47
10:D:200:ARG:HH22	10:D:326:ARG:HA	1.79	0.47
11:E:223:ARG:HA	11:E:226:GLN:NE2	2.29	0.47
13:K:15:PHE:CD1	13:K:21:LEU:HB3	2.49	0.47
14:f:233:LEU:O	14:f:237:VAL:HG23	2.14	0.47
14:f:256:PHE:HB3	14:f:265:ALA:HB2	1.96	0.47
14:f:344:VAL:O	14:f:348:ILE:HG12	2.13	0.47
5:l:133:LEU:HD21	5:l:159:MET:HB3	1.96	0.47
1:g:51:VAL:HG23	1:g:217:VAL:HG22	1.95	0.47
1:g:112:ASP:OD1	1:g:113:MET:N	2.47	0.47
2:h:17:GLY:HA3	3:i:27:ALA:HB2	1.96	0.47
26:t:38:ASN:ND2	20:N:201:THR:OG1	2.46	0.47
26:t:136:SER:HB3	26:t:154:LEU:HD12	1.94	0.47
20:N:66:HIS:CE1	20:N:70:LEU:HD11	2.49	0.47
27:U:422:LEU:O	27:U:425:THR:OG1	2.32	0.47
27:U:444:TYR:HE1	27:U:479:LEU:HD13	1.79	0.47
28:V:394:LEU:HG	28:V:397:ARG:NH2	2.29	0.47
28:V:481:SER:O	28:V:484:LEU:HG	2.14	0.47
29:X:86:ALA:HB1	29:X:125:LEU:HD13	1.96	0.47
29:X:405:GLN:HE22	29:X:409:LYS:HE3	1.78	0.47
30:Y:19:ILE:O	30:Y:23:ARG:HG3	2.15	0.47
32:W:136:ILE:O	32:W:141:GLU:HB3	2.14	0.47
1:G:158:GLY:O	2:H:84:ARG:NH2	2.46	0.47
3:I:45:LEU:HD13	3:I:75:SER:OG	2.14	0.47
3:I:174:MET:SD	3:I:195:LYS:NZ	2.87	0.47
7:A:232:ARG:NH2	7:A:271:LEU:HB3	2.29	0.47
9:C:73:VAL:HG23	10:D:112:TYR:N	2.29	0.47
9:C:113:ARG:O	9:C:127:LEU:N	2.47	0.47
9:C:162:LYS:O	9:C:166:GLU:HB3	2.14	0.47
10:D:401:LYS:O	10:D:405:THR:HG22	2.14	0.47
12:F:198:LEU:HD21	12:F:236:LEU:HD21	1.96	0.47
13:K:199:LEU:HD12	13:K:210:LEU:HD22	1.97	0.47
14:f:143:ARG:O	14:f:148:GLN:NE2	2.46	0.47
14:f:251:CYS:O	14:f:255:VAL:HG23	2.14	0.47
14:f:806:VAL:HB	14:f:810:ILE:CG2	2.44	0.47
17:c:223:LYS:HZ3	17:c:225:TRP:HE1	1.63	0.47
17:c:225:TRP:HA	31:Z:196:HIS:HD2	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:o:34:ILE:HG22	21:o:42:TYR:HD2	1.78	0.47
24:R:158:ARG:O	24:R:162:GLN:HG2	2.14	0.47
27:U:465:LEU:HD21	27:U:477:GLY:HA3	1.96	0.47
27:U:517:GLY:HA3	27:U:551:GLY:HA2	1.95	0.47
27:U:904:LYS:HD3	27:U:912:ILE:HG13	1.95	0.47
4:J:95:ARG:CG	23:Q:62:LYS:NZ	2.73	0.47
8:B:232:LYS:N	35:B:501:ADP:O1A	2.47	0.47
10:D:201:GLY:HA3	10:D:327:LEU:HA	1.96	0.47
14:f:208:LEU:HA	14:f:211:ILE:HG12	1.97	0.47
17:c:152:LYS:C	31:Z:170:VAL:HG22	2.39	0.47
3:i:111:VAL:HG21	3:i:148:TYR:HD2	1.78	0.47
13:k:97:GLN:HB3	24:r:61:ARG:HG2	1.96	0.47
20:n:112:TYR:CE2	20:n:122:ARG:HB2	2.49	0.47
23:Q:81:ALA:HA	23:Q:104:LEU:HD13	1.97	0.47
23:Q:85:ARG:O	23:Q:88:LEU:N	2.47	0.47
27:U:365:CYS:O	27:U:369:THR:HG23	2.15	0.47
28:V:357:LEU:O	28:V:361:PHE:N	2.39	0.47
1:G:208:ILE:HG23	1:G:210:PHE:H	1.80	0.47
2:H:29:VAL:HG22	2:H:29:VAL:O	2.13	0.47
2:H:42:ASN:HB2	2:H:185:GLU:HB2	1.95	0.47
2:H:65:VAL:N	2:H:209:GLU:OE2	2.32	0.47
4:J:66:ASP:C	4:J:68:ASN:H	2.23	0.47
10:D:105:SER:OG	10:D:108:GLY:O	2.28	0.47
18:d:99:LEU:HD23	18:d:122:LEU:HD11	1.97	0.47
18:d:141:GLN:HE22	18:d:145:GLU:HB2	1.79	0.47
1:g:27:TYR:CZ	6:m:16:PRO:HA	2.49	0.47
3:i:14:PRO:HA	4:j:21:TYR:CE1	2.49	0.47
20:N:133:SER:HA	20:N:136:TYR:CZ	2.49	0.47
27:U:117:ASP:OD1	27:U:192:GLN:HG3	2.15	0.47
27:U:200:VAL:O	27:U:204:ILE:HG22	2.15	0.47
31:Z:44:GLN:HG2	31:Z:45:LYS:N	2.29	0.47
32:W:117:ASP:CG	32:W:119:PRO:HD2	2.38	0.47
32:W:247:TYR:O	32:W:250:ILE:HG12	2.14	0.47
32:W:308:LEU:HD22	32:W:315:MET:HE3	1.97	0.47
2:H:91:ARG:HH12	21:O:69:SER:HA	1.79	0.47
4:J:80:ALA:CB	4:J:129:ILE:HG12	2.45	0.47
4:J:96:LEU:HD13	23:Q:62:LYS:HG3	1.97	0.47
4:J:159:ASN:OD1	4:J:159:ASN:N	2.31	0.47
4:J:189:LYS:HG3	4:J:232:ILE:HG12	1.97	0.47
6:M:34:SER:OG	6:M:65:ARG:NH1	2.47	0.47
7:A:99:THR:HA	7:A:141:GLY:HA2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A:179:GLY:H	7:A:353:HIS:CE1	2.33	0.47
7:A:214:LEU:HB3	7:A:318:LEU:HD21	1.95	0.47
7:A:239:ARG:HA	7:A:273:PHE:HD2	1.80	0.47
8:B:87:PRO:HA	14:f:619:HIS:CB	2.45	0.47
8:B:431:GLN:C	8:B:432:GLU:HG3	2.39	0.47
9:C:198:LEU:H	35:C:501:ADP:PB	2.36	0.47
11:E:112:PRO:HD2	12:F:96:LEU:HD21	1.97	0.47
11:E:153:LEU:HB2	11:E:274:LYS:HZ2	1.79	0.47
11:E:302:ASP:N	11:E:302:ASP:OD1	2.47	0.47
12:F:84:LYS:O	12:F:87:PRO:HD3	2.15	0.47
12:F:281:SER:H	12:F:326:VAL:HG22	1.78	0.47
14:f:53:GLN:HB2	14:f:98:PHE:CE1	2.49	0.47
14:f:607:LEU:H	14:f:607:LEU:HD12	1.80	0.47
15:a:34:TRP:CZ3	15:a:68:GLU:HB2	2.50	0.47
16:b:124:LEU:HD21	16:b:156:PHE:HB2	1.96	0.47
17:c:57:MET:HG2	17:c:69:VAL:HG11	1.96	0.47
18:d:62:SER:HB3	18:d:71:PHE:HB2	1.96	0.47
18:d:76:ALA:HB3	27:U:10:SER:HB2	1.96	0.47
19:e:27:TRP:HA	28:V:355:ARG:NE	2.25	0.47
5:l:168:ALA:HB2	5:l:198:THR:OG1	2.15	0.47
3:i:3:ARG:HA	4:j:5:ARG:HH22	1.80	0.47
13:k:12:VAL:HG21	13:k:124:GLY:HA2	1.97	0.47
6:m:140:TYR:CZ	6:m:218:GLU:HB3	2.50	0.47
21:o:17:ASP:OD2	21:o:33:LYS:NZ	2.48	0.47
24:r:8:PHE:CE1	24:r:13:ILE:HG12	2.40	0.47
24:r:127:SER:HB2	24:r:139:MET:HE1	1.96	0.47
21:O:38:SER:HB3	21:O:41:ILE:HG12	1.96	0.47
24:R:45:MET:HE2	24:R:53:SER:HB2	1.96	0.47
26:T:107:TRP:O	26:T:108:ASN:ND2	2.48	0.47
27:U:684:ARG:HH11	27:U:726:ALA:HB1	1.79	0.47
28:V:391:THR:O	28:V:395:ILE:N	2.45	0.47
30:Y:228:MET:SD	30:Y:263:LEU:HD13	2.54	0.47
30:Y:268:TYR:OH	30:Y:303:ALA:O	2.32	0.47
31:Z:54:PHE:CB	31:Z:78:MET:HE2	2.44	0.47
1:G:74:GLU:O	1:G:226:LYS:HA	2.13	0.47
2:H:148:GLN:OE1	2:H:156:PHE:CD2	2.58	0.47
6:M:5:THR:OG1	6:M:6:GLY:N	2.48	0.47
7:A:383:ALA:CB	8:B:346:ARG:HH21	2.27	0.47
8:B:71:TYR:CZ	14:f:667:GLY:HA2	2.50	0.47
10:D:93:LEU:CD2	10:D:102:ILE:CD1	2.89	0.47
10:D:278:GLN:H	10:D:278:GLN:CD	2.22	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:F:285:ILE:O	12:F:330:ALA:HA	2.15	0.47
14:f:128:VAL:HG11	14:f:154:TRP:CD1	2.49	0.47
14:f:178:LYS:HA	14:f:181:ARG:HG3	1.97	0.47
14:f:263:PRO:HB2	14:f:891:THR:HB	1.97	0.47
14:f:267:ARG:HG3	14:f:787:LEU:HD11	1.97	0.47
14:f:679:LEU:HD13	14:f:713:PHE:CD2	2.50	0.47
14:f:845:ARG:N	14:f:881:GLU:O	2.43	0.47
1:g:47:CYS:SG	1:g:221:THR:HG22	2.55	0.47
6:m:195:LYS:O	6:m:199:ILE:HD12	2.14	0.47
20:n:187:GLN:OE1	20:n:187:GLN:N	2.48	0.47
21:o:11:GLY:HA2	21:o:108:PRO:HB3	1.97	0.47
24:r:8:PHE:HE2	24:r:10:HIS:HB2	1.78	0.47
28:V:171:VAL:HB	28:V:187:ILE:HG21	1.95	0.47
28:V:216:ARG:NH1	28:V:253:LEU:HD23	2.30	0.47
29:X:90:ARG:HE	29:X:128:ALA:HB1	1.80	0.47
29:X:182:ASN:ND2	30:Y:244:ALA:O	2.48	0.47
33:x:77:PHE:HE1	33:x:98:CYS:HB3	1.80	0.47
1:G:41:ALA:HB1	1:G:50:ILE:HG22	1.93	0.47
1:G:101:TRP:CG	1:G:109:ILE:HB	2.50	0.47
2:H:15:PRO:HG3	2:H:20:VAL:HG23	1.97	0.47
3:I:61:PHE:HZ	3:I:227:VAL:CG2	2.25	0.47
3:I:68:LEU:HD23	3:I:74:CYS:SG	2.55	0.47
7:A:143:ASP:OD1	7:A:148:GLN:N	2.48	0.47
7:A:190:VAL:CG1	7:A:212:VAL:HG21	2.41	0.47
7:A:195:LEU:HD13	7:A:232:ARG:HD2	1.96	0.47
7:A:239:ARG:NH1	7:A:275:ASP:OD2	2.48	0.47
12:F:170:SER:OG	12:F:171:ARG:N	2.47	0.47
12:F:317:LEU:HB2	12:F:347:ARG:HH11	1.80	0.47
13:K:217:LEU:HD23	13:K:229:PHE:CD2	2.50	0.47
14:f:76:GLU:CD	14:f:79:ARG:HH22	2.22	0.47
14:f:124:ASP:O	14:f:127:SER:OG	2.33	0.47
14:f:834:ASP:OD1	14:f:838:ARG:N	2.39	0.47
15:a:149:THR:HG23	15:a:182:CYS:HB2	1.96	0.47
16:b:121:GLU:CD	16:b:152:LYS:HG3	2.40	0.47
5:l:36:VAL:HG13	5:l:172:LEU:HD11	1.97	0.47
26:t:209:TRP:CZ3	20:N:29:ARG:HD2	2.50	0.47
20:N:38:HIS:CG	20:N:39:ASP:H	2.33	0.47
23:Q:29:LYS:HE3	23:Q:32:HIS:HA	1.95	0.47
22:P:26:ARG:HG2	22:P:184:GLY:O	2.15	0.47
22:P:56:LEU:O	22:P:60:VAL:HG23	2.15	0.47
24:R:115:ASP:OD1	24:R:117:GLU:N	2.41	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:U:696:ILE:HG22	27:U:737:LEU:HA	1.97	0.47
27:U:889:LEU:HD23	27:U:892:LEU:HD13	1.96	0.47
30:Y:138:LEU:HD23	30:Y:168:ILE:HG22	1.97	0.47
31:Z:136:GLU:HB3	32:W:448:LYS:HZ3	1.80	0.47
33:x:70:GLN:HA	33:x:73:GLN:HG2	1.97	0.47
1:G:86:ASP:OD1	1:G:86:ASP:N	2.47	0.47
2:H:58:ASP:OD2	2:H:60:ARG:HG2	2.15	0.47
4:J:188:ILE:O	4:J:192:ILE:HG13	2.15	0.47
5:L:29:VAL:HG11	5:L:149:PRO:HD3	1.97	0.47
5:L:40:SER:HB3	5:L:187:LEU:HD22	1.97	0.47
5:L:225:ASP:HA	5:L:229:VAL:HG23	1.96	0.47
11:E:179:GLY:HA2	35:E:501:ADP:PA	2.55	0.47
12:F:227:GLY:O	12:F:333:ASN:HA	2.15	0.47
14:f:290:VAL:O	14:f:294:MET:HG2	2.15	0.47
14:f:849:ALA:HA	14:f:862:ILE:HA	1.96	0.47
17:c:172:HIS:CG	17:c:173:GLU:N	2.80	0.47
5:l:23:GLU:O	5:l:26:MET:HG2	2.15	0.47
5:l:132:LEU:HB2	5:l:147:THR:OG1	2.15	0.47
13:k:215:ILE:HD11	13:k:234:LEU:HD21	1.97	0.47
20:n:40:ARG:NH1	20:n:183:GLY:HA2	2.30	0.47
25:s:145:LEU:HD21	25:s:182:ALA:HB2	1.96	0.47
25:s:157:ASN:HD21	22:P:172:LEU:HD13	1.80	0.47
25:S:14:ALA:HA	25:S:22:ILE:O	2.15	0.47
27:U:691:SER:O	27:U:694:ILE:HG22	2.15	0.47
27:U:880:ASN:OD1	27:U:880:ASN:N	2.48	0.47
29:X:417:LYS:HD3	29:X:417:LYS:HA	1.75	0.47
30:Y:316:LEU:HA	30:Y:319:MET:HG2	1.96	0.47
32:W:356:ASN:O	32:W:359:VAL:N	2.48	0.47
2:H:66:GLU:OE1	2:H:91:ARG:NH2	2.47	0.46
2:H:148:GLN:CD	2:H:156:PHE:CD2	2.93	0.46
4:J:204:LYS:HD2	4:J:222:PRO:HB3	1.96	0.46
7:A:308:GLY:HA3	7:A:336:ARG:HH12	1.80	0.46
9:C:81:ASP:O	9:C:105:ILE:HD13	2.15	0.46
12:F:339:ASP:OD1	12:F:339:ASP:N	2.48	0.46
15:a:351:ASP:O	15:a:354:GLU:HG2	2.15	0.46
17:c:166:ASN:HA	17:c:169:VAL:HG22	1.96	0.46
17:c:268:GLU:O	17:c:272:ILE:HG12	2.14	0.46
5:l:89:ARG:NH1	25:s:77:HIS:HB3	2.31	0.46
5:l:150:SER:O	5:l:152:ASN:ND2	2.48	0.46
4:j:35:VAL:HG12	4:j:42:VAL:HB	1.96	0.46
6:m:119:VAL:O	6:m:123:THR:HG23	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:o:28:ASP:OD1	21:o:29:LYS:N	2.48	0.46
21:O:173:ILE:HD12	21:O:190:THR:HB	1.98	0.46
28:V:131:LEU:HD11	28:V:171:VAL:HG21	1.95	0.46
28:V:264:TYR:HD2	28:V:295:ILE:HG13	1.80	0.46
28:V:442:ILE:HD12	28:V:450:SER:HA	1.98	0.46
5:L:104:PRO:HG2	5:L:107:ARG:HD2	1.97	0.46
5:L:126:ARG:HD2	13:K:15:PHE:HE1	1.80	0.46
6:M:120:HIS:HA	6:M:123:THR:HG22	1.97	0.46
8:B:303:ARG:O	8:B:306:GLN:N	2.49	0.46
12:F:120:LYS:HD3	12:F:142:ALA:CB	2.45	0.46
13:K:97:GLN:HG3	24:R:65:ILE:HG13	1.97	0.46
14:f:123:ALA:HB1	14:f:142:TYR:O	2.15	0.46
14:f:560:LEU:O	14:f:564:LEU:HG	2.15	0.46
1:g:127:GLN:NE2	2:h:128:ARG:O	2.47	0.46
2:h:158:TRP:CD1	3:i:56:LEU:HD13	2.50	0.46
13:k:36:THR:HG1	13:k:172:SER:HG	1.61	0.46
23:q:12:TYR:CD1	23:q:153:ARG:HG3	2.49	0.46
24:r:149:VAL:HG12	24:r:178:HIS:HE1	1.79	0.46
26:t:167:ASP:O	26:t:171:ARG:HG3	2.16	0.46
22:P:53:LEU:CB	22:P:60:VAL:HG13	2.45	0.46
24:R:180:ARG:HH11	24:R:185:ILE:HG21	1.81	0.46
26:T:51:LEU:HD13	26:T:112:ILE:HG12	1.96	0.46
28:V:91:PRO:O	28:V:94:VAL:HB	2.15	0.46
28:V:489:MET:HE1	30:Y:388:ASN:HA	1.98	0.46
29:X:369:ILE:HD12	29:X:374:PHE:HD2	1.79	0.46
1:G:48:ALA:HB2	1:G:149:PRO:HB2	1.97	0.46
1:G:165:ALA:HB1	1:G:179:LEU:HB3	1.97	0.46
2:H:107:THR:HB	2:H:140:ASN:CB	2.45	0.46
3:I:33:THR:HA	3:I:165:GLY:CA	2.42	0.46
4:J:220:LEU:HD12	4:J:220:LEU:HA	1.74	0.46
7:A:38:GLN:HB3	7:A:42:SER:OG	2.16	0.46
8:B:413:LYS:HE3	14:f:160:ARG:HH12	1.79	0.46
8:B:415:THR:HG22	8:B:417:GLU:HB2	1.97	0.46
9:C:287:LYS:C	9:C:289:ILE:N	2.73	0.46
12:F:231:THR:OG1	35:F:501:ADP:O2B	2.31	0.46
14:f:459:CYS:O	33:x:79:GLY:N	2.48	0.46
15:a:164:GLN:OE1	15:a:164:GLN:N	2.44	0.46
15:a:369:HIS:HA	15:a:372:HIS:CE1	2.51	0.46
17:c:220:LEU:HD13	31:Z:134:PRO:HA	1.96	0.46
5:l:65:HIS:HA	5:l:221:PHE:HE2	1.81	0.46
5:l:93:LEU:HD11	25:s:73:LYS:HG3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:g:132:ARG:HB2	6:m:12:SER:HA	1.96	0.46
3:i:14:PRO:HA	4:j:21:TYR:CZ	2.50	0.46
4:j:134:VAL:HG12	4:j:144:LEU:HD13	1.97	0.46
6:m:7:TYR:HB2	6:m:15:SER:HA	1.97	0.46
6:m:193:VAL:HA	6:m:196:ILE:HG22	1.97	0.46
21:o:8:TYR:CE2	21:o:10:ASP:HB2	2.51	0.46
22:p:61:GLN:OE1	23:q:85:ARG:HD2	2.15	0.46
27:U:591:CYS:SG	27:U:755:THR:HG21	2.56	0.46
27:U:717:ILE:HG13	27:U:731:ILE:HG12	1.96	0.46
27:U:722:ASP:OD1	27:U:723:ASP:N	2.45	0.46
28:V:330:LYS:HG2	28:V:360:TYR:HE2	1.79	0.46
28:V:407:VAL:HG21	28:V:437:ILE:HG21	1.98	0.46
30:Y:220:VAL:HG11	30:Y:249:VAL:CG2	2.45	0.46
2:H:36:VAL:HG11	2:H:194:THR:HG22	1.97	0.46
2:H:80:GLY:N	2:H:81:PRO:HD2	2.30	0.46
4:J:46:GLU:HB2	4:J:195:LEU:HD21	1.97	0.46
4:J:146:GLN:HG3	4:J:161:ILE:HG13	1.98	0.46
4:J:177:THR:HG22	4:J:180:ALA:H	1.80	0.46
7:A:46:LYS:HE2	9:C:173:GLU:CD	2.40	0.46
7:A:330:ALA:N	7:A:333:ARG:HH21	2.14	0.46
11:E:200:SER:OG	11:E:232:MET:SD	2.74	0.46
14:f:515:ALA:O	14:f:518:THR:OG1	2.32	0.46
16:b:41:THR:HG23	16:b:45:PRO:HA	1.97	0.46
1:g:53:GLN:HE22	1:g:55:LYS:HG3	1.81	0.46
1:g:139:ILE:HG12	1:g:153:LYS:HG3	1.96	0.46
4:j:90:GLU:OE2	4:j:107:ILE:HG23	2.16	0.46
4:j:166:LYS:HA	4:j:169:ARG:HG2	1.97	0.46
6:m:184:MET:HB3	6:m:189:ILE:HD11	1.97	0.46
25:s:197:ILE:O	25:s:203:ILE:HA	2.15	0.46
28:V:91:PRO:O	28:V:95:LEU:HG	2.14	0.46
30:Y:337:PHE:HB2	30:Y:343:LEU:HD22	1.96	0.46
31:Z:7:GLN:HB3	31:Z:46:LYS:HB3	1.97	0.46
32:W:94:ARG:O	32:W:95:SER:CB	2.63	0.46
32:W:372:ARG:NH1	32:W:414:ASN:HB3	2.31	0.46
1:G:221:THR:OG1	1:G:224:ASN:HB3	2.15	0.46
3:I:233:VAL:O	3:I:237:ILE:HG13	2.15	0.46
12:F:75:GLU:O	12:F:79:LYS:HG2	2.16	0.46
14:f:249:LEU:O	14:f:253:LEU:HD23	2.16	0.46
15:a:112:ILE:HG22	15:a:151:VAL:HG21	1.97	0.46
18:d:237:ILE:CG2	18:d:238:PRO:HD3	2.46	0.46
2:h:203:MET:HB2	2:h:208:ILE:HD11	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:i:91:ARG:HD3	22:p:76:LEU:HB3	1.97	0.46
3:i:123:GLN:NE2	4:j:125:ARG:HG3	2.30	0.46
24:R:17:ASP:OD2	24:R:170:SER:OG	2.23	0.46
25:S:152:GLN:HG2	25:S:174:LEU:HD11	1.97	0.46
28:V:181:TYR:HB3	28:V:221:LEU:HD21	1.98	0.46
28:V:302:TYR:CB	28:V:339:LEU:HD21	2.39	0.46
28:V:464:ILE:HG21	28:V:469:THR:HG23	1.98	0.46
31:Z:182:THR:HG22	31:Z:183:THR:H	1.79	0.46
31:Z:261:TYR:O	31:Z:265:LEU:HB3	2.15	0.46
1:G:50:ILE:HD13	1:G:79:VAL:HB	1.97	0.46
2:H:155:TYR:CD1	2:H:155:TYR:O	2.68	0.46
6:M:4:GLY:O	6:M:6:GLY:N	2.48	0.46
7:A:101:ILE:HA	7:A:139:ARG:HA	1.98	0.46
10:D:381:GLU:O	10:D:384:MET:HG3	2.16	0.46
14:f:514:VAL:O	14:f:518:THR:HG23	2.15	0.46
16:b:17:ARG:NE	16:b:81:LYS:HE2	2.31	0.46
16:b:92:VAL:HG12	31:Z:68:TRP:H	1.80	0.46
5:l:72:ILE:HD13	5:l:88:MET:HE1	1.98	0.46
5:l:103:LEU:HD22	5:l:108:LEU:HB2	1.98	0.46
1:g:56:VAL:HG23	1:g:56:VAL:O	2.15	0.46
6:m:197:ILE:HG12	6:m:211:LEU:HD11	1.97	0.46
6:m:229:LYS:O	6:m:232:ARG:HB3	2.16	0.46
20:n:103:TRP:CZ2	20:n:181:GLU:HG3	2.50	0.46
22:p:82:ILE:HG12	22:p:87:LEU:HB2	1.98	0.46
25:S:13:LEU:HD13	25:S:137:ALA:HB2	1.98	0.46
27:U:61:ALA:HB3	27:U:84:ALA:HB2	1.97	0.46
27:U:406:ALA:HB2	27:U:444:TYR:HE2	1.80	0.46
28:V:173:ILE:HG22	28:V:213:TYR:CE2	2.51	0.46
28:V:263:LEU:HG	28:V:266:GLN:HB3	1.98	0.46
30:Y:101:ARG:NH2	30:Y:136:HIS:HB3	2.31	0.46
31:Z:40:LEU:HA	31:Z:91:ILE:HA	1.98	0.46
1:G:178:PHE:HA	1:G:181:LYS:HE2	1.97	0.46
5:L:133:LEU:HD23	5:L:133:LEU:HA	1.76	0.46
6:M:46:VAL:HG22	6:M:215:TRP:CD1	2.51	0.46
7:A:391:GLU:HG2	7:A:418:LYS:HG2	1.98	0.46
9:C:51:GLU:O	9:C:55:LYS:HG3	2.16	0.46
10:D:68:LEU:HD11	27:U:607:VAL:HB	1.97	0.46
11:E:258:MET:HA	11:E:261:LEU:HB3	1.97	0.46
12:F:225:MET:SD	12:F:233:LYS:HB3	2.56	0.46
12:F:233:LYS:HE2	12:F:332:THR:O	2.15	0.46
12:F:321:GLN:HB3	12:F:322:PRO:HD3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:f:551:LYS:HG2	14:f:587:PHE:HB2	1.98	0.46
14:f:803:PHE:HA	14:f:806:VAL:CG1	2.28	0.46
15:a:103:LYS:HG3	15:a:104:VAL:HG23	1.97	0.46
5:l:184:LEU:HD12	5:l:185:ASN:N	2.31	0.46
2:h:29:VAL:HG13	2:h:77:SER:O	2.16	0.46
6:m:169:ARG:HB2	6:m:173:LYS:NZ	2.31	0.46
20:n:133:SER:HA	20:n:136:TYR:CE2	2.50	0.46
22:p:135:ASP:HA	22:p:154:TRP:CZ2	2.51	0.46
20:N:52:THR:HG22	20:N:96:ALA:HB1	1.98	0.46
23:Q:3:TYR:N	23:Q:18:ASP:OD2	2.49	0.46
27:U:609:ASP:O	27:U:615:ARG:NE	2.49	0.46
27:U:756:HIS:HD2	27:U:759:SER:HB2	1.79	0.46
29:X:185:LYS:HZ3	30:Y:244:ALA:HB3	1.81	0.46
29:X:376:GLY:HA3	29:X:385:LEU:HD21	1.98	0.46
30:Y:49:ASN:HA	30:Y:52:PRO:HG2	1.97	0.46
32:W:19:ASP:OD1	32:W:20:TYR:N	2.49	0.46
32:W:88:MET:HA	32:W:130:MET:SD	2.56	0.46
32:W:268:LYS:HA	32:W:301:LYS:HG3	1.97	0.46
1:G:49:VAL:HG12	1:G:219:VAL:HG22	1.98	0.46
10:D:88:VAL:O	10:D:132:LEU:N	2.30	0.46
11:E:215:ILE:HA	11:E:218:MET:HG2	1.97	0.46
12:F:208:HIS:HB3	12:F:211:LYS:HG2	1.97	0.46
14:f:602:GLY:HA3	14:f:788:MET:HE1	1.98	0.46
15:a:47:ASP:O	15:a:49:CYS:N	2.45	0.46
18:d:185:ALA:HB3	28:V:442:ILE:HD11	1.96	0.46
5:l:13:TRP:H	6:m:22:GLN:HE22	1.62	0.46
1:g:147:GLN:HG3	1:g:150:GLN:OE1	2.16	0.46
3:i:121:TYR:CE2	3:i:129:PRO:HA	2.50	0.46
13:k:29:GLU:O	13:k:33:LEU:HG	2.16	0.46
25:s:185:ARG:HA	21:O:26:VAL:HB	1.98	0.46
20:N:59:VAL:HG11	20:N:83:PHE:CZ	2.50	0.46
25:S:46:LEU:HD12	25:S:72:LEU:HD12	1.97	0.46
32:W:231:ILE:HG13	32:W:232:GLN:N	2.31	0.46
1:G:54:LYS:N	1:G:214:GLU:O	2.34	0.46
2:H:51:LYS:HE2	2:H:200:GLU:HG3	1.98	0.46
7:A:51:ASP:HB3	8:B:69:LYS:HD2	1.97	0.46
7:A:333:ARG:O	7:A:336:ARG:N	2.49	0.46
9:C:25:LEU:HD12	10:D:48:GLN:CA	2.46	0.46
10:D:204:MET:HA	10:D:331:ILE:O	2.16	0.46
11:E:92:LEU:O	11:E:96:THR:OG1	2.31	0.46
16:b:166:THR:HG22	16:b:191:GLY:HA2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:c:191:ALA:HB1	17:c:197:ASN:HB2	1.97	0.46
18:d:71:PHE:O	18:d:75:MET:HG2	2.15	0.46
18:d:244:LYS:O	18:d:247:ILE:HG12	2.16	0.46
1:g:52:THR:OG1	1:g:216:GLU:HG3	2.16	0.46
24:r:1:THR:O	24:r:130:SER:N	2.49	0.46
24:r:182:ASP:OD1	24:r:183:GLY:N	2.48	0.46
20:N:8:PHE:HB3	20:N:152:CYS:SG	2.56	0.46
22:P:53:LEU:HB2	22:P:60:VAL:HG13	1.97	0.46
29:X:78:ASN:HB3	29:X:122:ARG:HH22	1.81	0.46
30:Y:70:LEU:O	30:Y:74:LYS:HG3	2.15	0.46
30:Y:215:ASP:HB3	30:Y:218:THR:H	1.79	0.46
30:Y:234:PRO:C	30:Y:236:LEU:N	2.74	0.46
2:H:178:TYR:O	2:H:180:GLU:HB2	2.16	0.46
5:L:44:ALA:HB1	5:L:144:ILE:HD11	1.98	0.46
7:A:101:ILE:HG22	7:A:139:ARG:HG3	1.98	0.46
9:C:80:MET:N	9:C:84:LYS:O	2.49	0.46
9:C:342:ILE:HG12	9:C:344:LEU:CD2	2.46	0.46
11:E:232:MET:SD	11:E:234:GLU:N	2.89	0.46
11:E:353:PHE:CA	11:E:356:ARG:HG2	2.46	0.46
12:F:97:LEU:HD22	12:F:120:LYS:HG2	1.98	0.46
12:F:402:GLU:HA	12:F:405:MET:HE2	1.98	0.46
13:K:48:LEU:HB2	13:K:218:ALA:HB3	1.97	0.46
13:K:220:VAL:HG13	13:K:226:PHE:CZ	2.51	0.46
14:f:783:SER:HB2	14:f:787:LEU:HD13	1.96	0.46
15:a:25:LEU:HG	15:a:37:LEU:HD11	1.98	0.46
15:a:371:ALA:HA	18:d:247:ILE:HG21	1.97	0.46
18:d:78:LEU:HD22	18:d:102:ASN:ND2	2.31	0.46
18:d:178:ILE:O	18:d:182:ILE:HG12	2.16	0.46
3:i:19:TYR:HB3	3:i:23:TYR:CZ	2.51	0.46
3:i:194:ILE:HG21	3:i:240:HIS:HB2	1.98	0.46
4:j:146:GLN:OE1	4:j:159:ASN:ND2	2.49	0.46
20:n:115:PRO:HD2	20:n:119:MET:SD	2.56	0.46
28:V:113:LEU:HD11	28:V:170:LEU:HD21	1.97	0.46
29:X:138:PHE:CZ	29:X:175:LYS:HB3	2.51	0.46
32:W:28:LEU:HD13	32:W:65:ARG:HE	1.81	0.46
3:I:37:ILE:HD11	3:I:184:MET:CE	2.46	0.45
4:J:40:ILE:CD1	4:J:184:ASP:CG	2.89	0.45
8:B:53:THR:N	8:B:64:LYS:HZ3	2.08	0.45
9:C:139:MET:SD	9:C:234:LEU:HD11	2.55	0.45
9:C:339:THR:HG22	9:C:377:HIS:HB3	1.98	0.45
9:C:383:PHE:O	9:C:387:VAL:HG23	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:E:37:THR:OG1	12:F:66:LEU:CD1	2.64	0.45
12:F:84:LYS:HB2	12:F:161:LEU:HG	1.99	0.45
14:f:252:ALA:HB1	14:f:268:LEU:HD13	1.98	0.45
14:f:316:ASP:O	14:f:320:ILE:HG12	2.17	0.45
14:f:653:ALA:O	14:f:657:ILE:HG12	2.16	0.45
14:f:682:GLY:HA3	14:f:686:LEU:HD23	1.98	0.45
17:c:138:GLU:OE1	17:c:139:ARG:NH1	2.49	0.45
3:i:43:VAL:HG23	3:i:137:ILE:HD12	1.97	0.45
25:s:27:THR:HG22	25:s:41:PRO:HA	1.98	0.45
20:N:46:SER:OG	20:N:97:GLY:O	2.32	0.45
27:U:415:HIS:NE2	27:U:418:GLU:HB2	2.30	0.45
27:U:444:TYR:OH	27:U:777:HIS:HB2	2.16	0.45
28:V:81:GLN:HG2	28:V:93:PHE:CZ	2.51	0.45
28:V:238:ALA:HB1	28:V:243:ASP:HB2	1.98	0.45
32:W:279:PHE:HA	32:W:283:GLN:OE1	2.16	0.45
4:J:210:VAL:CG1	4:J:212:ARG:HG3	2.45	0.45
6:M:48:GLY:C	6:M:49:VAL:HG23	2.41	0.45
7:A:30:ILE:HG13	7:A:31:ALA:N	2.30	0.45
7:A:126:SER:OG	7:A:149:ILE:O	2.28	0.45
7:A:142:VAL:HB	7:A:147:TYR:HA	1.98	0.45
8:B:365:PHE:CD1	8:B:399:CYS:SG	3.09	0.45
11:E:172:LEU:HD21	11:E:183:LEU:HD23	1.99	0.45
12:F:203:VAL:HG12	12:F:207:ASN:ND2	2.31	0.45
12:F:212:PHE:CG	12:F:219:PRO:HG3	2.50	0.45
15:a:32:LYS:O	16:b:18:ASN:HB2	2.17	0.45
15:a:188:LEU:HD11	15:a:193:GLN:HG3	1.98	0.45
20:n:45:ARG:HB2	20:n:52:THR:HB	1.98	0.45
21:o:175:LEU:HD12	21:o:189:TYR:CE1	2.51	0.45
22:p:56:LEU:O	22:p:60:VAL:HG23	2.16	0.45
25:s:64:LEU:HD12	25:s:104:TYR:CD2	2.52	0.45
20:N:162:LEU:HD11	20:N:197:PHE:CD1	2.52	0.45
26:T:96:MET:HE3	26:T:127:MET:HA	1.99	0.45
27:U:31:VAL:HG23	27:U:70:HIS:NE2	2.31	0.45
27:U:406:ALA:O	27:U:410:VAL:HG13	2.16	0.45
28:V:383:GLY:HA2	28:V:386:PHE:CD2	2.51	0.45
29:X:405:GLN:HE22	29:X:409:LYS:CE	2.29	0.45
30:Y:50:MET:HB2	30:Y:70:LEU:CD2	2.46	0.45
32:W:435:LEU:O	32:W:439:VAL:HG23	2.16	0.45
2:H:22:ILE:HD12	2:H:152:SER:HB2	1.98	0.45
2:H:102:GLN:CB	22:P:89:SER:OG	2.64	0.45
7:A:194:PRO:HB3	7:A:208:PRO:HG3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A:418:LYS:HG3	8:B:344:PRO:HG2	1.98	0.45
8:B:338:ASP:CG	8:B:339:PRO:HD2	2.41	0.45
9:C:127:LEU:HD12	9:C:128:PRO:HD2	1.98	0.45
9:C:168:PRO:HB3	9:C:183:PRO:HG2	1.98	0.45
10:D:155:THR:C	10:D:157:ASP:H	2.23	0.45
10:D:265:ASP:OD1	10:D:266:GLU:N	2.50	0.45
17:c:34:SER:OG	17:c:70:ILE:HA	2.16	0.45
17:c:225:TRP:CZ3	17:c:226:MET:HE3	2.51	0.45
5:l:180:MET:HG3	5:l:181:GLU:HG3	1.98	0.45
6:m:45:VAL:HG23	6:m:146:ALA:HB1	1.97	0.45
20:n:135:ILE:HD13	20:n:163:ALA:HB2	1.98	0.45
21:o:54:MET:HG2	22:p:96:TYR:CE1	2.51	0.45
25:s:141:ALA:O	25:s:145:LEU:HD23	2.17	0.45
26:t:135:PRO:HB2	26:t:154:LEU:HD13	1.98	0.45
23:Q:3:TYR:HE1	23:Q:5:ILE:HB	1.81	0.45
26:T:25:ASP:OD1	26:T:25:ASP:N	2.48	0.45
27:U:252:LEU:HD21	27:U:264:VAL:HG11	1.99	0.45
31:Z:23:PHE:HD2	31:Z:97:THR:HG21	1.81	0.45
4:J:66:ASP:OD2	4:J:102:VAL:HG12	2.17	0.45
9:C:91:PRO:HD3	10:D:109:SER:HA	1.97	0.45
10:D:225:ALA:HA	10:D:259:PRO:HB2	1.97	0.45
11:E:281:ARG:HG2	11:E:283:ASP:H	1.81	0.45
11:E:325:GLU:HG2	11:E:326:ILE:N	2.31	0.45
12:F:79:LYS:O	12:F:83:ASN:ND2	2.50	0.45
15:a:241:ASN:HA	15:a:339:ARG:NH2	2.32	0.45
15:a:326:GLU:OE1	32:W:373:ILE:HG13	2.17	0.45
5:l:24:TYR:CE1	13:k:17:PRO:HA	2.51	0.45
2:h:9:SER:HA	2:h:125:GLY:HA2	1.98	0.45
3:i:119:GLN:NE2	4:j:79:ASP:OD1	2.48	0.45
3:i:134:LEU:HD12	3:i:136:TYR:HE1	1.81	0.45
4:j:86:ARG:HG2	4:j:114:LEU:HD22	1.99	0.45
13:k:121:LEU:HD12	13:k:123:PHE:CE1	2.52	0.45
21:o:75:ARG:HB2	21:o:78:THR:HG22	1.97	0.45
23:q:3:TYR:OH	23:q:5:ILE:HD12	2.16	0.45
25:s:64:LEU:O	25:s:68:ILE:HG12	2.17	0.45
26:t:91:TRP:CE3	26:t:92:LEU:HD22	2.47	0.45
26:t:209:TRP:CH2	20:N:172:GLY:HA2	2.52	0.45
23:Q:45:LEU:HB2	23:Q:103:LEU:HB3	1.97	0.45
29:X:217:ILE:O	29:X:221:GLU:HG2	2.15	0.45
29:X:289:CYS:O	29:X:292:GLN:HG2	2.16	0.45
29:X:365:LEU:HD21	29:X:385:LEU:HD13	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:36:VAL:HG11	2:H:194:THR:CG2	2.46	0.45
2:H:73:GLY:HA3	2:H:218:PHE:CE1	2.51	0.45
2:H:179:ASN:HD21	3:I:55:LEU:HD23	1.79	0.45
2:H:205:GLU:HG2	2:H:206:ASP:N	2.30	0.45
7:A:308:GLY:HA3	7:A:336:ARG:NH1	2.32	0.45
8:B:71:TYR:HB3	14:f:670:MET:HE3	1.98	0.45
8:B:269:GLU:O	8:B:273:VAL:HG23	2.15	0.45
9:C:351:MET:HG2	9:C:390:VAL:HG21	1.98	0.45
11:E:353:PHE:HA	11:E:356:ARG:HD3	1.97	0.45
12:F:86:LEU:HG	12:F:86:LEU:O	2.17	0.45
12:F:120:LYS:O	12:F:136:VAL:HA	2.16	0.45
12:F:187:ASP:HA	12:F:368:ILE:HG21	1.97	0.45
14:f:62:ARG:HD2	14:f:70:LEU:HB3	1.99	0.45
16:b:7:MET:HB2	16:b:97:LEU:HD22	1.99	0.45
17:c:30:GLN:NE2	17:c:66:THR:HG22	2.32	0.45
6:m:189:ILE:O	6:m:193:VAL:HG23	2.16	0.45
22:p:107:PRO:HD2	22:p:124:LEU:HB2	1.99	0.45
24:R:179:VAL:HA	24:R:184:TRP:HA	1.99	0.45
27:U:583:MET:HE3	27:U:618:ALA:CA	2.36	0.45
32:W:183:VAL:O	32:W:187:LEU:HG	2.16	0.45
4:J:41:VAL:HG23	4:J:211:MET:HB3	1.99	0.45
4:J:182:GLU:HB2	4:J:186:LEU:HD12	1.98	0.45
7:A:45:ILE:HG13	8:B:62:LEU:HD12	1.97	0.45
11:E:63:GLN:O	11:E:65:THR:N	2.50	0.45
12:F:123:VAL:HG22	12:F:133:PHE:CD1	2.50	0.45
13:K:220:VAL:HG22	13:K:226:PHE:CD2	2.51	0.45
15:a:188:LEU:HB2	15:a:189:PRO:HD2	1.99	0.45
1:g:68:HIS:H	1:g:216:GLU:CD	2.25	0.45
2:h:162:ALA:O	2:h:167:TYR:HB2	2.17	0.45
13:k:211:ASN:CG	13:k:212:ALA:H	2.25	0.45
20:n:17:ASP:OD1	20:n:18:SER:N	2.49	0.45
22:p:49:LEU:HD12	22:p:110:ALA:O	2.16	0.45
22:p:205:ASP:HB3	24:R:165:TYR:HA	1.99	0.45
23:q:7:ILE:HD11	23:q:14:LEU:HD23	1.98	0.45
23:q:22:ALA:HA	23:q:27:GLN:HA	1.99	0.45
24:r:6:PHE:HB2	24:r:125:THR:HG22	1.98	0.45
23:Q:147:TYR:HA	23:Q:151:ILE:HD11	1.98	0.45
27:U:359:ALA:HA	27:U:720:LYS:HD3	1.98	0.45
27:U:483:LEU:HD13	27:U:778:PHE:CZ	2.52	0.45
27:U:507:VAL:HA	27:U:543:LYS:HD2	1.97	0.45
30:Y:231:LEU:HD21	30:Y:236:LEU:CD1	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Z:17:LEU:HD23	31:Z:17:LEU:H	1.80	0.45
32:W:63:THR:HB	32:W:96:GLN:HE21	1.82	0.45
2:H:200:GLU:HB3	10:D:339:ARG:CD	2.43	0.45
4:J:46:GLU:OE2	4:J:199:VAL:CG2	2.64	0.45
4:J:164:GLY:O	4:J:168:VAL:HG12	2.16	0.45
7:A:354:ILE:HA	7:A:357:ILE:HG22	1.99	0.45
7:A:393:GLY:HA2	8:B:214:MET:HE2	1.98	0.45
9:C:391:MET:HB3	9:C:392:GLN:NE2	2.32	0.45
10:D:83:GLN:HE21	17:c:152:LYS:CB	2.30	0.45
11:E:147:GLU:OE2	32:W:176:SER:HB3	2.16	0.45
17:c:249:LEU:HB2	29:X:403:THR:HG22	1.97	0.45
17:c:251:LEU:HD21	17:c:283:HIS:ND1	2.32	0.45
18:d:105:PHE:HB2	18:d:166:PHE:CD2	2.52	0.45
3:i:12:PHE:CE2	4:j:125:ARG:HB2	2.51	0.45
6:m:150:MET:HG3	6:m:163:CYS:SG	2.56	0.45
23:q:103:LEU:HG	23:q:132:HIS:HD2	1.81	0.45
21:O:164:PHE:HZ	21:O:192:PRO:HB2	1.81	0.45
23:Q:11:ASP:N	23:Q:11:ASP:OD1	2.49	0.45
28:V:148:ARG:HD2	28:V:148:ARG:O	2.16	0.45
28:V:160:LEU:HB2	28:V:163:VAL:HG12	1.98	0.45
28:V:344:ASP:HB3	28:V:346:LEU:HD23	1.97	0.45
28:V:483:CYS:SG	31:Z:267:ARG:HG2	2.57	0.45
31:Z:189:GLN:HE22	31:Z:193:ASN:HD21	1.63	0.45
32:W:187:LEU:HB3	32:W:225:LYS:HZ2	1.82	0.45
32:W:246:HIS:O	32:W:250:ILE:HG23	2.17	0.45
5:L:222:THR:HB	5:L:224:TYR:CE2	2.52	0.45
7:A:120:LYS:HE3	12:F:152:GLY:HA2	1.99	0.45
7:A:368:ILE:HG23	7:A:370:PHE:HD1	1.82	0.45
8:B:395:ILE:HD13	8:B:398:ILE:HD11	1.98	0.45
9:C:43:ARG:NH1	27:U:635:SER:O	2.49	0.45
9:C:114:VAL:HG23	9:C:126:ILE:HA	1.99	0.45
12:F:120:LYS:CD	12:F:142:ALA:HB2	2.47	0.45
14:f:217:LEU:O	14:f:221:ILE:HG12	2.16	0.45
15:a:54:ASP:OD1	15:a:54:ASP:N	2.50	0.45
16:b:51:LEU:HB2	16:b:62:THR:OG1	2.16	0.45
18:d:146:GLY:N	28:V:440:LYS:HZ3	2.14	0.45
2:h:205:GLU:HB3	2:h:227:LYS:HB3	1.99	0.45
4:j:195:LEU:O	4:j:199:VAL:HG12	2.17	0.45
13:k:141:LEU:HD12	13:k:156:MET:HG2	1.98	0.45
6:m:229:LYS:O	6:m:233:GLU:OE1	2.35	0.45
21:o:15:GLY:HA2	21:o:174:ASP:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:O:147:GLU:CD	21:O:150:GLU:H	2.24	0.45
23:Q:101:ASN:HB3	23:Q:132:HIS:HE2	1.82	0.45
23:Q:143:LEU:O	23:Q:147:TYR:HB3	2.17	0.45
28:V:166:TYR:HE1	28:V:206:VAL:HG13	1.81	0.45
28:V:375:PHE:O	28:V:379:LEU:HG	2.16	0.45
30:Y:231:LEU:HD12	30:Y:234:PRO:CG	2.47	0.45
32:W:225:LYS:O	32:W:229:LEU:HD23	2.17	0.45
2:H:11:THR:O	2:H:11:THR:CG2	2.65	0.45
3:I:49:ARG:HB2	3:I:210:LYS:HA	1.99	0.45
7:A:214:LEU:HD12	7:A:341:ILE:HG13	1.98	0.45
7:A:390:THR:HG23	8:B:216:ILE:HB	1.99	0.45
8:B:112:LEU:HD13	8:B:150:VAL:HG11	1.99	0.45
8:B:193:GLN:O	8:B:197:ILE:HG22	2.17	0.45
11:E:126:ASP:N	11:E:127:PRO:HD2	2.32	0.45
11:E:172:LEU:CD1	11:E:276:ILE:CG2	2.95	0.45
12:F:63:THR:O	12:F:67:GLN:HG2	2.16	0.45
14:f:175:ASP:OD1	14:f:175:ASP:N	2.50	0.45
19:e:22:PHE:CD2	28:V:324:PHE:HB2	2.51	0.45
5:l:152:ASN:HA	6:m:85:ARG:NH1	2.31	0.45
3:i:99:LEU:HD21	23:q:86:ARG:HE	1.82	0.45
3:i:106:PRO:HB2	3:i:109:GLN:HG2	1.98	0.45
24:R:8:PHE:CE1	24:R:13:ILE:HG12	2.52	0.45
25:S:25:SER:OG	25:S:43:CYS:SG	2.55	0.45
30:Y:64:GLN:CD	30:Y:64:GLN:H	2.25	0.45
30:Y:67:VAL:O	30:Y:71:ASN:ND2	2.34	0.45
4:J:4:ASP:CG	4:J:5:ARG:N	2.75	0.45
5:L:229:VAL:O	5:L:230:SER:C	2.56	0.45
8:B:262:ASP:HA	8:B:265:LYS:HB2	1.99	0.45
11:E:363:VAL:CG1	11:E:364:GLN:H	2.30	0.45
14:f:99:LEU:HD22	14:f:129:LEU:HD11	1.99	0.45
17:c:226:MET:HE2	31:Z:201:LEU:HA	1.98	0.45
1:g:39:SER:HB3	1:g:52:THR:HG22	1.99	0.45
2:h:224:THR:O	2:h:227:LYS:HG3	2.17	0.45
3:i:87:THR:O	3:i:91:ARG:HG3	2.17	0.45
13:k:16:SER:N	13:k:20:ARG:O	2.50	0.45
6:m:217:GLY:O	6:m:220:THR:OG1	2.29	0.45
23:q:174:ASN:N	23:Q:172:ILE:O	2.39	0.45
27:U:54:PHE:CE2	27:U:56:SER:HB3	2.52	0.45
27:U:593:SER:OG	27:U:595:ASN:OD1	2.34	0.45
29:X:346:GLN:HG3	29:X:348:GLU:OE2	2.17	0.45
30:Y:329:PHE:O	30:Y:332:GLN:HG3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Z:19:VAL:HG11	31:Z:124:ILE:HD13	1.99	0.45
32:W:120:ILE:O	32:W:124:LEU:HG	2.17	0.45
3:I:6[B]:ASP:OD1	3:I:6[B]:ASP:N	2.51	0.44
3:I:68:LEU:HD23	3:I:74:CYS:HB3	1.99	0.44
5:L:109:VAL:HG22	5:L:134:ILE:HD12	1.99	0.44
6:M:19:ARG:NE	6:M:24:GLU:OE2	2.51	0.44
11:E:72:LYS:HA	11:E:78:ARG:HA	1.99	0.44
11:E:222:ALA:O	11:E:225:HIS:C	2.61	0.44
14:f:513:GLU:HB2	14:f:554:TYR:CD2	2.52	0.44
15:a:89:ASP:HB3	15:a:92:VAL:HG12	1.99	0.44
17:c:177:THR:HG23	27:U:364:VAL:HG23	1.98	0.44
17:c:217:LEU:HD23	17:c:221:HIS:CE1	2.52	0.44
18:d:132:TYR:CD1	18:d:160:ALA:HA	2.52	0.44
5:l:71:GLY:HA3	5:l:221:PHE:CZ	2.51	0.44
1:g:126:THR:HB	2:h:128:ARG:HH12	1.81	0.44
2:h:119:GLN:O	2:h:123:GLN:HG2	2.16	0.44
2:h:219:ARG:HH11	2:h:221:LEU:HD23	1.82	0.44
23:q:21:ALA:O	23:q:28:MET:N	2.50	0.44
24:r:8:PHE:CE2	24:r:10:HIS:HB2	2.51	0.44
21:O:63:LEU:HD12	21:O:63:LEU:HA	1.83	0.44
21:O:185:PHE:C	21:O:186:LEU:HD12	2.42	0.44
27:U:756:HIS:CD2	27:U:759:SER:H	2.35	0.44
28:V:470:ARG:O	28:V:473:GLN:HG3	2.16	0.44
31:Z:182:THR:HG22	31:Z:183:THR:N	2.32	0.44
1:G:123:GLN:HA	1:G:126:THR:HG22	1.99	0.44
4:J:99:GLU:HG3	24:R:81:LYS:HG2	1.99	0.44
6:M:232:ARG:HA	6:M:232:ARG:HD3	1.69	0.44
7:A:120:LYS:HB2	12:F:90:VAL:HG12	1.99	0.44
8:B:249:ARG:NH1	9:C:275:GLU:OE2	2.46	0.44
9:C:122:THR:HG22	9:C:123:LEU:N	2.32	0.44
11:E:331:ILE:O	11:E:335:SER:OG	2.34	0.44
11:E:353:PHE:HA	11:E:356:ARG:CG	2.47	0.44
13:K:210:LEU:HD21	13:K:241:ILE:HG21	1.98	0.44
14:f:72:ARG:HB3	14:f:73:PRO:HD3	1.97	0.44
15:a:198:PHE:CZ	15:a:230:ARG:HD2	2.52	0.44
15:a:232:TRP:CZ3	15:a:253:THR:HA	2.52	0.44
18:d:113:ALA:HB2	28:V:299:GLN:HG3	1.99	0.44
1:g:41:ALA:HB2	1:g:50:ILE:HG12	1.98	0.44
2:h:195:LEU:O	2:h:199:PHE:HB2	2.16	0.44
3:i:148:TYR:CD1	3:i:158:GLY:HA2	2.53	0.44
