



Full wwPDB EM Validation Report ⓘ

Jan 20, 2026 – 01:33 pm GMT

PDB ID : 9QMS / pdb_00009qms
EMDB ID : EMD-53237
Title : DNA-PK bound to 153 bp H2AX nucleosome with ATPyS
Authors : Hall, C.; Chaplin, A.K.
Deposited on : 2025-03-24
Resolution : 5.00 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

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

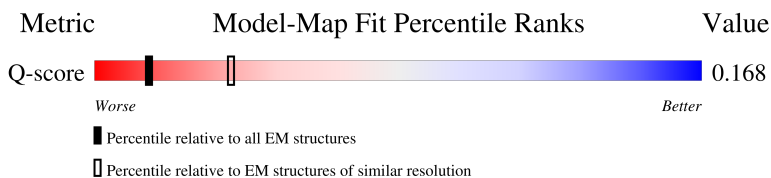
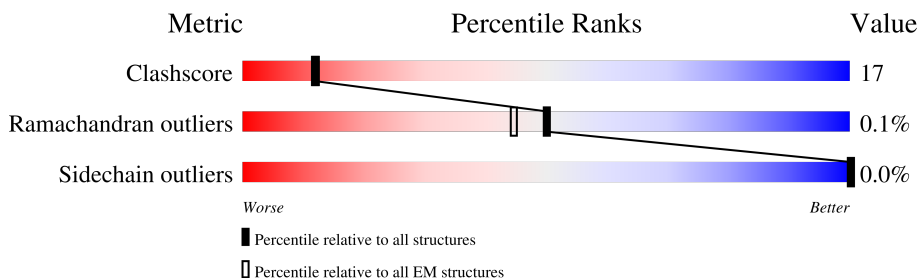
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 5.00 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.



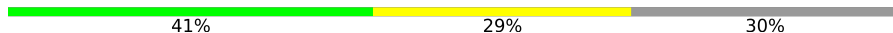
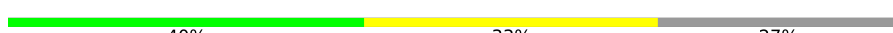
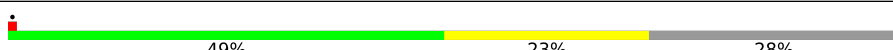
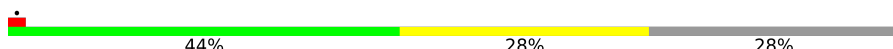
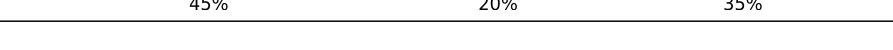
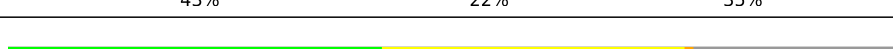
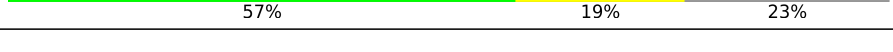
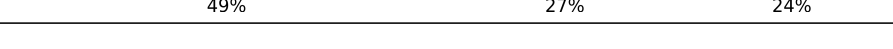
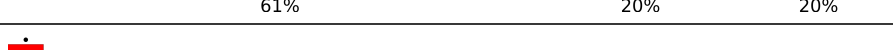
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	210492	15764	-
Ramachandran outliers	207382	16835	-
Sidechain outliers	206894	16415	-
Q-score	-	25397	1057 (4.50 - 5.50)

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	O	4128	
1	o	4128	
2	L	732	
2	N	732	

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Mol	Chain	Length	Quality of chain
2	l	732	
2	n	732	
3	C	143	
3	G	143	
3	c	143	
3	g	143	
4	D	126	
4	H	126	
4	d	126	
4	h	126	
5	A	136	
5	E	136	
5	a	136	
5	e	136	
6	B	103	
6	F	103	
6	b	103	
6	f	103	
7	K	609	
7	M	609	
7	k	609	
7	m	609	
8	I	153	
8	i	153	
9	J	153	

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Mol	Chain	Length	Quality of chain
9	j	153	30% 62% 8%

2 Entry composition [i](#)

There are 9 unique types of molecules in this entry. The entry contains 113260 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 DNA-dependent protein kinase catalytic subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	O	3514	Total	C	N	O	S	0	0
			28053	18035	4713	5119	186		
1	o	3505	Total	C	N	O	S	0	0
			27969	17985	4707	5090	187		

- Molecule 2 is a protein called X-ray repair cross-complementing protein 5.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	L	656	Total	C	N	O	S	0	0
			5240	3345	873	996	26		
2	N	640	Total	C	N	O	S	0	0
			5114	3270	850	968	26		
2	l	517	Total	C	N	O	S	0	0
			4117	2640	683	771	23		
2	n	517	Total	C	N	O	S	0	0
			4106	2630	684	769	23		

- Molecule 3 is a protein called Histone H2AX.

Mol	Chain	Residues	Atoms				AltConf	Trace
3	C	100	Total	C	N	O	0	0
			767	485	149	133		
3	G	98	Total	C	N	O	0	0
			745	470	144	131		
3	c	102	Total	C	N	O	0	0
			779	491	153	135		
3	g	99	Total	C	N	O	0	0
			751	473	145	133		

- Molecule 4 is a protein called Histone H2B type 1-J.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	D	92	Total	C	N	O	S	0	0
			706	444	126	134	2		
4	H	91	Total	C	N	O	S	0	0
			703	445	125	131	2		
4	d	91	Total	C	N	O	S	0	0
			708	447	125	134	2		
4	h	92	Total	C	N	O	S	0	0
			718	453	127	136	2		

- Molecule 5 is a protein called Histone H3.1.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	A	95	Total	C	N	O	S	0	0
			778	491	148	135	4		
5	E	96	Total	C	N	O	S	0	0
			794	500	154	136	4		
5	a	88	Total	C	N	O	S	0	0
			717	454	134	125	4		
5	e	88	Total	C	N	O	S	0	0
			721	456	135	126	4		

- Molecule 6 is a protein called Histone H4.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	B	79	Total	C	N	O	S	0	0
			631	400	121	109	1		
6	F	79	Total	C	N	O	S	0	0
			631	400	121	109	1		
6	b	78	Total	C	N	O	S	0	0
			620	393	120	106	1		
6	f	78	Total	C	N	O	S	0	0
			610	385	117	107	1		

- Molecule 7 is a protein called X-ray repair cross-complementing protein 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	K	493	Total	C	N	O	S	0	0
			3940	2528	658	736	18		
7	M	493	Total	C	N	O	S	0	0
			3970	2543	671	738	18		
7	k	493	Total	C	N	O	S	0	0
			3958	2538	666	736	18		

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Mol	Chain	Residues	Atoms					AltConf	Trace
7	m	489	Total	C	N	O	S	0	0
			3923	2514	660	732	17		

- Molecule 8 is a DNA chain called DNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	I	139	Total	C	N	O	P	0	0
			2829	1345	515	831	138		
8	i	141	Total	C	N	O	P	0	0
			2871	1364	520	846	141		

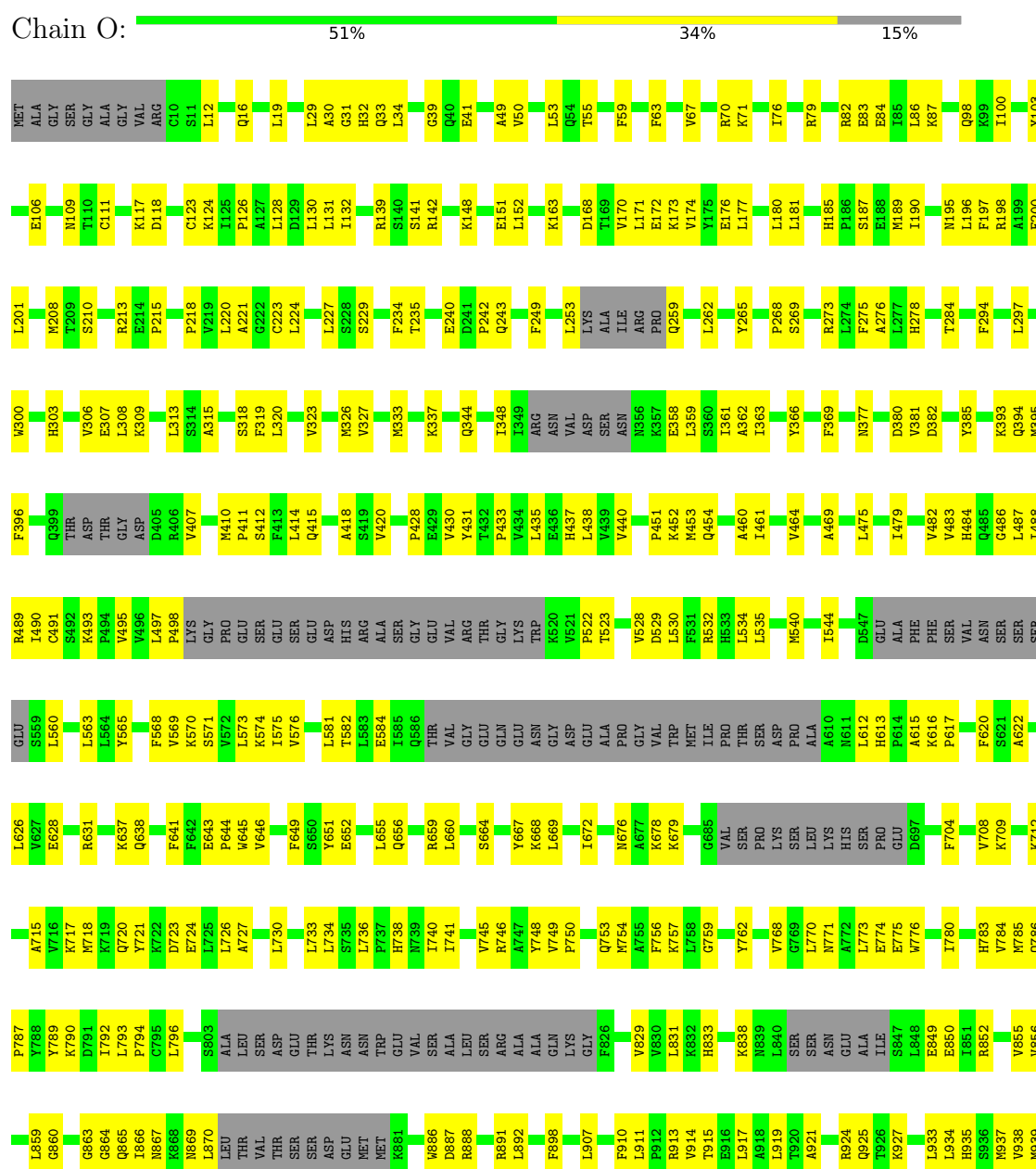
- Molecule 9 is a DNA chain called DNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	J	140	Total	C	N	O	P	0	0
			2886	1365	540	841	140		
9	j	141	Total	C	N	O	P	0	0
			2905	1375	542	847	141		

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: DNA-dependent protein kinase catalytic subunit



H2103	S2034	ASN	VAL	D1821	M1743	S1687	S1586	GLY	L1395	A1309	H1133	W1039	F940
H2104	T2035	LEU	PHE	R1822	K1744	F1688	M1589	ASP	P1396	E1310	L1134	W1039	H941
H2105	L2036	LEU	HIS	S1823	K1745	P1689	M1589	GLU	D1397	C1312	T1137	T1056	M948
L2108	M2040	PHE	SER	L1824	F1746	F1670	M1592	GLN	L1398	G1313	K1140	S1058	K1057
L2109	Q2042	ILE	CYS	L1827	L1747	V1671	V1593	CYS	C1399	GLY	K1140	L1059	E950
L2110	L2108	ASN	ILE	L1828	L1750	T1674	V1596	LEU	V1400	THR	L1145	F1060	G961
L2111	W1829	LEU	THR	L1829	P1756	Y1675	L1597	PRO	M1403	GLY	L1146	K1061	G952
L2112	H1830	ILE	LEU	H1830	M1757	L1676	M1600	S1502	K1404	ALA	N1146	R1062	P957
L2113	L1836	LEU	GLY	L1836	L1758	L1679	L1601	L1505	G1234	GLY	K1148	L1063	M958
L2114	L1837	LVS	E1910	R1837	L1759	L1679	L1601	L1505	T1235	ASN	K1149	Y1064	Y959
L2115	R1838	ARG	E1911	R1838	M1762	K1683	F1605	K1508	Q1238	ARG	K1150	Q960	Q960
L2116	F1839	ARG	T1912	F1839	M1762	L1684	F1605	Q1589	F1239	ARG	R1151	L961	L961
L2117	F1840	TYR	K1913	F1840	C1767	D1685	R1608	L1510	T1240	LEU	L1152	Y962	K963
L2118	A1847	ASN	T1914	A1847	R1768	L1688	R1608	L1517	LEU	L1153	L1153	K963	R964
L2119	I1848	PRO	L1915	I1848	H1772	K1689	Q1611	L1517	TYR	E1328	P1154	K1073	R964
L2120	L1849	VAL	L1916	L1849	V1773	G1690	K1612	L1524	LEU	L1415	R1155	K1074	R964
L2121	Y1850	GLU	K1917	Y1850	M1774	Q1691	H1613	L1524	LEU	E1416	G1156	R1075	Y968
L2122	L1851	ILE	A1922	L1851	E1775	T1693	Q1614	R1527	ARG	T1417	F1157	L1076	Y968
L2123	K1852	SER	M1926	K1852	E1776	T1694	G1615	L1528	GLY	H1418	Y1352	G1077	L972
L2124	ARG	PRO	MET	ARG	L1777	L1695	K1617	L1531	PRO	K1422	L1165	F1082	C974
L2125	ALA	PRO	ALA	PHE	F1778	L1696	L1618	L1532	PHE	T1424	D1167	F1082	C974
L2126	GLY	GLU	GLY	THR	Q1779	L1696	A1619	L1532	LEU	L1250	L1168	I1085	Q978
L2127	ARG	ARG	GLU	LVS	F1782	F1699	L1623	A1536	LEU	L1256	V1169	Y1086	Y979
L2128	GLU	ARG	ASN	LEU	R1783	THR	L1623	V1537	GLY	L1257	L1170	Y1086	Y979
L2129	LEU	ASN	GLN	LEU	K1784	SER	V1626	L1538	GLY	D1258	L1171	F1089	Y980
L2130	GLU	LEU	LEU	GLU	R1785	GLY	K1627	L1539	LEU	L1259	L1172	F1089	Y980
L2131	SER	SER	SER	GLY	L1786	GLY	K1627	THR	ALA	L1260	L1173	E1092	P986
L2132	THR	THR	THR	GLY	R1787	GLY	C1628	ALA	GLY	L1261	P1179	L1095	M989
L2133	GLY	GLY	GLY	GLY	R1787	GLY	D1630	LEU	SER	L1262	Q1180	V1096	M989
L2134	GLY	GLY	GLY	GLY	R1787	GLY	S1631	LEU	GLY	A1263	C1183	Q1099	Q990
L2135	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	R1184	F1099	F995
L2136	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	H1185	V1100	T996
L2137	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	K1186	F1101	T996
L2138	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	F1191	L1104	K1000
L2139	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	P1196	Q1004	Q1004
L2140	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	P1196	I1106	Q1004
L2141	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	P1196	Y1107	V1007
L2142	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	P1199	M1103	V1007
L2143	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	G1200	E1011	E1011
L2144	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	N1201	A1012	A1012
L2145	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	R1202	I1013	I1013
L2146	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	S1203	L1014	L1014
L2147	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	H1115	H1115	L1017
L2148	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	L1206	K1119	T1017
L2149	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	V1207	V1018	V1018
L2150	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	L1208	S1120	S1120
L2151	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	K1209	L1121	S1023
L2152	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	D1210	G1122	G1122
L2153	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	V1211	T1123	R1026
L2154	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	L1212	G1127	G1127
L2155	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	K1213	F1028	F1028
L2156	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	E1214	C1029	C1029
L2157	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358	S1218	I1033	I1033
L2158	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2159	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2160	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2161	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2162	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2163	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2164	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2165	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2166	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2167	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2168	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2169	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2170	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2171	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2172	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2173	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2174	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2175	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2176	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2177	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2178	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2179	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2180	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2181	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2182	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2183	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2184	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2185	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2186	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			
L2187	GLY	GLY	GLY	GLY	R1787	GLY	S1631	GLY	GLY	L1358			



L3480	E3582	L3767	L3857	R3965	V4038	R4119
K3483	W3588	V3770	K3858	Q3966	Y4039	T4120
I3487	V3592	I3774	K3860	F3967	R4040	W4124
K4493	A3597	L3788	T3867	I3968	R4041	E4125
Q4494	LYS	E3700	V3868	N3969	Q4043	P4126
F3495	THR	I3701	T3869	L3970	I4044	W4127
I3496	PRO	Q3704	T3870	M3971	A4047	M4128
S3497	V3601	Q3707	F3871	L3972	R4048	
W3498	V3606	R3708	K3872	M3974	R4049	
I3499	I3606	G3707	K3873	E3975	A4054	
S3500	E3607	R3708	K3874	I3976		
	K3608	K3710	E3875	T3977		
V3503	M3609	G3709	S3876	L3983	V4058	
L3505	A3504	K3710	K3877	M3984	I4059	
L3506	E3611	H3716	L3882	V3985	L4064	
	L3617	I3719	R3889	H3986	H4068	
D3509	P3623	A3720	P3894	L3988	P4072	
Q3510	G3624	F3721	L3898	N4000	Y4077	
V3512	L3625	F3722	A3905	M4002	V4078	
A3513	G3626	V3726	A3909	D4003	A4079	
	R3629	M3729	F4005	V4004	V4080	
N3524	K3630	S3730	R4082	V4006	A4081	
Q3527	K3631	L3732	C3912	K4007	G4083	
		L3733	L3913	F4008	S4084	
F3533	G3647	R3734	S3914	P4009	K4085	
S3536	GLY	R3735	H3915	S4010	P4086	
S3537	SER	K3736	L3918	D4011	H4087	
E3538	LEU	R3737	G3919	D4012	I4089	
S3539	LEU	I3738	I3920	W4013	R4090	
TVR	ARG		D3831	K4014	A4091	
SER	MET		P3832	Y4015	A4092	
PHE	LYS		R3833	PHE	Q4092	
LYS	LEU		A3834	GLU	E4093	
ASP	S3657		P3835	GLN	P4094	
T3546			P3836	LYS	E4095	
S3546	I3662		N3927	MET	S4096	
T3547			F3928	LEU	G4097	
G3548	M3665		K3929	LYS	L4098	
K3549	L3666		V3930	LYS		
N3551	L3667		A3931	LYS	T4102	
K3552	L3668		I3940	GLY	K4105	
F3553	K3669		D3941	GLY	G4106	
F3554	M3670		F3946	SER	L4107	
	N3671		T3950	TRP	M4108	
	K3672			ILE	D4109	
	L3680			ILE	Q4110	
	K3681			ASN	D4113	
V3567	E3682			VAL	P4114	
	G3683			ALA	L4117	
I3572	S3684			GLU	G4118	
N3573	P3685			LYS		
A3574	W3686			ASN		

• Molecule 1: DNA-dependent protein kinase catalytic subunit

Chain o:  49% 35% 15%

MET	P92	I166	Q243	K626	M410
ALA	L93	P167	T244	V327	P411
GLY	E94	D168	S245	V327	S412
SER	K95	T169	R246	F413	F413
GLY	N96	V170	E247	M333	L414
ALA	G97	L171	I248	K337	V417
GLY	Q98	E172	F249	L338	A418
VAL	K99	Y175	N250	Q339	S419
ARG	I100	E176	F251	V340	V420
C10	Y103	L177	L253	F341	
L13	S104	L181	LYS	T348	P428
R14	V106		ALA	I349	
L15			ILE	T432	
	K108	V184	ARG	L435	
L19	N109	H185	PRO	ASN	L435
	T110	P186	Q259	VAL	E436
D23	C111	S187	I260	ASP	H437
R24	T112	E188	D261	SER	L438
	S113	M189	L262	ASN	
A27	V114	I190	K263	N356	Q442
L28	Y115	N191	R264	L359	F446
L29	T116	N192	Y265	P447	F446
	K117	A193	A266	S360	P447
	A120	E194	V267	I361	Q448
L34	I121	N195	P268	A362	Y449
I35	K122	F197	S269	I363	S450
R36	C123	L196	A270	R364	
G37	C124	F200	L274	K374	M453
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				L455	
				D380	L468
				V381	R459
				D382	A460
				F383	V464
				K384	
				V385	
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				I389	V474
				Q390	L475
				R391	R476
				C392	N477
				K393	C478
				Q394	I479
				F396	
				L397	H484
				THR	Q485
				GLN	G486
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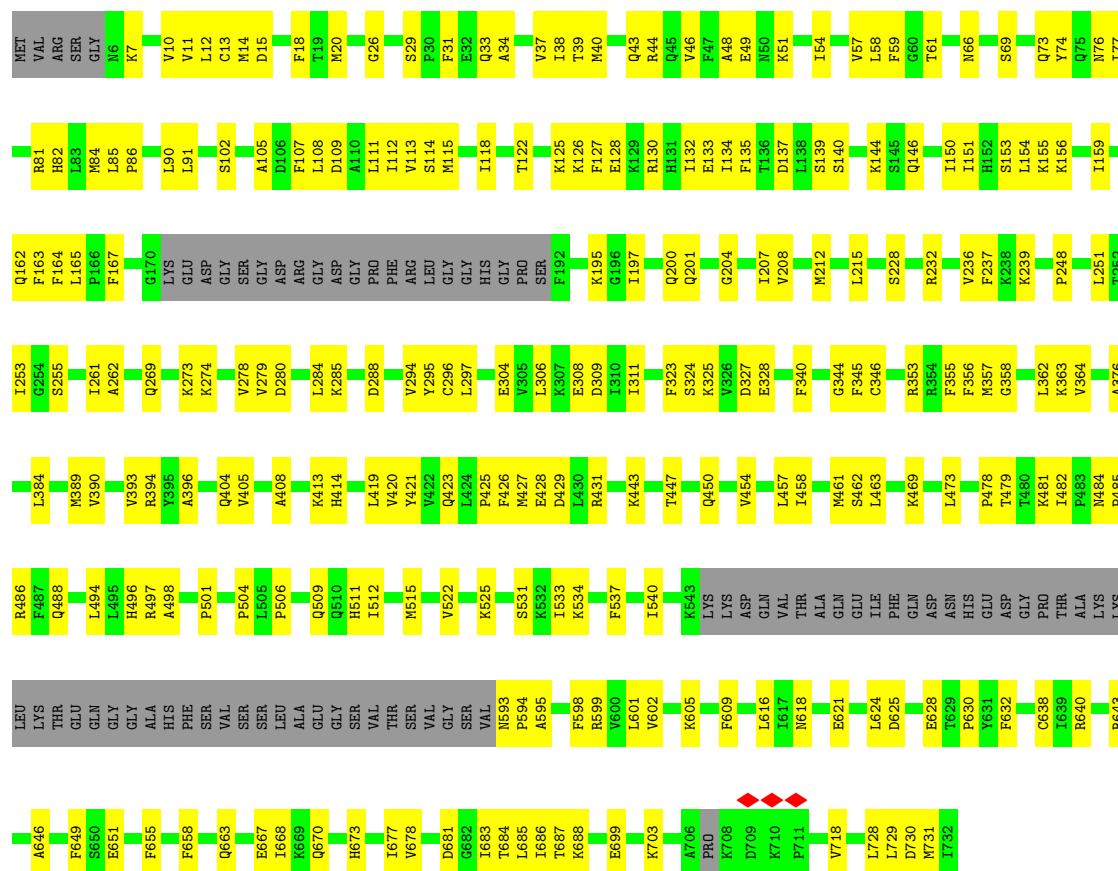
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THR	L1625	ALA	R1460	L1363	L1260	R1178	A1072	D908	D908	GLN	R746	L659	V576	GLU
LEU	H1626	SER	R1460	P1363	L1261	P1179	F1073	M989	F909	LYS	R746	L660	E577	SER
GLY	L1463	GLY	L1463	W1356	E1265	Q1180	K1074	Q990	F910	GLY	L752	S664	K578	GLU
SER	L1464	SER	L1464	K1357	C1266	E1182	L1076	L991	V914	LEU	Q753	L581	L581	ASP
GLM	H1465	SER	L1464	L1358	C1267	C1183	G1077	W994	T915	ALA	M754	L585	L585	HIS
GLY	M1466	GLM	M1466	L1359	M1268	R1184	A1078	N997	A918	SER	F756	Q586	Q586	ARG
SER	L1467	GLY	K1360	K1360	M1268	H1185	A1078	N997	L919	ASN	K757	L670	VAL	GLY
VAL	L1468	VAL	K1361	K1361	I1271	H1186	F1082	K1000	R924	ASN	G759	S671	VAL	VAL
ILE	D1474	ILE	D1362	D1363	T1275	S1187	I1085	F1001	R924	GLU	G759	I672	GLU	ARG
HIS	L1475	HIS	L1363	L1363	V1276	I1188	I1085	F1001	R924	ALA	Y762	I672	GLU	THR
PHE	L1476	PHE	T1366	T1366	V1276	E1188	F1086	D1005	C931	ILE	Y762	I672	GLU	GLY
S1554	H1477	S1554	H1367	H1367	V1281	F1191	R1087	D1005	E932	ALA	Y762	I672	GLU	GLY
E1557	L1478	E1557	L1368	L1368	L1282	F1191	R1087	D1005	E932	ILE	Y762	I672	GLU	GLY
F1558	V1479	F1558	M1369	M1369	L1282	K1193	E1092	A1008	L934	ALA	L765	G685	ASN	W519
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Y1560	K1489	Y1560	L1372	L1372	V1294	P1196	V1096	A1012	M939	PRO	R771	GLU	GLU	YS24
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F1562	K1489	F1562	L1372	L1372	V1294	P1196	V1096	A1012	M939	PRO	R771	GLU	GLU	YS24
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F1564	K1489	F1564	L1372	L1372	V1294	P1196	V1096	A1012	M939	PRO	R771	GLU	GLU	YS24
E1565	K1489	E1565	L1372	L1372	V1294	P1196	V1096	A1012	M939	PRO	R771	GLU	GLU	YS24
T1566	K1489	T1566	L1372	L1372	V1294	P1196	V1096	A1012	M939	PRO	R771	GLU	GLU	YS24
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M1574	K1574	M1574	L1395	L1395	K1311	K1203	C1127	V1039	Q980	THR	D791	PRO	PRO	L534
L1577	L1577	L1577	L1395	L1395	K1311	K1203	C1127	V1039	Q980	THR	D791	PRO	PRO	L534
A1578	A1578	A1578	L1395	L1395	K1311	K1203	C1127	V1039	Q980	THR	D791	PRO	PRO	L534
V1579	V1579	V1579	L1395	L1395	K1311	K1203	C1127	V1039	Q980	THR	D791	PRO	PRO	L534
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L1582	L1582	L1582	L1395	L1395	K1311	K1203	C1127	V1039	Q980	THR	D791	PRO	PRO	L534
M1583	M1583	M1583	L1395	L1395	K1311	K1203	C1127	V1039	Q980	THR	D791	PRO	PRO	L534
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T1590	T1590	T1590	L1395	L1395	K1311	K1203	C1127	V1039	Q980	THR	D791	PRO	PRO	L534
K1591	K1591	K1591	L1395	L1395	K1311	K1203	C1127	V1039	Q980	THR	D791	PRO	PRO	L534
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V1593	V1593	V1593	L1395	L1395	K1311	K1203	C1127	V1039	Q980	THR	D791	PRO	PRO	L534
V1596	V1596	V1596	L1395	L1395	K1311	K1203	C1127	V1039	Q980	THR	D791	PRO	PRO	L534
L1597	L1597	L1597	L1395	L1395	K1311	K1203	C1127	V1039	Q980	THR	D791	PRO	PRO	L534
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G1599	G1599	G1599	L1395	L1395	K1311	K1203	C1127	V1039	Q980	THR	D791	PRO	PRO	L534
M1600	M1600	M1600	L1395	L1395	K1311	K1203	C1127	V1039	Q980	THR	D791	PRO	PRO	L534
L1601	L1601	L1601	L1395	L1395	K1311	K1203	C1127	V1039	Q980	THR	D791	PRO	PRO	L534
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P1723	K1642	P1723	K1642	K1642	V1645	L1646	A1647	L1648	L1649	L1648	L1649	L1648	L1649	L1648
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D1741	L1652	D1741	L1652	L1652	L1652	A1647	L1648	L1649	L1648	L1649	L1648	L1649	L1648	L1649
K1742	L1655	K1742	L1655	L1655	L1655	A1647	L1648	L1649	L1648	L1649	L1648	L1649	L1648	L1649
K1744	L1661	K1744	L1661	L1661	L1661	A1647	L1648	L1649	L1648	L1649	L1648	L1649	L1648	L1649
K1745	F1661	K1745	F1661	F1661	L1664	G1665	L1665	G1666	S1667	F1668	P1669	E1670	V1671	L1750
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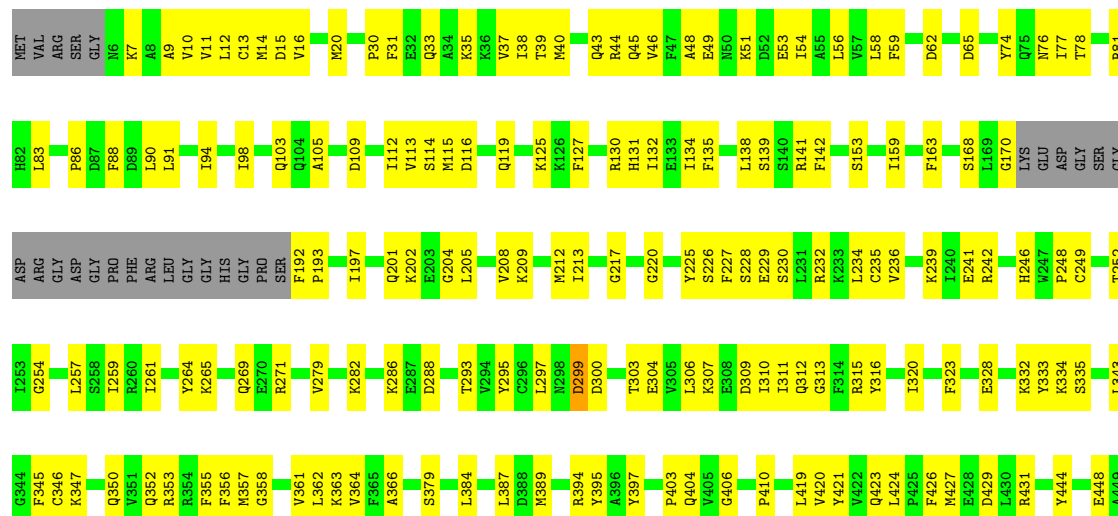
• Molecule 2: X-ray repair cross-complementing protein 5

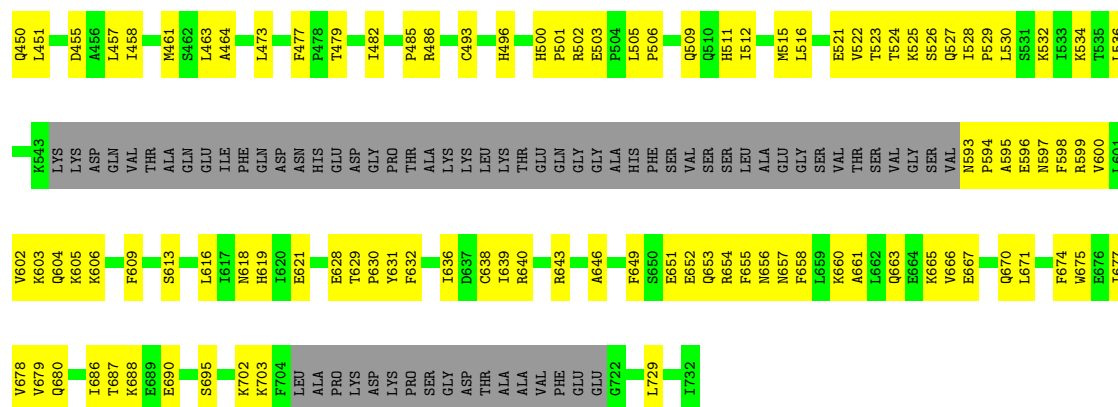
Chain L:  57% 33% 10%



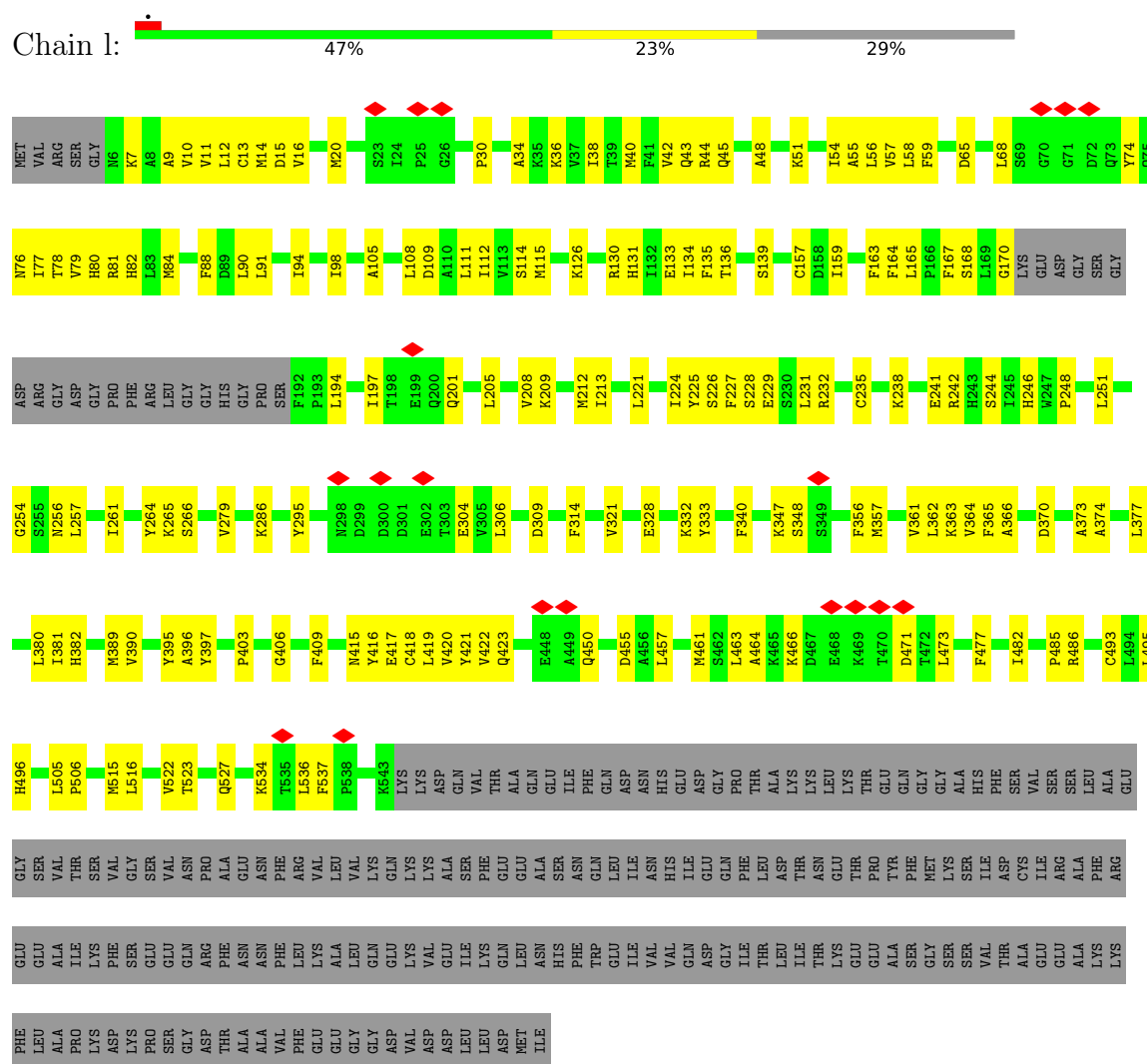
• Molecule 2: X-ray repair cross-complementing protein 5

Chain N:  50% 37% 13%





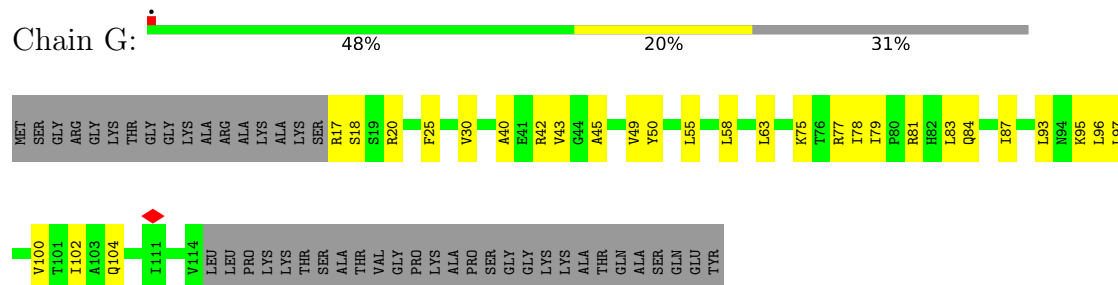
• Molecule 2: X-ray repair cross-complementing protein 5



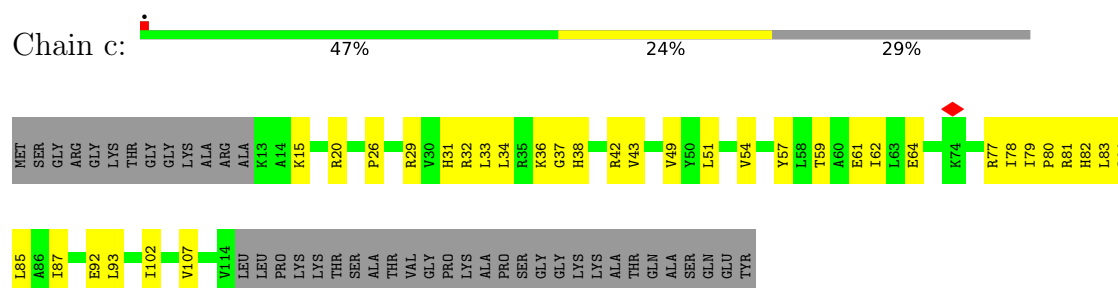
• Molecule 2: X-ray repair cross-complementing protein 5



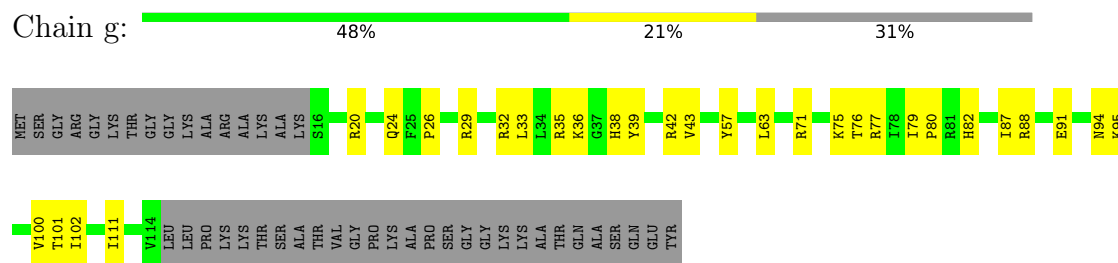
- Molecule 3: Histone H2AX



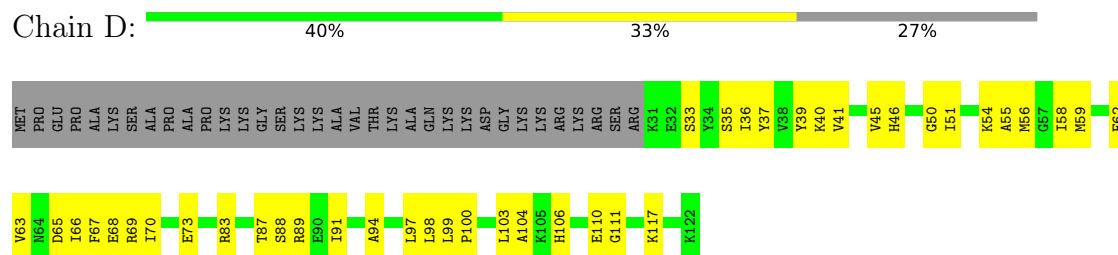
- Molecule 3: Histone H2AX



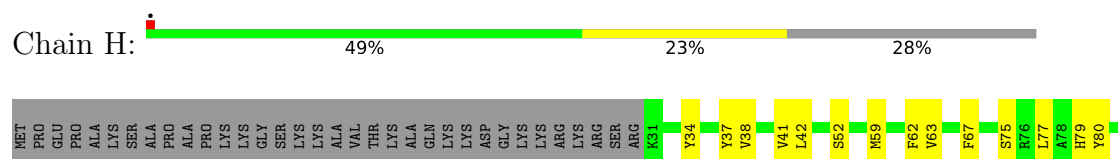
- Molecule 3: Histone H2AX

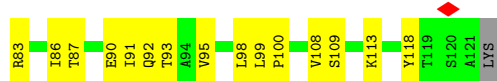


- Molecule 4: Histone H2B type 1-J

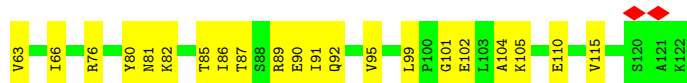
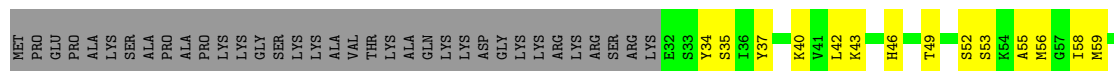


- Molecule 4: Histone H2B type 1-J

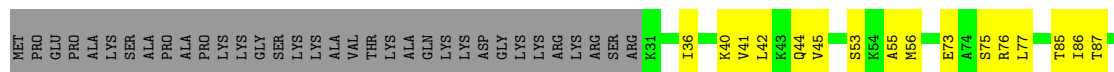




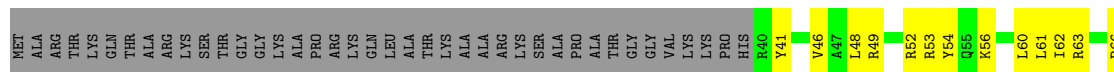
• Molecule 4: Histone H2B type 1-J



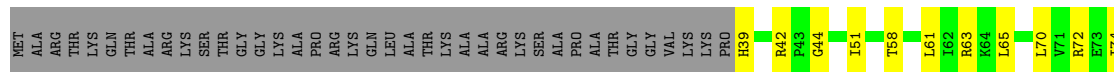
• Molecule 4: Histone H2B type 1-J



• Molecule 5: Histone H3.1

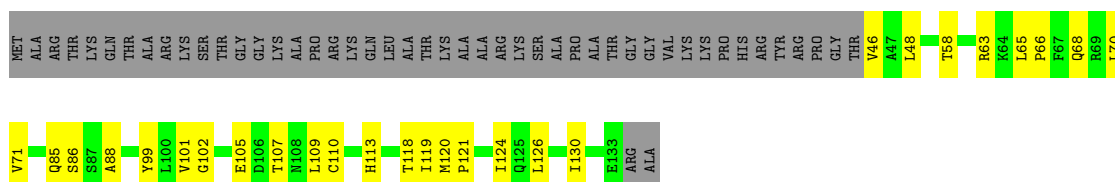


• Molecule 5: Histone H3.1



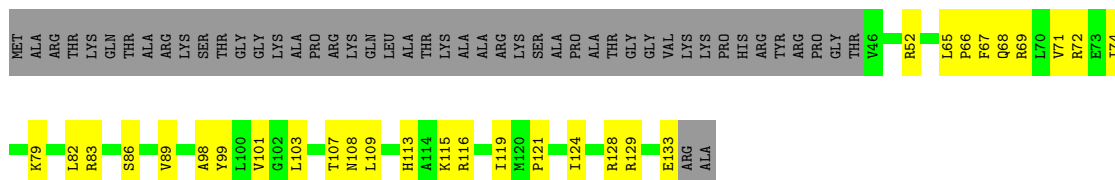
• Molecule 5: Histone H3.1





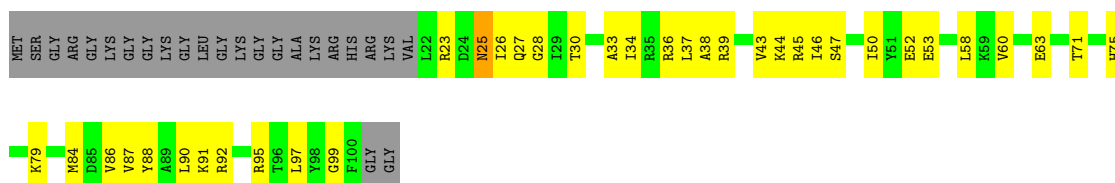
• Molecule 5: Histone H3.1

Chain e: 43% 22% 35%



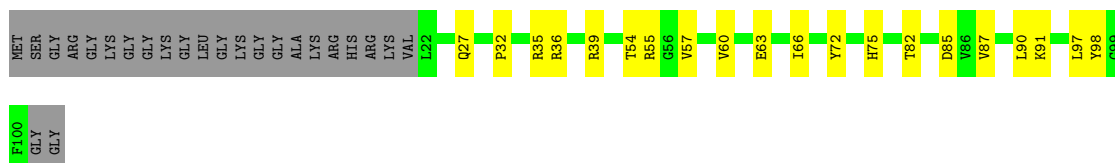
• Molecule 6: Histone H4

Chain B: 42% 34% 23%



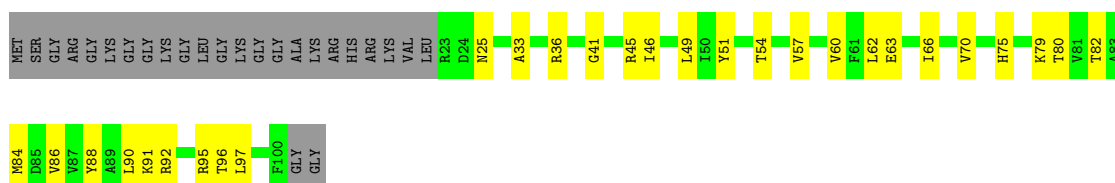
• Molecule 6: Histone H4

Chain F: 57% 19% 23%



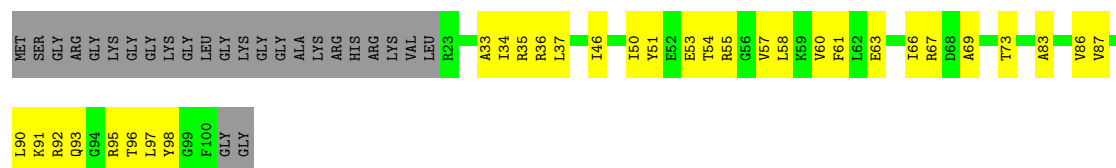
• Molecule 6: Histone H4

Chain b: 49% 27% 24%



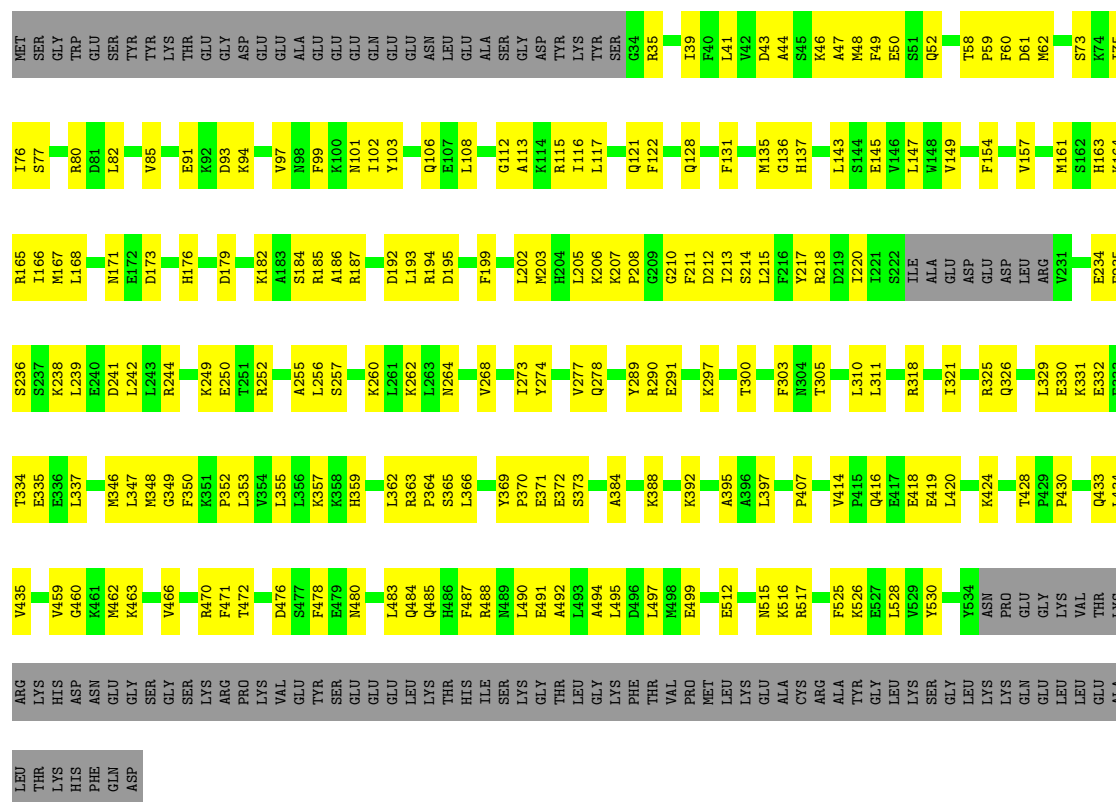
• Molecule 6: Histone H4

Chain f: 46% 30% 24%



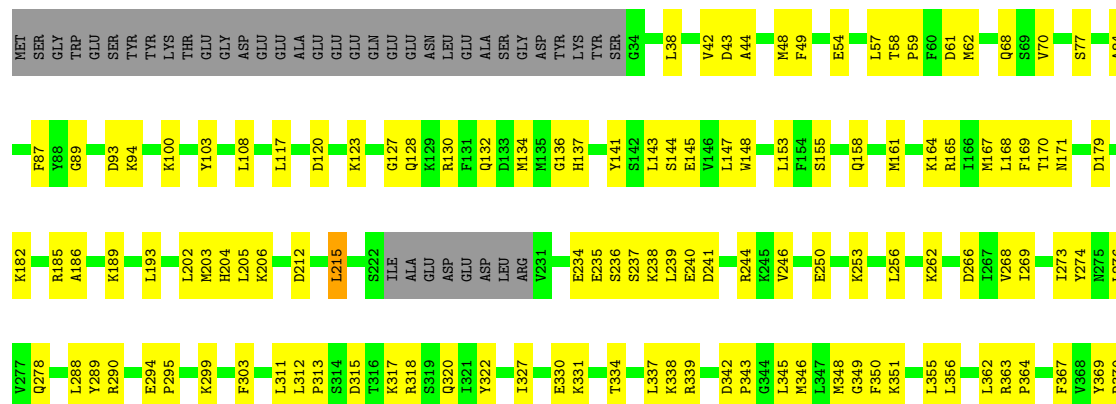
• Molecule 7: X-ray repair cross-complementing protein 6

Chain K: 49% 32% 19%

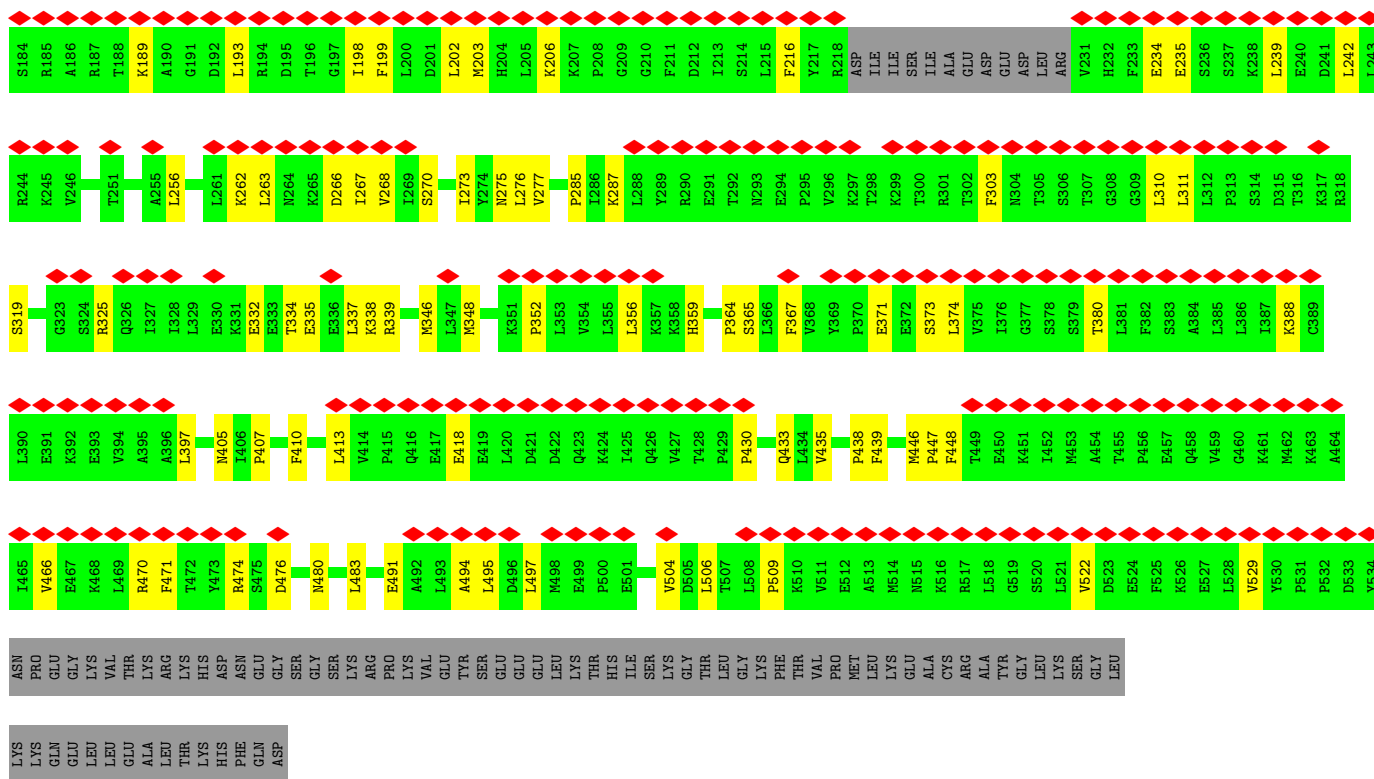


• Molecule 7: X-ray repair cross-complementing protein 6

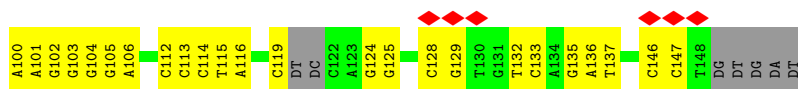
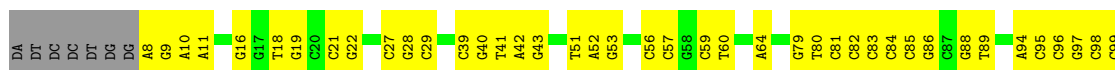
Chain M: 51% 29% 19%



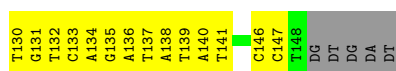
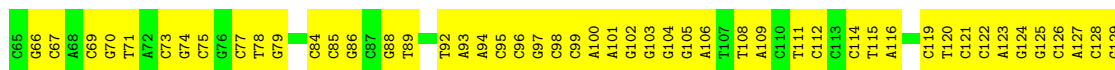
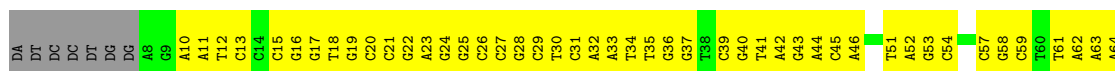




• Molecule 8: DNA



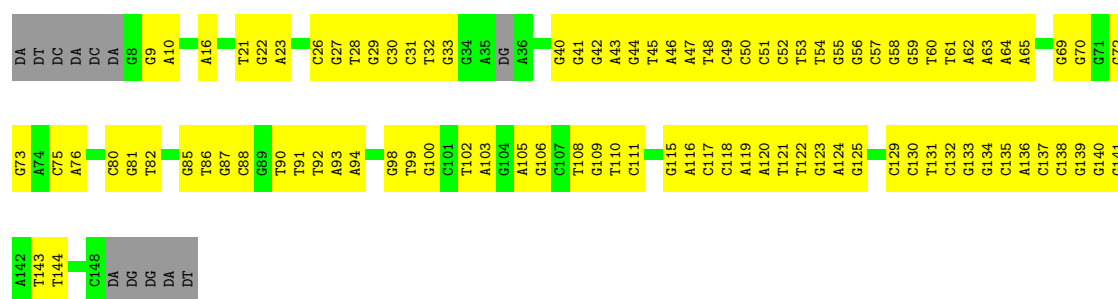
• Molecule 8: DNA



• Molecule 9: DNA



- Molecule 9: DNA



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	77373	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 ($e^-/\text{\AA}^2$)	50.87	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	1.994	Depositor
Minimum map value	-0.606	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.035	Depositor
Recommended contour level	0.21	Depositor
Map size ($\text{\AA}$)	1038.24, 1038.24, 1038.24	wwPDB
Map dimensions	420, 420, 420	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	2.472, 2.472, 2.472	Depositor

5 Model quality

5.1 Standard geometry

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	O	0.15	0/28610	0.36	0/38654
1	o	0.17	0/28521	0.39	0/38527
2	L	0.11	0/5337	0.31	0/7193
2	N	0.14	0/5210	0.33	0/7024
2	l	0.10	0/4200	0.30	0/5673
2	n	0.10	0/4187	0.30	0/5654
3	C	0.13	0/777	0.37	0/1050
3	G	0.11	0/755	0.26	0/1021
3	c	0.12	0/789	0.35	0/1064
3	g	0.10	0/761	0.29	0/1029
4	D	0.15	0/716	0.46	0/963
4	H	0.12	0/714	0.30	0/961
4	d	0.12	0/719	0.33	0/967
4	h	0.12	0/729	0.30	0/979
5	A	0.12	0/788	0.31	0/1057
5	E	0.12	0/805	0.36	0/1079
5	a	0.11	0/725	0.29	0/972
5	e	0.11	0/729	0.35	0/977
6	B	0.13	0/638	0.30	0/856
6	F	0.10	0/638	0.30	0/856
6	b	0.11	0/627	0.28	0/841
6	f	0.10	0/616	0.30	0/827
7	K	0.16	0/4018	0.33	0/5418
7	M	0.11	0/4048	0.32	0/5454
7	k	0.11	0/4036	0.28	0/5439
7	m	0.10	0/4001	0.28	0/5395
8	I	0.32	0/3169	0.50	0/4882
8	i	0.34	0/3216	0.52	0/4956
9	J	0.30	0/3240	0.48	0/5003
9	j	0.31	0/3261	0.48	0/5035
All	All	0.17	0/116580	0.37	0/159806

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts ⓘ

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	O	28053	0	28316	1046	0
1	o	27969	0	28250	1129	0
2	L	5240	0	5249	200	0
2	N	5114	0	5119	215	0
2	l	4117	0	4135	118	0
2	n	4106	0	4133	101	0
3	C	767	0	812	41	0
3	G	745	0	779	31	0
3	c	779	0	823	30	0
3	g	751	0	784	28	0
4	D	706	0	719	38	0
4	H	703	0	714	32	0
4	d	708	0	724	24	0
4	h	718	0	740	26	0
5	A	778	0	813	33	0
5	E	794	0	831	26	0
5	a	717	0	753	30	0
5	e	721	0	759	28	0
6	B	631	0	670	38	0
6	F	631	0	670	14	0
6	b	620	0	651	23	0
6	f	610	0	641	27	0
7	K	3940	0	3982	168	0
7	M	3970	0	4037	143	0
7	k	3958	0	4022	87	0
7	m	3923	0	3971	86	0
8	I	2829	0	1562	66	0
8	i	2871	0	1583	129	0
9	J	2886	0	1571	75	0
9	j	2905	0	1583	97	0
All	All	113260	0	109396	3808	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 17.

