



Full wwPDB EM Validation Report ⓘ

Jan 5, 2026 – 05:55 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

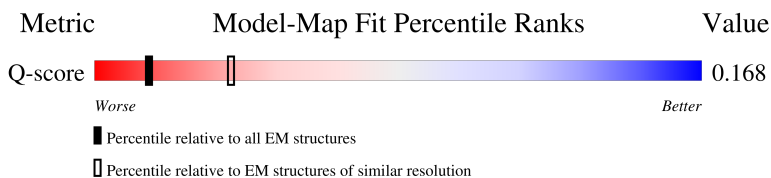
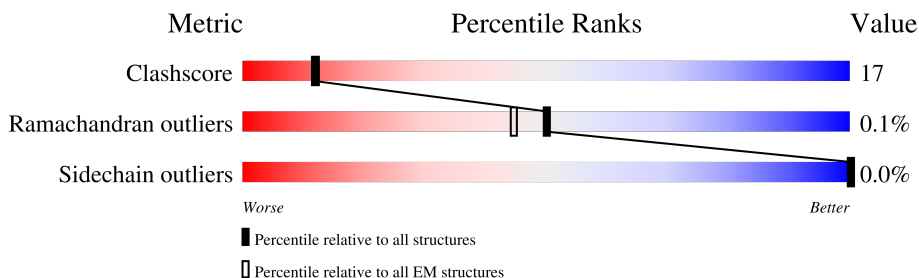
1 Overall quality at a glance

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.



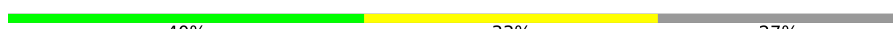
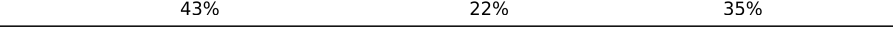
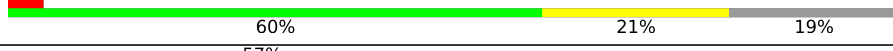
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	210492	15764	-
Ramachandran outliers	207382	16835	-
Sidechain outliers	206894	16415	-
Q-score	-	25397	1057 (4.50 - 5.50)

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		

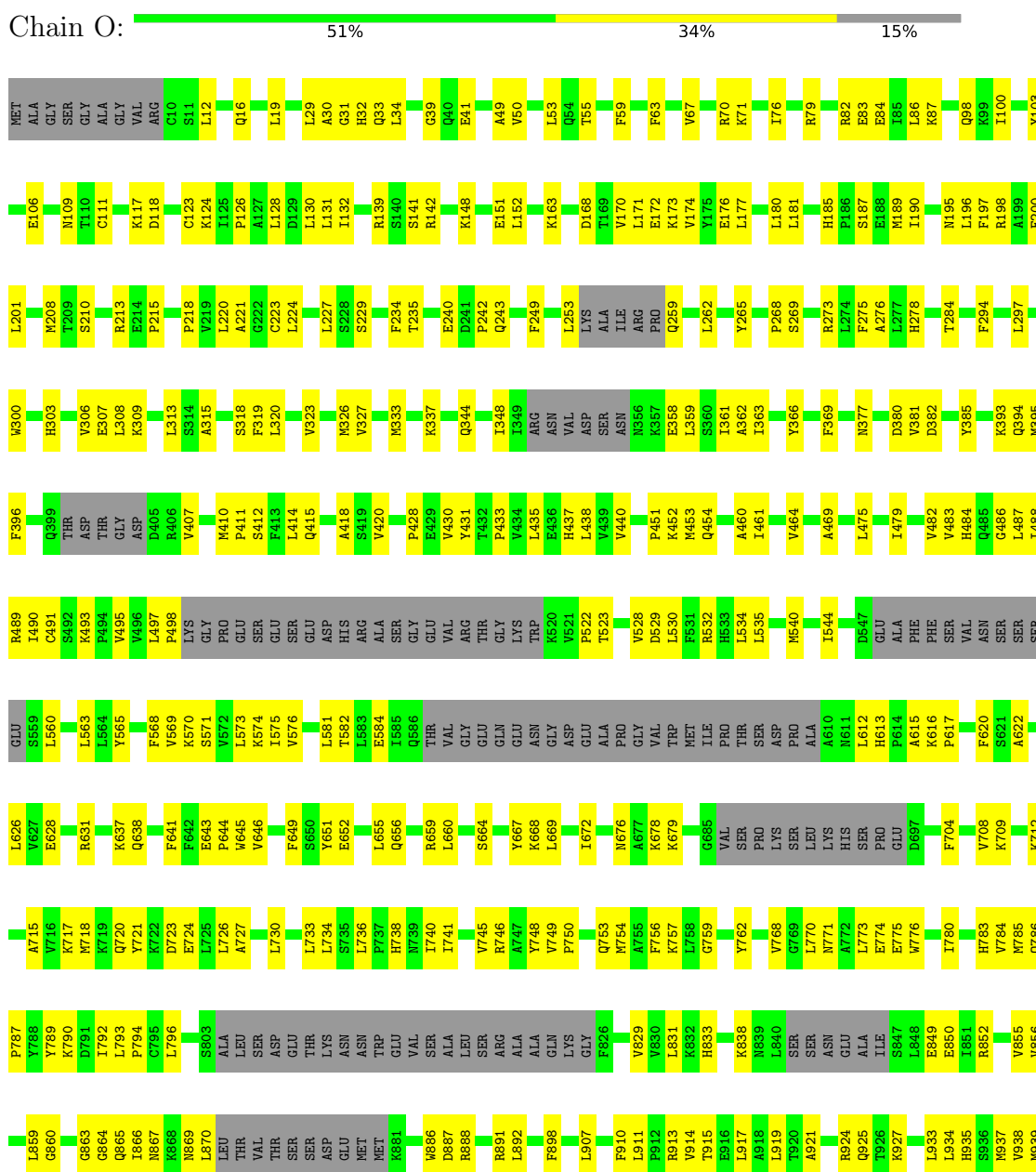
- Molecule 9 is a DNA chain called DNA.