6:m:120:HIS:NE2	6:m:124:LEU:HD21	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:r:194:ASP:HA	24:r:197:GLU:HG2	1.98	0.44
28:V:360:TYR:O	28:V:364:THR:HG23	2.17	0.44
31:Z:138:TYR:CE1	32:W:448:LYS:HD3	2.49	0.44
31:Z:221:PRO:HD2	32:W:453:HIS:HB3	1.99	0.44
3:I:86:LEU:HD12	3:I:86:LEU:HA	1.71	0.44
5:L:39:LYS:CD	5:L:142:PRO:O	2.65	0.44
7:A:99:THR:HG23	7:A:140:VAL:C	2.42	0.44
8:B:78:PHE:CB	14:f:613:LEU:HD13	2.47	0.44
10:D:293:LEU:HA	10:D:296:MET:HG2	1.99	0.44
12:F:287:GLU:HB3	12:F:290:ALA:HB3	2.00	0.44
14:f:322:SER:HA	14:f:456:ARG:HB2	1.97	0.44
14:f:829:MET:HA	14:f:872:VAL:O	2.17	0.44
17:c:252:ALA:CB	29:X:407:MET:HB2	2.47	0.44
18:d:202:THR:N	18:d:203:PRO:HD3	2.33	0.44
22:p:34:MET:HG3	22:p:183:MET:SD	2.56	0.44
23:q:111:GLU:N	23:q:111:GLU:OE1	2.50	0.44
25:s:150:ASP:OD2	22:P:177:ARG:NE	2.45	0.44
25:s:156:LYS:HB2	25:s:156:LYS:HE3	1.82	0.44
27:U:21:GLU:OE1	27:U:56:SER:HB2	2.17	0.44
27:U:217:CYS:SG	27:U:248:ILE:HG23	2.57	0.44
30:Y:19:ILE:HD13	30:Y:43:ALA:HB3	1.99	0.44
30:Y:268:TYR:OH	30:Y:307:LEU:HB2	2.18	0.44
31:Z:100:LYS:HG3	32:W:451:MET:SD	2.57	0.44
3:I:114:LEU:HD12	3:I:114:LEU:HA	1.80	0.44
7:A:164:MET:HE1	7:A:241:ILE:HD13	1.99	0.44
9:C:250:GLU:HA	9:C:294:ALA:O	2.17	0.44
9:C:307:ARG:N	9:C:308:PRO:HD2	2.32	0.44
11:E:142:ILE:HG12	11:E:183:LEU:HD13	1.99	0.44
18:d:63:ILE:HG12	18:d:166:PHE:CE1	2.53	0.44
5:l:11:THR:HA	6:m:129:ARG:HD3	2.00	0.44
23:q:18:ASP:CG	23:q:175:LEU:HD12	2.43	0.44
24:r:98:GLY:HA2	24:r:115:ASP:HA	2.00	0.44
26:t:88:ILE:O	26:t:92:LEU:HD23	2.17	0.44
20:N:127:ILE:HD12	20:N:136:TYR:CD1	2.53	0.44
21:O:11:GLY:HA2	21:O:108:PRO:HB3	2.00	0.44
27:U:414:GLY:HA2	27:U:453:HIS:HE1	1.83	0.44
27:U:580:ARG:HD3	27:U:771:PHE:HZ	1.81	0.44
29:X:71:LYS:O	29:X:74:ARG:NH1	2.50	0.44
30:Y:66:ASP:OD2	30:Y:70:LEU:HB2	2.17	0.44
31:Z:193:ASN:HA	31:Z:196:HIS:HE1	1.75	0.44
32:W:313:GLU:OE1	32:W:313:GLU:N	2.45	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:207:SER:HB2	3:I:210:LYS:HE3	2.00	0.44
6:M:160:TYR:CD1	6:M:163:CYS:HB2	2.52	0.44
9:C:104:ASP:OD1	9:C:107:ASP:HB2	2.17	0.44
15:a:217:LEU:HB3	15:a:241:ASN:HB2	2.00	0.44
16:b:11:ASP:O	16:b:16:MET:HG3	2.18	0.44
17:c:195:GLY:HA3	17:c:199:HIS:CE1	2.52	0.44
5:l:168:ALA:O	5:l:172:LEU:HG	2.18	0.44
6:m:117:MET:HE3	6:m:117:MET:HB3	1.89	0.44
22:p:26:ARG:HH11	22:p:186:ILE:HB	1.82	0.44
24:r:65:ILE:O	24:r:69:ARG:HG3	2.17	0.44
24:R:12:VAL:HB	24:R:179:VAL:HB	1.98	0.44
27:U:347:ASN:ND2	27:U:813:TYR:HB2	2.33	0.44
27:U:535:TYR:CZ	27:U:539:THR:HG21	2.52	0.44
28:V:169:LEU:O	28:V:172:VAL:HG12	2.18	0.44
29:X:126:ARG:O	29:X:130:GLU:HG3	2.17	0.44
29:X:151:SER:O	29:X:155:ARG:HG3	2.18	0.44
29:X:386:ILE:CD1	30:Y:312:ARG:HH11	2.31	0.44
32:W:28:LEU:HD12	32:W:66:ILE:HD13	1.99	0.44
3:I:60:PHE:HD1	3:I:62:SER:H	1.65	0.44
3:I:92:LEU:HG	3:I:96:ARG:HH12	1.83	0.44
4:J:36:ARG:NH2	13:K:60:GLU:OE2	2.50	0.44
6:M:46:VAL:HG22	6:M:215:TRP:HD1	1.83	0.44
6:M:215:TRP:CG	6:M:227:VAL:HG12	2.53	0.44
9:C:113:ARG:HH21	9:C:129:ASN:HA	1.82	0.44
10:D:157:ASP:HB3	10:D:226:ALA:HA	1.98	0.44
10:D:353:ASN:HB2	29:X:226:LYS:HZ1	1.82	0.44
11:E:116:ASP:OD1	11:E:118:LEU:HD23	2.17	0.44
12:F:120:LYS:HE2	12:F:142:ALA:CB	2.47	0.44
12:F:388:THR:CG2	12:F:388:THR:O	2.59	0.44
14:f:117:GLU:OE1	14:f:120:ARG:NH2	2.49	0.44
15:a:373:ASP:HB2	18:d:247:ILE:HB	1.99	0.44
5:l:50:LYS:HB2	5:l:50:LYS:HE3	1.81	0.44
5:l:196:ARG:HB2	5:l:205:LEU:HD13	1.99	0.44
1:g:69:LEU:HD23	1:g:79:VAL:HB	1.98	0.44
6:m:197:ILE:HA	6:m:200:VAL:HG22	1.99	0.44
20:n:84:LYS:HB2	20:n:120:MET:HB2	1.99	0.44
21:o:37:ILE:HG21	21:o:63:LEU:HD12	1.99	0.44
23:Q:145:ARG:O	23:Q:145:ARG:NH1	2.45	0.44
27:U:26:LYS:O	27:U:30:VAL:HG23	2.18	0.44
27:U:526:ALA:HA	27:U:529:ILE:HG22	1.97	0.44
28:V:110:HIS:CB	28:V:138:PRO:HD3	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:V:285:TRP:CD1	28:V:315:LYS:HD2	2.53	0.44
31:Z:26:ILE:HD11	31:Z:35:VAL:HG22	2.00	0.44
32:W:172:GLU:CD	32:W:172:GLU:H	2.26	0.44
1:G:69:LEU:HD21	1:G:216:GLU:HB3	2.00	0.44
2:H:97:TYR:CD1	2:H:110:LEU:HD13	2.53	0.44
4:J:42:VAL:CG2	4:J:187:THR:HG22	2.47	0.44
4:J:130:SER:OG	4:J:149:PRO:HD3	2.18	0.44
4:J:134:VAL:HG12	4:J:144:LEU:HB2	2.00	0.44
6:M:160:TYR:CG	6:M:163:CYS:HB2	2.52	0.44
8:B:216:ILE:HG13	8:B:218:PRO:HD3	1.98	0.44
9:C:161:ILE:HA	9:C:164:VAL:HG12	2.00	0.44
10:D:58:GLU:HA	10:D:61:ILE:HG12	1.98	0.44
10:D:60:TYR:CE2	27:U:599:ILE:CG2	3.01	0.44
10:D:170:MET:CE	29:X:198:ASN:HB3	2.46	0.44
11:E:162:VAL:HG21	32:W:170:GLN:HB2	2.00	0.44
12:F:254:PRO:HD3	12:F:287:GLU:HB2	2.00	0.44
13:K:41:GLN:HB2	13:K:153:LEU:HB2	2.00	0.44
14:f:261:ARG:HH21	14:f:263:PRO:CG	2.31	0.44
14:f:604:GLY:HA2	14:f:661:ALA:HB2	1.99	0.44
14:f:862:ILE:HG23	14:f:865:PHE:HE1	1.83	0.44
15:a:346:ILE:O	15:a:349:MET:HG2	2.18	0.44
18:d:205:LYS:O	18:d:205:LYS:NZ	2.35	0.44
2:h:159:LYS:HB3	2:h:178:TYR:OH	2.18	0.44
21:o:36:PHE:HD1	21:o:42:TYR:CZ	2.36	0.44
21:o:50:ALA:HB2	22:p:129:CYS:HB2	2.00	0.44
22:p:93:ASN:O	22:p:97:GLU:HG3	2.17	0.44
21:O:34:ILE:HG12	21:O:44:CYS:SG	2.58	0.44
27:U:350:LEU:HG	27:U:354:LYS:HE2	2.00	0.44
27:U:459:ASP:O	27:U:462:LEU:HG	2.17	0.44
27:U:845:GLU:O	27:U:848:LYS:HG2	2.18	0.44
29:X:116:TRP:O	29:X:120:GLU:HG2	2.17	0.44
29:X:343:SER:N	32:W:406:VAL:O	2.50	0.44
30:Y:236:LEU:HG	30:Y:240:VAL:HG22	2.00	0.44
32:W:316:ARG:NH1	32:W:380:GLN:O	2.51	0.44
2:H:72:ILE:HA	2:H:137:CYS:O	2.18	0.44
2:H:103:GLU:N	2:H:104:PRO:HD3	2.33	0.44
3:I:13:SER:OG	3:I:16:GLY:N	2.43	0.44
5:L:49:LEU:HD21	5:L:199:LEU:CG	2.45	0.44
8:B:168:ASP:N	8:B:169:PRO:HD3	2.33	0.44
9:C:342:ILE:HG12	9:C:344:LEU:HD21	2.00	0.44
10:D:178:ARG:O	10:D:181:VAL:HG12	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:E:53:VAL:HA	12:F:157:SER:O	2.18	0.44
16:b:100:ARG:HE	16:b:101:GLN:N	2.16	0.44
5:l:158:ALA:HB1	5:l:172:LEU:HD22	2.00	0.44
1:g:18:PRO:HA	2:h:24:TYR:CZ	2.53	0.44
1:g:68:HIS:HE2	1:g:80:MET:C	2.22	0.44
4:j:184:ASP:OD1	4:j:184:ASP:N	2.51	0.44
13:k:137:PHE:O	13:k:158:PRO:HB3	2.18	0.44
22:p:66:ARG:NH1	22:p:70:ARG:HB3	2.33	0.44
20:N:104:ASP:OD1	20:N:110:GLN:NE2	2.51	0.44
20:N:164:MET:SD	20:N:174:ILE:HG12	2.58	0.44
23:Q:85:ARG:HH22	22:P:62:THR:H	1.61	0.44
24:R:166:ARG:HD3	24:R:166:ARG:HA	1.83	0.44
27:U:204:ILE:O	27:U:208:LEU:HG	2.18	0.44
27:U:627:PHE:CE1	27:U:755:THR:HG22	2.53	0.44
28:V:479:ARG:HD3	31:Z:265:LEU:HD13	2.00	0.44
29:X:74:ARG:CG	29:X:75:PRO:CD	2.80	0.44
29:X:187:ARG:HH21	29:X:217:ILE:HG22	1.82	0.44
29:X:373:LYS:HG3	29:X:373:LYS:O	2.18	0.44
1:G:40:VAL:HG13	1:G:179:LEU:HD11	1.99	0.44
4:J:16:LEU:HD12	4:J:16:LEU:HA	1.86	0.44
4:J:66:ASP:OD1	4:J:91:CYS:HB3	2.18	0.44
6:M:72:HIS:H	6:M:72:HIS:CD2	2.36	0.44
9:C:273:MET:SD	9:C:274:LEU:N	2.91	0.44
10:D:92:PHE:CE1	10:D:101:ALA:HB1	2.52	0.44
11:E:212:ALA:O	11:E:215:ILE:HG12	2.18	0.44
12:F:59:VAL:HA	12:F:62:VAL:HB	1.99	0.44
12:F:419:ASP:OD1	12:F:419:ASP:N	2.42	0.44
14:f:703:ARG:HE	14:f:706:ILE:HD11	1.82	0.44
14:f:907:ASP:OD1	14:f:907:ASP:N	2.50	0.44
15:a:140:GLU:O	15:a:143:ASN:ND2	2.50	0.44
15:a:303:THR:O	15:a:307:VAL:HG23	2.17	0.44
16:b:91:ARG:HH12	16:b:130:ARG:HD3	1.83	0.44
16:b:157:VAL:HG21	16:b:170:LEU:HB2	1.99	0.44
17:c:29:GLU:HA	17:c:65:TYR:HB2	2.00	0.44
3:i:68:LEU:HD12	3:i:72:MET:HG2	2.00	0.44
6:m:172:ALA:HB2	6:m:200:VAL:HG11	2.00	0.44
20:N:14:LEU:HD21	20:N:101:ALA:HB3	1.99	0.44
20:N:45:ARG:HB3	20:N:52:THR:HB	1.99	0.44
21:O:76:VAL:H	21:O:104:ASP:CG	2.24	0.44
29:X:206:LEU:O	29:X:209:THR:OG1	2.27	0.44
31:Z:12:HIS:NE2	31:Z:49:ASP:HB3	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:W:31:CYS:HB3	32:W:43:VAL:CG2	2.48	0.44
32:W:63:THR:O	32:W:67:LEU:HG	2.18	0.44
32:W:83:LEU:HD23	32:W:123:ARG:HD3	2.00	0.44
1:G:41:ALA:CA	1:G:50:ILE:HG22	2.47	0.43
1:G:95:ARG:NH2	20:N:68:ILE:O	2.38	0.43
1:G:132:ARG:NH1	6:M:124:LEU:HD12	2.33	0.43
2:H:117:VAL:C	2:H:119:GLN:H	2.26	0.43
4:J:35:VAL:CG2	4:J:187:THR:HG23	2.48	0.43
7:A:83:ASP:O	7:A:86:THR:HG22	2.18	0.43
7:A:197:HIS:O	7:A:197:HIS:ND1	2.51	0.43
7:A:242:GLY:O	7:A:246:VAL:HG12	2.18	0.43
9:C:25:LEU:CD2	10:D:51:LEU:CD1	2.95	0.43
10:D:237:GLN:CG	10:D:238:LYS:N	2.78	0.43
11:E:353:PHE:O	11:E:356:ARG:CG	2.64	0.43
12:F:171:ARG:HH11	12:F:267:LEU:HD11	1.83	0.43
12:F:416:THR:C	12:F:417:HIS:CG	2.96	0.43
14:f:72:ARG:O	14:f:76:GLU:HG2	2.17	0.43
14:f:266:LEU:HD13	14:f:294:MET:HE1	2.00	0.43
14:f:452:ASN:HD22	14:f:462:ALA:HB2	1.82	0.43
14:f:531:ASN:HB3	14:f:534:VAL:HB	1.98	0.43
15:a:338:PRO:HB2	31:Z:229:GLN:HA	2.00	0.43
18:d:182:ILE:HG22	18:d:186:TYR:CE2	2.53	0.43
2:h:60:ARG:HH21	2:h:63:HIS:CE1	2.36	0.43
6:m:172:ALA:HA	6:m:196:ILE:HD11	2.00	0.43
20:n:14:LEU:HD13	20:n:179:ILE:HD13	1.99	0.43
21:o:33:LYS:O	21:o:44:CYS:HA	2.18	0.43
26:t:209:TRP:HZ3	20:N:29:ARG:HD2	1.82	0.43
21:O:45:GLY:HA3	21:O:52:THR:HG21	2.00	0.43
22:P:36:THR:OG1	22:P:38:ASP:OD1	2.35	0.43
24:R:8:PHE:HE1	24:R:13:ILE:HG12	1.83	0.43
25:S:113:LEU:HD23	25:S:198:VAL:HG12	2.00	0.43
27:U:265:ILE:HB	27:U:329:LEU:HD22	1.99	0.43
27:U:591:CYS:HA	27:U:625:ILE:HA	1.99	0.43
28:V:322:VAL:O	28:V:326:GLN:HG3	2.18	0.43
28:V:348:PHE:HE1	28:V:357:LEU:HD12	1.83	0.43
32:W:187:LEU:HB3	32:W:225:LYS:NZ	2.32	0.43
2:H:34:PRO:HD2	2:H:49:GLU:HB2	1.99	0.43
2:H:180:GLU:HB3	2:H:183:GLU:HG2	2.00	0.43
3:I:78:GLY:HA3	3:I:132:VAL:HA	1.98	0.43
5:L:19:ILE:HD12	5:L:22:ILE:HG12	1.98	0.43
6:M:70:ASP:HA	26:T:76:LEU:HD11	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A:411:GLU:HG3	7:A:415:LYS:HE2	2.00	0.43
11:E:113:ARG:HG2	11:E:114:GLU:N	2.33	0.43
11:E:307:GLN:O	11:E:310:LEU:HG	2.18	0.43
15:a:135:ILE:HD13	15:a:162:TYR:CE2	2.53	0.43
5:l:196:ARG:HG3	5:l:239:ARG:HE	1.84	0.43
20:n:103:TRP:NE1	20:n:181:GLU:OE2	2.51	0.43
21:o:88:PHE:O	21:o:91:GLN:NE2	2.51	0.43
21:o:175:LEU:HD12	21:o:189:TYR:CD1	2.53	0.43
22:p:53:LEU:HB3	22:p:60:VAL:HG13	2.01	0.43
25:s:136:LYS:NZ	25:s:137:ALA:O	2.49	0.43
27:U:349:ASP:O	27:U:353:LEU:HG	2.19	0.43
27:U:486:MET:HE1	27:U:758:PRO:HG3	1.99	0.43
27:U:528:ALA:O	27:U:532:MET:HG3	2.18	0.43
27:U:615:ARG:O	27:U:619:VAL:HG22	2.18	0.43
29:X:110:CYS:HB2	29:X:133:LEU:HD21	2.00	0.43
1:G:138:MET:HB3	1:G:154:CYS:SG	2.58	0.43
2:H:150:ASP:OD1	2:H:153:GLY:N	2.36	0.43
4:J:210:VAL:HB	4:J:218:LYS:HB3	2.00	0.43
5:L:107:ARG:HH12	26:T:81:HIS:HB2	1.83	0.43
9:C:97:VAL:HG21	9:C:121:TYR:C	2.43	0.43
11:E:66:GLU:HG2	11:E:89:LYS:NZ	2.32	0.43
11:E:122:MET:HE3	11:E:196:LEU:HB2	2.00	0.43
11:E:150:GLU:O	11:E:154:THR:N	2.49	0.43
11:E:162:VAL:HG21	32:W:170:GLN:CB	2.48	0.43
14:f:678:LEU:HB3	14:f:686:LEU:HD11	2.00	0.43
14:f:776:LEU:HD22	14:f:825:MET:HG2	2.01	0.43
17:c:263:ASP:O	17:c:267:PRO:HG3	2.18	0.43
5:l:65:HIS:CD2	25:s:77:HIS:HE1	2.36	0.43
2:h:109:GLN:O	2:h:113:ARG:HG2	2.18	0.43
4:j:42:VAL:HG22	4:j:210:VAL:HG23	2.01	0.43
6:m:49:VAL:HG21	6:m:65:ARG:HB2	2.01	0.43
22:p:61:GLN:NE2	23:q:124:LEU:O	2.46	0.43
28:V:131:LEU:HD11	28:V:171:VAL:CG2	2.49	0.43
28:V:285:TRP:HD1	28:V:315:LYS:HD2	1.83	0.43
29:X:120:GLU:HB3	29:X:122:ARG:HH21	1.83	0.43
30:Y:367:GLN:O	30:Y:371:LYS:HG2	2.18	0.43
32:W:132:THR:C	32:W:134:GLY:H	2.26	0.43
1:G:219:VAL:CG2	1:G:230:LEU:HD13	2.49	0.43
7:A:333:ARG:C	7:A:336:ARG:H	2.25	0.43
8:B:178:LYS:HB2	8:B:246:THR:HB	2.00	0.43
8:B:218:PRO:HB2	8:B:220:LYS:HD3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:D:170:MET:SD	10:D:343:LEU:HD21	2.58	0.43
10:D:170:MET:HB3	10:D:171:ASP:H	1.63	0.43
10:D:178:ARG:HA	10:D:181:VAL:HG12	2.00	0.43
10:D:353:ASN:CB	29:X:226:LYS:NZ	2.81	0.43
10:D:353:ASN:O	10:D:354:LEU:C	2.60	0.43
12:F:424:ILE:O	12:F:427:VAL:HG22	2.19	0.43
13:K:33:LEU:HD12	13:K:33:LEU:C	2.42	0.43
14:f:663:GLY:HA2	14:f:781:TYR:CZ	2.54	0.43
16:b:91:ARG:HE	16:b:95:LEU:CD1	2.30	0.43
3:i:43:VAL:HG21	3:i:137:ILE:HB	1.99	0.43
21:o:2:THR:N	21:o:17:ASP:OD1	2.46	0.43
22:p:25:ASP:OD1	22:p:41:LYS:NZ	2.33	0.43
23:Q:39:SER:OG	23:Q:40:GLU:N	2.50	0.43
25:S:209:SER:C	25:S:210:LEU:HD12	2.43	0.43
27:U:521:LEU:HG	27:U:557:TYR:HE2	1.83	0.43
27:U:552:ILE:O	27:U:555:VAL:HG12	2.19	0.43
29:X:206:LEU:O	29:X:210:LEU:HD23	2.18	0.43
1:G:37:LEU:HD11	1:G:81:THR:HA	2.01	0.43
2:H:72:ILE:HG12	2:H:107:THR:HG23	1.97	0.43
8:B:114:GLU:N	8:B:122:ILE:O	2.27	0.43
9:C:227:GLY:HA3	9:C:265:GLY:HA3	1.99	0.43
12:F:179:GLU:O	12:F:180:ARG:HG3	2.19	0.43
14:f:156:HIS:HA	14:f:159:VAL:HG12	2.00	0.43
14:f:821:LEU:O	14:f:825:MET:HB2	2.19	0.43
14:f:846:VAL:HG11	14:f:872:VAL:HG21	1.99	0.43
15:a:36:GLN:O	15:a:40:GLN:HG2	2.17	0.43
15:a:137:ASP:O	15:a:141:MET:HG2	2.19	0.43
16:b:71:ILE:HD12	16:b:71:ILE:H	1.83	0.43
17:c:57:MET:HE3	17:c:69:VAL:HG21	1.99	0.43
5:l:7:ASP:HB3	5:l:20:HIS:ND1	2.33	0.43
5:l:226:ASP:OD1	5:l:226:ASP:N	2.50	0.43
1:g:222:VAL:O	1:g:222:VAL:HG13	2.19	0.43
13:k:42:THR:CG2	13:k:194:ALA:HB2	2.44	0.43
6:m:51:LYS:HB3	6:m:210:GLU:HB3	2.00	0.43
21:O:211:VAL:HG21	22:P:198:ARG:HD3	1.99	0.43
26:T:176:LEU:O	26:T:180:ASP:HB3	2.18	0.43
26:T:178:TYR:OH	26:T:208:ASN:N	2.45	0.43
27:U:493:VAL:O	27:U:497:LEU:HD13	2.18	0.43
28:V:292:THR:O	28:V:296:LYS:HG2	2.18	0.43
29:X:110:CYS:CB	29:X:133:LEU:HD21	2.48	0.43
29:X:411:VAL:HG23	29:X:412:ASP:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Z:37:GLY:HA3	31:Z:54:PHE:O	2.18	0.43
31:Z:233:VAL:HA	31:Z:236:LEU:HG	1.99	0.43
32:W:243:ILE:HG22	32:W:273:TYR:CD2	2.53	0.43
2:H:105:ILE:O	2:H:105:ILE:CG2	2.60	0.43
5:L:93:LEU:HD21	25:S:73:LYS:CG	2.47	0.43
5:L:144:ILE:CG2	5:L:156:CYS:SG	3.06	0.43
7:A:122:VAL:HB	12:F:87:PRO:HD2	2.01	0.43
7:A:178:GLY:HA3	7:A:354:ILE:HG12	1.99	0.43
9:C:78:ARG:O	9:C:85:VAL:HA	2.18	0.43
9:C:164:VAL:HG21	9:C:313:ARG:CG	2.43	0.43
9:C:198:LEU:C	9:C:200:ALA:H	2.26	0.43
11:E:171:LEU:CD2	11:E:285:LEU:CD2	2.96	0.43
11:E:179:GLY:HA2	35:E:501:ADP:O3A	2.18	0.43
12:F:153:VAL:HG22	12:F:160:ILE:HD13	1.99	0.43
14:f:207:LEU:HD12	14:f:208:LEU:HG	2.00	0.43
14:f:242:GLU:OE1	14:f:242:GLU:N	2.41	0.43
14:f:335:ARG:HG2	14:f:340:MET:SD	2.58	0.43
14:f:379:GLY:HA3	14:f:413:SER:OG	2.19	0.43
14:f:556:ARG:HG2	14:f:590:PHE:CE2	2.54	0.43
14:f:799:VAL:O	14:f:802:SER:OG	2.32	0.43
15:a:9:GLN:O	15:a:12:GLN:HG2	2.19	0.43
15:a:81:LEU:HD11	15:a:117:ALA:HB2	2.01	0.43
15:a:332:HIS:CD2	15:a:334:THR:HG23	2.54	0.43
16:b:53:THR:OG1	16:b:59:GLU:N	2.50	0.43
16:b:97:LEU:HG	16:b:107:MET:HG3	2.01	0.43
17:c:265:MET:O	17:c:266:THR:OG1	2.36	0.43
17:c:293:THR:HA	17:c:296:ILE:HG12	2.00	0.43
18:d:105:PHE:HD1	18:d:169:ILE:HG21	1.82	0.43
19:e:17:ASP:N	19:e:17:ASP:OD1	2.51	0.43
5:l:40:SER:HB3	5:l:187:LEU:HD22	2.01	0.43
5:l:95:SER:OG	5:l:101:ARG:NH1	2.51	0.43
3:i:115:CYS:SG	3:i:156:TYR:HB3	2.58	0.43
23:q:9:GLY:HA3	23:q:12:TYR:CZ	2.54	0.43
27:U:78:LEU:O	27:U:82:LEU:HB2	2.18	0.43
27:U:133:ILE:O	27:U:137:MET:HG2	2.18	0.43
27:U:583:MET:SD	27:U:583:MET:C	3.01	0.43
27:U:623:GLY:CA	27:U:659:CYS:HB3	2.48	0.43
30:Y:387:ILE:HD11	31:Z:279:LYS:HG3	2.01	0.43
1:G:91:VAL:HG12	1:G:95:ARG:HD2	2.01	0.43
5:L:226:ASP:CG	5:L:227:ASP:N	2.68	0.43
8:B:107:MET:HA	8:B:152:LEU:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:C:337:ASN:OD1	9:C:338:LEU:N	2.51	0.43
11:E:97:ARG:HH21	11:E:111:LEU:HB3	1.82	0.43
13:K:73:HIS:CE1	13:K:106:THR:HB	2.53	0.43
14:f:248:LEU:HA	14:f:251:CYS:SG	2.58	0.43
14:f:333:LEU:HD11	14:f:831:VAL:HG22	2.01	0.43
14:f:442:SER:OG	14:f:476:THR:O	2.34	0.43
14:f:611:GLN:O	14:f:615:ILE:HG23	2.19	0.43
16:b:25:ARG:NH1	16:b:145:GLU:OE2	2.52	0.43
17:c:266:THR:O	17:c:268:GLU:N	2.51	0.43
18:d:53:ASP:O	18:d:56:GLU:HG2	2.18	0.43
5:l:86:ASN:HA	5:l:89:ARG:HG2	2.00	0.43
3:i:115:CYS:HG	3:i:156:TYR:HB3	1.83	0.43
25:s:63:THR:HG21	26:t:97:TYR:CG	2.53	0.43
26:t:24:ALA:HB1	26:t:41:ARG:NH2	2.34	0.43
20:N:164:MET:HA	20:N:170:SER:HB2	2.00	0.43
23:Q:140:LEU:HD23	23:Q:140:LEU:HA	1.84	0.43
22:P:169:GLN:O	22:P:173:ASN:ND2	2.51	0.43
27:U:10:SER:O	27:U:14:GLU:HG2	2.19	0.43
29:X:143:TYR:OH	30:Y:252:SER:HB3	2.19	0.43
33:x:95:GLN:HG2	33:x:96:ASP:H	1.84	0.43
1:G:225:PRO:O	1:G:226:LYS:HB2	2.19	0.43
2:H:82:ASP:CG	2:H:128:ARG:HH22	2.25	0.43
4:J:40:ILE:CD1	4:J:184:ASP:OD1	2.54	0.43
6:M:163:CYS:SG	6:M:164:ALA:N	2.91	0.43
8:B:112:LEU:HD12	8:B:123:VAL:HB	2.00	0.43
8:B:410:ARG:O	8:B:412:MET:HG3	2.18	0.43
10:D:172:ILE:HG23	10:D:334:PRO:HD2	2.00	0.43
10:D:268:ASP:OD2	10:D:313:ARG:HB2	2.19	0.43
10:D:283:ARG:O	10:D:287:ARG:HG3	2.19	0.43
11:E:90:SER:O	11:E:93:LYS:HE3	2.19	0.43
11:E:181:THR:HA	11:E:197:LYS:NZ	2.34	0.43
12:F:225:MET:HE2	12:F:225:MET:HB3	1.90	0.43
14:f:213:GLN:O	14:f:213:GLN:HG3	2.19	0.43
14:f:264:GLU:HB3	14:f:267:ARG:HH21	1.84	0.43
15:a:80:ILE:O	15:a:84:VAL:HG23	2.19	0.43
17:c:224:SER:O	31:Z:196:HIS:NE2	2.52	0.43
18:d:103:LEU:O	18:d:107:LEU:HD23	2.18	0.43
5:l:53:GLN:NE2	13:k:168:ARG:HH22	2.17	0.43
5:l:176:MET:HE3	5:l:176:MET:HB3	1.92	0.43
1:g:138:MET:HB3	1:g:154:CYS:SG	2.58	0.43
4:j:137:ASP:OD2	4:j:143:ARG:NE	2.45	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:n:34:LEU:O	20:n:34:LEU:HD12	2.18	0.43
24:r:161:TYR:OH	24:r:196:HIS:ND1	2.30	0.43
24:R:127:SER:HB3	24:R:136:TYR:CE2	2.54	0.43
27:U:208:LEU:HD12	27:U:215:ASN:HD22	1.83	0.43
27:U:381:THR:HA	27:U:412:HIS:CE1	2.52	0.43
27:U:397:THR:C	27:U:399:TRP:H	2.26	0.43
27:U:607:VAL:O	27:U:615:ARG:NH2	2.50	0.43
30:Y:56:ALA:HA	30:Y:59:LYS:NZ	2.34	0.43
31:Z:6:VAL:HG12	31:Z:43:TRP:CE2	2.54	0.43
32:W:341:PHE:HB3	32:W:351:TRP:NE1	2.33	0.43
2:H:14:SER:H	3:I:8[A]:ARG:NH2	2.16	0.43
3:I:213:ILE:HG13	3:I:228:LEU:HB2	2.00	0.43
4:J:105:GLU:HB3	4:J:145:TYR:OH	2.18	0.43
6:M:52:LEU:H	6:M:52:LEU:HD12	1.84	0.43
7:A:207:GLU:HG3	7:A:311:PRO:CB	2.49	0.43
9:C:25:LEU:CD2	10:D:51:LEU:HD12	2.48	0.43
9:C:53:ASN:HA	9:C:56:VAL:HG22	2.00	0.43
10:D:66:LYS:HE2	10:D:69:LYS:HE2	2.01	0.43
11:E:173:TYR:O	11:E:180:LYS:HD3	2.19	0.43
12:F:289:ASP:OD1	12:F:289:ASP:N	2.51	0.43
13:K:22:PHE:C	13:K:24:VAL:H	2.27	0.43
14:f:547:GLU:HA	14:f:550:LEU:HD12	2.00	0.43
15:a:213:PHE:O	15:a:216:LEU:HG	2.18	0.43
16:b:18:ASN:OD1	16:b:25:ARG:NH1	2.52	0.43
18:d:172:ASP:HA	18:d:175:ARG:HG2	2.00	0.43
5:l:41:LYS:HD3	5:l:181:GLU:HA	2.01	0.43
1:g:117:ARG:O	1:g:121:ILE:HG13	2.19	0.43
1:g:206:LEU:HG	1:g:208:ILE:HG23	2.00	0.43
6:m:20:VAL:HG23	6:m:23:VAL:HB	2.01	0.43
21:o:178:ILE:HG12	21:o:183:LEU:HD13	2.01	0.43
22:p:12:MET:HB3	22:p:146:MET:CE	2.48	0.43
25:s:65:THR:O	25:s:69:GLU:HG2	2.18	0.43
25:s:211:ARG:HH21	21:O:171:SER:HA	1.84	0.43
27:U:541:HIS:ND1	27:U:544:ILE:HD12	2.34	0.43
27:U:620:GLU:OE2	27:U:621:SER:OG	2.34	0.43
27:U:680:VAL:HB	27:U:683:VAL:HG12	2.00	0.43
27:U:728:PHE:O	27:U:732:LEU:HD23	2.19	0.43
28:V:77:GLU:C	28:V:81:GLN:HE21	2.27	0.43
28:V:326:GLN:O	28:V:330:LYS:HG3	2.18	0.43
29:X:162:ASP:O	29:X:166:LEU:HD23	2.18	0.43
3:I:114:LEU:HD23	3:I:136:TYR:OH	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A:248:LYS:HE3	8:B:260:LEU:CD2	2.49	0.43
9:C:194:THR:OG1	9:C:356:GLY:N	2.34	0.43
11:E:62:LYS:HB3	11:E:70:ILE:HB	2.01	0.43
11:E:322:LYS:HD3	11:E:322:LYS:HA	1.84	0.43
13:K:200:ILE:HG23	13:K:241:ILE:HD12	2.01	0.43
14:f:262:PHE:N	14:f:263:PRO:HD2	2.34	0.43
14:f:290:VAL:HA	14:f:293:GLN:HG3	2.00	0.43
15:a:177:LEU:HD21	15:a:216:LEU:HB3	2.01	0.43
15:a:323:SER:H	15:a:332:HIS:HB3	1.83	0.43
16:b:38:HIS:O	16:b:42:ARG:HG2	2.18	0.43
17:c:196:LEU:C	17:c:198:ARG:H	2.26	0.43
17:c:248:MET:HE2	31:Z:262:LEU:HB3	2.00	0.43
22:p:53:LEU:HD23	22:p:60:VAL:HA	2.00	0.43
26:t:182:ARG:HD2	26:t:182:ARG:N	2.34	0.43
27:U:811:PHE:HB2	27:U:883:ARG:HH22	1.84	0.43
28:V:225:ASP:OD1	28:V:226:VAL:HG23	2.19	0.43
28:V:423:ALA:HB2	28:V:434:ALA:HB2	2.00	0.43
28:V:487:HIS:O	28:V:491:VAL:HG23	2.19	0.43
29:X:344:ARG:HG3	29:X:386:ILE:HA	2.01	0.43
31:Z:23:PHE:CD2	31:Z:97:THR:HG21	2.54	0.43
32:W:96:GLN:HG2	32:W:97:LEU:N	2.29	0.43
32:W:207:LYS:HA	32:W:210:ASN:ND2	2.34	0.43
32:W:254:PRO:O	32:W:258:ALA:HA	2.18	0.43
32:W:282:GLU:O	32:W:286:LEU:HD23	2.19	0.43
32:W:374:THR:HG23	32:W:377:ARG:H	1.84	0.43
1:G:14:THR:HG22	1:G:24:GLN:HG2	2.01	0.42
4:J:63:CYS:HB2	4:J:84:ILE:HD13	2.01	0.42
5:L:36:VAL:HG22	5:L:47:VAL:HB	2.01	0.42
7:A:120:LYS:HB3	7:A:120:LYS:HE2	1.80	0.42
7:A:229:VAL:HG21	7:A:237:PHE:CD1	2.53	0.42
7:A:343:PHE:O	7:A:345:LEU:HG	2.18	0.42
8:B:400:THR:HA	9:C:180:ILE:HG13	2.02	0.42
13:K:48:LEU:O	13:K:217:LEU:HD12	2.18	0.42
18:d:6:LYS:HA	18:d:9:TRP:HE3	1.83	0.42
5:l:233:LEU:HD12	5:l:236:LEU:HG	2.00	0.42
1:g:81:THR:HG21	1:g:169:GLY:HA2	2.01	0.42
13:k:29:GLU:O	13:k:32:LYS:HG2	2.19	0.42
22:p:47:ASP:OD1	22:p:48:ARG:N	2.51	0.42
24:r:87:VAL:HG11	24:r:116:SER:HA	2.00	0.42
25:s:14:ALA:HA	25:s:22:ILE:O	2.19	0.42
25:s:185:ARG:CZ	21:O:29:LYS:HE3	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:N:66:HIS:O	20:N:69:GLU:HG2	2.19	0.42
25:S:123:SER:HB2	25:S:136:LYS:HG2	2.00	0.42
27:U:98:GLU:HA	27:U:101:ILE:HG12	2.01	0.42
32:W:373:ILE:HG22	32:W:413:ILE:HD11	2.00	0.42
32:W:378:MET:HE3	32:W:389:SER:HB2	2.01	0.42
1:G:202:LEU:HA	1:G:202:LEU:HD12	1.84	0.42
1:G:207:SER:H	11:E:291:ARG:NH2	2.16	0.42
3:I:197:LEU:HA	3:I:200:THR:HG22	2.00	0.42
8:B:303:ARG:O	8:B:304:GLU:C	2.62	0.42
10:D:183:LEU:HD21	10:D:198:PRO:HB2	2.00	0.42
10:D:204:MET:HB2	10:D:212:LYS:HE3	2.00	0.42
12:F:184:GLN:OE1	12:F:185:TYR:N	2.52	0.42
12:F:272:PHE:HE1	12:F:320:PHE:HE1	1.67	0.42
13:K:230:THR:HB	13:K:233:GLU:C	2.43	0.42
14:f:60:VAL:HG21	14:f:102:HIS:CE1	2.54	0.42
14:f:573:ILE:HA	14:f:576:ILE:HD13	2.01	0.42
15:a:18:GLN:N	15:a:19:PRO:HD2	2.34	0.42
16:b:92:VAL:HG12	31:Z:67:VAL:HA	2.00	0.42
21:o:2:THR:HG21	21:o:162:GLY:HA3	2.01	0.42
21:o:51:ASP:OD2	22:p:99:ARG:NH1	2.53	0.42
26:t:50:MET:HE2	26:t:50:MET:HB3	1.91	0.42
26:t:154:LEU:HD23	26:t:154:LEU:HA	1.82	0.42
20:N:19:ARG:CZ	20:N:171:GLY:HA3	2.49	0.42
21:O:187:ARG:CB	21:O:188:PRO:CD	2.94	0.42
23:Q:85:ARG:NH1	22:P:65:GLN:OE1	2.52	0.42
22:P:149:MET:HE3	22:P:153:LEU:HD21	2.00	0.42
25:S:148:LEU:O	25:S:151:ASN:OD1	2.38	0.42
25:S:192:ALA:C	25:S:210:LEU:HD13	2.44	0.42
27:U:191:LYS:HA	27:U:194:ARG:HB3	2.01	0.42
28:V:117:VAL:HG13	28:V:121:PHE:CD2	2.54	0.42
31:Z:136:GLU:HB3	32:W:448:LYS:NZ	2.33	0.42
32:W:245:LYS:O	32:W:248:ARG:HG2	2.19	0.42
6:M:34:SER:HB3	6:M:52:LEU:HD11	2.02	0.42
6:M:35:THR:HG22	6:M:167:LYS:HB3	2.00	0.42
7:A:26:ASP:O	7:A:30:ILE:HG23	2.20	0.42
7:A:60:ASN:O	7:A:63:THR:HG23	2.20	0.42
7:A:191:VAL:C	7:A:194:PRO:HD2	2.44	0.42
7:A:331:LEU:C	7:A:334:PRO:HD2	2.43	0.42
9:C:147:THR:HG22	9:C:205:HIS:CD2	2.54	0.42
10:D:359:ASP:OD1	10:D:362:ASP:HB3	2.19	0.42
14:f:430:ASP:OD1	33:x:74:LYS:NZ	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:f:542:ILE:O	14:f:550:LEU:HD11	2.19	0.42
14:f:553:THR:HA	14:f:556:ARG:HH12	1.85	0.42
18:d:252:GLN:NE2	28:V:487:HIS:HB3	2.34	0.42
1:g:75:ASN:OD1	1:g:76:ILE:HG13	2.19	0.42
4:j:6:ALA:H	13:k:125:GLU:HG2	1.84	0.42
4:j:59:VAL:HG22	4:j:59:VAL:O	2.19	0.42
13:k:27:ALA:O	13:k:31:ILE:HG12	2.19	0.42
23:q:38:MET:HE1	23:q:60:ILE:HG23	2.01	0.42
24:r:19:ARG:NH2	22:P:205:ASP:OD2	2.53	0.42
26:t:156:LYS:HA	26:t:156:LYS:HE3	2.00	0.42
21:O:55:THR:O	21:O:59:ILE:HG12	2.18	0.42
22:P:118:LYS:HD3	22:P:118:LYS:HA	1.82	0.42
27:U:147:TYR:HA	27:U:150:ALA:HB3	2.00	0.42
27:U:181:LEU:HD12	27:U:205:TYR:CE2	2.54	0.42
27:U:658:ILE:HG12	27:U:763:VAL:HG11	2.01	0.42
28:V:304:GLU:H	28:V:304:GLU:CD	2.27	0.42
28:V:357:LEU:HD13	28:V:360:TYR:HD2	1.85	0.42
29:X:143:TYR:CZ	30:Y:252:SER:HB3	2.53	0.42
29:X:315:ASP:O	29:X:319:ILE:HB	2.20	0.42
29:X:346:GLN:HA	29:X:384:VAL:HA	2.00	0.42
30:Y:294:TYR:CD1	30:Y:298:GLU:HB2	2.54	0.42
1:G:219:VAL:CG2	1:G:230:LEU:CD1	2.98	0.42
7:A:143:ASP:O	7:A:147:TYR:N	2.33	0.42
10:D:353:ASN:CG	29:X:226:LYS:NZ	2.77	0.42
12:F:230:GLY:HA3	12:F:392:ASN:HB3	2.02	0.42
14:f:264:GLU:HB3	14:f:267:ARG:NH2	2.34	0.42
14:f:336:GLU:OE1	14:f:337:LEU:HD22	2.18	0.42
14:f:343:LYS:HB3	14:f:381:VAL:HG11	2.00	0.42
14:f:429:ILE:HD12	14:f:432:TYR:HB2	2.00	0.42
14:f:457:ASN:OD1	14:f:460:ASP:N	2.51	0.42
14:f:828:ARG:NE	14:f:873:LEU:HD12	2.34	0.42
17:c:119:GLY:HA3	17:c:190:GLN:NE2	2.32	0.42
18:d:47:GLN:O	18:d:50:LEU:HG	2.19	0.42
18:d:241:GLU:OE2	28:V:473:GLN:NE2	2.43	0.42
2:h:162:ALA:O	2:h:163:MET:HE2	2.18	0.42
4:j:224:GLU:HA	4:j:227:LYS:HG2	2.01	0.42
24:r:42:LEU:HD21	24:r:184:TRP:CB	2.49	0.42
26:t:172:CYS:O	26:t:176:LEU:HD23	2.19	0.42
22:P:29:GLY:HA2	22:P:35:VAL:HG23	2.02	0.42
22:P:44:PRO:HB3	22:P:50:TYR:CE2	2.54	0.42
27:U:738:ASP:OD1	27:U:741:GLY:HA2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:V:325:LYS:O	28:V:329:HIS:CD2	2.73	0.42
32:W:340:VAL:HG12	32:W:341:PHE:CD1	2.54	0.42
2:H:83:TYR:O	2:H:84:ARG:C	2.61	0.42
3:I:11[A]:ILE:O	3:I:18:LEU:HD23	2.19	0.42
6:M:31:GLU:O	6:M:167:LYS:HA	2.18	0.42
9:C:140:VAL:HG13	9:C:234:LEU:HD21	1.96	0.42
9:C:336:MET:HA	10:D:195:GLY:HA3	2.02	0.42
9:C:365:GLU:CG	9:C:386:ALA:HA	2.49	0.42
11:E:355:ILE:O	11:E:358:ASP:OD1	2.36	0.42
13:K:52:LYS:HD2	13:K:216:GLU:HG3	2.02	0.42
14:f:182:GLU:HB2	14:f:183:PRO:HD3	2.02	0.42
17:c:229:LEU:HD11	31:Z:201:LEU:HB2	2.01	0.42
18:d:164:THR:HB	18:d:167:ILE:HD11	2.02	0.42
18:d:206:MET:HE3	18:d:206:MET:HA	2.00	0.42
1:g:86:ASP:HB3	1:g:136:CYS:SG	2.60	0.42
3:i:134:LEU:HD12	3:i:136:TYR:CE1	2.54	0.42
3:i:184:MET:SD	3:i:188:SER:OG	2.71	0.42
13:k:59:MET:HE3	13:k:64:ILE:HG13	2.01	0.42
6:m:215:TRP:CH2	6:m:228:PRO:HD2	2.54	0.42
20:n:53:GLN:CD	21:o:119:THR:H	2.28	0.42
20:n:103:TRP:CD1	20:n:108:GLY:HA2	2.54	0.42
21:o:186:LEU:HD23	21:o:189:TYR:CD1	2.54	0.42
24:r:184:TRP:HZ3	24:r:186:ARG:HG3	1.83	0.42
26:t:142:GLY:HA2	26:t:176:LEU:HD11	2.02	0.42
20:N:114:VAL:HA	20:N:119:MET:O	2.18	0.42
21:O:100:LEU:O	21:O:110:LEU:HD12	2.20	0.42
23:Q:86:ARG:HH12	22:P:62:THR:HG23	1.85	0.42
24:R:112:TYR:CE2	24:R:122:SER:HB2	2.55	0.42
27:U:213:PHE:CG	27:U:214:ILE:N	2.87	0.42
28:V:338:LEU:HD12	28:V:398:LEU:HD12	2.01	0.42
28:V:343:PRO:HB2	28:V:345:ARG:HH22	1.83	0.42
1:G:16:PHE:HB2	2:H:21:GLN:OE1	2.20	0.42
1:G:18:PRO:HA	2:H:24:TYR:CG	2.54	0.42
1:G:104:LYS:HE3	1:G:104:LYS:HB3	1.76	0.42
2:H:58:ASP:OD2	2:H:60:ARG:N	2.52	0.42
4:J:40:ILE:HG21	4:J:184:ASP:CG	2.44	0.42
5:L:77:LEU:HD23	5:L:80:ASP:H	1.84	0.42
6:M:52:LEU:HD23	6:M:209:PHE:CZ	2.54	0.42
8:B:116:ILE:HG22	8:B:120:HIS:O	2.19	0.42
8:B:338:ASP:O	8:B:342:ILE:N	2.46	0.42
9:C:297:ARG:O	9:C:299:ASP:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:D:105:SER:OG	10:D:109:SER:OG	2.36	0.42
11:E:41:GLU:OE2	12:F:69:MET:HB3	2.20	0.42
11:E:151:LEU:HD12	32:W:175:GLY:O	2.20	0.42
13:K:220:VAL:HG22	13:K:226:PHE:CE2	2.55	0.42
14:f:124:ASP:OD1	14:f:143:ARG:NH1	2.45	0.42
14:f:686:LEU:O	14:f:690:VAL:HG23	2.19	0.42
15:a:247:ARG:NH1	15:a:269:LEU:HD23	2.34	0.42
17:c:75:MET:HG2	17:c:91:PHE:HE2	1.85	0.42
3:i:10:THR:HG21	3:i:126:GLY:H	1.84	0.42
3:i:184:MET:HG3	3:i:189:ALA:HB2	2.02	0.42
3:i:229:LYS:O	3:i:233:VAL:HG23	2.19	0.42
4:j:155:ALA:HB3	13:k:60:GLU:HB2	2.02	0.42
6:m:122:TYR:HD2	6:m:131:PHE:CZ	2.38	0.42
6:m:123:THR:HG22	6:m:130:PRO:HB3	2.01	0.42
21:o:82:MET:HA	21:o:85:GLN:NE2	2.35	0.42
23:q:19:ARG:HH21	23:q:31:ASP:HB3	1.84	0.42
23:q:44:LEU:HD12	23:q:104:LEU:HD11	2.02	0.42
24:r:71:LYS:O	24:r:71:LYS:CG	2.67	0.42
24:r:104:TRP:CE2	24:r:181:GLU:HG3	2.54	0.42
25:s:122:TYR:CE2	25:s:132:ARG:HB2	2.54	0.42
25:s:162:GLU:OE2	25:s:164:VAL:HG23	2.20	0.42
20:N:13:VAL:C	20:N:14:LEU:HD23	2.45	0.42
21:O:45:GLY:HA2	21:O:98:LEU:HD13	2.01	0.42
21:O:76:VAL:HG23	21:O:104:ASP:OD1	2.20	0.42
21:O:164:PHE:CZ	21:O:192:PRO:HB2	2.54	0.42
23:Q:36:PHE:HB2	23:Q:44:LEU:HB3	2.01	0.42
26:T:59:ASP:O	26:T:63:LEU:HD23	2.18	0.42
27:U:38:ILE:HG22	27:U:67:VAL:HG22	2.01	0.42
27:U:401:LYS:NZ	27:U:438:GLN:HA	2.32	0.42
27:U:466:LYS:HD3	27:U:496:LEU:HD13	2.01	0.42
28:V:61:GLU:HA	28:V:64:GLN:HG2	2.01	0.42
28:V:121:PHE:CE1	28:V:167:LEU:HD22	2.54	0.42
28:V:419:LEU:HA	28:V:422:ILE:HG22	2.01	0.42
31:Z:214:LYS:NZ	32:W:450:GLU:OE2	2.53	0.42
32:W:27:ARG:HG2	32:W:31:CYS:SG	2.59	0.42
32:W:275:ILE:HD11	32:W:305:LEU:HA	2.02	0.42
1:G:160:TYR:O	1:G:160:TYR:CG	2.73	0.42
1:G:190:THR:C	1:G:192:GLU:H	2.28	0.42
3:I:163:CYS:SG	3:I:164:ILE:N	2.92	0.42
6:M:109:LYS:HG3	6:M:110:HIS:N	2.34	0.42
7:A:425:ALA:HB3	8:B:342:ILE:HG23	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:C:43:ARG:HG2	10:D:65:GLN:OE1	2.19	0.42
10:D:317:LEU:HB3	10:D:321:LEU:HD11	2.01	0.42
12:F:81:LYS:O	12:F:85:THR:OG1	2.20	0.42
14:f:129:LEU:O	14:f:133:MET:HG2	2.20	0.42
14:f:188:VAL:HA	14:f:191:ILE:HG12	2.01	0.42
14:f:219:LYS:HA	14:f:258:LYS:NZ	2.35	0.42
14:f:416:MET:HE3	14:f:416:MET:HB3	1.84	0.42
14:f:733:GLY:O	14:f:736:THR:OG1	2.28	0.42
15:a:38:THR:HG21	15:a:75:SER:OG	2.20	0.42
15:a:172:TYR:HA	15:a:175:ASP:OD2	2.20	0.42
16:b:8:VAL:HG23	16:b:110:ILE:HG23	2.00	0.42
5:l:65:HIS:HA	5:l:221:PHE:CE2	2.54	0.42
5:l:85:CYS:HA	5:l:88:MET:HE2	2.02	0.42
1:g:191:PHE:O	1:g:195:VAL:HG13	2.20	0.42
13:k:44:GLU:O	13:k:44:GLU:CG	2.67	0.42
20:n:21:THR:HG22	20:n:26:ILE:HA	2.00	0.42
22:p:66:ARG:HG3	22:p:94:LEU:HD11	2.01	0.42
25:s:153:VAL:HG22	25:s:166:LEU:HD21	2.00	0.42
26:t:68:GLY:O	26:t:72:ILE:HG12	2.19	0.42
26:t:203:LEU:HD23	26:t:203:LEU:HA	1.95	0.42
25:S:64:LEU:HD21	25:S:92:LEU:HD11	2.01	0.42
26:T:9:THR:O	26:T:41:ARG:NH2	2.53	0.42
27:U:246:TYR:O	27:U:250:PHE:HD2	2.02	0.42
27:U:376:MET:HG2	27:U:738:ASP:O	2.20	0.42
27:U:583:MET:HE2	27:U:583:MET:HB2	1.93	0.42
28:V:316:ALA:HB2	28:V:324:PHE:CE2	2.55	0.42
28:V:394:LEU:H	28:V:394:LEU:HD12	1.84	0.42
28:V:440:LYS:HG2	28:V:443:ARG:HE	1.85	0.42
30:Y:16:ASP:O	30:Y:19:ILE:HG22	2.20	0.42
32:W:328:LEU:HD22	32:W:351:TRP:HZ2	1.84	0.42
1:G:143:ILE:HD12	1:G:148:GLY:C	2.44	0.42
1:G:147:GLN:HB3	1:G:150:GLN:NE2	2.34	0.42