All (3808) 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)
2:l:328:GLU:O	2:l:332:LYS:HB2	1.54	1.05
9:j:55:DG:N2	9:j:56:DG:H22	1.62	0.97
9:j:55:DG:N2	9:j:56:DG:N2	2.12	0.96
1:o:3686:TRP:HA	1:o:3690:PHE:HB3	1.46	0.93
9:j:55:DG:C2	9:j:56:DG:N2	2.40	0.89
1:O:132:ILE:HG13	1:O:173:LYS:HZ2	1.38	0.87
1:o:1686:LEU:HD11	1:o:1738:ASN:HB3	1.57	0.87
1:o:1633:TRP:HZ2	1:o:1674:THR:HA	1.41	0.85
1:o:2395:THR:HB	1:o:2431:ARG:HE	1.41	0.84
2:N:297:LEU:HB2	7:K:297:LYS:H	1.41	0.84
2:n:328:GLU:O	2:n:332:LYS:HB2	1.78	0.84
1:o:79:ARG:HD2	1:o:122:LYS:HE3	1.58	0.83
1:O:1085:ILE:O	1:O:1089:PHE:HB2	1.78	0.82
1:o:1201:ASN:HB3	1:o:1207:TRP:HB2	1.60	0.82
1:o:1574:ASN:HD21	1:o:1577:LEU:HB2	1.45	0.81
5:e:128:ARG:HG3	5:e:133:GLU:HG3	1.62	0.81
1:o:956:PRO:HA	1:o:959:TYR:HB2	1.63	0.81
7:K:77:SER:HA	7:K:250:GLU:HA	1.63	0.81
1:o:1632:TRP:HB2	1:o:1637:SER:HB2	1.62	0.81
1:o:1664:SER:HA	1:o:1668:PHE:HB3	1.63	0.80
2:N:20:MET:HB3	2:N:31:PHE:HB2	1.62	0.80
1:O:950:GLU:HB3	1:O:957:PRO:HB3	1.62	0.80
1:o:3611:GLU:O	1:o:3615:ALA:HB3	1.82	0.80
1:o:1580:LEU:HA	1:o:1583:MET:HE2	1.63	0.79
1:o:3723:ASP:HB3	1:o:3741:ARG:HB2	1.64	0.79
1:O:3680:LEU:HD12	1:O:3688:SER:HB2	1.64	0.79
1:O:3730:ALA:HA	1:O:3735:PRO:HD2	1.63	0.79
1:o:2891:ARG:HH22	1:o:3897:PHE:HD2	1.29	0.79
1:O:1098:GLN:HB3	1:O:1152:ARG:HH21	1.47	0.79
2:L:358:GLY:H	7:M:364:PRO:HD3	1.46	0.79
4:H:90:GLU:HG2	6:b:75:HIS:HE1	1.44	0.79
8:i:71:DT:H3	9:j:82:DT:H3	1.29	0.79
7:K:122:PHE:HD1	7:K:131:PHE:HB2	1.49	0.78
2:n:241:GLU:HG2	2:n:242:ARG:H	1.49	0.78
1:O:708:VAL:HG12	1:O:740:ILE:HG23	1.64	0.78
3:G:42:ARG:HG2	9:J:115:DG:H4'	1.64	0.78
1:O:3835:PRO:HA	1:O:3839:TYR:HB2	1.65	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:29:ARG:HG2	3:C:32:ARG:HE	1.47	0.78
5:e:72:ARG:HH12	5:e:83:ARG:HA	1.47	0.78
2:l:81:ARG:HH12	2:l:90:LEU:HD22	1.48	0.77
1:o:3754:GLY:HA3	1:o:3800:LEU:HD12	1.66	0.77
2:l:40:MET:HE1	2:l:231:LEU:HD13	1.63	0.77
2:L:20:MET:HB3	2:L:31:PHE:HB2	1.67	0.77
2:l:45:GLN:HG3	2:l:54:ILE:HD11	1.65	0.77
1:O:253:LEU:HB3	1:O:300:TRP:HE1	1.49	0.77
2:L:295:TYR:H	2:L:304:GLU:HB2	1.48	0.77
2:N:235:CYS:HA	2:N:511:HIS:HE1	1.49	0.77
1:o:2263:LYS:HE3	1:o:2265:PRO:HB3	1.67	0.77
1:O:1536:ALA:HB3	1:O:1555:HIS:HB2	1.67	0.76
1:o:645:TRP:HB3	1:o:649:PHE:HB2	1.67	0.76
1:o:738:HIS:HB2	1:o:780:ILE:HD11	1.66	0.76
1:O:1229:CYS:HB3	1:O:1233:SER:HB3	1.67	0.76
1:O:3265:GLU:HG3	1:O:3272:TRP:HE1	1.50	0.75
1:O:3626:GLY:HA2	1:O:3629:ARG:HB2	1.68	0.75
1:O:3462:ARG:HH22	1:O:3496:ILE:HG22	1.50	0.75
1:o:2514:ASN:HD22	1:o:2517:LEU:HG	1.51	0.75
2:L:163:PHE:HD2	2:L:208:VAL:HG13	1.51	0.75
2:L:431:ARG:HD3	7:M:253:LYS:HB3	1.68	0.75
1:O:3118:ASP:H	1:O:3121:LEU:HD12	1.52	0.74
1:O:3335:ARG:HD3	1:O:3419:PHE:HB2	1.67	0.74
7:K:173:ASP:H	7:K:207:LYS:HZ3	1.35	0.74
2:n:353:ARG:HH12	7:m:356:LEU:HB3	1.52	0.74
1:O:3971:MET:HE3	1:O:3974:MET:HB2	1.68	0.74
7:K:35:ARG:HE	7:K:80:ARG:HH11	1.36	0.74
3:G:104:GLN:HA	5:E:58:THR:HG21	1.69	0.74
7:M:318:ARG:HH22	7:M:331:LYS:HA	1.53	0.74
1:o:207:GLN:HE22	1:o:210:SER:HA	1.51	0.74
2:l:221:LEU:HA	2:l:224:ILE:HD12	1.69	0.74
2:L:364:VAL:HB	2:L:419:LEU:HB3	1.68	0.74
1:O:4049:ARG:HH21	1:O:4059:ILE:HD13	1.53	0.73
1:O:3183:ILE:HD12	1:O:3238:MET:HE2	1.70	0.73
1:o:2724:ASP:HB2	1:o:2727:ARG:HH22	1.53	0.73
1:O:4009:PRO:HA	1:O:4012:ASP:HB2	1.70	0.73
2:L:15:ASP:HB3	2:L:20:MET:HE3	1.69	0.73
1:o:3974:MET:HG3	1:o:3976:GLU:H	1.53	0.73
1:o:1484:LEU:HD13	1:o:1531:LEU:HD11	1.71	0.73
2:N:230:SER:HA	2:N:234:LEU:HB3	1.69	0.73
5:A:107:THR:HG22	5:A:119:ILE:HD11	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:886:TRP:HA	1:o:964:ARG:HH12	1.54	0.73
1:O:1389:VAL:HG23	1:O:1391:VAL:HG22	1.72	0.72
1:o:3150:ASN:HD22	1:o:3196:LYS:HG3	1.54	0.72
7:M:303:PHE:HA	7:M:311:LEU:HB2	1.70	0.72
2:N:241:GLU:HG2	2:N:242:ARG:H	1.54	0.72
2:l:231:LEU:HG	2:l:232:ARG:HG3	1.70	0.72
1:O:664:SER:HA	1:O:667:TYR:HD2	1.54	0.72
2:N:65:ASP:HB3	2:N:78:THR:HG23	1.70	0.72
1:O:1147:LYS:HE3	1:O:1149:LYS:HD3	1.71	0.72
1:O:3701:ILE:HD11	1:O:3719:ILE:HG12	1.71	0.72
2:l:65:ASP:HB3	2:l:78:THR:HG23	1.70	0.72
1:O:1365:ASN:HD21	1:O:1370:ARG:HE	1.36	0.72
1:o:1240:THR:HB	1:o:1312:CYS:HA	1.71	0.72
2:N:264:TYR:HB2	2:N:363:LYS:HB3	1.71	0.72
7:M:317:LYS:HG2	7:M:330:GLU:HG3	1.71	0.72
2:n:364:VAL:HB	2:n:419:LEU:HB2	1.70	0.72
1:o:265:TYR:HB3	1:o:308:LEU:HD11	1.72	0.72
1:o:3301:LEU:HD12	1:o:3304:VAL:HG23	1.72	0.72
1:o:3789:ARG:HH12	1:o:3806:LEU:HD11	1.54	0.71
1:O:2589:TYR:H	1:O:2776:ARG:HA	1.54	0.71
1:o:2440:TYR:HA	1:o:2443:MET:HE1	1.72	0.71
2:N:62:ASP:HA	2:N:103:GLN:HG2	1.72	0.71
4:D:59:MET:HA	4:D:62:PHE:CE2	2.25	0.71
1:o:3104:GLN:HA	1:o:3107:ILE:HD12	1.73	0.71
2:N:343:LEU:HD11	2:N:394:ARG:HB2	1.72	0.71
1:o:1406:LEU:HA	1:o:1409:SER:HB3	1.72	0.71
1:o:2225:HIS:HB2	1:o:2231:PHE:HB2	1.72	0.71
2:N:11:VAL:HB	2:N:132:ILE:HG12	1.71	0.71
3:c:42:ARG:HH21	4:d:85:THR:HB	1.56	0.71
1:o:71:LYS:HB3	1:o:78:PHE:HB3	1.71	0.71
2:N:74:TYR:HA	2:N:77:ILE:HD12	1.72	0.71
2:N:315:ARG:HA	2:N:320:ILE:HA	1.72	0.71
5:A:119:ILE:HG23	6:B:50:ILE:HG13	1.72	0.71
2:l:82:HIS:HB2	2:l:84:MET:HE1	1.70	0.71
1:O:2295:GLN:N	1:O:2295:GLN:HE21	1.88	0.71
1:o:3269:ARG:HB2	1:o:3272:TRP:HB2	1.72	0.71
1:O:2376:ASP:HA	1:O:2379:MET:HE1	1.71	0.71
1:O:2944:THR:HG23	1:O:2954:GLN:HE21	1.56	0.71
3:C:32:ARG:HA	3:C:35:ARG:HD2	1.71	0.71
7:M:58:THR:HG22	7:M:61:ASP:HB2	1.73	0.71
2:n:279:VAL:HG12	2:n:286:LYS:HG2	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:793:LEU:HD22	1:O:866:ILE:HG12	1.71	0.70
2:L:162:GLN:HB3	2:L:164:PHE:HE1	1.56	0.70
1:o:361:ILE:HG13	1:o:364:ARG:HH21	1.57	0.70
7:K:131:PHE:O	7:K:135:MET:HB3	1.90	0.70
7:K:203:MET:HG2	7:K:242:LEU:HD22	1.73	0.70
1:O:960:GLN:HA	1:O:963:LYS:HE2	1.72	0.70
5:a:63:ARG:HD3	9:J:94:DA:H5"	1.73	0.70
2:l:279:VAL:HG12	2:l:286:LYS:HG2	1.73	0.70
1:O:915:THR:HA	1:O:934:LEU:HD11	1.71	0.70
1:O:1404:LYS:HE3	1:O:1461:ALA:HA	1.72	0.70
1:O:1722:PHE:HB3	1:O:1768:ARG:HH22	1.57	0.70
1:O:3806:LEU:HG	1:O:3808:ASN:H	1.57	0.70
1:o:4011:PHE:HA	1:o:4014:LYS:HG3	1.73	0.70
2:n:425:PRO:HB3	2:n:429:ASP:HB2	1.74	0.70
1:o:1475:LEU:HD12	1:o:1521:PHE:HB3	1.72	0.70
1:o:721:TYR:HB2	1:o:726:LEU:HD13	1.72	0.70
1:O:2125:TRP:HD1	1:O:2128:PHE:HB2	1.57	0.70
1:O:3959:MET:HE2	1:O:4124:TRP:HE1	1.56	0.70
1:O:3969:ASN:HD22	1:O:3972:LEU:HD13	1.57	0.70
7:K:203:MET:HE3	7:K:239:LEU:HA	1.74	0.70
1:o:919:LEU:HA	1:o:972:LEU:HD21	1.74	0.69
1:O:1428:ILE:HG21	1:O:1451:VAL:HG11	1.74	0.69
2:L:10:VAL:O	2:L:54:ILE:HA	1.92	0.69
1:o:253:LEU:HD11	1:o:268:PRO:HA	1.73	0.69
1:o:2161:ALA:HA	1:o:2164:TRP:HB2	1.73	0.69
1:o:3045:ILE:HD11	1:o:3082:TYR:HD2	1.57	0.69
8:i:10:DA:N7	9:j:144:DT:O4	2.25	0.69
2:l:14:MET:HE1	2:l:34:ALA:HB3	1.74	0.69
2:l:241:GLU:HG2	2:l:242:ARG:H	1.57	0.69
1:o:1635:LYS:HD3	1:o:1683:LYS:HE3	1.75	0.69
1:o:2482:ASP:HA	1:o:2485:ARG:HE	1.56	0.69
1:o:3321:LEU:HD22	1:o:3324:ARG:HE	1.58	0.69
1:O:3842:TRP:HB3	1:O:3855:TYR:HA	1.74	0.69
2:L:687:THR:HG22	2:L:688:LYS:H	1.57	0.69
1:o:3725:ARG:HD2	1:o:3741:ARG:HH12	1.57	0.69
1:O:2547:SER:HB3	1:O:2550:ILE:HG12	1.73	0.69
1:O:3069:MET:HA	1:O:3075:LYS:HB3	1.74	0.69
1:O:3389:VAL:HG11	1:O:3449:LYS:HE3	1.74	0.69
2:l:482:ILE:HG12	2:l:515:MET:HE2	1.75	0.69
1:O:886:TRP:HE1	1:O:911:LEU:HB2	1.58	0.69
1:O:2415:LEU:HB2	1:O:2420:PHE:HB2	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:3183:ILE:HG23	1:O:3238:MET:HE1	1.73	0.69
1:o:3256:MET:HA	1:o:3259:LEU:HD12	1.75	0.69
1:O:978:GLN:HE21	1:O:2594:ASP:HB3	1.58	0.68
1:O:3731:SER:H	1:O:3735:PRO:HG2	1.58	0.68
1:o:3813:LYS:HE3	1:o:3925:LEU:HB3	1.74	0.68
8:i:105:DG:H22	9:j:49:DC:H1'	1.58	0.68
5:a:70:LEU:HB2	6:b:25:ASN:HB2	1.76	0.68
1:o:3183:ILE:HG23	1:o:3238:MET:HE1	1.75	0.68
7:M:77:SER:HA	7:M:250:GLU:HA	1.75	0.68
1:O:738:HIS:HD2	1:O:780:ILE:HD11	1.58	0.68
7:M:289:TYR:HB3	7:M:294:GLU:HG2	1.74	0.68
7:M:414:VAL:HB	7:M:433:GLN:HB3	1.74	0.68
9:J:43:DA:H2''	9:J:44:DG:C8	2.29	0.68
2:L:684:THR:HG22	2:L:685:LEU:H	1.59	0.68
1:o:1387:GLY:HA2	1:o:1392:MET:HG2	1.73	0.68
2:N:335:SER:HB2	2:N:403:PRO:HG3	1.75	0.68
9:j:133:DG:H2'	9:j:134:DG:C8	2.28	0.68
1:O:1196:PRO:HG3	1:O:1203:SER:HB3	1.75	0.68
1:O:1270:PHE:HA	1:O:1275:THR:HB	1.73	0.68
1:O:1331:ASN:HB2	1:O:1384:PHE:HD2	1.59	0.68
1:O:2294:ILE:HB	1:O:2295:GLN:NE2	2.08	0.68
1:O:2596:ARG:HB3	1:O:2598:ARG:HH22	1.59	0.68
2:L:687:THR:HB	2:L:699:GLU:HG3	1.74	0.68
2:l:264:TYR:HB2	2:l:363:LYS:HB3	1.75	0.68
2:N:212:MET:HE1	2:N:220:GLY:HA2	1.74	0.68
1:o:2376:ASP:H	1:o:2404:ARG:HH21	1.41	0.68
1:o:3740:ILE:HD11	1:o:3750:PHE:HB2	1.76	0.68
7:M:57:LEU:HB3	7:M:61:ASP:HB3	1.76	0.68
1:O:2791:ILE:HA	1:O:2794:LEU:HD12	1.76	0.67
2:L:311:ILE:HD12	2:L:325:LYS:HE2	1.77	0.67
3:c:79:ILE:HG23	3:c:82:HIS:H	1.58	0.67
1:o:3144:PHE:HE1	1:o:3158:LYS:HB2	1.59	0.67
1:o:3163:THR:HG22	1:o:3164:TRP:H	1.57	0.67
3:g:42:ARG:HD2	8:i:116:DA:H5''	1.75	0.67
7:K:206:LYS:HE2	7:K:238:LYS:HE3	1.76	0.67
1:O:176:GLU:HG3	1:O:223:CYS:HA	1.77	0.67
1:O:1400:VAL:HA	1:O:1403:MET:HE2	1.77	0.67
1:o:2531:LEU:HD22	1:o:2538:ARG:HG3	1.76	0.67
1:O:2205:VAL:HG13	1:O:2208:ASP:H	1.59	0.67
1:o:856:VAL:HA	1:o:859:LEU:HD12	1.77	0.67
1:o:3577:GLN:HG3	1:o:3684:SER:HA	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:240:GLU:HG2	1:O:242:PRO:HD2	1.76	0.67
1:O:2353:GLN:HG3	1:O:2360:PHE:HB2	1.76	0.67
1:o:3018:SER:HB3	1:o:3031:TRP:HD1	1.59	0.67
9:J:80:DC:H2''	9:J:81:DG:C8	2.29	0.67
7:k:458:GLN:NE2	7:k:529:VAL:HG22	2.09	0.67
1:O:139:ARG:HH21	1:O:142:ARG:HH12	1.42	0.67
1:O:3856:MET:HE2	1:O:4072:PRO:HG2	1.77	0.67
1:o:2371:PHE:HD2	1:o:2374:LEU:HD23	1.59	0.67
1:O:3820:MET:HB2	1:O:3882:LEU:HD11	1.76	0.67
2:N:600:VAL:HA	2:N:603:LYS:HG2	1.77	0.67
1:O:433:PRO:HB2	1:O:2047:THR:HG23	1.76	0.67
1:O:2724:ASP:O	1:O:2728:LEU:HD23	1.94	0.67
2:L:44:ARG:HH12	2:L:48:ALA:HB2	1.60	0.67
1:o:3425:ARG:HH21	1:o:3467:ARG:HD3	1.60	0.67
7:M:59:PRO:HB3	7:M:205:LEU:HD23	1.76	0.67
1:O:1060:PHE:HA	1:O:1063:LEU:HD12	1.76	0.66
2:n:65:ASP:HB3	2:n:78:THR:HG23	1.76	0.66
2:n:296:CYS:HA	2:n:301:ASP:HB2	1.75	0.66
1:o:3085:GLU:HA	1:o:3088:LEU:HD12	1.77	0.66
1:o:3618:GLY:HA2	1:o:3633:ILE:HB	1.77	0.66
2:l:347:LYS:HA	2:l:389:MET:HA	1.76	0.66
1:o:891:ARG:HH21	1:o:958:MET:HE1	1.59	0.66
1:o:2427:ARG:HH22	1:o:2466:SER:H	1.44	0.66
7:k:451:LYS:HG3	7:k:453:MET:HE3	1.78	0.66
1:o:200:PHE:HZ	1:o:227:LEU:HD13	1.61	0.66
1:o:1828:LEU:HG	1:o:1836:LEU:HD22	1.77	0.66
1:o:2461:PHE:HB3	1:o:2473:MET:HE1	1.77	0.66
1:O:2343:GLU:HG2	1:O:2377:ARG:HH22	1.60	0.66
2:L:731:MET:HE1	1:o:1885:PRO:HA	1.77	0.66
3:c:26:PRO:HB2	3:c:29:ARG:HB3	1.77	0.66
1:o:455:LEU:O	1:o:459:ARG:HG2	1.95	0.66
9:j:43:DA:H2''	9:j:44:DG:C8	2.31	0.66
2:l:485:PRO:HG3	2:l:516:LEU:HD21	1.78	0.66
1:O:3809:THR:HG23	1:O:3929:MET:HE2	1.77	0.66
3:C:96:LEU:HD11	4:D:99:LEU:HD13	1.76	0.66
1:o:2987:THR:HG23	1:o:2990:GLU:H	1.59	0.66
1:o:3582:GLU:O	1:o:3586:LYS:HB3	1.95	0.66
1:O:570:LYS:HG2	1:O:574:LYS:HE3	1.76	0.66
3:g:20:ARG:HD3	4:h:122:LYS:HD3	1.77	0.66
8:I:99:DC:H2'	8:I:100:DA:H8	1.60	0.66
9:J:50:DC:H4'	9:J:51:DC:H5'	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:487:LEU:HD11	1:o:575:ILE:HG13	1.78	0.66
1:o:892:LEU:HG	1:o:907:LEU:HB2	1.77	0.66
8:i:136:DA:H1'	8:i:137:DT:H5'	1.77	0.66
2:n:35:LYS:HA	2:n:38:ILE:HD12	1.77	0.66
1:o:3750:PHE:HB3	1:o:3802:LEU:HD11	1.76	0.66
2:n:358:GLY:H	7:m:364:PRO:HG3	1.59	0.66
1:O:3266:SER:HB3	1:O:3273:LEU:HA	1.78	0.66
1:o:1428:ILE:HG12	1:o:1451:VAL:HG21	1.78	0.66
1:O:582:THR:HB	1:O:615:ALA:HB3	1.77	0.65
1:O:643:GLU:HA	1:O:646:VAL:HG23	1.77	0.65
2:l:364:VAL:HB	2:l:419:LEU:HB2	1.78	0.65
5:a:121:PRO:HG2	6:b:49:LEU:HB3	1.78	0.65
1:o:234:PHE:HD1	1:o:235:THR:HG23	1.62	0.65
1:o:730:LEU:HD23	1:o:755:ALA:HB2	1.78	0.65
7:M:455:THR:HG23	7:M:458:GLN:H	1.61	0.65
2:L:479:THR:HA	2:L:482:ILE:HB	1.78	0.65
2:L:677:ILE:HA	2:L:681:ASP:HB2	1.78	0.65
6:B:27:GLN:HE22	6:B:52:GLU:HA	1.61	0.65
1:o:762:TYR:HD2	1:o:765:LEU:HG	1.60	0.65
1:o:2338:GLU:HB2	1:o:2341:LEU:HB2	1.77	0.65
1:o:3626:GLY:HA2	1:o:3683:CYS:HB3	1.79	0.65
2:L:285:LYS:HD2	2:L:288:ASP:H	1.61	0.65
2:L:297:LEU:HD22	7:M:295:PRO:HB2	1.77	0.65
7:K:459:VAL:HG12	7:K:463:LYS:HE2	1.79	0.65
3:c:83:LEU:HD13	4:d:59:MET:HE2	1.79	0.65
1:o:948:MET:HG3	1:o:951:GLY:H	1.62	0.65
1:o:1196:PRO:HB3	1:o:1203:SER:HB2	1.77	0.65
7:K:484:GLN:O	7:K:488:ARG:HG2	1.96	0.65
1:o:435:LEU:HA	1:o:438:LEU:HD12	1.78	0.65
1:o:1741:ASP:HA	1:o:1744:LYS:HG2	1.78	0.65
2:l:81:ARG:HD2	2:l:82:HIS:O	1.97	0.65
1:O:168:ASP:HB3	1:O:170:VAL:HG22	1.78	0.65
1:o:96:MET:HE2	1:o:100:ILE:HG23	1.77	0.65
1:O:132:ILE:HG13	1:O:173:LYS:NZ	2.12	0.65
1:O:3909:ALA:HB1	1:O:3984:MET:HE3	1.79	0.65
2:n:384:LEU:HD23	2:n:389:MET:HB3	1.79	0.65
1:O:780:ILE:HG21	1:O:785:MET:HE1	1.79	0.65
1:o:1138:ILE:O	1:o:1142:HIS:HB3	1.97	0.65
1:O:1949:ILE:HG23	1:O:2100:LEU:HD22	1.79	0.64
2:L:134:ILE:HD13	2:L:163:PHE:HE1	1.62	0.64
2:L:640:ARG:HH12	2:L:685:LEU:HB2	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:2430:GLU:HA	1:o:2433:LYS:HE2	1.79	0.64
1:o:2436:LEU:HD12	1:o:2469:CYS:HB2	1.78	0.64
1:o:2897:LEU:HD13	1:o:2923:TRP:HE1	1.62	0.64
1:o:4104:VAL:HA	1:o:4107:LEU:HD12	1.80	0.64
7:K:122:PHE:CD1	7:K:131:PHE:HB2	2.32	0.64
8:i:98:DC:N4	9:j:56:DG:O6	2.30	0.64
1:O:3617:LEU:HD21	1:O:3629:ARG:HH11	1.63	0.64
1:O:3726:VAL:HG13	1:O:3738:ILE:HA	1.78	0.64
2:L:39:THR:HG23	2:L:91:LEU:HD11	1.79	0.64
1:o:3579:SER:HB3	1:o:3736:LYS:HE2	1.78	0.64
2:N:76:ASN:HB2	2:N:105:ALA:HB2	1.78	0.64
2:N:254:GLY:HA3	2:N:257:LEU:HB2	1.80	0.64
5:e:74:ILE:HD11	6:f:63:GLU:HB3	1.78	0.64
1:O:1505:LEU:HA	1:O:1508:LYS:HD2	1.80	0.64
1:O:2346:ALA:HA	1:O:2349:LEU:HD12	1.79	0.64
1:O:3668:LEU:O	1:O:3672:LYS:HB3	1.97	0.64
1:o:736:LEU:HB3	1:o:740:ILE:HD11	1.79	0.64
1:o:3459:ASN:HA	1:o:3462:ARG:HD3	1.80	0.64
7:M:403:ARG:HH22	8:I:16:DG:H1'	1.63	0.64
1:O:489:ARG:HH21	1:O:2040:MET:HB2	1.63	0.64
1:O:4083:GLY:HA3	1:O:4088:ASN:HB3	1.80	0.64
1:o:3626:GLY:HA3	1:o:3629:ARG:HB2	1.78	0.64
2:L:670:GLN:HG2	2:L:673:HIS:HB2	1.79	0.64
2:N:11:VAL:HG11	2:N:114:SER:HB2	1.78	0.64
1:o:4041:ARG:HH22	1:o:4044:ILE:HD11	1.62	0.64
7:m:62:MET:HE2	7:m:239:LEU:HD12	1.78	0.64
1:O:3487:ILE:HG12	1:O:3513:ALA:HB1	1.80	0.64
5:E:126:LEU:HD22	5:a:113:HIS:CD2	2.33	0.64
6:b:82:THR:HG22	6:b:84:MET:H	1.63	0.64
1:o:1349:LEU:HD21	1:o:1409:SER:HB2	1.80	0.64
1:o:1723:PRO:HG3	2:N:594:PRO:HD3	1.79	0.64
6:f:34:ILE:HA	6:f:37:LEU:HD12	1.79	0.64
8:I:80:DT:O4	9:J:75:DC:N3	2.30	0.64
3:g:87:ILE:HG13	3:g:88:ARG:HE	1.63	0.64
7:K:205:LEU:HD13	7:K:239:LEU:HD13	1.78	0.64
1:O:652:GLU:HA	1:O:655:LEU:HD12	1.80	0.64
1:O:2956:ALA:HB2	1:O:2971:GLN:HB2	1.78	0.64
1:o:3172:LYS:HG3	1:o:3248:LYS:HB3	1.80	0.64
2:N:632:PHE:HZ	2:N:678:VAL:HA	1.62	0.64
7:M:49:PHE:HD1	7:M:128:GLN:HG3	1.63	0.64
1:O:1685:ASP:H	1:O:1688:LEU:HD12	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:2533:SER:HA	1:o:2538:ARG:HH21	1.63	0.64
7:M:68:GLN:NE2	7:M:123:LYS:HD3	2.12	0.64
8:i:101:DA:H2''	8:i:102:DG:C8	2.32	0.64
2:l:314:PHE:HB2	7:k:490:LEU:HD21	1.79	0.64
3:G:30:VAL:HG13	4:H:67:PHE:HE1	1.61	0.63
1:o:989:MET:HE1	1:o:2779:ASP:HA	1.79	0.63
1:o:2047:THR:HG23	1:o:2049:VAL:H	1.62	0.63
1:o:3963:LEU:HB3	1:o:4112:THR:HG21	1.81	0.63
2:N:197:ILE:HG13	2:N:201:GLN:HB2	1.80	0.63
7:M:458:GLN:HE21	7:M:528:LEU:HB3	1.63	0.63
2:n:12:LEU:HB3	2:n:14:MET:HE3	1.79	0.63
1:O:2321:GLU:HB3	1:O:2366:LYS:HD2	1.79	0.63
1:o:3929:MET:HE1	1:o:3940:ILE:HG12	1.80	0.63
2:N:595:ALA:HA	2:N:598:PHE:CE2	2.33	0.63
2:l:228:SER:HA	2:l:231:LEU:HB3	1.78	0.63
2:L:447:THR:HG23	2:L:450:GLN:H	1.62	0.63
1:o:488:ILE:HG23	1:o:2036:LEU:HD11	1.80	0.63
1:o:738:HIS:HA	1:o:741:ILE:HG12	1.81	0.63
2:L:251:LEU:HG	2:L:340:PHE:HB2	1.80	0.63
1:o:414:LEU:HD11	1:o:442:GLN:HG2	1.80	0.63
1:o:2328:ARG:HH11	1:o:2372:PRO:HD2	1.62	0.63
1:O:1352:SER:HG	1:O:1356:TRP:CG	2.17	0.63
4:d:42:LEU:HG	4:d:49:THR:HG23	1.79	0.63
2:N:643:ARG:HH12	2:N:656:ASN:HA	1.63	0.63
7:M:117:LEU:HD13	7:M:495:LEU:HD13	1.81	0.63
1:o:1082:PHE:HA	1:o:1085:ILE:HG12	1.81	0.63
8:I:119:DC:H3'	9:J:35:DG:H1	1.64	0.63
1:O:4083:GLY:HA2	1:O:4114:PRO:HG3	1.80	0.63
1:o:793:LEU:HD13	1:o:796:LEU:HD12	1.79	0.63
8:i:88:DG:H2''	8:i:89:DT:H5''	1.80	0.63
2:l:76:ASN:HB2	2:l:105:ALA:HB2	1.79	0.63
1:O:3822:GLN:HA	1:O:3825:LYS:HE3	1.80	0.63
2:N:323:PHE:CE2	2:N:328:GLU:HB2	2.34	0.63
7:M:143:LEU:HB2	7:M:185:ARG:HH12	1.62	0.63
1:O:2133:LEU:HD13	1:O:2146:LEU:HB2	1.81	0.63
2:L:405:VAL:H	2:L:423:GLN:HE22	1.46	0.63
1:o:2470:ARG:HA	1:o:2473:MET:HE3	1.81	0.63
1:o:2586:PHE:CD1	1:o:2778:GLY:HA3	2.33	0.62
9:j:16:DA:H5'	7:k:403:ARG:HH22	1.64	0.62
1:O:933:LEU:HD13	1:O:2793:PRO:HG2	1.81	0.62
1:O:2930:TYR:HB3	1:O:2938:VAL:HG21	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:117:LYS:HZ2	2:N:299:ASP:HB2	1.63	0.62
1:o:585:ILE:HG23	1:o:611:ASN:HB3	1.80	0.62
1:o:770:LEU:HD23	1:o:773:LEU:HD21	1.79	0.62
2:N:362:LEU:HB2	2:N:421:TYR:HB3	1.81	0.62
2:l:261:ILE:HA	2:l:366:ALA:HA	1.81	0.62
2:L:640:ARG:HD2	2:L:683:ILE:HG21	1.80	0.62
1:o:100:ILE:HB	1:o:103:TYR:HB2	1.81	0.62
2:N:9:ALA:HB3	2:N:130:ARG:HG3	1.80	0.62
1:O:2411:LEU:HB2	1:O:2442:MET:HE1	1.81	0.62
1:o:1820:VAL:HA	1:o:1824:LEU:HD23	1.79	0.62
1:o:3620:PRO:HA	1:o:3634:GLN:HG2	1.80	0.62
2:N:16:VAL:HG11	2:N:58:LEU:HD12	1.80	0.62
7:M:312:LEU:H	7:M:315:ASP:HB2	1.63	0.62
1:o:348:ILE:HD12	1:o:362:ALA:HB2	1.80	0.62
1:o:528:VAL:O	1:o:532:ARG:HG2	1.99	0.62
1:o:2821:ASP:HA	1:o:2829:LYS:HD3	1.81	0.62
1:O:2372:PRO:HG2	1:O:2373:PRO:HD3	1.81	0.62
1:O:2773:ARG:HB2	1:O:2789:SER:HB2	1.81	0.62
1:O:3833:ARG:HA	1:O:3877:LYS:HE3	1.82	0.62
5:E:61:LEU:HD22	6:F:36:ARG:HB3	1.82	0.62
1:o:105:VAL:HG23	1:o:108:LYS:HE2	1.82	0.62
1:o:581:LEU:HG	1:o:660:LEU:HD12	1.82	0.62
1:o:349:ILE:HA	1:o:359:LEU:HD11	1.81	0.62
1:o:3313:SER:HB2	1:o:3316:LEU:HD23	1.81	0.62
1:O:4089:ILE:HA	1:O:4092:GLN:HB2	1.82	0.62
1:o:168:ASP:HB3	1:o:170:VAL:HG22	1.82	0.62
1:o:1633:TRP:HE1	1:o:1674:THR:HG23	1.63	0.62
1:O:2897:LEU:HD22	1:O:2922:ARG:HG3	1.82	0.62
2:L:18:PHE:HB2	2:L:102:SER:HA	1.80	0.62
4:H:90:GLU:HG2	6:b:75:HIS:CE1	2.32	0.62
1:o:131:LEU:HD22	1:o:177:LEU:HG	1.82	0.62
1:o:2257:PHE:HA	1:o:2260:PHE:CE2	2.34	0.62
1:o:2855:VAL:HA	1:o:2858:ILE:HD12	1.82	0.62
1:o:4055:ASN:HB3	1:o:4058:VAL:HB	1.81	0.62
2:N:505:LEU:HD11	7:K:329:LEU:HD11	1.81	0.62
1:o:392:CYS:HA	1:o:395:MET:HG3	1.81	0.62
1:o:3793:VAL:HG23	1:o:3803:ILE:HG13	1.80	0.62
1:o:2390:HIS:HA	1:o:2394:LYS:HD2	1.83	0.61
1:o:3240:MET:HA	1:o:3243:ILE:HD12	1.81	0.61
1:o:3692:VAL:HG12	1:o:3720:ALA:HB2	1.81	0.61
7:k:414:VAL:HB	7:k:433:GLN:HB2	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1637:SER:HB2	1:O:1641:THR:HB	1.81	0.61
1:O:1787:ARG:HB3	1:O:1830:HIS:HE2	1.65	0.61
1:o:643:GLU:HA	1:o:646:VAL:HG13	1.82	0.61
1:o:727:ALA:HB1	1:o:765:LEU:HD21	1.82	0.61
7:m:418:GLU:HB2	7:m:430:PRO:HB3	1.82	0.61
1:O:1210:ASP:HA	1:O:1213:LYS:HE2	1.80	0.61
1:O:2205:VAL:HG22	1:O:2207:LYS:H	1.66	0.61
1:O:3572:ILE:HG12	1:O:3796:MET:HG3	1.83	0.61
1:o:2353:GLN:HB3	1:o:2360:PHE:CG	2.36	0.61
1:o:3762:GLN:HG3	1:o:3793:VAL:HG13	1.82	0.61
4:H:87:THR:HB	4:H:90:GLU:HG3	1.82	0.61
1:o:1040:SER:O	1:o:1044:ILE:HB	1.99	0.61
1:o:1598:ASN:HA	1:o:1601:LEU:HD12	1.82	0.61
1:o:2851:PHE:HB3	1:o:2854:PHE:HB3	1.82	0.61
2:N:660:LYS:HD3	2:N:687:THR:HG23	1.82	0.61
7:M:392:LYS:HB2	7:M:394:VAL:HG12	1.83	0.61
1:O:377:ASN:HB3	1:O:380:ASP:HB2	1.83	0.61
2:L:236:VAL:HB	2:L:511:HIS:HB2	1.81	0.61
5:a:118:THR:HB	6:b:45:ARG:HD3	1.82	0.61
7:K:35:ARG:HB3	7:K:161:MET:HG3	1.82	0.61
8:i:126:DC:N3	9:j:28:DT:O4	2.33	0.61
2:l:362:LEU:HB2	2:l:421:TYR:HB3	1.82	0.61
7:k:242:LEU:HA	7:k:245:LYS:HE2	1.83	0.61
2:n:74:TYR:HA	2:n:77:ILE:HD12	1.81	0.61
2:n:220:GLY:HA2	2:n:223:GLU:HB3	1.81	0.61
1:O:913:ARG:HD3	1:O:2803:ILE:HD11	1.83	0.61
2:L:498:ALA:HB2	7:M:327:ILE:HG12	1.82	0.61
1:o:939:MET:HE3	1:o:2783:ILE:HD13	1.81	0.61
1:o:259:GLN:HG2	1:o:260:ILE:H	1.65	0.61
2:N:457:LEU:O	2:N:461:MET:HG3	2.00	0.61
7:K:303:PHE:HB2	7:K:310:LEU:HA	1.83	0.61
7:m:480:ASN:HB3	7:m:483:LEU:HB2	1.83	0.61
2:L:46:VAL:O	2:L:49:GLU:HG2	2.01	0.61
1:o:1294:VAL:HG21	1:o:1363:LEU:HG	1.83	0.61
7:k:297:LYS:HE2	7:k:299:LYS:HD3	1.83	0.61
1:O:2125:TRP:HD1	1:O:2128:PHE:CB	2.13	0.61
2:L:59:PHE:HB2	2:L:105:ALA:HB3	1.82	0.61
2:L:115:MET:HE1	2:L:159:ILE:HD13	1.82	0.61
2:L:512:ILE:HA	2:L:515:MET:HG3	1.82	0.61
1:o:2937:ASP:HB2	1:o:3979:LEU:HD23	1.82	0.61
1:o:4005:PHE:C	1:o:4007:LYS:H	2.09	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:205:LEU:O	2:N:209:LYS:HG2	2.00	0.61
2:N:261:ILE:HA	2:N:366:ALA:HA	1.83	0.61
1:O:1615:GLY:HA2	1:O:1618:LEU:HD12	1.83	0.61
4:D:36:ILE:HD13	9:j:124:DA:H3'	1.82	0.61
1:o:310:LYS:HA	1:o:313:LEU:HD12	1.83	0.61
3:g:26:PRO:HB2	3:g:29:ARG:HB3	1.82	0.61
1:O:1762:MET:HE1	1:O:1778:PHE:HD1	1.66	0.60
6:f:63:GLU:HA	6:f:66:ILE:HG12	1.82	0.60
8:i:26:DC:H1'	8:i:28:DG:H1	1.66	0.60
2:n:45:GLN:HG3	2:n:54:ILE:HD11	1.83	0.60
1:O:1650:ALA:HA	1:O:1695:LEU:HD21	1.81	0.60
1:O:2281:MET:HE1	1:O:2326:ILE:HA	1.82	0.60
1:o:2194:LEU:HD21	1:o:2241:LEU:HB3	1.83	0.60
1:o:2510:LEU:HD23	1:o:2521:ILE:HD12	1.82	0.60
1:o:3447:VAL:HG23	1:o:3482:LEU:HD12	1.81	0.60
2:N:56:LEU:HD21	2:N:98:ILE:HD11	1.82	0.60
7:K:250:GLU:HB2	7:K:252:ARG:NH1	2.16	0.60
1:O:174:VAL:HA	1:O:177:LEU:HD12	1.83	0.60
1:O:2125:TRP:CD1	1:O:2128:PHE:HB2	2.35	0.60
1:O:3344:GLU:HG2	1:O:3347:CYS:H	1.64	0.60
4:D:65:ASP:O	4:D:68:GLU:HG3	2.00	0.60
5:E:109:LEU:HD22	5:a:126:LEU:HD11	1.83	0.60
1:o:484:HIS:CE1	1:o:488:ILE:HD11	2.36	0.60
1:o:2576:MET:HE1	1:o:2787:HIS:CD2	2.36	0.60
1:o:3113:ASN:O	1:o:3117:ILE:HG12	2.01	0.60
1:o:3857:LEU:HA	1:o:3860:LYS:HE2	1.83	0.60
1:O:1300:SER:HA	1:O:1304:HIS:HB2	1.83	0.60
1:O:3239:LYS:HB3	1:O:3262:LEU:HD21	1.83	0.60
1:O:3301:LEU:HB3	1:O:3304:VAL:HA	1.82	0.60
2:L:294:VAL:HG23	7:M:299:LYS:HE3	1.84	0.60
2:L:346:CYS:HB2	7:M:473:TYR:HB2	1.84	0.60
4:d:76:ARG:HH11	4:d:80:TYR:HE2	1.47	0.60
1:o:263:LYS:HG3	1:o:264:ARG:HD3	1.83	0.60
1:o:898:PHE:H	1:o:902:LYS:HE3	1.66	0.60
2:N:458:ILE:HG23	7:K:350:PHE:HD2	1.67	0.60
7:K:414:VAL:HB	7:K:433:GLN:HB2	1.83	0.60
7:k:39:ILE:HG12	7:k:84:ALA:HB3	1.82	0.60
1:O:2514:ASN:HD22	1:O:2517:LEU:HG	1.65	0.60
7:M:343:PRO:HA	7:M:401:THR:O	2.02	0.60
1:o:1774:MET:HG2	1:o:1777:LEU:HB2	1.83	0.60
2:N:671:LEU:H	2:N:674:PHE:HB3	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:3732:LEU:HD13	1:O:3941:ASP:HB3	1.83	0.60
7:K:470:ARG:HH12	7:K:472:THR:HA	1.65	0.60
7:M:462:MET:HA	7:M:465:ILE:HB	1.82	0.60
1:O:3985:VAL:HG12	1:O:3989:ARG:HH21	1.65	0.60
1:o:74:ASN:HB3	1:o:122:LYS:HE2	1.83	0.60
1:o:1178:ARG:HG2	1:o:1180:GLN:H	1.67	0.60
2:N:512:ILE:HA	2:N:515:MET:HE2	1.82	0.60
7:M:212:ASP:HB3	7:M:215:LEU:HB2	1.82	0.60
2:l:139:SER:HB3	2:l:201:GLN:HG2	1.82	0.60
1:O:612:LEU:HD22	1:O:2602:LEU:HD22	1.83	0.60
1:O:1201:ASN:HB3	1:O:1207:TRP:HB2	1.84	0.60
1:o:3414:MET:HE2	1:o:3450:MET:HE1	1.84	0.60
1:O:168:ASP:H	1:O:171:LEU:HB2	1.67	0.60
1:O:921:ALA:HB3	1:O:927:LYS:HB3	1.83	0.60
1:o:385:TYR:HB2	1:o:420:VAL:HG21	1.84	0.60
1:o:1268:ASN:HB3	1:o:1344:PHE:HD1	1.67	0.60
1:o:2510:LEU:HA	1:o:2521:ILE:HD12	1.82	0.60
1:o:4054:ALA:HA	1:o:4096:SER:HA	1.84	0.60
7:K:58:THR:HG23	7:K:61:ASP:H	1.67	0.60
2:l:11:VAL:HG11	2:l:114:SER:HB2	1.82	0.60
1:o:793:LEU:HB3	1:o:870:LEU:HA	1.84	0.59
1:o:3254:LEU:H	1:o:3256:MET:HE1	1.66	0.59
1:o:3822:GLN:HA	1:o:3825:LYS:HG2	1.84	0.59
7:K:460:GLY:HA2	7:K:463:LYS:HE3	1.84	0.59
7:M:276:LEU:HG	7:M:367:PHE:HB2	1.84	0.59
1:O:1750:LEU:HD22	1:O:1762:MET:HG2	1.84	0.59
1:O:2105:HIS:CG	1:O:2156:VAL:HG23	2.36	0.59
1:o:207:GLN:NE2	1:o:210:SER:HA	2.17	0.59
1:o:307:GLU:HG2	1:o:308:LEU:H	1.67	0.59
1:o:3749:PRO:HB2	1:o:3805:TRP:N	2.16	0.59
7:K:194:ARG:HH12	7:K:199:PHE:HA	1.68	0.59
8:i:77:DC:H2''	8:i:78:DT:C5	2.37	0.59
2:l:209:LYS:HE2	2:l:213:ILE:HD11	1.84	0.59
7:m:35:ARG:HH21	7:m:80:ARG:HH11	1.49	0.59
7:m:206:LYS:HD3	7:m:239:LEU:HD22	1.83	0.59
1:O:1613:HIS:O	1:O:1617:LYS:HG2	2.01	0.59
1:O:2589:TYR:HB2	1:O:2777:HIS:HB2	1.83	0.59
2:L:69:SER:HA	2:L:74:TYR:HB2	1.82	0.59
2:L:309:ASP:HA	7:M:289:TYR:HD1	1.66	0.59
1:o:191:ASN:HA	1:o:194:GLU:CD	2.27	0.59
8:i:146:DC:H2''	8:i:147:DC:H5'	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:770:LEU:HD12	1:O:773:LEU:HD11	1.83	0.59
1:O:2820:MET:HG2	1:O:2824:LYS:HG2	1.84	0.59
1:o:1342:MET:O	1:o:1346:THR:HG23	2.02	0.59
1:o:2791:ILE:HA	1:o:2794:LEU:HD12	1.85	0.59
2:N:347:LYS:HD3	7:K:470:ARG:HH21	1.67	0.59
8:I:101:DA:H2"	8:I:102:DG:C8	2.38	0.59
1:o:1366:THR:HG23	1:o:1369:MET:HE1	1.85	0.59
2:N:213:ILE:HG23	2:N:217:GLY:HA2	1.84	0.59
1:O:1723:PRO:HG3	2:L:594:PRO:HD3	1.84	0.59
1:O:2125:TRP:CD1	1:O:2128:PHE:H	2.21	0.59
2:L:389:MET:HE3	2:L:390:VAL:H	1.67	0.59
1:o:2133:LEU:HD11	1:o:2171:LEU:HD11	1.85	0.59
2:N:248:PRO:HG3	2:N:264:TYR:CZ	2.37	0.59
2:l:321:VAL:HG21	7:k:494:ALA:HB2	1.84	0.59
1:O:29:LEU:HA	1:O:32:HIS:CD2	2.37	0.59
1:O:933:LEU:HB2	1:O:2793:PRO:HB2	1.85	0.59
1:O:1250:LEU:HD22	1:O:1329:ARG:HH21	1.66	0.59
1:O:2257:PHE:HA	1:O:2260:PHE:CE2	2.38	0.59
2:L:237:PHE:HZ	2:L:509:GLN:HG2	1.67	0.59
1:o:418:ALA:HB2	1:o:464:VAL:HG12	1.83	0.59
1:o:3881:ASP:H	1:o:3966:GLN:HE22	1.49	0.59
1:o:4045:CYS:HA	1:o:4048:LYS:HZ1	1.67	0.59
1:O:195:ASN:HD22	1:O:198:ARG:HE	1.50	0.59
1:O:2126:MET:HB2	1:O:2164:TRP:HZ2	1.66	0.59
1:O:2546:TYR:HA	1:O:2554:PHE:CE1	2.38	0.59
2:N:307:LYS:HD3	2:N:310:ILE:HD11	1.84	0.59
3:g:111:ILE:H	5:e:52:ARG:HH22	1.50	0.59
1:O:418:ALA:HB2	1:O:464:VAL:HG12	1.85	0.59
1:O:4120:THR:HB	1:O:4126:PRO:HG3	1.84	0.59
1:o:800:LEU:HA	1:o:3111:MET:HE1	1.84	0.59
1:o:3454:LEU:HD22	1:o:3461:ALA:HB1	1.83	0.59
3:g:32:ARG:HA	3:g:35:ARG:HE	1.68	0.59
1:O:717:LYS:HE2	1:O:1120:SER:HB2	1.84	0.59
1:O:1104:LEU:HD13	1:O:1134:LEU:HD23	1.85	0.59
1:O:2551:GLU:HA	1:O:2554:PHE:HB2	1.85	0.59
1:O:2724:ASP:HA	1:O:2727:ARG:HG2	1.84	0.59
1:O:3867:THR:HA	1:O:4118:GLY:HA3	1.85	0.59
1:o:1258:ASP:HA	1:o:1261:LEU:HD12	1.84	0.59
1:o:2395:THR:HA	1:o:2398:LEU:HD12	1.85	0.59
1:o:4004:VAL:HG12	1:o:4005:PHE:H	1.67	0.59
7:M:38:LEU:HD13	7:M:165:ARG:HG3	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:i:141:DT:H4'	7:k:403:ARG:HD2	1.85	0.59
7:k:40:PHE:HA	7:k:167:MET:HB3	1.85	0.59
1:O:1154:PRO:HG2	1:O:1157:PHE:HB3	1.85	0.58
1:O:3266:SER:HA	1:O:3272:TRP:CD1	2.38	0.58
1:O:3741:ARG:HB3	1:O:3745:GLU:HG2	1.84	0.58
1:o:169:THR:HA	1:o:172:GLU:HG2	1.85	0.58
1:o:2361:ILE:HD11	1:o:2393:LEU:HD23	1.85	0.58
1:o:2522:ARG:HH21	1:o:2564:GLU:HB2	1.69	0.58
2:n:88:PHE:HD2	7:m:325:ARG:HB2	1.68	0.58
1:O:201:LEU:HD13	1:O:249:PHE:HE2	1.68	0.58
1:O:2198:GLY:H	1:O:2722:ARG:HH22	1.50	0.58
1:o:79:ARG:NH2	1:o:124:LYS:HB2	2.19	0.58
1:o:487:LEU:HD21	1:o:571:SER:HB2	1.85	0.58
1:o:785:MET:HA	1:o:788:TYR:CZ	2.38	0.58
1:o:915:THR:HA	1:o:934:LEU:HD11	1.85	0.58
1:o:2317:ALA:HA	1:o:2366:LYS:HE3	1.85	0.58
8:i:100:DA:H61	9:j:54:DT:H3	1.51	0.58
1:O:1339:VAL:HG12	1:O:1395:LEU:HD21	1.84	0.58
1:o:3159:ARG:HA	1:o:3162:ASN:HD21	1.68	0.58
2:N:269:GLN:HG3	2:N:271:ARG:HH11	1.68	0.58
7:K:165:ARG:HD3	7:K:199:PHE:HB2	1.84	0.58
7:M:42:VAL:HA	7:M:169:PHE:HB2	1.84	0.58
9:j:56:DG:H1'	9:j:57:DC:C2	2.39	0.58
2:L:13:CYS:HA	2:L:57:VAL:O	2.03	0.58
1:o:754:MET:HA	1:o:757:LYS:HG2	1.86	0.58
1:o:2186:VAL:HA	1:o:2189:ILE:HG12	1.85	0.58
2:N:53:GLU:HB3	2:N:83:LEU:HG	1.85	0.58
7:K:217:TYR:HB3	7:K:220:ILE:HB	1.86	0.58
2:l:473:LEU:HD13	7:k:352:PRO:HG2	1.83	0.58
1:O:1119:LYS:HD2	1:O:1121:LEU:HB3	1.86	0.58
1:O:2806:LYS:HG2	1:O:2857:CYS:HB2	1.85	0.58
1:O:3793:VAL:HG22	1:O:3795:PRO:HD3	1.85	0.58
1:o:535:LEU:HD13	1:o:637:LYS:HB2	1.84	0.58
7:M:147:LEU:HB3	7:M:193:LEU:HD11	1.85	0.58
1:O:529:ASP:HA	1:O:532:ARG:HE	1.68	0.58
1:O:891:ARG:HH22	1:O:952:GLY:H	1.50	0.58
1:O:959:TYR:HE1	1:O:1007:VAL:HG21	1.69	0.58
3:c:15:LYS:HE2	3:c:20:ARG:HH11	1.68	0.58
1:o:2142:ILE:HA	1:o:2145:PHE:CE2	2.38	0.58
1:o:3548:GLY:HA2	1:o:3551:ASN:HD22	1.68	0.58
8:i:66:DG:H2''	8:i:67:DC:H2'	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:l:91:LEU:HA	2:l:94:ILE:HD12	1.86	0.58
2:l:157:CYS:HB3	2:l:159:ILE:HG13	1.84	0.58
7:k:78:SER:HB2	7:k:252:ARG:HD3	1.86	0.58
7:k:459:VAL:HG12	7:k:463:LYS:HE2	1.86	0.58
1:O:327:VAL:HG22	1:O:333:MET:HA	1.84	0.58
1:O:1661:PHE:HZ	1:O:1671:VAL:HG21	1.68	0.58
1:O:1961:PHE:HB2	1:O:1963:GLN:HG2	1.85	0.58
2:L:134:ILE:HD13	2:L:163:PHE:CE1	2.38	0.58
1:o:888:ARG:HH12	1:o:3889:ARG:HE	1.52	0.58
1:o:1142:HIS:CG	1:o:1197:LEU:HD11	2.38	0.58
8:I:105:DG:H2''	8:I:106:DA:N7	2.19	0.58
2:n:377:LEU:HA	2:n:380:LEU:HD12	1.86	0.58
7:m:95:ASN:HD22	7:m:149:VAL:HG21	1.68	0.58
1:O:1111:LEU:HD23	1:O:1186:LYS:HD3	1.86	0.58
1:O:2300:PHE:HB2	1:O:2341:LEU:HD23	1.86	0.58
1:o:2443:MET:HA	1:o:2446:LEU:HD13	1.85	0.58
1:o:3571:PHE:O	1:o:3575:LEU:HG	2.04	0.58
2:n:206:GLU:O	2:n:210:MET:HG3	2.03	0.58
7:m:102:ILE:HG12	7:m:146:VAL:HG22	1.85	0.58
1:O:19:LEU:HD21	1:O:33:GLN:HG3	1.85	0.58
1:O:1058:SER:HA	1:O:1061:LYS:HD2	1.85	0.58
1:O:2546:TYR:HA	1:O:2554:PHE:HE1	1.69	0.58
2:L:13:CYS:HB2	2:L:134:ILE:HG13	1.86	0.58
2:L:463:LEU:HG	7:M:349:GLY:HA3	1.85	0.58
1:o:3609:MET:O	1:o:3613:MET:HG2	2.04	0.58
1:o:3971:MET:SD	1:o:3974:MET:HB2	2.44	0.58
7:M:59:PRO:HA	7:M:62:MET:SD	2.43	0.58
9:j:56:DG:H2''	9:j:57:DC:C5	2.39	0.58
1:O:1232:PRO:HA	1:O:1235:ILE:HB	1.84	0.58
1:O:1331:ASN:HD21	1:O:1386:ILE:H	1.51	0.58
1:o:71:LYS:HD3	1:o:78:PHE:HD1	1.68	0.58
1:o:1727:ARG:HG3	1:o:1772:HIS:HB2	1.86	0.58
1:o:1878:ASP:HB3	1:o:1947:CYS:HA	1.85	0.58
2:N:594:PRO:HG2	2:N:619:HIS:CE1	2.39	0.58
5:e:66:PRO:HA	5:e:69:ARG:HE	1.69	0.58
1:O:435:LEU:HA	1:O:438:LEU:HD12	1.86	0.57
1:O:733:LEU:HA	1:O:736:LEU:HD23	1.85	0.57
1:o:1649:LEU:HA	1:o:1652:ILE:HD12	1.85	0.57
8:i:126:DC:O2	9:j:28:DT:N3	2.37	0.57
2:l:9:ALA:HB3	2:l:130:ARG:HG3	1.85	0.57
1:O:4127:TRP:CD1	1:O:4128:MET:HG2	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:96:MET:HE1	1:o:99:LYS:H	1.69	0.57
1:o:124:LYS:HD2	8:i:11:DA:H5''	1.86	0.57
1:o:175:TYR:O	1:o:227:LEU:HD12	2.04	0.57
1:o:2287:PRO:HB3	1:o:2326:ILE:HG12	1.85	0.57
1:o:2352:HIS:ND1	1:o:2356:MET:HE2	2.19	0.57
2:N:170:GLY:HA2	2:N:193:PRO:HA	1.85	0.57
7:M:389:CYS:HB3	7:M:415:PRO:HG3	1.86	0.57
8:i:70:DG:H21	9:j:85:DG:H1	1.49	0.57
2:n:404:GLN:HB2	2:n:423:GLN:HE22	1.68	0.57
1:O:1111:LEU:HD13	1:O:1127:CYS:HB3	1.85	0.57
1:o:2517:LEU:O	1:o:2521:ILE:HG12	2.04	0.57
1:o:3958:LEU:HD13	1:o:4064:LEU:HD11	1.85	0.57
7:K:184:SER:HA	7:K:187:ARG:HE	1.68	0.57
8:i:99:DC:C2'	8:i:100:DA:H8	2.18	0.57
2:l:10:VAL:O	2:l:54:ILE:HA	2.04	0.57
2:n:427:MET:HG3	7:m:476:ASP:HA	1.86	0.57
1:O:723:ASP:O	1:O:724:GLU:HG2	2.04	0.57
1:o:530:LEU:O	1:o:534:LEU:HG	2.04	0.57
1:o:1557:GLU:HG2	1:o:1558:TYR:H	1.69	0.57
1:o:2105:HIS:CE1	1:o:2156:VAL:HA	2.39	0.57
1:o:2923:TRP:HE3	1:o:2942:ILE:HG23	1.69	0.57
1:o:2930:TYR:HA	1:o:2933:ILE:HG12	1.85	0.57
1:o:3311:ASN:HB2	1:o:3315:TYR:H	1.69	0.57
7:K:47:ALA:HB1	7:K:171:ASN:HD21	1.69	0.57
7:K:357:LYS:HE2	7:K:359:HIS:CE1	2.39	0.57
7:M:42:VAL:O	7:M:87:PHE:HA	2.05	0.57
7:M:70:VAL:HG22	7:M:246:VAL:HG21	1.87	0.57
8:i:100:DA:N6	9:j:54:DT:H3	2.02	0.57
2:l:455:ASP:HB2	7:k:388:LYS:HE2	1.87	0.57
7:m:38:LEU:HD13	7:m:165:ARG:HB2	1.86	0.57
3:C:97:LEU:HB2	3:C:100:VAL:HG22	1.86	0.57
1:o:2559:THR:HG22	1:o:2812:LEU:HD21	1.85	0.57
1:o:3831:ASP:HB3	1:o:3832:PRO:HD3	1.86	0.57
1:o:3835:PRO:HA	1:o:3839:TYR:HB2	1.85	0.57
1:O:3462:ARG:HH21	1:O:3497:SER:H	1.51	0.57
1:O:3617:LEU:HD21	1:O:3629:ARG:HD3	1.86	0.57
7:K:75:ILE:HD11	7:K:116:ILE:HD11	1.87	0.57
7:M:418:GLU:HB3	7:M:430:PRO:HB3	1.87	0.57
1:O:215:PRO:HG2	1:O:259:GLN:HG2	1.86	0.57
1:O:1623:LEU:HD22	1:O:1671:VAL:HG11	1.85	0.57
2:L:11:VAL:HB	2:L:132:ILE:HG23	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:61:LEU:HD12	6:B:37:LEU:HD23	1.86	0.57
1:o:933:LEU:HD11	1:o:2794:LEU:HD23	1.87	0.57
1:o:3909:ALA:HB2	1:o:3980:MET:HG3	1.85	0.57
7:M:108:LEU:HD12	7:M:153:LEU:HB3	1.86	0.57
8:i:99:DC:H2'	8:i:100:DA:H8	1.69	0.57
7:k:40:PHE:HD2	7:k:85:VAL:HG22	1.70	0.57
2:n:11:VAL:HG11	2:n:114:SER:HB2	1.86	0.57
1:O:2898:LEU:HD13	1:O:3973:PRO:HA	1.86	0.57
2:L:163:PHE:H	2:L:212:MET:HE1	1.68	0.57
1:o:19:LEU:HD21	1:o:37:GLY:HA3	1.86	0.57
1:o:395:MET:HE3	1:o:413:PHE:HE2	1.69	0.57
1:o:3364:GLY:HA2	1:o:3376:GLY:HA3	1.87	0.57
7:K:39:ILE:HB	7:K:166:ILE:HG12	1.86	0.57
8:i:30:DT:H2''	8:i:31:DC:C5	2.40	0.57
9:j:26:DC:H2''	9:j:27:DG:C8	2.40	0.57
2:n:16:VAL:HG11	2:n:58:LEU:HD12	1.85	0.57
1:O:3007:GLU:HB3	1:O:3010:SER:HB3	1.86	0.57
2:L:494:LEU:HD21	7:M:320:GLN:NE2	2.20	0.57
1:o:139:ARG:HA	1:o:142:ARG:HH21	1.70	0.57
1:o:3582:GLU:O	1:o:3586:LYS:CB	2.52	0.57
1:O:12:LEU:HD22	1:O:41:GLU:HG2	1.87	0.57
1:O:2219:LEU:HD13	1:O:2238:ILE:HG12	1.87	0.57
1:O:2442:MET:HE3	1:O:2446:LEU:HD21	1.87	0.57
3:C:79:ILE:HG22	3:C:81:ARG:H	1.70	0.57
1:o:93:LEU:HD23	1:o:136:GLN:HG3	1.87	0.57
1:o:220:LEU:O	1:o:224:LEU:HG	2.05	0.57
1:o:745:VAL:HB	1:o:746:ARG:HH12	1.70	0.57
1:o:1840:PHE:CE1	1:o:1880:MET:HE2	2.40	0.57
1:o:3749:PRO:HB2	1:o:3805:TRP:H	1.69	0.57
2:N:431:ARG:HH22	7:K:278:GLN:HB3	1.69	0.57
3:g:29:ARG:HH21	9:j:32:DT:H4'	1.70	0.57
7:M:413:LEU:HB3	7:M:432:PHE:HB3	1.86	0.57
9:J:46:DA:H2''	9:J:47:DA:C8	2.40	0.57
7:k:116:ILE:HG21	7:k:495:LEU:HD22	1.85	0.57
2:n:91:LEU:HA	2:n:94:ILE:HD12	1.87	0.57
2:L:431:ARG:HH22	7:M:274:TYR:HB3	1.70	0.56
5:a:120:MET:O	5:a:124:ILE:HD12	2.05	0.56
1:o:200:PHE:HA	1:o:224:LEU:HD13	1.86	0.56
1:o:479:ILE:HG22	1:o:567:GLU:HG2	1.87	0.56
1:o:1369:MET:HA	1:o:1372:LEU:HG	1.86	0.56
1:o:1685:ASP:H	1:o:1688:LEU:HD12	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:1752:LEU:HD23	1:o:1788:ARG:HH12	1.70	0.56
1:o:2820:MET:HA	1:o:2823:PHE:CE2	2.40	0.56
1:o:3134:ALA:O	1:o:3137:GLU:HG2	2.05	0.56
7:K:112:GLY:O	7:K:116:ILE:HD12	2.05	0.56
7:K:420:LEU:HB3	7:K:424:LYS:HA	1.87	0.56
7:M:144:SER:HA	7:M:189:LYS:HD3	1.87	0.56
2:n:261:ILE:HA	2:n:366:ALA:HA	1.87	0.56
1:O:1407:LYS:HE2	1:O:1463:LEU:HD11	1.86	0.56
1:o:1227:GLY:HA3	1:o:1231:GLN:HA	1.87	0.56
1:o:3575:LEU:HD12	1:o:3800:LEU:HD21	1.86	0.56
2:N:450:GLN:HG3	2:N:536:LEU:HD22	1.87	0.56
4:h:53:SER:HA	4:h:56:MET:SD	2.45	0.56
7:m:303:PHE:HA	7:m:311:LEU:HB2	1.87	0.56
1:O:393:LYS:HA	1:O:396:PHE:CE1	2.40	0.56
1:O:1475:LEU:HB3	1:O:1477:HIS:CD2	2.39	0.56
1:O:3269:ARG:HG3	1:O:3272:TRP:H	1.71	0.56
1:O:4039:TYR:HB2	1:O:4042:GLN:HG2	1.87	0.56
2:L:197:ILE:HA	2:L:201:GLN:HE21	1.69	0.56
2:L:663:GLN:HE21	2:L:667:GLU:HB3	1.70	0.56
1:o:1253:THR:O	1:o:1257:LEU:HG	2.05	0.56