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
L2106	M2040	PHE	SER	L1824	F1746	V1671	M1592	GLN	L1398	GLY	K1140	S1058	P949
L2107	Q2042	ASN	CYS	L1827	L1750	T1674	V1593	LEU	C1399	THR	L1145	L1059	G950
L2108	L1828	ASN	ILE	L1828	L1750	T1674	V1593	LEU	V1400	ARG	K1140	G951	G952
L2109	W1829	LEU	THR	W1829	P1756	Y1675	V1596	PRO	M1403	GLY	L1145	F1060	P957
L2110	H1830	ILE	GLU	H1830	M1757	L1676	L1597	S1502	K1404	ALA	N1146	K1061	M958
L2111	L1836	LEU	GLY	L1836	L1758	L1679	M1600	L1505	G1234	GLY	K1147	R1062	L1063
L2112	R1837	LEU	LYS	R1837	L1759	L1679	L1601	L1505	K1407	ASN	K1149	Y1064	Y959
L2113	R1838	ARG	E1910	R1838	L1762	K1683	F1605	K1508	K1407	ARG	K1150	Q960	Q960
L2114	F1839	ARG	L1911	F1839	M1762	L1684	F1605	Q1589	Y1411	T1322	R1151	L961	L961
L2115	F1840	TYR	K1913	F1840	C1767	D1685	R1608	L1510	K1412	S1323	L1152	Y962	K963
L2116	A1847	ASN	T1914	A1847	R1768	L1688	R1608	L1517	D1413	E1328	L1153	K963	R964
L2117	I1848	PHE	L1915	I1848	K1689	K1689	Q1611	L1517	L1414	LEU	P1154	K1073	R964
L2118	D1849	VAL	L1916	D1849	H1772	G1690	K1612	L1524	L1415	TYR	R1155	K1074	R1075
L2119	Y1850	GLU	K1917	Y1850	V1773	Q1691	H1613	L1524	E1416	LEU	G1156	L1076	Y968
L2120	L1851	VAL	A1922	L1851	M1774	A1692	Q1614	R1527	T1417	ARG	F1157	G1077	L972
L2121	K1852	GLU	M1926	K1852	E1775	T1693	G1615	L1528	H1418	GLY	L1165	F1082	C974
L2122	SER	PRO	MET	SER	E1776	T1694	K1617	L1531	K1422	PRO	L1166	F1082	C974
L2123	ARG	VAL	ALA	ARG	L1777	L1695	L1618	L1532	I1423	PHI	D1167	F1089	L983
L2124	THR	GLU	ALA	PHE	F1778	L1696	A1619	L1532	T1424	LEU	L1168	I1085	Q978
L2125	THR	GLU	GLY	THR	Q1779	L1696	A1619	L1532	A1425	LEU	V1169	Y1086	Y979
L2126	LYS	ARG	GLU	LYS	F1782	F1699	L1623	A1536	Q1426	LEU	L1170	Y980	L980
L2127	LEU	ASN	ASN	LEU	R1783	THR	L1623	V1537	I1428	PRO	L1171	F1089	L983
L2128	GLN	LYS	GLN	ASN	K1784	SER	V1626	L1538	S1352	LEU	L1172	E1092	L983
L2129	ARG	LYS	LEU	GLU	R1785	THR	K1627	S1539	P1353	L1259	L1173	E1092	P886
L2130	ARG	LEU	LEU	SER	I1785	GLY	K1628	ALA	E1354	L1260	P1179	L1095	L1095
L2131	ARG	LEU	LEU	GLY	A1786	GLY	C1629	ALA	G1355	L1261	Q1180	V1096	V1096
L2132	GLU	ILE	E1935	T1882	R1787	GLY	D1630	LEU	A1263	L1261	C1183	Q1098	Q990
L2133	GLN	ILE	E1935	F1883	R1787	GLY	S1631	GLY	L1358	L1264	R1184	F1099	F995
L2134	ASP	ILE	ILE	L1867	S1790	SER	S1631	GLY	L1448	L1264	H1185	V1100	T996
L2135	PRO	LYS	LYS	I1867	S1790	SER	V1632	ILE	V1451	Y1267	K1186	F1101	T996
L2136	THR	GLU	GLU	M1871	T1793	V1713	V1633	SER	V1452	F1270	F1191	L1104	K1000
L2137	VAL	ALA	M1946	Y1874	Q1794	L1714	A1634	GLN	C1455	F1275	P1196	V1105	Q1004
L2138	HIS	ARG	C1947	Y1874	V1795	E1715	K1635	GLY	C1455	T1275	P1196	V1105	Q1004
L2139	ASP	GLU	A1948	Y1874	V1795	E1715	K1635	SER	C1455	T1275	P1196	V1105	Q1004
L2140	ASP	ALA	I1949	L1877	G1796	Q1716	D1636	VAL	R1460	L1279	P1199	M1103	V1007
L2141	ASP	ALA	V1951	L1877	L1797	L1717	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2142	VAL	ALA	V1951	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2143	VAL	ASN	V1951	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2144	LEU	ASN	V1951	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2145	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2146	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2147	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2148	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2149	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2150	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2151	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2152	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2153	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2154	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2155	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2156	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2157	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2158	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2159	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2160	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2161	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2162	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2163	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2164	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2165	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2166	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2167	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2168	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2169	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2170	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2171	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2172	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2173	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2174	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2175	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2176	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2177	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2178	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2179	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2180	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2181	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2182	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2183	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2184	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2185	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2186	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2187	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2188	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2189	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2190	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2191	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2192	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2193	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2194	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2195	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2196	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2197	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2198	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2199	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2200	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2201	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2202	GLY	GLY	F1956	L1877	L1797	I1718	S1637	VAL	R1460	L1279	P1199	M1103	V1007
L2203	GLY	GLY	F1956	L1877									



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	Q4042	P4126
F3495	THR	I3701	T3869	N3970	K4043	W4127
I3496	PRO	Q3704	T3870	N3971	I4044	M4128
S3497	V3601	Q3707	F3871	N3972	A4047	
W3498	V3606	R3708	K3872	N3973	R4048	
I3499	I3606	G3707	K3873	K3974	A4054	
S3500	E3607	R3708	K3874	E3975		
V3503	K3608	K3710	E3875	I3983	V4058	
A3504	M3609	G3709	S3876	M3984	I4059	
L3505	F3610	W3805	K3877	V3985	L4064	
L3506	E3611	L3816	L3882	H3986	L4064	
D3509	L3617	I3719	R3889	A3987	H4068	
Q3510	P3623	A3720	P3894	L3988	P4072	
A3511	G3624	F3721	L3898	M4002	Y4077	
V3512	L3625	F3722	A3905	D4003	V4078	
A3513	G3626	V3726	A3909	V4004	A4079	
N3524	R3629	N3729	A3912	F4005	V4080	
Q3527	K3631	S3731	C3912	V4006	A4081	
F3533	G3647	L3732	C3913	K4007	G4082	
S3536	GLY	R3734	S3914	P4008	S4084	
S3537	SER	R3735	H3915	P4009	K4085	
E3538	LYS	K3736	G3919	S4010	P4086	
S3539	LEU	R3737	L3918	D4011	H4087	
TVR	ARG	I3738	I3920	W4013	I4089	
SER	MET	R3741	H3924	K4014	R4090	
PHE	LYS	G3742	L3925	Y4015	A4091	
LYS	LEU	D3744	N3926	PHE	Q4092	
ASP	ASP	E3745	N3927	GLU	E4093	
T3546	T3546	R3746	K3928	GLN	P4094	
T3547	T3547	E3747	F3929	LYS	E4095	
G3548	M3665	H3748	V3930	MET	S4096	
K3549	L3666	P3749	A3931	LEU	G4097	
N3551	L3667	F3750	L3940	LYS	L4098	
K3552	L3668	L3751	D3941	LYS	T4102	
F3553	K3669	V3752	F3946	TRP	K4105	
F3554	M3670	E3756		ILE	G4106	
R3557	N3671			ILE	L4107	
V3567	K3672			GLY	M4108	
L3572	L3680			GLY	D4109	
A3574	K3681			GLY	Q4110	
	E3682			ASN	Q4113	
	G3683			VAL	P4114	
	S3684			ALA	D4117	
	P3685			GLU	L4117	
				LYS	G4118	
				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	L248	K337	V417
GLY	Q98	E172	F249	L338	A418
VAL	K99	Y175	N250	Q339	S419
ARG	I100	E176	F251	V420	V420
C10	Y103	L177	V252	F341	
L13	S104	L181	LYS	T348	P428
R14	V106		ALA	I349	
L15			ILE	T432	
L19	K108	V184	ARG	L435	
D23	N109	H185	PRO	ASN	L435
R24	T110	P186	Q259	VAL	E436
A27	C111	S187	L260	ASP	H437
L28	T112	E188	D261	SER	L438
L29	S113	M189	L262	ASN	
L34	V114	N190	K263	N356	Q442
L35	Y115	N191	R264	L359	F446
L36	T116	N192	Y265	P447	P447
L37	K117	A193	A266	S360	Q448
L38	A120	E194	V267	A362	Y449
L39	I121	N195	P268	L363	S450
L40	K122	F197	S269	R364	M453
E41	C123	F200		K374	Q454
C42	K124	L201	L274	L455	
S45	I125		F275		
A49	I126	L204	T284	D380	L468
A52	L128	C285	C285	V381	R459
F59	D129	L286	L286	F382	A460
L66	L130	L287	L287	K384	V464
V67	L131	S210	Y290	V385	
R70	K132	K216	V296	E387	L468
K71	L133	V219	K299	L388	A469
N74	K134	L220	H303	I389	P473
S75	L135	C223	E307	Q390	L475
I76	Q136	L224	L308	C392	R476
E77	Q142	L227	K309	K393	R477
F78	R142	L230	K310	Q394	C478
R79	D145	L231	L313	F396	I479
E80	E146	L232	S314	THR	H484
E87	F147	L233	A315	GLN	Q485
F88	K148	L234	L316	THR	G486
	E151	L235	N233	ASP	L488
	L162	E159	F234	GLY	I488
	L163	L162	T235	ASP	K493
	K164	L163	E240	ASP	
	K165	L164	P242	LYS	F498
				GLY	V407
				PRO	