3:I:28:ILE:CG1	3:I:152:PRO:HG2	2.44	0.42
6:M:36:ALA:CA	6:M:49:VAL:HG22	2.48	0.42
6:M:41:CYS:SG	6:M:44:GLY:N	2.93	0.42
7:A:261:PHE:HZ	7:A:306:LEU:HB3	1.85	0.42
8:B:92:GLN:HB3	8:B:96:ARG:HG2	2.02	0.42
9:C:25:LEU:HD21	10:D:51:LEU:HD11	2.01	0.42
9:C:329:LEU:HD23	9:C:348:ALA:HB2	2.02	0.42
10:D:168:GLY:H	35:D:501:ADP:N6	2.04	0.42
10:D:273:LYS:HA	10:D:316:THR:HB	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:E:175:PRO:HB3	11:E:280:ASN:HB3	2.02	0.42
14:f:403:LYS:HG3	14:f:404:ASP:CG	2.44	0.42
14:f:494:ARG:HE	14:f:495:GLU:H	1.66	0.42
14:f:576:ILE:H	14:f:576:ILE:HD12	1.85	0.42
15:a:11:SER:O	15:a:22:TRP:NE1	2.53	0.42
15:a:179:PHE:HA	15:a:182:CYS:SG	2.60	0.42
18:d:155:LYS:HB3	18:d:167:ILE:HB	2.02	0.42
1:g:125:TYR:HB3	1:g:133:PRO:HA	2.02	0.42
1:g:159:TYR:CG	1:g:159:TYR:O	2.72	0.42
1:g:210:PHE:CE2	1:g:215:ILE:HD13	2.54	0.42
13:k:8:TYR:O	13:k:10:ARG:N	2.52	0.42
20:n:144:ARG:NH1	20:n:147:MET:HE2	2.35	0.42
21:o:127:MET:C	21:o:131:SER:HB2	2.45	0.42
22:p:33:GLN:HB3	24:R:134:TYR:OH	2.19	0.42
27:U:653:ALA:HB1	27:U:687:ALA:HA	2.02	0.42
28:V:337:LEU:HD11	28:V:364:THR:HG22	2.01	0.42
29:X:44:GLN:HA	29:X:47:GLU:OE1	2.19	0.42
29:X:132:ARG:O	29:X:135:SER:OG	2.26	0.42
29:X:133:LEU:HD23	29:X:133:LEU:HA	1.89	0.42
29:X:264:PRO:HA	29:X:267:VAL:HG23	2.01	0.42
33:x:38:GLU:OE2	33:x:40:HIS:HE1	2.03	0.42
4:J:104:VAL:HG23	4:J:105:GLU:N	2.35	0.42
4:J:146:GLN:OE1	4:J:148:ASP:OD1	2.38	0.42
4:J:147:THR:HG22	4:J:153:TYR:HB3	2.02	0.42
8:B:221:GLY:H	8:B:326:LYS:HE2	1.84	0.42
8:B:247:PHE:CZ	8:B:249:ARG:HB2	2.54	0.42
10:D:66:LYS:CE	10:D:69:LYS:HE2	2.50	0.42
14:f:789:SER:OG	14:f:792:ALA:HB3	2.19	0.42
14:f:828:ARG:HE	14:f:873:LEU:HD12	1.85	0.42
15:a:123:LEU:HD12	15:a:162:TYR:HD1	1.83	0.42
17:c:183:HIS:HD2	27:U:725:MET:HE3	1.85	0.42
18:d:70:SER:HA	18:d:73:ARG:HE	1.84	0.42
18:d:197:ILE:H	18:d:197:ILE:HD12	1.85	0.42
2:h:76:TYR:HB3	2:h:83:TYR:CD1	2.55	0.42
4:j:10:PHE:CE2	13:k:135:ARG:HB2	2.55	0.42
6:m:131:PHE:O	6:m:153:PRO:HB3	2.19	0.42
23:q:118:MET:HE2	23:q:118:MET:HB2	1.88	0.42
25:s:81:LYS:HG3	25:s:82:ALA:N	2.35	0.42
25:s:145:LEU:CD1	25:s:178:VAL:HB	2.49	0.42
23:Q:116:TYR:HB3	23:Q:124:LEU:HD11	2.00	0.42
22:P:47:ASP:OD1	22:P:48:ARG:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:U:236:LEU:HB3	27:U:245:ALA:HB2	2.01	0.42
28:V:176:MET:SD	28:V:217:VAL:HG13	2.59	0.42
28:V:476:PHE:O	28:V:479:ARG:HG2	2.20	0.42
30:Y:217:LYS:HE3	30:Y:253:LEU:HD21	2.02	0.42
32:W:308:LEU:HA	32:W:313:GLU:OE2	2.20	0.42
1:G:77:GLY:HA3	1:G:227:PHE:CG	2.54	0.42
2:H:69:THR:HG22	2:H:72:ILE:HB	2.01	0.42
2:H:134:LEU:HD23	2:H:134:LEU:H	1.85	0.42
7:A:363:SER:O	7:A:405:THR:N	2.53	0.42
8:B:71:TYR:CD2	14:f:670:MET:HB3	2.55	0.42
8:B:80:ARG:HA	8:B:83:GLU:CD	2.45	0.42
8:B:116:ILE:CG2	8:B:120:HIS:C	2.92	0.42
9:C:64:GLN:OE1	9:C:67:GLN:NE2	2.53	0.42
9:C:94:LYS:H	9:C:94:LYS:HD2	1.85	0.42
9:C:343:ASN:O	9:C:347:ILE:HG12	2.20	0.42
9:C:393:LYS:HA	9:C:393:LYS:HD3	1.85	0.42
12:F:207:ASN:OD1	12:F:208:HIS:CD2	2.72	0.42
14:f:322:SER:HB3	14:f:456:ARG:O	2.19	0.42
14:f:848:GLN:OE1	14:f:878:GLU:HB3	2.18	0.42
15:a:122:LYS:HG3	15:a:130:VAL:HG12	2.01	0.42
15:a:359:ASP:O	15:a:363:MET:HG2	2.19	0.42
18:d:92:SER:O	18:d:94:TYR:N	2.52	0.42
18:d:152:PHE:HE1	18:d:174:ILE:HG21	1.85	0.42
3:i:240:HIS:O	3:i:243:GLU:HG2	2.20	0.42
21:o:20:ALA:HB2	21:o:31:CYS:HB2	2.00	0.42
21:o:92:GLY:HA2	21:o:115:PRO:O	2.20	0.42
25:s:6:VAL:HG21	25:s:31:GLU:OE2	2.20	0.42
21:O:159:ILE:O	21:O:163:ILE:HG13	2.20	0.42
24:R:138:VAL:HG11	24:R:159:ALA:HA	2.01	0.42
27:U:532:MET:CB	27:U:548:LEU:HD11	2.50	0.42
28:V:343:PRO:HG2	28:V:364:THR:HG22	2.02	0.42
28:V:419:LEU:HD12	28:V:420:ALA:N	2.34	0.42
29:X:194:ARG:NH1	29:X:210:LEU:HB3	2.35	0.42
30:Y:50:MET:HG2	30:Y:71:ASN:OD1	2.20	0.42
32:W:187:LEU:HA	32:W:190:MET:HG2	2.02	0.42
3:I:68:LEU:HD12	3:I:69:ASN:CB	2.49	0.41
4:J:79:ASP:O	4:J:83:VAL:HG23	2.19	0.41
4:J:83:VAL:HG23	4:J:127:PHE:CE2	2.55	0.41
4:J:137:ASP:OD1	4:J:141:THR:N	2.53	0.41
7:A:104:ALA:HA	7:A:136:GLU:HG2	2.02	0.41
9:C:394:ASP:CG	9:C:395:SER:H	2.28	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:D:183:LEU:HD11	10:D:198:PRO:HB2	2.02	0.41
12:F:228:PRO:HG2	12:F:356:MET:SD	2.60	0.41
12:F:336:ASP:OD1	12:F:336:ASP:N	2.53	0.41
12:F:344:ARG:HB3	12:F:347:ARG:HG2	2.01	0.41
14:f:125:ILE:HA	14:f:128:VAL:HG22	2.00	0.41
16:b:12:ASN:HD21	16:b:75:LEU:HD11	1.84	0.41
17:c:223:LYS:HE2	17:c:225:TRP:CD1	2.54	0.41
17:c:259:VAL:O	17:c:262:GLU:HB2	2.20	0.41
18:d:67:ASP:OD1	18:d:67:ASP:N	2.48	0.41
5:l:109:VAL:HG21	5:l:145:PHE:CG	2.55	0.41
5:l:159:MET:SD	5:l:169:ARG:NH1	2.92	0.41
1:g:12:HIS:CD2	6:m:6:GLY:HA3	2.55	0.41
3:i:20:GLN:HG2	3:i:21:VAL:N	2.35	0.41
4:j:112:ALA:HB1	4:j:151:GLY:O	2.19	0.41
4:j:115:LYS:O	4:j:119:THR:HG23	2.19	0.41
4:j:122:ASN:OD1	13:k:134:SER:HB3	2.20	0.41
13:k:202:LEU:HA	13:k:205:VAL:HG22	2.02	0.41
21:o:24:MET:HE3	25:S:187:VAL:HG21	2.02	0.41
23:q:39:SER:OG	23:q:40:GLU:N	2.52	0.41
23:q:71:ASN:HB3	23:q:73:TYR:CE1	2.55	0.41
25:s:28:ARG:O	25:s:42:LYS:NZ	2.50	0.41
25:s:36:HIS:HB3	26:t:132:TYR:CE2	2.54	0.41
21:O:8:TYR:HE2	21:O:10:ASP:HB2	1.85	0.41
21:O:15:GLY:HA2	21:O:174:ASP:O	2.20	0.41
21:O:214:GLU:OE1	22:P:198:ARG:NE	2.44	0.41
23:Q:3:TYR:CE1	23:Q:5:ILE:HB	2.55	0.41
22:P:34:MET:HE3	22:P:34:MET:HB3	1.96	0.41
22:P:82:ILE:HG12	22:P:87:LEU:HB2	2.02	0.41
26:T:85:PRO:HB2	26:T:121:PHE:HD2	1.85	0.41
27:U:212:ASP:O	27:U:216:VAL:HG12	2.21	0.41
27:U:225:ASP:HB3	27:U:228:ALA:HB3	2.02	0.41
27:U:602:LEU:HD11	27:U:621:SER:O	2.20	0.41
27:U:904:LYS:HB3	27:U:912:ILE:HG23	2.02	0.41
28:V:96:ARG:HD2	28:V:96:ARG:O	2.20	0.41
28:V:313:LEU:HB2	28:V:328:VAL:HG21	2.02	0.41
30:Y:160:ASN:HA	30:Y:163:LYS:HG2	2.02	0.41
31:Z:36:VAL:HG13	31:Z:94:TRP:CZ3	2.55	0.41
2:H:83:TYR:HB2	2:H:132:VAL:HG21	2.03	0.41
2:H:113:ARG:HA	2:H:113:ARG:CZ	2.49	0.41
2:H:173:PHE:CE2	2:H:177:ARG:HG3	2.54	0.41
7:A:362:MET:HE3	7:A:364:VAL:HG21	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:B:112:LEU:HA	8:B:123:VAL:HB	2.03	0.41
8:B:122:ILE:HD12	8:B:132:TYR:CB	2.46	0.41
8:B:260:LEU:HD23	8:B:260:LEU:H	1.84	0.41
8:B:368:HIS:CE1	8:B:396:LYS:HB2	2.54	0.41
10:D:183:LEU:HB2	10:D:184:PRO:HD3	2.01	0.41
11:E:153:LEU:HD23	11:E:191:LEU:HG	2.02	0.41
12:F:265:ALA:HB1	12:F:312:GLU:HG3	2.00	0.41
15:a:370:GLN:O	18:d:247:ILE:HD13	2.20	0.41
18:d:18:LYS:HA	18:d:18:LYS:HD2	1.82	0.41
19:e:44:ASP:OD1	19:e:47:ASN:ND2	2.54	0.41
3:i:148:TYR:HD1	3:i:158:GLY:HA2	1.85	0.41
21:O:175:LEU:HB2	21:O:186:LEU:HD22	2.02	0.41
23:Q:1:MET:HG2	23:Q:2:GLU:OE2	2.20	0.41
27:U:321:GLN:O	27:U:325:MET:HG2	2.19	0.41
27:U:405:THR:HG23	27:U:444:TYR:HD2	1.85	0.41
27:U:414:GLY:HA2	27:U:453:HIS:CE1	2.54	0.41
28:V:99:ARG:O	28:V:102:PRO:HD2	2.19	0.41
28:V:228:ARG:HD3	28:V:257:ASN:ND2	2.35	0.41
32:W:148:THR:O	32:W:151:THR:OG1	2.30	0.41
32:W:148:THR:HG1	32:W:168:GLU:CD	2.27	0.41
32:W:277:ALA:O	32:W:283:GLN:NE2	2.53	0.41
32:W:384:LEU:HB3	32:W:388:GLU:HB2	2.01	0.41
1:G:18:PRO:HA	2:H:24:TYR:CD1	2.55	0.41
1:G:62:ASP:HB2	6:M:159:GLY:HA3	2.01	0.41
4:J:210:VAL:N	4:J:218:LYS:O	2.47	0.41
6:M:202:ASP:HA	6:M:209:PHE:CE2	2.55	0.41
7:A:312:ARG:HG2	7:A:314:ASN:H	1.85	0.41
8:B:70:ASP:HB3	14:f:606:VAL:HG11	2.02	0.41
8:B:112:LEU:HD21	8:B:115:ILE:HD11	2.02	0.41
8:B:231:GLY:N	35:B:501:ADP:O1A	2.53	0.41
9:C:25:LEU:HD21	10:D:51:LEU:CD1	2.50	0.41
10:D:66:LYS:HG2	10:D:69:LYS:HE3	2.02	0.41
10:D:167:ILE:HG12	10:D:169:GLY:H	1.84	0.41
10:D:335:LEU:HD13	10:D:335:LEU:HA	1.91	0.41
14:f:136:GLU:HG3	14:f:137:ARG:N	2.33	0.41
14:f:293:GLN:O	14:f:297:MET:HG3	2.21	0.41
14:f:442:SER:HA	14:f:445:LEU:HD12	2.01	0.41
14:f:564:LEU:HD13	14:f:794:ALA:HB1	2.02	0.41
15:a:294:GLU:O	15:a:298:LYS:HG3	2.19	0.41
15:a:318:GLY:HA2	15:a:321:LYS:HD3	2.02	0.41
16:b:33:VAL:HG11	16:b:71:ILE:HG21	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:d:34:ASN:ND2	27:U:26:LYS:HE3	2.34	0.41
1:g:54:LYS:H	1:g:215:ILE:HA	1.84	0.41
3:i:34:CYS:HB2	3:i:164:ILE:HG22	2.02	0.41
13:k:86:LYS:HE2	13:k:86:LYS:HB3	1.93	0.41
20:n:28:ASN:ND2	21:o:122:LEU:HD13	2.34	0.41
21:o:21:THR:OG1	21:o:25:VAL:O	2.31	0.41
23:q:184:ASP:OD1	23:q:184:ASP:N	2.54	0.41
25:s:151:ASN:HD21	22:P:169:GLN:NE2	2.19	0.41
26:t:9:THR:HB	26:t:182:ARG:HB3	2.01	0.41
21:O:80:ASN:ND2	21:O:111:TYR:CD2	2.88	0.41
24:R:52:CYS:SG	24:R:97:MET:HG3	2.61	0.41
27:U:155:LEU:O	27:U:158:ARG:HD2	2.19	0.41
27:U:323:LEU:H	27:U:323:LEU:HD12	1.84	0.41
28:V:109:ASN:HB3	28:V:112:VAL:HG12	2.01	0.41
28:V:216:ARG:HH11	28:V:253:LEU:HD23	1.86	0.41
28:V:487:HIS:O	28:V:490:SER:OG	2.29	0.41
29:X:258:LYS:HD2	29:X:261:LEU:HD12	2.01	0.41
30:Y:288:PHE:HD1	30:Y:288:PHE:H	1.68	0.41
1:G:208:ILE:C	1:G:210:PHE:H	2.27	0.41
2:H:113:ARG:HA	2:H:113:ARG:NH1	2.36	0.41
6:M:21:PHE:HA	6:M:24:GLU:HB2	2.02	0.41
6:M:140:TYR:CG	6:M:217:GLY:HA2	2.54	0.41
9:C:140:VAL:HG12	9:C:212:ILE:HG23	2.02	0.41
10:D:353:ASN:OD1	29:X:226:LYS:HG3	2.20	0.41
11:E:141:GLN:OE1	11:E:299:ILE:HB	2.19	0.41
11:E:267:PHE:HB3	11:E:270:LEU:HB2	2.01	0.41
11:E:365:GLU:O	11:E:369:LYS:HG2	2.19	0.41
12:F:223:VAL:HG22	12:F:350:ARG:HB2	2.02	0.41
15:a:173:TYR:O	15:a:177:LEU:HG	2.21	0.41
1:g:49:VAL:HG22	1:g:219:VAL:HG12	2.02	0.41
2:h:179:ASN:O	2:h:182:LEU:HD22	2.19	0.41
3:i:164:ILE:HD12	3:i:164:ILE:HA	1.92	0.41
4:j:229:VAL:HA	4:j:232:ILE:HG22	2.03	0.41
13:k:91:LYS:HZ1	13:k:137:PHE:HZ	1.68	0.41
13:k:181:LEU:HA	13:k:184:VAL:HG22	2.02	0.41
20:n:127:ILE:HD11	20:n:139:VAL:HG11	2.01	0.41
22:p:30:ILE:CG2	22:p:33:GLN:HG2	2.49	0.41
24:r:127:SER:HB3	24:r:136:TYR:HE1	1.83	0.41
25:s:36:HIS:HB3	26:t:132:TYR:CZ	2.55	0.41
25:s:70:ALA:O	25:s:74:MET:HG3	2.21	0.41
23:Q:160:LEU:HA	23:Q:163:CYS:SG	2.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:S:6:VAL:H	25:S:57:PHE:HD2	1.67	0.41
27:U:501:LEU:HD22	27:U:516:LEU:HD11	2.03	0.41
28:V:111:TYR:HE2	28:V:115:LYS:HE2	1.84	0.41
28:V:224:LEU:HA	28:V:227:VAL:HG12	2.02	0.41
28:V:471:GLU:N	28:V:472:PRO:HD2	2.35	0.41
29:X:283:GLN:H	29:X:283:GLN:CD	2.29	0.41
30:Y:17:LEU:HD22	30:Y:214:MET:HG2	2.03	0.41
31:Z:228:TYR:HE1	31:Z:229:GLN:HE21	1.67	0.41
32:W:254:PRO:HA	32:W:257:GLN:O	2.20	0.41
1:G:46:ASP:HB2	1:G:222:VAL:HG12	2.03	0.41
5:L:31:GLN:O	13:K:20:ARG:NH1	2.53	0.41
8:B:63:LEU:HD12	8:B:63:LEU:HA	1.83	0.41
8:B:204:PRO:O	8:B:206:THR:N	2.54	0.41
8:B:331:THR:OG1	8:B:332:ASN:N	2.53	0.41
8:B:344:PRO:HA	8:B:347:ILE:O	2.21	0.41
9:C:128:PRO:HG2	9:C:130:LYS:HZ1	1.84	0.41
12:F:99:VAL:HA	12:F:119:GLY:HA2	2.02	0.41
12:F:145:LEU:HD22	12:F:160:ILE:HG21	2.02	0.41
12:F:359:GLU:HB3	12:F:385:ALA:HB1	2.01	0.41
13:K:165:CYS:SG	13:K:168:ARG:HB2	2.60	0.41
14:f:389:LYS:HA	14:f:392:THR:HB	2.02	0.41
16:b:100:ARG:NH2	16:b:101:GLN:O	2.35	0.41
18:d:25:ARG:NH2	18:d:50:LEU:HB2	2.34	0.41
1:g:40:VAL:HG21	1:g:201:CYS:SG	2.60	0.41
1:g:132:ARG:HA	1:g:133:PRO:HD3	1.93	0.41
20:N:18:SER:HB2	20:N:30:VAL:HA	2.02	0.41
20:N:199:VAL:O	20:N:199:VAL:HG23	2.21	0.41
23:Q:84:THR:O	23:Q:85:ARG:C	2.61	0.41
25:S:4:PRO:HG3	26:T:103:MET:HE1	2.01	0.41
25:S:46:LEU:HB3	25:S:72:LEU:HD11	2.03	0.41
25:S:63:THR:O	25:S:67:ILE:HG13	2.20	0.41
27:U:220:LEU:HD22	27:U:225:ASP:HB2	2.03	0.41
28:V:127:THR:O	28:V:131:LEU:HD23	2.21	0.41
28:V:403:ILE:HG21	28:V:428:LEU:HD21	2.01	0.41
29:X:344:ARG:HH21	32:W:409:LEU:HB3	1.86	0.41
30:Y:342:ARG:HD3	30:Y:342:ARG:HA	1.77	0.41
31:Z:94:TRP:O	31:Z:121:LEU:HA	2.21	0.41
31:Z:233:VAL:O	31:Z:237:LEU:HG	2.20	0.41
32:W:284:SER:HA	32:W:287:VAL:HG22	2.03	0.41
32:W:397:VAL:O	32:W:400:LYS:HE2	2.20	0.41
1:G:191:PHE:O	1:G:192:GLU:HG3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:231:THR:OG1	1:G:234:GLU:OE1	2.20	0.41
2:H:15:PRO:CG	2:H:20:VAL:HG23	2.50	0.41
5:L:116:THR:HG22	5:L:128:TYR:CD2	2.56	0.41
7:A:40:THR:HG22	14:f:164:GLY:HA3	2.01	0.41
7:A:80:LEU:HA	7:A:83:ASP:HB3	2.03	0.41
8:B:241:ASN:HD21	8:B:281:ILE:CG2	2.29	0.41
9:C:117:ARG:H	9:C:121:TYR:HA	1.85	0.41
9:C:198:LEU:HD13	35:C:501:ADP:H5'2	2.03	0.41
9:C:275:GLU:O	9:C:279:GLN:HB2	2.21	0.41
9:C:287:LYS:O	9:C:287:LYS:CG	2.68	0.41
11:E:61:LEU:HD22	11:E:72:LYS:HB2	2.02	0.41
11:E:78:ARG:H	11:E:78:ARG:HD2	1.85	0.41
11:E:325:GLU:HG2	11:E:326:ILE:H	1.86	0.41
12:F:99:VAL:HA	12:F:119:GLY:N	2.35	0.41
12:F:120:LYS:HD2	12:F:142:ALA:CB	2.50	0.41
14:f:345:PRO:C	14:f:763:ARG:HH21	2.29	0.41
14:f:646:MET:O	14:f:649:HIS:ND1	2.52	0.41
14:f:762:VAL:O	14:f:766:GLN:HG3	2.20	0.41
16:b:156:PHE:CZ	16:b:160:LEU:HD11	2.56	0.41
17:c:95:MET:HE2	17:c:95:MET:HB3	1.95	0.41
18:d:44:THR:HA	18:d:47:GLN:HB3	2.02	0.41
19:e:27:TRP:HB2	28:V:355:ARG:H	1.86	0.41
2:h:225:GLU:O	2:h:229:TYR:HD1	2.04	0.41
13:k:47:CYS:SG	13:k:195:ILE:HD13	2.60	0.41
13:k:197:SER:O	13:k:201:ILE:HG12	2.21	0.41
21:o:111:TYR:CE2	21:o:121:LYS:HB2	2.55	0.41
23:q:172:ILE:HD12	23:Q:22:ALA:CB	2.50	0.41
25:s:16:ALA:HB1	25:s:119:GLY:C	2.46	0.41
20:N:36:PRO:HB3	20:N:42:PHE:CZ	2.55	0.41
21:O:38:SER:O	21:O:40:ASN:N	2.54	0.41
22:P:30:ILE:HG12	22:P:33:GLN:HG2	2.02	0.41
27:U:185:MET:HG2	27:U:222:PHE:CZ	2.56	0.41
27:U:405:THR:HG21	27:U:441:GLY:CA	2.47	0.41
27:U:524:LYS:HD3	27:U:559:ARG:NE	2.35	0.41
27:U:650:TYR:N	27:U:683:VAL:HG23	2.36	0.41
27:U:766:PHE:CD1	27:U:779:LEU:HD22	2.56	0.41
28:V:325:LYS:HG2	28:V:329:HIS:NE2	2.36	0.41
28:V:391:THR:HA	28:V:394:LEU:HD13	2.01	0.41
30:Y:263:LEU:HD12	30:Y:271:PHE:CE1	2.55	0.41
31:Z:223:ASN:ND2	32:W:449:GLU:HG3	2.36	0.41
32:W:436:MET:HE3	32:W:436:MET:HB3	1.98	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:132:ARG:NH1	6:M:124:LEU:HA	2.35	0.41
3:I:167:ASN:OD1	3:I:167:ASN:N	2.53	0.41
4:J:112:ALA:HB1	4:J:151:GLY:O	2.21	0.41
7:A:73:ALA:HA	7:A:76:ALA:HB3	2.03	0.41
7:A:368:ILE:HD13	7:A:408:ASP:HB2	2.02	0.41
10:D:214:MET:HE3	10:D:214:MET:HB3	1.96	0.41
14:f:139:CYS:HB3	14:f:165:GLU:OE2	2.21	0.41
15:a:289:ARG:HD2	15:a:332:HIS:ND1	2.36	0.41
17:c:39:LEU:CD1	31:Z:17:LEU:HD21	2.51	0.41
17:c:231:LEU:HD22	32:W:429:SER:HB2	2.03	0.41
17:c:297:VAL:CG2	31:Z:190:ARG:HG2	2.51	0.41
18:d:175:ARG:HH21	18:d:205:LYS:CD	2.33	0.41
5:l:123:TYR:HB2	6:m:127:ALA:O	2.21	0.41
1:g:195:VAL:HG21	1:g:238:HIS:CE1	2.56	0.41
6:m:42:LYS:HB3	6:m:183:GLU:HA	2.02	0.41
20:n:114:VAL:HA	20:n:119:MET:O	2.20	0.41
20:n:117:GLY:HA3	20:n:119:MET:HE1	2.03	0.41
20:n:144:ARG:O	20:n:147:MET:HG3	2.21	0.41
24:r:51:ASP:HA	25:s:97:TYR:HE2	1.84	0.41
24:r:64:ARG:NH2	24:r:68:LEU:HD21	2.36	0.41
26:t:141:TYR:CZ	20:N:24:SER:HB2	2.55	0.41
20:N:7:GLN:HA	20:N:12:VAL:HG12	2.01	0.41
20:N:135:ILE:HD12	20:N:159:ALA:HB1	2.03	0.41
23:Q:148:THR:O	23:Q:151:ILE:HG13	2.21	0.41
24:R:30:THR:O	24:R:30:THR:HG22	2.20	0.41
26:T:27:LEU:HD12	26:T:36:PHE:O	2.21	0.41
27:U:246:TYR:CD2	27:U:913:ILE:HD12	2.55	0.41
28:V:290:TYR:OH	28:V:327:THR:HB	2.20	0.41
28:V:306:ARG:HG3	28:V:307:ARG:N	2.36	0.41
30:Y:283:LYS:C	30:Y:285:ASP:H	2.27	0.41
32:W:72:LYS:HA	32:W:75:TYR:CD2	2.56	0.41
32:W:192:LEU:O	32:W:196:VAL:HG23	2.20	0.41
1:G:99:ALA:C	20:N:61:TYR:CE1	2.96	0.41
2:H:88:HIS:CE1	2:H:92:LYS:HE3	2.55	0.41
2:H:93:LEU:HD23	2:H:93:LEU:HA	1.92	0.41
2:H:100:VAL:CG1	22:P:93:ASN:HD22	2.09	0.41
3:I:146:GLN:HB3	3:I:148:TYR:CE1	2.55	0.41
4:J:69:VAL:CG1	4:J:133:ILE:HG23	2.51	0.41
5:L:214:ILE:HB	5:L:224:TYR:HE2	1.86	0.41
7:A:80:LEU:HA	7:A:80:LEU:HD12	1.89	0.41
7:A:308:GLY:O	7:A:310:ASP:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A:333:ARG:HA	7:A:336:ARG:HB3	2.02	0.41
9:C:249:ASP:OD2	9:C:250:GLU:OE1	2.39	0.41
10:D:240:LEU:HD22	10:D:284:GLU:HG3	2.03	0.41
12:F:234:THR:HA	12:F:284:PHE:CE2	2.55	0.41
14:f:261:ARG:HG3	14:f:261:ARG:O	2.21	0.41
14:f:419:LEU:C	14:f:421:ASP:H	2.29	0.41
15:a:266:ALA:HA	15:a:269:LEU:HD12	2.03	0.41
15:a:290:GLN:HA	15:a:330:ARG:HG3	2.02	0.41
5:l:39:LYS:HA	5:l:44:ALA:HA	2.03	0.41
1:g:62:ASP:HA	6:m:161:TRP:NE1	2.36	0.41
4:j:82:ILE:HG13	4:j:83:VAL:N	2.36	0.41
23:q:4:LEU:HD21	23:q:45:LEU:HB2	2.03	0.41
25:s:113:LEU:HD11	25:s:199:THR:HA	2.03	0.41
23:Q:38:MET:HE1	23:Q:60:ILE:HG22	2.03	0.41
25:S:91:MET:O	25:S:95:ILE:HG12	2.20	0.41
28:V:81:GLN:HA	28:V:93:PHE:HE2	1.86	0.41
28:V:355:ARG:O	28:V:359:PRO:HD2	2.20	0.41
30:Y:245:GLU:O	30:Y:249:VAL:HG22	2.21	0.41
2:H:65:VAL:HG23	2:H:209:GLU:HG2	2.03	0.41
3:I:52:ILE:O	3:I:52:ILE:CG2	2.62	0.41
4:J:12:PRO:HA	13:K:26:TYR:CD1	2.56	0.41
5:L:103:LEU:HD12	5:L:104:PRO:HD2	2.01	0.41
6:M:41:CYS:N	6:M:44:GLY:O	2.54	0.41
8:B:64:LYS:HB3	8:B:64:LYS:HE2	1.87	0.41
8:B:150:VAL:HG12	8:B:162:VAL:HG23	2.03	0.41
8:B:174:MET:HA	9:C:271:ARG:HH22	1.85	0.41
9:C:32:GLN:OE1	10:D:55:GLU:HA	2.21	0.41
9:C:97:VAL:HG21	9:C:121:TYR:O	2.21	0.41
9:C:114:VAL:HG21	9:C:123:LEU:HD22	2.03	0.41
10:D:91:GLN:HG2	10:D:245:ARG:CZ	2.51	0.41
10:D:281:ALA:HA	10:D:284:GLU:HG2	2.02	0.41
10:D:353:ASN:O	10:D:356:GLU:N	2.54	0.41
11:E:297:ARG:HH11	32:W:138:VAL:HG23	1.86	0.41
12:F:240:CYS:O	12:F:244:THR:HG23	2.20	0.41
13:K:170:ILE:HD12	13:K:170:ILE:HA	1.91	0.41
14:f:149:GLU:OE1	14:f:150:GLU:N	2.54	0.41
14:f:170:TRP:O	14:f:181:ARG:NH1	2.54	0.41
14:f:203:GLU:OE1	14:f:203:GLU:N	2.36	0.41
14:f:493:ASN:OD1	14:f:526:ALA:HA	2.21	0.41
14:f:494:ARG:NH2	14:f:495:GLU:HG2	2.33	0.41
14:f:658:ALA:HB2	14:f:675:PHE:CZ	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:f:662:MET:HG3	14:f:781:TYR:OH	2.21	0.41
14:f:737:ASN:HD21	14:f:773:LYS:C	2.27	0.41
14:f:844:VAL:HG12	14:f:882:LEU:HA	2.02	0.41
15:a:115:LYS:HE3	15:a:115:LYS:HB3	1.88	0.41
15:a:245:VAL:HG23	15:a:246:GLU:N	2.36	0.41
16:b:22:LEU:HB2	16:b:23:PRO:HD3	2.03	0.41
17:c:40:LYS:HD2	17:c:74:ALA:HB2	2.03	0.41
17:c:174:PRO:HG2	17:c:200:TYR:HA	2.03	0.41
18:d:183:GLU:OE1	18:d:215:TRP:NE1	2.54	0.41
5:l:139:ASP:N	5:l:139:ASP:OD1	2.53	0.41
5:l:204:ASP:OD1	5:l:205:LEU:N	2.53	0.41
4:j:180:ALA:HB1	4:j:190:LEU:HD11	2.02	0.41
6:m:215:TRP:CZ3	6:m:227:VAL:HG13	2.56	0.41
20:n:199:VAL:HG23	26:T:37:ARG:NH2	2.36	0.41
20:n:201:THR:HA	26:T:38:ASN:ND2	2.36	0.41
21:o:18:THR:HG21	21:o:172:ASN:HB3	2.02	0.41
21:o:67:SER:HB3	21:o:74:PRO:HG3	2.01	0.41
22:p:8:GLY:HA2	22:p:141:THR:HG21	2.03	0.41
22:p:30:ILE:HG13	22:p:31:GLN:H	1.86	0.41
23:q:1:MET:HG2	23:q:134:TYR:CE1	2.56	0.41
23:q:49:GLU:O	23:q:53:THR:HG23	2.21	0.41
23:q:172:ILE:O	23:Q:174:ASN:N	2.48	0.41
24:r:19:ARG:NH2	24:r:171:GLY:HA3	2.36	0.41
24:r:51:ASP:HA	25:s:97:TYR:CE2	2.56	0.41
24:r:103:GLY:HA2	24:r:179:VAL:HG11	2.02	0.41
24:r:168:ALA:HB2	22:P:27:ARG:NH2	2.36	0.41
25:s:95:ILE:O	25:s:98:SER:OG	2.24	0.41
25:s:148:LEU:CD2	25:s:178:VAL:HG12	2.50	0.41
25:s:190:GLY:O	25:s:192:ALA:N	2.52	0.41
23:Q:174:ASN:O	23:Q:175:LEU:HD12	2.21	0.41
22:P:88:MET:HE3	22:P:88:MET:HB3	1.98	0.41
25:S:16:ALA:HB2	25:S:121:VAL:HG23	2.03	0.41
25:S:91:MET:HE3	25:S:91:MET:HB3	1.91	0.41
27:U:199:ARG:HA	27:U:202:VAL:HG22	2.02	0.41
27:U:243:LEU:HD21	27:U:915:LYS:HA	2.03	0.41
27:U:510:GLU:CD	27:U:775:LEU:HD21	2.45	0.41
27:U:524:LYS:HA	27:U:556:MET:HB3	2.03	0.41
27:U:692:ALA:O	27:U:696:ILE:HG23	2.20	0.41
28:V:77:GLU:O	28:V:81:GLN:HG3	2.21	0.41
28:V:348:PHE:CE2	28:V:361:PHE:HD1	2.39	0.41
29:X:216:ILE:HG12	29:X:318:ILE:CD1	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:X:252:LYS:HG3	29:X:287:LEU:HD11	2.03	0.41
30:Y:12:PRO:C	30:Y:13:LYS:HD2	2.46	0.41
30:Y:101:ARG:HH21	30:Y:136:HIS:HB3	1.86	0.41
31:Z:32:GLN:NE2	31:Z:60:GLU:HB2	2.36	0.41
32:W:204:ILE:O	32:W:207:LYS:HG3	2.21	0.41
2:H:180:GLU:CD	2:H:181:ASP:H	2.29	0.41
3:I:28:ILE:HD11	3:I:131:GLY:C	2.45	0.41
5:L:34:ALA:HA	5:L:162:GLY:HA3	2.03	0.41
5:L:94:ASP:O	5:L:98:VAL:HG22	2.21	0.41
7:A:102:ILE:HD11	7:A:136:GLU:HA	2.03	0.41
7:A:178:GLY:HA3	34:A:501:ATP:N1	2.36	0.41
8:B:55:HIS:O	8:B:55:HIS:CG	2.74	0.41
10:D:178:ARG:O	10:D:182:GLU:HG2	2.21	0.41
11:E:112:PRO:HG2	12:F:96:LEU:CD1	2.51	0.41
11:E:171:LEU:HB2	11:E:295:LEU:HD21	2.03	0.41
14:f:340:MET:O	14:f:341:GLU:C	2.63	0.41
14:f:345:PRO:O	14:f:763:ARG:NH2	2.53	0.41
16:b:185:SER:O	16:b:188:ILE:HG22	2.21	0.41
17:c:52:GLU:HB3	17:c:113:HIS:CE1	2.55	0.41
5:l:13:TRP:HB2	6:m:22:GLN:CD	2.46	0.41
3:i:135:LEU:HD12	3:i:148:TYR:O	2.21	0.41
6:m:163:CYS:SG	6:m:164:ALA:N	2.93	0.41
20:n:128:GLY:C	20:n:132:SER:HB3	2.46	0.41
21:o:51:ASP:HB3	21:o:94:ILE:HG23	2.03	0.41
23:q:170:ARG:HH21	24:R:140:ASP:CG	2.28	0.41
20:N:42:PHE:CE1	20:N:184:VAL:HG21	2.56	0.41
21:O:22:GLU:HG3	21:O:27:ALA:HB2	2.03	0.41
23:Q:19:ARG:NH1	23:Q:193:ASN:HD22	2.19	0.41
23:Q:60:ILE:HG21	23:Q:84:THR:OG1	2.21	0.41
24:R:40:TYR:OH	24:R:74:ILE:HG22	2.21	0.41
27:U:101:ILE:O	27:U:105:ILE:HG13	2.21	0.41
29:X:130:GLU:HB2	29:X:153:LEU:HD21	2.03	0.41
32:W:356:ASN:O	32:W:357:ARG:C	2.64	0.41
3:I:115:CYS:HB2	3:I:154:GLY:O	2.21	0.40
5:L:84:LEU:HD23	5:L:84:LEU:HA	1.85	0.40
7:A:184:ILE:H	7:A:184:ILE:HG13	1.60	0.40
8:B:71:TYR:O	8:B:74:MET:HG2	2.20	0.40
8:B:170:LEU:CD2	8:B:173:VAL:HG21	2.51	0.40
8:B:234:LEU:HD23	8:B:237:LYS:HE3	2.03	0.40
9:C:83:LYS:C	9:C:99:VAL:CG2	2.87	0.40
9:C:194:THR:HG1	9:C:356:GLY:H	1.63	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:D:340:GLN:O	10:D:344:ILE:HG13	2.21	0.40
14:f:124:ASP:O	14:f:128:VAL:HG13	2.21	0.40
14:f:240:VAL:HG21	14:f:248:LEU:HD12	2.02	0.40
15:a:292:THR:HA	15:a:329:LYS:O	2.22	0.40
18:d:71:PHE:HE2	18:d:105:PHE:CD2	2.39	0.40
5:l:19:ILE:O	5:l:23:GLU:HG3	2.21	0.40
3:i:79:ILE:HG22	3:i:82:ASP:H	1.86	0.40
4:j:99:GLU:OE2	24:r:77:ALA:HB1	2.21	0.40
6:m:188:ASP:O	6:m:192:GLU:HG2	2.21	0.40
20:n:122:ARG:NH2	20:N:202:LEU:HB2	2.28	0.40
23:q:116:TYR:CE2	23:q:126:LYS:HB2	2.56	0.40
24:r:59:LEU:HD22	24:r:83:LEU:HD22	2.02	0.40
21:O:146:MET:HE3	21:O:150:GLU:HG3	2.02	0.40
26:T:76:LEU:HD23	26:T:76:LEU:HA	1.91	0.40
27:U:82:LEU:C	27:U:129:ARG:HD2	2.46	0.40
27:U:159:ARG:O	27:U:162:VAL:HG12	2.21	0.40
27:U:229:VAL:HG23	27:U:232:ILE:HD11	2.04	0.40
27:U:595:ASN:O	27:U:599:ILE:HG13	2.21	0.40
29:X:157:LEU:HB3	29:X:166:LEU:CD2	2.50	0.40
29:X:205:LYS:O	29:X:209:THR:HG23	2.21	0.40
29:X:258:LYS:HD2	29:X:258:LYS:HA	1.91	0.40
30:Y:48:ASN:HB3	30:Y:74:LYS:HE3	2.03	0.40
30:Y:235:ASP:O	30:Y:239:LYS:HG2	2.21	0.40
31:Z:130:ASP:CG	31:Z:131:LEU:H	2.27	0.40
32:W:116:THR:OG1	32:W:117:ASP:N	2.48	0.40
32:W:164:SER:HA	32:W:167:GLN:HE21	1.86	0.40
1:G:151:VAL:HG13	1:G:163:PHE:HA	2.03	0.40
1:G:206:LEU:HA	11:E:291:ARG:NH2	2.36	0.40
2:H:71:HIS:CB	2:H:107:THR:HG21	2.38	0.40
5:L:23:GLU:HA	5:L:26:MET:HE2	2.03	0.40
5:L:224:TYR:CD2	5:L:224:TYR:N	2.89	0.40
6:M:165:ILE:HD12	6:M:165:ILE:HA	1.93	0.40
6:M:181:MET:HB2	6:M:181:MET:HE3	1.84	0.40
7:A:120:LYS:NZ	12:F:151:VAL:O	2.29	0.40
9:C:184:LYS:HD2	9:C:277:LEU:CB	2.50	0.40
9:C:217:SER:O	10:D:274:ARG:NE	2.54	0.40
10:D:78:GLU:HG2	31:Z:184:VAL:HG11	2.03	0.40
14:f:45:LEU:HB2	14:f:50:LYS:HG3	2.03	0.40
14:f:262:PHE:HA	14:f:265:ALA:HB3	2.03	0.40
14:f:682:GLY:CA	14:f:686:LEU:HD23	2.51	0.40
15:a:230:ARG:HB3	15:a:233:LEU:HD12	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:b:65:THR:OG1	16:b:70:ARG:HD2	2.21	0.40
17:c:30:GLN:HA	17:c:204:THR:O	2.21	0.40
18:d:80:CYS:HB3	27:U:7:GLY:C	2.46	0.40
18:d:145:GLU:N	28:V:440:LYS:HZ1	2.19	0.40
5:l:225:ASP:O	5:l:229:VAL:HG13	2.21	0.40
1:g:15:ILE:HD12	1:g:15:ILE:HA	1.88	0.40
4:j:12:PRO:HA	13:k:26:TYR:CE1	2.57	0.40
13:k:241:ILE:HD13	13:k:241:ILE:HA	1.96	0.40
6:m:108:LEU:HD22	6:m:139:SER:HB3	2.04	0.40
6:m:119:VAL:HA	6:m:131:PHE:HE2	1.86	0.40
20:n:133:SER:HA	20:n:136:TYR:HE2	1.86	0.40
22:p:125:ASP:OD1	22:p:128:GLY:N	2.53	0.40
23:q:126:LYS:HE2	23:q:126:LYS:HB3	1.93	0.40
24:r:117:GLU:OE1	24:r:117:GLU:N	2.54	0.40
25:s:27:THR:OG1	25:s:192:ALA:HB3	2.20	0.40
26:t:37:ARG:NE	20:N:199:VAL:HG21	2.37	0.40
26:t:177:TYR:HA	26:t:183:SER:OG	2.21	0.40
23:Q:182:ILE:HG23	23:Q:189:HIS:HB2	2.02	0.40
24:R:71:LYS:HE2	24:R:71:LYS:HB3	1.89	0.40
25:S:63:THR:HG21	26:T:97:TYR:CE2	2.56	0.40
27:U:22:PHE:HA	27:U:25:HIS:ND1	2.36	0.40
27:U:575:ASP:O	27:U:579:ARG:HG3	2.21	0.40
27:U:722:ASP:HB3	27:U:727:LYS:HG3	2.03	0.40
28:V:399:ARG:NH2	28:V:402:VAL:HG11	2.25	0.40
29:X:285:GLU:OE2	29:X:288:LYS:NZ	2.45	0.40
30:Y:275:LEU:HG	30:Y:296:VAL:HG12	2.03	0.40
32:W:131:VAL:HG13	32:W:144:ARG:HH11	1.87	0.40
32:W:200:ILE:H	32:W:200:ILE:HD12	1.85	0.40
32:W:340:VAL:HA	32:W:350:ARG:NH1	2.33	0.40
32:W:366:MET:SD	32:W:373:ILE:HG21	2.61	0.40
2:H:15:PRO:HG3	2:H:20:VAL:CG2	2.50	0.40
4:J:4:ASP:CG	4:J:5:ARG:H	2.28	0.40
4:J:192:ILE:C	4:J:194:ALA:N	2.79	0.40
5:L:49:LEU:HD22	5:L:199:LEU:HG	2.04	0.40
7:A:75:PRO:O	7:A:80:LEU:N	2.55	0.40
7:A:365:GLU:CG	7:A:366:ARG:H	2.31	0.40
7:A:382:GLY:HA3	34:A:501:ATP:C5	2.56	0.40
8:B:57:GLN:CD	8:B:57:GLN:H	2.29	0.40
8:B:87:PRO:HA	14:f:619:HIS:HB3	2.03	0.40
8:B:413:LYS:CE	14:f:160:ARG:HH12	2.34	0.40
10:D:155:THR:HB	10:D:157:ASP:OD2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:E:184:ALA:HB3	11:E:197:LYS:NZ	2.36	0.40
12:F:55:MET:O	12:F:59:VAL:HG22	2.22	0.40
12:F:225:MET:H	12:F:225:MET:HG2	1.64	0.40
14:f:157:GLU:OE1	14:f:157:GLU:N	2.38	0.40
14:f:592:ASN:OD1	14:f:593:THR:N	2.55	0.40
14:f:656:GLY:O	14:f:660:ILE:HG12	2.21	0.40
17:c:115:HIS:H	17:c:147:PRO:HD3	1.87	0.40
18:d:41:THR:HG22	18:d:41:THR:O	2.20	0.40
18:d:190:LEU:HB2	18:d:193:GLU:HB2	2.02	0.40
3:i:69:ASN:OD1	3:i:72:MET:HB3	2.21	0.40
22:p:51:ILE:HG13	22:p:109:ILE:HG13	2.03	0.40
23:q:23:SER:O	23:q:24:ASN:HB2	2.21	0.40
24:r:39:PRO:HA	24:r:184:TRP:HE1	1.85	0.40
26:t:1:THR:O	26:t:107:TRP:NE1	2.54	0.40
21:O:41:ILE:O	21:O:42:TYR:HD1	2.04	0.40
22:P:107:PRO:HG2	22:P:124:LEU:HB2	2.03	0.40
22:P:164:PHE:CZ	22:P:198:ARG:HD2	2.57	0.40
25:S:36:HIS:HB3	26:T:132:TYR:CE1	2.56	0.40
29:X:172:LEU:HD23	29:X:172:LEU:HA	1.94	0.40
29:X:177:TYR:O	29:X:182:ASN:N	2.37	0.40
30:Y:272:PHE:HZ	30:Y:304:TYR:HE1	1.69	0.40
30:Y:380:VAL:HG11	31:Z:265:LEU:HD11	2.03	0.40
32:W:355:LYS:O	32:W:359:VAL:HG23	2.21	0.40
1:G:9:PHE:O	1:G:13:ILE:HG12	2.22	0.40
1:G:41:ALA:HB2	1:G:50:ILE:HG22	2.01	0.40
1:G:228:ARG:O	1:G:230:LEU:HD12	2.22	0.40
3:I:90:LEU:HA	3:I:90:LEU:HD12	1.89	0.40
4:J:97:THR:HG22	24:R:85:ASN:HD22	1.86	0.40
5:L:49:LEU:HD22	5:L:199:LEU:CG	2.50	0.40
6:M:231:ILE:O	6:M:234:GLU:HG3	2.22	0.40
7:A:218:PRO:HA	34:A:501:ATP:O1G	2.21	0.40
8:B:116:ILE:HG22	8:B:120:HIS:C	2.46	0.40
8:B:285:ASP:O	8:B:286:GLU:CB	2.70	0.40
8:B:302:GLU:O	8:B:304:GLU:N	2.46	0.40
11:E:160:GLN:HB2	11:E:269:THR:HG21	2.03	0.40
12:F:188:ILE:HA	35:F:501:ADP:N1	2.37	0.40
12:F:253:GLY:N	12:F:254:PRO:HD2	2.36	0.40
14:f:63:LEU:HG	14:f:109:ILE:HD13	2.02	0.40
14:f:190:GLU:O	14:f:193:PRO:HD2	2.21	0.40
14:f:695:ALA:HB2	14:f:728:ALA:HA	2.02	0.40
14:f:742:ALA:O	14:f:746:ARG:HG3	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:a:44:PHE:HE2	15:a:57:ILE:HG12	1.86	0.40
15:a:63:PHE:O	15:a:66:GLU:HG2	2.21	0.40
15:a:122:LYS:HD3	15:a:122:LYS:HA	1.88	0.40
15:a:210:VAL:O	15:a:210:VAL:HG23	2.21	0.40
16:b:86:PHE:CE1	16:b:90:ILE:HD11	2.56	0.40
5:l:230:SER:N	5:l:231:PRO:HD2	2.36	0.40
3:i:165:GLY:O	3:i:168:SER:OG	2.39	0.40
13:k:221:GLN:OE1	13:k:221:GLN:N	2.54	0.40
23:q:90:ASP:OD1	23:q:91:CYS:N	2.54	0.40
25:s:125:ASP:OD1	25:s:128:GLY:N	2.30	0.40
26:t:141:TYR:HE2	20:N:25:TYR:HB2	1.86	0.40
23:Q:5:ILE:HD11	23:Q:143:LEU:HD11	2.04	0.40
23:Q:77:PRO:HD2	23:Q:108:ASP:HB2	2.04	0.40
23:Q:118:MET:HE3	23:Q:122:ALA:HA	2.03	0.40
27:U:158:ARG:HA	27:U:158:ARG:NH1	2.37	0.40
27:U:234:GLU:HG3	27:U:268:LEU:HD12	2.04	0.40
27:U:792:ASN:OD1	27:U:793:LYS:N	2.54	0.40
31:Z:255:ASP:O	31:Z:259:VAL:HG23	2.22	0.40
32:W:345:GLU:O	32:W:349:LYS:HG2	2.21	0.40
2:H:195:LEU:O	2:H:196:LYS:C	2.65	0.40
4:J:129:ILE:O	4:J:129:ILE:HG23	2.20	0.40
5:L:15:PRO:HA	6:M:25:TYR:CG	2.56	0.40
5:L:52:ALA:HB2	5:L:59:HIS:CG	2.57	0.40
6:M:87:LEU:HD22	6:M:131:PHE:CD2	2.55	0.40
9:C:89:VAL:O	9:C:93:GLY:N	2.55	0.40
9:C:182:GLN:N	9:C:183:PRO:HD3	2.36	0.40
35:C:501:ADP:H5'1	35:C:501:ADP:C8	2.56	0.40
10:D:410:ASP:OD2	10:D:410:ASP:N	2.55	0.40
11:E:201:SER:HA	11:E:204:VAL:HG22	2.03	0.40
11:E:228:CYS:SG	11:E:229:ILE:N	2.95	0.40
11:E:344:ARG:O	11:E:348:THR:HG23	2.21	0.40
13:K:206:MET:SD	13:K:215:ILE:HD11	2.62	0.40
14:f:687:ARG:HG3	14:f:721:VAL:HG21	2.03	0.40
14:f:745:LEU:HB3	14:f:766:GLN:HG2	2.04	0.40
14:f:746:ARG:O	14:f:750:GLN:HG2	2.21	0.40
16:b:140:ILE:HB	16:b:170:LEU:HD12	2.04	0.40
17:c:94:LYS:HA	17:c:94:LYS:HD2	1.96	0.40
2:h:9:SER:HB2	3:i:127:LYS:HD2	2.04	0.40
2:h:25:ALA:O	2:h:29:VAL:HG23	2.22	0.40
3:i:27:ALA:HA	3:i:30:HIS:CE1	2.56	0.40
3:i:66:TYR:CD1	3:i:87:THR:HG21	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:j:106:TYR:HA	4:j:109:ARG:NH1	2.37	0.40
24:r:160:ILE:HD13	24:r:160:ILE:HA	1.93	0.40
25:s:113:LEU:HD23	25:s:119:GLY:HA2	2.04	0.40
25:S:5:TYR:OH	25:S:103:PRO:O	2.34	0.40
27:U:471:ASP:CB	27:U:472:ILE:HD12	2.50	0.40
27:U:508:THR:O	27:U:508:THR:HG22	2.21	0.40
27:U:797:MET:HB2	27:U:925:VAL:O	2.22	0.40
30:Y:23:ARG:HH22	30:Y:52:PRO:HB2	1.87	0.40
30:Y:189:VAL:HG12	30:Y:287:LEU:HG	2.03	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	G	235/246 (96%)	212 (90%)	20 (8%)	3 (1%)	10	41
1	g	241/246 (98%)	229 (95%)	12 (5%)	0	100	100
2	H	224/234 (96%)	184 (82%)	40 (18%)	0	100	100
2	h	230/234 (98%)	220 (96%)	10 (4%)	0	100	100
3	I	254/261 (97%)	231 (91%)	23 (9%)	0	100	100
3	i	248/261 (95%)	237 (96%)	11 (4%)	0	100	100
4	J	235/248 (95%)	203 (86%)	27 (12%)	5 (2%)	5	33
4	j	236/248 (95%)	226 (96%)	10 (4%)	0	100	100
5	L	235/269 (87%)	218 (93%)	15 (6%)	2 (1%)	14	48
5	l	235/269 (87%)	225 (96%)	10 (4%)	0	100	100
6	M	236/255 (92%)	218 (92%)	16 (7%)	2 (1%)	16	51
6	m	238/255 (93%)	232 (98%)	6 (2%)	0	100	100
7	A	401/433 (93%)	350 (87%)	44 (11%)	7 (2%)	7	37