1:o:2862:SER:HA	1:o:2868:LEU:HD23	1.87	0.56
1:o:3717:VAL:HG12	1:o:3746:ARG:NE	2.19	0.56
1:o:3766:GLN:O	1:o:3769:GLN:HG2	2.05	0.56
2:l:12:LEU:HD13	2:l:38:ILE:HG12	1.88	0.56
7:m:94:LYS:H	7:m:103:TYR:HA	1.70	0.56
1:o:67:VAL:O	1:o:71:LYS:HG2	2.05	0.56
1:o:683:PHE:HD2	1:o:704:PHE:HE1	1.53	0.56
1:o:3999:THR:HG21	1:o:4051:LEU:HD13	1.87	0.56
8:I:10:DA:H2''	8:I:11:DA:C8	2.40	0.56
2:n:264:TYR:HB2	2:n:363:LYS:HB3	1.87	0.56
1:O:1793:THR:O	1:O:1797:LEU:HG	2.06	0.56
1:O:2121:ASP:HB2	1:O:2126:MET:HG3	1.87	0.56
1:O:3015:SER:HA	1:O:3044:MET:HE1	1.88	0.56
1:O:3262:LEU:HB3	1:O:3276:TRP:CD1	2.40	0.56
3:G:40:ALA:HB3	3:G:43:VAL:HB	1.87	0.56
5:E:39:HIS:CD2	8:I:86:DG:H21	2.24	0.56
1:o:3113:ASN:HB3	1:o:3128:LYS:HZ1	1.71	0.56
2:N:652:GLU:HG2	2:N:653:GLN:H	1.71	0.56
7:K:353:LEU:HD23	7:K:395:ALA:HB2	1.87	0.56
8:I:80:DT:N3	9:J:75:DC:O2	2.37	0.56
8:i:119:DC:H2''	8:i:120:DT:H5''	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:j:129:DC:H2''	9:j:130:DC:C6	2.40	0.56
1:o:2126:MET:SD	1:o:2127:LYS:HD3	2.45	0.56
1:o:2808:LEU:HD23	1:o:2812:LEU:HD23	1.88	0.56
1:o:3267:LYS:HA	1:o:3273:LEU:HD22	1.87	0.56
1:o:4002:MET:O	1:o:4004:VAL:HG23	2.05	0.56
9:J:69:DG:H2''	9:J:70:DG:C8	2.41	0.56
1:O:1096:VAL:O	1:O:1100:VAL:HG23	2.05	0.56
2:L:353:ARG:HB3	7:M:433:GLN:HE22	1.71	0.56
1:o:327:VAL:HB	1:o:333:MET:HB2	1.87	0.56
1:o:447:PRO:HB3	1:o:523:THR:HG22	1.88	0.56
1:o:850:GLU:HA	1:o:853:ILE:HG12	1.88	0.56
1:o:2139:PRO:HB2	1:o:2142:ILE:HG12	1.87	0.56
1:o:2173:ALA:HB1	1:o:2214:ARG:HH12	1.70	0.56
7:K:418:GLU:HB2	7:K:430:PRO:HB3	1.87	0.56
2:n:362:LEU:HB2	2:n:421:TYR:HB3	1.88	0.56
7:m:471:PHE:HB3	7:m:474:ARG:HH12	1.69	0.56
1:O:2231:PHE:O	1:O:2235:LEU:HG	2.06	0.56
5:E:75:ALA:HB2	5:E:84:PHE:HZ	1.71	0.56
1:o:2101:VAL:HA	1:o:2104:MET:SD	2.45	0.56
1:o:4091:ALA:H	1:o:4110:GLN:NE2	2.03	0.56
7:K:97:VAL:HG23	7:K:99:PHE:H	1.71	0.56
7:K:241:ASP:HA	7:K:244:ARG:HE	1.70	0.56
9:J:86:DT:H2''	9:J:87:DG:H5'	1.88	0.56
7:k:82:LEU:HB3	7:k:108:LEU:HD22	1.88	0.56
1:O:535:LEU:HD22	1:O:637:LYS:HZ2	1.70	0.56
1:O:1946:ASN:HA	1:O:1949:ILE:HD12	1.88	0.56
1:O:3007:GLU:HG3	1:O:3010:SER:H	1.71	0.56
6:B:45:ARG:HD2	8:i:84:DC:H4'	1.86	0.56
1:o:1358:LEU:HD12	1:o:1361:LYS:HD3	1.88	0.56
1:o:2510:LEU:HD21	1:o:2525:TRP:CD1	2.41	0.56
1:o:3179:TRP:O	1:o:3183:ILE:HG12	2.06	0.56
3:g:39:TYR:HB3	4:h:75:SER:OG	2.04	0.56
6:f:58:LEU:HD13	6:f:61:PHE:HE2	1.70	0.56
7:K:102:ILE:HG21	7:K:149:VAL:HG21	1.88	0.56
2:l:81:ARG:NH1	2:l:90:LEU:HD22	2.18	0.56
1:O:1619:ALA:O	1:O:1623:LEU:HG	2.06	0.56
1:O:1714:LEU:HD12	1:O:1757:MET:HE1	1.87	0.56
1:O:3756:GLU:HG3	1:O:4014:LYS:HD3	1.88	0.56
2:L:58:LEU:HD12	2:L:61:THR:HG21	1.88	0.56
3:C:81:ARG:HH22	5:A:56:LYS:HA	1.70	0.56
1:o:966:PHE:HD1	1:o:969:LEU:HD12	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:2244:CYS:HG	1:o:2245:TRP:CD1	2.24	0.56
8:I:132:DT:H4'	2:n:247:TRP:HE1	1.70	0.56
7:k:91:GLU:HB3	7:k:136:GLY:HA3	1.87	0.56
1:O:3066:ASP:HA	1:O:3069:MET:HE3	1.88	0.55
1:O:3451:LEU:HA	1:O:3454:LEU:HD12	1.88	0.55
1:o:2321:GLU:HG3	1:o:2366:LYS:HD2	1.87	0.55
1:o:3984:MET:HB3	1:o:4104:VAL:HG21	1.88	0.55
6:f:33:ALA:HA	6:f:36:ARG:HE	1.69	0.55
8:I:56:DC:H2''	8:I:57:DC:C2	2.41	0.55
8:i:22:DG:H8	8:i:22:DG:OP1	1.88	0.55
1:O:718:MET:HA	1:O:721:TYR:CD2	2.42	0.55
1:O:2424:MET:HB3	1:O:2461:PHE:HZ	1.70	0.55
1:O:3592:VAL:HG13	1:O:3606:ILE:HD12	1.87	0.55
5:E:72:ARG:HH22	9:J:54:DT:H2'	1.70	0.55
1:o:1601:LEU:HD21	1:o:1652:ILE:HG13	1.89	0.55
1:o:1791:CYS:HB2	1:o:1835:ALA:HB2	1.87	0.55
1:o:3493:TRP:CE2	1:o:3524:ASN:HB2	2.41	0.55
7:m:82:LEU:HB3	7:m:108:LEU:HD22	1.88	0.55
7:M:262:LYS:HG2	7:M:268:VAL:HG13	1.88	0.55
1:o:849:GLU:HA	1:o:852:ARG:HE	1.72	0.55
1:o:2586:PHE:HB2	1:o:2776:ARG:NH2	2.22	0.55
1:o:3869:THR:O	1:o:3873:LYS:HG2	2.06	0.55
2:N:464:ALA:HB1	2:N:473:LEU:HB3	1.88	0.55
2:n:486:ARG:HH12	7:m:338:LYS:HE2	1.70	0.55
1:O:1201:ASN:ND2	1:O:1206:LEU:HB2	2.21	0.55
1:O:1648:LEU:HA	1:O:1651:LYS:HD2	1.88	0.55
1:O:2365:ASN:HA	1:O:2368:THR:HG22	1.89	0.55
1:O:3238:MET:SD	1:O:3239:LYS:HG3	2.46	0.55
1:O:3761:ASP:HB3	1:O:3793:VAL:HG11	1.87	0.55
1:o:3050:LYS:HG3	1:o:3054:GLN:HE21	1.72	0.55
7:K:173:ASP:HB3	7:K:211:PHE:CD1	2.41	0.55
1:O:139:ARG:HE	1:O:142:ARG:HH22	1.55	0.55
1:O:1960:LYS:HE3	1:O:2125:TRP:HB3	1.88	0.55
1:O:2298:GLU:HA	1:O:2301:GLN:HB3	1.88	0.55
1:O:3874:ARG:HG2	1:O:4127:TRP:HB3	1.88	0.55
1:o:267:VAL:HG23	1:o:268:PRO:HD3	1.89	0.55
1:o:1265:GLU:HA	1:o:1268:ASN:ND2	2.22	0.55
1:o:2304:VAL:HB	1:o:2348:GLN:HG2	1.88	0.55
1:o:3483:MET:HE2	1:o:3513:ALA:H	1.70	0.55
7:M:348:MET:HE3	7:M:397:LEU:HG	1.89	0.55
9:J:105:DA:H2''	9:J:106:DG:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:k:303:PHE:HA	7:k:311:LEU:HB2	1.88	0.55
1:O:2897:LEU:HD21	1:O:2923:TRP:CE2	2.41	0.55
3:C:101:THR:HG22	6:B:97:LEU:HD13	1.88	0.55
3:c:29:ARG:HG3	3:c:32:ARG:HH21	1.71	0.55
1:o:175:TYR:HB2	1:o:223:CYS:HB3	1.88	0.55
1:o:2183:HIS:HA	1:o:2186:VAL:HG22	1.89	0.55
1:o:2353:GLN:HB3	1:o:2360:PHE:CD1	2.41	0.55
1:o:2427:ARG:NH2	1:o:2466:SER:H	2.04	0.55
1:o:3621:LYS:HD2	1:o:3630:ARG:HH22	1.71	0.55
7:K:289:TYR:CE2	7:K:291:GLU:HB2	2.42	0.55
1:o:899:ARG:HD3	1:o:2568:MET:HG2	1.88	0.55
1:o:3425:ARG:HE	1:o:3467:ARG:CZ	2.19	0.55
1:o:4004:VAL:HG12	1:o:4005:PHE:N	2.22	0.55
2:N:323:PHE:HE2	2:N:328:GLU:HB2	1.72	0.55
2:N:628:GLU:HB3	2:N:631:TYR:HB3	1.89	0.55
2:n:212:MET:HG3	2:n:213:ILE:N	2.22	0.55
1:O:860:GLY:HA3	1:O:3136:THR:HG21	1.89	0.55
1:O:2375:ALA:HA	1:O:2378:PHE:HD2	1.70	0.55
2:L:44:ARG:HD3	2:L:239:LYS:HA	1.89	0.55
2:L:478:PRO:HG2	2:L:481:LYS:HE3	1.89	0.55
4:H:59:MET:O	4:H:63:VAL:HG12	2.07	0.55
1:o:3962:ARG:HD3	1:o:4124:TRP:CZ2	2.42	0.55
7:K:416:GLN:HE21	7:K:428:THR:HG23	1.71	0.55
9:J:42:DG:H2"	9:J:43:DA:C8	2.42	0.55
8:i:61:DT:H2"	8:i:62:DA:C8	2.42	0.55
1:O:1690:GLY:HA2	1:O:1693:VAL:HG12	1.89	0.55
1:O:2967:GLU:O	1:O:2971:GLN:HG2	2.06	0.55
1:O:3961:PHE:HZ	1:O:4108:MET:HB3	1.71	0.55
1:O:3965:ARG:HA	1:O:3968:ILE:HD12	1.89	0.55
6:B:88:TYR:O	6:B:92:ARG:HG2	2.07	0.55
1:o:417:VAL:HA	1:o:420:VAL:HG12	1.88	0.55
1:o:1282:LEU:HD13	1:o:1359:LEU:HD13	1.89	0.55
4:h:40:LYS:O	4:h:44:GLN:HG2	2.07	0.55
6:f:35:ARG:HG3	6:f:46:ILE:HD13	1.89	0.55
8:I:40:DG:H2"	8:I:41:DT:OP2	2.06	0.55
1:O:385:TYR:HB2	1:O:420:VAL:HG21	1.88	0.54
1:O:1527:ARG:O	1:O:1531:LEU:HG	2.07	0.54
1:O:2294:ILE:HB	1:O:2295:GLN:HE22	1.72	0.54
4:D:98:LEU:HA	6:f:92:ARG:HH21	1.71	0.54
1:o:1265:GLU:HA	1:o:1268:ASN:HD21	1.71	0.54
1:o:3556:ALA:HA	1:o:3559:LYS:HG2	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:i:73:DC:H2''	8:i:74:DG:C8	2.41	0.54
8:i:98:DC:N3	9:j:56:DG:C6	2.75	0.54
1:O:86:LEU:HD22	1:O:130:LEU:HA	1.88	0.54
1:O:197:PHE:O	1:O:201:LEU:HG	2.07	0.54
1:O:3048:LYS:HA	1:O:3051:LEU:HD12	1.88	0.54
2:L:486:ARG:HB2	7:M:407:PRO:HG3	1.88	0.54
1:o:1206:LEU:HA	1:o:1209:LYS:HE2	1.89	0.54
1:o:3493:TRP:CD2	1:o:3524:ASN:HB2	2.43	0.54
2:N:12:LEU:HB3	2:N:14:MET:HE3	1.90	0.54
2:N:293:THR:HB	7:K:300:THR:HG23	1.90	0.54
8:i:40:DG:H2''	8:i:41:DT:C5	2.42	0.54
9:j:124:DA:H2''	9:j:125:DG:C8	2.42	0.54
2:l:523:THR:O	2:l:527:GLN:HG3	2.06	0.54
1:O:200:PHE:HE2	1:O:227:LEU:HD22	1.71	0.54
1:O:1264:LEU:HD22	1:O:1340:ARG:HB3	1.89	0.54
1:O:1762:MET:HE1	1:O:1778:PHE:CD1	2.42	0.54
1:O:2094:MET:HG2	1:O:2097:LEU:HD22	1.88	0.54
2:L:126:LYS:HG2	2:L:128:GLU:HG3	1.88	0.54
2:L:384:LEU:HA	2:L:389:MET:HB3	1.89	0.54
2:L:413:LYS:HG3	2:L:414:HIS:H	1.73	0.54
1:o:13:LEU:HB2	1:o:59:PHE:CZ	2.40	0.54
1:o:1190:LEU:HD23	1:o:1193:LYS:HD3	1.88	0.54
1:o:2228:ARG:HA	1:o:2231:PHE:HB3	1.89	0.54
1:o:2276:LEU:HA	1:o:2279:ILE:HD12	1.90	0.54
1:o:3629:ARG:O	1:o:3633:ILE:HG12	2.07	0.54
6:f:51:TYR:O	6:f:55:ARG:HG2	2.08	0.54
7:K:147:LEU:HB3	7:K:193:LEU:HD11	1.89	0.54
9:J:99:DT:H2''	9:J:100:DG:C8	2.42	0.54
2:l:59:PHE:HB2	2:l:105:ALA:HB3	1.90	0.54
1:O:185:HIS:HA	1:O:189:MET:HG3	1.90	0.54
1:o:3548:GLY:O	1:o:3552:LYS:HG2	2.07	0.54
2:N:496:HIS:CG	2:N:506:PRO:HD3	2.43	0.54
7:K:203:MET:HE2	7:K:241:ASP:HB2	1.89	0.54
8:I:97:DG:H4'	8:I:98:DC:OP1	2.06	0.54
1:O:1605:PHE:HD1	1:O:2042:GLN:HE22	1.56	0.54
2:L:482:ILE:HG23	2:L:515:MET:HE2	1.88	0.54
6:F:75:HIS:NE2	4:d:90:GLU:HG2	2.23	0.54
1:o:2461:PHE:HA	1:o:2464:HIS:CE1	2.43	0.54
1:o:3507:ASP:HB3	1:o:3508:LYS:HZ3	1.72	0.54
1:o:3729:MET:HG2	1:o:3737:ARG:HE	1.71	0.54
1:o:4049:ARG:HG2	1:o:4054:ALA:HB2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:e:67:PHE:HE2	5:e:89:VAL:HB	1.70	0.54
7:K:59:PRO:HA	7:K:62:MET:HG2	1.89	0.54
7:m:161:MET:HA	7:m:161:MET:HE3	1.90	0.54
1:O:395:MET:SD	1:O:410:MET:HE1	2.47	0.54
1:O:2295:GLN:HG3	1:O:2298:GLU:H	1.72	0.54
1:O:2389:PHE:HB3	1:O:2393:LEU:HB2	1.90	0.54
1:O:3130:GLN:HB3	1:O:3178:ILE:HG21	1.90	0.54
3:G:102:ILE:HG22	6:F:98:TYR:HB2	1.90	0.54
1:o:201:LEU:HD22	1:o:249:PHE:CE2	2.42	0.54
1:o:1564:SER:HA	1:o:1567:ILE:HD12	1.89	0.54
1:o:1668:PHE:HA	1:o:1671:VAL:HG22	1.90	0.54
1:o:3833:ARG:HD2	1:o:3877:LYS:HE2	1.88	0.54
8:i:126:DC:H2''	8:i:127:DA:H5'	1.90	0.54
1:O:2100:LEU:HG	1:O:2104:MET:HE1	1.90	0.54
3:C:83:LEU:O	3:C:87:ILE:HG12	2.08	0.54
1:o:1104:LEU:HD11	1:o:1131:ILE:HG23	1.88	0.54
1:o:2184:TYR:CE1	1:o:2734:ARG:HG3	2.42	0.54
1:o:2238:ILE:HD13	1:o:2241:LEU:HD21	1.89	0.54
1:o:3958:LEU:H	1:o:3958:LEU:HD23	1.73	0.54
1:o:3999:THR:O	1:o:4002:MET:HG3	2.08	0.54
1:O:919:LEU:HA	1:O:972:LEU:HD21	1.90	0.54
1:O:2995:GLU:O	1:O:2999:LEU:HG	2.08	0.54
5:E:42:ARG:HH21	5:E:44:GLY:HA3	1.72	0.54
1:o:1011:GLU:HA	1:o:1014:LEU:HG	1.89	0.54
1:o:3980:MET:O	1:o:3984:MET:HG2	2.08	0.54
1:o:4105:LYS:HA	1:o:4108:MET:HE2	1.89	0.54
2:N:389:MET:HG2	7:K:466:VAL:HG11	1.90	0.54
2:N:652:GLU:HG2	2:N:653:GLN:N	2.23	0.54
9:J:59:DG:H2''	9:J:60:DT:C5	2.43	0.54
2:L:362:LEU:HB2	2:L:421:TYR:HB3	1.90	0.54
1:o:1358:LEU:HA	1:o:1361:LYS:HZ3	1.73	0.54
1:o:2184:TYR:HE1	1:o:2734:ARG:HG3	1.73	0.54
1:o:2328:ARG:HD2	1:o:2371:PHE:HA	1.90	0.54
2:N:450:GLN:HA	2:N:536:LEU:HD13	1.89	0.54
2:N:604:GLN:HG3	2:N:605:LYS:HG3	1.89	0.54
7:M:362:LEU:HB2	7:M:438:PRO:HD3	1.90	0.54
2:l:57:VAL:HG22	2:l:79:VAL:HG13	1.90	0.54
1:O:1478:SER:O	1:O:1481:THR:HG22	2.08	0.54
1:O:2225:HIS:HB2	1:O:2231:PHE:HB2	1.90	0.54
1:O:2888:VAL:HG12	1:O:3894:PRO:HG2	1.90	0.54
1:O:3281:CYS:HB2	1:O:3301:LEU:HD11	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:3462:ARG:HD2	1:O:3494:GLN:HG3	1.90	0.54
1:O:3626:GLY:HA3	1:O:3631:LYS:HG2	1.90	0.54
2:L:37:VAL:HA	2:L:40:MET:HE2	1.90	0.54
1:o:230:LEU:HA	1:o:233:ASN:ND2	2.23	0.54
7:K:48:MET:HB3	7:K:60:PHE:HB2	1.90	0.54
7:K:419:GLU:HB3	7:K:428:THR:HB	1.89	0.54
8:I:9:DG:H1	9:J:148:DC:H42	1.56	0.54
8:I:81:DC:H2''	8:I:82:DC:H5	1.74	0.54
8:I:135:DG:H1	9:J:20:DT:H3	1.55	0.54
1:O:1565:GLU:HG2	1:O:1566:THR:N	2.23	0.53
1:O:3506:LEU:HD13	1:O:3537:SER:HA	1.90	0.53
1:o:741:ILE:HD12	1:o:776:TRP:CE2	2.44	0.53
1:o:2548:PRO:HG3	1:o:2846:THR:HB	1.90	0.53
1:o:3332:THR:HG23	1:o:3335:ARG:HH21	1.72	0.53
9:J:123:DG:H2''	9:J:124:DA:C5	2.44	0.53
8:i:114:DC:H2''	8:i:115:DT:C5	2.43	0.53
1:O:493:LYS:HZ3	1:O:523:THR:HA	1.72	0.53
1:O:1072:ALA:HA	1:O:1075:ARG:HH21	1.73	0.53
1:O:2407:GLY:HA3	1:O:2411:LEU:HD11	1.89	0.53
1:O:3011:LEU:HD23	1:O:3047:SER:HA	1.90	0.53
1:O:3326:GLN:O	1:O:3329:LEU:HG	2.08	0.53
2:L:632:PHE:HZ	2:L:678:VAL:HA	1.73	0.53
1:o:2313:LYS:HA	1:o:2316:TYR:CZ	2.44	0.53
2:N:529:PRO:HA	2:N:532:LYS:HE2	1.91	0.53
8:i:31:DC:H2''	8:i:32:DA:C5	2.43	0.53
9:j:63:DA:H2''	9:j:64:DA:H8	1.74	0.53
1:O:2300:PHE:HA	1:O:2303:LEU:HD12	1.90	0.53
1:O:2942:ILE:HG13	1:O:2943:PHE:N	2.23	0.53
1:O:3816:LEU:HD22	1:O:3882:LEU:HB3	1.90	0.53
3:C:85:LEU:HD22	3:C:108:LEU:HG	1.91	0.53
1:o:132:ILE:HA	1:o:135:LEU:HD12	1.91	0.53
1:o:172:GLU:HG3	1:o:220:LEU:HD23	1.90	0.53
1:o:970:LEU:HD21	1:o:988:VAL:HG21	1.90	0.53
8:i:12:DT:H2''	8:i:13:DC:C5	2.42	0.53
2:n:225:TYR:CG	2:n:229:GLU:HG3	2.43	0.53
1:O:2311:ARG:HG2	1:O:2312:TYR:HD1	1.74	0.53
1:O:2512:ASP:HB2	1:O:2518:GLN:HG2	1.89	0.53
4:H:59:MET:HA	4:H:62:PHE:CE2	2.43	0.53
6:b:60:VAL:O	6:b:63:GLU:HG3	2.08	0.53
1:o:1427:SER:O	1:o:1430:GLU:HG2	2.09	0.53
1:o:1468:LEU:HD23	1:o:1476:HIS:HB2	1.88	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:3719:ILE:HA	1:o:3742:GLY:HA3	1.89	0.53
7:K:487:PHE:HA	7:K:490:LEU:HD12	1.90	0.53
8:I:39:DC:H2"	8:I:40:DG:C8	2.43	0.53
8:i:130:DT:H2"	8:i:131:DG:N7	2.23	0.53
9:j:41:DG:H2"	9:j:42:DG:C8	2.44	0.53
1:O:996:THR:HG1	1:O:1039:TRP:HD1	1.57	0.53
1:O:1878:ASP:HB3	1:O:1947:CYS:SG	2.49	0.53
1:O:2145:PHE:O	1:O:2149:LEU:HG	2.07	0.53
1:O:3263:HIS:HB2	1:O:3276:TRP:CZ2	2.44	0.53
2:L:111:LEU:HD22	2:L:150:ILE:HG12	1.89	0.53
1:o:79:ARG:HH21	1:o:125:ILE:HD12	1.73	0.53
1:o:1111:LEU:HB3	1:o:1183:CYS:HB3	1.90	0.53
1:o:3463:LEU:HA	1:o:3498:TRP:CH2	2.44	0.53
2:l:15:ASP:HB3	2:l:20:MET:HG2	1.90	0.53
1:O:1836:LEU:HD21	1:O:1880:MET:HB2	1.90	0.53
1:O:2210:VAL:HG13	1:O:2214:ARG:HH12	1.71	0.53
1:O:2771:LEU:HD23	1:O:2771:LEU:H	1.73	0.53
1:O:2927:ALA:HB2	1:O:2942:ILE:HD11	1.90	0.53
1:O:3283:LEU:O	1:O:3287:ARG:HG2	2.08	0.53
1:o:15:LEU:HD13	1:o:40:GLN:HG3	1.89	0.53
1:o:888:ARG:HH12	1:o:3889:ARG:NE	2.05	0.53
1:o:2245:TRP:HB2	1:o:2249:LEU:HD11	1.91	0.53
1:o:2923:TRP:CE3	1:o:2942:ILE:HG23	2.44	0.53
1:o:2995:GLU:O	1:o:2999:LEU:HG	2.08	0.53
1:o:4091:ALA:H	1:o:4110:GLN:HE22	1.57	0.53
1:o:4113:ASP:O	1:o:4117:LEU:HG	2.09	0.53
2:N:429:ASP:HB3	7:K:278:GLN:H	1.74	0.53
3:g:42:ARG:O	4:h:85:THR:HA	2.08	0.53
7:K:256:LEU:HB3	7:K:273:ILE:O	2.08	0.53
2:L:663:GLN:HG2	2:L:686:ILE:HD12	1.89	0.53
1:o:1871:MET:HE2	1:o:1871:MET:HA	1.91	0.53
1:o:3531:TYR:O	1:o:3535:ILE:HG12	2.09	0.53
2:N:384:LEU:HD23	2:N:389:MET:HB3	1.91	0.53
8:I:27:DC:H2"	8:I:28:DG:C8	2.43	0.53
2:n:279:VAL:HG22	7:m:319:SER:HB3	1.91	0.53
2:n:455:ASP:HB2	7:m:388:LYS:HE2	1.90	0.53
1:O:195:ASN:HA	1:O:198:ARG:HE	1.74	0.53
1:O:460:ALA:O	1:O:464:VAL:HG13	2.09	0.53
1:O:3729:MET:HB3	1:O:3737:ARG:HB2	1.91	0.53
1:o:1630:ASP:HB2	1:o:1633:TRP:HB2	1.91	0.53
7:K:303:PHE:HA	7:K:311:LEU:HB2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:M:62:MET:HG3	7:M:239:LEU:HB3	1.91	0.53
9:J:85:DG:H2''	9:J:86:DT:H5''	1.91	0.53
2:l:251:LEU:HD22	2:l:340:PHE:HB2	1.89	0.53
1:O:84:GLU:HA	1:O:87:LYS:HE2	1.90	0.53
1:O:1775:GLU:HA	1:O:1778:PHE:HB3	1.91	0.53
1:O:1779:GLN:O	1:O:1783:ARG:HG2	2.08	0.53
1:O:3480:LEU:HG	1:O:3511:ALA:HB2	1.91	0.53
2:L:44:ARG:NH1	2:L:48:ALA:HB2	2.24	0.53
2:L:77:ILE:HG21	2:L:113:VAL:HG21	1.90	0.53
6:b:90:LEU:HD13	6:b:97:LEU:H	1.74	0.53
1:o:891:ARG:NH2	1:o:953:GLN:HG2	2.24	0.53
2:N:596:GLU:HG3	2:N:599:ARG:NH1	2.24	0.53
2:N:632:PHE:CZ	2:N:678:VAL:HA	2.43	0.53
1:O:2133:LEU:HG	1:O:2171:LEU:HD11	1.90	0.53
1:O:3052:LEU:HD12	1:O:3061:LEU:HD21	1.91	0.53
1:O:4040:PRO:HA	1:O:4043:LYS:HE2	1.91	0.53
5:A:119:ILE:HG22	6:B:46:ILE:HA	1.91	0.53
1:o:184:VAL:HG13	1:o:186:PRO:HD3	1.90	0.53
1:o:1268:ASN:HA	1:o:1271:ILE:HG12	1.90	0.53
1:o:1750:LEU:HD13	1:o:1758:LEU:HB2	1.91	0.53
1:o:2270:ASN:O	1:o:2274:ILE:HG13	2.09	0.53
1:o:2304:VAL:HA	1:o:2307:MET:HG3	1.91	0.53
1:o:2393:LEU:H	1:o:2393:LEU:HD12	1.74	0.53
2:N:316:TYR:CZ	7:K:75:ILE:HG21	2.44	0.53
2:N:646:ALA:HB1	2:N:651:GLU:HG3	1.90	0.53
7:k:165:ARG:HD3	7:k:199:PHE:HB2	1.91	0.53
1:O:1295:ALA:O	1:O:1298:LEU:HG	2.08	0.52
1:O:1397:ASP:HA	1:O:1460:ARG:HH12	1.75	0.52
1:O:2215:LEU:HD13	1:O:2218:PHE:HD2	1.74	0.52
2:L:595:ALA:HA	2:L:598:PHE:CE2	2.44	0.52
2:L:730:ASP:H	1:o:1913:LYS:HG2	1.74	0.52
5:A:121:PRO:HB3	6:B:53:GLU:HG3	1.90	0.52
2:N:458:ILE:HG12	7:K:350:PHE:CE2	2.44	0.52
8:i:103:DG:H1'	8:i:104:DG:C8	2.43	0.52
1:O:348:ILE:HG21	1:O:362:ALA:HB2	1.90	0.52
1:O:664:SER:O	1:O:668:LYS:HG3	2.08	0.52
1:O:720:GLN:HG2	1:O:1121:LEU:HD13	1.90	0.52
2:L:306:LEU:HG	2:L:308:GLU:H	1.74	0.52
4:d:63:VAL:HA	4:d:66:ILE:HG22	1.90	0.52
1:o:303:HIS:O	1:o:309:LYS:HE3	2.09	0.52
1:o:1723:PRO:HG3	2:N:593:ASN:HB2	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:3970:LEU:HG	1:o:3971:MET:SD	2.50	0.52
2:N:357:MET:C	2:N:423:GLN:HB3	2.34	0.52
7:M:130:ARG:HB2	7:M:134:MET:HE1	1.90	0.52
7:M:480:ASN:HB3	7:M:483:LEU:HB2	1.91	0.52
1:O:189:MET:HA	1:O:189:MET:HE2	1.91	0.52
1:O:1452:VAL:HA	1:O:1517:LEU:HD21	1.91	0.52
1:O:1589:ASN:HB3	1:O:1592:MET:SD	2.49	0.52
1:O:2941:GLY:HA2	1:O:3977:THR:O	2.09	0.52
1:o:493:LYS:HB3	1:o:524:TYR:HE1	1.73	0.52
1:o:1690:GLY:HA2	1:o:1693:VAL:HG12	1.91	0.52
1:o:2832:ILE:HA	1:o:2835:LYS:HE2	1.91	0.52
7:K:214:SER:HB3	7:K:218:ARG:HE	1.75	0.52
8:i:51:DT:H2''	8:i:52:DA:C8	2.44	0.52
2:l:42:VAL:HG21	2:l:94:ILE:HD11	1.90	0.52
2:l:197:ILE:HG13	2:l:201:GLN:HB2	1.89	0.52
7:k:130:ARG:O	7:k:134:MET:HG2	2.10	0.52
2:n:254:GLY:HA3	2:n:257:LEU:HB2	1.91	0.52
1:O:284:THR:HA	1:O:326:MET:HE1	1.91	0.52
1:O:1693:VAL:HG22	1:O:1696:LEU:HD23	1.91	0.52
1:O:1914:THR:HA	1:O:1917:LYS:HZ3	1.74	0.52
3:G:42:ARG:HD3	8:I:42:DA:H4'	1.91	0.52
5:a:71:VAL:HG12	6:b:62:LEU:HD21	1.90	0.52
1:o:1696:LEU:HD23	1:o:1697:PRO:HD3	1.91	0.52
1:O:759:GLY:HA2	1:O:762:TYR:O	2.10	0.52
1:O:1532:LEU:HD13	1:O:1560:TYR:HB2	1.91	0.52
1:O:3303:THR:O	1:O:3307:LEU:HD12	2.10	0.52
1:O:3735:PRO:HB3	1:O:3751:LEU:HD21	1.92	0.52
1:O:3905:ALA:HB2	1:O:3970:LEU:HD21	1.92	0.52
5:a:99:TYR:HD1	6:b:95:ARG:HH21	1.57	0.52
1:o:117:LYS:NZ	2:N:299:ASP:HB2	2.24	0.52
1:o:1238:GLN:HB2	1:o:1296:PHE:CZ	2.45	0.52
1:o:2382:VAL:O	1:o:2386:LEU:HG	2.10	0.52
1:o:3050:LYS:HG3	1:o:3054:GLN:NE2	2.24	0.52
4:h:36:ILE:HD12	4:h:36:ILE:H	1.74	0.52
2:n:197:ILE:HG12	2:n:202:LYS:HG2	1.91	0.52
2:n:253:ILE:HB	2:n:340:PHE:HD2	1.74	0.52
1:O:2101:VAL:HA	1:O:2104:MET:SD	2.49	0.52
1:O:2440:TYR:HA	1:O:2443:MET:HE1	1.92	0.52
2:L:109:ASP:HA	2:L:112:ILE:HD12	1.92	0.52
4:d:99:LEU:HB2	4:d:104:ALA:HB2	1.91	0.52
1:o:651:TYR:CZ	1:o:655:LEU:HD11	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:1693:VAL:HG22	1:o:1696:LEU:HD22	1.91	0.52
1:o:3179:TRP:O	1:o:3182:ILE:HG12	2.09	0.52
2:N:15:ASP:O	2:N:20:MET:HG3	2.10	0.52
7:K:94:LYS:H	7:K:103:TYR:HA	1.73	0.52
7:K:214:SER:HB2	7:K:218:ARG:HH21	1.75	0.52
7:M:168:LEU:HB3	7:M:202:LEU:HA	1.92	0.52
8:I:94:DA:H1'	8:I:95:DC:H5'	1.92	0.52
1:O:269:SER:O	1:O:273:ARG:HG2	2.10	0.52
1:O:1756:PRO:HA	1:O:1759:LEU:HD12	1.91	0.52
1:O:2273:GLY:HA2	1:O:2276:LEU:HD12	1.91	0.52
5:A:63:ARG:HD3	8:i:94:DA:H4'	1.90	0.52
5:a:85:GLN:O	8:I:53:DG:H5''	2.10	0.52
1:o:265:TYR:C	1:o:268:PRO:HD2	2.35	0.52
1:o:287:LEU:HA	1:o:290:TYR:CE1	2.44	0.52
1:o:394:GLN:NE2	1:o:1741:ASP:OD2	2.43	0.52
1:o:1525:CYS:HB3	1:o:1578:ALA:HB2	1.91	0.52
1:o:1839:PHE:O	1:o:1843:ILE:HD12	2.10	0.52
1:o:1850:VAL:HG11	1:o:1873:TYR:CG	2.44	0.52
1:o:3172:LYS:C	1:o:3173:MET:HE2	2.35	0.52
3:g:102:ILE:HA	6:f:98:TYR:HB2	1.91	0.52
4:h:36:ILE:HG12	8:i:125:DG:H3'	1.92	0.52
7:K:362:LEU:HG	7:K:363:ARG:HG2	1.91	0.52
7:M:54:GLU:HB2	7:M:206:LYS:HE3	1.90	0.52
8:I:41:DT:H2''	8:I:42:DA:C8	2.45	0.52
1:O:980:THR:O	1:O:983:LEU:HG	2.10	0.52
1:O:1731:PRO:HA	1:O:1736:PHE:CD2	2.45	0.52
1:O:2323:LEU:HA	1:O:2326:ILE:HD12	1.90	0.52
1:O:3813:LYS:HZ1	1:O:3925:LEU:H	1.57	0.52
2:L:463:LEU:HD12	7:M:397:LEU:HD23	1.91	0.52
3:G:77:ARG:HD2	4:H:52:SER:HB3	1.90	0.52
1:o:1104:LEU:HD13	1:o:1134:LEU:HD22	1.92	0.52
1:o:3069:MET:HA	1:o:3075:LYS:HD3	1.90	0.52
1:o:3236:PHE:HB3	1:o:3272:TRP:HE1	1.74	0.52
2:N:228:SER:HB2	2:N:232:ARG:HB2	1.92	0.52
6:f:83:ALA:HA	6:f:86:VAL:HG22	1.92	0.52
7:k:200:LEU:HB3	7:k:222:SER:HB2	1.91	0.52
1:O:117:LYS:HG2	1:O:118:ASP:H	1.74	0.52
1:O:2227:LYS:O	1:O:2228:ARG:HG3	2.10	0.52
1:O:3150:ASN:HB3	1:O:3155:VAL:HG22	1.92	0.52
1:O:3662:ILE:HA	1:O:3665:MET:SD	2.49	0.52
2:L:14:MET:HE1	2:L:34:ALA:HB3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:83:ARG:HG3	6:B:79:LYS:HE2	1.92	0.52
1:o:1686:LEU:HA	1:o:1689:LYS:HD2	1.91	0.52
1:o:2231:PHE:O	1:o:2235:LEU:HG	2.09	0.52
1:o:2353:GLN:HA	1:o:2356:MET:HE3	1.91	0.52
1:o:2888:VAL:HA	1:o:2891:ARG:HG2	1.91	0.52
5:e:68:GLN:O	5:e:72:ARG:HG2	2.10	0.52
9:j:30:DC:H2"	9:j:31:DC:C6	2.45	0.52
7:k:480:ASN:HB3	7:k:483:LEU:HB2	1.92	0.52
1:O:581:LEU:HB3	1:O:660:LEU:HD12	1.91	0.52
1:O:3961:PHE:HE2	1:O:4107:LEU:HG	1.73	0.52
1:o:194:GLU:HA	1:o:197:PHE:CD2	2.44	0.52
1:o:3687:MET:O	1:o:3722:PHE:HB3	2.09	0.52
8:i:10:DA:H8	8:i:11:DA:N7	2.08	0.52
8:i:19:DG:H8	8:i:19:DG:OP1	1.93	0.52
9:j:55:DG:C2	9:j:56:DG:C2	2.97	0.52
2:n:197:ILE:HG13	2:n:201:GLN:HB2	1.91	0.52
1:O:131:LEU:HB2	1:O:173:LYS:NZ	2.25	0.51
1:O:996:THR:HG1	1:O:1039:TRP:CD1	2.28	0.51
1:O:1477:HIS:CD2	1:O:1527:ARG:HD2	2.45	0.51
1:O:1635:LYS:H	1:O:1642:LYS:HZ1	1.57	0.51
1:O:3416:LEU:HG	1:O:3446:VAL:HG12	1.92	0.51
1:O:3701:ILE:HG13	1:O:3719:ILE:HG23	1.91	0.51
2:N:427:MET:SD	7:K:476:ASP:HA	2.49	0.51
7:M:94:LYS:H	7:M:103:TYR:HA	1.74	0.51
7:M:460:GLY:HA2	7:M:463:LYS:HB2	1.92	0.51
1:O:414:LEU:HB2	1:O:460:ALA:HB1	1.91	0.51
1:O:935:HIS:CE1	1:O:2775:TYR:HE1	2.28	0.51
1:O:1056:THR:HA	1:O:1059:LEU:HD12	1.92	0.51
3:G:45:ALA:O	3:G:49:VAL:HG23	2.10	0.51
1:o:538:ASP:HA	1:o:541:MET:HE3	1.91	0.51
1:o:905:ILE:HD11	1:o:2812:LEU:HA	1.92	0.51
1:o:958:MET:HA	1:o:961:LEU:HB2	1.93	0.51
1:o:1611:GLN:HB2	1:o:1613:HIS:ND1	2.24	0.51
2:N:328:GLU:O	2:N:332:LYS:HB2	2.10	0.51
2:N:500:HIS:HB3	2:N:503:GLU:HB3	1.92	0.51
1:O:796:LEU:HD23	1:O:796:LEU:H	1.75	0.51
2:L:26:GLY:HA3	2:L:195:LYS:HB3	1.93	0.51
2:L:280:ASP:HB3	2:L:285:LYS:H	1.74	0.51
2:L:394:ARG:HH12	2:L:396:ALA:HB2	1.76	0.51
2:L:628:GLU:HB3	2:L:630:PRO:HD2	1.93	0.51
1:o:571:SER:HA	1:o:574:LYS:HE2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:1661:PHE:HE1	1:o:1666:GLY:H	1.57	0.51
1:o:1820:VAL:HG23	1:o:1824:LEU:HB2	1.91	0.51
1:o:2586:PHE:HE1	1:o:2780:LEU:H	1.57	0.51
1:o:3049:LEU:HD21	1:o:3088:LEU:HB2	1.92	0.51
3:g:79:ILE:HG22	3:g:82:HIS:CG	2.45	0.51
5:e:74:ILE:HG23	6:f:66:ILE:HD13	1.91	0.51
7:K:143:LEU:HD21	7:K:186:ALA:HB2	1.92	0.51
7:M:167:MET:HE3	7:M:203:MET:HB2	1.91	0.51
8:i:45:DC:H2"	8:i:46:DA:N7	2.24	0.51
1:O:528:VAL:HB	1:O:532:ARG:HH21	1.76	0.51
1:O:530:LEU:O	1:O:534:LEU:HG	2.09	0.51
2:L:729:LEU:HD23	1:o:1913:LYS:HD3	1.93	0.51
3:C:80:PRO:HD3	4:D:55:ALA:HB2	1.93	0.51
1:o:772:ALA:O	1:o:776:TRP:HD1	1.92	0.51
1:o:2886:GLN:N	1:o:2887:PRO:HD2	2.25	0.51
1:o:3739:ILE:HG21	1:o:3747:GLU:HG3	1.92	0.51
2:N:656:ASN:HB3	2:N:688:LYS:HB2	1.92	0.51
3:g:87:ILE:HD12	3:g:88:ARG:HH21	1.75	0.51
8:I:133:DC:H42	9:J:22:DA:N6	2.09	0.51
8:i:137:DT:H2"	8:i:138:DA:N7	2.25	0.51
2:n:11:VAL:HB	2:n:132:ILE:HG12	1.93	0.51
1:O:31:GLY:HA2	1:O:34:LEU:HD12	1.92	0.51
1:O:856:VAL:HA	1:O:859:LEU:HD12	1.91	0.51
1:O:1208:LEU:HG	1:O:1275:THR:HG23	1.91	0.51
1:O:1279:LEU:N	1:O:1356:TRP:HE1	2.09	0.51
1:O:2190:VAL:HA	1:O:2193:ILE:HG12	1.93	0.51
1:O:3472:ILE:HD12	1:O:3483:MET:HE2	1.91	0.51
1:O:3950:THR:HG21	1:O:4064:LEU:HD23	1.93	0.51
2:L:699:GLU:O	2:L:703:LYS:HG2	2.10	0.51
3:C:21:ALA:HA	4:D:117:LYS:HE2	1.92	0.51
5:A:53:ARG:HA	5:A:56:LYS:HG2	1.92	0.51
1:o:914:VAL:HG13	1:o:934:LEU:HD21	1.93	0.51
1:o:955:ALA:HB1	1:o:956:PRO:HD2	1.92	0.51
1:o:1023:SER:O	1:o:1026:ARG:HG2	2.11	0.51
1:o:3008:TRP:CD1	1:o:3050:LYS:HG2	2.45	0.51
1:o:3568:ILE:HA	1:o:3571:PHE:CE2	2.45	0.51
1:o:3772:ASN:HD21	1:o:3788:LEU:HB3	1.75	0.51
1:o:3792:SER:HB2	1:o:3804:GLU:HG2	1.91	0.51
2:N:115:MET:HE3	2:N:153:SER:HB2	1.91	0.51
2:N:236:VAL:H	2:N:511:HIS:CE1	2.28	0.51
2:N:493:CYS:HB3	2:N:505:LEU:HD13	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:g:79:ILE:HG13	3:g:80:PRO:HD2	1.92	0.51
9:j:119:DA:H2"	9:j:120:DA:N7	2.24	0.51
1:O:2233:HIS:O	1:O:2237:ILE:HG12	2.11	0.51
1:O:2801:ASP:HB3	1:O:2804:ILE:HG22	1.93	0.51
1:O:3357:ARG:HH21	1:O:3358:ARG:NH1	2.08	0.51
3:C:31:HIS:CD2	3:C:35:ARG:HE	2.28	0.51
6:B:33:ALA:HA	6:B:36:ARG:HE	1.76	0.51
6:F:72:TYR:HD2	6:F:85:ASP:HB2	1.76	0.51
6:b:33:ALA:HA	6:b:36:ARG:HE	1.75	0.51
1:o:1297:PHE:HA	1:o:1301:ILE:HG23	1.92	0.51
1:o:2349:LEU:C	1:o:2353:GLN:HG3	2.36	0.51
2:N:45:GLN:HG3	2:N:54:ILE:HD11	1.91	0.51
7:k:418:GLU:HB2	7:k:430:PRO:HB3	1.92	0.51
7:m:371:GLU:HG3	7:m:373:SER:H	1.76	0.51
1:O:1632:TRP:CD1	1:O:1637:SER:HB3	2.46	0.51
1:O:1877:LEU:O	1:O:1880:MET:HG3	2.11	0.51
1:O:2254:ARG:HH21	1:O:2292:CYS:HB2	1.76	0.51
1:O:2295:GLN:N	1:O:2295:GLN:NE2	2.58	0.51
1:O:3083:SER:HA	1:O:3086:LEU:HD12	1.93	0.51
1:O:3110:PHE:HE1	1:O:3128:LYS:HB3	1.75	0.51
1:O:3469:LEU:HA	1:O:3472:ILE:HG12	1.93	0.51
1:o:3327:ASN:HB2	1:o:3388:ALA:HB2	1.92	0.51
2:N:361:VAL:HG13	2:N:420:VAL:HG13	1.93	0.51
8:I:82:DC:H2"	8:I:83:DC:C6	2.46	0.51
1:O:995:PHE:HD1	1:O:1000:LYS:HG2	1.75	0.51
1:O:1085:ILE:O	1:O:1089:PHE:CB	2.54	0.51
2:L:154:LEU:HA	2:L:159:ILE:HD12	1.91	0.51
2:L:531:SER:HA	2:L:534:LYS:HE2	1.92	0.51
5:a:70:LEU:HD13	6:b:25:ASN:H	1.76	0.51
1:o:1474:ASP:HB2	1:o:1477:HIS:ND1	2.25	0.51
1:o:3048:LYS:HE3	1:o:3061:LEU:HB3	1.91	0.51
1:o:3387:GLU:O	1:o:3390:GLN:HG2	2.10	0.51
7:K:492:ALA:HA	7:K:497:LEU:HB2	1.93	0.51
9:J:72:DG:H4'	9:J:73:DG:OP1	2.10	0.51
2:l:10:VAL:HA	2:l:131:HIS:O	2.10	0.51
1:O:898:PHE:CD1	1:O:2566:THR:HG21	2.46	0.51
1:O:913:ARG:HH21	1:O:917:LEU:HG	1.76	0.51
1:O:1191:PHE:CZ	1:O:1208:LEU:HD11	2.46	0.51
1:O:1605:PHE:HD2	1:O:1655:ILE:HD13	1.73	0.51
1:O:2510:LEU:HD13	1:O:2525:TRP:CD1	2.46	0.51
1:O:4011:PHE:HD1	1:O:4014:LYS:HD3	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:311:ILE:HD13	7:M:290:ARG:HE	1.75	0.51
2:L:311:ILE:H	7:M:288:LEU:H	1.59	0.51
3:C:31:HIS:ND1	3:C:48:PRO:HG3	2.26	0.51
3:c:87:ILE:HG13	3:c:93:LEU:HB3	1.93	0.51
4:d:40:LYS:HA	4:d:43:LYS:HE2	1.93	0.51
1:o:204:LEU:HA	1:o:216:LYS:NZ	2.26	0.51
1:o:493:LYS:HB3	1:o:524:TYR:CE1	2.46	0.51
1:o:3311:ASN:HB3	1:o:3315:TYR:CZ	2.46	0.51
3:g:63:LEU:HD13	4:h:42:LEU:HD12	1.92	0.51
7:K:91:GLU:HB3	7:K:136:GLY:HA3	1.92	0.51
7:M:179:ASP:HB3	7:M:182:LYS:HB2	1.93	0.51
9:j:69:DG:H2''	9:j:70:DG:C8	2.45	0.51
2:l:473:LEU:HB2	7:k:355:LEU:HD21	1.93	0.51
7:m:193:LEU:HB3	7:m:198:ILE:HB	1.92	0.51
1:O:2390:HIS:HA	1:O:2394:LYS:HD2	1.93	0.51
2:L:602:VAL:HG22	2:L:609:PHE:HD2	1.76	0.51
6:B:91:LYS:HZ3	6:B:92:ARG:HH12	1.59	0.51
1:o:724:GLU:HG2	1:o:2600:THR:O	2.11	0.51
3:g:24:GLN:HB3	4:h:40:LYS:HE3	1.93	0.51
7:K:256:LEU:HG	7:K:257:SER:H	1.76	0.51
8:i:92:DT:H2''	8:i:93:DA:C8	2.46	0.51
8:i:98:DC:C4	9:j:56:DG:O6	2.63	0.51
2:l:74:TYR:HA	2:l:77:ILE:HD12	1.93	0.51
7:k:368:VAL:HB	7:k:432:PHE:HB2	1.93	0.51
1:O:569:VAL:O	1:O:573:LEU:HG	2.10	0.50
1:O:2325:LEU:HD22	1:O:2370:SER:HB3	1.92	0.50
1:O:2424:MET:HE1	1:O:2435:CYS:HB3	1.93	0.50
1:o:446:PHE:CE1	1:o:530:LEU:HD21	2.46	0.50
1:o:1661:PHE:HE1	1:o:1667:SER:H	1.58	0.50
1:o:1871:MET:CE	1:o:1940:TYR:HA	2.40	0.50
2:N:686:ILE:HD12	2:N:702:LYS:NZ	2.27	0.50
8:i:114:DC:H1'	8:i:115:DT:C2	2.46	0.50
7:m:72:ILE:HG12	7:m:497:LEU:HD11	1.92	0.50
1:O:1411:TYR:O	1:O:1414:ILE:HG12	2.11	0.50
1:O:1776:GLU:HG2	1:O:1777:LEU:N	2.26	0.50
1:O:3254:LEU:HB3	1:O:3287:ARG:NH2	2.26	0.50
5:E:124:ILE:O	5:E:128:ARG:HG2	2.11	0.50
1:o:1071:ASN:HD21	1:o:1073:PHE:HB2	1.76	0.50
1:o:2854:PHE:CZ	1:o:2858:ILE:HD11	2.46	0.50
1:o:3164:TRP:HE3	1:o:3167:ARG:HD3	1.76	0.50
8:i:22:DG:C2	8:i:23:DA:C6	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:j:87:DG:H4'	9:j:88:DC:OP1	2.11	0.50
1:O:484:HIS:O	1:O:488:ILE:HG12	2.11	0.50
1:O:655:LEU:O	1:O:659:ARG:HG2	2.11	0.50
1:O:849:GLU:HG2	1:O:850:GLU:H	1.76	0.50
1:O:2410:GLU:HG3	1:O:2413:PHE:H	1.76	0.50
1:O:2587:GLN:HB2	1:O:2777:HIS:HB3	1.92	0.50
1:O:3554:PHE:O	1:O:3557:ARG:HG2	2.12	0.50
2:L:497:ARG:HH12	2:L:504:PRO:HA	1.75	0.50
6:F:54:THR:HA	6:F:57:VAL:HG12	1.93	0.50
1:o:385:TYR:HE2	1:o:428:PRO:HG2	1.76	0.50
1:o:410:MET:N	1:o:411:PRO:HD2	2.27	0.50
1:o:1060:PHE:HA	1:o:1063:LEU:HD12	1.93	0.50
1:o:1181:THR:HG23	1:o:1184:ARG:NH2	2.27	0.50
1:o:2822:LYS:HE3	1:o:2823:PHE:HD2	1.75	0.50
1:o:3569:GLN:HA	1:o:3572:ILE:HB	1.93	0.50
1:o:3958:LEU:HD11	1:o:4115:ASN:HD21	1.77	0.50
2:N:14:MET:SD	2:N:38:ILE:HD11	2.51	0.50
7:m:39:ILE:HG12	7:m:84:ALA:HB3	1.91	0.50
1:O:3453:ALA:HA	1:O:3456:LEU:HD12	1.93	0.50
1:O:3623:PRO:HA	1:O:3630:ARG:HE	1.76	0.50
1:O:4093:GLU:HB2	1:O:4094:PRO:HD3	1.93	0.50
6:B:27:GLN:NE2	6:B:52:GLU:HA	2.25	0.50
4:H:77:LEU:HA	4:H:80:TYR:CD2	2.47	0.50
1:o:1524:LEU:O	1:o:1528:LEU:HG	2.10	0.50
1:o:1790:SER:O	1:o:1794:GLN:HG3	2.11	0.50
1:o:2943:PHE:HD1	1:o:2947:ILE:HB	1.77	0.50
1:o:3233:SER:HB3	1:o:3269:ARG:HH22	1.77	0.50
2:N:688:LYS:HG3	2:N:695:SER:HA	1.94	0.50
5:e:65:LEU:HD23	9:j:94:DA:H2'	1.92	0.50
8:i:74:DG:H4'	8:i:75:DC:OP1	2.11	0.50
7:k:460:GLY:HA2	7:k:463:LYS:HE3	1.93	0.50
1:O:887:ASP:HB2	1:O:961:LEU:HD21	1.94	0.50
1:O:1718:ILE:HA	1:O:1721:HIS:CD2	2.46	0.50
1:O:2231:PHE:CZ	1:O:2272:VAL:HG12	2.47	0.50
1:O:2562:LEU:O	1:O:2565:MET:HG3	2.12	0.50
1:o:459:ARG:HD3	1:o:540:MET:HE3	1.93	0.50
1:o:1601:LEU:HD13	1:o:1651:LYS:HD2	1.92	0.50
1:o:3970:LEU:HD21	1:o:3974:MET:HG2	1.94	0.50
1:o:4102:THR:HA	1:o:4105:LYS:HE2	1.94	0.50
7:K:173:ASP:HB3	7:K:211:PHE:HD1	1.74	0.50
7:M:49:PHE:HE2	7:M:137:HIS:HB3	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:M:346:MET:HB2	7:M:399:ARG:HG3	1.92	0.50
9:J:87:DG:H4'	9:J:88:DC:OP1	2.11	0.50
9:j:105:DA:H2''	9:j:106:DG:C8	2.47	0.50
1:O:173:LYS:HA	1:O:223:CYS:SG	2.52	0.50
1:O:1170:LYS:HA	1:O:1173:LEU:HD12	1.94	0.50
1:O:1794:GLN:O	1:O:1798:LEU:HG	2.11	0.50
1:O:1910:GLU:HG2	1:O:1911:LEU:HG	1.93	0.50
1:O:3924:HIS:ND1	1:O:3926:ASN:HB2	2.27	0.50
1:O:3946:PHE:HD2	1:O:4002:MET:HE3	1.76	0.50
5:A:126:LEU:HD22	5:e:113:HIS:CG	2.47	0.50
3:c:59:THR:HA	3:c:62:ILE:HG12	1.94	0.50
1:o:66:LEU:O	1:o:70:ARG:HB2	2.11	0.50
1:o:200:PHE:CD1	1:o:224:LEU:HD22	2.47	0.50
1:o:244:THR:O	1:o:248:ILE:HG12	2.12	0.50
1:o:484:HIS:O	1:o:488:ILE:HG13	2.11	0.50
1:o:1915:LEU:HG	1:o:1916:ILE:H	1.76	0.50
1:o:2102:LYS:O	1:o:2106:ARG:HG2	2.11	0.50
1:o:2218:PHE:HA	1:o:2221:LYS:HE2	1.94	0.50
1:o:3178:ILE:O	1:o:3182:ILE:HG23	2.11	0.50
2:N:311:ILE:HB	7:K:290:ARG:CZ	2.41	0.50
5:e:79:LYS:HB3	5:e:82:LEU:HD11	1.92	0.50
8:I:88:DG:H2''	8:I:89:DT:H5''	1.93	0.50
8:i:105:DG:H2''	8:i:106:DA:C8	2.47	0.50
2:l:466:LYS:HD2	2:l:471:ASP:HA	1.94	0.50
2:n:312:GLN:HA	7:m:287:LYS:HA	1.94	0.50
2:n:357:MET:O	2:n:423:GLN:HB3	2.12	0.50
1:o:166:ILE:H	1:o:166:ILE:HD12	1.75	0.50
1:o:1297:PHE:O	1:o:1301:ILE:HG12	2.11	0.50
1:o:2295:GLN:CD	1:o:2298:GLU:HG3	2.37	0.50
2:N:197:ILE:HG12	2:N:202:LYS:HG3	1.94	0.50
3:g:76:THR:HG23	3:g:77:ARG:HG2	1.93	0.50
9:J:57:DC:H2''	9:J:58:DG:C8	2.46	0.50
9:j:80:DC:H1'	9:j:81:DG:C4	2.46	0.50
2:n:343:LEU:HD21	2:n:394:ARG:HB2	1.94	0.50
1:O:1289:SER:HA	1:O:1292:LYS:HG2	1.94	0.50
1:O:2237:ILE:HD12	1:O:2728:LEU:HD13	1.94	0.50
1:O:2835:LYS:O	1:O:2838:GLN:HG2	2.12	0.50
1:O:2964:ASP:HA	1:O:3253:SER:HB2	1.93	0.50
1:O:3104:GLN:O	1:O:3108:GLN:HG2	2.12	0.50
1:O:3278:GLN:HA	1:O:3281:CYS:SG	2.52	0.50
1:o:204:LEU:HA	1:o:216:LYS:HZ3	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:410:MET:O	1:o:414:LEU:HG	2.12	0.50
1:o:2193:ILE:HD12	1:o:2196:TRP:HE1	1.76	0.50
2:N:279:VAL:HG12	2:N:286:LYS:HG2	1.92	0.50
4:h:99:LEU:HD12	4:h:103:LEU:HD23	1.94	0.50
2:n:42:VAL:HG21	2:n:94:ILE:HD11	1.94	0.50
1:O:344:GLN:O	1:O:348:ILE:HG12	2.11	0.50
1:O:1014:LEU:O	1:O:1018:VAL:HG22	2.11	0.50
1:O:1608:ARG:HA	1:O:1612:LYS:HD2	1.94	0.50
1:O:2797:VAL:HA	1:O:2800:ARG:HB2	1.93	0.50
2:L:294:VAL:HG23	7:M:299:LYS:HB2	1.93	0.50
3:C:87:ILE:HD13	3:C:93:LEU:HD13	1.94	0.50
4:D:33:SER:C	4:D:35:SER:H	2.19	0.50
3:G:63:LEU:HD22	4:H:41:VAL:HG23	1.94	0.50
3:G:87:ILE:HG13	3:G:93:LEU:HB3	1.93	0.50
5:E:72:ARG:O	5:E:76:GLN:HG2	2.12	0.50
6:F:87:VAL:O	6:F:91:LYS:HG2	2.11	0.50
6:b:79:LYS:HB2	9:J:104:DG:H3'	1.93	0.50
1:o:531:PHE:O	1:o:535:LEU:HG	2.12	0.50
1:o:1008:ALA:HA	1:o:1011:GLU:OE2	2.12	0.50
1:o:2482:ASP:HA	1:o:2485:ARG:NE	2.24	0.50
1:o:2891:ARG:HH21	1:o:3898:LEU:HD23	1.77	0.50
1:o:3579:SER:C	1:o:3629:ARG:HH12	2.20	0.50
6:f:60:VAL:O	6:f:63:GLU:HG3	2.12	0.50
8:I:8:DA:H2'	8:I:9:DG:C5	2.47	0.50
9:j:29:DG:H1'	9:j:30:DC:C2	2.47	0.50
1:O:394:GLN:NE2	1:O:1737:ASN:HB3	2.27	0.49
1:O:491:CYS:HB2	1:O:622:ALA:HB1	1.93	0.49
1:O:3247:ARG:HG3	1:O:3286:CYS:SG	2.52	0.49
2:L:118:ILE:O	2:L:122:THR:HG23	2.10	0.49
4:D:83:ARG:HD3	8:i:43:DG:H3'	1.94	0.49
3:G:40:ALA:HB2	4:H:86:ILE:HG12	1.92	0.49
3:c:33:LEU:HD23	3:c:36:LYS:HZ3	1.77	0.49
1:o:1633:TRP:CZ2	1:o:1674:THR:HA	2.32	0.49
1:o:2310:VAL:HG11	1:o:2359:LYS:HE3	1.94	0.49
1:o:3385:LEU:HB2	1:o:3416:LEU:HD13	1.94	0.49
2:N:35:LYS:HA	2:N:38:ILE:HD12	1.93	0.49
7:k:75:ILE:HG12	7:k:111:PRO:HB2	1.94	0.49
2:n:464:ALA:HB1	2:n:473:LEU:HB3	1.94	0.49
1:O:70:ARG:HE	1:O:71:LYS:HE2	1.76	0.49
1:O:1307:ILE:HD11	1:O:1311:LYS:H	1.77	0.49
1:O:1423:ILE:HG12	1:O:1428:ILE:HD11	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1623:LEU:HB3	1:O:1667:SER:HB2	1.94	0.49
1:O:3321:LEU:HG	1:O:3324:ARG:HH21	1.78	0.49
2:L:684:THR:HA	2:L:703:LYS:NZ	2.27	0.49
3:C:31:HIS:HD2	3:C:35:ARG:HE	1.60	0.49
1:o:115:TYR:O	1:o:120:ALA:HB2	2.11	0.49
1:o:1468:LEU:HD22	1:o:1475:LEU:HB3	1.94	0.49
1:o:3472:ILE:HA	1:o:3479:THR:HG21	1.94	0.49
1:o:3608:LYS:O	1:o:3611:GLU:HG3	2.12	0.49
1:o:3611:GLU:O	1:o:3615:ALA:CB	2.59	0.49
1:o:3729:MET:O	1:o:3735:PRO:HG2	2.12	0.49
1:o:3964:THR:H	1:o:3967:PHE:HB2	1.77	0.49
2:N:521:GLU:O	2:N:525:LYS:HG3	2.13	0.49
7:K:82:LEU:HD22	7:K:157:VAL:HG21	1.94	0.49
7:K:154:PHE:CE2	7:K:164:LYS:HB3	2.47	0.49
7:K:480:ASN:HB3	7:K:483:LEU:HB2	1.94	0.49
2:l:461:MET:HA	2:l:522:VAL:HG13	1.93	0.49
1:O:307:GLU:HG2	1:O:308:LEU:H	1.77	0.49
1:O:718:MET:HE2	1:O:726:LEU:HB2	1.94	0.49
1:O:939:MET:HE1	1:O:2781:PRO:HB2	1.94	0.49
1:O:2254:ARG:HD2	1:O:2294:ILE:HD11	1.94	0.49
1:O:4041:ARG:HD2	1:O:4044:ILE:HD11	1.93	0.49
2:L:473:LEU:HB2	7:M:355:LEU:HD21	1.94	0.49
2:L:484:ASN:O	2:L:488:GLN:HG2	2.12	0.49
1:o:1000:LYS:HB3	1:o:1005:ASP:OD1	2.12	0.49
1:o:3039:THR:O	1:o:3042:PRO:HD2	2.12	0.49
1:o:3263:HIS:HB2	1:o:3276:TRP:CD2	2.47	0.49
7:M:339:ARG:HH11	7:M:405:ASN:H	1.60	0.49
7:M:420:LEU:HB3	7:M:424:LYS:HD3	1.94	0.49
8:i:25:DG:H2'	8:i:26:DC:C5	2.47	0.49
1:O:187:SER:HA	1:O:190:ILE:HD12	1.93	0.49
1:O:309:LYS:O	1:O:313:LEU:HG	2.12	0.49
1:O:2950:LYS:O	1:O:2953:THR:HG22	2.13	0.49
1:O:3321:LEU:HB2	1:O:3395:GLU:HG3	1.94	0.49
1:O:3369:ASP:H	1:O:3372:LYS:HE2	1.78	0.49
4:d:81:ASN:O	4:d:82:LYS:HG2	2.13	0.49
5:a:101:VAL:HG13	6:b:41:GLY:HA2	1.94	0.49
1:o:2442:MET:HG3	1:o:2446:LEU:HD11	1.94	0.49
1:o:3226:ASP:O	1:o:3230:LEU:HG	2.12	0.49
1:o:3740:ILE:HG13	1:o:3748:HIS:HB2	1.93	0.49
1:o:3781:CYS:HA	1:o:3786:LEU:HD12	1.94	0.49
2:N:429:ASP:O	7:K:277:VAL:HA	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:g:43:VAL:HG13	4:h:86:ILE:HB	1.95	0.49
7:K:59:PRO:HB3	7:K:205:LEU:HD12	1.93	0.49