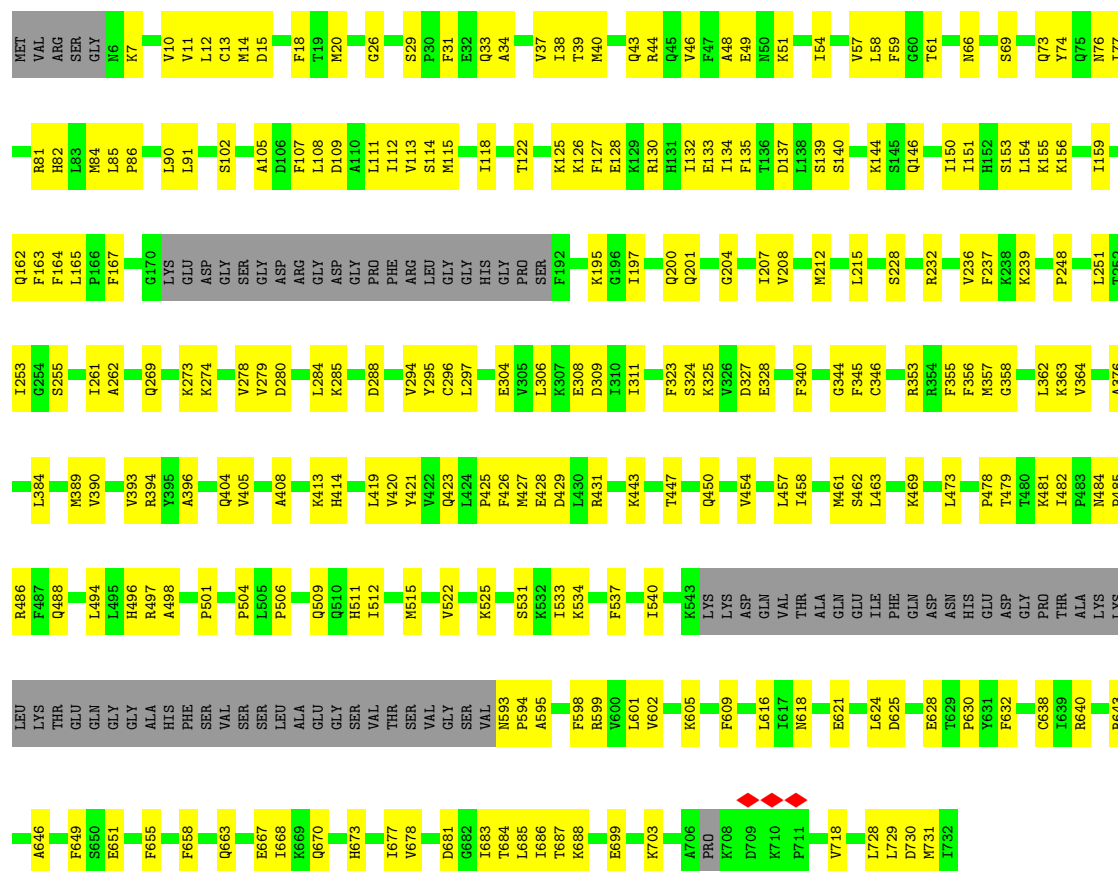
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THR	L1625	ALA	R1460	P1363	L1260	R1178	A1072	D908	D908	GLN	R746	L659	V576	GLU
LEU	H1626	SER	R1460	P1363	L1261	P1179	F1073	M989	F910	LYS	R746	L660	E577	SER
GLY	L1463	GLY	L1463	W1356	E1265	Q1180	K1074	Q990	F910	GLY	L752	S664	K578	GLU
SER	L1464	SER	L1464	K1357	C1266	E1182	L1076	L991	V914	THR	Q753	L752	L581	ASP
GLM	H1465	SER	L1464	L1358	C1267	C1183	G1077	W994	T915	ALA	M754	Y667	L585	HIS
GLY	M1466	GLM	M1466	L1359	M1268	R1184	A1078	N997	A918	SER	F756	Y667	Q586	ARG
SER	L1467	GLY	K1360	K1360	M1268	H1185	A1078	N997	L919	ASN	K757	L670	Q586	ALA
VAL	L1468	VAL	K1361	K1361	I1271	H1186	F1082	K1000	R924	ASN	L758	S671	VAL	GLU
ILE	D1474	ILE	D1362	D1363	T1275	S1187	F1082	F1001	R924	GLU	G759	I672	GLY	VAL
HIS	L1475	HIS	L1363	L1363	V1276	I1188	I1085	F1001	R924	GLU	G759	I672	GLY	VAL
PHE	L1476	PHE	T1366	T1366	V1276	E1188	I1085	F1001	R924	GLU	G759	I672	GLY	VAL
S1554	H1477	S1554	H1367	H1367	V1276	E1188	I1085	F1001	R924	GLU	G759	I672	GLY	VAL
E1557	S1478	E1557	L1368	L1368	L1282	F1191	A1087	D1005	C931	ILE	Y762	F683	Q586	THR
Y1558	V1479	Y1558	M1369	M1369	L1282	F1191	A1087	D1005	C931	ILE	Y762	F683	Q586	THR
F1558	L1484	F1558	L1370	L1370	K1292	K1193	E1092	A1008	L934	VAL	L765	G685	GLY	W519
Y1560	L1489	Y1560	L1371	L1371	A1293	F1194	L1095	E1011	L934	VAL	L765	G685	GLY	W519
S1561	K1489	S1561	L1372	L1372	V1294	P1195	V1096	A1012	L934	VAL	L765	G685	GLY	W519
F1563	L1492	F1563	L1376	L1376	F1296	L1197	F1101	L1014	L934	VAL	L765	G685	GLY	W519
E1565	PRO	E1565	L1382	L1382	F1297	L1197	F1101	L1014	L934	VAL	L765	G685	GLY	W519
S1564	GLY	S1564	L1387	L1387	L1298	S1203	E1102	L1017	A945	THR	L770	VAL	ASP	TS23
E1566	GLY	E1566	G1387	G1387	E1299	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
T1566	ASP	T1566	L1391	L1391	F1299	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
I1567	GLU	I1567	M1392	M1392	S1300	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
N1568	GLN	N1568	L1395	L1395	T1301	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
T1569	CYS	T1569	L1395	L1395	H1304	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
E1570	LEU	E1570	L1395	L1395	K1311	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
K1573	PRO	K1573	L1395	L1395	C1312	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
M1574	S1502	M1574	L1395	L1395	PHE	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
L1577	L1510	L1577	L1395	L1395	GLY	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
A1578	G1513	A1578	L1395	L1395	THR	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
V1579	L1514	V1579	L1395	L1395	ALA	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
L1580	L1515	L1580	L1395	L1395	ALA	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
E1581	E1516	E1581	L1395	L1395	ASN	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
L1582	L1517	L1582	L1395	L1395	ARG	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
M1583	F1518	M1583	L1395	L1395	ARG	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
F1519	F1519	F1519	L1395	L1395	ARG	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
A1520	A1520	A1520	L1395	L1395	ARG	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
F1521	F1521	F1521	L1395	L1395	ARG	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
L1524	L1524	L1524	L1395	L1395	ARG	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
C1525	C1525	C1525	L1395	L1395	ARG	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
E1526	E1526	E1526	L1395	L1395	ARG	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
L1527	L1527	L1527	L1395	L1395	ARG	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
N1528	N1528	N1528	L1395	L1395	ARG	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
G1529	G1529	G1529	L1395	L1395	ARG	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
M1600	M1600	M1600	L1395	L1395	ARG	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
L1601	L1601	L1601	L1395	L1395	ARG	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
Q1611	Q1611	Q1611	L1395	L1395	ARG	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
H1612	H1612	H1612	L1395	L1395	ARG	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
L1696	L1696	L1696	L1395	L1395	ARG	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23
P1697	P1697	P1697	L1395	L1395	ARG	S1203	A1103	L1017	A945	THR	L770	VAL	ASP	TS23