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	B	398/440 (90%)	341 (86%)	51 (13%)	6 (2%)	8	39
9	C	362/398 (91%)	311 (86%)	47 (13%)	4 (1%)	12	45
10	D	370/418 (88%)	306 (83%)	57 (15%)	7 (2%)	6	35
11	E	359/403 (89%)	315 (88%)	43 (12%)	1 (0%)	37	67
12	F	349/439 (80%)	312 (89%)	31 (9%)	6 (2%)	7	37
13	K	218/241 (90%)	205 (94%)	11 (5%)	2 (1%)	14	48
13	k	232/241 (96%)	221 (95%)	10 (4%)	1 (0%)	30	63
14	f	815/908 (90%)	771 (95%)	44 (5%)	0	100	100
15	a	371/376 (99%)	343 (92%)	28 (8%)	0	100	100
16	b	189/377 (50%)	176 (93%)	12 (6%)	1 (0%)	25	59
17	c	285/310 (92%)	248 (87%)	37 (13%)	0	100	100
18	d	250/350 (71%)	212 (85%)	37 (15%)	1 (0%)	30	63
19	e	48/70 (69%)	43 (90%)	5 (10%)	0	100	100
20	N	201/239 (84%)	196 (98%)	5 (2%)	0	100	100
20	n	200/239 (84%)	193 (96%)	7 (4%)	0	100	100
21	O	218/277 (79%)	211 (97%)	5 (2%)	2 (1%)	14	48
21	o	218/277 (79%)	208 (95%)	10 (5%)	0	100	100
22	P	202/205 (98%)	193 (96%)	9 (4%)	0	100	100
22	p	202/205 (98%)	193 (96%)	9 (4%)	0	100	100
23	Q	194/201 (96%)	188 (97%)	6 (3%)	0	100	100
23	q	194/201 (96%)	190 (98%)	4 (2%)	0	100	100
24	R	199/263 (76%)	194 (98%)	5 (2%)	0	100	100
24	r	199/263 (76%)	197 (99%)	2 (1%)	0	100	100
25	S	210/241 (87%)	206 (98%)	4 (2%)	0	100	100
25	s	211/241 (88%)	201 (95%)	9 (4%)	1 (0%)	25	59
26	T	214/264 (81%)	207 (97%)	7 (3%)	0	100	100
26	t	214/264 (81%)	208 (97%)	6 (3%)	0	100	100
27	U	853/953 (90%)	794 (93%)	59 (7%)	0	100	100
28	V	442/534 (83%)	421 (95%)	21 (5%)	0	100	100
29	X	378/422 (90%)	362 (96%)	15 (4%)	1 (0%)	37	67
30	Y	378/389 (97%)	339 (90%)	36 (10%)	3 (1%)	16	51