8:I:52:DA:H61	9:J:102:DT:H3	1.59	0.49
9:j:80:DC:H4'	9:j:81:DG:H5'	1.95	0.49
7:k:41:LEU:HD23	7:k:168:LEU:HD13	1.93	0.49
2:n:248:PRO:HG3	2:n:264:TYR:CZ	2.48	0.49
1:O:1633:TRP:CD2	1:O:1674:THR:HG23	2.47	0.49
1:O:1863:PHE:CZ	2:L:718:VAL:HG13	2.47	0.49
1:O:3582:GLU:OE2	1:O:3671:ASN:HB3	2.12	0.49
1:o:92:PHE:O	1:o:96:MET:CB	2.60	0.49
1:o:1224:PHE:HE1	1:o:1266:CYS:HB2	1.78	0.49
1:o:1296:PHE:HA	1:o:1299:GLU:HG2	1.94	0.49
3:g:71:ARG:HH22	3:g:76:THR:HA	1.77	0.49
7:K:173:ASP:H	7:K:207:LYS:NZ	2.08	0.49
7:M:382:PHE:HZ	7:M:431:GLY:HA2	1.77	0.49
7:k:256:LEU:HG	7:k:257:SER:H	1.77	0.49
1:O:111:CYS:HB2	1:O:130:LEU:HG	1.94	0.49
1:O:1133:HIS:O	1:O:1137:ILE:HG12	2.12	0.49
1:O:2929:LEU:O	1:O:2933:ILE:HG23	2.12	0.49
2:L:728:LEU:HD13	1:o:1915:LEU:HB2	1.95	0.49
1:o:1513:GLY:HA2	1:o:1516:GLU:CD	2.36	0.49
1:o:2375:ALA:HA	1:o:2378:PHE:HD2	1.77	0.49
1:o:2540:LEU:HD21	1:o:2835:LYS:HE3	1.95	0.49
7:K:366:LEU:HB2	7:K:434:LEU:HD23	1.94	0.49
7:M:161:MET:HB3	7:M:164:LYS:HE3	1.94	0.49
7:M:236:SER:HB2	7:M:241:ASP:HB2	1.94	0.49
8:i:42:DA:H2''	8:i:43:DG:C8	2.48	0.49
8:i:100:DA:H2'	8:i:101:DA:C8	2.48	0.49
8:i:103:DG:C2	8:i:104:DG:C2	3.00	0.49
2:l:348:SER:HB3	2:l:390:VAL:HG13	1.95	0.49
2:l:496:HIS:CG	2:l:506:PRO:HD3	2.48	0.49
1:O:754:MET:HA	1:O:757:LYS:HB2	1.95	0.49
1:O:1145:LEU:HD11	1:O:1165:LEU:HB2	1.93	0.49
1:O:1583:MET:HG2	1:O:1628:LYS:HB2	1.95	0.49
1:O:1820:VAL:HA	1:O:1824:LEU:HD23	1.94	0.49
1:O:3763:ARG:HD2	1:O:4004:VAL:HG21	1.94	0.49
2:L:405:VAL:HG21	7:M:507:THR:HB	1.94	0.49
2:L:408:ALA:HB1	2:L:419:LEU:HD21	1.94	0.49
3:C:96:LEU:HD21	4:D:99:LEU:HA	1.95	0.49
4:D:35:SER:HA	4:D:56:MET:CE	2.42	0.49
3:c:82:HIS:HA	3:c:85:LEU:HD12	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:1510:LEU:O	1:o:1514:LEU:HG	2.13	0.49
1:o:3149:GLY:HA3	1:o:3152:SER:HB2	1.94	0.49
7:K:371:GLU:HG3	7:K:373:SER:H	1.77	0.49
9:J:51:DC:H2"	9:J:52:DC:C6	2.48	0.49
7:k:357:LYS:HD2	7:k:359:HIS:HE1	1.75	0.49
2:n:473:LEU:HD13	7:m:352:PRO:HG2	1.95	0.49
1:O:229:SER:HA	1:O:278:HIS:CE1	2.48	0.49
1:O:493:LYS:NZ	1:O:495:VAL:HG22	2.27	0.49
1:O:749:VAL:HG13	1:O:792:ILE:HG21	1.95	0.49
1:O:1173:LEU:HD11	1:O:1191:PHE:CE1	2.47	0.49
1:O:3759:ARG:HH22	1:O:4006:VAL:HG12	1.77	0.49
1:O:3809:THR:HA	1:O:3931:ALA:HA	1.95	0.49
2:L:274:LYS:HG3	7:M:322:TYR:CZ	2.48	0.49
1:o:284:THR:H	1:o:326:MET:HE2	1.78	0.49
1:o:1335:CYS:HA	1:o:1338:VAL:HG22	1.94	0.49
1:o:1357:LYS:HG3	1:o:1361:LYS:HZ2	1.77	0.49
1:o:2385:LEU:HD23	1:o:2388:LYS:HD2	1.94	0.49
1:o:3143:SER:O	1:o:3147:LYS:HB2	2.13	0.49
1:o:3871:PHE:O	1:o:3874:ARG:HG2	2.13	0.49
9:J:10:DG:H2"	9:J:11:DA:C8	2.48	0.49
9:J:57:DC:H2"	9:J:58:DG:H8	1.78	0.49
1:O:560:LEU:HD13	1:O:563:LEU:HD12	1.95	0.49
1:O:925:GLN:HB2	1:O:2769:VAL:HG22	1.95	0.49
1:O:1201:ASN:HD21	1:O:1206:LEU:HB2	1.78	0.49
1:O:2482:ASP:HA	1:O:2485:ARG:HG2	1.94	0.49
1:O:3924:HIS:HD1	1:O:3926:ASN:HB2	1.78	0.49
3:c:77:ARG:HH12	3:c:79:ILE:HD13	1.78	0.49
6:b:63:GLU:HA	6:b:66:ILE:HG12	1.94	0.49
1:o:1330:TYR:CE1	1:o:1334:LYS:HD2	2.48	0.49
1:o:1382:ILE:O	1:o:1382:ILE:HG13	2.13	0.49
2:N:353:ARG:HG3	2:N:356:PHE:CE2	2.48	0.49
2:N:486:ARG:HD2	7:K:407:PRO:HG2	1.95	0.49
5:e:71:VAL:HA	5:e:74:ILE:HG22	1.94	0.49
7:K:318:ARG:HD3	7:K:331:LYS:N	2.28	0.49
9:j:56:DG:H8	9:j:57:DC:C4	2.31	0.49
2:l:463:LEU:HD21	2:l:477:PHE:HB3	1.93	0.49
7:k:263:LEU:HD22	7:k:347:LEU:HD22	1.93	0.49
2:n:54:ILE:HD12	2:n:86:PRO:HB3	1.94	0.49
2:n:154:LEU:HD13	2:n:215:LEU:HD11	1.95	0.49
1:O:82:ARG:HG3	1:O:126:PRO:HB3	1.94	0.49
1:O:139:ARG:NH2	1:O:181:LEU:H	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:479:ILE:O	1:O:483:VAL:HG22	2.12	0.49
1:O:3667:LEU:HA	1:O:3670:MET:HG2	1.95	0.49
2:L:405:VAL:HB	2:L:426:PHE:HE1	1.78	0.49
1:o:108:LYS:HG3	1:o:148:LYS:NZ	2.28	0.49
1:o:240:GLU:HG3	1:o:242:PRO:HG2	1.95	0.49
1:o:338:LEU:HD12	1:o:339:GLN:HG3	1.93	0.49
1:o:713:GLU:O	1:o:717:LYS:HG2	2.13	0.49
1:o:1513:GLY:O	1:o:1517:LEU:HG	2.12	0.49
1:o:2166:SER:OG	1:o:2167:PRO:HD3	2.13	0.49
1:o:3015:SER:HA	1:o:3044:MET:HE1	1.95	0.49
8:i:98:DC:C6	8:i:98:DC:H5"	2.48	0.49
2:l:88:PHE:HD2	7:k:325:ARG:HB2	1.78	0.49
7:k:49:PHE:HD1	7:k:128:GLN:HG3	1.77	0.49
7:k:206:LYS:HE2	7:k:238:LYS:HE3	1.94	0.49
7:m:365:SER:HB2	7:m:435:VAL:HG22	1.95	0.49
1:O:67:VAL:O	1:O:71:LYS:HG2	2.13	0.48
1:O:2455:LEU:HD11	1:O:2501:LEU:HD23	1.95	0.48
1:O:3279:SER:HA	1:O:3282:ARG:HH21	1.78	0.48
1:O:3913:ILE:HB	1:O:3984:MET:SD	2.53	0.48
1:O:3918:LEU:HB3	1:O:3920:ILE:HG12	1.94	0.48
2:L:537:PHE:HE1	7:M:380:THR:HG22	1.77	0.48
2:L:673:HIS:HA	2:L:677:ILE:HD11	1.94	0.48
1:o:1023:SER:HA	1:o:1026:ARG:NE	2.28	0.48
1:o:1645:VAL:HA	1:o:1648:LEU:HD12	1.95	0.48
1:o:3141:PHE:O	1:o:3145:ILE:HG12	2.13	0.48
7:M:49:PHE:CE2	7:M:137:HIS:HB3	2.46	0.48
1:O:1634:ALA:C	1:O:1636:ASP:H	2.22	0.48
1:O:2122:LEU:H	1:O:2126:MET:HG2	1.78	0.48
1:O:2303:LEU:HB3	1:O:2323:LEU:HD11	1.95	0.48
1:O:2969:ALA:HB1	1:O:3002:TYR:HE1	1.78	0.48
1:o:2586:PHE:HD1	1:o:2778:GLY:HA3	1.74	0.48
1:o:3420:CYS:HB2	1:o:3446:VAL:HG11	1.93	0.48
1:o:3546:SER:O	1:o:3549:HIS:CE1	2.67	0.48
1:o:3623:PRO:O	1:o:3685:PRO:HG3	2.13	0.48
1:o:4002:MET:HE1	1:o:4044:ILE:HA	1.94	0.48
2:N:352:GLN:HB2	2:N:355:PHE:CE1	2.48	0.48
7:K:58:THR:HG22	7:K:61:ASP:HB2	1.95	0.48
7:K:106:GLN:NE2	7:K:115:ARG:HB3	2.28	0.48
9:J:79:DG:H2"	9:J:80:DC:C5	2.48	0.48
1:O:1747:LEU:O	1:O:1750:LEU:HG	2.12	0.48
1:O:1801:VAL:HA	1:O:1804:MET:HG3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:762:TYR:CD2	1:o:765:LEU:HG	2.45	0.48
1:o:2231:PHE:HZ	1:o:2272:VAL:HG12	1.77	0.48
1:o:2495:SER:HA	1:o:2498:ILE:HD12	1.96	0.48
4:h:36:ILE:HD11	8:i:126:DC:P	2.54	0.48
7:K:46:LYS:HA	7:K:49:PHE:HD2	1.78	0.48
7:K:47:ALA:HA	7:K:50:GLU:CD	2.39	0.48
2:l:246:HIS:CE1	2:l:265:LYS:H	2.30	0.48
1:O:151:GLU:HG2	1:O:152:LEU:HD12	1.95	0.48
1:O:172:GLU:HG3	1:O:223:CYS:SG	2.53	0.48
1:O:935:HIS:HE1	1:O:2773:ARG:NH1	2.12	0.48
1:O:1086:TYR:CZ	1:O:1133:HIS:HB3	2.48	0.48
1:O:1179:PRO:HG2	1:O:1180:GLN:HE21	1.78	0.48
1:O:1583:MET:HE1	1:O:1626:TRP:HA	1.95	0.48
1:O:3301:LEU:HD23	1:O:3304:VAL:HA	1.95	0.48
2:L:163:PHE:CD2	2:L:208:VAL:HG13	2.41	0.48
3:C:42:ARG:HG2	9:j:115:DG:H4'	1.94	0.48
5:E:84:PHE:O	9:J:53:DT:H5''	2.14	0.48
3:c:43:VAL:HG13	4:d:86:ILE:HB	1.95	0.48
1:o:527:TYR:HA	1:o:530:LEU:HD12	1.94	0.48
1:o:541:MET:HA	1:o:544:ILE:HG22	1.96	0.48
1:o:849:GLU:O	1:o:853:ILE:HG23	2.14	0.48
1:o:881:LYS:HB2	1:o:883:TYR:CE1	2.49	0.48
1:o:994:TRP:CE2	1:o:2581:LEU:HD21	2.49	0.48
1:o:1560:TYR:OH	1:o:1599:GLY:HA3	2.13	0.48
1:o:3812:LEU:HB2	1:o:3925:LEU:HD11	1.94	0.48
1:o:4008:GLU:HG3	1:o:4011:PHE:HB3	1.95	0.48
7:m:117:LEU:O	7:m:121:GLN:HG2	2.14	0.48
1:O:210:SER:OG	1:O:215:PRO:HD3	2.13	0.48
1:O:863:GLY:HA2	1:O:3133:GLN:HE22	1.78	0.48
1:O:4091:ALA:HB3	1:O:4110:GLN:HB3	1.96	0.48
5:A:126:LEU:HD13	5:e:113:HIS:HB2	1.95	0.48
3:G:95:LYS:HE3	4:H:100:PRO:HG3	1.94	0.48
1:o:1713:VAL:O	1:o:1716:GLN:HG2	2.14	0.48
1:o:3029:LYS:HD2	1:o:3067:LYS:HE2	1.96	0.48
1:o:3287:ARG:HG3	1:o:3302:LYS:HZ1	1.79	0.48
7:K:348:MET:HB2	7:K:397:LEU:HG	1.95	0.48
7:M:204:HIS:CE1	7:M:235:GLU:HG2	2.49	0.48
8:I:99:DC:H2'	8:I:100:DA:C8	2.46	0.48
2:l:11:VAL:HG22	2:l:55:ALA:HB3	1.94	0.48
2:n:256:ASN:HB2	7:m:522:VAL:HG21	1.96	0.48
1:O:359:LEU:O	1:O:363:ILE:HG12	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1847:ALA:O	1:O:1850:VAL:HG12	2.13	0.48
1:O:2218:PHE:O	1:O:2221:LYS:HG2	2.13	0.48
1:O:2371:PHE:CD1	1:O:2373:PRO:HD2	2.48	0.48
1:O:2850:PHE:HB3	1:O:2883:SER:HB3	1.95	0.48
1:O:3048:LYS:HB3	1:O:3061:LEU:HD23	1.94	0.48
2:L:29:SER:O	2:L:33:GLN:HG2	2.13	0.48
5:A:118:THR:HA	6:B:45:ARG:HB2	1.95	0.48
5:a:46:VAL:HG22	5:a:48:LEU:H	1.78	0.48
1:o:197:PHE:O	1:o:201:LEU:HG	2.14	0.48
1:o:2501:LEU:O	1:o:2505:VAL:HG23	2.13	0.48
1:o:3686:TRP:HH2	1:o:3692:VAL:HB	1.78	0.48
2:N:208:VAL:O	2:N:212:MET:HG3	2.14	0.48
2:N:357:MET:HA	7:K:364:PRO:HG3	1.96	0.48
8:I:136:DA:H2''	8:I:137:DT:O5'	2.14	0.48
9:J:119:DA:H2''	9:J:120:DA:C8	2.48	0.48
9:j:64:DA:H2''	9:j:65:DA:C8	2.48	0.48
1:O:1023:SER:HA	1:O:1026:ARG:HD2	1.96	0.48
1:O:1489:LYS:HA	1:O:1492:ALA:HB3	1.94	0.48
1:O:2950:LYS:HE3	1:O:2986:PRO:HB3	1.96	0.48
1:O:3179:TRP:CZ3	1:O:3245:SER:HB2	2.48	0.48
2:L:324:SER:OG	2:L:327:ASP:HB2	2.12	0.48
3:C:17:ARG:HH22	3:C:48:PRO:HG2	1.79	0.48
1:o:446:PHE:HE2	1:o:526:ASP:HB2	1.79	0.48
1:o:849:GLU:HA	1:o:852:ARG:HH21	1.79	0.48
1:o:2429:ASP:HB2	1:o:2433:LYS:NZ	2.27	0.48
1:o:2969:ALA:HB1	1:o:3002:TYR:CE1	2.48	0.48
1:o:3013:TYR:HA	1:o:3016:THR:HG23	1.95	0.48
4:h:114:ALA:HA	4:h:117:LYS:HG2	1.95	0.48
9:J:38:DT:H2''	9:J:39:DA:C5	2.48	0.48
7:m:106:GLN:HG2	7:m:115:ARG:HD2	1.94	0.48
1:O:1101:PHE:HZ	1:O:1145:LEU:HD13	1.78	0.48
1:O:1666:GLY:C	1:O:1669:PRO:HD2	2.39	0.48
1:O:2257:PHE:HA	1:O:2260:PHE:CD2	2.49	0.48
1:O:3035:PHE:HA	1:O:3038:GLU:HB2	1.95	0.48
1:o:983:LEU:O	1:o:987:LEU:HG	2.14	0.48
1:o:1151:ARG:HB2	1:o:1163:LEU:HD12	1.96	0.48
1:o:2300:PHE:HA	1:o:2303:LEU:HD12	1.95	0.48
1:o:2931:ARG:HE	1:o:2939:LEU:HD11	1.79	0.48
1:o:3493:TRP:HE1	1:o:3520:GLU:HB3	1.78	0.48
2:N:523:THR:O	2:N:527:GLN:HG3	2.13	0.48
2:N:602:VAL:HA	2:N:609:PHE:CD2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:i:130:DT:C2	8:i:131:DG:C6	3.02	0.48
1:O:565:TYR:HA	1:O:568:PHE:CD2	2.49	0.48
1:O:1257:LEU:O	1:O:1261:LEU:HG	2.14	0.48
1:O:1836:LEU:HD11	1:O:1880:MET:HA	1.95	0.48
1:O:2184:TYR:O	1:O:2188:GLU:HG2	2.14	0.48
1:O:3743:HIS:HB3	1:O:3746:ARG:HH21	1.79	0.48
2:L:51:LYS:HG2	2:L:125:LYS:HE3	1.96	0.48
2:L:496:HIS:CD2	2:L:506:PRO:HD3	2.48	0.48
3:G:25:PHE:HE1	4:H:34:TYR:HD2	1.62	0.48
1:o:1236:LEU:O	1:o:1239:PRO:HD2	2.13	0.48
1:o:1596:VAL:O	1:o:1600:MET:HG2	2.14	0.48
1:o:2825:THR:HG23	1:o:2828:GLU:H	1.79	0.48
1:o:2921:LEU:O	1:o:2925:GLU:HG3	2.14	0.48
2:N:479:THR:HA	2:N:482:ILE:HB	1.96	0.48
4:h:87:THR:O	4:h:91:ILE:HG12	2.13	0.48
7:M:185:ARG:HD2	7:M:186:ALA:N	2.29	0.48
8:i:93:DA:C2	8:i:94:DA:C6	3.02	0.48
8:i:134:DA:H2'	8:i:135:DG:C8	2.48	0.48
2:l:108:LEU:O	2:l:112:ILE:HG13	2.14	0.48
2:n:312:GLN:HB2	7:m:285:PRO:HB2	1.95	0.48
2:n:356:PHE:CG	2:n:422:VAL:HG11	2.49	0.48
1:O:2257:PHE:HE1	1:O:2299:TYR:HA	1.79	0.48
1:O:2511:ILE:HD11	1:O:2550:ILE:HB	1.96	0.48
1:O:3164:TRP:HA	1:O:3168:TYR:CE2	2.49	0.48
1:O:3701:ILE:HG22	1:O:3704:GLN:HE22	1.79	0.48
1:O:3708:ARG:H	1:O:3710:LYS:HG2	1.79	0.48
1:O:3912:CYS:HA	1:O:3915:HIS:CE1	2.49	0.48
1:O:3913:ILE:HD13	1:O:3987:ALA:HB3	1.96	0.48
2:L:7:LYS:HD2	2:L:125:LYS:HB3	1.96	0.48
3:G:30:VAL:HG13	4:H:67:PHE:CE1	2.47	0.48
1:o:270:ALA:O	1:o:274:LEU:HD23	2.13	0.48
1:o:668:LYS:O	1:o:672:ILE:HG12	2.13	0.48
1:o:745:VAL:HG11	1:o:788:TYR:CZ	2.49	0.48
1:o:1776:GLU:O	1:o:1779:GLN:HG3	2.13	0.48
1:o:2840:PHE:O	1:o:2844:LEU:HG	2.14	0.48
1:o:3666:LEU:HB3	1:o:3670:MET:HE1	1.95	0.48
2:N:636:ILE:O	2:N:640:ARG:HG2	2.14	0.48
5:e:121:PRO:HB3	6:f:53:GLU:HG3	1.94	0.48
8:i:39:DC:H2''	8:i:40:DG:C8	2.48	0.48
2:l:115:MET:HE1	2:l:157:CYS:HB2	1.95	0.48
2:n:14:MET:SD	2:n:38:ILE:HD11	2.54	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:750:PRO:HA	1:O:753:GLN:OE1	2.14	0.47
1:O:2833:THR:HG23	1:O:2868:LEU:HD23	1.96	0.47
2:L:237:PHE:HD2	2:L:488:GLN:HB3	1.79	0.47
5:A:83:ARG:HB3	9:j:53:DT:H4'	1.96	0.47
3:G:55:LEU:HD23	3:G:58:LEU:HD21	1.94	0.47
1:o:1073:PHE:O	1:o:1076:LEU:HG	2.14	0.47
1:o:2893:LEU:HD12	1:o:2926:LEU:HG	1.94	0.47
1:o:4044:ILE:HG13	1:o:4045:CYS:N	2.28	0.47
2:N:48:ALA:HA	2:N:241:GLU:OE1	2.14	0.47
7:K:332:GLU:O	7:K:335:GLU:HG2	2.14	0.47
7:K:525:PHE:HA	7:K:528:LEU:HD12	1.95	0.47
7:M:369:TYR:CD1	7:M:370:PRO:HD2	2.49	0.47
9:J:134:DG:H1'	9:J:135:DC:H5'	1.95	0.47
8:i:103:DG:H4'	8:i:104:DG:OP1	2.13	0.47
8:i:138:DA:N1	9:j:16:DA:N1	2.61	0.47
7:k:37:SER:N	7:k:161:MET:HE1	2.29	0.47
1:O:83:GLU:HB2	1:O:126:PRO:HG3	1.95	0.47
1:O:218:PRO:HG2	1:O:220:LEU:HD23	1.95	0.47
1:O:363:ILE:HB	1:O:412:SER:HB2	1.96	0.47
1:O:493:LYS:HG3	1:O:522:PRO:HG2	1.96	0.47
1:O:833:HIS:NE2	1:O:838:LYS:HG2	2.29	0.47
1:O:1240:THR:O	1:O:1249:SER:HB2	2.14	0.47
1:O:1298:LEU:HB3	1:O:1367:HIS:CG	2.49	0.47
1:O:2330:VAL:HG23	1:O:2335:ASN:O	2.14	0.47
3:G:79:ILE:HG22	3:G:81:ARG:H	1.79	0.47
1:o:1646:LEU:O	1:o:1649:LEU:HG	2.14	0.47
1:o:1685:ASP:HB3	1:o:1688:LEU:HG	1.96	0.47
1:o:1759:LEU:HD22	1:o:1797:LEU:HD23	1.95	0.47
1:o:3720:ALA:H	1:o:3742:GLY:HA3	1.79	0.47
2:N:295:TYR:H	2:N:304:GLU:HG2	1.79	0.47
7:k:204:HIS:HB3	7:k:211:PHE:CE2	2.49	0.47
2:n:48:ALA:HA	2:n:241:GLU:OE1	2.13	0.47
2:n:537:PHE:HE1	7:m:380:THR:HG22	1.79	0.47
1:O:2428:ASP:O	1:O:2432:GLN:HG2	2.15	0.47
1:O:4058:VAL:HA	1:O:4082:ARG:HH12	1.78	0.47
1:O:4113:ASP:O	1:O:4117:LEU:HG	2.14	0.47
2:L:389:MET:HE3	2:L:390:VAL:N	2.30	0.47
3:C:31:HIS:CE1	3:C:43:VAL:HB	2.49	0.47
4:D:87:THR:HB	4:D:89:ARG:HG2	1.96	0.47
4:H:83:ARG:HG3	8:I:43:DG:H3'	1.96	0.47
1:o:45:SER:HB3	1:o:88:PHE:HE1	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:167:PRO:HA	1:o:171:LEU:HD12	1.97	0.47
1:o:667:TYR:HA	1:o:670:LEU:HD12	1.96	0.47
1:o:979:VAL:HA	1:o:982:GLN:HG2	1.97	0.47
1:o:984:TYR:CD1	1:o:987:LEU:HD12	2.50	0.47
1:o:2522:ARG:NH2	1:o:2564:GLU:HB2	2.29	0.47
1:o:3263:HIS:HB2	1:o:3276:TRP:CE2	2.49	0.47
1:o:4089:ILE:HA	1:o:4110:GLN:OE1	2.14	0.47
9:J:74:DA:H1'	9:J:75:DC:O4'	2.14	0.47
7:k:90:THR:HG21	7:k:135:MET:HE1	1.94	0.47
7:m:147:LEU:HB3	7:m:193:LEU:HD11	1.96	0.47
1:O:1017:ILE:HG23	1:O:1077:GLY:HA3	1.95	0.47
1:O:2173:ALA:HB2	1:O:2215:LEU:HD21	1.96	0.47
1:O:2300:PHE:HD2	1:O:2341:LEU:HD22	1.80	0.47
1:O:2925:GLU:O	1:O:2929:LEU:HG	2.13	0.47
1:O:2942:ILE:HG22	1:O:3974:MET:SD	2.54	0.47
1:O:3493:TRP:NE1	1:O:3524:ASN:HB3	2.29	0.47
2:L:376:ALA:HB2	7:M:529:VAL:HG11	1.97	0.47
2:L:473:LEU:HB3	7:M:355:LEU:HD11	1.97	0.47
5:a:68:GLN:HA	5:a:71:VAL:HG22	1.96	0.47
1:o:437:HIS:ND1	1:o:2047:THR:HG21	2.29	0.47
1:o:994:TRP:HA	1:o:997:ASN:ND2	2.29	0.47
1:o:1817:GLN:HG2	1:o:1818:SER:N	2.28	0.47
1:o:3236:PHE:HB3	1:o:3240:MET:HE1	1.96	0.47
1:o:3483:MET:HE1	1:o:3511:ALA:HB1	1.96	0.47
1:o:3820:MET:SD	1:o:3824:GLU:HB3	2.55	0.47
2:N:125:LYS:HB2	2:N:127:PHE:CE2	2.50	0.47
2:N:677:ILE:HA	2:N:680:GLN:HG2	1.96	0.47
6:f:69:ALA:O	6:f:73:THR:HG23	2.14	0.47
7:K:494:ALA:C	7:K:495:LEU:HD23	2.39	0.47
8:I:8:DA:H2'	8:I:9:DG:C6	2.50	0.47
2:l:537:PHE:HE1	7:k:380:THR:HG22	1.78	0.47
1:O:529:ASP:O	1:O:532:ARG:HG2	2.14	0.47
1:O:771:ASN:O	1:O:774:GLU:HB3	2.14	0.47
1:O:1104:LEU:O	1:O:1108:MET:HG2	2.13	0.47
1:O:1538:LEU:HB3	1:O:1553:PHE:CE1	2.50	0.47
1:O:2375:ALA:H	1:O:2404:ARG:NH2	2.12	0.47
1:O:2533:SER:HA	1:O:2538:ARG:HE	1.80	0.47
1:O:2855:VAL:HA	1:O:2858:ILE:HD12	1.96	0.47
1:O:3183:ILE:HG23	1:O:3238:MET:CE	2.42	0.47
1:O:3259:LEU:HD21	1:O:3283:LEU:HD23	1.96	0.47
1:O:3813:LYS:HZ1	1:O:3925:LEU:N	2.11	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:3831:ASP:HB3	1:O:3832:PRO:HD3	1.95	0.47
2:L:228:SER:HB3	2:L:232:ARG:HD3	1.97	0.47
3:C:50:TYR:CD2	4:D:88:SER:HB3	2.49	0.47
5:E:129:ARG:HB3	5:a:109:LEU:HD13	1.95	0.47
1:o:535:LEU:HB3	1:o:637:LYS:NZ	2.30	0.47
1:o:1339:VAL:O	1:o:1342:MET:HG3	2.14	0.47
1:o:1568:ASN:HA	1:o:1600:MET:HE1	1.96	0.47
1:o:2577:PHE:HD2	1:o:2783:ILE:HD12	1.79	0.47
1:o:2967:GLU:O	1:o:2971:GLN:HG2	2.14	0.47
1:o:3763:ARG:O	1:o:3767:LEU:HG	2.14	0.47
1:o:3882:LEU:HD23	1:o:3882:LEU:H	1.80	0.47
2:N:39:THR:HA	2:N:94:ILE:HD13	1.97	0.47
2:N:461:MET:HA	2:N:522:VAL:HG13	1.96	0.47
6:f:58:LEU:HD13	6:f:61:PHE:CE2	2.50	0.47
7:K:179:ASP:OD2	7:K:182:LYS:HG3	2.14	0.47
8:i:129:DG:C2	8:i:130:DT:C2	3.02	0.47
8:i:135:DG:H2''	8:i:136:DA:H5'	1.97	0.47
9:j:59:DG:H2''	9:j:60:DT:H2'	1.96	0.47
2:l:44:ARG:NH1	2:l:48:ALA:HB2	2.29	0.47
1:O:382:ASP:HA	1:O:385:TYR:HB3	1.97	0.47
1:O:616:LYS:NZ	1:O:2034:SER:HA	2.30	0.47
1:O:651:TYR:CE2	1:O:655:LEU:HD11	2.50	0.47
1:O:892:LEU:HD21	1:O:907:LEU:HD23	1.95	0.47
1:O:1071:ASN:HD21	1:O:1073:PHE:HD2	1.63	0.47
1:O:1191:PHE:HZ	1:O:1208:LEU:HD11	1.80	0.47
1:O:1795:VAL:HG21	1:O:1838:GLU:HG3	1.97	0.47
1:O:1867:ILE:O	1:O:1871:MET:HG2	2.14	0.47
1:O:1935:GLU:O	1:O:1939:LEU:HG	2.14	0.47
1:O:2220:MET:HE1	1:O:2255:LEU:HB2	1.96	0.47
1:O:2372:PRO:CG	1:O:2373:PRO:HD3	2.45	0.47
1:O:3735:PRO:C	1:O:3736:LYS:HD3	2.40	0.47
1:O:3812:LEU:HB2	1:O:3925:LEU:HB3	1.96	0.47
1:O:3813:LYS:HG2	1:O:3925:LEU:HD12	1.97	0.47
1:O:3964:THR:HG22	1:O:3967:PHE:CD2	2.49	0.47
2:L:497:ARG:HH21	2:L:501:PRO:C	2.23	0.47
2:L:632:PHE:HB2	2:L:673:HIS:HE1	1.80	0.47
4:H:87:THR:O	4:H:91:ILE:HD12	2.14	0.47
1:o:92:PHE:O	1:o:96:MET:HB3	2.15	0.47
1:o:108:LYS:HE3	1:o:148:LYS:HE3	1.96	0.47
1:o:1068:LEU:HD21	1:o:1106:ILE:HG23	1.96	0.47
1:o:1529:VAL:HA	1:o:1532:LEU:HD12	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:1960:LYS:O	1:o:1960:LYS:HD3	2.15	0.47
1:o:2474:TYR:HA	1:o:2477:LEU:HD12	1.95	0.47
1:o:2494:ASP:HA	1:o:2497:GLU:CD	2.40	0.47
1:o:3568:ILE:HA	1:o:3571:PHE:CZ	2.49	0.47
2:N:667:GLU:HA	2:N:675:TRP:CD1	2.50	0.47
2:N:686:ILE:HD11	2:N:703:LYS:HD3	1.96	0.47
8:i:10:DA:H2"	8:i:11:DA:C8	2.49	0.47
8:i:31:DC:H2"	8:i:32:DA:N7	2.28	0.47
2:l:208:VAL:O	2:l:212:MET:HG2	2.13	0.47
1:O:151:GLU:HG2	1:O:152:LEU:N	2.30	0.47
1:O:221:ALA:O	1:O:224:LEU:HG	2.15	0.47
1:O:1111:LEU:HD12	1:O:1114:ALA:HB3	1.97	0.47
1:O:1223:THR:HG21	1:O:1267:TYR:CE1	2.50	0.47
1:O:1646:LEU:HD11	1:O:1692:ALA:HA	1.96	0.47
1:O:1790:SER:O	1:O:1794:GLN:HG3	2.14	0.47
1:O:2341:LEU:HG	1:O:2344:LEU:HD12	1.96	0.47
1:O:2420:PHE:O	1:O:2424:MET:HG2	2.12	0.47
1:O:3736:LYS:HE2	1:O:3752:VAL:HG13	1.97	0.47
2:L:251:LEU:HB3	2:L:261:ILE:HD11	1.97	0.47
3:G:84:GLN:HB2	3:G:102:ILE:HD11	1.97	0.47
4:H:77:LEU:HD13	4:H:93:THR:HG23	1.96	0.47
5:E:131:ARG:HG3	5:a:130:ILE:HG22	1.97	0.47
3:c:51:LEU:HA	3:c:54:VAL:HG22	1.97	0.47
5:a:63:ARG:HG2	5:a:66:PRO:HD2	1.96	0.47
5:a:65:LEU:HD12	5:a:68:GLN:HE21	1.79	0.47
1:o:307:GLU:HG2	1:o:308:LEU:N	2.30	0.47
1:o:718:MET:HA	1:o:721:TYR:CE2	2.49	0.47
1:o:1231:GLN:HA	1:o:1292:LYS:HZ3	1.79	0.47
1:o:1426:GLN:HA	1:o:1429:GLU:CD	2.40	0.47
1:o:1589:ASN:HB3	1:o:1592:MET:SD	2.55	0.47
1:o:1816:ARG:HA	1:o:1819:PHE:CD2	2.50	0.47
1:o:1831:CYS:HB2	1:o:1836:LEU:HD21	1.95	0.47
1:o:2773:ARG:HE	1:o:2789:SER:HB2	1.79	0.47
1:o:2864:GLN:HG2	1:o:2865:HIS:CD2	2.50	0.47
1:o:2891:ARG:NE	1:o:3894:PRO:HB3	2.29	0.47
1:o:3170:ASP:HB3	1:o:3179:TRP:CZ2	2.50	0.47
1:o:3321:LEU:O	1:o:3324:ARG:HG2	2.14	0.47
1:o:3369:ASP:HB3	1:o:3372:LYS:HD3	1.97	0.47
1:o:3753:LYS:O	1:o:3758:LEU:HD11	2.14	0.47
2:N:139:SER:HB3	2:N:201:GLN:HE21	1.80	0.47
2:N:395:TYR:OH	2:N:397:TYR:HB3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:473:LEU:HD13	7:K:352:PRO:HG2	1.97	0.47
7:K:167:MET:HE1	7:K:203:MET:HB3	1.96	0.47
7:M:339:ARG:HH22	7:M:342:ASP:HA	1.80	0.47
8:I:113:DC:H2''	8:I:114:DC:C5	2.50	0.47
9:J:126:DC:H2''	9:J:127:DG:H5'	1.96	0.47
8:i:69:DC:H1'	8:i:70:DG:C4	2.49	0.47
8:i:131:DG:N1	9:j:23:DA:C6	2.81	0.47
9:j:135:DC:H2''	9:j:136:DA:O5'	2.14	0.47
2:l:16:VAL:HG11	2:l:58:LEU:HD12	1.96	0.47
2:l:135:PHE:CD1	2:l:164:PHE:HB2	2.48	0.47
7:k:352:PRO:HA	7:k:394:VAL:HA	1.97	0.47
7:m:234:GLU:HG3	7:m:235:GLU:H	1.80	0.47
7:m:339:ARG:HB2	7:m:405:ASN:HA	1.96	0.47
1:O:168:ASP:N	1:O:171:LEU:HB2	2.29	0.47
1:O:2788:SER:HA	1:O:2791:ILE:HG12	1.96	0.47
1:O:3695:LEU:HD23	1:O:3695:LEU:H	1.79	0.47
3:C:92:GLU:OE2	4:D:100:PRO:HD2	2.15	0.47
3:G:97:LEU:HB3	3:G:100:VAL:HB	1.96	0.47
6:b:90:LEU:HB3	6:b:96:THR:HA	1.96	0.47
1:o:24:ARG:HA	1:o:70:ARG:HH21	1.80	0.47
1:o:977:ASP:HB3	1:o:980:THR:OG1	2.15	0.47
1:o:2362:VAL:HG12	1:o:2366:LYS:HZ2	1.79	0.47
1:o:2467:THR:HA	1:o:2470:ARG:HG3	1.97	0.47
1:o:2959:ALA:HB3	1:o:2968:ALA:HB2	1.96	0.47
1:o:3311:ASN:HB3	1:o:3315:TYR:CE1	2.49	0.47
2:N:295:TYR:HD2	2:N:304:GLU:HB2	1.80	0.47
7:K:357:LYS:HE2	7:K:359:HIS:NE2	2.30	0.47
9:J:112:DT:H2''	9:J:113:DA:O4'	2.14	0.47
9:j:46:DA:H2''	9:j:47:DA:C8	2.50	0.47
2:l:12:LEU:HD23	2:l:133:GLU:HB2	1.97	0.47
2:l:333:TYR:N	7:k:485:GLN:HG2	2.30	0.47
2:l:464:ALA:HB1	2:l:473:LEU:HB3	1.97	0.47
7:k:471:PHE:HB3	7:k:474:ARG:HH12	1.79	0.47
1:O:12:LEU:HB2	1:O:59:PHE:CZ	2.49	0.47
1:O:734:LEU:HD11	1:O:768:VAL:HB	1.97	0.47
1:O:2897:LEU:HD13	1:O:2922:ARG:HD2	1.96	0.47
1:O:3588:TRP:HA	1:O:3609:MET:HE1	1.97	0.47
3:C:29:ARG:O	3:C:32:ARG:HG2	2.14	0.47
1:o:296:VAL:HA	1:o:299:LYS:HG2	1.97	0.47
1:o:709:LYS:O	1:o:713:GLU:OE1	2.33	0.47
1:o:1774:MET:HG2	1:o:1774:MET:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:3552:LYS:HA	1:o:3555:VAL:HG22	1.97	0.47
7:M:89:GLY:N	7:M:141:TYR:HB3	2.30	0.47
8:i:22:DG:H2''	8:i:23:DA:N7	2.30	0.47
2:l:457:LEU:O	2:l:461:MET:HG2	2.15	0.47
1:O:1354:GLU:HA	1:O:1357:LYS:HB3	1.97	0.47
1:O:1961:PHE:HD1	2:N:729:LEU:HD11	1.79	0.47
1:O:2536:LEU:HD13	1:O:2820:MET:SD	2.55	0.47
1:O:3274:VAL:O	1:O:3278:GLN:OE1	2.33	0.47
4:D:54:LYS:O	4:D:58:ILE:HG13	2.15	0.47
1:o:1096:VAL:O	1:o:1100:VAL:HG13	2.15	0.47
1:o:1191:PHE:O	1:o:1195:VAL:HG23	2.15	0.47
1:o:1736:PHE:O	1:o:1740:VAL:HG13	2.15	0.47
1:o:2539:LEU:O	1:o:2542:LEU:HG	2.15	0.47
2:N:134:ILE:HD13	2:N:163:PHE:CE1	2.50	0.47
2:N:364:VAL:HB	2:N:419:LEU:HB2	1.97	0.47
3:g:95:LYS:HZ3	4:h:100:PRO:HG2	1.80	0.47
7:K:369:TYR:CD1	7:K:370:PRO:HD2	2.50	0.47
8:I:59:DC:H2''	8:I:60:DT:C5	2.50	0.47
8:I:83:DC:H2''	8:I:84:DC:C5	2.49	0.47
2:l:170:GLY:HA2	2:l:194:LEU:N	2.30	0.47
2:n:7:LYS:HE3	2:n:126:LYS:H	1.80	0.47
7:m:95:ASN:ND2	7:m:102:ILE:HB	2.29	0.47
1:O:1064:TYR:CD1	1:O:1106:ILE:HG21	2.50	0.46
1:O:1475:LEU:HD13	1:O:1477:HIS:CE1	2.50	0.46
1:O:3137:GLU:O	1:O:3140:GLU:HG3	2.14	0.46
1:O:3767:LEU:HD13	1:O:3918:LEU:HD11	1.97	0.46
1:o:192:ASN:O	1:o:196:LEU:HG	2.15	0.46
1:o:655:LEU:O	1:o:659:ARG:HG2	2.15	0.46
1:o:933:LEU:HB2	1:o:2793:PRO:HB2	1.96	0.46
1:o:1149:LYS:NZ	1:o:1151:ARG:HG2	2.30	0.46
1:o:1228:GLY:HA2	1:o:1259:LEU:HD13	1.97	0.46
1:o:2503:LYS:O	1:o:2507:ILE:HG13	2.15	0.46
1:o:3924:HIS:H	1:o:3927:ASN:ND2	2.14	0.46
2:N:10:VAL:HA	2:N:131:HIS:O	2.15	0.46
8:i:21:DC:H6	8:i:21:DC:OP1	1.98	0.46
8:i:43:DG:C8	8:i:43:DG:H5'	2.50	0.46
9:j:108:DT:H2''	9:j:109:DG:H8	1.80	0.46
2:l:20:MET:HE1	2:l:227:PHE:CZ	2.49	0.46
2:n:45:GLN:HB3	2:n:86:PRO:HG3	1.97	0.46
1:O:1361:LYS:HA	1:O:1366:THR:OG1	2.15	0.46
1:O:3741:ARG:HB3	1:O:3745:GLU:HA	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:248:PRO:HB3	2:L:262:ALA:HB1	1.98	0.46
5:E:70:LEU:O	5:E:74:ILE:HG13	2.15	0.46
1:o:1832:SER:O	1:o:1836:LEU:HG	2.16	0.46
1:O:2311:ARG:HG2	1:O:2312:TYR:CD1	2.50	0.46
1:O:2412:TYR:O	1:O:2415:LEU:HG	2.15	0.46
1:O:2534:ASN:HB3	1:O:2537:ASP:CG	2.40	0.46
1:O:2943:PHE:CD1	1:O:2947:ILE:HB	2.51	0.46
1:O:3962:ARG:HA	1:O:4124:TRP:HZ2	1.81	0.46
1:O:3964:THR:HG23	1:O:3967:PHE:H	1.80	0.46
2:L:86:PRO:HA	2:L:90:LEU:HD23	1.97	0.46
4:D:69:ARG:O	4:D:73:GLU:HG2	2.15	0.46
6:B:86:VAL:O	6:B:90:LEU:HG	2.15	0.46
6:F:35:ARG:HD3	8:I:85:DC:OP2	2.15	0.46
1:o:797:ASP:O	1:o:800:LEU:HB2	2.15	0.46
1:o:3052:LEU:HD21	1:o:3058:ASP:OD1	2.16	0.46
7:K:117:LEU:O	7:K:121:GLN:HG2	2.15	0.46
9:J:69:DG:H2''	9:J:70:DG:N7	2.31	0.46
2:l:390:VAL:HG12	2:l:409:PHE:HA	1.97	0.46
2:n:416:TYR:HB3	7:m:448:PHE:HB2	1.96	0.46
1:O:669:LEU:O	1:O:672:ILE:HG22	2.16	0.46
1:O:990:GLN:HB3	1:O:2781:PRO:HG3	1.98	0.46
1:O:1233:SER:HB2	1:O:1256:TRP:CD1	2.50	0.46
1:O:1623:LEU:O	1:O:1626:TRP:HB2	2.15	0.46
1:O:2551:GLU:HB2	1:O:2854:PHE:CD2	2.49	0.46
1:O:3354:ASP:HB2	1:O:3357:ARG:HG3	1.98	0.46
1:O:3946:PHE:CZ	1:O:4047:ALA:HB2	2.51	0.46
1:O:3962:ARG:HG3	1:O:3967:PHE:HE2	1.80	0.46
2:L:482:ILE:HG21	7:M:410:PHE:HE2	1.80	0.46
3:G:96:LEU:HD21	4:H:99:LEU:HA	1.97	0.46
5:E:39:HIS:CG	8:I:86:DG:H21	2.34	0.46
4:d:34:TYR:HB3	4:d:37:TYR:HB2	1.97	0.46
1:o:1627:LYS:HD3	1:o:1670:GLU:HB3	1.96	0.46
1:o:2438:ILE:O	1:o:2442:MET:HB2	2.15	0.46
2:N:606:LYS:HD2	2:N:649:PHE:CG	2.50	0.46
5:e:116:ARG:HG2	8:i:74:DG:H3'	1.98	0.46
8:i:123:DA:H2''	8:i:124:DG:C8	2.50	0.46
9:j:62:DA:H2''	9:j:63:DA:C8	2.51	0.46
9:j:85:DG:C5	9:j:86:DT:C4	3.04	0.46
7:m:494:ALA:C	7:m:495:LEU:HD23	2.40	0.46
1:O:960:GLN:O	1:O:964:ARG:HG2	2.15	0.46
1:O:1013:ILE:O	1:O:1017:ILE:HG12	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1261:LEU:HD11	1:O:1337:VAL:HG12	1.97	0.46
1:O:2328:ARG:HB2	1:O:2370:SER:O	2.15	0.46
1:O:2424:MET:HE1	1:O:2435:CYS:CB	2.45	0.46
1:O:2891:ARG:O	1:O:2894:GLU:HG2	2.15	0.46
1:O:3275:SER:HA	1:O:3278:GLN:OE1	2.15	0.46
1:O:3574:ALA:HA	1:O:3685:PRO:HD2	1.97	0.46
1:O:3962:ARG:HD3	1:O:4124:TRP:CZ2	2.50	0.46
2:L:512:ILE:HA	2:L:515:MET:CG	2.45	0.46
4:D:106:HIS:O	4:D:110:GLU:HG2	2.16	0.46
1:o:924:ARG:HE	1:o:2766:ASP:HB3	1.81	0.46
1:o:1184:ARG:O	1:o:1188:ILE:HG23	2.16	0.46
1:o:1631:SER:C	1:o:1633:TRP:H	2.24	0.46
1:o:3639:GLU:HA	1:o:3642:LYS:HE2	1.97	0.46
1:o:3758:LEU:HD12	1:o:3801:GLY:HA3	1.98	0.46
1:o:3820:MET:HE1	1:o:3825:LYS:HA	1.97	0.46
2:N:40:MET:O	2:N:43:GLN:HG3	2.16	0.46
2:N:81:ARG:HD3	2:N:90:LEU:HD22	1.98	0.46
2:N:655:PHE:HA	2:N:658:PHE:HB2	1.96	0.46
7:K:255:ALA:HA	7:K:274:TYR:HE1	1.80	0.46
7:M:127:GLY:HA2	7:M:130:ARG:HG2	1.97	0.46
9:J:139:DG:H2''	9:J:140:DG:OP2	2.16	0.46
2:l:7:LYS:HD3	2:l:51:LYS:HB3	1.98	0.46
7:k:142:SER:O	7:k:146:VAL:HG23	2.15	0.46
1:O:738:HIS:HA	1:O:741:ILE:HD12	1.98	0.46
1:O:913:ARG:HE	1:O:917:LEU:HG	1.81	0.46
1:O:1297:PHE:O	1:O:1301:ILE:HG12	2.15	0.46
1:O:2323:LEU:O	1:O:2327:LEU:HG	2.16	0.46
1:O:3226:ASP:O	1:O:3230:LEU:HG	2.16	0.46
1:O:3448:GLU:HG3	1:O:3452:LYS:NZ	2.30	0.46
1:O:3462:ARG:NH2	1:O:3497:SER:H	2.13	0.46
2:L:663:GLN:NE2	2:L:667:GLU:HB3	2.31	0.46
6:F:63:GLU:HA	6:F:66:ILE:HG12	1.97	0.46
3:c:31:HIS:HD2	3:c:34:LEU:HD11	1.81	0.46
3:c:33:LEU:HA	3:c:36:LYS:HZ2	1.81	0.46
1:o:164:LYS:NZ	7:K:300:THR:H	2.14	0.46
1:o:387:GLU:O	1:o:390:GLN:HG3	2.15	0.46
1:o:712:LYS:O	1:o:716:VAL:HG13	2.15	0.46
1:o:1513:GLY:HA2	1:o:1516:GLU:OE2	2.16	0.46
1:o:2215:LEU:HA	1:o:2218:PHE:CD2	2.51	0.46
1:o:3357:ARG:HH21	1:o:3361:GLU:HB3	1.81	0.46
7:K:94:LYS:HB2	7:K:103:TYR:CE2	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:K:329:LEU:HG	7:K:330:GLU:H	1.81	0.46
2:l:13:CYS:HB2	2:l:134:ILE:HG13	1.96	0.46
2:l:416:TYR:HB3	7:k:448:PHE:HB2	1.97	0.46
1:O:1256:TRP:O	1:O:1259:LEU:HG	2.15	0.46
1:O:1596:VAL:HG22	1:O:1600:MET:HE1	1.98	0.46
1:O:1597:LEU:O	1:O:1601:LEU:HG	2.15	0.46
1:O:1719:VAL:HG21	2:L:630:PRO:HB2	1.97	0.46
1:O:1912:THR:O	1:O:1916:ILE:HG23	2.16	0.46
1:O:2384:PHE:O	7:M:155:SER:HB2	2.16	0.46
1:O:3940:ILE:HG22	1:O:3941:ASP:H	1.80	0.46
2:L:683:ILE:HG22	2:L:684:THR:O	2.16	0.46
4:D:58:ILE:HG12	6:B:99:GLY:HA3	1.98	0.46
6:B:60:VAL:O	6:B:63:GLU:HG3	2.15	0.46
6:F:32:PRO:HG2	9:J:64:DA:H2'	1.97	0.46
1:o:145:ASP:HA	1:o:147:PHE:CE2	2.51	0.46
1:o:247:GLU:OE2	1:o:285:CYS:HB2	2.15	0.46
1:o:581:LEU:HD11	1:o:660:LEU:HB2	1.98	0.46
1:o:898:PHE:HB3	1:o:900:GLU:H	1.80	0.46
1:o:2298:GLU:HB2	1:o:2301:GLN:HB3	1.97	0.46
1:o:2454:LEU:O	1:o:2457:PRO:HD2	2.15	0.46
1:o:3138:ILE:HD13	1:o:3189:PHE:HZ	1.80	0.46
1:o:3166:ASN:ND2	1:o:3186:ARG:HG3	2.31	0.46
1:o:4006:VAL:O	1:o:4006:VAL:HG12	2.16	0.46
7:K:352:PRO:HD2	7:K:355:LEU:HD12	1.96	0.46
7:K:471:PHE:HE1	7:K:517:ARG:HH22	1.62	0.46
8:I:96:DC:H2''	8:I:97:DG:C8	2.50	0.46
8:I:128:DC:H2''	8:I:129:DG:C8	2.51	0.46
2:l:34:ALA:HB1	2:l:135:PHE:HB3	1.97	0.46
2:n:10:VAL:HA	2:n:131:HIS:O	2.14	0.46
2:n:209:LYS:HA	2:n:212:MET:HG2	1.98	0.46
7:m:202:LEU:HD23	7:m:202:LEU:H	1.80	0.46
1:O:39:GLY:HA3	1:O:829:VAL:HG23	1.97	0.46
1:O:575:ILE:HG12	1:O:626:LEU:HD13	1.97	0.46
1:O:935:HIS:HA	1:O:938:VAL:HG12	1.98	0.46
1:O:1635:LYS:H	1:O:1642:LYS:NZ	2.13	0.46
1:O:2279:ILE:HD12	1:O:2282:ALA:HB3	1.96	0.46
1:O:3625:LEU:HD12	1:O:3682:GLU:HA	1.97	0.46
2:L:687:THR:HG22	2:L:688:LYS:N	2.30	0.46
3:C:57:TYR:HE2	4:D:103:LEU:HB3	1.81	0.46
1:o:1526:GLU:HG2	1:o:1527:ARG:N	2.30	0.46
1:o:1639:LEU:HA	1:o:1642:LYS:HD2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:4008:GLU:CG	1:o:4011:PHE:HB3	2.46	0.46
2:N:605:LYS:HB2	2:N:609:PHE:HZ	1.80	0.46
7:K:462:MET:HE3	7:K:525:PHE:CD1	2.51	0.46
7:M:93:ASP:HB3	7:M:100:LYS:HA	1.97	0.46
8:i:101:DA:H2''	8:i:102:DG:H8	1.76	0.46
9:j:120:DA:H1'	9:j:121:DT:H5'	1.97	0.46
7:k:312:LEU:H	7:k:315:ASP:HB2	1.79	0.46
2:n:345:PHE:HB2	7:m:470:ARG:HA	1.96	0.46
2:n:486:ARG:HH11	7:m:407:PRO:HG2	1.81	0.46
1:O:935:HIS:CE1	1:O:2773:ARG:NH1	2.84	0.46
1:O:1614:GLN:O	1:O:1618:LEU:HG	2.16	0.46
1:O:2182:ILE:HG13	1:O:2183:HIS:N	2.31	0.46
1:O:2918:PRO:HA	1:O:2921:LEU:HB2	1.96	0.46
1:O:2925:GLU:HA	1:O:2928:LYS:HE2	1.98	0.46
3:C:114:VAL:HG21	6:B:44:LYS:HD3	1.98	0.46
5:E:113:HIS:HB2	5:a:126:LEU:HD23	1.98	0.46
1:o:1013:ILE:O	1:o:1017:ILE:HB	2.16	0.46
1:o:1779:GLN:O	1:o:1783:ARG:HG2	2.16	0.46
1:o:3350:GLU:HB3	1:o:3360:LEU:HD12	1.98	0.46
2:N:448:GLU:HA	2:N:451:LEU:HD12	1.98	0.46
7:K:213:ILE:HD13	7:K:235:GLU:HB3	1.96	0.46
7:M:351:LYS:HD2	7:M:356:LEU:HD21	1.97	0.46
8:I:119:DC:H5	9:J:34:DA:H2	1.63	0.46
8:i:21:DC:H2''	8:i:22:DG:C8	2.51	0.46
2:l:265:LYS:HB2	7:k:444:ARG:HH11	1.80	0.46
2:n:468:GLU:O	2:n:469:LYS:HG2	2.16	0.46
7:m:167:MET:HE3	7:m:169:PHE:HE2	1.80	0.46
7:m:303:PHE:HB2	7:m:310:LEU:HA	1.98	0.46
1:O:745:VAL:O	1:O:749:VAL:HG23	2.16	0.46
1:O:2101:VAL:HG12	1:O:2102:LYS:HE2	1.98	0.46
1:O:2589:TYR:N	1:O:2776:ARG:HA	2.27	0.46
1:O:3259:LEU:HD11	1:O:3283:LEU:HD23	1.98	0.46
1:O:3691:LYS:HD3	1:O:3722:PHE:HE2	1.81	0.46
1:O:3856:MET:HE3	1:O:3856:MET:O	2.16	0.46
5:a:86:SER:OG	8:I:53:DG:H3'	2.15	0.46
1:o:1865:THR:O	1:o:1869:LYS:HG2	2.16	0.46
1:o:3410:ILE:O	1:o:3414:MET:HG2	2.16	0.46
2:N:596:GLU:HG3	2:N:599:ARG:HH11	1.80	0.46
7:K:207:LYS:HE3	7:K:210:GLY:C	2.41	0.46
7:K:480:ASN:HD22	7:K:483:LEU:HG	1.79	0.46
9:j:137:DC:H2''	9:j:138:DC:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:k:242:LEU:HD23	7:k:242:LEU:H	1.81	0.46
1:O:200:PHE:CE2	1:O:227:LEU:HD22	2.49	0.45
1:O:363:ILE:HD13	1:O:366:TYR:CE2	2.52	0.45
1:O:491:CYS:HB3	1:O:626:LEU:HD21	1.98	0.45
1:O:1374:GLN:HG3	1:O:1382:ILE:HG21	1.96	0.45
1:O:2350:LYS:HD3	1:O:2360:PHE:CZ	2.51	0.45
1:O:2470:ARG:HA	1:O:2473:MET:HE3	1.97	0.45
3:C:88:ARG:HA	3:C:94:ASN:HD21	1.80	0.45
5:A:46:VAL:HG21	8:i:86:DG:H3'	1.98	0.45
5:A:48:LEU:O	5:A:52:ARG:HG2	2.16	0.45
5:A:130:ILE:HD11	5:e:109:LEU:HB2	1.96	0.45
1:o:745:VAL:HB	1:o:746:ARG:NH1	2.31	0.45
1:o:2443:MET:SD	1:o:2444:PRO:HD3	2.56	0.45
1:o:3856:MET:HA	1:o:3859:TYR:CD2	2.51	0.45
1:o:3886:ALA:O	1:o:3889:ARG:HG2	2.16	0.45
2:N:90:LEU:O	2:N:94:ILE:HG13	2.16	0.45
2:N:629:THR:OG1	2:N:630:PRO:HD3	2.15	0.45
4:h:93:THR:HA	4:h:96:ARG:HE	1.81	0.45
7:K:264:ASN:HA	7:K:346:MET:HE1	1.98	0.45
7:K:334:THR:O	7:K:337:LEU:HG	2.15	0.45
2:l:43:GLN:NE2	2:l:495:LEU:HD22	2.30	0.45
2:l:461:MET:HE2	7:k:349:GLY:HA2	1.98	0.45
7:m:41:LEU:HD23	7:m:168:LEU:HD13	1.96	0.45
1:O:393:LYS:HA	1:O:396:PHE:HE1	1.80	0.45
1:O:2304:VAL:HG22	1:O:2345:VAL:HG23	1.97	0.45
1:O:2384:PHE:HD1	1:O:2385:LEU:HD22	1.81	0.45
1:O:2581:LEU:HB2	1:O:2783:ILE:HD11	1.98	0.45
1:O:3385:LEU:HB2	1:O:3416:LEU:HD13	1.97	0.45
2:L:363:LYS:HE2	2:L:420:VAL:HG22	1.99	0.45
2:L:426:PHE:O	2:L:428:GLU:HG3	2.16	0.45
3:C:47:ALA:HB1	4:D:91:ILE:HD11	1.98	0.45
1:o:382:ASP:HA	1:o:385:TYR:HB3	1.98	0.45
1:o:697:ASP:HB3	1:o:700:LYS:HG3	1.98	0.45
1:o:770:LEU:HD21	1:o:855:VAL:HG22	1.97	0.45
1:o:891:ARG:HH22	1:o:953:GLN:HG2	1.81	0.45
1:o:1464:LEU:HD23	1:o:1464:LEU:H	1.80	0.45
1:o:1519:PHE:HB3	1:o:1573:LYS:NZ	2.31	0.45
1:o:1737:ASN:HA	1:o:1740:VAL:HG22	1.98	0.45
1:o:1915:LEU:H	1:o:1918:LEU:HD23	1.81	0.45
1:o:2300:PHE:HB2	1:o:2341:LEU:HD12	1.98	0.45
1:o:3580:ASN:H	1:o:3734:ARG:HH22	1.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:3729:MET:HE3	1:o:3737:ARG:HH21	1.80	0.45
7:K:76:ILE:HD11	7:K:487:PHE:CD2	2.51	0.45
7:K:103:TYR:CD2	7:K:135:MET:HE1	2.51	0.45
9:J:90:DT:H2''	9:J:91:DT:H5'	1.97	0.45
7:k:179:ASP:OD2	7:k:182:LYS:HE2	2.16	0.45
7:k:484:GLN:O	7:k:488:ARG:HG2	2.15	0.45
7:m:491:GLU:HB3	7:m:497:LEU:HB3	1.99	0.45
1:O:771:ASN:O	1:O:775:GLU:OE1	2.33	0.45
1:O:919:LEU:HD21	1:O:968:VAL:HB	1.98	0.45
1:O:1651:LYS:O	1:O:1655:ILE:HG12	2.16	0.45
1:O:1778:PHE:CZ	1:O:1823:SER:HB3	2.51	0.45
1:O:2443:MET:HB3	1:O:2479:TRP:CZ3	2.52	0.45
3:C:81:ARG:O	3:C:85:LEU:HG	2.17	0.45
3:C:84:GLN:NE2	3:C:88:ARG:HG3	2.32	0.45
6:B:38:ALA:HB1	6:B:43:VAL:HB	1.98	0.45
4:d:87:THR:O	4:d:91:ILE:HG12	2.15	0.45
1:o:15:LEU:HD22	1:o:40:GLN:HE21	1.81	0.45
1:o:1109:GLU:O	1:o:1113:LEU:HG	2.16	0.45
1:o:1426:GLN:O	1:o:1429:GLU:HG2	2.17	0.45
1:o:1713:VAL:HA	1:o:1716:GLN:CD	2.41	0.45
1:o:1722:PHE:HB3	1:o:1768:ARG:HH12	1.81	0.45
1:o:2037:SER:HA	1:o:2040:MET:SD	2.56	0.45
1:o:2231:PHE:CZ	1:o:2272:VAL:HG12	2.51	0.45
1:o:2788:SER:HA	1:o:2791:ILE:HG12	1.98	0.45
1:o:3805:TRP:CG	1:o:3806:LEU:H	2.34	0.45
1:o:3869:THR:HA	1:o:3872:ARG:NH1	2.32	0.45
1:o:3964:THR:H	1:o:3967:PHE:HD2	1.63	0.45
2:N:404:GLN:HB2	2:N:423:GLN:HE22	1.82	0.45
8:i:18:DT:H1'	8:i:19:DG:OP2	2.16	0.45
2:n:68:LEU:HB3	2:n:74:TYR:CD2	2.51	0.45
7:m:116:ILE:HB	7:m:495:LEU:HD11	1.98	0.45
1:O:208:MET:HE2	1:O:208:MET:HA	1.99	0.45
1:O:1000:LYS:HD2	1:O:1004:GLN:HB3	1.98	0.45
1:O:1448:LEU:HA	1:O:1451:VAL:HG22	1.98	0.45
1:O:3749:PRO:HB2	1:O:3805:TRP:HB2	1.99	0.45
1:O:3969:ASN:HA	1:O:3972:LEU:HB2	1.99	0.45
1:O:4077:TYR:HD1	1:O:4119:ARG:HH12	1.64	0.45
5:E:63:ARG:HD3	8:I:94:DA:H4'	1.98	0.45
1:o:197:PHE:HA	1:o:200:PHE:CD2	2.51	0.45
1:o:374:LYS:HD3	1:o:374:LYS:HA	1.69	0.45
1:o:1044:ILE:HG21	1:o:1049:GLN:HE21	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:1733:THR:HG23	1:o:1736:PHE:H	1.81	0.45
1:o:2151:ILE:HD11	1:o:2189:ILE:HG22	1.98	0.45
1:o:2943:PHE:HA	1:o:2947:ILE:HB	1.98	0.45
1:o:3554:PHE:HA	1:o:3557:ARG:HE	1.80	0.45
2:N:135:PHE:HB3	2:N:227:PHE:HE1	1.81	0.45
7:k:420:LEU:HB3	7:k:424:LYS:HA	1.99	0.45
1:O:253:LEU:HB3	1:O:300:TRP:NE1	2.25	0.45
1:O:431:TYR:O	1:O:435:LEU:HG	2.16	0.45
1:O:1725:GLN:N	1:O:1768:ARG:HH21	2.15	0.45
1:O:2310:VAL:HG13	1:O:2316:TYR:CE1	2.51	0.45
1:O:2507:ILE:HD11	1:O:2545:LEU:HD22	1.98	0.45
1:O:2555:LEU:HD11	1:O:2806:LYS:HA	1.98	0.45
2:L:237:PHE:CD2	2:L:488:GLN:HB3	2.52	0.45
2:L:255:SER:HB2	7:M:511:VAL:HG23	1.97	0.45
4:D:37:TYR:HA	4:D:40:LYS:HD2	1.98	0.45
5:A:62:ILE:HD11	6:B:37:LEU:HD11	1.98	0.45
1:o:1046:PRO:HA	1:o:1049:GLN:HB2	1.97	0.45
1:o:1256:TRP:HA	1:o:1259:LEU:HD12	1.98	0.45
1:o:1651:LYS:O	1:o:1655:ILE:HG12	2.16	0.45
1:o:2260:PHE:HE1	1:o:2302:ALA:HB3	1.82	0.45
1:o:2356:MET:SD	1:o:2359:LYS:HB2	2.56	0.45
1:o:2412:TYR:CZ	1:o:2450:GLU:HB2	2.51	0.45
1:o:3042:PRO:HA	1:o:3082:TYR:HE2	1.81	0.45
1:o:3065:ILE:O	1:o:3069:MET:HG2	2.16	0.45
1:o:3565:GLY:HA2	1:o:3568:ILE:HB	1.99	0.45
2:N:45:GLN:HB3	2:N:86:PRO:HG3	1.98	0.45
2:N:279:VAL:HA	2:N:286:LYS:HD3	1.99	0.45