V2855	D2766	L2569	E2471	L2393	K2313	F2231	L2140	ARG	ILE	ASN	T1862	R1763
S2856	R2773	E2564	Q2472	K2394	Y2316	L2235	N2141	ARG	GLU	GLN	F1863	G1768
I2858		M2565	Y2473	T2395	L2396	L2236	R2142	GLU	ARG	LEU	T1864	I1768
I2861	R2776	L2566	L2475	C2397	A2317	L2238	L2143	GLN	LYS	LYS	Q1865	C1778
S2862	G2777	M2568	I2476	L2398	A2318	L2239	F2144	ARG	GLU	Y1940	Q1866	S1790
C2863	D2778	L2567	L2477	L2399	A2319	L2240	L2145	ASP	ALA	C1947	T1867	C1791
Q2864	T2779	M2576	M2478	E2399	A2320	V2242	L2146	PRO	ARG	A1948	K1868	Q1794
H2865		F2577		R2404	E2321	V2243	A2147	THR	THR	G1949	K1869	L1797
A2866		L2581	D2482	Y2412	T2326	C2244	I2151	HIS	ALA	I1952	G1870	G1872
A2867	Q2784	L2584	R2485	K2418	L2327	W2245	V2156	ASP	ASN	C1953	R1806	L1806
L2868		C2584	PRO	D2419	R2328	K2246	P2159	VAL	ASP	G1954	LYS	ASP
		E2585	GLU	F2420	E2338	L2249	Y2160	LEU	SER		D1878	ASP
P2873		L2586	SER	D2421	E2332	L2249	A2161	GLU	ASP	L1959	V1879	ASP
		Q2587	TRP	R2428	R2333	Y2253	A2161	LEU	GLY	K1960	M1880	PRO
		E2588	GLU	V2423	L2337	F2257	W2164	GLU	PRO		Y1881	ARG
A2878		T2600	T2491	M2424	L2341	K2263	S2166	MET	SER	Q1963	S1882	SER
C2879		T2603	D2494	H2425	L2344	D2264	S2167	ASP	TYR	PHE	L1884	PHE
C2880		PRO	S2495	R2426	K2347	S2267	P2176	GLU	MET	GLY	P1885	T1815
L2881		THR	Q2496	H2427	Q2348	S2267	ASN	SER	SER	PHE	R1816	R1816
A2882		THR	E2497	D2428	K2350	D2269	L2171	ASN	LEU	SER	Q1817	Q1817
S2883		ASP	I2498	R2430	Q2351	N2270	A2173	LYS	VAL	GLU	S1818	F1819
		VAL	L2501	E2431	H2352	S2271		LYS	TYR	LYS	V1820	V1820
Q2886		LEU	L2502	R2432	Q2353	V2272		LEU	ALA	ASN	D1821	D1821
P2887		GLU	A2502	Q2432	Q2353	W2272	G2179	LEU	LYS	ILE	L1822	L1822
V2888		THR	K2433	K2433	Q2353	G2273	H2183	LEU	ALA	PHE	S1823	S1823
L2808		HIS	L2434	L2434	Q2353	Q2274	Y2184	GLU	GLY	ASN	L1824	L1824
F2809		ALA	V2505	C2435	H2352	Q2275	V2186	ASN	ASP	ASN	A1835	A1835
		THR	L2506	D2437	H2352	S2271		LEU	GLY	ASN	L1836	L1836
L2812		GLN	I2507	L2438	Q2353	V2272	I2189	LEU	GLY	ASN	F1839	F1839
		LYS	L2510	I2438	M2356	G2273	I2193	PRO	CYS	ASP	F1840	F1840
T2816		THR	L2514	Y2440	L2362	Q2275	L2194	PRO	THR	LEU	S1841	S1841
M2820		GLN	M2514	M2441	K2366	L2276	W2196	GLN	GLY	ARG	T1842	T1842
D2821		THR	L2517	M2442	K2366	L2277	D2208	GLY	TYR	ASN	L1843	L1843
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F2823		ALA	T2521	P2444	V2362	V2280	A2212	ASP	PHE	PHE	A1847	A1847
T2825		GLY	R2522	K2445	K2366	N2283	N2213	TYR	VAL	VAL	T1912	T1912
		HIS	L2525	L2446	K2366	L2284	R2214	TYR	VAL	VAL	K1913	K1913
E2828		ARG	W2525	E2450	P2371	L2285	L2215	SER	SER	GLU	V1850	V1850
K2829		LEU	L2531	L2451	P2372	L2286	L2216	PRO	GLN	GLU	L1851	L1851
T2832		ALA	L2532	R2452	F2373	P2287	F2218	ASP	ASP	GLU	K1852	K1852
Q2833		ARG	S2533	E2453	L2374	Y2288	M2126	LEU	VAL	VAL	L1915	L1915
K2834		LEU	N2534	L2454	A2375		K2127	PRO	ARG	PRO	PHE	PHE
K2835		TRP	L2534	L2454	D2376		M2220	PRO	ARG	GLU	THR	THR
		PRO	VAL	P2457	R2377	Q2296	K2221	ALA	ALA	ARG	LYS	LYS
F2840		ALA	D2537	E2460	F2378	E2298	H2225	THR	THR	LYS	LEU	LEU
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T2846		SER	L2541	H2464	L2384	A2302		ARG	ARG	GLY	GLY	GLY
		GLU	A2542	P2465	L2385	L2303		PRO	PRO	GLY	GLY	GLY
F2850		ALA	M2543	S2466	L2386	V2304		THR	THR	LYS	LEU	LEU
F2851		THR	T2467	T2467	F2387	M2307		GLN	GLN	LYS	ASN	ASN
V2923		ASP	Y2546	T2468	K2388			GLY	GLY	LYS	GLY	GLY
V2925		PHE	S2547	C2469	F2389			GLY	GLY	LYS	GLY	GLY
L2926		GLN	P2548	R2470	H2390	V2310		PHE	PHE	TYR	SER	SER



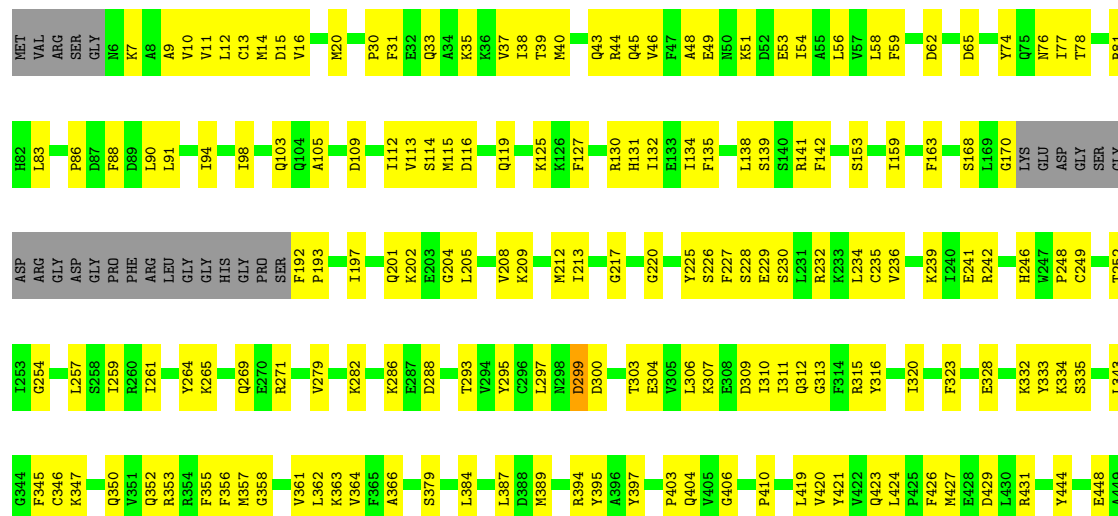
• Molecule 2: X-ray repair cross-complementing protein 5