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
31	Z	284/324 (88%)	258 (91%)	25 (9%)	1 (0%)	30	63
32	W	442/456 (97%)	412 (93%)	28 (6%)	2 (0%)	25	59
33	x	83/230 (36%)	81 (98%)	2 (2%)	0	100	100
All	All	13230/15118 (88%)	12241 (92%)	931 (7%)	58 (0%)	32	63

All (58) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	G	164	LYS
4	J	49	SER
4	J	199	VAL
5	L	226	ASP
6	M	104	TYR
8	B	256	ILE
8	B	435	PRO
9	C	87	VAL
9	C	246	ILE
10	D	164	TYR
12	F	170	SER
12	F	324	THR
16	b	23	PRO
7	A	73	ALA
7	A	172	VAL
7	A	206	ILE
8	B	253	SER
9	C	230	MET
10	D	172	ILE
12	F	137	ILE
18	d	93	ALA
25	s	191	ASP
21	O	187	ARG
4	J	182	GLU
7	A	108	ASP
8	B	205	LEU
8	B	411	ARG
10	D	151	ILE
13	K	232	GLU
21	O	188	PRO
30	Y	212	GLU
30	Y	234	PRO
1	G	191	PHE

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Mol	Chain	Res	Type
9	C	239	ARG
10	D	353	ASN
12	F	415	LEU
31	Z	144	VAL
32	W	117	ASP
4	J	46	GLU
7	A	309	PHE
10	D	231	VAL
12	F	326	VAL
13	K	231	LYS
30	Y	235	ASP
32	W	140	ILE
1	G	58	ASP
6	M	5	THR
7	A	343	PHE
10	D	82	ILE
11	E	238	ILE
13	k	9	ASP
10	D	406	VAL
5	L	63	ILE
8	B	145	GLU
29	X	318	ILE
4	J	98	VAL
7	A	177	VAL
12	F	279	ALA