2:N:652:GLU:HB2	2:N:690:GLU:OE1	2.16	0.45
7:K:487:PHE:O	7:K:491:GLU:OE1	2.34	0.45
8:i:11:DA:H61	9:j:143:DT:H72	1.82	0.45
8:i:96:DC:H2''	8:i:97:DG:C8	2.51	0.45
9:j:60:DT:H4'	9:j:61:DT:H5'	1.99	0.45
1:O:275:PHE:HZ	1:O:319:PHE:HB2	1.82	0.45
1:O:1111:LEU:HB2	1:O:1127:CYS:SG	2.56	0.45
1:O:1713:VAL:O	1:O:1716:GLN:HG2	2.16	0.45
1:O:1724:MET:HE1	2:L:594:PRO:HG3	1.99	0.45
1:O:1956:PHE:HD2	1:O:1961:PHE:CZ	2.34	0.45
1:O:2165:LEU:HD22	1:O:2202:PRO:HD3	1.99	0.45
1:O:3084:GLN:O	1:O:3088:LEU:HG	2.17	0.45
1:O:3324:ARG:HG2	1:O:3388:ALA:HA	1.98	0.45
1:O:3385:LEU:HD13	1:O:3416:LEU:HA	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:135:PHE:CD1	2:L:164:PHE:HB2	2.52	0.45
2:L:357:MET:HB2	2:L:423:GLN:HB3	1.98	0.45
2:L:404:GLN:HB3	2:L:423:GLN:OE1	2.17	0.45
3:C:53:ALA:HB3	4:D:111:GLY:HA2	1.98	0.45
6:F:27:GLN:HA	6:F:55:ARG:HD3	1.99	0.45
1:o:75:SER:HB3	1:o:78:PHE:CE2	2.52	0.45
1:o:2160:TYR:HB3	1:o:2164:TRP:CD1	2.51	0.45
1:o:2164:TRP:O	1:o:2167:PRO:HD2	2.17	0.45
1:o:2998:SER:HA	1:o:3001:CYS:SG	2.56	0.45
1:o:3784:ARG:HB2	1:o:3786:LEU:HG	1.98	0.45
1:o:3997:LEU:HD23	1:o:3998:LEU:N	2.32	0.45
2:N:30:PRO:HA	2:N:33:GLN:HG3	1.98	0.45
2:N:168:SER:HB2	2:N:226:SER:HB3	1.98	0.45
5:e:66:PRO:HD3	9:j:94:DA:H3'	1.98	0.45
7:K:76:ILE:HG23	7:K:249:LYS:O	2.16	0.45
7:K:212:ASP:HB3	7:K:215:LEU:HB2	1.98	0.45
7:M:49:PHE:CD1	7:M:128:GLN:HG3	2.47	0.45
8:I:81:DC:H2"	8:I:82:DC:C5	2.51	0.45
2:l:205:LEU:O	2:l:209:LYS:HG2	2.17	0.45
2:l:450:GLN:HG3	2:l:536:LEU:HD22	1.98	0.45
7:k:488:ARG:HH11	7:k:503:ALA:HB2	1.82	0.45
7:m:100:LYS:HB3	7:m:101:ASN:HD22	1.81	0.45
1:O:275:PHE:CZ	1:O:319:PHE:HB2	2.51	0.45
1:O:573:LEU:HD11	1:O:645:TRP:CD1	2.51	0.45
1:O:924:ARG:HG2	1:O:2769:VAL:HG21	1.99	0.45
1:O:1480:GLY:O	1:O:1483:LEU:HB3	2.17	0.45
1:O:1733:THR:HG23	1:O:1736:PHE:H	1.81	0.45
1:O:2187:VAL:HA	1:O:2190:VAL:HG22	1.97	0.45
1:O:3420:CYS:HB2	1:O:3446:VAL:HG11	1.99	0.45
2:L:655:PHE:HA	2:L:658:PHE:HB2	1.98	0.45
6:b:66:ILE:O	6:b:70:VAL:HG23	2.16	0.45
1:o:1427:SER:HA	1:o:1430:GLU:CD	2.42	0.45
1:o:2242:VAL:O	1:o:2246:LYS:HG3	2.17	0.45
1:o:2996:LEU:HA	1:o:2999:LEU:HD12	1.97	0.45
1:o:3912:CYS:HA	1:o:3915:HIS:CE1	2.52	0.45
2:N:404:GLN:CB	2:N:423:GLN:HE22	2.29	0.45
2:N:530:LEU:HB3	2:N:534:LYS:HZ2	1.82	0.45
3:g:80:PRO:HD3	4:h:55:ALA:HB2	1.98	0.45
2:l:361:VAL:HG13	2:l:420:VAL:HG13	1.97	0.45
7:k:102:ILE:HG21	7:k:149:VAL:HG21	1.99	0.45
7:m:491:GLU:HB3	7:m:497:LEU:HD22	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:240:GLU:O	1:O:243:GLN:HG2	2.16	0.45
1:O:738:HIS:HA	1:O:741:ILE:HB	1.98	0.45
1:O:1180:GLN:HB2	1:O:1183:CYS:HB3	1.98	0.45
1:O:1723:PRO:HB2	1:O:1724:MET:SD	2.57	0.45
1:O:2510:LEU:HD13	1:O:2525:TRP:HD1	1.82	0.45
2:L:108:LEU:HD12	2:L:144:LYS:HA	1.98	0.45
2:L:684:THR:HG23	2:L:703:LYS:HE2	1.99	0.45
4:D:99:LEU:HG	4:D:104:ALA:HB2	1.97	0.45
4:H:38:VAL:HA	4:H:41:VAL:HG22	1.98	0.45
5:E:88:ALA:HB2	6:F:82:THR:HA	1.99	0.45
5:E:107:THR:HG22	5:E:119:ILE:HD12	1.99	0.45
4:d:101:GLY:O	4:d:105:LYS:HG2	2.16	0.45
1:o:1261:LEU:HD21	1:o:1337:VAL:HA	1.98	0.45
1:o:1367:HIS:HD2	1:o:1371:VAL:HG13	1.82	0.45
1:o:2125:TRP:O	1:o:2129:LEU:HG	2.17	0.45
1:o:2310:VAL:HG13	1:o:2316:TYR:CE2	2.52	0.45
1:o:3626:GLY:HA2	1:o:3683:CYS:CB	2.46	0.45
4:h:73:GLU:O	4:h:76:ARG:HG2	2.16	0.45
7:K:207:LYS:HG3	7:K:208:PRO:HD2	1.98	0.45
7:M:484:GLN:O	7:M:488:ARG:HG2	2.17	0.45
8:I:101:DA:H2''	8:I:102:DG:H8	1.80	0.45
9:j:32:DT:H2''	9:j:33:DG:C8	2.52	0.45
2:l:382:HIS:HE1	7:k:454:ALA:H	1.64	0.45
1:O:849:GLU:CD	1:O:849:GLU:H	2.24	0.45
1:O:1119:LYS:NZ	1:O:1123:THR:HB	2.32	0.45
1:O:1679:LEU:O	1:O:1717:LEU:HD21	2.17	0.45
1:O:2183:HIS:HA	1:O:2186:VAL:HB	1.99	0.45
1:O:2273:GLY:O	1:O:2277:LEU:HG	2.17	0.45
1:O:2350:LYS:HD3	1:O:2360:PHE:HZ	1.81	0.45
1:O:2379:MET:HA	1:O:2382:VAL:HG12	1.98	0.45
1:O:3123:GLN:HG2	1:O:3124:SER:N	2.32	0.45
1:O:3254:LEU:HD21	1:O:3258:LEU:HD23	1.98	0.45
1:O:3500:SER:HA	1:O:3503:VAL:HG12	1.99	0.45
1:O:3734:ARG:N	1:O:3735:PRO:HD3	2.31	0.45
1:O:3924:HIS:CE1	1:O:3926:ASN:HB2	2.52	0.45
3:G:63:LEU:HD23	4:H:42:LEU:HB2	1.99	0.45
4:H:98:LEU:HB2	6:b:92:ARG:HH21	1.82	0.45
1:o:573:LEU:HA	1:o:576:VAL:HG12	1.99	0.45
1:o:1851:LEU:C	1:o:1852:LYS:HD2	2.41	0.45
1:o:2858:ILE:O	1:o:2861:ILE:HG12	2.16	0.45
1:o:3090:TYR:HE2	1:o:3102:TYR:HE2	1.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:3119:VAL:HA	1:o:3125:ARG:NH2	2.32	0.45
1:o:3311:ASN:ND2	1:o:3314:SER:HA	2.32	0.45
1:o:3864:ARG:CZ	1:o:4085:LYS:HA	2.47	0.45
2:N:654:ARG:HA	2:N:657:ASN:HD21	1.82	0.45
7:K:41:LEU:HD23	7:K:168:LEU:HD13	1.98	0.45
8:i:52:DA:H2''	8:i:53:DG:C8	2.52	0.45
2:n:56:LEU:HD21	2:n:98:ILE:HD11	1.99	0.45
2:n:343:LEU:HA	7:m:509:PRO:HB3	1.98	0.45
7:m:413:LEU:HA	7:m:433:GLN:O	2.16	0.45
1:O:19:LEU:HB3	1:O:34:LEU:CD2	2.46	0.45
1:O:4002:MET:HB2	1:O:4007:LYS:HZ1	1.82	0.45
1:O:4092:GLN:HG2	1:O:4110:GLN:OE1	2.17	0.45
2:L:431:ARG:NH2	7:M:274:TYR:HB3	2.32	0.45
3:C:18:SER:H	3:C:27:VAL:HG22	1.82	0.45
5:E:126:LEU:HD11	5:a:110:CYS:HA	1.98	0.45
3:c:79:ILE:HD12	3:c:80:PRO:HD2	1.99	0.45
4:d:53:SER:O	4:d:56:MET:HG3	2.16	0.45
1:o:1476:HIS:O	1:o:1479:VAL:HG22	2.15	0.45
1:o:3788:LEU:HB2	1:o:3910:LEU:HD22	1.99	0.45
1:o:4125:GLU:HB3	1:o:4127:TRP:CD1	2.52	0.45
2:N:345:PHE:H	7:K:471:PHE:HB2	1.81	0.45
2:N:362:LEU:CB	2:N:421:TYR:HB3	2.47	0.45
2:N:384:LEU:HB3	2:N:410:PRO:HG3	1.99	0.45
6:f:90:LEU:HD23	6:f:93:GLN:HE21	1.82	0.45
7:K:262:LYS:HG2	7:K:268:VAL:HG13	1.98	0.45
9:J:48:DT:H2''	9:J:49:DC:H5'	1.99	0.45
8:i:18:DT:H2''	8:i:19:DG:OP1	2.17	0.45
8:i:99:DC:H2'	8:i:100:DA:C8	2.49	0.45
2:l:246:HIS:HE2	2:l:264:TYR:HB3	1.81	0.45
7:k:397:LEU:HD11	7:k:410:PHE:HB3	1.99	0.45
2:n:170:GLY:HA2	2:n:194:LEU:N	2.32	0.45
1:O:497:LEU:HD12	1:O:498:PRO:HD2	1.99	0.44
1:O:2347:LYS:HE2	1:O:2347:LYS:HB2	1.75	0.44
1:O:3700:GLU:HG2	1:O:3716:HIS:HE1	1.82	0.44
1:O:3828:TYR:HD1	1:O:3832:PRO:HG2	1.82	0.44
1:O:4085:LYS:HB2	1:O:4088:ASN:ND2	2.32	0.44
2:L:82:HIS:HB2	2:L:84:MET:HE1	1.99	0.44
2:L:269:GLN:HB2	7:M:362:LEU:HD11	1.97	0.44
4:D:73:GLU:CD	4:D:94:ALA:HB1	2.42	0.44
1:o:752:LEU:HG	1:o:756:PHE:CE2	2.52	0.44
1:o:1092:GLU:CG	1:o:1095:LEU:HB2	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:1322:THR:OG1	1:o:1324:PRO:HD2	2.17	0.44
1:o:1864:ASP:HA	1:o:1867:ILE:HD12	1.99	0.44
1:o:2272:VAL:O	1:o:2276:LEU:HG	2.16	0.44
1:o:2470:ARG:O	1:o:2473:MET:HG2	2.17	0.44
1:o:3123:GLN:HG2	1:o:3124:SER:N	2.32	0.44
1:o:3480:LEU:HA	1:o:3483:MET:HB2	1.99	0.44
1:o:3565:GLY:HA2	1:o:3568:ILE:HD12	1.99	0.44
1:o:3574:ALA:HB2	1:o:3686:TRP:H	1.82	0.44
1:o:4005:PHE:C	1:o:4007:LYS:N	2.75	0.44
1:o:4005:PHE:CE2	1:o:4007:LYS:HA	2.52	0.44
2:N:670:GLN:HG3	2:N:675:TRP:HZ3	1.82	0.44
7:K:73:SER:HA	7:K:76:ILE:HG22	1.99	0.44
7:K:85:VAL:HB	7:K:106:GLN:HB2	1.98	0.44
9:J:115:DG:H2''	9:J:116:DA:C8	2.52	0.44
8:i:97:DG:H1'	8:i:98:DC:H5''	1.98	0.44
2:l:365:PHE:CE1	2:l:418:CYS:HB3	2.51	0.44
2:n:355:PHE:HA	7:m:277:VAL:HG11	2.00	0.44
2:n:374:ALA:O	2:n:377:LEU:HG	2.17	0.44
2:n:449:ALA:HA	2:n:452:ASN:HD21	1.82	0.44
1:O:452:LYS:HG3	1:O:453:MET:N	2.33	0.44
1:O:865:GLN:OE1	1:O:3170:ASP:HA	2.18	0.44
1:O:1092:GLU:HG3	1:O:1095:LEU:HB2	1.99	0.44
1:O:1310:GLU:O	1:O:1311:LYS:HG2	2.18	0.44
1:O:2260:PHE:O	1:O:2270:ASN:HB2	2.17	0.44
1:O:2457:PRO:HB2	1:O:2461:PHE:CZ	2.52	0.44
1:O:2940:ARG:O	1:O:2944:THR:HB	2.18	0.44
1:O:3007:GLU:HA	1:O:3257:LYS:HE3	1.98	0.44
1:O:3031:TRP:HE1	1:O:3064:PHE:HE2	1.65	0.44
1:o:1767:CYS:SG	1:o:1819:PHE:HA	2.57	0.44
1:o:2577:PHE:HB2	1:o:2783:ILE:HG21	1.99	0.44
1:o:2588:GLU:HA	1:o:2776:ARG:HA	2.00	0.44
1:o:4039:TYR:CZ	1:o:4041:ARG:HB2	2.51	0.44
2:N:306:LEU:O	2:N:310:ILE:HG12	2.17	0.44
2:N:458:ILE:HG12	7:K:350:PHE:HE2	1.83	0.44
2:N:530:LEU:HB3	2:N:534:LYS:NZ	2.33	0.44
4:h:112:THR:O	4:h:116:THR:HG23	2.17	0.44
2:l:380:LEU:HD23	7:k:462:MET:HE2	1.99	0.44
1:O:407:VAL:HA	1:O:410:MET:HE3	1.99	0.44
1:O:986:PRO:HA	1:O:989:MET:HG3	1.98	0.44
1:O:1207:TRP:HE3	1:O:1208:LEU:HD22	1.82	0.44
1:O:1331:ASN:CG	1:O:1384:PHE:HB2	2.43	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:2153:THR:O	1:O:2156:VAL:HG12	2.17	0.44
1:O:3161:LEU:HB2	1:O:3166:ASN:ND2	2.33	0.44
1:O:3190:LEU:HD12	1:O:3235:LYS:HZ3	1.82	0.44
1:O:3287:ARG:C	1:O:3289:ARG:H	2.26	0.44
1:O:3820:MET:SD	1:O:3824:GLU:HB2	2.57	0.44
2:L:112:ILE:HD13	2:L:146:GLN:HE21	1.82	0.44
3:c:49:VAL:HG23	4:d:115:VAL:HG22	1.98	0.44
1:o:958:MET:HE3	1:o:958:MET:HB3	1.91	0.44
1:o:2344:LEU:HA	1:o:2347:LYS:HE2	1.98	0.44
1:o:2940:ARG:HA	1:o:2957:LEU:HD21	1.98	0.44
1:o:3554:PHE:O	1:o:3557:ARG:HG2	2.18	0.44
1:o:3913:ILE:HB	1:o:3984:MET:SD	2.58	0.44
7:K:416:GLN:HB2	7:K:433:GLN:HG3	1.99	0.44
9:j:75:DC:H2"	9:j:76:DA:C8	2.53	0.44
2:l:134:ILE:HD13	2:l:163:PHE:CE1	2.52	0.44
1:O:139:ARG:HH12	1:O:180:LEU:HD23	1.83	0.44
1:O:201:LEU:HD22	1:O:249:PHE:CD2	2.52	0.44
1:O:1776:GLU:HG2	1:O:1777:LEU:H	1.82	0.44
1:O:2197:THR:H	1:O:2722:ARG:NH2	2.16	0.44
1:O:3550:LYS:O	1:O:3553:GLU:HG2	2.17	0.44
2:L:20:MET:HE2	2:L:137:ASP:CG	2.41	0.44
2:L:273:LYS:HA	2:L:273:LYS:HD3	1.77	0.44
3:C:43:VAL:H	9:j:115:DG:H5"	1.82	0.44
6:B:25:ASN:HA	6:B:28:GLY:HA3	2.00	0.44
6:B:75:HIS:NE2	4:h:90:GLU:HG2	2.33	0.44
4:H:109:SER:O	4:H:113:LYS:HG2	2.16	0.44
1:o:23:ASP:HB3	1:o:34:LEU:HD21	1.99	0.44
1:o:245:SER:O	1:o:249:PHE:HD2	2.00	0.44
1:o:851:ILE:O	1:o:855:VAL:HG23	2.16	0.44
1:o:1039:TRP:O	1:o:1043:GLN:HG3	2.16	0.44
1:o:1565:GLU:HA	1:o:1568:ASN:HD22	1.82	0.44
1:o:1756:PRO:O	1:o:1760:GLU:HG2	2.17	0.44
1:o:2431:ARG:HA	1:o:2434:VAL:HG22	1.99	0.44
1:o:2435:CYS:O	1:o:2439:ILE:HG12	2.18	0.44
1:o:2833:THR:HG21	1:o:2867:ALA:HB1	2.00	0.44
1:o:3008:TRP:NE1	1:o:3050:LYS:HG2	2.32	0.44
1:o:3166:ASN:CG	1:o:3186:ARG:HE	2.26	0.44
1:o:3284:SER:O	1:o:3287:ARG:HB2	2.18	0.44
1:o:3311:ASN:HB2	1:o:3315:TYR:N	2.33	0.44
1:o:3588:TRP:CD1	1:o:3609:MET:HB3	2.52	0.44
1:o:3970:LEU:HD23	1:o:3971:MET:H	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:4098:LEU:H	1:o:4098:LEU:HD23	1.81	0.44
2:N:10:VAL:O	2:N:54:ILE:HA	2.17	0.44
2:N:91:LEU:HA	2:N:94:ILE:HD12	1.99	0.44
2:N:288:ASP:HA	7:K:305:THR:HB	1.98	0.44
2:N:353:ARG:HA	2:N:356:PHE:CE1	2.53	0.44
7:M:44:ALA:HB2	7:M:87:PHE:HB3	1.99	0.44
8:i:74:DG:H1'	8:i:75:DC:C6	2.53	0.44
8:i:108:DT:C4	8:i:109:DA:N6	2.85	0.44
9:j:115:DG:H2''	9:j:116:DA:C8	2.52	0.44
9:j:115:DG:H2''	9:j:116:DA:H8	1.82	0.44
1:O:1376:LEU:HD21	1:O:1399:CYS:HB3	1.98	0.44
1:O:1575:LEU:HG	1:O:1576:ASP:H	1.83	0.44
1:O:3335:ARG:NE	1:O:3385:LEU:HD11	2.33	0.44
2:L:525:LYS:HB2	2:L:525:LYS:HE2	1.77	0.44
5:A:60:LEU:HD13	5:A:93:GLN:HG2	1.99	0.44
4:H:95:VAL:O	4:H:99:LEU:HB2	2.18	0.44
1:o:95:LYS:HD3	1:o:95:LYS:HA	1.84	0.44
1:o:450:SER:OG	1:o:453:MET:HG3	2.18	0.44
1:o:469:ALA:HA	1:o:475:LEU:HD13	1.99	0.44
2:N:33:GLN:HB3	2:N:232:ARG:HH12	1.82	0.44
2:N:252:THR:HA	2:N:259:ILE:O	2.17	0.44
3:g:57:TYR:OH	4:h:103:LEU:HD12	2.18	0.44
7:K:182:LYS:HG2	7:K:185:ARG:NH2	2.32	0.44
8:i:85:DC:H2''	8:i:86:DG:C8	2.53	0.44
9:j:90:DT:H2''	9:j:91:DT:H5'	2.00	0.44
2:l:51:LYS:HB2	2:l:51:LYS:HE3	1.85	0.44
2:n:343:LEU:HD12	2:n:392:ILE:HG22	2.00	0.44
7:m:332:GLU:O	7:m:335:GLU:HG2	2.17	0.44
1:O:2197:THR:H	1:O:2722:ARG:HH22	1.64	0.44
1:O:2800:ARG:HA	1:O:2800:ARG:HD3	1.68	0.44
2:L:66:ASN:ND2	2:L:74:TYR:HB3	2.33	0.44
2:L:85:LEU:HD12	2:L:86:PRO:HD2	2.00	0.44
5:A:104:PHE:HE2	6:B:37:LEU:HB3	1.82	0.44
1:o:193:ALA:HA	1:o:196:LEU:HD12	2.00	0.44
1:o:918:ALA:HB1	1:o:931:CYS:SG	2.57	0.44
1:o:980:THR:O	1:o:983:LEU:HG	2.18	0.44
1:o:1029:CYS:O	1:o:1033:ILE:HG12	2.17	0.44
1:o:1066:LEU:CD1	1:o:1078:ALA:HB2	2.48	0.44
1:o:2384:PHE:CE2	1:o:2388:LYS:HE3	2.52	0.44
1:o:3008:TRP:HA	1:o:3011:LEU:HD12	1.98	0.44
1:o:3130:GLN:HB3	1:o:3178:ILE:HG12	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:3496:ILE:O	1:o:3499:ILE:HG22	2.17	0.44
1:o:3820:MET:HB2	1:o:3885:ARG:HH22	1.82	0.44
1:o:3895:GLU:O	1:o:3898:LEU:HG	2.18	0.44
9:J:84:DC:H2'	9:J:85:DG:C8	2.52	0.44
2:l:295:TYR:H	2:l:304:GLU:HB2	1.83	0.44
7:m:277:VAL:HG23	7:m:364:PRO:HB3	1.99	0.44
1:O:565:TYR:HB2	1:O:637:LYS:HZ3	1.82	0.44
1:O:1166:LEU:HA	1:O:1169:VAL:HB	2.00	0.44
1:O:1740:VAL:HA	1:O:1743:MET:HG2	2.00	0.44
1:O:3151:LEU:HA	1:O:3197:LEU:HD22	1.99	0.44
2:L:344:GLY:HA3	7:M:471:PHE:HE1	1.83	0.44
3:G:20:ARG:HB2	4:H:118:TYR:HE1	1.82	0.44
4:H:59:MET:HA	4:H:62:PHE:CD2	2.52	0.44
6:b:54:THR:HA	6:b:57:VAL:HG12	1.99	0.44
1:o:627:VAL:HG22	1:o:669:LEU:HD11	2.00	0.44
1:o:632:GLU:O	1:o:635:PRO:HD2	2.17	0.44
1:o:1456:LYS:HE2	1:o:1456:LYS:HA	1.99	0.44
1:o:1733:THR:HG22	1:o:1736:PHE:HB3	1.99	0.44
1:o:2328:ARG:HH21	1:o:2333:ARG:HD3	1.83	0.44
1:o:2854:PHE:O	1:o:2858:ILE:HG13	2.17	0.44
1:o:3175:PRO:HB2	1:o:3177:ASN:OD1	2.17	0.44
5:e:115:LYS:HE2	5:e:115:LYS:HB2	1.88	0.44
6:f:90:LEU:HD23	6:f:93:GLN:NE2	2.33	0.44
8:I:51:DT:H2''	8:I:52:DA:C8	2.53	0.44
8:I:115:DT:H6	8:I:115:DT:H2'	1.69	0.44
8:i:97:DG:H4'	8:i:98:DC:OP1	2.18	0.44
1:O:148:LYS:HE2	1:O:148:LYS:HB2	1.87	0.44
1:O:320:LEU:HA	1:O:323:VAL:HG22	2.00	0.44
1:O:746:ARG:NH2	1:O:749:VAL:HG21	2.32	0.44
1:O:1150:LYS:HD3	1:O:1150:LYS:HA	1.71	0.44
1:O:3030:ILE:HG23	1:O:3067:LYS:HD2	2.00	0.44
1:O:3462:ARG:HE	1:O:3498:TRP:HZ3	1.65	0.44
1:O:3860:LYS:HD2	1:O:4072:PRO:HB2	2.00	0.44
1:O:3871:PHE:HB2	1:O:4117:LEU:HB3	2.00	0.44
1:O:3894:PRO:O	1:O:3898:LEU:HG	2.18	0.44
1:O:4087:HIS:HB2	1:O:4090:ARG:NH2	2.32	0.44
2:L:325:LYS:O	2:L:328:GLU:HG2	2.18	0.44
2:L:355:PHE:O	2:L:425:PRO:HD3	2.18	0.44
2:L:486:ARG:NH2	7:M:338:LYS:HE3	2.33	0.44
2:L:667:GLU:HG3	2:L:668:ILE:HG23	1.99	0.44
4:H:37:TYR:O	4:H:41:VAL:HG13	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:525:LYS:HA	1:o:629:PHE:CE1	2.52	0.44
1:o:788:TYR:O	1:o:792:ILE:HG13	2.18	0.44
1:o:1297:PHE:HB3	1:o:1301:ILE:HD13	1.99	0.44
1:o:2507:ILE:O	1:o:2510:LEU:HB2	2.18	0.44
4:h:110:GLU:HA	4:h:113:LYS:HG2	1.99	0.44
7:K:44:ALA:O	7:K:137:HIS:HB2	2.17	0.44
7:K:365:SER:HB2	7:K:435:VAL:HG22	2.00	0.44
7:K:512:GLU:HA	7:K:515:ASN:HD21	1.82	0.44
7:M:337:LEU:HD12	7:M:338:LYS:HG3	1.99	0.44
8:i:132:DT:OP1	2:l:244:SER:HB2	2.18	0.44
9:j:138:DC:H2''	9:j:139:DG:C8	2.52	0.44
2:l:36:LYS:O	2:l:40:MET:HE3	2.18	0.44
2:l:58:LEU:HD21	2:l:78:THR:HB	1.99	0.44
2:n:404:GLN:HB2	2:n:423:GLN:NE2	2.33	0.44
2:n:449:ALA:HA	2:n:452:ASN:ND2	2.32	0.44
1:O:30:ALA:O	1:O:34:LEU:HG	2.18	0.44
1:O:31:GLY:O	1:O:34:LEU:HB2	2.18	0.44
1:O:82:ARG:NH1	1:O:126:PRO:HB2	2.33	0.44
1:O:2276:LEU:O	1:O:2280:VAL:HG23	2.18	0.44
1:O:2576:MET:HG2	1:O:2577:PHE:CD2	2.52	0.44
1:O:3171:ALA:C	1:O:3173:MET:H	2.26	0.44
1:O:3837:CYS:HB2	1:O:3874:ARG:HG3	1.99	0.44
2:L:485:PRO:HG3	2:L:515:MET:HE1	2.00	0.44
3:C:79:ILE:HB	3:C:82:HIS:HD2	1.83	0.44
3:G:75:LYS:HZ2	3:G:77:ARG:HB3	1.82	0.44
1:o:27:ALA:HB3	1:o:29:LEU:HG	2.00	0.44
1:o:1949:ILE:O	1:o:1952:ILE:HG22	2.18	0.44
1:o:1960:LYS:HA	1:o:2125:TRP:HZ3	1.82	0.44
1:o:3930:VAL:HA	1:o:3936:GLY:O	2.18	0.44
1:o:4105:LYS:HG2	1:o:4108:MET:HE2	2.00	0.44
2:N:59:PHE:HB2	2:N:105:ALA:HB3	2.00	0.44
2:N:406:GLY:HA2	2:N:424:LEU:HG	2.00	0.44
3:g:33:LEU:HA	3:g:36:LYS:HG2	2.00	0.44
4:h:41:VAL:O	4:h:45:VAL:HG22	2.18	0.44
7:K:75:ILE:CD1	7:K:116:ILE:HD11	2.46	0.44
9:J:16:DT:H2''	9:J:17:DA:C8	2.53	0.44
9:J:38:DT:H3'	9:J:38:DT:OP2	2.17	0.44
2:l:235:CYS:SG	2:l:238:LYS:HA	2.58	0.44
2:n:489:ARG:HG3	7:m:337:LEU:HB2	2.00	0.44
1:O:49:ALA:O	1:O:53:LEU:HG	2.17	0.43
1:O:106:GLU:HA	1:O:109:ASN:HD21	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:488:ILE:HG23	1:O:2036:LEU:HD22	1.99	0.43
1:O:638:GLN:HB2	1:O:641:PHE:CE2	2.53	0.43
1:O:1824:LEU:HD13	1:O:1827:LEU:HD11	2.00	0.43
1:O:2158:ARG:HD2	1:O:2196:TRP:HE1	1.83	0.43
1:O:2313:LYS:HA	1:O:2316:TYR:CE1	2.53	0.43
1:O:2825:THR:C	1:O:2829:LYS:HZ2	2.26	0.43
1:O:2893:LEU:HD23	1:O:2926:LEU:HD13	2.00	0.43
1:O:3137:GLU:HG2	1:O:3189:PHE:HE2	1.83	0.43
1:O:3813:LYS:NZ	1:O:3924:HIS:HB2	2.33	0.43
1:O:4091:ALA:O	1:O:4094:PRO:HD2	2.17	0.43
2:L:81:ARG:HG3	2:L:84:MET:HE2	1.99	0.43
2:L:279:VAL:HB	2:L:284:LEU:HA	2.00	0.43
2:L:457:LEU:HD22	2:L:533:ILE:HG13	1.99	0.43
2:L:461:MET:HG3	7:M:349:GLY:HA2	2.00	0.43
3:c:102:ILE:HD12	4:d:58:ILE:HD13	1.99	0.43
4:d:89:ARG:O	4:d:92:GLN:HG3	2.17	0.43
5:a:88:ALA:HB1	6:b:86:VAL:HG21	2.00	0.43
1:o:148:LYS:HD2	1:o:148:LYS:O	2.17	0.43
1:o:385:TYR:O	1:o:389:ILE:HG12	2.18	0.43
1:o:664:SER:O	1:o:668:LYS:HG3	2.18	0.43
1:o:1032:CYS:O	1:o:1035:GLU:HG2	2.18	0.43
1:o:1477:HIS:HB2	1:o:1527:ARG:NH1	2.33	0.43
1:o:2269:ASP:O	1:o:2272:VAL:HG22	2.18	0.43
1:o:3391:ALA:HA	1:o:3394:GLU:CD	2.42	0.43
1:o:3720:ALA:H	1:o:3742:GLY:CA	2.30	0.43
2:N:357:MET:HE1	7:K:277:VAL:HB	1.99	0.43
2:N:613:SER:O	2:N:616:LEU:HG	2.18	0.43
2:l:306:LEU:HD23	2:l:309:ASP:HB2	1.99	0.43
7:k:529:VAL:HG12	7:k:530:TYR:HD1	1.83	0.43
2:n:13:CYS:HA	2:n:57:VAL:O	2.17	0.43
7:m:43:ASP:C	7:m:48:MET:HG2	2.43	0.43
7:m:189:LYS:HD2	7:m:189:LYS:HA	1.84	0.43
1:O:307:GLU:HG2	1:O:308:LEU:N	2.33	0.43
1:O:363:ILE:HA	1:O:366:TYR:CD2	2.53	0.43
1:O:849:GLU:HG2	1:O:850:GLU:N	2.33	0.43
1:O:1082:PHE:CD2	1:O:1130:ALA:HB1	2.53	0.43
1:O:1477:HIS:CG	1:O:1527:ARG:HD2	2.53	0.43
1:O:1881:TYR:CZ	1:O:1951:VAL:HG12	2.53	0.43
1:O:3107:ILE:O	1:O:3111:MET:HG3	2.17	0.43
1:O:3737:ARG:NH2	1:O:3807:GLU:HG3	2.33	0.43
1:O:3761:ASP:O	1:O:3765:GLU:HG2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:99:TYR:HB2	6:B:95:ARG:NH1	2.32	0.43
4:d:92:GLN:HA	4:d:95:VAL:HG22	2.01	0.43
1:o:186:PRO:O	1:o:190:ILE:HG12	2.18	0.43
1:o:196:LEU:HD13	1:o:227:LEU:HD11	2.00	0.43
1:o:849:GLU:HA	1:o:852:ARG:NE	2.32	0.43
1:o:909:VAL:HG23	1:o:2807:GLN:NE2	2.33	0.43
1:o:1353:PRO:HD2	1:o:1356:TRP:CZ3	2.53	0.43
1:o:1709:GLU:CD	1:o:1709:GLU:H	2.25	0.43
1:o:2212:ALA:O	1:o:2215:LEU:HG	2.18	0.43
1:o:2531:LEU:HD23	1:o:2531:LEU:HA	1.90	0.43
1:o:3919:GLY:HA3	1:o:3946:PHE:HA	2.00	0.43
6:f:54:THR:HA	6:f:57:VAL:HG12	2.00	0.43
7:K:46:LYS:HA	7:K:46:LYS:HD2	1.74	0.43
7:K:113:ALA:HA	7:K:116:ILE:HD13	2.00	0.43
8:I:119:DC:H6	8:I:119:DC:H2'	1.66	0.43
9:J:44:DG:H2''	9:J:45:DT:C5	2.52	0.43
8:i:58:DG:H2''	8:i:59:DC:OP2	2.18	0.43
9:j:9:DG:H2''	9:j:10:DA:C8	2.53	0.43
2:l:396:ALA:HB2	2:l:403:PRO:HA	1.99	0.43
7:k:147:LEU:HB3	7:k:193:LEU:HD11	2.00	0.43
2:n:241:GLU:CG	2:n:242:ARG:H	2.25	0.43
2:n:420:VAL:HG21	7:m:359:HIS:HB3	2.00	0.43
1:O:196:LEU:HD13	1:O:227:LEU:HD11	1.99	0.43
1:O:709:LYS:HA	1:O:712:LYS:HE3	2.00	0.43
1:O:974:CYS:HB3	1:O:1028:PHE:CG	2.53	0.43
1:O:1685:ASP:HB3	1:O:1688:LEU:HG	2.01	0.43
1:O:1783:ARG:HD2	1:O:1830:HIS:HB2	2.00	0.43
1:O:1840:PHE:CG	1:O:1880:MET:HE3	2.53	0.43
1:O:1874:TYR:HD1	1:O:1947:CYS:SG	2.40	0.43
1:O:2303:LEU:HD13	1:O:2323:LEU:HD21	2.00	0.43
1:O:2342:CYS:O	1:O:2345:VAL:HG12	2.18	0.43
1:O:3382:PHE:HZ	1:O:3445:LEU:HD21	1.82	0.43
1:O:3964:THR:HG22	1:O:3967:PHE:CG	2.53	0.43
2:L:133:GLU:HG2	2:L:162:GLN:HB2	2.01	0.43
4:D:97:LEU:HD11	6:f:92:ARG:HG2	1.99	0.43
5:A:60:LEU:HD22	5:A:93:GLN:HG3	2.00	0.43
5:A:73:GLU:HG3	6:B:23:ARG:NH2	2.33	0.43
4:H:75:SER:HB3	3:c:38:HIS:NE2	2.33	0.43
5:E:110:CYS:HB3	5:E:126:LEU:HD23	2.00	0.43
5:E:124:ILE:HG13	5:E:125:GLN:N	2.33	0.43
3:c:57:TYR:HB2	4:d:110:GLU:HG2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:169:THR:OG1	1:o:219:VAL:HB	2.18	0.43
1:o:538:ASP:O	1:o:541:MET:HG2	2.18	0.43
1:o:574:LYS:HB3	1:o:578:LYS:HZ1	1.82	0.43
1:o:848:LEU:O	1:o:852:ARG:HG3	2.18	0.43
1:o:1190:LEU:HA	1:o:1193:LYS:HG2	2.00	0.43
1:o:1959:LEU:HD23	1:o:1959:LEU:H	1.82	0.43
1:o:3048:LYS:O	1:o:3052:LEU:HD23	2.18	0.43
1:o:3090:TYR:HE2	1:o:3102:TYR:CE2	2.36	0.43
1:o:3182:ILE:O	1:o:3186:ARG:HG2	2.18	0.43
1:o:3515:GLN:HA	1:o:3518:VAL:HB	1.98	0.43
1:o:3952:PHE:HZ	1:o:4038:TRP:HB3	1.82	0.43
1:o:4011:PHE:O	1:o:4015:ASN:HB3	2.19	0.43
2:N:13:CYS:HB2	2:N:134:ILE:HG13	2.00	0.43
7:M:362:LEU:HD22	7:M:438:PRO:HB3	2.00	0.43
8:i:127:DA:H1'	8:i:128:DC:C2	2.53	0.43
9:j:99:DT:H2''	9:j:100:DG:C8	2.53	0.43
9:j:117:DC:C4	9:j:118:DC:N4	2.87	0.43
2:l:534:LYS:HE3	7:k:266:ASP:HB2	2.00	0.43
7:k:465:ILE:HG23	7:k:518:LEU:HD21	2.00	0.43
7:m:262:LYS:HE2	7:m:346:MET:HG2	2.00	0.43
7:m:410:PHE:HD2	7:m:439:PHE:CE1	2.36	0.43
1:O:262:LEU:HD23	1:O:262:LEU:HA	1.90	0.43
1:O:265:TYR:C	1:O:268:PRO:HD2	2.43	0.43
1:O:939:MET:HE3	1:O:2783:ILE:HG12	1.99	0.43
1:O:1169:VAL:O	1:O:1172:LEU:HG	2.18	0.43
1:O:1665:HIS:H	1:O:1668:PHE:HB3	1.83	0.43
1:O:2291:GLN:HG2	1:O:2292:CYS:N	2.34	0.43
1:O:3747:GLU:HG2	1:O:3749:PRO:HD3	2.00	0.43
1:O:3971:MET:HG2	1:O:3976:GLU:HA	2.01	0.43
2:L:151:ILE:HA	2:L:154:LEU:HD12	1.99	0.43
2:L:602:VAL:HG12	2:L:649:PHE:HE2	1.83	0.43
2:L:688:LYS:HB2	2:L:688:LYS:HE2	1.86	0.43
5:A:119:ILE:O	5:A:120:MET:HE2	2.18	0.43
6:F:90:LEU:HD13	6:F:97:LEU:HB3	2.00	0.43
1:o:2265:PRO:HB2	1:o:2267:SER:H	1.84	0.43
1:o:2869:LEU:HD11	1:o:2895:GLU:HG3	1.99	0.43
1:o:3924:HIS:ND1	1:o:3926:ASN:HB2	2.34	0.43
2:N:594:PRO:HA	2:N:597:ASN:HB3	2.00	0.43
7:K:168:LEU:HB3	7:K:202:LEU:HA	2.00	0.43
8:I:103:DG:H2''	8:I:104:DG:C8	2.53	0.43
9:J:51:DC:H2''	9:J:52:DC:C5	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:j:45:DT:C4	9:j:46:DA:N6	2.87	0.43
2:n:368:ARG:HH22	7:m:447:PRO:HB2	1.82	0.43
7:m:276:LEU:HG	7:m:367:PHE:HB2	2.01	0.43
1:O:70:ARG:NE	1:O:71:LYS:HZ3	2.16	0.43
1:O:394:GLN:HG2	1:O:1741:ASP:OD2	2.19	0.43
1:O:715:ALA:O	1:O:718:MET:HG3	2.18	0.43
1:O:1169:VAL:HG13	1:O:1191:PHE:HD1	1.82	0.43
1:O:2433:LYS:HB2	1:O:2433:LYS:HE2	1.81	0.43
1:O:2876:VAL:HG21	1:O:2892:LEU:HD23	2.00	0.43
1:O:3971:MET:HG2	1:O:3976:GLU:HG3	2.00	0.43
2:L:114:SER:HB3	2:L:132:ILE:HD13	2.00	0.43
2:L:165:LEU:HB2	2:L:167:PHE:O	2.18	0.43
5:a:102:GLY:O	5:a:105:GLU:HG2	2.18	0.43
1:o:159:GLU:O	1:o:162:LEU:HB2	2.18	0.43
1:o:380:ASP:HB3	1:o:384:MET:HE1	1.99	0.43
1:o:1044:ILE:HG23	1:o:1048:GLN:HB2	2.00	0.43
1:o:1881:TYR:HE2	1:o:1954:CYS:H	1.66	0.43
1:o:2471:GLU:HG2	1:o:2472:GLN:N	2.33	0.43
1:o:3613:MET:SD	1:o:3617:LEU:HD13	2.57	0.43
1:o:3909:ALA:O	1:o:3984:MET:HE1	2.17	0.43
2:N:599:ARG:HH21	2:N:638:CYS:HA	1.83	0.43
7:M:494:ALA:O	7:M:495:LEU:HG	2.18	0.43
9:j:40:DG:H1'	9:j:41:DG:C8	2.54	0.43
2:n:264:TYR:CD2	7:m:446:MET:HG2	2.53	0.43
1:O:98:GLN:CD	1:O:141:SER:HB3	2.44	0.43
1:O:1331:ASN:HB2	1:O:1384:PHE:CD2	2.47	0.43
1:O:1824:LEU:HA	1:O:1827:LEU:HG	1.99	0.43
1:O:3325:ASP:O	1:O:3328:ILE:HG22	2.18	0.43
1:O:3504:ALA:HA	1:O:3536:SER:HB2	2.00	0.43
2:L:253:ILE:HG12	2:L:340:PHE:HB3	2.01	0.43
2:L:534:LYS:HD3	7:M:266:ASP:HB3	1.99	0.43
4:D:98:LEU:HD13	6:f:92:ARG:CZ	2.49	0.43
3:G:43:VAL:C	9:J:115:DG:H3'	2.44	0.43
3:G:50:TYR:OH	4:H:108:VAL:HA	2.19	0.43
5:a:107:THR:HB	5:a:119:ILE:HD13	2.01	0.43
1:o:849:GLU:HA	1:o:852:ARG:NH2	2.34	0.43
1:o:1366:THR:C	1:o:1368:LEU:H	2.24	0.43
1:o:1742:CYS:HA	1:o:1745:LYS:HE3	1.99	0.43
1:o:2880:CYS:SG	1:o:2886:GLN:HA	2.59	0.43
1:o:2970:LYS:O	1:o:2974:GLU:OE1	2.36	0.43
1:o:3033:GLU:HB2	1:o:3034:PRO:HD3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:3531:TYR:HA	1:o:3534:ILE:HG12	2.00	0.43
1:o:3741:ARG:HG2	1:o:3747:GLU:HA	2.01	0.43
1:o:3897:PHE:O	1:o:3900:LEU:HG	2.18	0.43
2:N:116:ASP:O	2:N:119:GLN:HG2	2.19	0.43
2:N:332:LYS:HB3	2:N:334:LYS:NZ	2.34	0.43
2:N:387:LEU:HB2	2:N:389:MET:HB2	2.00	0.43
2:N:530:LEU:O	2:N:534:LYS:HG3	2.18	0.43
2:N:618:ASN:HA	2:N:621:GLU:CD	2.43	0.43
7:M:143:LEU:O	7:M:147:LEU:HG	2.18	0.43
8:I:10:DA:N7	9:J:144:DT:O4	2.52	0.43
8:I:114:DC:H6	8:I:114:DC:H2'	1.67	0.43
9:J:32:DG:H1'	9:J:33:DG:C8	2.54	0.43
9:J:60:DT:H2''	9:J:61:DT:C6	2.53	0.43
8:i:15:DC:H2''	8:i:16:DG:C8	2.54	0.43
2:l:248:PRO:HG3	2:l:264:TYR:CE2	2.54	0.43
1:O:452:LYS:HG3	1:O:453:MET:H	1.83	0.43
1:O:571:SER:HA	1:O:574:LYS:HD2	2.01	0.43
1:O:727:ALA:O	1:O:730:LEU:HG	2.18	0.43
1:O:733:LEU:O	1:O:736:LEU:HB2	2.18	0.43
1:O:892:LEU:HB2	1:O:958:MET:SD	2.59	0.43
1:O:934:LEU:HD23	1:O:937:MET:SD	2.58	0.43
1:O:1058:SER:O	1:O:1062:ARG:HG2	2.18	0.43
1:O:1157:PHE:HD1	1:O:1171:TRP:CD1	2.37	0.43
1:O:1611:GLN:OE1	1:O:1613:HIS:HB2	2.19	0.43
1:O:2776:ARG:HH12	1:O:2785:ILE:HD12	1.83	0.43
1:O:2866:ALA:HA	1:O:2869:LEU:HG	2.01	0.43
1:O:3574:ALA:HB1	1:O:3684:SER:HB2	2.00	0.43
2:L:458:ILE:HG12	7:M:350:PHE:CZ	2.54	0.43
2:L:605:LYS:HD3	2:L:605:LYS:HA	1.79	0.43
6:B:44:LYS:HB3	6:B:44:LYS:HE2	1.71	0.43
3:G:93:LEU:HD23	3:G:96:LEU:HD12	2.01	0.43
6:b:46:ILE:HD12	6:b:51:TYR:HE1	1.83	0.43
1:o:1071:ASN:ND2	1:o:1073:PHE:HB2	2.33	0.43
1:o:1583:MET:HE1	1:o:1625:HIS:CG	2.54	0.43
1:o:2216:LEU:O	1:o:2220:MET:HG2	2.19	0.43
1:o:2452:ARG:HB2	1:o:2498:ILE:HD11	1.99	0.43
1:o:2809:PHE:O	1:o:2812:LEU:HG	2.18	0.43
1:o:2878:ALA:O	1:o:2881:LEU:HG	2.18	0.43
1:o:3482:LEU:HD13	1:o:3485:LYS:HD2	2.01	0.43
1:o:4127:TRP:CD1	1:o:4127:TRP:H	2.36	0.43
2:N:461:MET:HE3	7:K:347:LEU:HD21	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:524:THR:HA	2:N:527:GLN:CD	2.43	0.43
7:K:43:ASP:O	7:K:48:MET:HG3	2.18	0.43
7:K:526:LYS:HD2	7:K:530:TYR:HB2	2.01	0.43
7:M:424:LYS:HD3	7:M:424:LYS:HA	1.81	0.43
8:i:51:DT:H2'	8:i:51:DT:OP2	2.19	0.43
8:i:111:DT:H2'	8:i:112:DC:C2	2.54	0.43
2:l:406:GLY:HA3	2:l:421:TYR:CE2	2.54	0.43
7:k:303:PHE:HB2	7:k:310:LEU:HA	2.00	0.43
1:O:16:GLN:NE2	1:O:63:PHE:CZ	2.87	0.43
1:O:124:LYS:O	1:O:128:LEU:HG	2.18	0.43
1:O:358:GLU:HA	1:O:361:ILE:HD13	2.01	0.43
1:O:1086:TYR:HA	1:O:1089:PHE:HB3	2.00	0.43
1:O:1784:ARG:HA	1:O:1787:ARG:NE	2.34	0.43
1:O:2430:GLU:HA	1:O:2433:LYS:HE2	2.01	0.43
1:O:3126:LEU:O	1:O:3130:GLN:OE1	2.36	0.43
1:O:3462:ARG:O	1:O:3465:PHE:HB3	2.18	0.43
1:O:3467:ARG:HD2	1:O:4000:ASN:HD21	1.83	0.43
1:O:3828:TYR:CD1	1:O:3832:PRO:HG2	2.53	0.43
1:O:4078:VAL:O	1:O:4082:ARG:HG2	2.18	0.43
1:O:4080:VAL:HG11	1:O:4119:ARG:HD3	2.00	0.43
2:L:356:PHE:O	2:L:357:MET:HE2	2.19	0.43
2:L:646:ALA:HB1	2:L:651:GLU:O	2.19	0.43
3:G:17:ARG:HB3	3:G:18:SER:H	1.62	0.43
3:c:84:GLN:HA	3:c:87:ILE:HG22	2.01	0.43
1:o:240:GLU:HG2	1:o:243:GLN:HG2	2.00	0.43
1:o:262:LEU:HA	1:o:265:TYR:CE1	2.54	0.43
1:o:384:MET:O	1:o:388:LEU:HG	2.19	0.43
1:o:710:PHE:HA	1:o:713:GLU:CD	2.43	0.43
1:o:1294:VAL:HA	1:o:1297:PHE:CD2	2.53	0.43
1:o:2092:GLU:HG2	1:o:2092:GLU:O	2.19	0.43
1:o:2959:ALA:HA	1:o:2962:ARG:HG2	2.00	0.43
1:o:3426:LYS:HE3	1:o:3426:LYS:HB3	1.85	0.43
2:N:312:GLN:CD	2:N:313:GLY:N	2.76	0.43
3:g:91:GLU:HA	3:g:94:ASN:HD22	1.82	0.43
7:K:94:LYS:HB2	7:K:103:TYR:CD2	2.54	0.43
8:I:147:DC:O2	8:I:147:DC:O4'	2.36	0.43
7:k:77:SER:HA	7:k:250:GLU:HA	2.01	0.43
7:m:40:PHE:CD2	7:m:67:ILE:HG12	2.53	0.43
7:m:115:ARG:O	7:m:118:GLU:HG2	2.19	0.43
7:m:165:ARG:HD3	7:m:199:PHE:HB2	2.01	0.43
1:O:123:CYS:SG	1:O:171:LEU:HD11	2.58	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:641:PHE:O	1:O:644:PRO:HD2	2.19	0.43
1:O:1528:LEU:O	1:O:1532:LEU:HG	2.19	0.43
1:O:1772:HIS:ND1	1:O:1773:VAL:HG13	2.34	0.43
1:O:3172:LYS:O	1:O:3173:MET:HE2	2.19	0.43
1:O:3868:VAL:HG13	1:O:3872:ARG:CZ	2.49	0.43
2:L:76:ASN:HB2	2:L:105:ALA:HB2	2.01	0.43
3:C:102:ILE:HG23	4:D:58:ILE:HD13	2.00	0.43
4:D:41:VAL:O	4:D:45:VAL:HG22	2.18	0.43
5:A:100:LEU:HD21	6:B:58:LEU:HB3	2.00	0.43
6:B:26:ILE:HD12	6:B:26:ILE:H	1.83	0.43
1:o:76:ILE:O	1:o:80:GLU:HG3	2.19	0.43
1:o:96:MET:SD	1:o:99:LYS:HB2	2.59	0.43
1:o:1066:LEU:HA	1:o:1069:HIS:ND1	2.34	0.43
1:o:1170:LYS:O	1:o:1173:LEU:HG	2.18	0.43
1:o:1489:LYS:HA	1:o:1489:LYS:HD3	1.76	0.43
1:o:1578:ALA:O	1:o:1581:GLU:HG2	2.18	0.43
1:o:2307:MET:HB3	1:o:2319:ALA:HB3	2.00	0.43
1:o:2850:PHE:HB3	1:o:2883:SER:OG	2.19	0.43
1:o:3628:PHE:HD1	1:o:3631:LYS:HZ3	1.67	0.43
7:M:256:LEU:HB3	7:M:273:ILE:O	2.19	0.43
8:i:57:DC:H2''	8:i:58:DG:C5	2.53	0.43
8:i:133:DC:H42	9:j:21:DT:H3	1.65	0.43
2:l:136:THR:O	2:l:165:LEU:HD23	2.19	0.43
2:l:357:MET:C	2:l:423:GLN:HB3	2.44	0.43
2:n:33:GLN:O	2:n:37:VAL:HG23	2.19	0.43
7:m:256:LEU:HB3	7:m:273:ILE:O	2.18	0.43
1:O:163:LYS:NZ	7:M:313:PRO:HD3	2.34	0.43
1:O:469:ALA:HA	1:O:475:LEU:HD13	2.01	0.43
1:O:794:PRO:HB3	1:O:869:ASN:O	2.18	0.43
1:O:1167:ASP:O	1:O:1170:LYS:HG2	2.19	0.43
1:O:1184:ARG:HD3	1:O:1262:ALA:HB1	2.01	0.43
1:O:1218:SER:HA	1:O:1221:ILE:HG22	2.00	0.43
1:O:1713:VAL:HA	1:O:1716:GLN:HG2	2.00	0.43
1:O:2214:ARG:HG3	1:O:2215:LEU:HD22	2.01	0.43
1:O:3983:ILE:HG22	1:O:3984:MET:HE2	2.00	0.43
2:L:601:LEU:HG	2:L:609:PHE:CE2	2.54	0.43
1:o:110:THR:O	1:o:114:VAL:HG23	2.19	0.43
1:o:1300:SER:O	1:o:1304:HIS:HB2	2.19	0.43
1:o:2141:ASN:HA	1:o:2144:LEU:HD12	2.01	0.43
1:o:2792:THR:O	1:o:2795:GLN:HG2	2.19	0.43
1:o:3164:TRP:HE3	1:o:3167:ARG:HA	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:4048:LYS:HE2	1:o:4048:LYS:HB2	1.74	0.43
2:N:141:ARG:NE	2:N:142:PHE:H	2.16	0.43
2:N:496:HIS:CD2	2:N:506:PRO:HD3	2.54	0.43
6:f:58:LEU:HA	6:f:61:PHE:CE2	2.54	0.43
7:K:349:GLY:O	7:K:350:PHE:HD1	2.01	0.43
7:K:516:LYS:HB3	7:K:516:LYS:HE3	1.80	0.43
7:M:204:HIS:ND1	7:M:235:GLU:HG2	2.34	0.43
7:M:414:VAL:O	7:M:432:PHE:HA	2.19	0.43
8:i:126:DC:H2''	8:i:127:DA:H2'	2.01	0.43
8:i:147:DC:O2	8:i:147:DC:O4'	2.36	0.43
9:j:48:DT:H2''	9:j:49:DC:H5'	2.01	0.43
7:k:371:GLU:HG3	7:k:373:SER:H	1.83	0.43
2:n:134:ILE:HD13	2:n:163:PHE:CE1	2.54	0.43
7:m:270:SER:HB3	7:m:374:LEU:HB2	2.01	0.43
1:O:303:HIS:O	1:O:309:LYS:HE3	2.19	0.42
1:O:410:MET:N	1:O:411:PRO:HD2	2.33	0.42
1:O:1155:ARG:NH2	1:O:3691:LYS:HB3	2.34	0.42
1:O:1211:VAL:HA	1:O:1214:GLU:HG2	2.02	0.42
1:O:1653:LEU:HG	1:O:1695:LEU:HD23	2.01	0.42
1:O:1827:LEU:HD12	1:O:1828:LEU:HG	2.00	0.42
1:O:2532:PRO:HB2	1:O:2537:ASP:HB3	2.01	0.42
1:O:2972:TYR:HB3	1:O:2998:SER:HB3	2.01	0.42
2:L:593:ASN:HB2	2:L:594:PRO:HD3	2.00	0.42
5:A:66:PRO:HB3	5:A:69:ARG:HH21	1.83	0.42
6:B:91:LYS:NZ	6:B:92:ARG:HH12	2.15	0.42
4:H:83:ARG:HA	4:H:83:ARG:HD3	1.76	0.42
3:c:81:ARG:O	3:c:85:LEU:HG	2.19	0.42
5:a:126:LEU:O	5:a:130:ILE:HG13	2.18	0.42
1:o:130:LEU:O	1:o:134:LEU:HG	2.18	0.42
1:o:313:LEU:O	1:o:316:LEU:HG	2.19	0.42
1:o:575:ILE:HA	1:o:578:LYS:HG2	2.01	0.42
1:o:2956:ALA:HB2	1:o:2971:GLN:HB2	2.01	0.42
1:o:3044:MET:O	1:o:3048:LYS:HG3	2.19	0.42
1:o:3090:TYR:HB3	1:o:3095:ASP:HB2	2.00	0.42
1:o:3527:GLN:O	1:o:3529:ILE:HD12	2.19	0.42
1:o:3529:ILE:C	1:o:3532:PRO:HD2	2.43	0.42
2:N:463:LEU:HD21	2:N:477:PHE:HB3	2.00	0.42
2:N:674:PHE:HB2	2:N:675:TRP:HE3	1.84	0.42
7:M:367:PHE:CE1	7:M:429:PRO:HB2	2.54	0.42
8:i:33:DA:H2	9:j:121:DT:O2	2.01	0.42
8:i:79:DG:H21	9:j:76:DA:N6	2.16	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:j:123:DG:H2''	9:j:124:DA:H8	1.84	0.42
2:l:374:ALA:O	2:l:377:LEU:HG	2.19	0.42
1:O:87:LYS:HD2	1:O:831:LEU:HD23	2.01	0.42
1:O:173:LYS:HE3	1:O:173:LYS:HB2	1.89	0.42
1:O:664:SER:HA	1:O:667:TYR:CD2	2.44	0.42
1:O:787:PRO:HA	1:O:790:LYS:HG2	2.00	0.42
1:O:1007:VAL:O	1:O:1011:GLU:HG2	2.19	0.42
1:O:1071:ASN:HB3	1:O:1074:LYS:HG2	2.01	0.42
1:O:1140:LYS:HB3	1:O:1140:LYS:HE3	1.80	0.42
1:O:1183:CYS:HA	1:O:1186:LYS:HE3	2.00	0.42
1:O:3121:LEU:O	1:O:3125:ARG:HG2	2.19	0.42
1:O:3274:VAL:O	1:O:3277:VAL:HB	2.19	0.42
1:O:3389:VAL:HG13	1:O:3413:TYR:HE1	1.83	0.42
1:O:3509:ASP:HA	1:O:3547:THR:HG21	2.01	0.42
3:C:65:LEU:HD12	3:C:93:LEU:HD11	2.01	0.42
5:A:115:LYS:HE2	5:A:115:LYS:HB2	1.91	0.42
3:G:77:ARG:HD3	3:G:78:ILE:H	1.84	0.42
3:c:92:GLU:HG3	4:d:102:GLU:HG3	2.01	0.42
3:c:107:VAL:HG12	5:a:58:THR:HG22	2.02	0.42
1:o:35:ILE:HB	1:o:80:GLU:OE1	2.19	0.42
1:o:111:CYS:SG	1:o:133:LYS:HD2	2.60	0.42
1:o:200:PHE:HE2	1:o:227:LEU:HD22	1.83	0.42
1:o:966:PHE:HA	1:o:969:LEU:HB2	2.01	0.42
1:o:1651:LYS:HB3	1:o:2045:PHE:CZ	2.54	0.42
1:o:2120:ARG:N	1:o:2159:PRO:HG2	2.34	0.42
1:o:2196:TRP:HB3	1:o:2722:ARG:HH22	1.84	0.42
1:o:3247:ARG:HG3	1:o:3286:CYS:SG	2.60	0.42
1:o:3450:MET:HG3	1:o:3468:LEU:HD21	2.01	0.42
1:o:3859:TYR:HB3	1:o:4119:ARG:HE	1.85	0.42
1:o:3882:LEU:HB2	1:o:3885:ARG:HH21	1.84	0.42
2:N:109:ASP:HA	2:N:112:ILE:HD12	2.01	0.42
2:N:225:TYR:CG	2:N:229:GLU:HG3	2.55	0.42
2:N:249:CYS:SG	2:N:397:TYR:HB2	2.59	0.42
7:K:192:ASP:HA	7:K:195:ASP:OD2	2.19	0.42
8:i:70:DG:H2''	8:i:71:DT:H5'	2.00	0.42
9:j:110:DT:H2''	9:j:111:DC:C5	2.54	0.42
2:l:254:GLY:HA3	2:l:257:LEU:HB2	2.02	0.42
2:n:390:VAL:HG12	2:n:409:PHE:HA	2.02	0.42
7:m:73:SER:HA	7:m:76:ILE:HG22	2.02	0.42
1:O:79:ARG:NH2	1:O:124:LYS:HB2	2.34	0.42
1:O:1478:SER:O	1:O:1482:GLU:OE1	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1578:ALA:O	1:O:1582:LEU:HD23	2.19	0.42
1:O:3854:ALA:HA	1:O:3857:LEU:HD12	2.00	0.42
2:L:296:CYS:HB2	7:M:299:LYS:NZ	2.35	0.42
2:L:618:ASN:O	2:L:621:GLU:HG2	2.20	0.42
1:o:361:ILE:HG13	1:o:364:ARG:NH2	2.31	0.42
1:o:485:GLN:HB2	1:o:2043:PHE:CZ	2.54	0.42
1:o:574:LYS:O	1:o:577:GLU:HG3	2.19	0.42
1:o:1178:ARG:N	1:o:1184:ARG:HG3	2.34	0.42
1:o:1360:LYS:HB3	1:o:1366:THR:HB	2.01	0.42
1:o:2347:LYS:HB3	1:o:2351:GLN:NE2	2.34	0.42
1:o:3573:ASN:O	1:o:3577:GLN:HG2	2.19	0.42
2:N:639:ILE:HD13	2:N:639:ILE:HA	1.88	0.42
2:N:661:ALA:O	2:N:665:LYS:HG2	2.18	0.42
7:M:363:ARG:HG3	7:M:436:PHE:CG	2.54	0.42
7:M:420:LEU:HB3	7:M:424:LYS:HA	2.02	0.42
9:J:42:DG:H5'	9:J:42:DG:C8	2.54	0.42
8:i:139:DT:H2''	8:i:140:DA:C8	2.54	0.42
9:j:72:DG:H2''	9:j:73:DG:O5'	2.20	0.42
2:l:170:GLY:HA2	2:l:194:LEU:H	1.85	0.42
2:n:44:ARG:HG3	2:n:238:LYS:O	2.18	0.42
2:n:230:SER:HA	2:n:234:LEU:HB3	2.01	0.42
2:n:496:HIS:CG	2:n:506:PRO:HD3	2.54	0.42
7:m:60:PHE:O	7:m:64:ILE:HG12	2.19	0.42
7:m:102:ILE:HG22	7:m:102:ILE:O	2.18	0.42
1:O:50:VAL:HA	1:O:53:LEU:HG	2.01	0.42
1:O:678:LYS:HA	1:O:678:LYS:HD3	1.86	0.42
1:O:741:ILE:HA	1:O:748:TYR:CZ	2.53	0.42
1:O:780:ILE:HG22	1:O:784:VAL:HG21	2.01	0.42
1:O:888:ARG:CZ	1:O:3889:ARG:HH12	2.33	0.42
1:O:1583:MET:HE3	1:O:1629:CYS:SG	2.59	0.42
1:O:1690:GLY:HA3	1:O:1745:LYS:HZ3	1.84	0.42
1:O:2361:ILE:HD11	1:O:2393:LEU:HD22	2.02	0.42
1:O:2485:ARG:HD2	1:O:2499:PHE:CZ	2.55	0.42
1:O:2832:ILE:HA	1:O:2835:LYS:HE2	2.02	0.42
3:C:78:ILE:HG12	4:D:50:GLY:O	2.19	0.42
1:o:148:LYS:HG2	1:o:151:GLU:OE2	2.19	0.42
1:o:275:PHE:CE2	1:o:319:PHE:HB2	2.54	0.42
1:o:1115:HIS:CE1	1:o:1182:GLU:H	2.36	0.42
1:o:1463:LEU:HD12	1:o:1466:ASN:OD1	2.19	0.42
1:o:1565:GLU:HG2	1:o:1566:THR:N	2.35	0.42
1:o:1843:ILE:O	1:o:1843:ILE:HG22	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:2331:MET:HE1	1:o:2337:LEU:H	1.84	0.42
1:o:3079:GLU:HG2	1:o:3102:TYR:CE1	2.55	0.42
1:o:3287:ARG:HA	1:o:3287:ARG:HD3	1.73	0.42
1:o:3467:ARG:O	1:o:3471:ILE:HG12	2.18	0.42
1:o:3828:TYR:HD1	1:o:3829:LEU:HD22	1.84	0.42
2:N:501:PRO:HB2	2:N:502:ARG:CZ	2.49	0.42
2:N:526:SER:C	2:N:529:PRO:HD2	2.44	0.42
7:K:167:MET:HE2	7:K:242:LEU:HD13	2.02	0.42
7:M:170:THR:H	7:M:205:LEU:HD13	1.85	0.42
7:M:505:ASP:HB3	7:M:508:LEU:HG	2.01	0.42
8:I:96:DC:H6	8:I:96:DC:H2'	1.68	0.42
9:J:46:DA:H2''	9:J:47:DA:N7	2.34	0.42
8:i:43:DG:H2''	8:i:44:DA:C8	2.54	0.42
9:j:75:DC:H2''	9:j:76:DA:N7	2.33	0.42