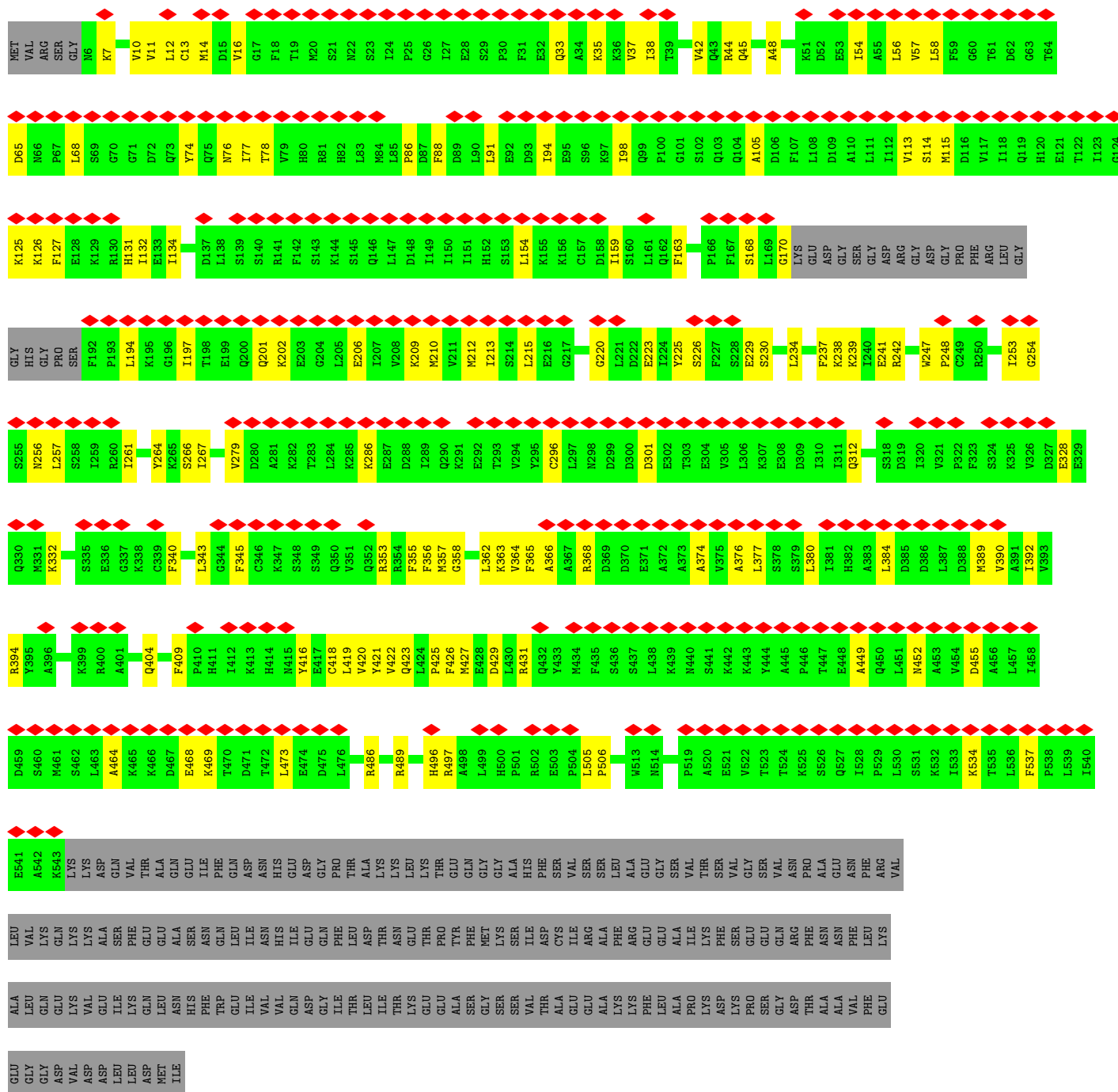
Chain L:  57% 33% 10%



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

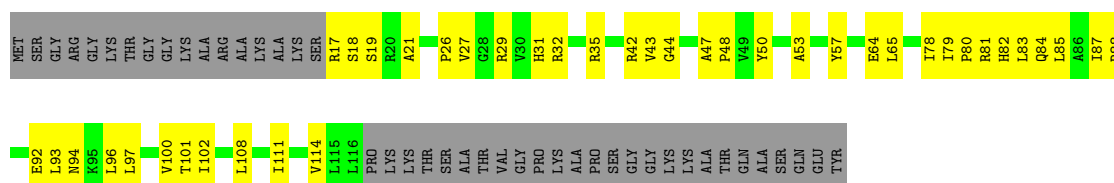
Chain N:  50% 37% 13%

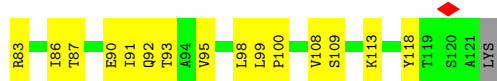




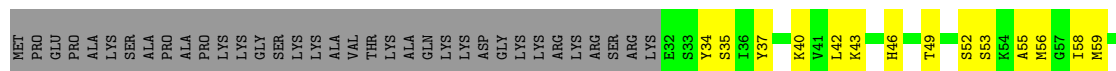
• Molecule 3: Histone H2AX

Chain C: 41% 29% 30%

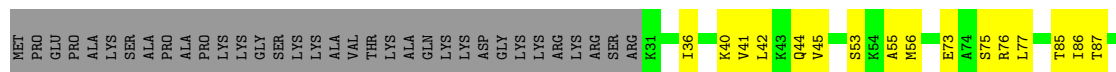




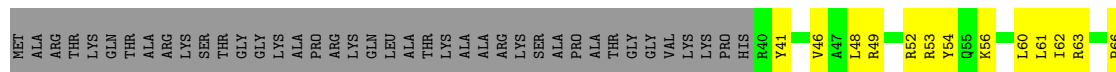
• Molecule 4: Histone H2B type 1-J



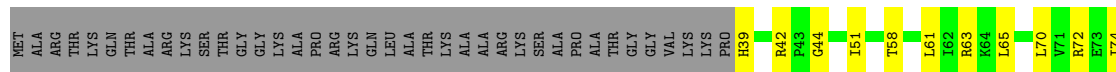
• Molecule 4: Histone H2B type 1-J



• Molecule 5: Histone H3.1

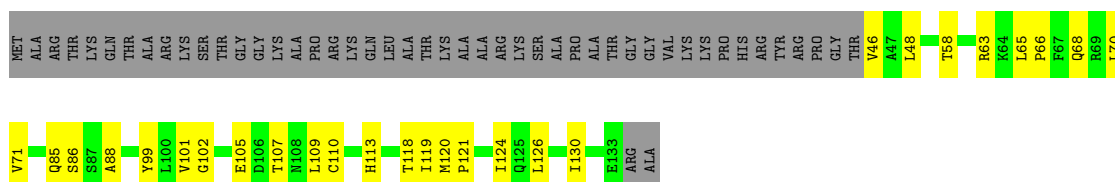


• Molecule 5: Histone H3.1



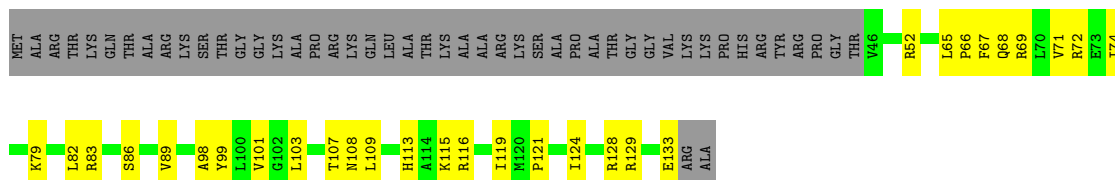
• Molecule 5: Histone H3.1





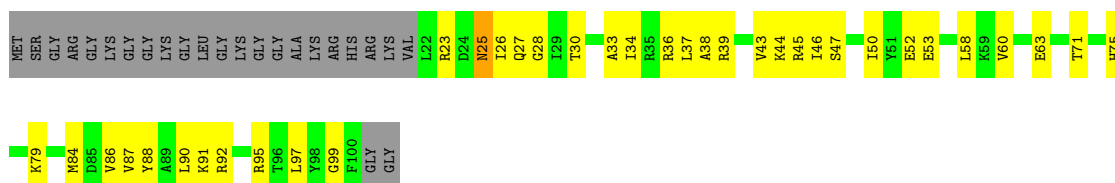
• Molecule 5: Histone H3.1

Chain e: 43% 22% 35%



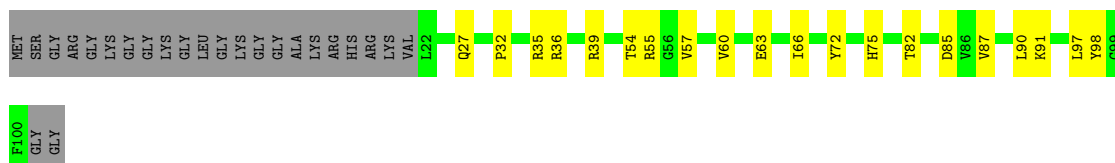