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	G	201/210 (96%)	200 (100%)	1 (0%)	86 93
1	g	206/210 (98%)	206 (100%)	0	100 100
2	H	184/191 (96%)	183 (100%)	1 (0%)	86 93
2	h	190/191 (100%)	189 (100%)	1 (0%)	86 93
3	I	215/221 (97%)	211 (98%)	4 (2%)	52 73

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	i	210/221 (95%)	210 (100%)	0	100	100
4	J	201/211 (95%)	194 (96%)	7 (4%)	31	60
4	j	202/211 (96%)	202 (100%)	0	100	100
5	L	203/230 (88%)	199 (98%)	4 (2%)	50	72
5	l	203/230 (88%)	203 (100%)	0	100	100
6	M	195/212 (92%)	188 (96%)	7 (4%)	30	59
6	m	198/212 (93%)	198 (100%)	0	100	100
7	A	338/372 (91%)	325 (96%)	13 (4%)	28	57
8	B	333/385 (86%)	311 (93%)	22 (7%)	14	42
9	C	313/346 (90%)	296 (95%)	17 (5%)	18	48
10	D	314/366 (86%)	302 (96%)	12 (4%)	28	57
11	E	299/353 (85%)	290 (97%)	9 (3%)	36	63
12	F	292/379 (77%)	276 (94%)	16 (6%)	18	47
13	K	187/203 (92%)	177 (95%)	10 (5%)	19	48
13	k	196/203 (97%)	196 (100%)	0	100	100
14	f	682/763 (89%)	680 (100%)	2 (0%)	91	96
15	a	329/336 (98%)	329 (100%)	0	100	100
16	b	167/312 (54%)	167 (100%)	0	100	100
17	c	247/268 (92%)	247 (100%)	0	100	100
18	d	224/294 (76%)	224 (100%)	0	100	100
19	e	42/63 (67%)	42 (100%)	0	100	100
20	N	158/181 (87%)	158 (100%)	0	100	100
20	n	157/181 (87%)	157 (100%)	0	100	100
21	O	181/228 (79%)	181 (100%)	0	100	100
21	o	181/228 (79%)	181 (100%)	0	100	100
22	P	173/174 (99%)	173 (100%)	0	100	100
22	p	173/174 (99%)	173 (100%)	0	100	100
23	Q	167/171 (98%)	167 (100%)	0	100	100
23	q	167/171 (98%)	167 (100%)	0	100	100
24	R	156/202 (77%)	156 (100%)	0	100	100
24	r	156/202 (77%)	156 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
25	S	177/199 (89%)	177 (100%)	0	100	100
25	s	178/199 (89%)	178 (100%)	0	100	100
26	T	179/215 (83%)	179 (100%)	0	100	100
26	t	179/215 (83%)	179 (100%)	0	100	100
27	U	727/816 (89%)	726 (100%)	1 (0%)	92	97
28	V	388/460 (84%)	388 (100%)	0	100	100
29	X	326/362 (90%)	326 (100%)	0	100	100
30	Y	320/344 (93%)	320 (100%)	0	100	100
31	Z	252/295 (85%)	252 (100%)	0	100	100
32	W	402/416 (97%)	402 (100%)	0	100	100
33	x	73/207 (35%)	73 (100%)	0	100	100
All	All	11241/12833 (88%)	11114 (99%)	127 (1%)	69	83

All (127) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	G	69	LEU
2	H	71	HIS
3	I	43	VAL
3	I	44	LEU
3	I	134	LEU
3	I	149	GLN
4	J	28	LYS
4	J	84	ILE
4	J	91	CYS
4	J	132	LEU
4	J	144	LEU
4	J	159	ASN
4	J	220	LEU
5	L	29	VAL
5	L	38	LEU
5	L	96	ARG
5	L	99	PHE
6	M	23	VAL
6	M	35	THR
6	M	52	LEU
6	M	83	ASP
6	M	129	ARG

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Mol	Chain	Res	Type
6	M	198	TYR
6	M	215	TRP
7	A	33	LEU
7	A	45	ILE
7	A	63	THR
7	A	102	ILE
7	A	112	ILE
7	A	222	LYS
7	A	223	THR
7	A	237	PHE
7	A	238	ILE
7	A	280	ILE
7	A	337	LEU
7	A	373	LEU
7	A	376	LEU
8	B	49	LEU
8	B	59	ARG
8	B	112	LEU
8	B	123	VAL
8	B	135	ILE
8	B	138	PHE
8	B	144	LEU
8	B	160	ILE
8	B	187	ILE
8	B	210	TYR
8	B	211	TYR
8	B	239	VAL
8	B	246	THR
8	B	247	PHE
8	B	266	LEU
8	B	287	ILE
8	B	288	ASP
8	B	313	LEU
8	B	334	ILE
8	B	347	ILE
8	B	365	PHE
8	B	426	VAL
9	C	42	LEU
9	C	66	LEU
9	C	87	VAL
9	C	94	LYS
9	C	137	LEU

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Mol	Chain	Res	Type
9	C	158	ILE
9	C	174	LEU
9	C	187	LEU
9	C	198	LEU
9	C	210	THR
9	C	249	ASP
9	C	276	LEU
9	C	289	ILE
9	C	290	LYS
9	C	326	LEU
9	C	329	LEU
9	C	383	PHE
10	D	100	THR
10	D	102	ILE
10	D	115	ILE
10	D	133	HIS
10	D	215	LEU
10	D	240	LEU
10	D	289	LEU
10	D	305	VAL
10	D	327	LEU
10	D	368	ASP
10	D	398	ASP
10	D	414	HIS
11	E	41	GLU
11	E	129	ASN
11	E	135	ILE
11	E	203	ILE
11	E	215	ILE
11	E	229	ILE
11	E	261	LEU
11	E	339	ASN
11	E	353	PHE
12	F	76	ASN
12	F	80	ILE
12	F	85	THR
12	F	121	CYS
12	F	134	LEU
12	F	161	LEU
12	F	221	LYS
12	F	225	MET
12	F	311	LEU

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Mol	Chain	Res	Type
12	F	316	GLN
12	F	318	ASP
12	F	323	ASN
12	F	369	HIS
12	F	384	LEU
12	F	397	LYS
12	F	408	LEU
13	K	31	ILE
13	K	51	GLU
13	K	84	ASP
13	K	108	THR
13	K	135	ARG
13	K	156	MET
13	K	157	ASP
13	K	205	VAL
13	K	210	LEU
13	K	230	THR
14	f	669	GLU
14	f	670	MET
2	h	127	VAL
27	U	880	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (168) such sidechains are listed below:

Mol	Chain	Res	Type
1	G	92	GLN
1	G	193	GLN
2	H	42	ASN
2	H	95	GLN
2	H	119	GLN
2	H	123	GLN
2	H	166	ASN
2	H	207	ASN
3	I	30	HIS
3	I	40	ASN
3	I	102	GLN
3	I	155	ASN
4	J	92	GLN
4	J	146	GLN
5	L	20	HIS
5	L	86	ASN
5	L	117	GLN

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Mol	Chain	Res	Type
5	L	175	HIS
5	L	190	HIS
6	M	101	ASN
7	A	150	HIS
7	A	314	ASN
8	B	207	HIS
8	B	241	ASN
8	B	315	GLN
8	B	332	ASN
8	B	425	ASN
9	C	41	ASN
9	C	67	GLN
9	C	90	HIS
9	C	206	HIS
9	C	270	GLN
9	C	288	ASN
10	D	49	GLN
10	D	99	ASN
10	D	110	ASN
10	D	135	HIS
10	D	158	GLN
10	D	295	GLN
11	E	194	ASN
11	E	226	GLN
11	E	345	ASN
12	F	208	HIS
12	F	369	HIS
12	F	417	HIS
13	K	178	GLN
13	K	221	GLN
13	K	227	HIS
14	f	43	GLN
14	f	452	ASN
14	f	473	ASN
14	f	566	HIS
14	f	724	ASN
14	f	815	HIS
14	f	855	GLN
14	f	868	HIS
15	a	10	GLN
15	a	40	GLN
15	a	124	ASN

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Mol	Chain	Res	Type
15	a	152	HIS
15	a	249	GLN
15	a	337	GLN
15	a	369	HIS
16	b	12	ASN
16	b	94	HIS
16	b	101	GLN
17	c	113	HIS
17	c	115	HIS
17	c	183	HIS
17	c	278	GLN
18	d	10	ASN
18	d	47	GLN
18	d	97	GLN
18	d	109	GLN
18	d	141	GLN
18	d	221	ASN
18	d	230	GLN
18	d	245	GLN
5	l	117	GLN
1	g	53	GLN
1	g	147	GLN
1	g	193	GLN
1	g	238	HIS
2	h	52	GLN
2	h	63	HIS
2	h	189	HIS
3	i	109	GLN
3	i	146	GLN
4	j	18	GLN
4	j	215	GLN
13	k	23	GLN
6	m	105	ASN
6	m	170	GLN
20	n	110	GLN
21	o	62	ASN
21	o	91	GLN
21	o	193	ASN
22	p	93	ASN
22	p	173	ASN
23	q	27	GLN
23	q	71	ASN

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Mol	Chain	Res	Type
23	q	101	ASN
23	q	132	HIS
24	r	38	ASN
24	r	119	ASN
24	r	151	GLN
25	s	77	HIS
25	s	108	ASN
25	s	151	ASN
25	s	157	ASN
26	t	3	ASN
20	N	77	HIS
20	N	110	GLN
20	N	158	ASN
21	O	57	GLN
21	O	85	GLN
21	O	193	ASN
23	Q	132	HIS
23	Q	193	ASN
22	P	93	ASN
22	P	145	GLN
22	P	162	HIS
22	P	173	ASN
24	R	70	ASN
24	R	85	ASN
25	S	163	HIS
26	T	157	GLN
26	T	188	GLN
27	U	89	ASN
27	U	107	HIS
27	U	373	ASN
27	U	389	ASN
27	U	500	ASN
27	U	525	ASN
27	U	698	GLN
27	U	718	ASN
27	U	756	HIS
27	U	768	GLN
28	V	81	GLN
28	V	146	GLN
28	V	266	GLN
28	V	329	HIS
28	V	350	GLN

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Mol	Chain	Res	Type
28	V	365	GLN
28	V	376	ASN
28	V	400	HIS
29	X	148	HIS
29	X	182	ASN
29	X	268	GLN
29	X	367	GLN
29	X	405	GLN
29	X	416	ASN
30	Y	48	ASN
30	Y	280	GLN
30	Y	306	GLN
30	Y	388	ASN
31	Z	32	GLN
31	Z	189	GLN
31	Z	229	GLN
31	Z	235	ASN
32	W	156	ASN
32	W	288	HIS
32	W	395	ASN
32	W	426	ASN
32	W	440	ASN
33	x	40	HIS
33	x	56	GLN
33	x	73	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

6 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
34	ATP	A	501	-	26,33,33	0.61	0	31,52,52	0.78	1 (3%)
35	ADP	F	501	-	24,29,29	0.93	1 (4%)	29,45,45	1.51	4 (13%)
35	ADP	E	501	-	24,29,29	0.91	1 (4%)	29,45,45	1.49	4 (13%)
35	ADP	B	501	-	24,29,29	0.89	1 (4%)	29,45,45	1.39	4 (13%)
35	ADP	D	501	-	24,29,29	0.90	1 (4%)	29,45,45	1.38	4 (13%)
35	ADP	C	501	-	24,29,29	0.96	1 (4%)	29,45,45	1.44	4 (13%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '2' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
34	ATP	A	501	-	-	5/18/38/38	0/3/3/3
35	ADP	F	501	-	-	3/12/32/32	0/3/3/3
35	ADP	E	501	-	-	4/12/32/32	0/3/3/3
35	ADP	B	501	-	-	3/12/32/32	0/3/3/3
35	ADP	D	501	-	-	5/12/32/32	0/3/3/3
35	ADP	C	501	-	-	5/12/32/32	0/3/3/3

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	C	501	ADP	C5-C4	2.40	1.47	1.40
35	F	501	ADP	C5-C4	2.35	1.47	1.40
35	E	501	ADP	C5-C4	2.31	1.47	1.40
35	D	501	ADP	C5-C4	2.27	1.46	1.40
35	B	501	ADP	C5-C4	2.26	1.46	1.40

All (21) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	C	501	ADP	PA-O3A-PB	-4.05	118.93	132.83
35	E	501	ADP	PA-O3A-PB	-3.93	119.34	132.83
35	F	501	ADP	PA-O3A-PB	-3.77	119.89	132.83
35	D	501	ADP	PA-O3A-PB	-3.62	120.39	132.83
35	F	501	ADP	C3'-C2'-C1'	3.52	106.27	100.98
35	E	501	ADP	C3'-C2'-C1'	3.31	105.96	100.98
35	F	501	ADP	N3-C2-N1	-3.25	123.60	128.68
35	E	501	ADP	N3-C2-N1	-3.24	123.61	128.68
35	B	501	ADP	C3'-C2'-C1'	3.14	105.71	100.98
35	D	501	ADP	N3-C2-N1	-3.12	123.79	128.68
35	B	501	ADP	N3-C2-N1	-3.03	123.94	128.68
35	C	501	ADP	N3-C2-N1	-2.97	124.03	128.68
35	C	501	ADP	C3'-C2'-C1'	2.86	105.29	100.98
35	B	501	ADP	PA-O3A-PB	-2.86	123.03	132.83
35	B	501	ADP	C4-C5-N7	-2.65	106.64	109.40
35	D	501	ADP	C4-C5-N7	-2.62	106.67	109.40
35	C	501	ADP	C4-C5-N7	-2.54	106.75	109.40
35	F	501	ADP	C4-C5-N7	-2.54	106.76	109.40
35	D	501	ADP	C3'-C2'-C1'	2.37	104.55	100.98
35	E	501	ADP	C4-C5-N7	-2.36	106.94	109.40
34	A	501	ATP	C5-C6-N6	2.29	123.83	120.35

There are no chirality outliers.

All (25) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
35	B	501	ADP	C5'-O5'-PA-O3A
35	C	501	ADP	C5'-O5'-PA-O2A
35	D	501	ADP	C5'-O5'-PA-O1A
35	D	501	ADP	C5'-O5'-PA-O2A
35	E	501	ADP	C5'-O5'-PA-O3A
35	E	501	ADP	O4'-C4'-C5'-O5'
35	F	501	ADP	C5'-O5'-PA-O1A
35	F	501	ADP	C5'-O5'-PA-O2A
35	D	501	ADP	O4'-C4'-C5'-O5'
35	D	501	ADP	C3'-C4'-C5'-O5'
35	E	501	ADP	C3'-C4'-C5'-O5'
34	A	501	ATP	O4'-C4'-C5'-O5'
35	C	501	ADP	C5'-O5'-PA-O3A
35	D	501	ADP	C5'-O5'-PA-O3A
35	F	501	ADP	C5'-O5'-PA-O3A

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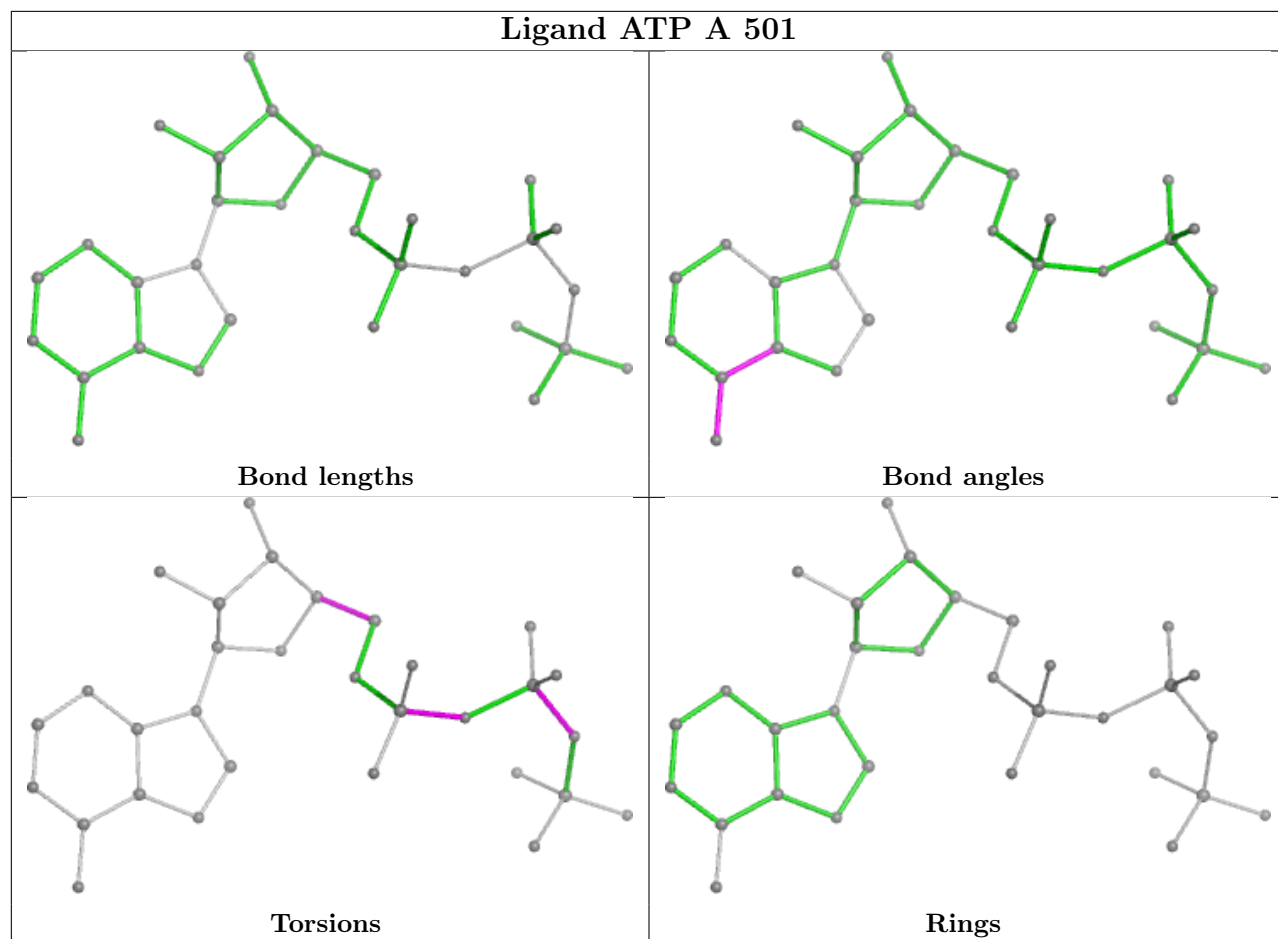
Mol	Chain	Res	Type	Atoms
35	B	501	ADP	C5'-O5'-PA-O1A
35	C	501	ADP	C5'-O5'-PA-O1A
35	E	501	ADP	C5'-O5'-PA-O1A
34	A	501	ATP	C3'-C4'-C5'-O5'
34	A	501	ATP	PG-O3B-PB-O1B
34	A	501	ATP	PB-O3A-PA-O1A
34	A	501	ATP	PB-O3A-PA-O2A
35	C	501	ADP	O4'-C4'-C5'-O5'
35	C	501	ADP	C3'-C4'-C5'-O5'
35	B	501	ADP	C5'-O5'-PA-O2A

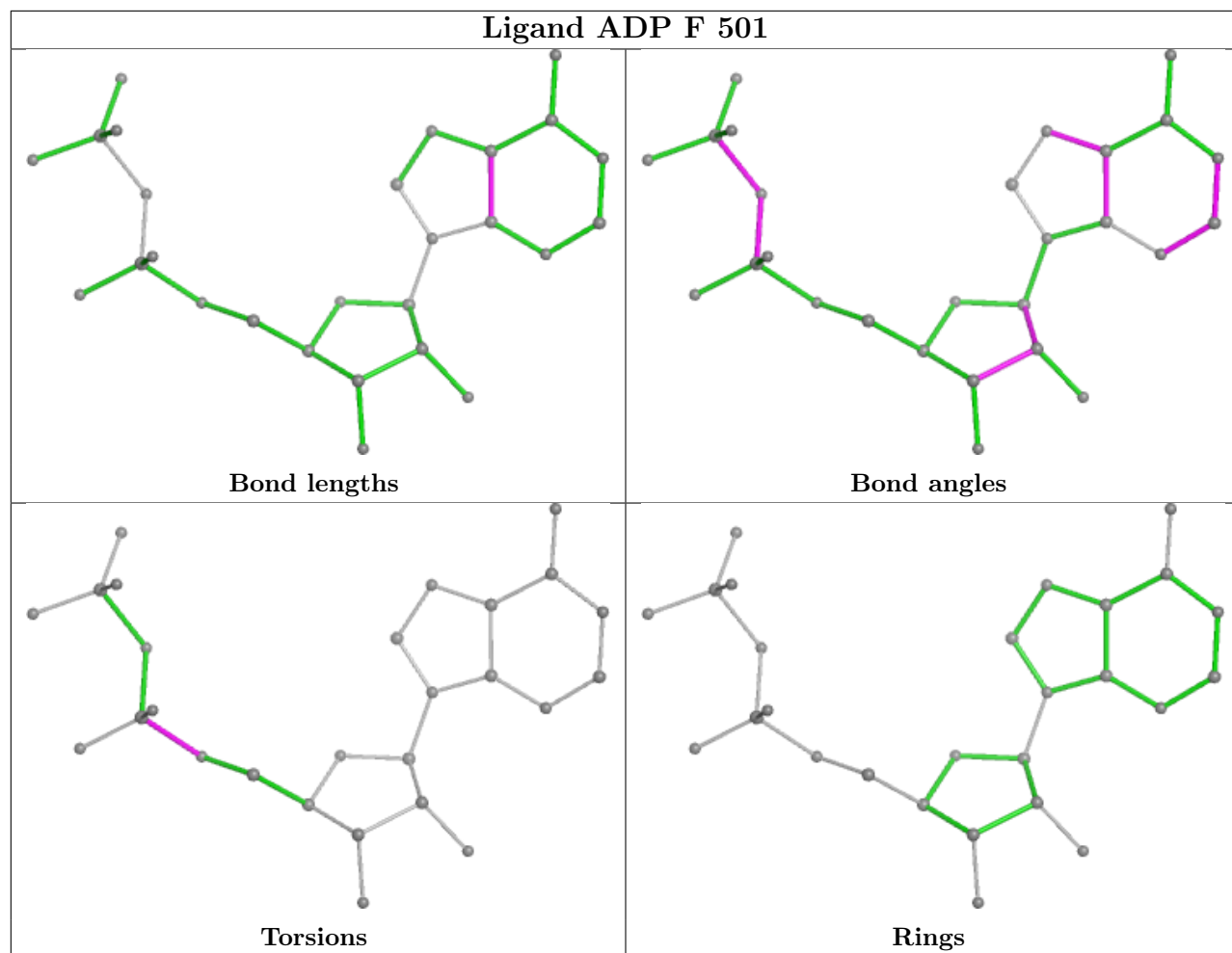
There are no ring outliers.