7:k:218:ARG:HD3	7:k:218:ARG:HA	1.79	0.42
7:k:357:LYS:HD2	7:k:359:HIS:CE1	2.53	0.42
2:n:77:ILE:HG21	2:n:113:VAL:HG11	2.01	0.42
2:n:168:SER:HB2	2:n:226:SER:N	2.34	0.42
1:O:213:ARG:HB2	7:M:404:ARG:NH1	2.35	0.42
1:O:933:LEU:O	1:O:937:MET:HE3	2.20	0.42
1:O:1145:LEU:CD1	1:O:1165:LEU:HB2	2.49	0.42
1:O:1539:SER:HA	1:O:1552:HIS:HB2	2.02	0.42
1:O:1630:ASP:C	1:O:1632:TRP:H	2.27	0.42
1:O:2514:ASN:HB3	1:O:2517:LEU:HB2	2.01	0.42
1:O:2559:THR:O	1:O:2562:LEU:HG	2.20	0.42
1:O:2957:LEU:O	1:O:2960:GLU:HG3	2.19	0.42
1:O:3061:LEU:O	1:O:3065:ILE:HG12	2.19	0.42
1:O:3870:SER:HA	1:O:3873:LYS:HE2	2.02	0.42
2:L:163:PHE:CD2	2:L:212:MET:HE3	2.55	0.42
2:L:204:GLY:O	2:L:207:ILE:HG22	2.20	0.42
2:L:496:HIS:CG	2:L:506:PRO:HD3	2.55	0.42
2:L:624:LEU:HG	2:L:625:ASP:OD1	2.20	0.42
6:B:75:HIS:CD2	4:h:77:LEU:HD21	2.55	0.42
3:c:107:VAL:HG23	5:a:101:VAL:HG11	2.01	0.42
1:o:881:LYS:HE3	1:o:883:TYR:CE1	2.55	0.42
1:o:1275:THR:HG23	1:o:1276:VAL:HG13	2.01	0.42
1:o:1774:MET:CG	1:o:1777:LEU:HB2	2.48	0.42
1:o:2331:MET:O	1:o:2331:MET:HG2	2.20	0.42
1:o:2806:LYS:HE2	1:o:2857:CYS:HB2	2.01	0.42
1:o:3154:GLN:HE22	1:o:3227:ILE:HD11	1.85	0.42
1:o:3193:ILE:HA	1:o:3196:LYS:HZ2	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:3349:ALA:HA	1:o:3352:GLU:HG2	2.02	0.42
1:o:3719:ILE:HA	1:o:3719:ILE:HD13	1.92	0.42
2:N:282:LYS:HE2	2:N:282:LYS:HB2	1.90	0.42
2:N:528:ILE:HB	2:N:529:PRO:HD3	2.01	0.42
3:g:101:THR:O	6:f:97:LEU:HG	2.19	0.42
7:K:250:GLU:HB2	7:K:252:ARG:HH12	1.80	0.42
8:i:124:DG:H2''	8:i:125:DG:C8	2.55	0.42
2:n:497:ARG:HG2	2:n:505:LEU:HD21	2.02	0.42
7:m:95:ASN:ND2	7:m:149:VAL:HG21	2.32	0.42
1:O:276:ALA:HA	1:O:318:SER:OG	2.19	0.42
1:O:783:HIS:HA	1:O:786:GLN:HB2	2.00	0.42
1:O:1576:ASP:OD1	1:O:1618:LEU:HD23	2.19	0.42
1:O:1586:SER:HB2	1:O:1593:VAL:HG21	2.02	0.42
1:O:2873:PRO:HA	1:O:2876:VAL:HG12	2.02	0.42
1:O:3103:ILE:O	1:O:3107:ILE:HG12	2.19	0.42
1:O:3444:ALA:HB2	1:O:3478:GLU:HG3	2.02	0.42
1:O:3854:ALA:HA	1:O:3857:LEU:HB2	2.02	0.42
2:L:40:MET:O	2:L:43:GLN:HG3	2.19	0.42
2:L:461:MET:HA	2:L:522:VAL:HG13	2.02	0.42
4:D:70:ILE:HD11	4:D:91:ILE:HG23	2.01	0.42
5:A:41:TYR:H	8:i:86:DG:H4'	1.84	0.42
3:c:61:GLU:O	3:c:64:GLU:HG3	2.19	0.42
1:o:38:LEU:HA	1:o:41:GLU:OE1	2.18	0.42
1:o:181:LEU:HD21	1:o:233:ASN:HD22	1.83	0.42
1:o:1395:LEU:O	1:o:1398:VAL:HG12	2.20	0.42
1:o:1560:TYR:O	1:o:1564:SER:CB	2.68	0.42
1:o:1708:GLU:HA	1:o:1711:ARG:HG2	2.00	0.42
1:o:2095:ALA:N	1:o:2096:PRO:HD2	2.34	0.42
1:o:2276:LEU:O	1:o:2280:VAL:HG23	2.19	0.42
1:o:2584:CYS:HB2	1:o:2586:PHE:CZ	2.54	0.42
1:o:3134:ALA:O	1:o:3138:ILE:HG12	2.19	0.42
1:o:3254:LEU:HB2	1:o:3256:MET:SD	2.59	0.42
2:N:358:GLY:O	7:K:364:PRO:HD3	2.19	0.42
7:M:235:GLU:OE2	7:M:237:SER:HB2	2.19	0.42
8:I:133:DC:H42	9:J:22:DA:H61	1.67	0.42
8:i:24:DG:N1	8:i:25:DG:N2	2.68	0.42
8:i:98:DC:C4	9:j:56:DG:C6	3.07	0.42
7:k:170:THR:H	7:k:205:LEU:HD23	1.84	0.42
1:O:461:ILE:O	1:O:464:VAL:HG22	2.20	0.42
1:O:1333:SER:O	1:O:1337:VAL:HG13	2.20	0.42
1:O:3792:SER:O	1:O:3803:ILE:HG13	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:3986:HIS:O	1:O:3989:ARG:HG2	2.19	0.42
1:O:4054:ALA:HA	1:O:4096:SER:HA	2.02	0.42
2:L:107:PHE:CE1	2:L:140:SER:HB2	2.54	0.42
1:o:19:LEU:HD23	1:o:33:GLN:HE22	1.85	0.42
1:o:112:THR:HG21	1:o:152:LEU:HD13	2.01	0.42
1:o:652:GLU:HA	1:o:655:LEU:HD12	2.01	0.42
1:o:715:ALA:O	1:o:718:MET:HG3	2.20	0.42
1:o:966:PHE:HD2	1:o:1011:GLU:OE2	2.02	0.42
1:o:1048:GLN:HA	1:o:1051:LYS:HG2	2.00	0.42
1:o:2584:CYS:HB2	1:o:2586:PHE:CE2	2.54	0.42
1:o:3159:ARG:HA	1:o:3162:ASN:ND2	2.34	0.42
1:o:3258:LEU:O	1:o:3261:GLU:HG2	2.20	0.42
2:N:306:LEU:HD23	2:N:309:ASP:HB2	2.01	0.42
8:I:146:DC:H6	8:I:146:DC:H2'	1.69	0.42
8:i:114:DC:H6	8:i:114:DC:H2'	1.73	0.42
9:j:140:DG:H2''	9:j:141:DG:C8	2.54	0.42
2:n:365:PHE:CE1	2:n:418:CYS:HB3	2.55	0.42
1:O:275:PHE:HD2	1:O:315:ALA:HB1	1.84	0.42
1:O:300:TRP:O	1:O:303:HIS:HB2	2.20	0.42
1:O:910:PHE:O	1:O:914:VAL:HG12	2.20	0.42
1:O:1328:GLU:HG2	1:O:1329:ARG:N	2.35	0.42
1:O:2796:ALA:O	1:O:2799:GLN:HG2	2.19	0.42
1:O:3084:GLN:HG2	1:O:3085:GLU:N	2.35	0.42
1:O:3793:VAL:HB	1:O:3803:ILE:HD12	2.01	0.42
1:O:3872:ARG:O	1:O:3875:GLU:HG2	2.20	0.42
1:O:3877:LYS:HZ2	1:O:4128:MET:HE3	1.85	0.42
2:L:340:PHE:CZ	2:L:393:VAL:HG21	2.54	0.42
1:o:337:LYS:HA	1:o:341:PHE:CD1	2.53	0.42
1:o:956:PRO:N	1:o:957:PRO:HD2	2.35	0.42
1:o:988:VAL:HA	1:o:991:LEU:HG	2.02	0.42
1:o:1186:LYS:HA	1:o:1186:LYS:HD2	1.81	0.42
1:o:1769:GLU:C	1:o:1822:ARG:HH22	2.28	0.42
1:o:3232:ARG:HA	1:o:3235:LYS:HD2	2.02	0.42
1:o:3531:TYR:O	1:o:3534:ILE:HG12	2.20	0.42
2:N:138:LEU:HD22	2:N:204:GLY:HA3	2.00	0.42
2:N:192:PHE:HE2	2:N:227:PHE:HB2	1.85	0.42
9:J:55:DG:H5'	9:J:55:DG:C8	2.54	0.42
9:J:137:DC:H1'	9:J:138:DC:H5'	2.02	0.42
9:j:50:DC:H4'	9:j:51:DC:H5'	2.02	0.42
2:l:58:LEU:HD22	2:l:80:HIS:CD2	2.54	0.42
2:l:109:ASP:HA	2:l:112:ILE:HD12	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:n:426:PHE:O	2:n:427:MET:HB3	2.20	0.42
1:O:584:GLU:O	1:O:613:HIS:HB3	2.19	0.42
1:O:852:ARG:HA	1:O:855:VAL:HB	2.01	0.42
1:O:1298:LEU:HB3	1:O:1367:HIS:CD2	2.55	0.42
1:O:1803:GLU:HA	1:O:1806:ARG:HE	1.84	0.42
1:O:1848:ILE:HD11	1:O:1915:LEU:HD21	2.00	0.42
1:O:2464:HIS:CG	1:O:2465:PRO:HD2	2.55	0.42
1:O:3110:PHE:CE1	1:O:3128:LYS:HB3	2.55	0.42
1:O:3929:MET:HA	1:O:3929:MET:HE3	2.02	0.42
1:O:4064:LEU:O	1:O:4068:HIS:HB3	2.19	0.42
4:D:56:MET:O	4:D:59:MET:HG3	2.18	0.42
3:G:96:LEU:HD21	4:H:99:LEU:HD13	2.01	0.42
1:o:108:LYS:HG3	1:o:148:LYS:HZ1	1.84	0.42
1:o:275:PHE:HE2	1:o:319:PHE:HB2	1.85	0.42
1:o:1149:LYS:HZ3	1:o:1151:ARG:HG2	1.85	0.42
1:o:1150:LYS:HA	1:o:1150:LYS:HD2	1.85	0.42
1:o:1357:LYS:HG3	1:o:1361:LYS:NZ	2.35	0.42
1:o:1560:TYR:HD1	1:o:1567:ILE:HD13	1.84	0.42
1:o:1593:VAL:O	1:o:1597:LEU:HG	2.20	0.42
1:o:3005:LEU:HB3	1:o:3007:GLU:OE1	2.20	0.42
1:o:3144:PHE:CE1	1:o:3158:LYS:HB2	2.47	0.42
1:o:3151:LEU:HD12	1:o:3151:LEU:HA	1.90	0.42
2:N:15:ASP:C	2:N:20:MET:HG3	2.44	0.42
2:N:703:LYS:HD3	2:N:703:LYS:HA	1.84	0.42
7:K:499:GLU:CD	7:K:499:GLU:H	2.28	0.42
7:M:169:PHE:HD1	7:M:205:LEU:HD11	1.85	0.42
9:J:105:DA:OP2	9:J:105:DA:H8	2.02	0.42
9:j:137:DC:H2"	9:j:138:DC:H6	1.84	0.42
7:k:38:LEU:HD11	7:k:167:MET:HB2	2.01	0.42
2:n:13:CYS:O	2:n:134:ILE:HA	2.19	0.42
2:n:13:CYS:O	2:n:14:MET:HE2	2.20	0.42
1:O:938:VAL:HA	1:O:941:MET:HG2	2.02	0.42
1:O:2456:ASN:O	1:O:2459:VAL:HG22	2.19	0.42
1:O:3459:ASN:O	1:O:3463:LEU:HG	2.20	0.42
6:B:84:MET:O	6:B:87:VAL:HG22	2.20	0.42
1:o:19:LEU:HD22	1:o:34:LEU:HA	2.02	0.42
1:o:207:GLN:HB2	1:o:216:LYS:HE3	2.02	0.42
1:o:212:VAL:O	1:o:212:VAL:HG12	2.20	0.42
1:o:910:PHE:O	1:o:914:VAL:HG12	2.19	0.42
1:o:1185:HIS:HA	1:o:1188:ILE:HG12	2.01	0.42
1:o:3123:GLN:HA	1:o:3126:LEU:HD12	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:3487:ILE:HG13	1:o:3516:HIS:HB2	2.01	0.42
1:o:3494:GLN:HB3	1:o:3708:ARG:HH21	1.85	0.42
1:o:3580:ASN:N	1:o:3734:ARG:HH22	2.17	0.42
2:N:457:LEU:HD13	2:N:529:PRO:HB2	2.01	0.42
7:K:49:PHE:HB3	7:K:128:GLN:NE2	2.35	0.42
7:K:143:LEU:O	7:K:147:LEU:HG	2.20	0.42
7:K:260:LYS:HB3	7:K:260:LYS:HE2	1.89	0.42
7:M:269:ILE:HB	7:M:378:SER:HB3	2.02	0.42
9:J:31:DT:H2''	9:J:32:DG:H5'	2.02	0.42
9:J:36:DA:H2'	9:J:37:DC:O4'	2.20	0.42
2:l:266:SER:OG	2:l:363:LYS:HE3	2.20	0.42
2:l:356:PHE:CG	2:l:422:VAL:HG11	2.54	0.42
2:l:370:ASP:HB3	2:l:373:ALA:HB3	2.02	0.42
7:m:72:ILE:HG12	7:m:497:LEU:HD21	2.02	0.42
1:O:79:ARG:NH1	1:O:124:LYS:HB2	2.35	0.41
1:O:437:HIS:HA	1:O:440:VAL:HG22	2.02	0.41
1:O:1358:LEU:HD23	1:O:1361:LYS:HD3	2.02	0.41
1:O:1418:HIS:O	1:O:1422:LYS:HG2	2.20	0.41
1:O:1772:HIS:CE1	1:O:1773:VAL:HG13	2.55	0.41
1:O:1801:VAL:O	1:O:1804:MET:HG3	2.20	0.41
1:O:2232:ARG:HD2	1:O:2235:LEU:HD12	2.01	0.41
1:O:3163:THR:C	1:O:3165:THR:H	2.28	0.41
1:O:3246:ALA:HA	1:O:3251:ASN:OD1	2.20	0.41
1:O:3300:VAL:O	1:O:3300:VAL:HG13	2.20	0.41
2:L:14:MET:HE3	2:L:15:ASP:O	2.20	0.41
2:L:462:SER:HA	7:M:350:PHE:HB2	2.02	0.41
2:L:598:PHE:CZ	2:L:616:LEU:HD12	2.55	0.41
2:L:728:LEU:HD13	1:o:1915:LEU:HD13	2.02	0.41
4:D:58:ILE:HA	6:B:99:GLY:HA2	2.01	0.41
5:A:54:TYR:HD2	6:B:39:ARG:HB2	1.85	0.41
3:G:79:ILE:O	3:G:83:LEU:HG	2.20	0.41
6:F:57:VAL:HA	6:F:60:VAL:HG12	2.01	0.41
5:a:119:ILE:HG23	5:a:124:ILE:HD11	2.02	0.41
1:o:87:LYS:HD3	1:o:831:LEU:HB2	2.02	0.41
1:o:316:LEU:O	1:o:320:LEU:HG	2.20	0.41
1:o:323:VAL:O	1:o:327:VAL:HG22	2.20	0.41
1:o:449:TYR:CD2	1:o:453:MET:HE1	2.55	0.41
1:o:655:LEU:HB3	1:o:659:ARG:HH12	1.85	0.41
1:o:871:LEU:O	1:o:879:MET:HG2	2.20	0.41
1:o:919:LEU:HD11	1:o:971:ARG:HD2	2.02	0.41
1:o:959:TYR:HB3	1:o:963:LYS:NZ	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:1071:ASN:HB3	1:o:1074:LYS:HE2	2.02	0.41
1:o:2420:PHE:O	1:o:2423:VAL:HG12	2.20	0.41
1:o:3716:HIS:CD2	1:o:3717:VAL:HG13	2.55	0.41
1:o:3732:LEU:HD12	1:o:3732:LEU:HA	1.89	0.41
1:o:3965:ARG:O	1:o:3968:ILE:HG22	2.20	0.41
2:N:33:GLN:O	2:N:37:VAL:HG23	2.20	0.41
2:N:420:VAL:HG21	7:K:359:HIS:HB3	2.02	0.41
2:N:431:ARG:HH22	7:K:278:GLN:CB	2.32	0.41
5:e:98:ALA:HA	5:e:101:VAL:HG12	2.02	0.41
5:e:107:THR:HG21	5:e:124:ILE:HG12	2.01	0.41
8:I:119:DC:H5'	9:J:35:DG:H22	1.85	0.41
8:i:94:DA:H5'	8:i:94:DA:C8	2.55	0.41
8:i:134:DA:H2'	8:i:135:DG:H8	1.83	0.41
9:j:51:DC:H2''	9:j:52:DC:C5	2.55	0.41
9:j:93:DA:H1'	9:j:94:DA:C8	2.55	0.41
2:l:168:SER:HB2	2:l:226:SER:N	2.35	0.41
2:l:516:LEU:O	7:k:348:MET:HE1	2.19	0.41
1:O:377:ASN:O	1:O:381:VAL:HG23	2.21	0.41
1:O:1441:ALA:HA	1:O:1444:ASP:HB3	2.02	0.41
1:O:1524:LEU:O	1:O:1528:LEU:HG	2.19	0.41
1:O:1605:PHE:HD1	1:O:2042:GLN:NE2	2.17	0.41
1:O:1767:CYS:HA	1:O:1822:ARG:NH1	2.36	0.41
1:O:1776:GLU:O	1:O:1779:GLN:HG3	2.20	0.41
1:O:2394:LYS:O	1:O:2398:LEU:HG	2.20	0.41
1:O:3262:LEU:O	1:O:3265:GLU:HG2	2.20	0.41
2:L:73:GLN:HG3	2:L:74:TYR:HD1	1.85	0.41
5:E:65:LEU:HD23	5:E:65:LEU:HA	1.91	0.41
6:b:80:THR:HG22	9:J:105:DA:OP1	2.20	0.41
1:o:162:LEU:HD22	1:o:164:LYS:HZ1	1.85	0.41
1:o:432:THR:O	1:o:435:LEU:HG	2.21	0.41
1:o:460:ALA:O	1:o:464:VAL:HG13	2.21	0.41
1:o:710:PHE:HA	1:o:713:GLU:OE2	2.20	0.41
1:o:1102:GLU:H	1:o:1102:GLU:CD	2.28	0.41
1:o:1400:VAL:HG11	1:o:1460:ARG:HB3	2.03	0.41
1:o:2184:TYR:HD1	1:o:2732:PHE:CZ	2.38	0.41
1:o:3699:LEU:HB3	1:o:3714:GLU:OE2	2.19	0.41
2:N:246:HIS:CD2	2:N:265:LYS:H	2.38	0.41
2:N:299:ASP:CG	2:N:300:ASP:H	2.28	0.41
2:N:427:MET:HE2	7:K:478:PHE:H	1.84	0.41
2:N:509:GLN:O	2:N:512:ILE:HG22	2.19	0.41
3:g:57:TYR:CZ	4:h:106:HIS:HB3	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:K:52:GLN:HE22	7:K:207:LYS:HA	1.84	0.41
7:K:369:TYR:CG	7:K:370:PRO:HD2	2.55	0.41
7:M:68:GLN:HE22	7:M:120:ASP:HA	1.84	0.41
7:M:371:GLU:HG3	7:M:373:SER:H	1.84	0.41
9:j:43:DA:H2''	9:j:44:DG:H8	1.83	0.41
9:j:57:DC:H2''	9:j:58:DG:H5'	2.02	0.41
2:l:486:ARG:HH11	7:k:407:PRO:HG2	1.85	0.41
7:k:71:TYR:CE2	7:k:75:ILE:HD11	2.55	0.41
7:m:504:VAL:HG12	7:m:506:LEU:HG	2.02	0.41
1:O:451:PRO:HA	1:O:454:GLN:HB2	2.02	0.41
1:O:1455:CYS:SG	1:O:1517:LEU:HD22	2.60	0.41
1:O:2253:TYR:HA	1:O:2256:ILE:HD12	2.02	0.41
1:O:2555:LEU:HB2	1:O:2809:PHE:CD1	2.55	0.41
1:O:2586:PHE:HB3	1:O:2776:ARG:HD2	2.01	0.41
1:O:2773:ARG:NH2	1:O:2785:ILE:HG21	2.34	0.41
1:O:2938:VAL:O	1:O:2942:ILE:HG12	2.20	0.41
1:O:3483:MET:HE3	1:O:3511:ALA:HB3	2.02	0.41
1:O:3496:ILE:HA	1:O:3499:ILE:HG23	2.03	0.41
2:L:643:ARG:HB2	2:L:655:PHE:HE2	1.84	0.41
3:C:87:ILE:HG22	3:C:94:ASN:ND2	2.34	0.41
5:A:101:VAL:O	5:A:104:PHE:HB2	2.19	0.41
6:B:39:ARG:HH12	6:B:46:ILE:HD11	1.85	0.41
4:H:92:GLN:HG3	4:H:108:VAL:HG22	2.02	0.41
5:E:42:ARG:HE	5:E:44:GLY:HA3	1.85	0.41
3:c:77:ARG:HD3	4:d:52:SER:HB3	2.02	0.41
1:o:42:CYS:HA	1:o:88:PHE:CD1	2.55	0.41
1:o:204:LEU:HB3	1:o:249:PHE:CD1	2.55	0.41
1:o:759:GLY:HA2	1:o:762:TYR:O	2.19	0.41
1:o:3099:ALA:O	1:o:3103:ILE:HG12	2.20	0.41
1:o:3143:SER:HA	1:o:3147:LYS:HD3	2.03	0.41
1:o:3172:LYS:HA	1:o:3249:GLN:HE21	1.85	0.41
1:o:3500:SER:HA	1:o:3532:PRO:HB3	2.01	0.41
1:o:3576:ASP:C	1:o:3578:LEU:H	2.27	0.41
1:o:3834:ALA:HB3	1:o:3835:PRO:HD3	2.02	0.41
6:f:66:ILE:HG13	6:f:67:ARG:N	2.34	0.41
9:J:38:DT:H6	9:J:38:DT:H2'	1.62	0.41
9:J:44:DG:H2''	9:J:45:DT:C6	2.55	0.41
8:i:25:DG:H2'	8:i:25:DG:OP2	2.20	0.41
9:j:30:DC:H2''	9:j:31:DC:C5	2.55	0.41
9:j:62:DA:H2''	9:j:63:DA:H8	1.85	0.41
2:l:167:PHE:CZ	2:l:197:ILE:HD12	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:m:334:THR:O	7:m:337:LEU:HG	2.20	0.41
1:O:486:GLY:O	1:O:490:ILE:HG12	2.21	0.41
1:O:1115:HIS:CE1	1:O:1180:GLN:HA	2.56	0.41
1:O:1676:ILE:O	1:O:1679:LEU:HG	2.19	0.41
1:O:1922:ALA:HB1	1:O:1940:TYR:OH	2.20	0.41
1:O:2517:LEU:HA	1:O:2520:ILE:HG22	2.02	0.41
1:O:2776:ARG:HH12	1:O:2785:ILE:HB	1.85	0.41
1:O:2978:LYS:NZ	1:O:2981:TRP:HA	2.36	0.41
1:O:3302:LYS:HA	1:O:3302:LYS:HD3	1.90	0.41
1:O:3496:ILE:HG21	1:O:3707:GLY:H	1.85	0.41
1:O:3828:TYR:O	1:O:3832:PRO:HD2	2.21	0.41
1:O:3842:TRP:CH2	1:O:4119:ARG:HA	2.55	0.41
1:O:4098:LEU:HD23	1:O:4098:LEU:H	1.85	0.41
2:L:427:MET:HG2	7:M:478:PHE:O	2.20	0.41
1:o:473:PRO:HA	1:o:476:ARG:HG2	2.01	0.41
1:o:493:LYS:HB3	1:o:493:LYS:HE2	1.78	0.41
1:o:626:LEU:HD12	1:o:627:VAL:N	2.36	0.41
1:o:1590:THR:HA	1:o:1593:VAL:HG22	2.02	0.41
1:o:1627:LYS:HA	1:o:1627:LYS:HD2	1.82	0.41
1:o:1816:ARG:HA	1:o:1819:PHE:CE2	2.55	0.41
1:o:1869:LYS:HA	1:o:1869:LYS:HD3	1.84	0.41
1:o:2047:THR:HG23	1:o:2049:VAL:N	2.34	0.41
1:o:2133:LEU:HD12	1:o:2143:ARG:HB2	2.01	0.41
1:o:3041:LEU:O	1:o:3045:ILE:HG12	2.19	0.41
1:o:3419:PHE:O	1:o:3423:GLN:HG2	2.19	0.41
1:o:3766:GLN:O	1:o:3770:VAL:HG13	2.21	0.41
1:o:4046:TYR:HD1	1:o:4049:ARG:HH12	1.69	0.41
7:M:334:THR:O	7:M:337:LEU:HG	2.21	0.41
8:I:29:DC:H6	8:I:29:DC:H2'	1.71	0.41
8:i:115:DT:H2''	8:i:116:DA:H8	1.85	0.41
2:l:256:ASN:HB2	7:k:522:VAL:HG21	2.02	0.41
2:l:493:CYS:SG	2:l:505:LEU:HD13	2.60	0.41
7:k:143:LEU:HD23	7:k:143:LEU:HA	1.91	0.41
7:k:462:MET:HB2	7:k:525:PHE:CE1	2.55	0.41
2:n:534:LYS:HE3	7:m:266:ASP:HB2	2.02	0.41
1:O:294:PHE:HA	1:O:297:LEU:HD12	2.02	0.41
1:O:628:GLU:HA	1:O:631:ARG:HG2	2.02	0.41
1:O:704:PHE:O	1:O:708:VAL:HG13	2.19	0.41
1:O:864:GLY:HA2	1:O:867:ASN:HB2	2.01	0.41
1:O:959:TYR:O	1:O:963:LYS:HG3	2.20	0.41
1:O:1013:ILE:HG12	1:O:1033:ILE:HG13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1593:VAL:O	1:O:1597:LEU:HG	2.20	0.41
1:O:2186:VAL:O	1:O:2189:ILE:HG22	2.21	0.41
1:O:2522:ARG:HH22	1:O:2560:ASN:C	2.29	0.41
1:O:3059:GLN:HB3	1:O:3062:LEU:HB3	2.03	0.41
1:O:3161:LEU:HB2	1:O:3166:ASN:HD21	1.86	0.41
2:L:37:VAL:HG22	2:L:40:MET:HE2	2.02	0.41
2:L:405:VAL:HB	2:L:426:PHE:CE1	2.55	0.41
2:L:703:LYS:HA	2:L:703:LYS:HD2	1.90	0.41
3:C:26:PRO:HD3	4:D:37:TYR:CG	2.55	0.41
3:C:47:ALA:N	3:C:48:PRO:HD2	2.36	0.41
3:C:64:GLU:HA	4:D:46:HIS:NE2	2.35	0.41
6:B:30:THR:HG21	9:j:64:DA:H5''	2.03	0.41
1:o:945:ALA:HA	1:o:951:GLY:O	2.21	0.41
1:o:1111:LEU:HD21	1:o:1127:CYS:HB3	2.01	0.41
1:o:1176:CYS:SG	1:o:1188:ILE:HG22	2.60	0.41
1:o:1361:LYS:HE3	1:o:1411:TYR:HE1	1.85	0.41
1:o:1618:LEU:O	1:o:1622:ILE:HG12	2.20	0.41
1:o:2425:ARG:HH22	1:o:2460:GLU:HB2	1.84	0.41
1:o:3585:PHE:O	1:o:3586:LYS:C	2.63	0.41
1:o:3665:MET:O	1:o:3668:LEU:HG	2.21	0.41
1:o:3929:MET:SD	1:o:3938:ILE:HB	2.61	0.41
7:M:203:MET:HE1	7:M:236:SER:HB3	2.02	0.41
8:i:36:DG:H1'	8:i:37:DG:O4'	2.21	0.41
8:i:63:DA:H2''	8:i:64:DA:H8	1.84	0.41
9:j:92:DT:H1'	9:j:93:DA:H5'	2.03	0.41
2:l:30:PRO:HB3	2:l:227:PHE:CE2	2.55	0.41
7:k:348:MET:HG3	7:k:398:CYS:HA	2.03	0.41
1:O:79:ARG:HH22	1:O:124:LYS:HB2	1.85	0.41
1:O:407:VAL:O	1:O:410:MET:HG2	2.19	0.41
1:O:756:PHE:CD2	1:O:796:LEU:HB3	2.55	0.41
1:O:933:LEU:HG	1:O:937:MET:HE3	2.03	0.41
1:O:941:MET:HB2	1:O:958:MET:HE3	2.02	0.41
1:O:1029:CYS:O	1:O:1033:ILE:HG12	2.20	0.41
1:O:1238:GLN:HA	1:O:1309:ALA:O	2.21	0.41
1:O:1960:LYS:HE2	1:O:1963:GLN:N	2.35	0.41
1:O:2481:HIS:CD2	1:O:2485:ARG:HD3	2.55	0.41
1:O:2555:LEU:HB3	1:O:2854:PHE:HE1	1.85	0.41
1:O:3190:LEU:HB3	1:O:3231:ILE:HD12	2.01	0.41
2:L:153:SER:HA	2:L:156:LYS:HE2	2.01	0.41
2:L:429:ASP:HB3	7:M:278:GLN:O	2.20	0.41
3:C:111:ILE:HD12	3:C:111:ILE:HA	1.93	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:67:PHE:O	4:D:70:ILE:HG22	2.20	0.41
1:o:128:LEU:HD21	1:o:171:LEU:HD23	2.02	0.41
1:o:468:LEU:HD13	1:o:478:CYS:SG	2.61	0.41
1:o:903:PRO:HG3	1:o:2816:ILE:HD13	2.02	0.41
1:o:1069:HIS:HE2	1:o:3745:GLU:HB2	1.85	0.41
1:o:1209:LYS:HB3	1:o:1213:LYS:HZ2	1.85	0.41
1:o:1454:ALA:HA	1:o:1457:GLN:OE1	2.21	0.41
1:o:2386:LEU:HD12	1:o:2418:LYS:HG2	2.02	0.41
1:o:3114:TYR:HD1	1:o:3128:LYS:HG2	1.86	0.41
1:o:3335:ARG:HD2	1:o:3336:ILE:HD13	2.03	0.41
1:o:3585:PHE:CZ	1:o:3667:LEU:HD12	2.55	0.41
1:o:3741:ARG:HA	1:o:3746:ARG:O	2.20	0.41
1:o:3853:GLY:HA2	1:o:3856:MET:HE2	2.02	0.41
2:N:311:ILE:HD13	7:K:290:ARG:HH22	1.86	0.41
2:N:404:GLN:HG3	2:N:423:GLN:HE22	1.86	0.41
2:N:444:TYR:OH	7:K:372:GLU:HG3	2.21	0.41
2:N:663:GLN:HA	2:N:666:VAL:HG12	2.02	0.41
2:N:686:ILE:HD12	2:N:702:LYS:HZ3	1.85	0.41
7:K:82:LEU:HG	7:K:108:LEU:HD22	2.03	0.41
7:K:512:GLU:H	7:K:512:GLU:CD	2.29	0.41
7:M:145:GLU:HA	7:M:148:TRP:HB2	2.02	0.41
7:M:189:LYS:HE3	7:M:189:LYS:HB3	1.88	0.41
8:i:16:DG:H2"	8:i:17:DG:H8	1.84	0.41
7:k:42:VAL:HB	7:k:87:PHE:CD2	2.55	0.41
7:k:75:ILE:CD1	7:k:116:ILE:HD11	2.50	0.41
7:k:184:SER:HB2	7:k:187:ARG:HH21	1.86	0.41
7:k:283:PRO:HA	7:k:284:PRO:HD3	1.91	0.41
2:n:13:CYS:C	2:n:14:MET:HE2	2.46	0.41
2:n:345:PHE:CG	7:m:466:VAL:HG13	2.55	0.41
7:m:203:MET:HE3	7:m:242:LEU:HD22	2.02	0.41
7:m:262:LYS:HG2	7:m:268:VAL:HG13	2.02	0.41
1:O:430:VAL:HG23	1:O:431:TYR:CD1	2.55	0.41
1:O:1146:ASN:HD22	1:O:1199:PRO:HD3	1.85	0.41
1:O:1795:VAL:HA	1:O:1798:LEU:HG	2.03	0.41
1:O:1947:CYS:O	1:O:1951:VAL:HG13	2.21	0.41
1:O:2207:LYS:HA	1:O:2207:LYS:HD2	1.73	0.41
1:O:2376:ASP:HA	1:O:2379:MET:CE	2.45	0.41
1:O:2773:ARG:HH22	1:O:2785:ILE:HG21	1.86	0.41
1:O:2794:LEU:HA	1:O:2797:VAL:HG22	2.03	0.41
1:O:3749:PRO:HG3	1:O:3807:GLU:HG2	2.03	0.41
1:O:4126:PRO:HD2	1:O:4127:TRP:CZ3	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:599:ARG:HH21	2:L:638:CYS:HA	1.85	0.41
5:A:46:VAL:HG22	5:A:49:ARG:NH2	2.36	0.41
6:b:88:TYR:HD1	6:b:91:LYS:HD2	1.84	0.41
1:o:186:PRO:HD2	1:o:189:MET:HE1	2.03	0.41
1:o:1391:VAL:O	1:o:1395:LEU:HG	2.20	0.41
1:o:1400:VAL:HA	1:o:1403:MET:HE2	2.02	0.41
1:o:1423:ILE:HG13	1:o:1425:ALA:H	1.86	0.41
1:o:1688:LEU:O	1:o:1691:GLN:HG2	2.21	0.41
1:o:2538:ARG:NE	1:o:2565:MET:HG3	2.35	0.41
1:o:2776:ARG:HH11	1:o:2784:GLN:CD	2.28	0.41
1:o:3051:LEU:HA	1:o:3054:GLN:CD	2.45	0.41
1:o:3052:LEU:HG	1:o:3061:LEU:HD21	2.03	0.41
1:o:3903:HIS:CE1	1:o:3934:THR:HG22	2.55	0.41
1:o:4061:CYS:SG	1:o:4078:VAL:HB	2.61	0.41
2:N:46:VAL:O	2:N:49:GLU:HG3	2.20	0.41
2:N:463:LEU:HD11	2:N:477:PHE:HB2	2.02	0.41
5:e:99:TYR:CE2	5:e:103:LEU:HD11	2.56	0.41
7:K:143:LEU:HD22	7:K:176:HIS:NE2	2.35	0.41
7:M:399:ARG:HB2	7:M:408:PRO:HB2	2.01	0.41
8:I:21:DC:H1'	8:I:22:DG:OP2	2.21	0.41
9:J:37:DC:H2''	9:J:38:DT:O5'	2.21	0.41
8:i:34:DT:H2'	8:i:35:DT:C6	2.56	0.41
8:i:58:DG:H1'	8:i:59:DC:C6	2.56	0.41
9:j:22:DG:H2''	9:j:23:DA:O4'	2.20	0.41
7:k:388:LYS:HA	7:k:388:LYS:HD2	1.84	0.41
2:n:267:ILE:HG21	7:m:438:PRO:HB3	2.01	0.41
2:n:376:ALA:HB2	7:m:529:VAL:HG11	2.02	0.41
2:n:431:ARG:HH21	7:m:275:ASN:HB2	1.85	0.41
1:O:55:THR:HG22	1:O:59:PHE:CZ	2.56	0.41
1:O:676:ASN:HA	1:O:679:LYS:HD3	2.03	0.41
1:O:959:TYR:CE1	1:O:1007:VAL:HG21	2.54	0.41
1:O:1782:PHE:HD1	1:O:1785:ILE:HD12	1.86	0.41
1:O:2435:CYS:O	1:O:2439:ILE:HG12	2.20	0.41
1:O:3856:MET:HA	1:O:3859:TYR:CD2	2.56	0.41
4:D:98:LEU:O	4:D:100:PRO:HD3	2.20	0.41
5:A:106:ASP:HA	5:e:129:ARG:HH12	1.85	0.41
1:o:449:TYR:CG	1:o:453:MET:HE1	2.56	0.41
1:o:643:GLU:O	1:o:646:VAL:HG22	2.21	0.41
1:o:790:LYS:NZ	1:o:869:ASN:HA	2.36	0.41
1:o:938:VAL:HA	1:o:941:MET:HG3	2.02	0.41
1:o:1271:ILE:HG22	1:o:1281:VAL:HG11	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:1570:GLU:HA	1:o:1573:LYS:HE2	2.02	0.41
1:o:1909:ASN:HD21	1:o:1911:LEU:HB2	1.86	0.41
1:o:2328:ARG:HA	1:o:2371:PHE:HD1	1.86	0.41
1:o:2396:LEU:HA	1:o:2399:GLU:CD	2.45	0.41
1:o:3041:LEU:HA	1:o:3044:MET:HB2	2.03	0.41
1:o:3324:ARG:HH22	1:o:3408:GLY:HA3	1.85	0.41
1:o:3348:LEU:HA	1:o:3351:ILE:HB	2.02	0.41
1:o:3586:LYS:HG2	1:o:3590:ASN:OD1	2.20	0.41
1:o:3638:LYS:O	1:o:3642:LYS:HG3	2.20	0.41
3:g:29:ARG:HA	3:g:32:ARG:NH1	2.35	0.41
7:K:512:GLU:HA	7:K:515:ASN:ND2	2.35	0.41
7:K:525:PHE:HA	7:K:528:LEU:HB2	2.02	0.41
7:M:94:LYS:N	7:M:103:TYR:HA	2.34	0.41
7:M:411:VAL:HG12	7:M:436:PHE:HA	2.03	0.41
8:I:119:DC:C5	9:J:34:DA:H2	2.38	0.41
9:J:141:DG:H2''	9:J:142:DA:C8	2.56	0.41
8:i:103:DG:C8	8:i:103:DG:H5'	2.55	0.41
8:i:121:DC:H1'	8:i:122:DC:H5'	2.02	0.41
2:l:56:LEU:HD21	2:l:98:ILE:HD11	2.03	0.41
7:k:253:LYS:HA	7:k:253:LYS:HD3	1.77	0.41
7:m:348:MET:HE2	7:m:397:LEU:HD21	2.01	0.41
1:O:100:ILE:HG22	1:O:103:TYR:HB2	2.03	0.41
1:O:479:ILE:HA	1:O:482:VAL:HG12	2.02	0.41
1:O:540:MET:O	1:O:544:ILE:HG12	2.21	0.41
1:O:948:MET:HE1	1:O:950:GLU:HB2	2.02	0.41
1:O:1261:LEU:HD21	1:O:1337:VAL:HG12	2.02	0.41
1:O:1737:ASN:O	1:O:1740:VAL:HG22	2.21	0.41
1:O:1840:PHE:CD1	1:O:1880:MET:HE3	2.55	0.41
1:O:2164:TRP:O	1:O:2168:LEU:HG	2.21	0.41
1:O:2211:LEU:HA	1:O:2214:ARG:HH11	1.85	0.41
1:O:2216:LEU:O	1:O:2219:LEU:HG	2.21	0.41
1:O:2388:LYS:HE3	7:M:158:GLN:HA	2.03	0.41
1:O:3293:CYS:O	1:O:3297:VAL:HG23	2.20	0.41
1:O:3350:GLU:O	1:O:3357:ARG:HD2	2.21	0.41
1:O:3503:VAL:HG21	1:O:3533:PHE:HA	2.03	0.41
1:O:3527:GLN:HB2	1:O:3700:GLU:HB2	2.03	0.41
1:O:3687:MET:HG2	1:O:3722:PHE:HB3	2.02	0.41
1:O:3691:LYS:HA	1:O:3722:PHE:CE2	2.56	0.41
2:L:139:SER:HA	2:L:200:GLN:OE1	2.21	0.41
2:L:443:LYS:HB2	2:L:443:LYS:HE2	1.86	0.41
2:L:469:LYS:HD2	2:L:469:LYS:HA	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:109:LEU:HA	5:A:112:ILE:HD12	2.03	0.41
6:B:30:THR:O	6:B:34:ILE:HG13	2.21	0.41
1:o:793:LEU:N	1:o:794:PRO:HD2	2.36	0.41
1:o:881:LYS:HE3	1:o:883:TYR:CZ	2.56	0.41
1:o:956:PRO:CD	1:o:957:PRO:HD2	2.51	0.41
1:o:1311:LYS:HA	1:o:1311:LYS:HD3	1.77	0.41
1:o:1356:TRP:HD1	1:o:1359:LEU:HD11	1.86	0.41
1:o:1372:LEU:O	1:o:1376:LEU:HG	2.21	0.41
1:o:1583:MET:HB2	1:o:1629:CYS:HB3	2.02	0.41
1:o:1816:ARG:HD3	1:o:1819:PHE:CE2	2.55	0.41
1:o:1869:LYS:O	1:o:1873:TYR:HD1	2.04	0.41
1:o:2040:MET:HA	1:o:2043:PHE:HD2	1.86	0.41
1:o:2142:ILE:O	1:o:2146:LEU:HG	2.20	0.41
1:o:2283:ASN:HB3	1:o:2285:LEU:HG	2.03	0.41
1:o:2385:LEU:HA	1:o:2388:LYS:HD2	2.02	0.41
1:o:2394:LYS:HB2	1:o:2431:ARG:CZ	2.51	0.41
1:o:2395:THR:O	1:o:2399:GLU:OE1	2.38	0.41
1:o:2539:LEU:HD23	1:o:2543:ASN:OD1	2.21	0.41
1:o:2872:ASP:HA	1:o:2873:PRO:HD3	1.95	0.41
1:o:3759:ARG:HH21	1:o:4005:PHE:HE2	1.67	0.41
1:o:3812:LEU:HA	1:o:3815:LEU:HD12	2.01	0.41
2:N:88:PHE:CD2	7:K:325:ARG:HB2	2.56	0.41
2:N:192:PHE:HA	2:N:193:PRO:HD3	1.96	0.41
2:N:303:THR:HG21	7:K:289:TYR:CD1	2.56	0.41
2:N:333:TYR:N	7:K:485:GLN:HG2	2.36	0.41
2:N:406:GLY:HA3	2:N:421:TYR:CE1	2.55	0.41
2:N:455:ASP:HB2	7:K:388:LYS:HE2	2.02	0.41
3:g:100:VAL:HG13	6:f:96:THR:O	2.21	0.41
5:e:99:TYR:HD1	6:f:95:ARG:HH21	1.67	0.41
5:e:108:ASN:OD1	5:e:119:ILE:HD11	2.20	0.41
7:M:48:MET:HE1	7:M:171:ASN:H	1.86	0.41
7:M:288:LEU:HD22	7:M:295:PRO:HA	2.02	0.41
8:I:18:DT:H2''	8:I:19:DG:OP1	2.20	0.41
8:I:124:DG:H2''	8:I:125:DG:C8	2.56	0.41
9:J:126:DC:H6	9:J:126:DC:H2'	1.75	0.41
8:i:29:DC:H5	9:j:124:DA:H61	1.68	0.41
8:i:78:DT:H2''	8:i:79:DG:C5	2.56	0.41
9:j:102:DT:H2''	9:j:103:DA:N7	2.35	0.41
9:j:122:DT:H2''	9:j:123:DG:N7	2.36	0.41
9:j:124:DA:H2''	9:j:125:DG:H8	1.86	0.41
2:l:415:ASN:HB2	7:k:448:PHE:CE1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:k:263:LEU:HA	7:k:347:LEU:HB3	2.03	0.41
7:k:332:GLU:O	7:k:335:GLU:HG2	2.21	0.41
2:n:241:GLU:HG2	2:n:242:ARG:N	2.26	0.41
7:m:203:MET:HE3	7:m:242:LEU:HB3	2.02	0.41
1:O:385:TYR:HE2	1:O:428:PRO:HG2	1.86	0.41
1:O:1257:LEU:HD22	1:O:1337:VAL:HG11	2.03	0.41
1:O:1424:THR:HG22	1:O:1426:GLN:H	1.86	0.41
1:O:1956:PHE:CE2	1:O:1959:LEU:HB3	2.56	0.41
1:O:2269:ASP:O	1:O:2272:VAL:HG22	2.21	0.41
1:O:2475:ASN:HA	1:O:2478:MET:HG2	2.03	0.41
1:O:3608:LYS:O	1:O:3611:GLU:HG3	2.21	0.41
1:O:3788:LEU:HD12	1:O:3788:LEU:HA	1.88	0.41
1:O:3963:LEU:HA	1:O:3967:PHE:HD2	1.86	0.41
1:O:4041:ARG:HA	1:O:4044:ILE:HG12	2.03	0.41
5:E:63:ARG:HB3	8:I:94:DA:H5''	2.02	0.41
1:o:231:LEU:HA	1:o:234:PHE:CZ	2.56	0.41
1:o:459:ARG:HD3	1:o:540:MET:SD	2.61	0.41
1:o:570:LYS:O	1:o:573:LEU:HG	2.21	0.41
1:o:1060:PHE:HB3	1:o:1064:TYR:CZ	2.56	0.41
1:o:2208:ASP:OD1	1:o:2209:GLU:N	2.54	0.41
1:o:2238:ILE:O	1:o:2241:LEU:HG	2.21	0.41
1:o:2362:VAL:HG12	1:o:2366:LYS:NZ	2.35	0.41
1:o:2796:ALA:O	1:o:2799:GLN:HG3	2.21	0.41
1:o:3045:ILE:HD11	1:o:3082:TYR:CD2	2.47	0.41
1:o:3141:PHE:CZ	1:o:3145:ILE:HD11	2.56	0.41
1:o:3294:SER:HA	1:o:3297:VAL:HG22	2.02	0.41
2:N:205:LEU:O	2:N:208:VAL:HG12	2.21	0.41
2:N:675:TRP:O	2:N:679:VAL:HG22	2.21	0.41
3:g:75:LYS:HB3	3:g:82:HIS:CE1	2.56	0.41
6:f:87:VAL:HG13	6:f:91:LYS:NZ	2.36	0.41
7:K:93:ASP:HB3	7:K:101:ASN:N	2.35	0.41
9:J:117:DC:H6	9:J:117:DC:H2'	1.71	0.41
9:J:129:DC:H6	9:J:129:DC:H2'	1.68	0.41
9:J:135:DC:H2''	9:J:136:DA:O5'	2.21	0.41
9:j:140:DG:C2	9:j:141:DG:C5	3.08	0.41
2:l:111:LEU:HD21	2:l:134:ILE:HD11	2.03	0.41
2:n:76:ASN:HB2	2:n:105:ALA:HB2	2.03	0.41
2:n:237:PHE:HB3	2:n:239:LYS:HE2	2.03	0.41
7:m:263:LEU:HD12	7:m:267:ILE:HG21	2.03	0.41
1:O:139:ARG:HH22	1:O:181:LEU:H	1.68	0.40
1:O:741:ILE:HD13	1:O:776:TRP:HE1	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1070:PRO:HD2	1:O:3744:ASP:C	2.46	0.40
1:O:1379:PRO:O	1:O:1385:ASN:HB2	2.20	0.40
1:O:1787:ARG:HB3	1:O:1830:HIS:NE2	2.32	0.40
1:O:1960:LYS:HD3	1:O:1962:TYR:H	1.85	0.40
1:O:2851:PHE:HD2	1:O:2854:PHE:HB2	1.86	0.40
1:O:3151:LEU:HG	1:O:3197:LEU:HB2	2.04	0.40
1:O:3243:ILE:HG23	1:O:3283:LEU:HD22	2.03	0.40
1:O:3927:ASN:HD22	1:O:3941:ASP:HB2	1.86	0.40
1:O:4091:ALA:HB2	1:O:4109:ASP:OD2	2.21	0.40
2:L:345:PHE:CG	7:M:466:VAL:HG22	2.57	0.40
2:L:363:LYS:HD3	2:L:363:LYS:HA	1.89	0.40
3:C:44:GLY:HA3	3:C:48:PRO:HD3	2.04	0.40
4:D:63:VAL:HA	4:D:66:ILE:HG12	2.03	0.40
5:A:98:ALA:HB3	6:B:95:ARG:NH2	2.35	0.40
6:B:47:SER:OG	6:B:50:ILE:HG12	2.21	0.40
4:d:46:HIS:HB2	4:d:49:THR:HG22	2.03	0.40
1:o:49:ALA:HB1	1:o:52:ALA:HB3	2.02	0.40
1:o:186:PRO:HB2	1:o:188:GLU:OE1	2.21	0.40
1:o:891:ARG:NH2	1:o:958:MET:HE1	2.31	0.40
1:o:1071:ASN:ND2	1:o:1073:PHE:H	2.19	0.40
1:o:1294:VAL:O	1:o:1298:LEU:HD23	2.21	0.40
1:o:1579:VAL:O	1:o:1583:MET:HG2	2.20	0.40
1:o:1871:MET:HE3	1:o:1940:TYR:CD2	2.56	0.40
1:o:1883:ARG:HG2	1:o:1884:LEU:H	1.86	0.40
1:o:2147:ALA:O	1:o:2151:ILE:HG13	2.21	0.40
1:o:2193:ILE:HG23	1:o:2194:LEU:HD12	2.04	0.40
1:o:2546:TYR:CG	1:o:2547:SER:N	2.89	0.40
1:o:2840:PHE:HE2	1:o:2868:LEU:HD21	1.86	0.40
1:o:3100:LYS:O	1:o:3103:ILE:HB	2.21	0.40
2:N:44:ARG:HD3	2:N:239:LYS:HG2	2.03	0.40
2:N:74:TYR:CE1	2:N:113:VAL:HB	2.55	0.40
2:N:132:ILE:HD12	2:N:159:ILE:HG21	2.03	0.40
2:N:458:ILE:HB	7:K:392:LYS:NZ	2.36	0.40
5:e:72:ARG:HH22	8:i:54:DC:H5''	1.86	0.40
5:e:99:TYR:O	5:e:103:LEU:HG	2.21	0.40
7:K:213:ILE:HG23	7:K:234:GLU:HA	2.03	0.40
7:K:352:PRO:HB2	7:K:355:LEU:HG	2.04	0.40
7:K:487:PHE:O	7:K:490:LEU:HB2	2.21	0.40
7:M:240:GLU:HB3	7:M:244:ARG:NH2	2.36	0.40
9:J:64:DA:H2''	9:J:65:DA:C8	2.56	0.40
8:i:63:DA:C4	8:i:64:DA:C8	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:i:94:DA:C5	8:i:95:DC:N4	2.89	0.40
8:i:97:DG:H1'	8:i:98:DC:C5	2.57	0.40
9:j:56:DG:H2''	9:j:57:DC:C6	2.56	0.40
2:l:332:LYS:HG2	2:l:333:TYR:H	1.84	0.40
2:l:395:TYR:OH	2:l:397:TYR:HB3	2.21	0.40
7:k:95:ASN:HD21	7:k:99:PHE:HB2	1.86	0.40
2:n:125:LYS:HB2	2:n:127:PHE:CE2	2.56	0.40
1:O:306:VAL:HG22	1:O:309:LYS:HZ3	1.87	0.40
1:O:652:GLU:O	1:O:656:GLN:OE1	2.39	0.40
1:O:1307:ILE:HG13	1:O:1309:ALA:H	1.86	0.40
1:O:1328:GLU:HG2	1:O:1329:ARG:H	1.87	0.40
1:O:1608:ARG:HA	1:O:1608:ARG:HD3	1.81	0.40
1:O:1683:LYS:HE2	1:O:1683:LYS:HB2	1.94	0.40
1:O:3048:LYS:CB	1:O:3061:LEU:HD23	2.52	0.40
1:O:3387:GLU:O	1:O:3390:GLN:HG3	2.21	0.40
1:O:4102:THR:HA	1:O:4105:LYS:HG2	2.03	0.40
2:L:323:PHE:HZ	7:M:489:ASN:HB3	1.85	0.40
2:L:450:GLN:O	2:L:454:VAL:HG23	2.21	0.40
3:G:84:GLN:HA	3:G:87:ILE:HG22	2.03	0.40
5:E:51:ILE:HG12	6:F:39:ARG:O	2.21	0.40
4:d:59:MET:O	4:d:63:VAL:HG22	2.21	0.40
1:o:105:VAL:O	1:o:108:LYS:HG2	2.20	0.40
1:o:196:LEU:HB3	1:o:200:PHE:CZ	2.56	0.40
1:o:247:GLU:HB3	1:o:251:PHE:CE2	2.56	0.40
1:o:1447:ARG:O	1:o:1451:VAL:HG13	2.21	0.40
1:o:2253:TYR:CZ	1:o:2288:TYR:HA	2.56	0.40
1:o:2320:ALA:HB3	1:o:2366:LYS:HE2	2.03	0.40
1:o:2475:ASN:HA	1:o:2478:MET:HG2	2.04	0.40
1:o:2510:LEU:HD23	1:o:2510:LEU:HA	1.91	0.40
1:o:2806:LYS:HE3	1:o:2856:SER:OG	2.21	0.40
1:o:3176:MET:HE2	1:o:3179:TRP:CD1	2.56	0.40
1:o:3180:ASP:HA	1:o:3183:ILE:HB	2.02	0.40
1:o:3582:GLU:HA	1:o:3585:PHE:HB3	2.03	0.40
1:o:3751:LEU:HD23	1:o:3805:TRP:HB2	2.02	0.40
2:N:269:GLN:HB2	7:K:362:LEU:HD11	2.03	0.40
2:N:426:PHE:O	2:N:427:MET:HB2	2.22	0.40
5:e:86:SER:O	5:e:89:VAL:HG22	2.21	0.40
5:e:119:ILE:C	6:f:50:ILE:HD11	2.46	0.40
7:K:145:GLU:O	7:K:149:VAL:HG23	2.21	0.40
7:K:163:HIS:HB3	7:K:165:ARG:NH1	2.37	0.40
7:M:43:ASP:HB3	7:M:48:MET:SD	2.61	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:M:84:ALA:HB2	7:M:108:LEU:HG	2.03	0.40
7:M:234:GLU:OE2	7:M:241:ASP:HB2	2.21	0.40
8:I:79:DG:C6	9:J:76:DA:N1	2.89	0.40
8:I:98:DC:H3'	8:I:98:DC:OP2	2.20	0.40
8:I:112:DC:H1'	8:I:113:DC:N3	2.36	0.40
8:I:115:DT:H1'	8:I:116:DA:C8	2.55	0.40
8:i:108:DT:H6	8:i:108:DT:H2'	1.72	0.40
9:j:122:DT:H2''	9:j:123:DG:C8	2.56	0.40
2:l:68:LEU:HB3	2:l:74:TYR:CD2	2.56	0.40
2:l:381:ILE:HD13	2:l:417:GLU:HB2	2.04	0.40
7:m:494:ALA:O	7:m:495:LEU:HD23	2.21	0.40
1:O:234:PHE:CD2	1:O:235:THR:HG23	2.57	0.40
1:O:337:LYS:HG2	1:O:369:PHE:CE1	2.56	0.40
1:O:911:LEU:H	1:O:911:LEU:HG	1.66	0.40
1:O:1323:SER:HA	1:O:1328:GLU:OE1	2.22	0.40
1:O:1413:ASP:O	1:O:1416:GLU:HG2	2.22	0.40
1:O:1448:LEU:HD13	1:O:1510:LEU:HD22	2.03	0.40
1:O:1917:LYS:HE3	1:O:1917:LYS:HB3	1.86	0.40
1:O:2334:LYS:HB3	1:O:2334:LYS:HE3	1.81	0.40
1:O:2459:VAL:HB	1:O:2505:VAL:HG11	2.04	0.40
1:O:2721:GLY:HA3	1:O:2727:ARG:HH12	1.85	0.40
1:O:2824:LYS:HD3	1:O:2824:LYS:HA	1.84	0.40
1:O:3369:ASP:O	1:O:3373:VAL:HG23	2.21	0.40
1:O:3462:ARG:NH1	1:O:3494:GLN:HA	2.35	0.40
1:O:3548:GLY:O	1:O:3552:LYS:HG2	2.21	0.40
1:O:3567:VAL:HG13	1:O:3686:TRP:HE1	1.85	0.40
2:L:12:LEU:HD13	2:L:38:ILE:HG12	2.03	0.40
2:L:155:LYS:HG3	2:L:215:LEU:HD23	2.03	0.40
2:L:278:VAL:HA	7:M:318:ARG:HA	2.04	0.40
3:c:78:ILE:HD13	3:c:78:ILE:HA	1.94	0.40
1:o:623:PHE:O	1:o:626:LEU:HG	2.20	0.40
1:o:1066:LEU:HA	1:o:1069:HIS:CE1	2.57	0.40
1:o:1111:LEU:HD23	1:o:1111:LEU:HA	1.76	0.40
1:o:1136:ARG:O	1:o:1139:GLU:HG2	2.21	0.40
1:o:1558:TYR:HD2	1:o:1562:LEU:HD23	1.86	0.40
1:o:1841:SER:HA	1:o:1844:VAL:HG13	2.02	0.40
1:o:2260:PHE:HA	1:o:2270:ASN:HB3	2.02	0.40
1:o:2534:ASN:HD22	1:o:2537:ASP:CG	2.30	0.40
1:o:2935:GLU:OE1	1:o:2938:VAL:HB	2.21	0.40
1:o:3574:ALA:HB1	1:o:3684:SER:HB2	2.04	0.40
1:o:4073:ALA:HB1	1:o:4076:ASP:HB3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:7:LYS:HB2	2:N:51:LYS:HE3	2.04	0.40
2:N:346:CYS:HB2	2:N:350:GLN:OE1	2.21	0.40
7:K:321:ILE:HG13	7:K:326:GLN:HG2	2.03	0.40
7:M:132:GLN:O	7:M:136:GLY:HA2	2.21	0.40
7:M:345:LEU:HG	7:M:400:TYR:CD1	2.56	0.40
7:M:474:ARG:HG3	7:M:476:ASP:OD1	2.21	0.40
8:i:20:DC:H1'	8:i:21:DC:OP2	2.21	0.40
8:i:40:DG:H2''	8:i:41:DT:C6	2.56	0.40
9:j:98:DG:H1'	9:j:99:DT:H5'	2.04	0.40
2:l:7:LYS:HE3	2:l:126:LYS:HB3	2.04	0.40
1:O:71:LYS:HA	1:O:71:LYS:HD3	1.82	0.40
1:O:484:HIS:O	1:O:487:LEU:HG	2.22	0.40
1:O:1614:GLN:CD	1:O:1614:GLN:H	2.30	0.40
1:O:2210:VAL:HG13	1:O:2214:ARG:NH1	2.36	0.40
1:O:2575:PRO:HA	1:O:2785:ILE:O	2.20	0.40
1:O:2863:CYS:HB2	1:O:2895:GLU:CD	2.46	0.40
1:O:3324:ARG:HE	1:O:3324:ARG:HB3	1.78	0.40
1:O:3720:ALA:O	1:O:3741:ARG:HB2	2.21	0.40
1:O:3770:VAL:O	1:O:3774:ILE:HG12	2.21	0.40
2:L:127:PHE:HB3	2:L:130:ARG:HD2	2.02	0.40
4:D:39:TYR:HE1	4:D:51:ILE:HD11	1.86	0.40
6:B:71:THR:HG22	4:h:93:THR:HG23	2.03	0.40
4:H:79:HIS:NE2	3:c:37:GLY:HA2	2.37	0.40
3:c:80:PRO:HD3	4:d:55:ALA:HB2	2.04	0.40
5:a:63:ARG:NH2	8:I:64:DA:H5'	2.36	0.40
1:o:98:GLN:O	1:o:99:LYS:HD3	2.21	0.40
1:o:618:LYS:HD2	1:o:2034:SER:HB2	2.03	0.40
1:o:974:CYS:SG	1:o:1025:LEU:HA	2.62	0.40
1:o:1001:PHE:CE1	1:o:1052:SER:HB2	2.55	0.40
1:o:1369:MET:HE3	1:o:1369:MET:HB3	1.98	0.40
1:o:1847:ALA:HA	1:o:1873:TYR:CD2	2.57	0.40
1:o:3611:GLU:HA	1:o:3614:TYR:CZ	2.57	0.40
1:o:3644:PHE:CE1	1:o:3659:PHE:HB3	2.57	0.40
1:o:3699:LEU:HB3	1:o:3718:ARG:HH12	1.86	0.40
1:o:3746:ARG:HH12	1:o:3749:PRO:HD3	1.86	0.40
1:o:3833:ARG:HH21	1:o:4127:TRP:NE1	2.19	0.40
2:N:461:MET:HB3	2:N:526:SER:OG	2.22	0.40
7:M:94:LYS:HB2	7:M:103:TYR:CD2	2.56	0.40
7:M:202:LEU:H	7:M:202:LEU:HD23	1.87	0.40
8:I:105:DG:H2''	8:I:106:DA:C8	2.57	0.40
8:i:25:DG:C2	9:j:129:DC:N3	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:j:139:DG:C2	9:j:140:DG:C5	3.10	0.40
7:k:173:ASP:HB3	7:k:211:PHE:CD1	2.56	0.40
7:k:343:PRO:HB3	7:k:403:ARG:HA	2.02	0.40
7:m:90:THR:HA	7:m:137:HIS:HA	2.03	0.40
1:O:19:LEU:HB3	1:O:34:LEU:HD23	2.03	0.40
1:O:124:LYS:HA	1:O:124:LYS:HD3	1.97	0.40
1:O:576:VAL:HG21	1:O:649:PHE:HE1	1.85	0.40
1:O:617:PRO:HA	1:O:620:PHE:CD2	2.56	0.40
1:O:786:GLN:HA	1:O:789:TYR:CD2	2.56	0.40
1:O:869:ASN:O	1:O:870:LEU:HD22	2.22	0.40
1:O:1157:PHE:CE2	1:O:1167:ASP:HB3	2.57	0.40
1:O:1386:ILE:HG13	1:O:1387:GLY:N	2.37	0.40
1:O:1948:ALA:HA	1:O:1951:VAL:HG22	2.02	0.40
1:O:2122:LEU:HG	1:O:2126:MET:SD	2.62	0.40
1:O:2257:PHE:CE1	1:O:2299:TYR:HA	2.56	0.40
2:L:540:ILE:HB	7:M:376:ILE:HB	2.03	0.40
3:G:20:ARG:HB2	4:H:118:TYR:CE1	2.57	0.40
5:a:63:ARG:HD3	9:J:94:DA:C5'	2.47	0.40
1:o:15:LEU:HD22	1:o:40:GLN:NE2	2.36	0.40
1:o:265:TYR:O	1:o:308:LEU:HD21	2.22	0.40
1:o:314:SER:O	1:o:317:GLU:HG3	2.20	0.40
1:o:484:HIS:O	1:o:487:LEU:HG	2.22	0.40
1:o:790:LYS:HD3	1:o:790:LYS:HA	1.88	0.40
1:o:1034:ARG:NH2	1:o:1087:ARG:HD2	2.36	0.40
1:o:2301:GLN:HA	1:o:2304:VAL:HG22	2.04	0.40
1:o:2430:GLU:O	1:o:2434:VAL:HG13	2.21	0.40
1:o:2930:TYR:CZ	1:o:2938:VAL:HG11	2.57	0.40
1:o:3457:ASN:HB3	1:o:3491:PRO:HG3	2.03	0.40
1:o:3719:ILE:HG13	1:o:3740:ILE:HD12	2.04	0.40
2:N:141:ARG:HE	2:N:142:PHE:H	1.69	0.40
2:N:379:SER:HA	7:K:459:VAL:HG22	2.04	0.40
2:N:485:PRO:HG3	2:N:516:LEU:HD11	2.03	0.40
7:K:211:PHE:HB2	7:K:236:SER:O	2.20	0.40
7:K:384:ALA:O	7:K:388:LYS:HG2	2.21	0.40
8:i:27:DC:H2''	8:i:28:DG:C5	2.57	0.40
8:i:104:DG:C5	8:i:105:DG:C6	3.10	0.40
9:j:131:DT:H1'	9:j:132:DC:H5'	2.04	0.40
2:l:225:TYR:HB3	2:l:229:GLU:HB2	2.03	0.40
2:n:115:MET:HE1	2:n:159:ILE:HD12	2.02	0.40
2:n:266:SER:OG	2:n:363:LYS:HE3	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