• Molecule 6: Histone H4

Chain B: 42% 34% 23%



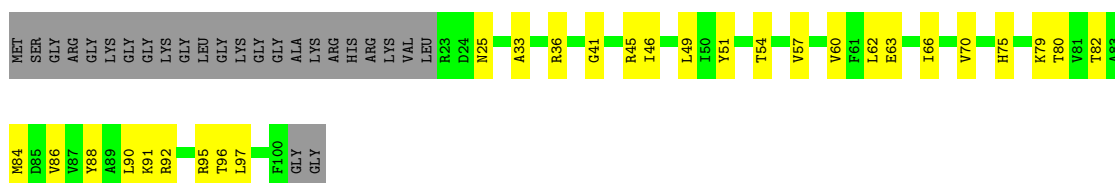
• Molecule 6: Histone H4

Chain F: 57% 19% 23%



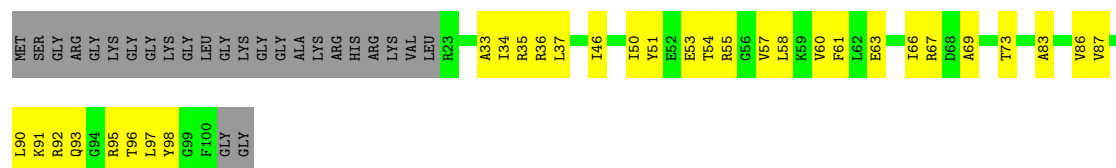
• Molecule 6: Histone H4

Chain b: 49% 27% 24%



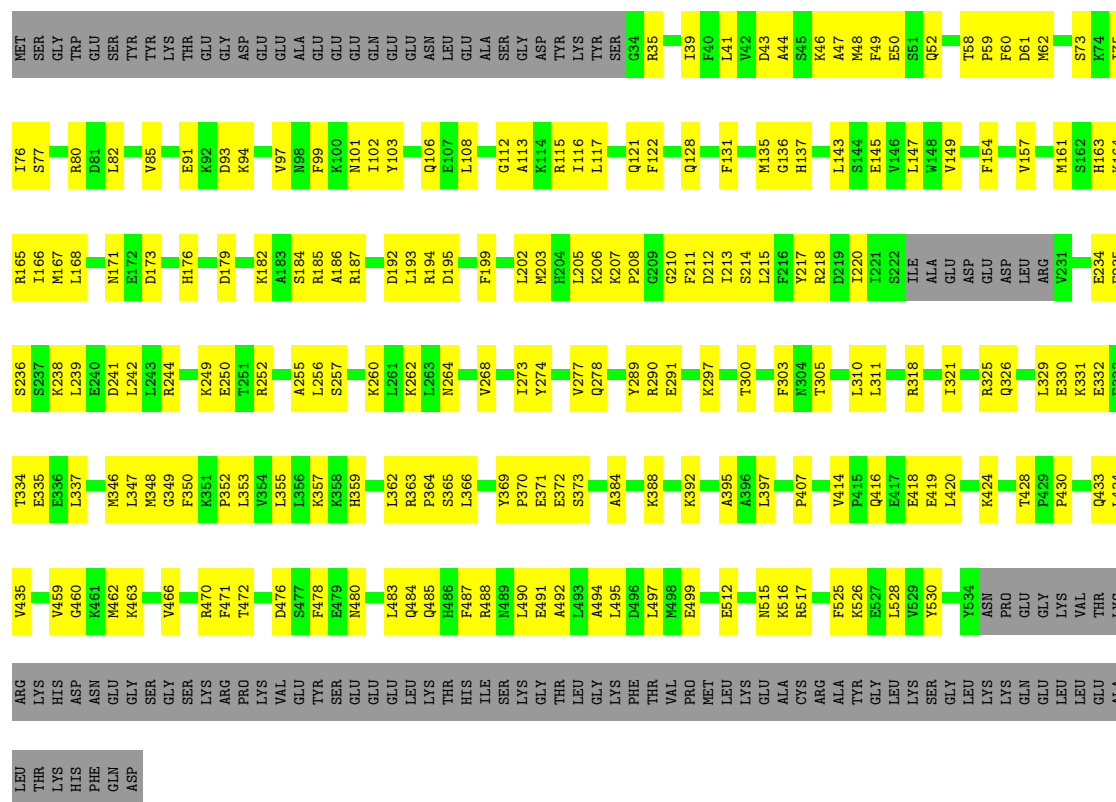
• Molecule 6: Histone H4

Chain f: 46% 30% 24%



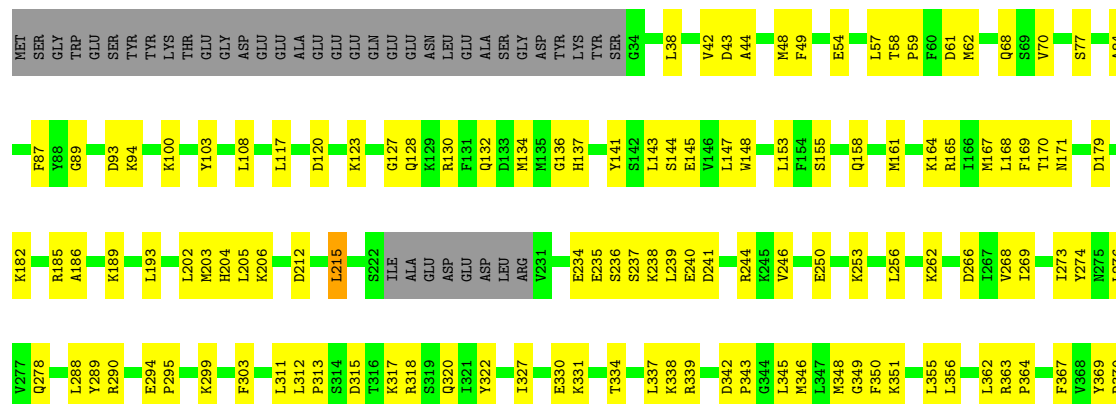
• Molecule 7: X-ray repair cross-complementing protein 6

Chain K: 49% 32% 19%

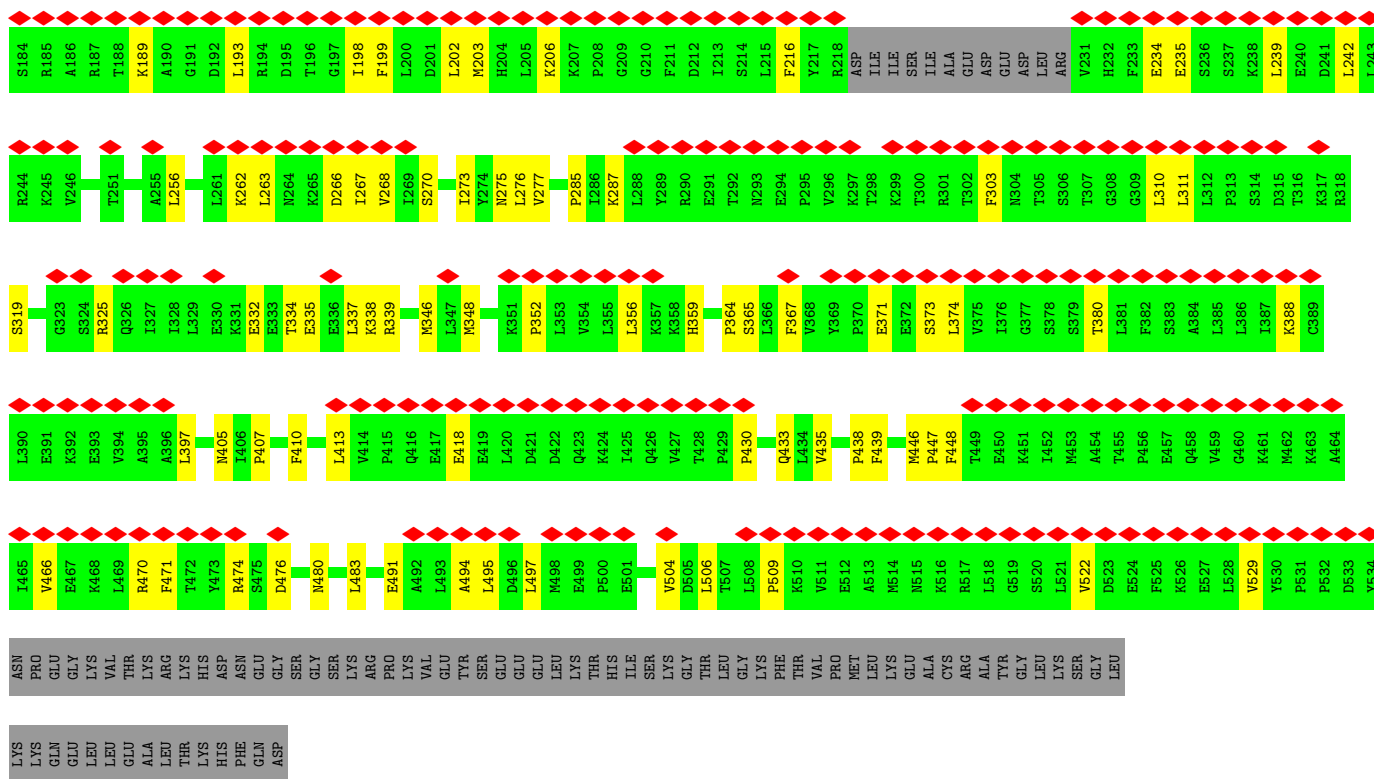


• Molecule 7: X-ray repair cross-complementing protein 6

Chain M: 51% 29% 19%

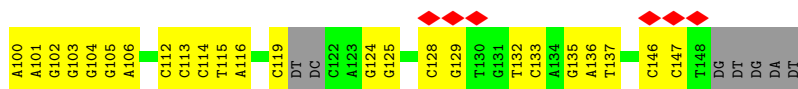
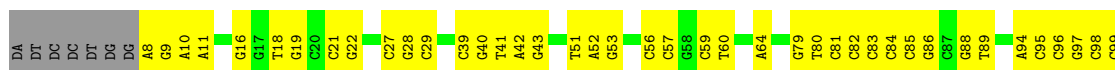






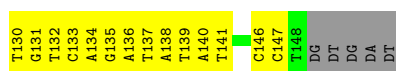
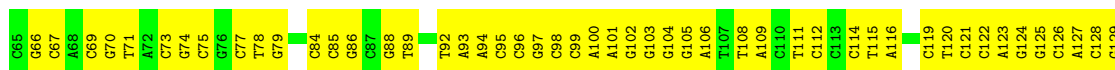
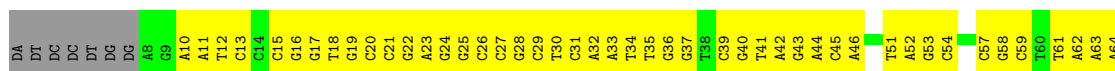
- Molecule 8: DNA