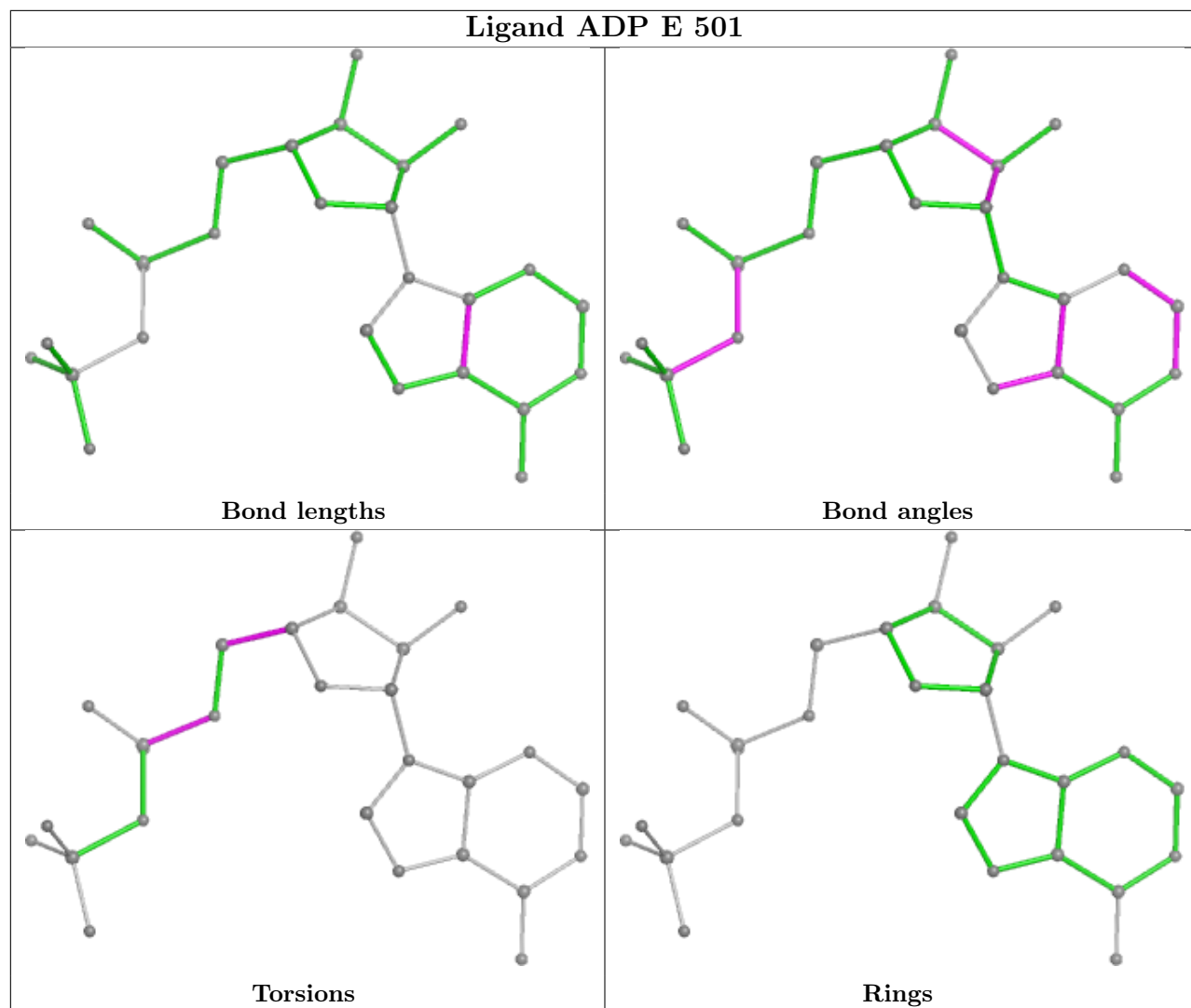
6 monomers are involved in 28 short contacts:

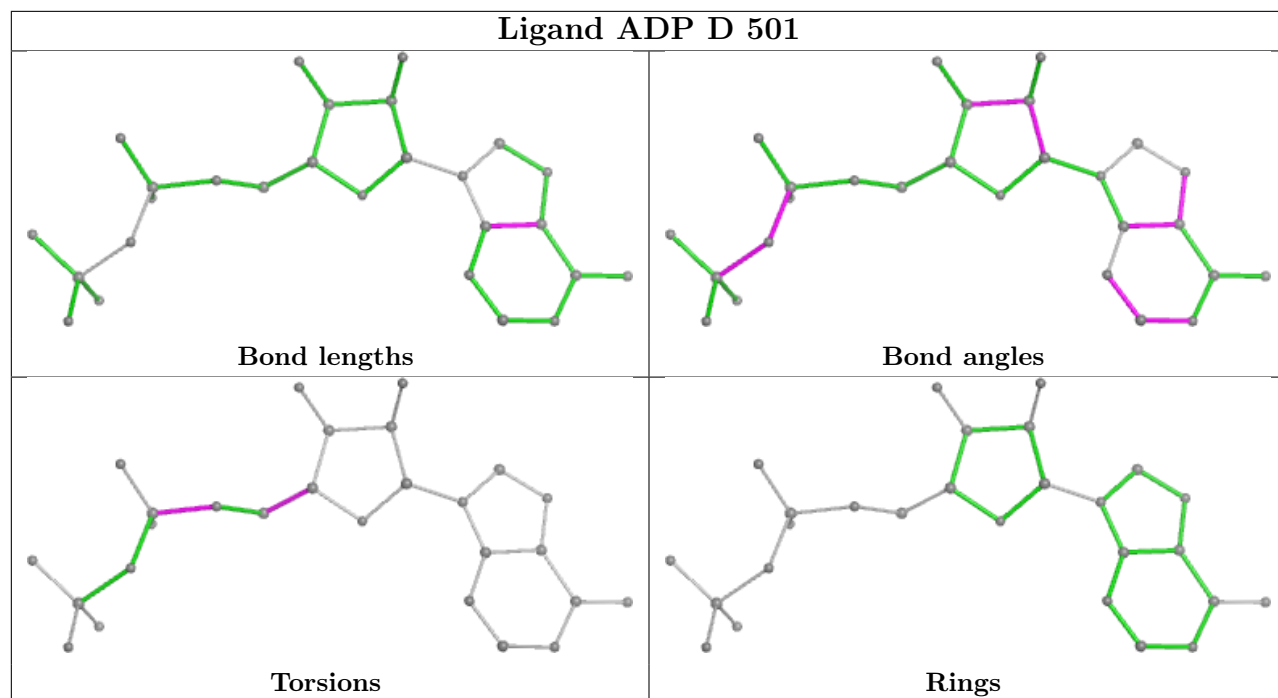
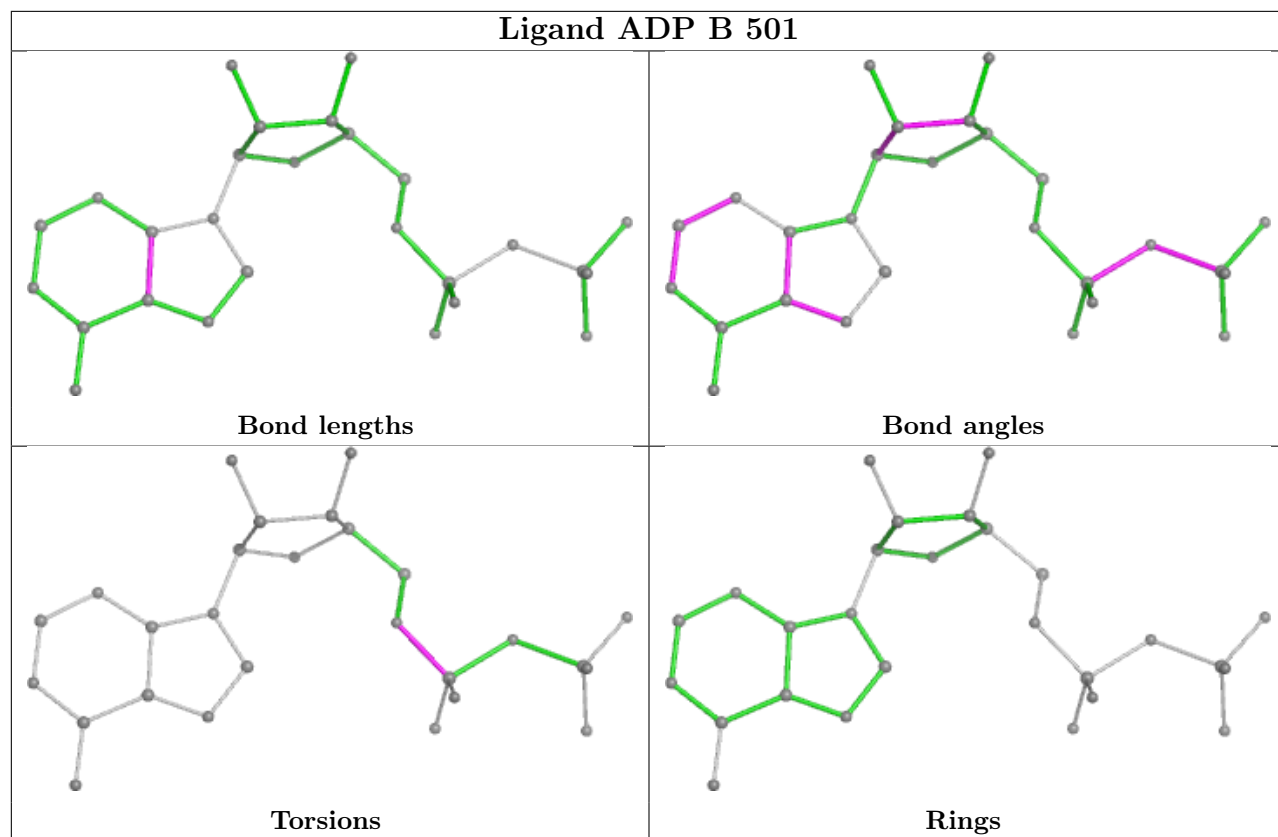
Mol	Chain	Res	Type	Clashes	Symm-Clashes
34	A	501	ATP	5	0
35	F	501	ADP	5	0
35	E	501	ADP	3	0
35	B	501	ADP	5	0
35	D	501	ADP	4	0
35	C	501	ADP	6	0

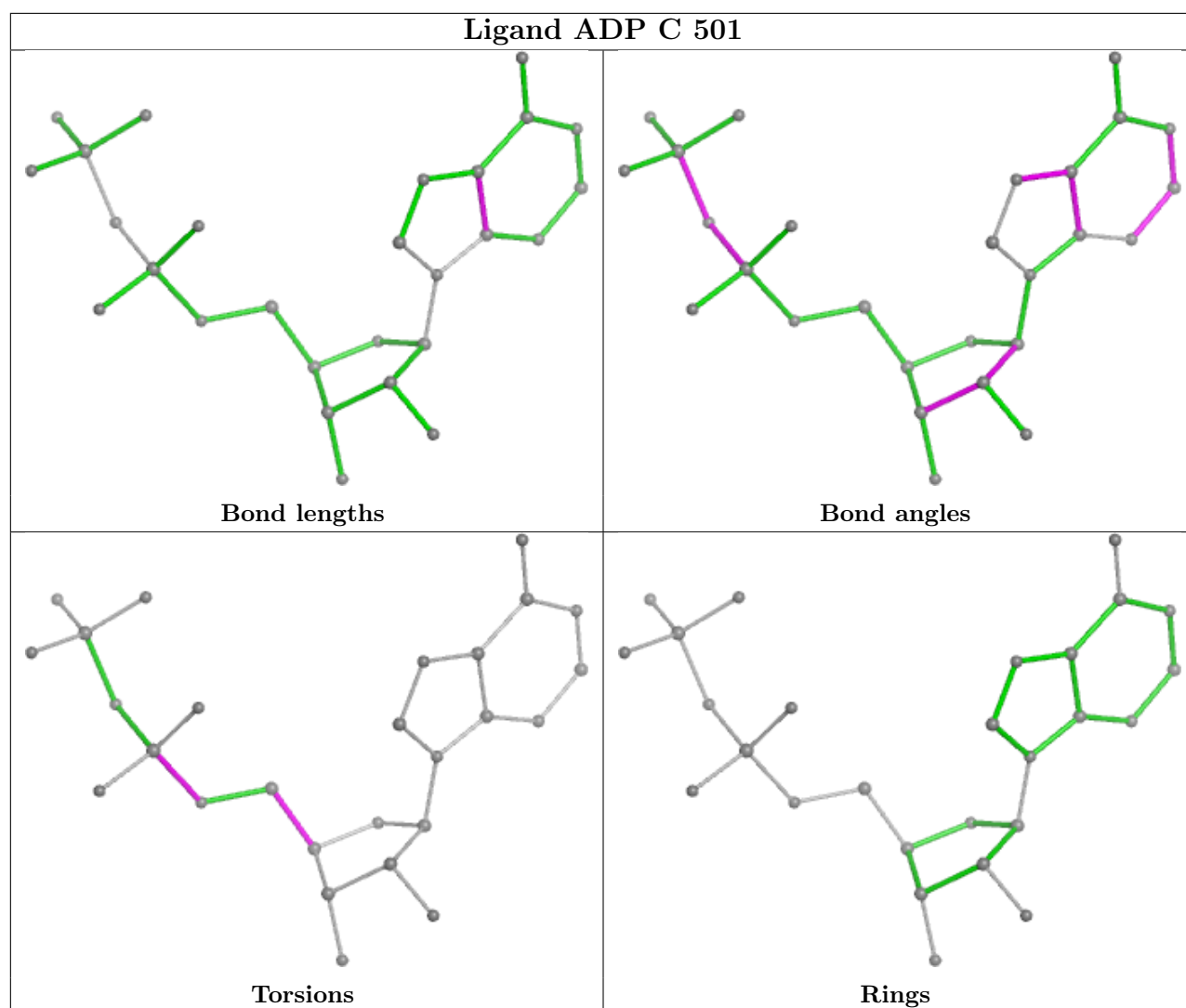
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.











5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

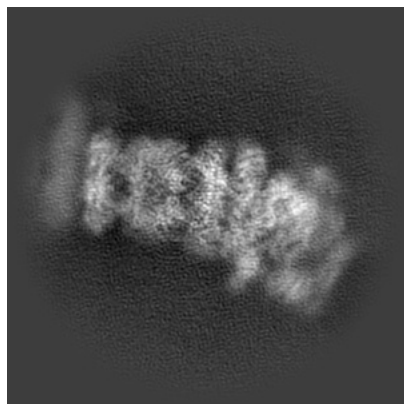
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-52097. These allow visual inspection of the internal detail of the map and identification of artifacts.

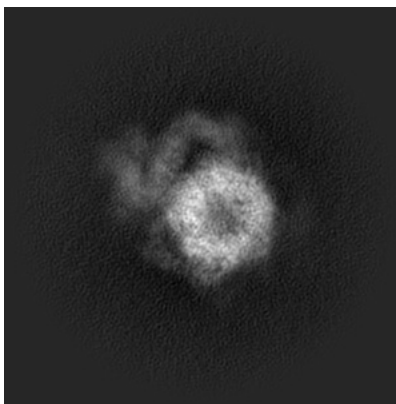
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

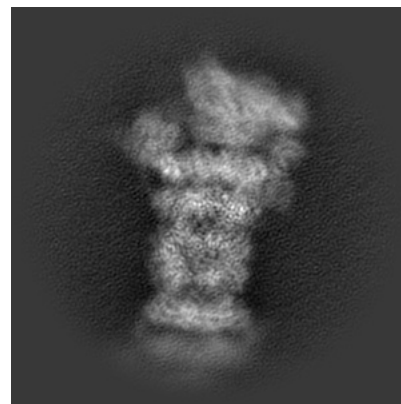
6.1.1 Primary map



X

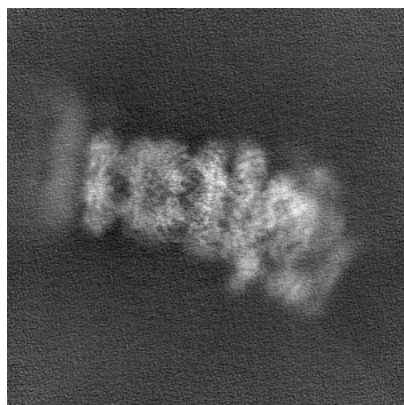


Y

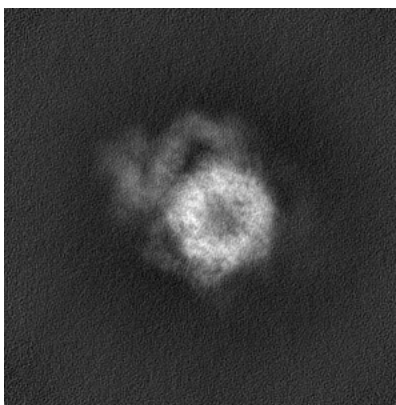


Z

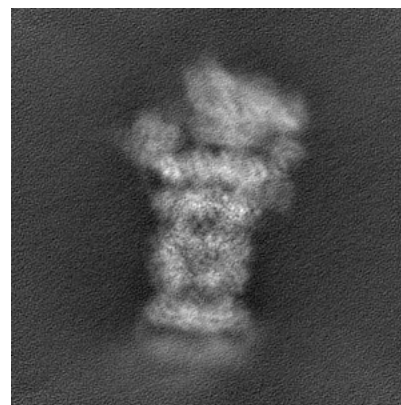
6.1.2 Raw map



X



Y

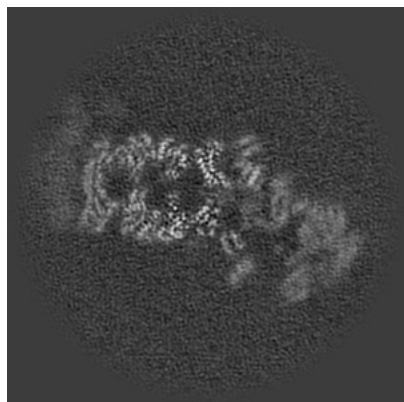


Z

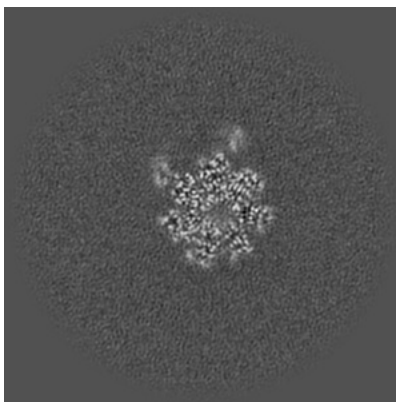
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

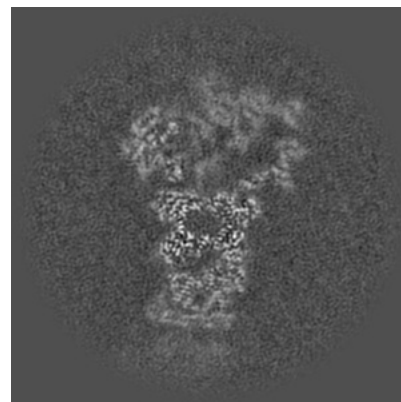
6.2.1 Primary map



X Index: 150

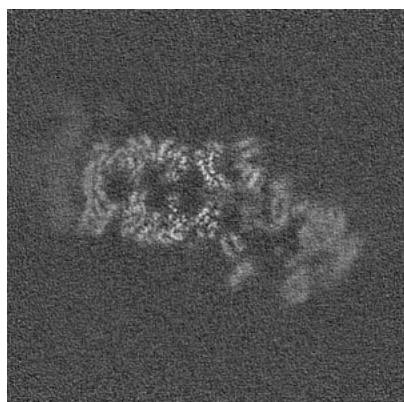


Y Index: 150

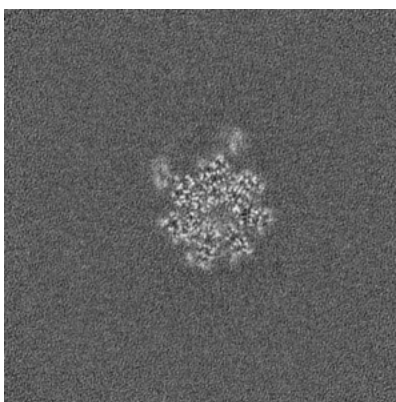


Z Index: 150

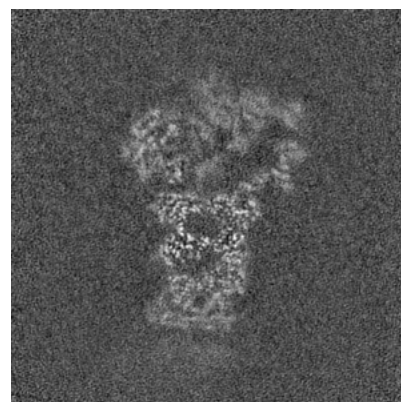
6.2.2 Raw map



X Index: 150



Y Index: 150

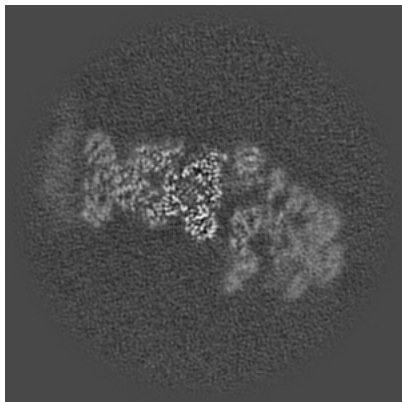


Z Index: 150

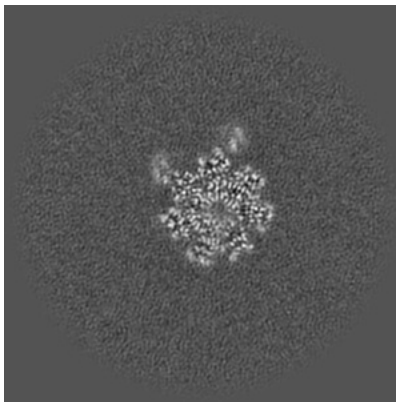
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

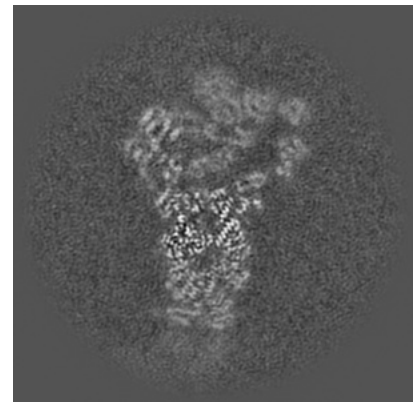
6.3.1 Primary map



X Index: 161

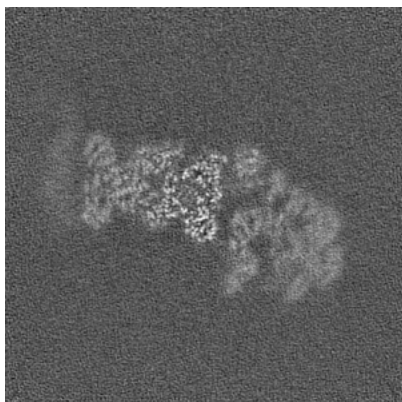


Y Index: 151

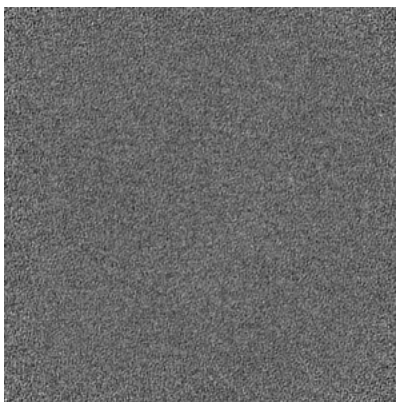


Z Index: 147

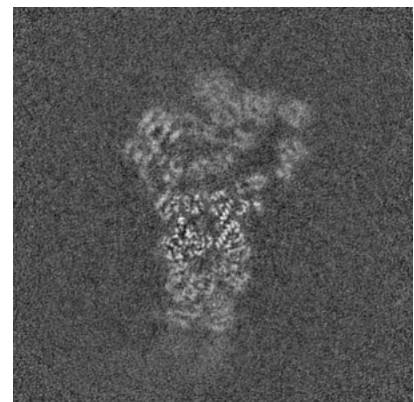
6.3.2 Raw map



X Index: 161



Y Index: 0

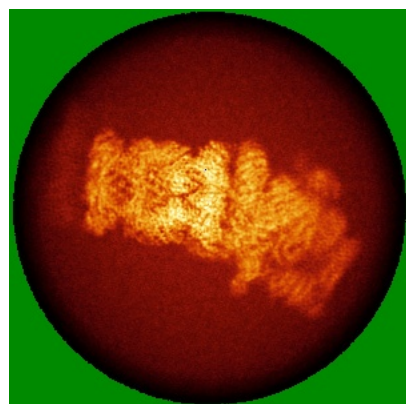


Z Index: 147

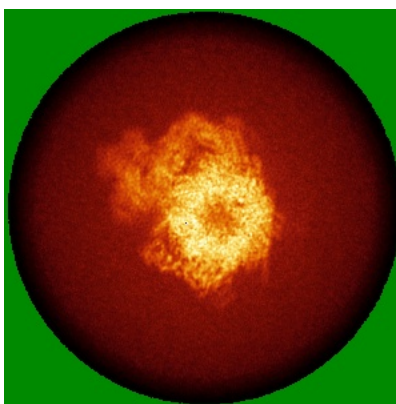
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

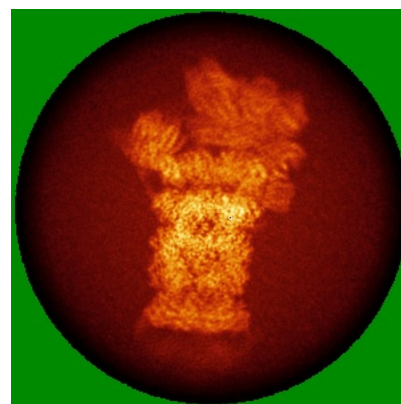
6.4.1 Primary map



X

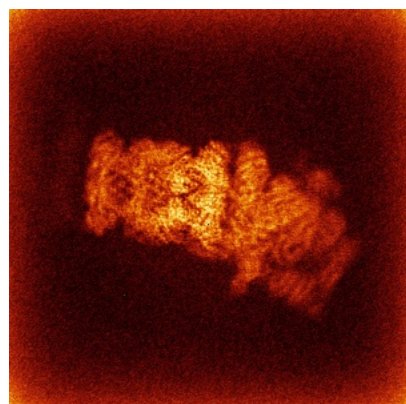


Y

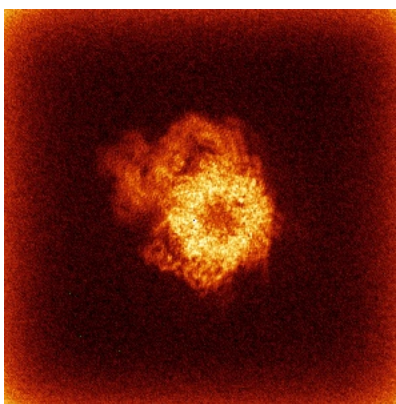


Z

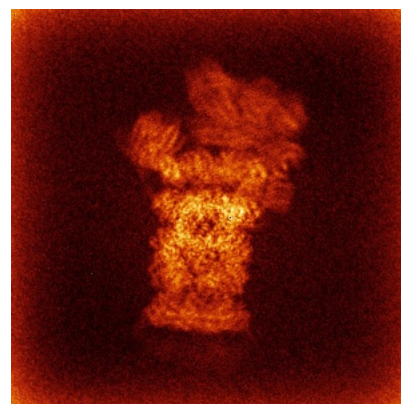
6.4.2 Raw map



X



Y

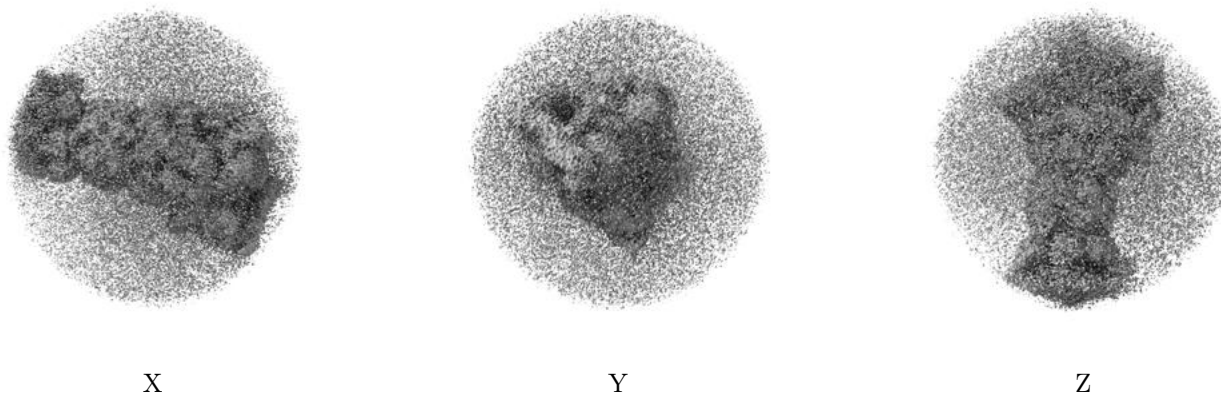


Z

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.