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	O	3438/4128 (83%)	3136 (91%)	300 (9%)	2 (0%)	48	83
1	o	3427/4128 (83%)	3081 (90%)	341 (10%)	5 (0%)	48	83
2	L	648/732 (88%)	583 (90%)	65 (10%)	0	100	100
2	N	632/732 (86%)	577 (91%)	54 (8%)	1 (0%)	44	78
2	l	513/732 (70%)	473 (92%)	40 (8%)	0	100	100
2	n	513/732 (70%)	478 (93%)	35 (7%)	0	100	100
3	C	98/143 (68%)	83 (85%)	14 (14%)	1 (1%)	13	49
3	G	96/143 (67%)	96 (100%)	0	0	100	100
3	c	100/143 (70%)	92 (92%)	8 (8%)	0	100	100
3	g	97/143 (68%)	93 (96%)	3 (3%)	1 (1%)	13	49
4	D	90/126 (71%)	80 (89%)	10 (11%)	0	100	100
4	H	89/126 (71%)	86 (97%)	3 (3%)	0	100	100
4	d	89/126 (71%)	86 (97%)	2 (2%)	1 (1%)	12	46
4	h	90/126 (71%)	86 (96%)	4 (4%)	0	100	100
5	A	93/136 (68%)	89 (96%)	4 (4%)	0	100	100
5	E	94/136 (69%)	89 (95%)	5 (5%)	0	100	100
5	a	86/136 (63%)	80 (93%)	6 (7%)	0	100	100
5	e	86/136 (63%)	78 (91%)	8 (9%)	0	100	100
6	B	77/103 (75%)	75 (97%)	2 (3%)	0	100	100
6	F	77/103 (75%)	74 (96%)	3 (4%)	0	100	100
6	b	76/103 (74%)	76 (100%)	0	0	100	100
6	f	76/103 (74%)	75 (99%)	1 (1%)	0	100	100
7	K	489/609 (80%)	455 (93%)	34 (7%)	0	100	100
7	M	489/609 (80%)	454 (93%)	33 (7%)	2 (0%)	30	68
7	k	489/609 (80%)	468 (96%)	21 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
7	m	485/609 (80%)	457 (94%)	27 (6%)	1 (0%)	44	78
All	All	12537/15652 (80%)	11500 (92%)	1023 (8%)	14 (0%)	50	83