Chain I: 48% 42% 9%



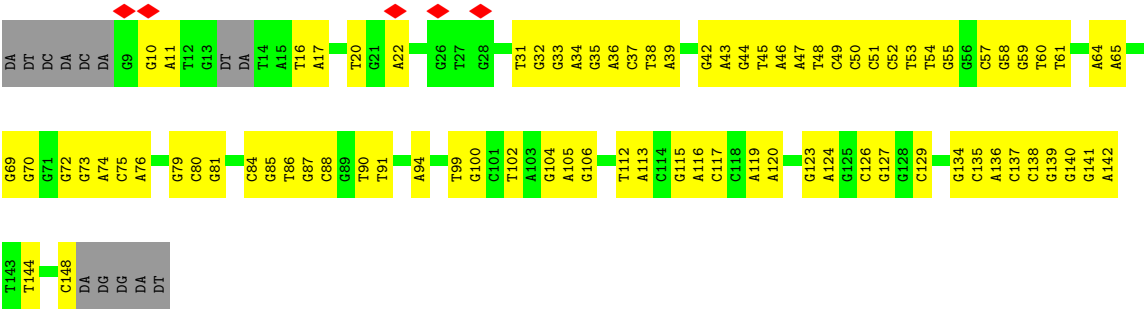
- Molecule 8: DNA

Chain i: 21% 71% 8%

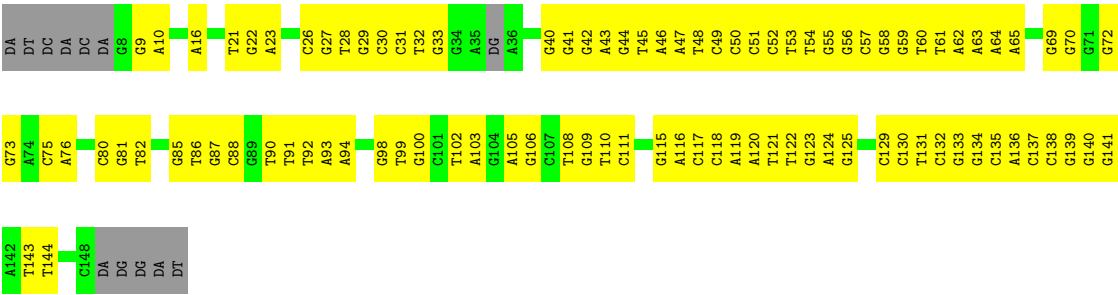


- Molecule 9: DNA

Chain J: 37% 54% 8%



• 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 (Å)	1038.24, 1038.24, 1038.24	wwPDB
Map dimensions	420, 420, 420	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	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
2:1:231:LEU:HG	2:1:232: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
2:1:65:ASP:HB3	2:1:78: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
2:1:82:HIS:HB2	2:1:84: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 ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

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.

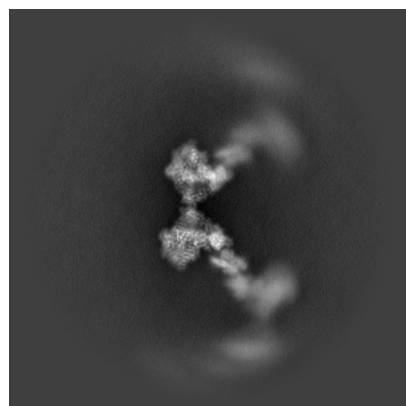
6 Map visualisation [i](#)

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.

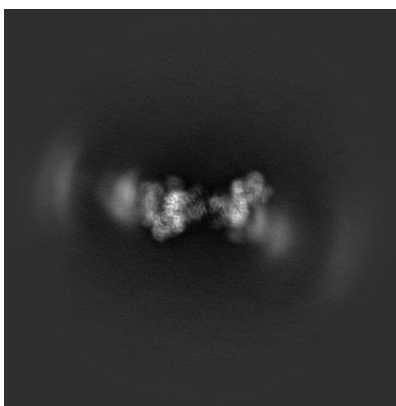
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

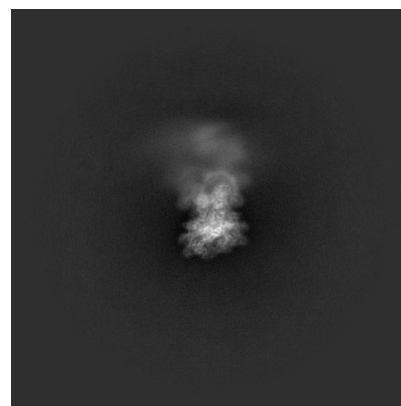
6.1.1 Primary map



X

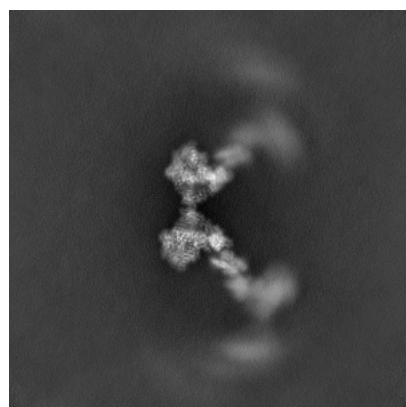


Y

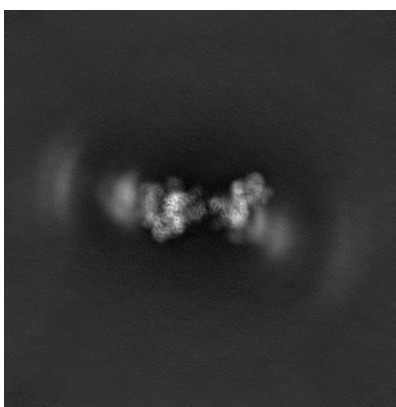


Z

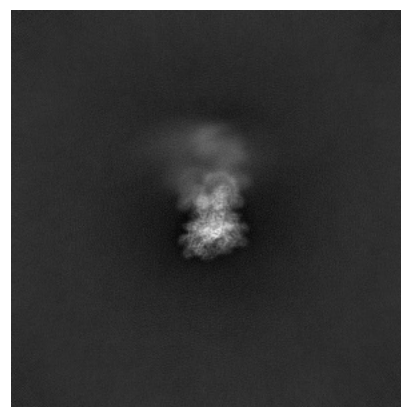
6.1.2 Raw map



X



Y

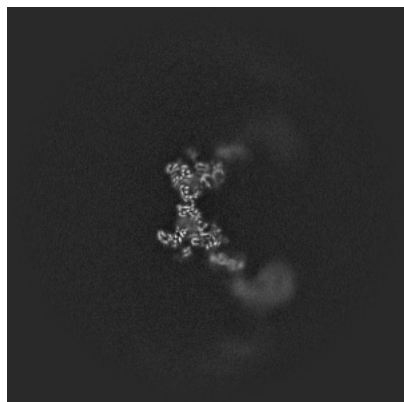


Z

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

6.2 Central slices [i](#)

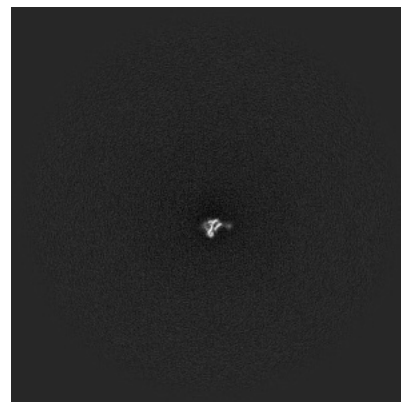
6.2.1 Primary map



X Index: 210

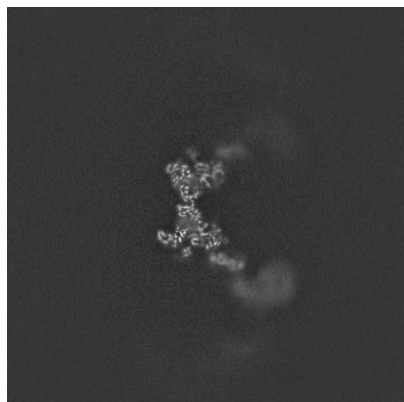


Y Index: 210



Z Index: 210

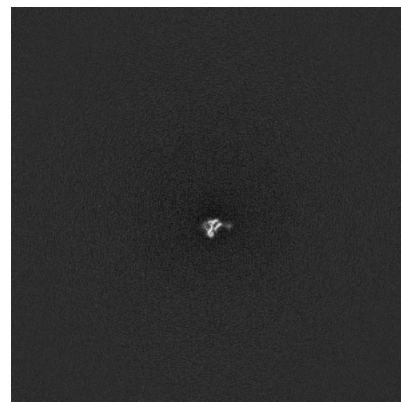
6.2.2 Raw map



X Index: 210



Y Index: 210

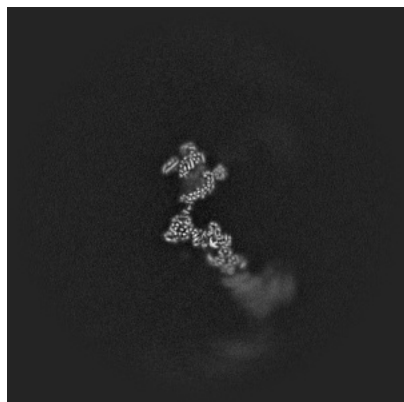


Z Index: 210

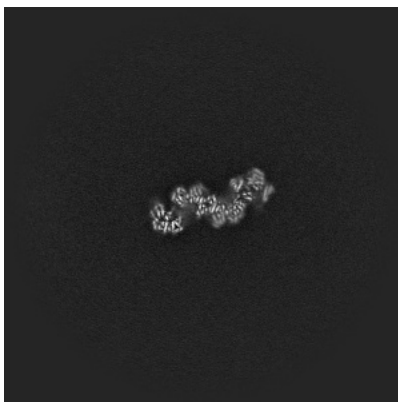
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