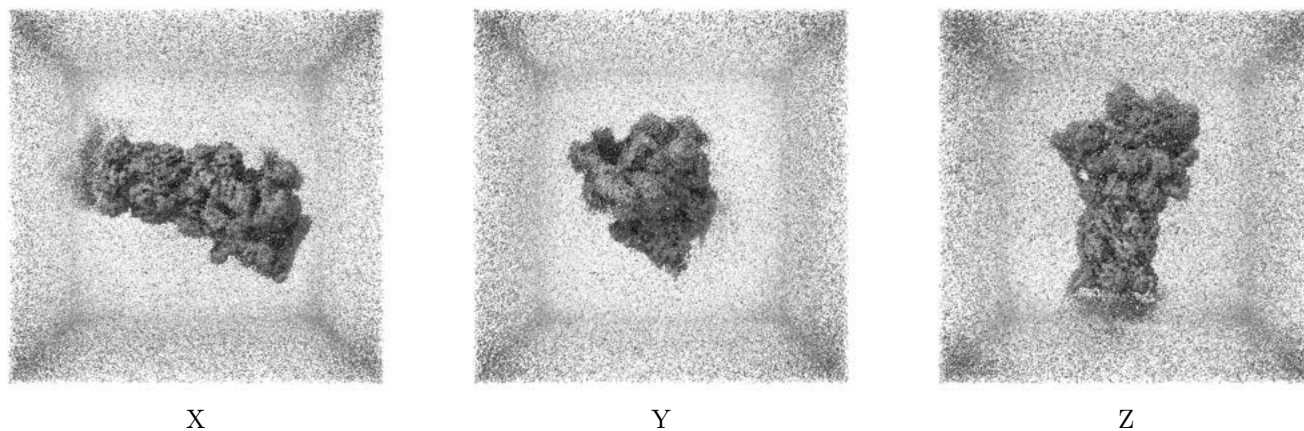
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.2. 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



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.

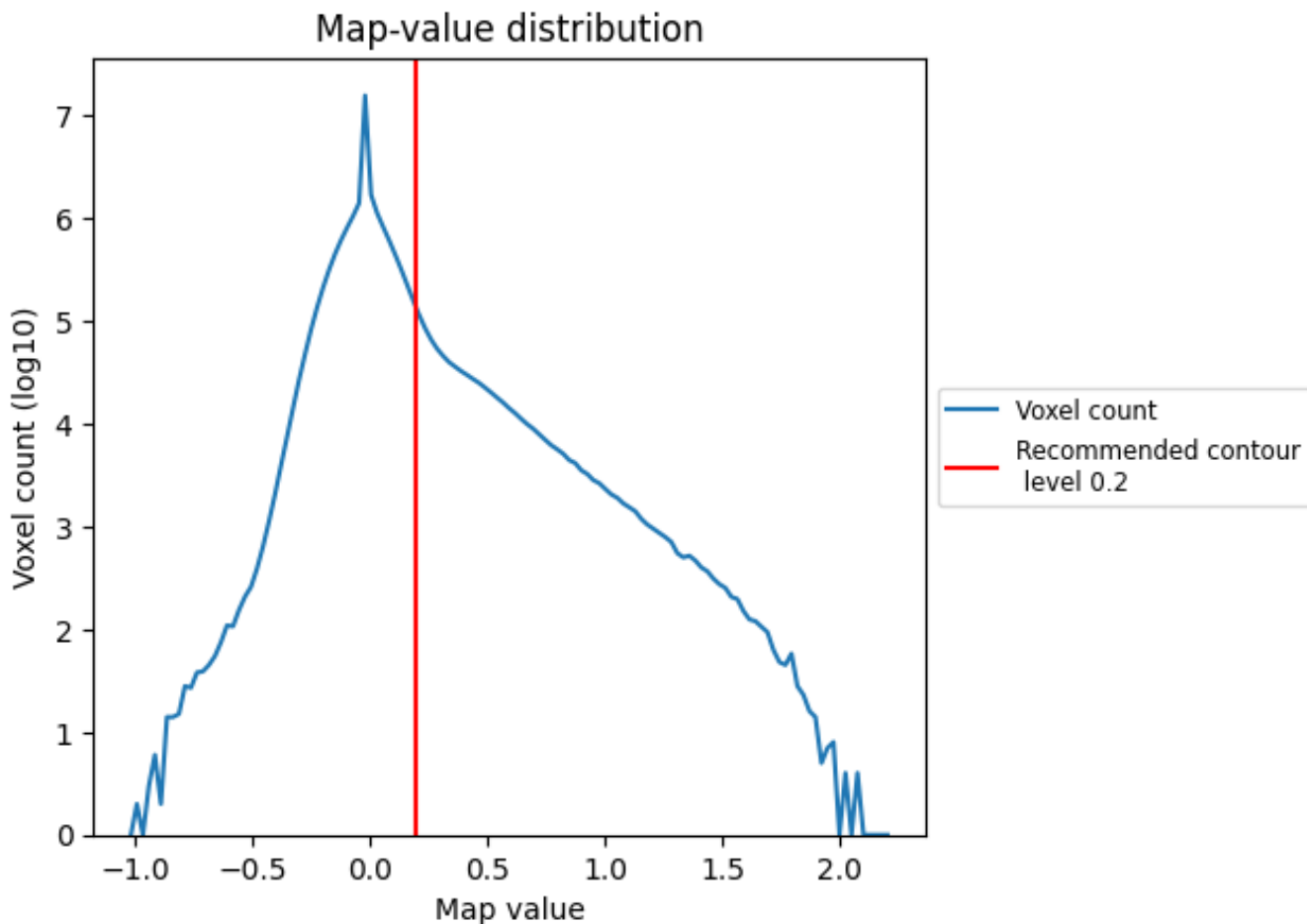
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

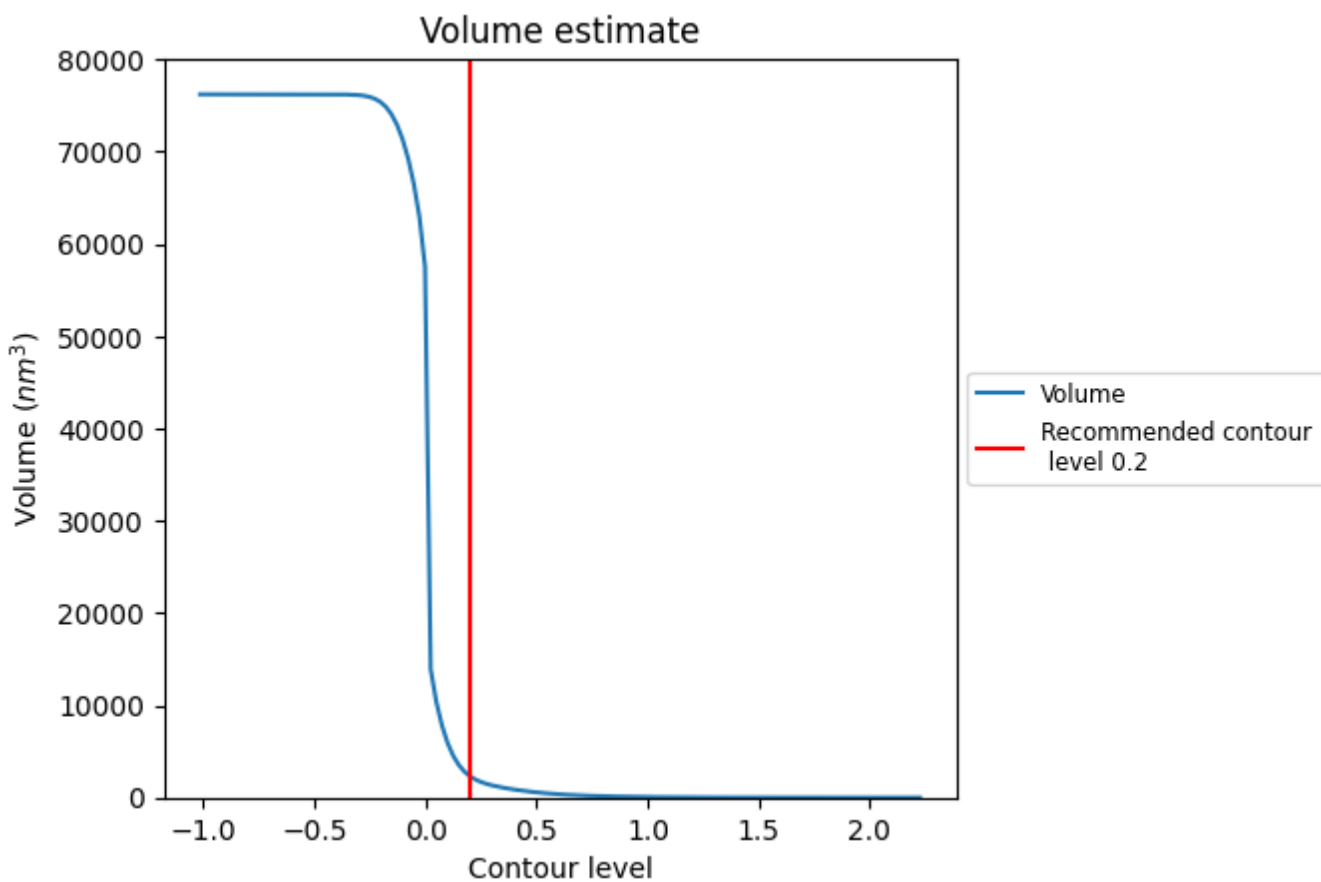
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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.

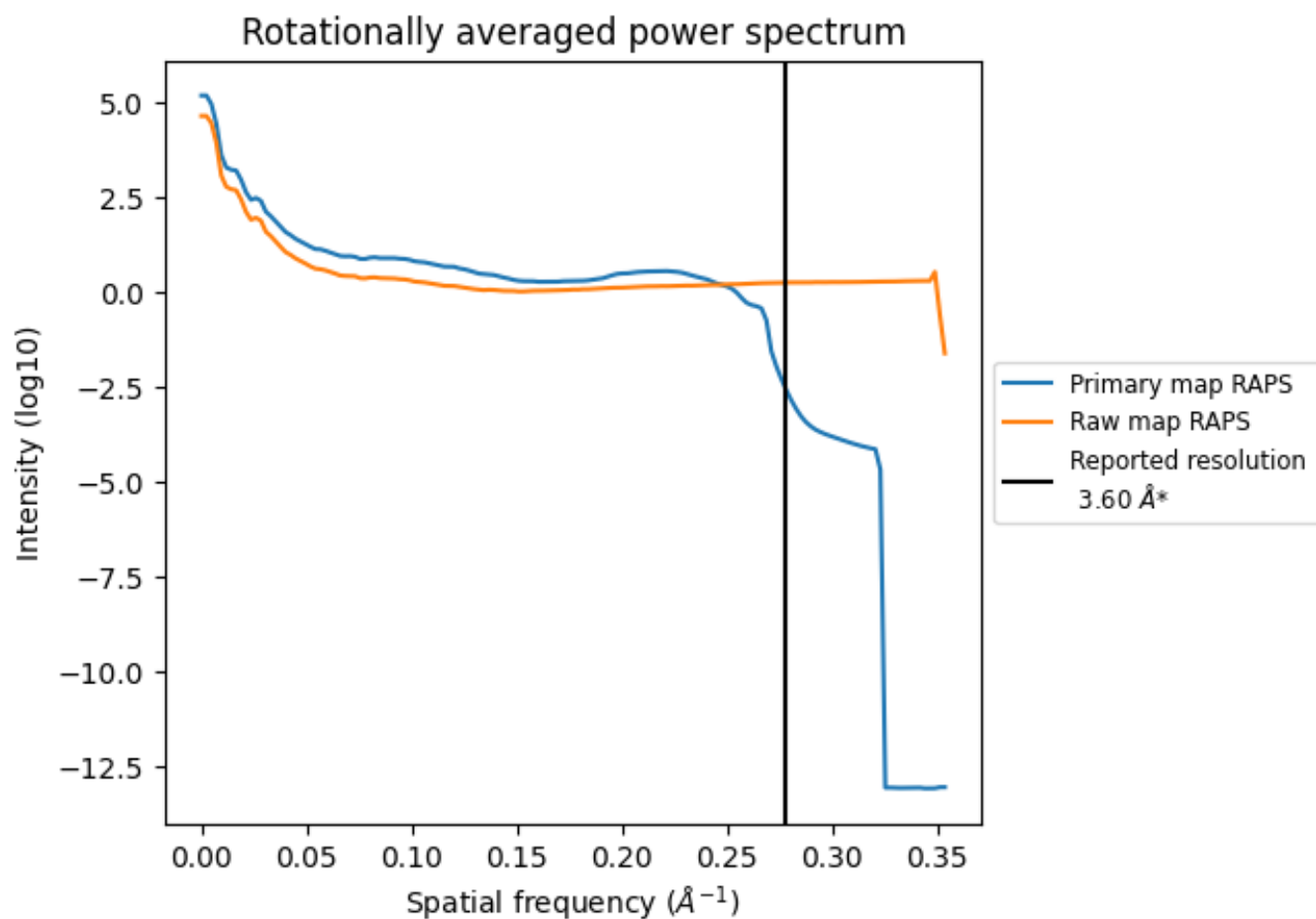
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2315 nm³; this corresponds to an approximate mass of 2091 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](#)

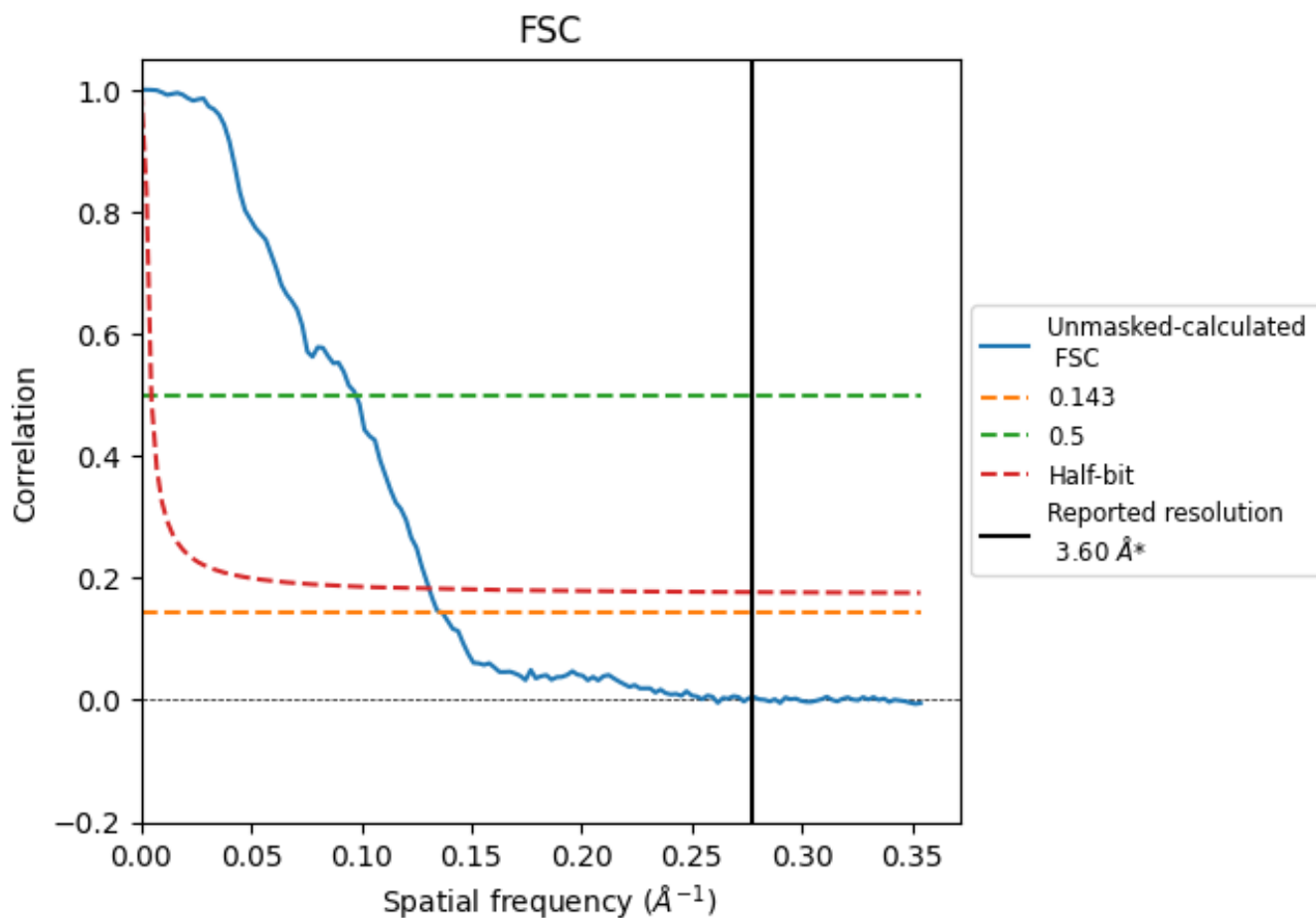


*Reported resolution corresponds to spatial frequency of 0.278 Å⁻¹

8 Fourier-Shell correlation [i](#)

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 [i](#)



*Reported resolution corresponds to spatial frequency of 0.278 Å⁻¹

8.2 Resolution estimates [i](#)

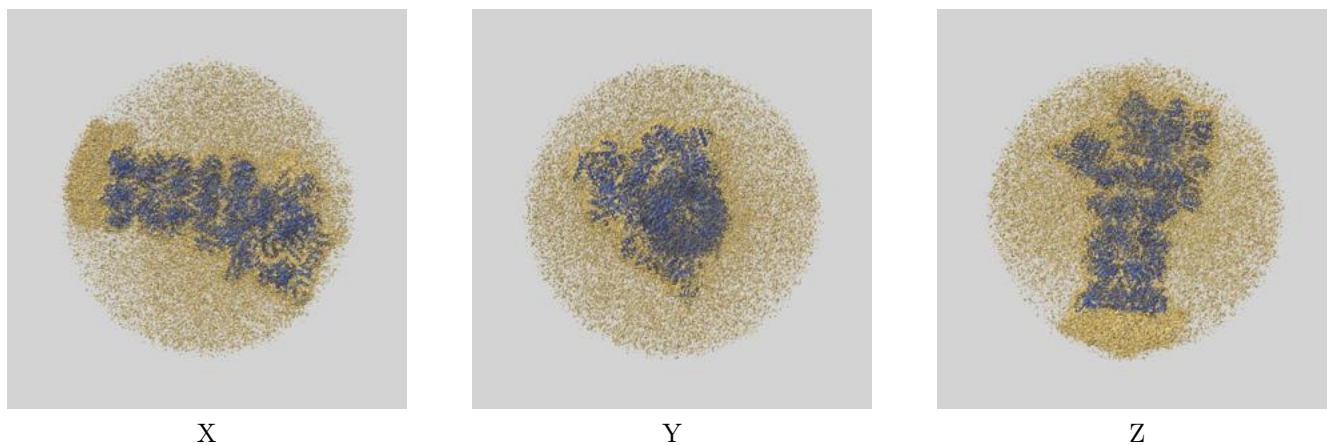
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.60	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	7.32	10.28	7.65

*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 7.32 differs from the reported value 3.6 by more than 10 %

9 Map-model fit [i](#)

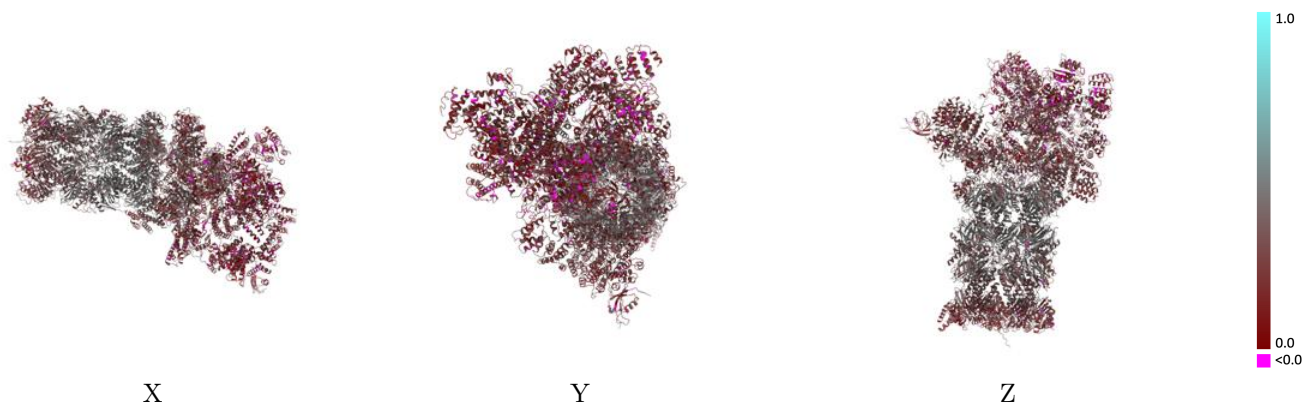
This section contains information regarding the fit between EMDB map EMD-52097 and PDB model 9HEU. Per-residue inclusion information can be found in section 3 on page 12.

9.1 Map-model overlay [i](#)



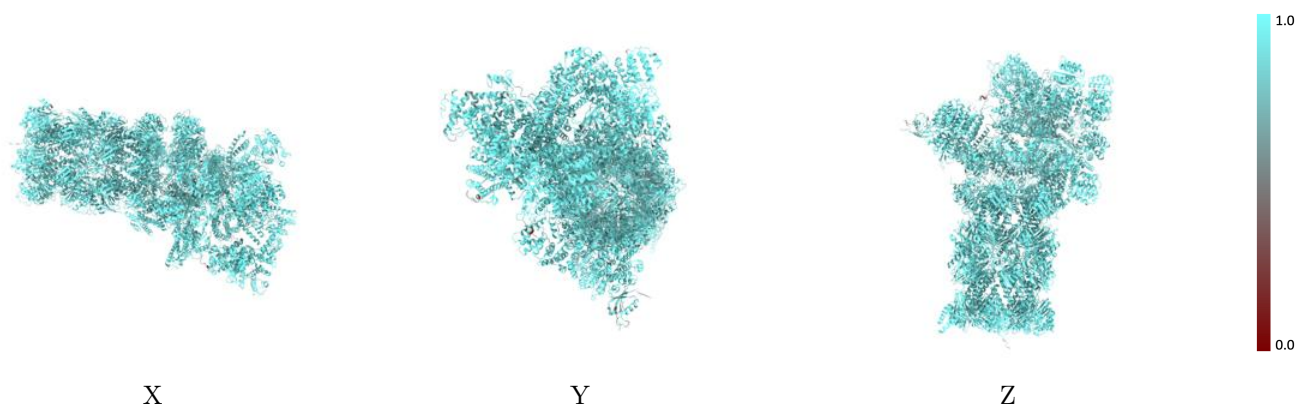
The images above show the 3D surface view of the map at the recommended contour level 0.2 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



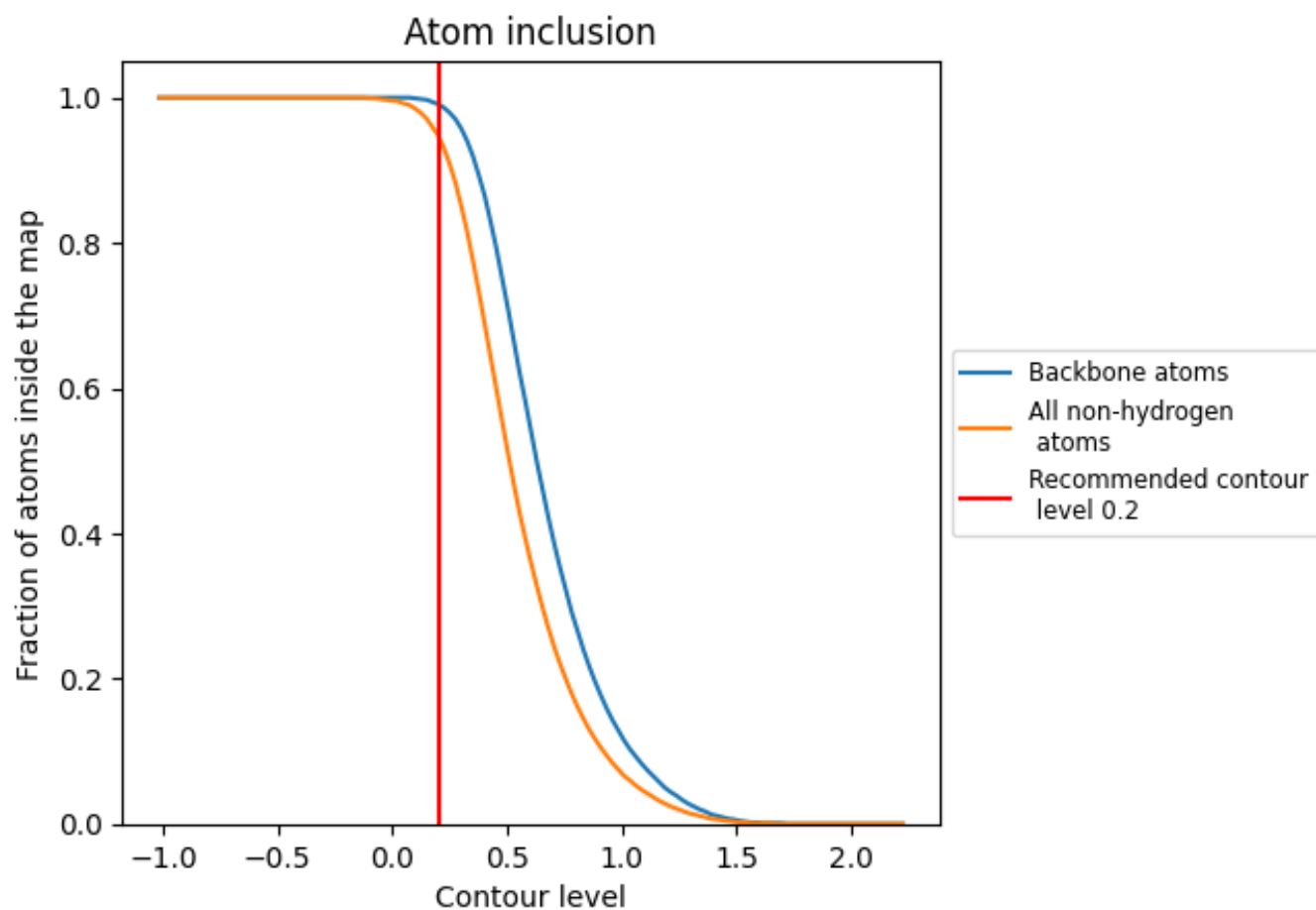
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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](#)



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 (0.2).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 99% of all backbone atoms, 95% 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 (0.2) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9480	 0.3110
A	 0.9160	 0.2720
B	 0.8930	 0.2900
C	 0.9070	 0.2750
D	 0.9100	 0.2840
E	 0.9260	 0.2960
F	 0.9320	 0.2660
G	 0.9660	 0.4330
H	 0.9440	 0.4220
I	 0.9470	 0.4200
J	 0.9380	 0.3850
K	 0.9410	 0.3910
L	 0.9540	 0.4200
M	 0.9570	 0.4240
N	 0.9700	 0.4270
O	 0.9800	 0.4360
P	 0.9800	 0.4450
Q	 0.9640	 0.4350
R	 0.9770	 0.4330
S	 0.9660	 0.4230
T	 0.9590	 0.4210
U	 0.9620	 0.2070
V	 0.9450	 0.2170
W	 0.9570	 0.2580
X	 0.9460	 0.2970
Y	 0.9530	 0.2350
Z	 0.9630	 0.2180
a	 0.9590	 0.2120
b	 0.9590	 0.1960
c	 0.9500	 0.2280
d	 0.9230	 0.2070
e	 0.9110	 0.2410
f	 0.9550	 0.2860
g	 0.9570	 0.3000
h	 0.9490	 0.2950



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Chain	Atom inclusion	Q-score
i	 0.9470	 0.2920
j	 0.9570	 0.2960
k	 0.9380	 0.2860
l	 0.9520	 0.3010
m	 0.9440	 0.2820
n	 0.9760	 0.3840
o	 0.9690	 0.3780
p	 0.9800	 0.3930
q	 0.9690	 0.3890
r	 0.9780	 0.4040
s	 0.9620	 0.3960
t	 0.9700	 0.3910
x	 0.7280	 0.2200