All (14) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	O	76	ILE
3	C	19	SER
1	o	1557	GLU
2	N	299	ASP
7	M	215	LEU
7	M	238	LYS
7	m	216	PHE
1	O	2311	ARG
4	d	35	SER
1	o	1631	SER
1	o	4004	VAL
1	o	4006	VAL
3	g	38	HIS
1	o	1723	PRO

5.3.2 Protein sidechains ⓘ

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	O	3106/3671 (85%)	3103 (100%)	3 (0%)	92	95
1	o	3090/3671 (84%)	3089 (100%)	1 (0%)	100	100
2	L	585/649 (90%)	585 (100%)	0	100	100
2	N	570/649 (88%)	570 (100%)	0	100	100
2	l	461/649 (71%)	461 (100%)	0	100	100
2	n	460/649 (71%)	460 (100%)	0	100	100
3	C	77/106 (73%)	77 (100%)	0	100	100
3	G	74/106 (70%)	74 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	c	77/106 (73%)	77 (100%)	0	100	100
3	g	75/106 (71%)	75 (100%)	0	100	100
4	D	75/105 (71%)	75 (100%)	0	100	100
4	H	74/105 (70%)	74 (100%)	0	100	100
4	d	76/105 (72%)	76 (100%)	0	100	100
4	h	78/105 (74%)	78 (100%)	0	100	100
5	A	82/111 (74%)	82 (100%)	0	100	100
5	E	84/111 (76%)	84 (100%)	0	100	100
5	a	76/111 (68%)	76 (100%)	0	100	100
5	e	77/111 (69%)	77 (100%)	0	100	100
6	B	65/79 (82%)	64 (98%)	1 (2%)	60	75
6	F	65/79 (82%)	65 (100%)	0	100	100
6	b	62/79 (78%)	62 (100%)	0	100	100
6	f	62/79 (78%)	62 (100%)	0	100	100
7	K	439/548 (80%)	439 (100%)	0	100	100
7	M	445/548 (81%)	445 (100%)	0	100	100
7	k	443/548 (81%)	443 (100%)	0	100	100
7	m	438/548 (80%)	438 (100%)	0	100	100
All	All	11216/13734 (82%)	11211 (100%)	5 (0%)	100	100

All (5) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	O	415	GLN
1	O	2137	ILE
1	O	2295	GLN
6	B	25	ASN
1	o	3383	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (23) such sidechains are listed below:

Mol	Chain	Res	Type
1	O	16	GLN
1	O	935	HIS
1	O	2295	GLN

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Mol	Chain	Res	Type
1	O	3339	ASN
1	O	3422	GLN
1	O	4000	ASN
6	B	25	ASN
6	B	27	GLN
5	a	68	GLN
1	o	233	ASN
1	o	415	GLN
1	o	2475	ASN
1	o	4068	HIS
2	N	511	HIS
2	N	673	HIS
4	h	81	ASN
5	e	85	GLN
6	f	93	GLN
7	K	485	GLN
7	K	502	GLN
7	M	68	GLN
7	M	320	GLN
7	M	485	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 [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

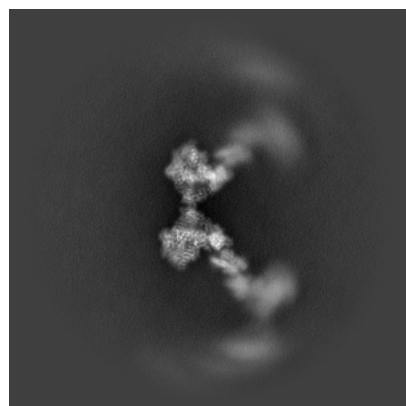
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-53237. These allow visual inspection of the internal detail of the map and identification of artifacts.

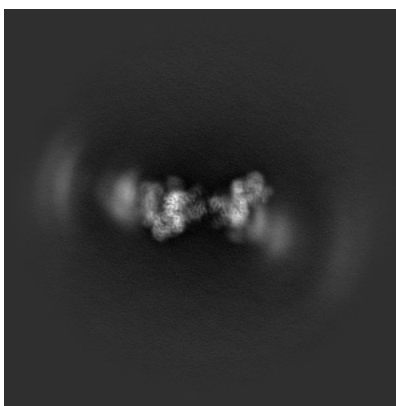
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

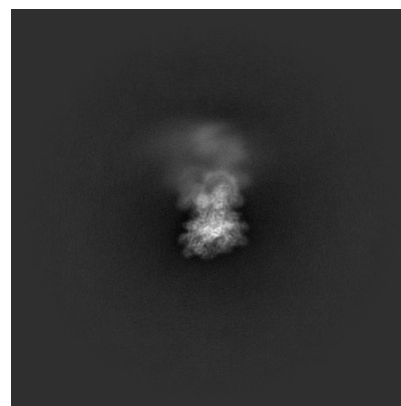
6.1.1 Primary map



X

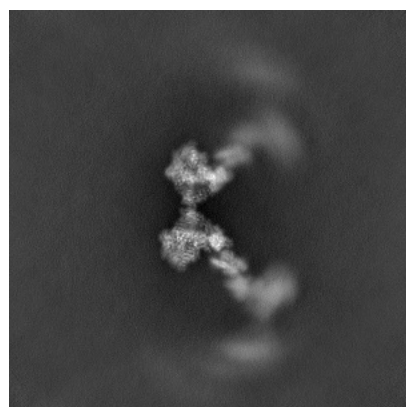


Y

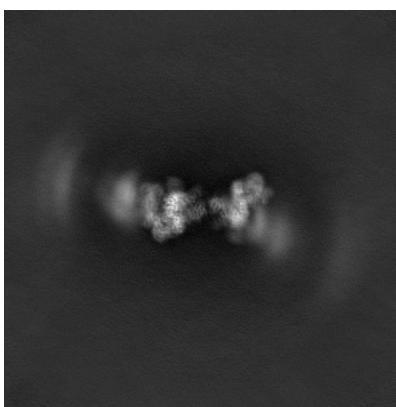


Z

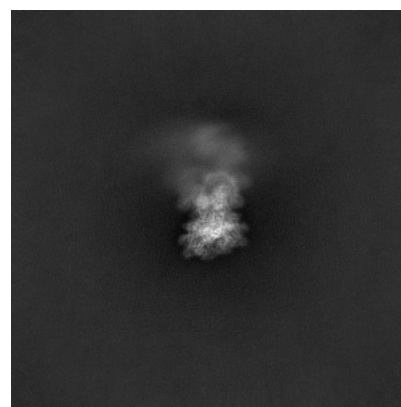
6.1.2 Raw map



X



Y

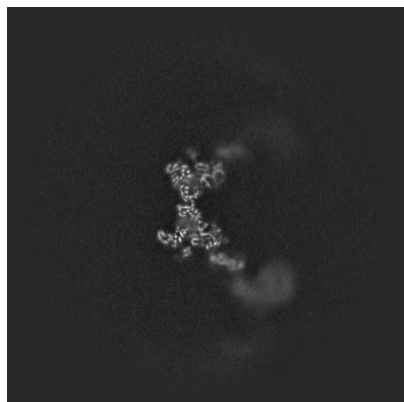


Z

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

6.2 Central slices [i](#)

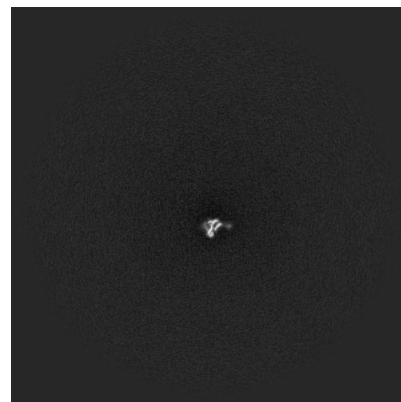
6.2.1 Primary map



X Index: 210

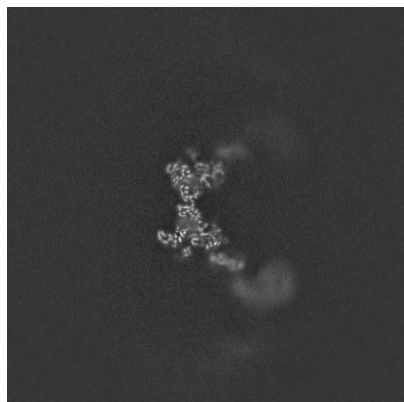


Y Index: 210



Z Index: 210

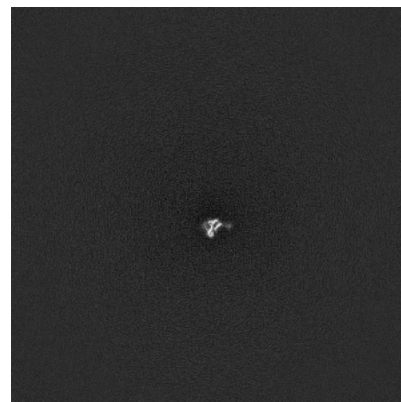
6.2.2 Raw map



X Index: 210



Y Index: 210

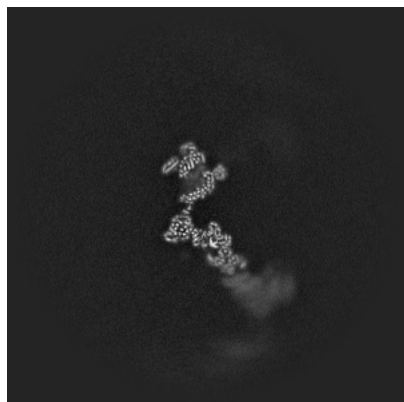


Z Index: 210

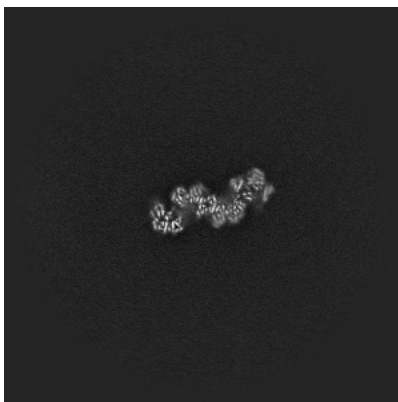
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

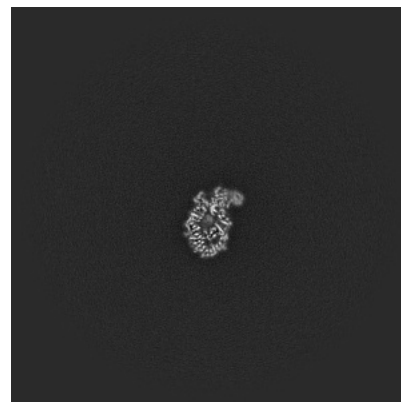
6.3.1 Primary map



X Index: 220



Y Index: 189

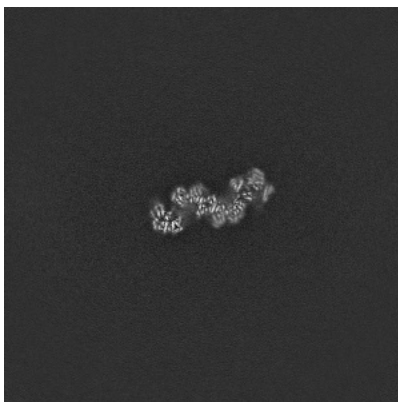


Z Index: 181

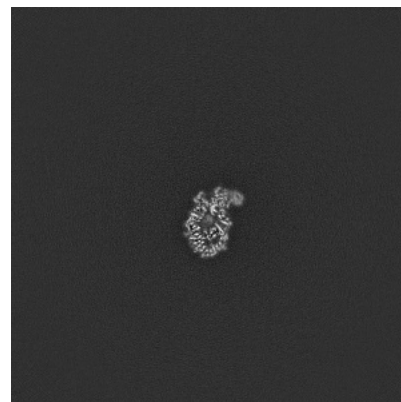
6.3.2 Raw map



X Index: 220



Y Index: 189

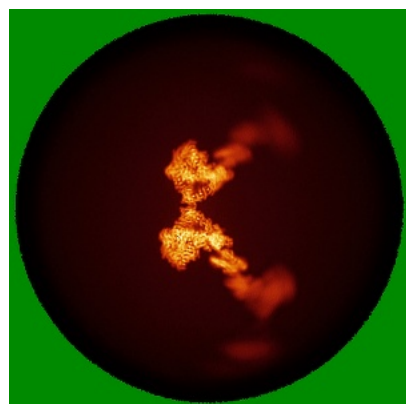


Z Index: 181

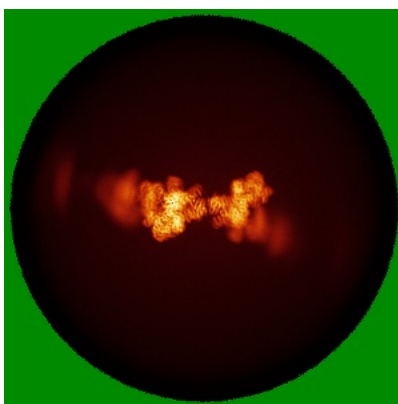
The images above show the largest variance slices of the map in three orthogonal directions.

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

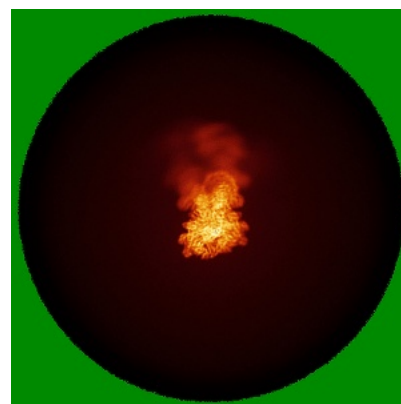
6.4.1 Primary map



X

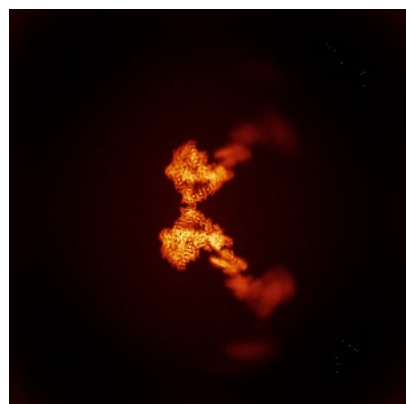


Y

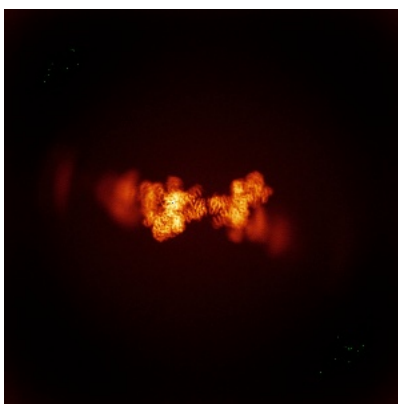


Z

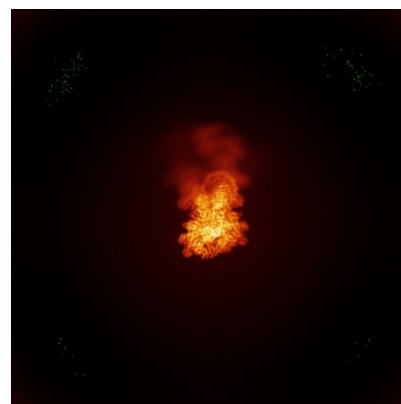
6.4.2 Raw map



X



Y

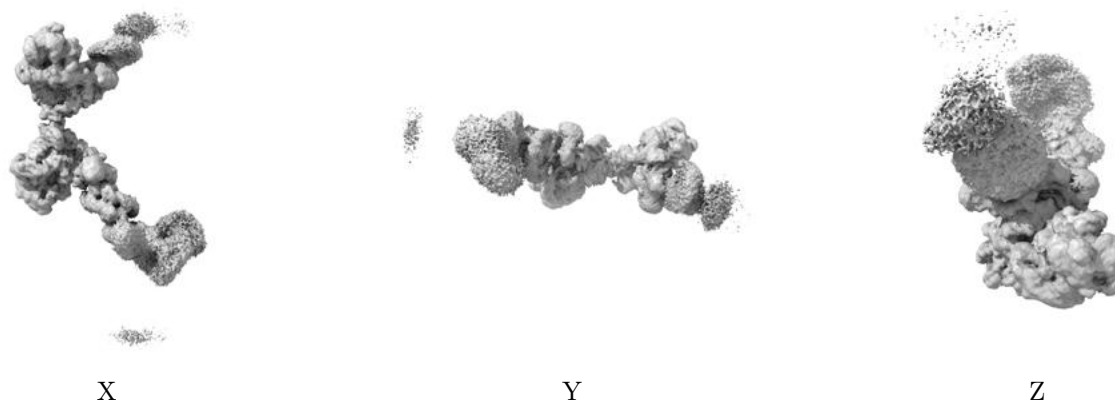


Z

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.

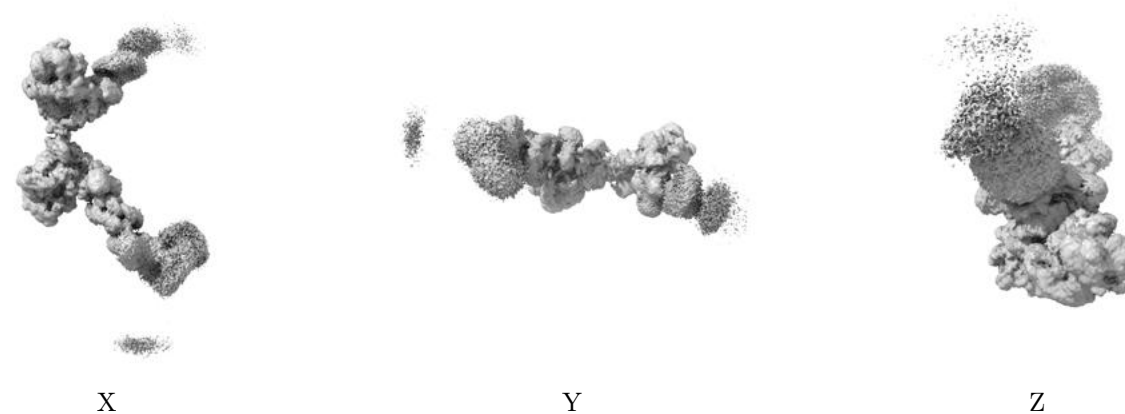
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.21. 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.

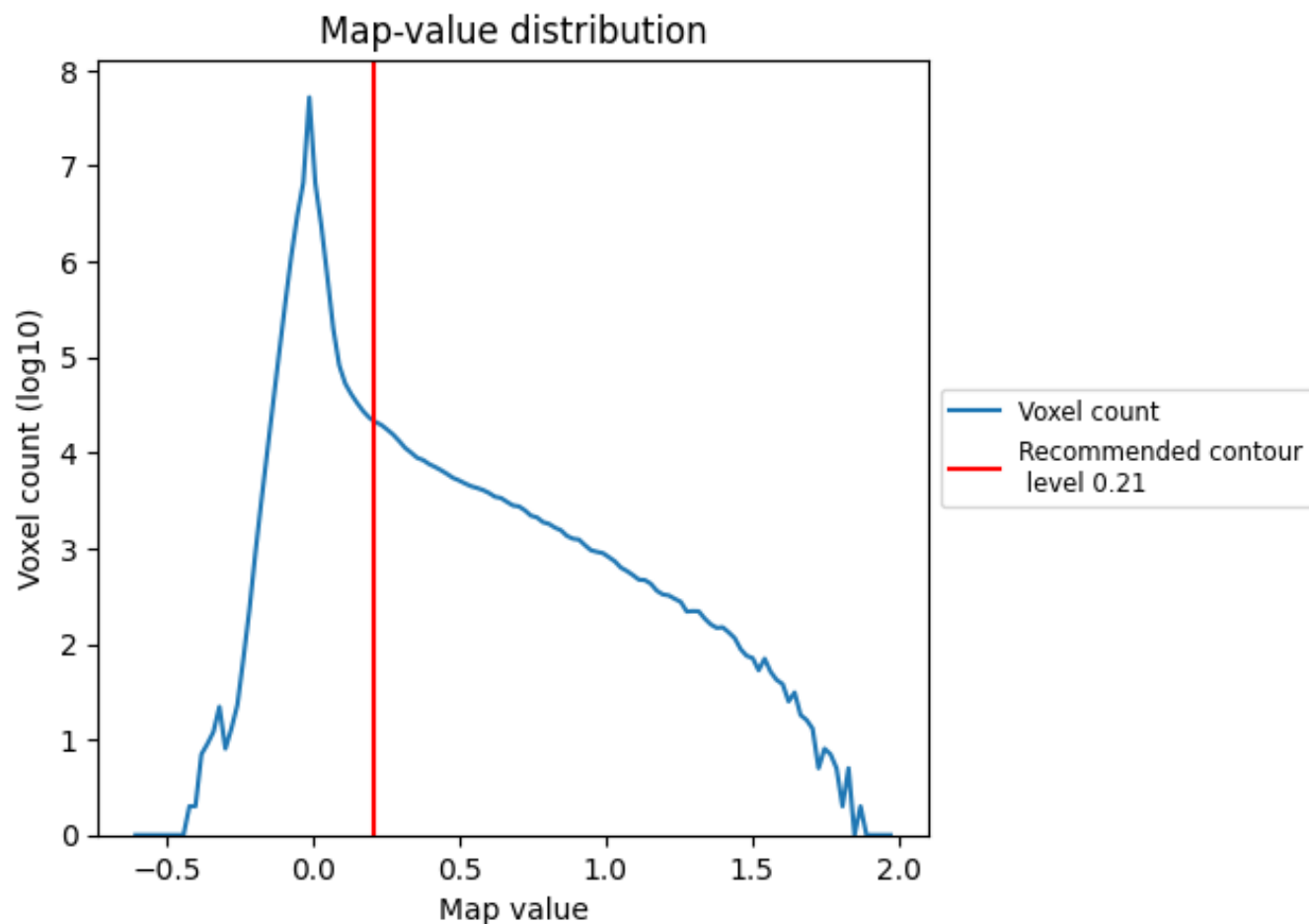
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

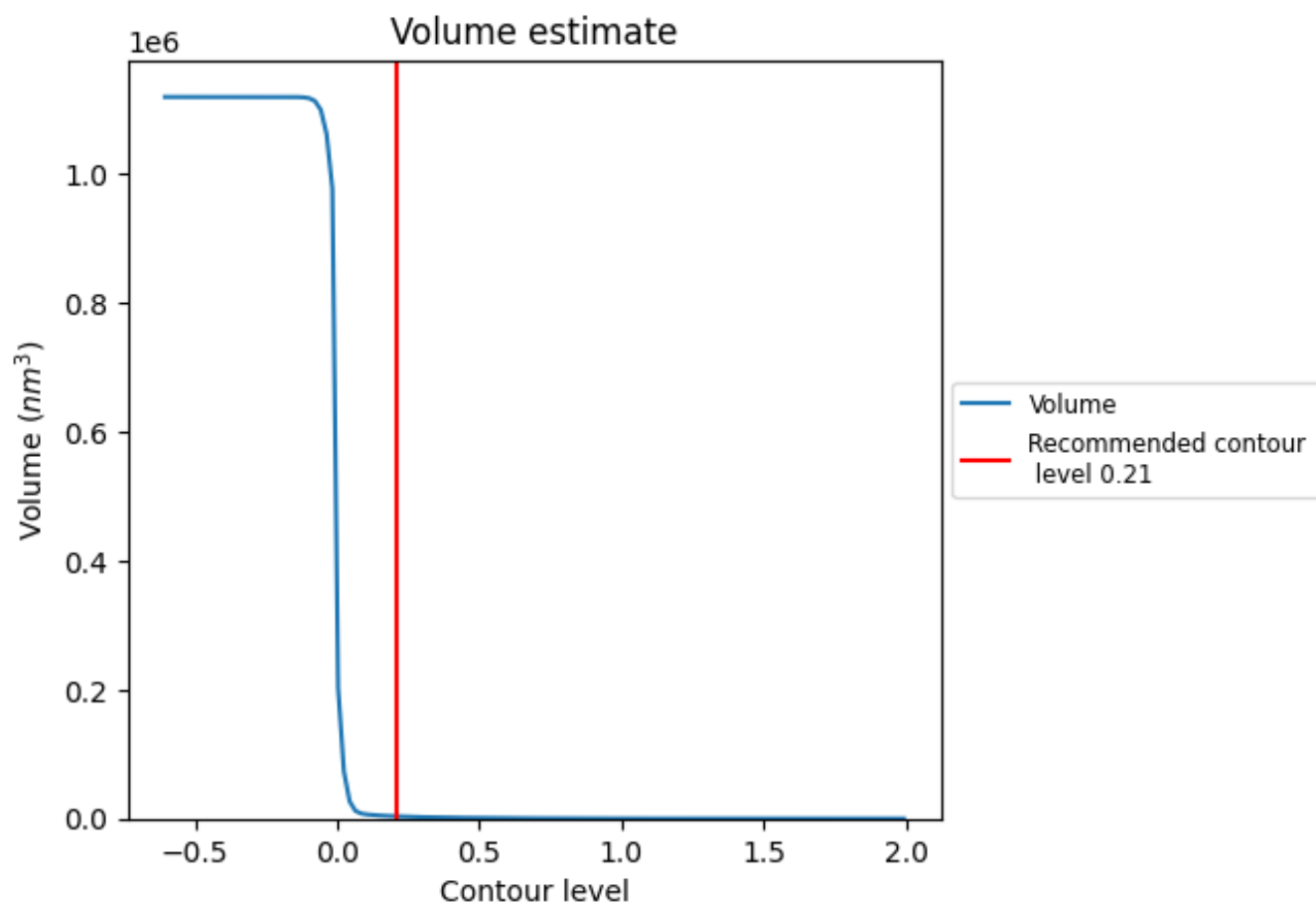
This section contains the results of statistical analysis of the map.

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.

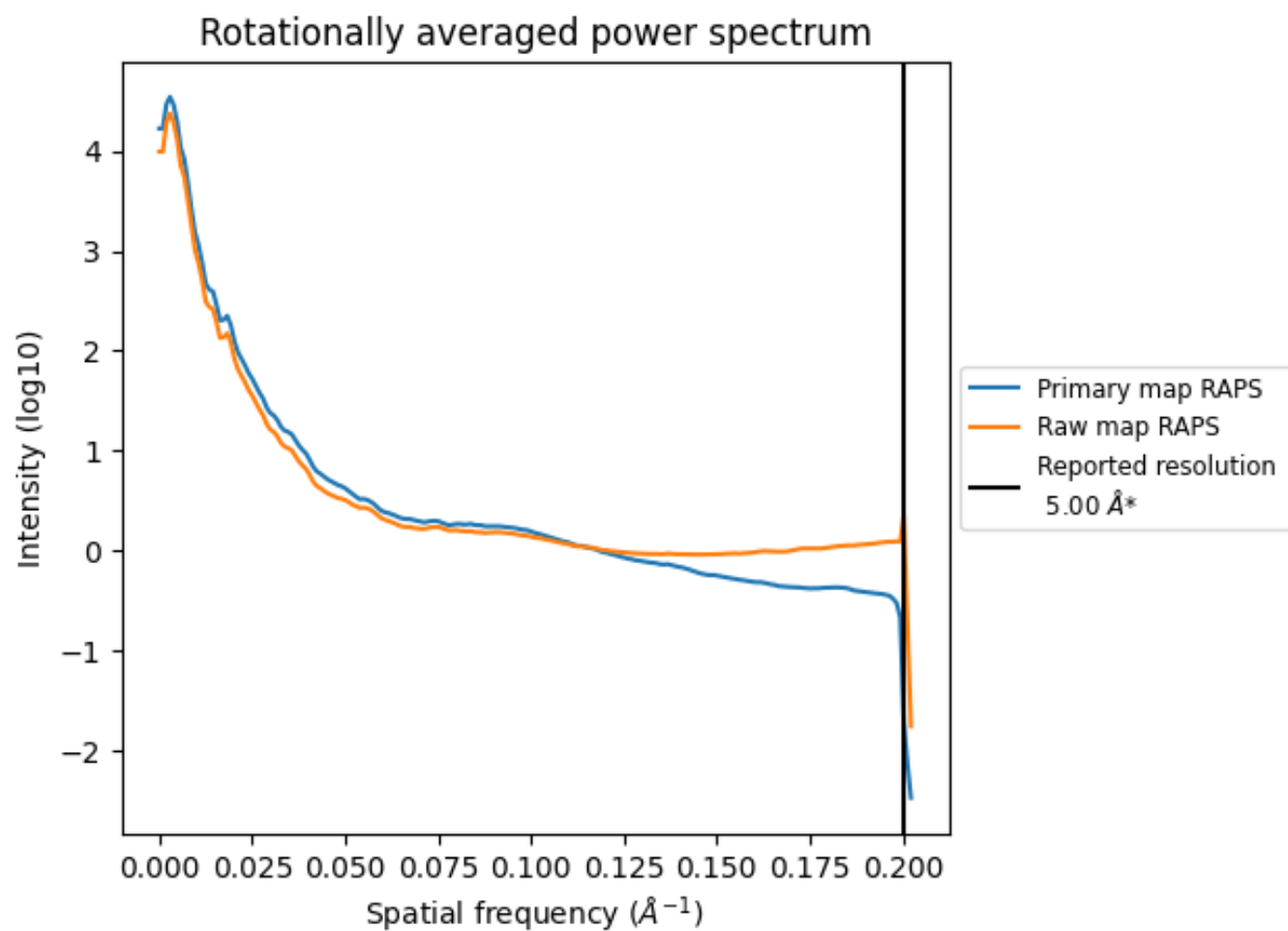
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 3518 nm³; this corresponds to an approximate mass of 3178 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 ⓘ

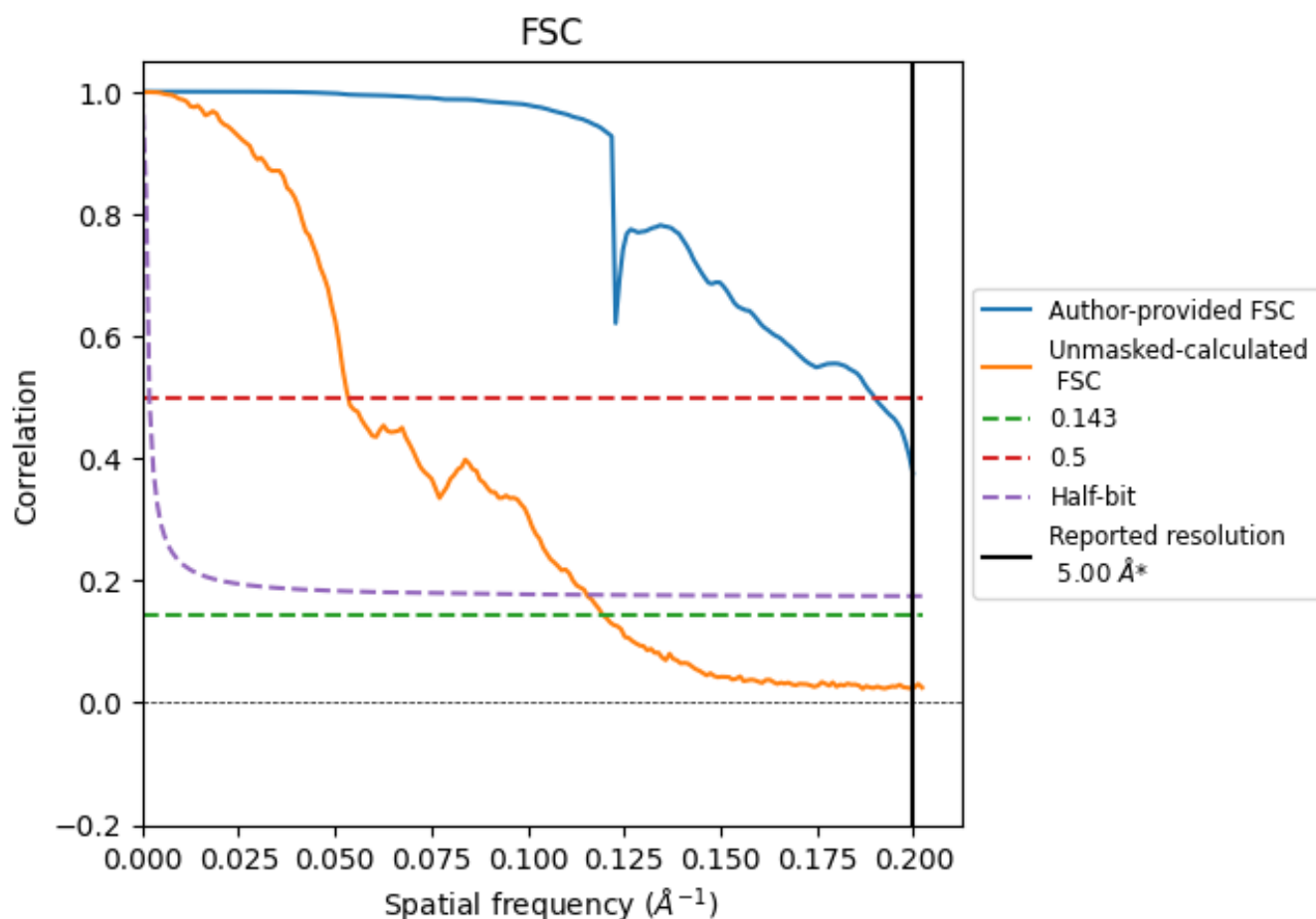


*Reported resolution corresponds to spatial frequency of 0.200 $\text{\AA}^{-1}$

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 0.200 Å⁻¹

8.2 Resolution estimates [i](#)

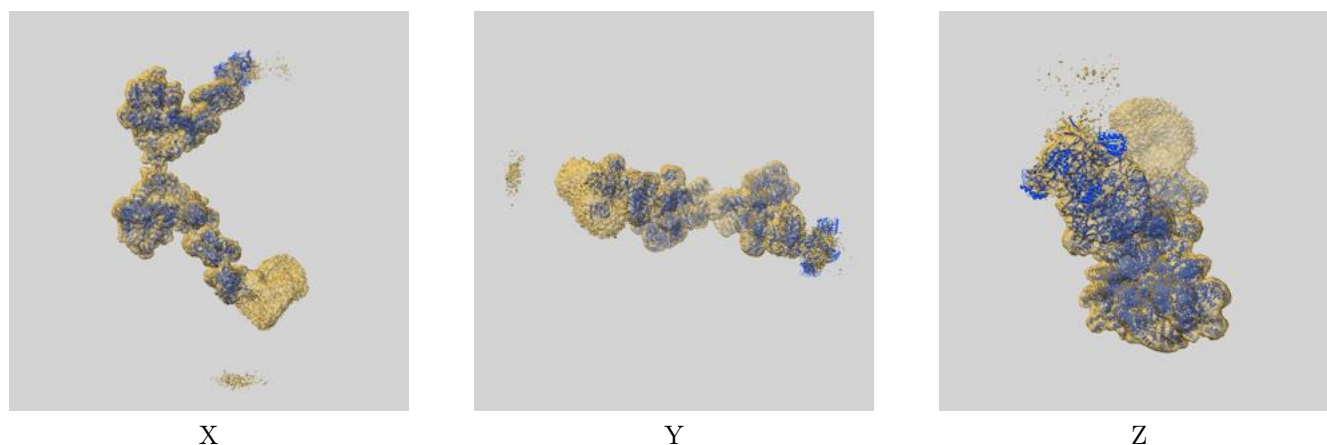
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	5.00	-	-
Author-provided FSC curve	-	5.27	-
Unmasked-calculated*	8.36	18.73	8.67

*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 8.36 differs from the reported value 5.0 by more than 10 %

9 Map-model fit [i](#)

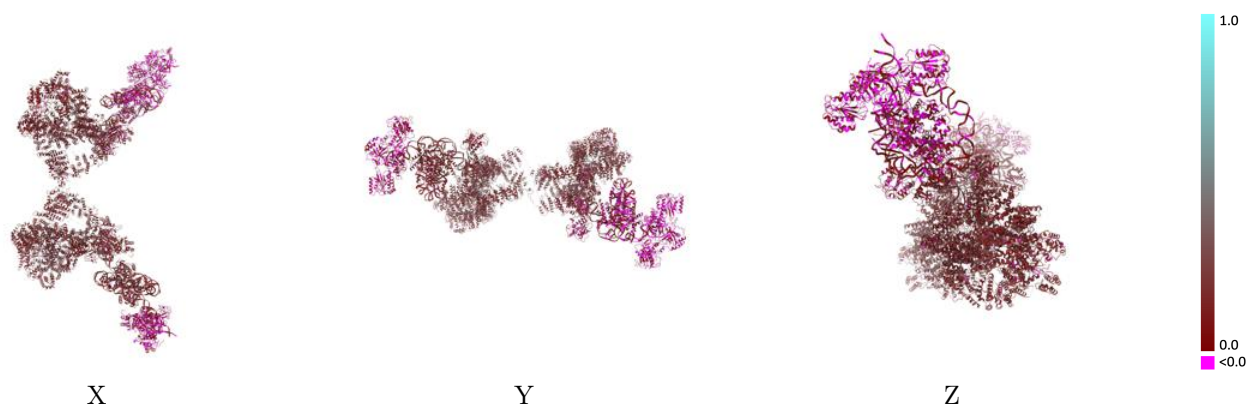
This section contains information regarding the fit between EMDB map EMD-53237 and PDB model 9QMS. Per-residue inclusion information can be found in section [3](#) on page [8](#).

9.1 Map-model overlay [i](#)



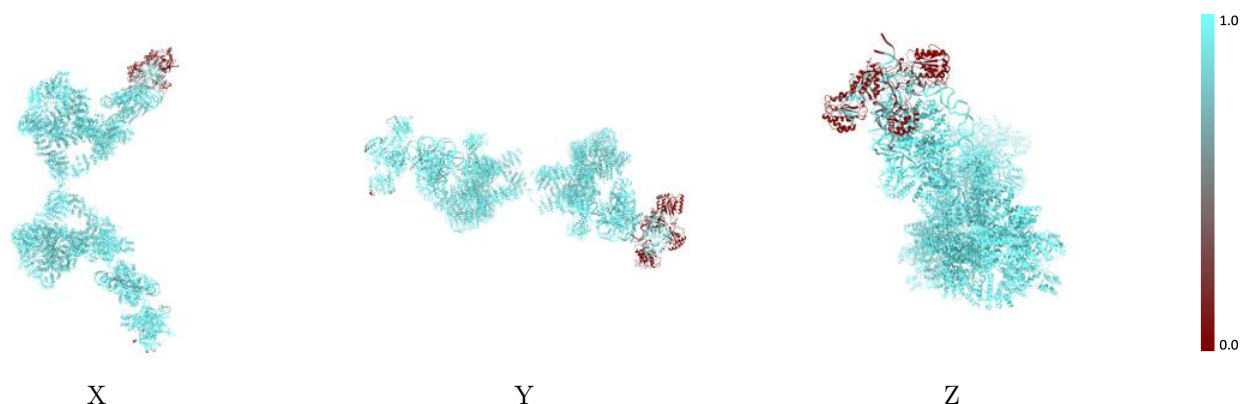
The images above show the 3D surface view of the map at the recommended contour level 0.21 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



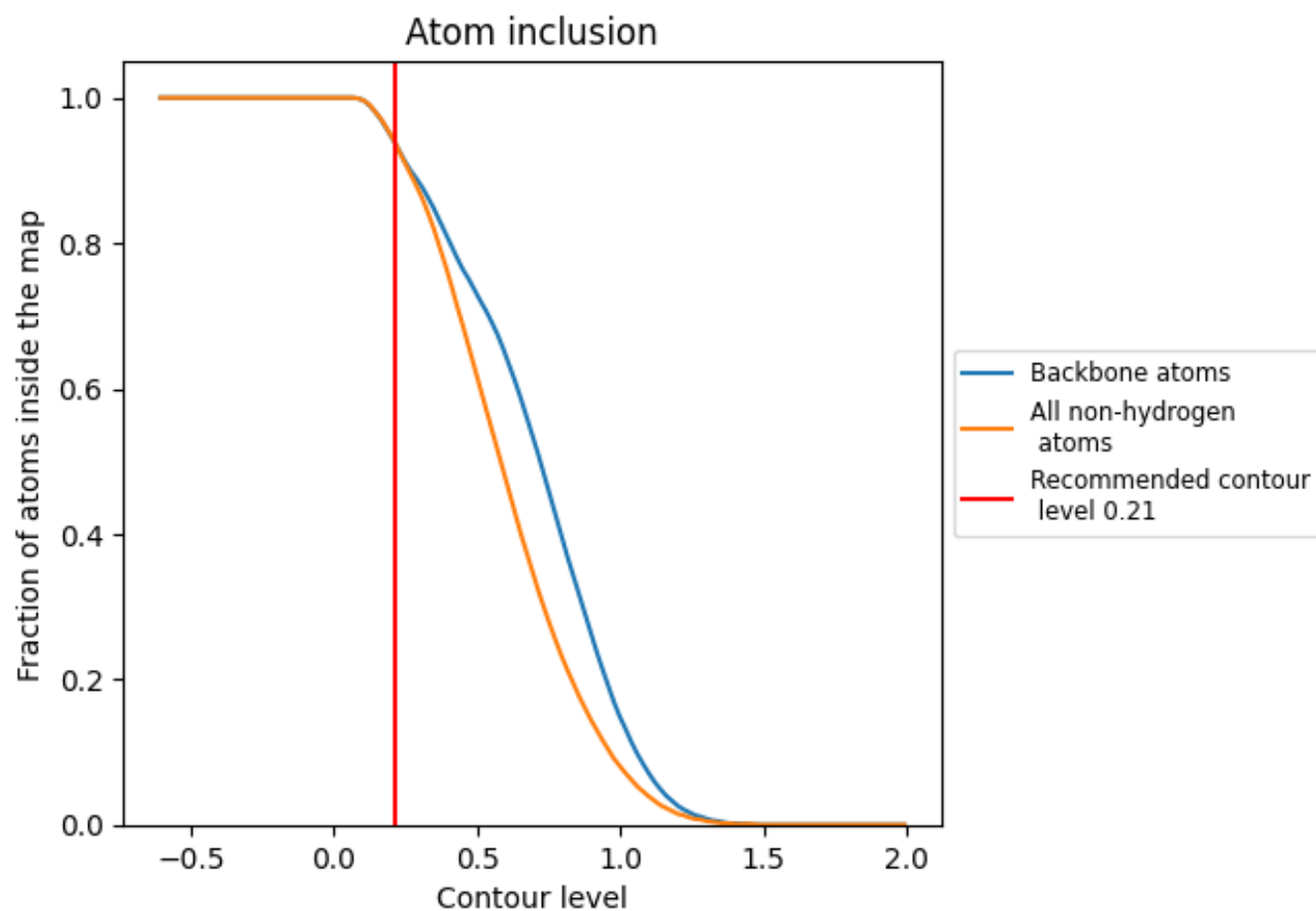
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.21).

9.4 Atom inclusion [i](#)



At the recommended contour level, 94% of all backbone atoms, 94% 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 (0.21) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9410	 0.1680
A	 1.0000	 0.1560
B	 1.0000	 0.1600
C	 0.9990	 0.1930
D	 1.0000	 0.2000
E	 1.0000	 0.0780
F	 0.9970	 0.0470
G	 0.9920	 0.0740
H	 0.9940	 0.1010
I	 0.9310	 0.1070
J	 0.9190	 0.1070
K	 0.9990	 0.2320
L	 0.9950	 0.1460
M	 1.0000	 0.1740
N	 0.9990	 0.2040
O	 0.9980	 0.2010
a	 1.0000	 0.0550
b	 1.0000	 0.0610
c	 0.9740	 0.0620
d	 0.9670	 0.0690
e	 1.0000	 0.1690
f	 1.0000	 0.1690
g	 1.0000	 0.1640
h	 1.0000	 0.1770
i	 1.0000	 0.1870
j	 1.0000	 0.2000
k	 0.9320	 0.0600
l	 0.9490	 0.0630
m	 0.2810	 0.0320
n	 0.3350	 0.0270
o	 0.9960	 0.2210