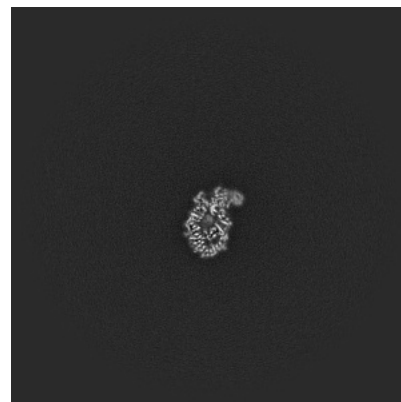
6.3.1 Primary map



X Index: 220



Y Index: 189

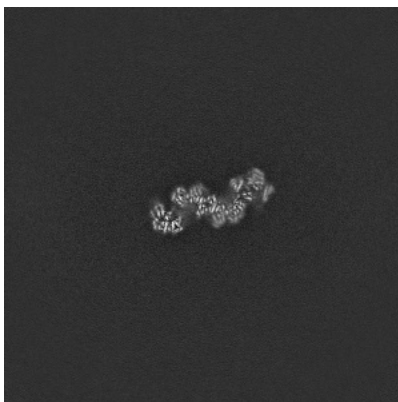


Z Index: 181

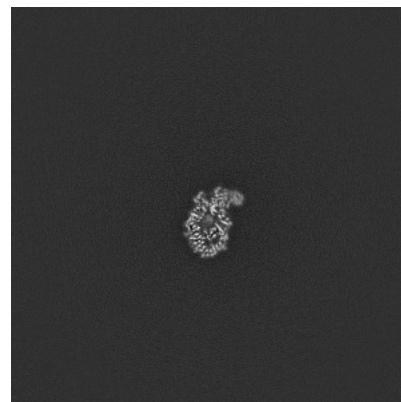
6.3.2 Raw map



X Index: 220



Y Index: 189

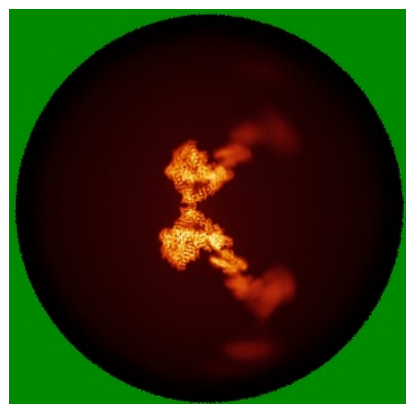


Z Index: 181

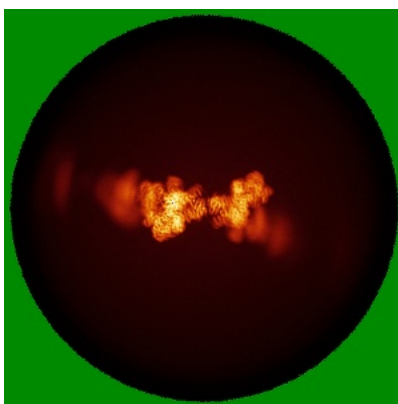
The images above show the largest variance slices of the map in three orthogonal directions.

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

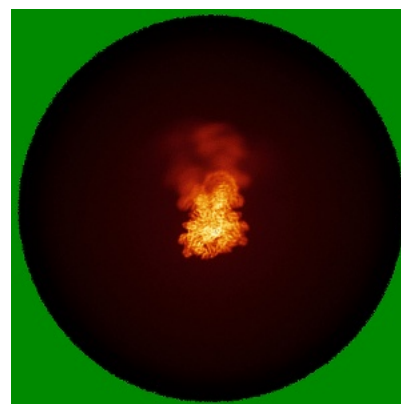
6.4.1 Primary map



X

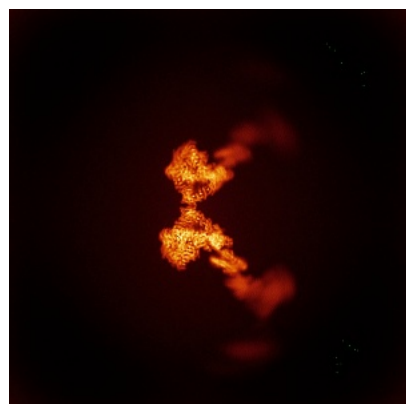


Y

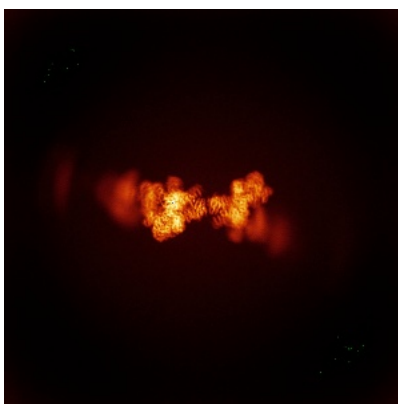


Z

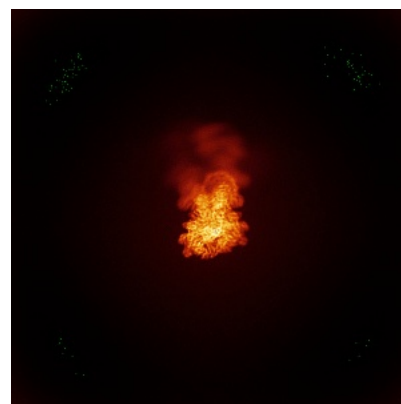
6.4.2 Raw map



X



Y

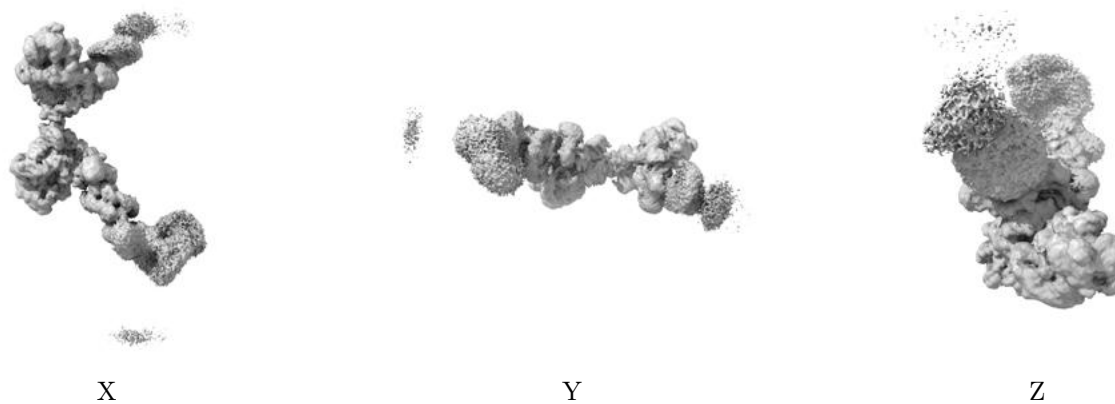


Z

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.

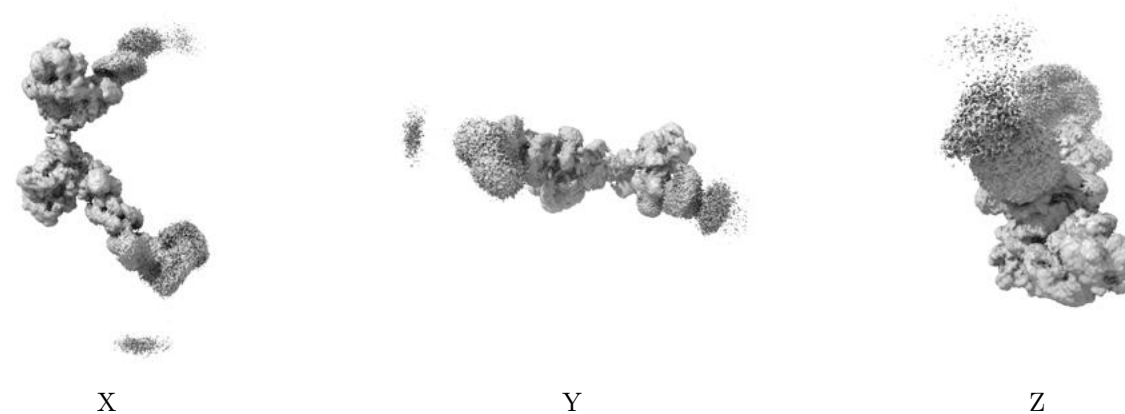
6.5 Orthogonal surface views [i](#)

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.

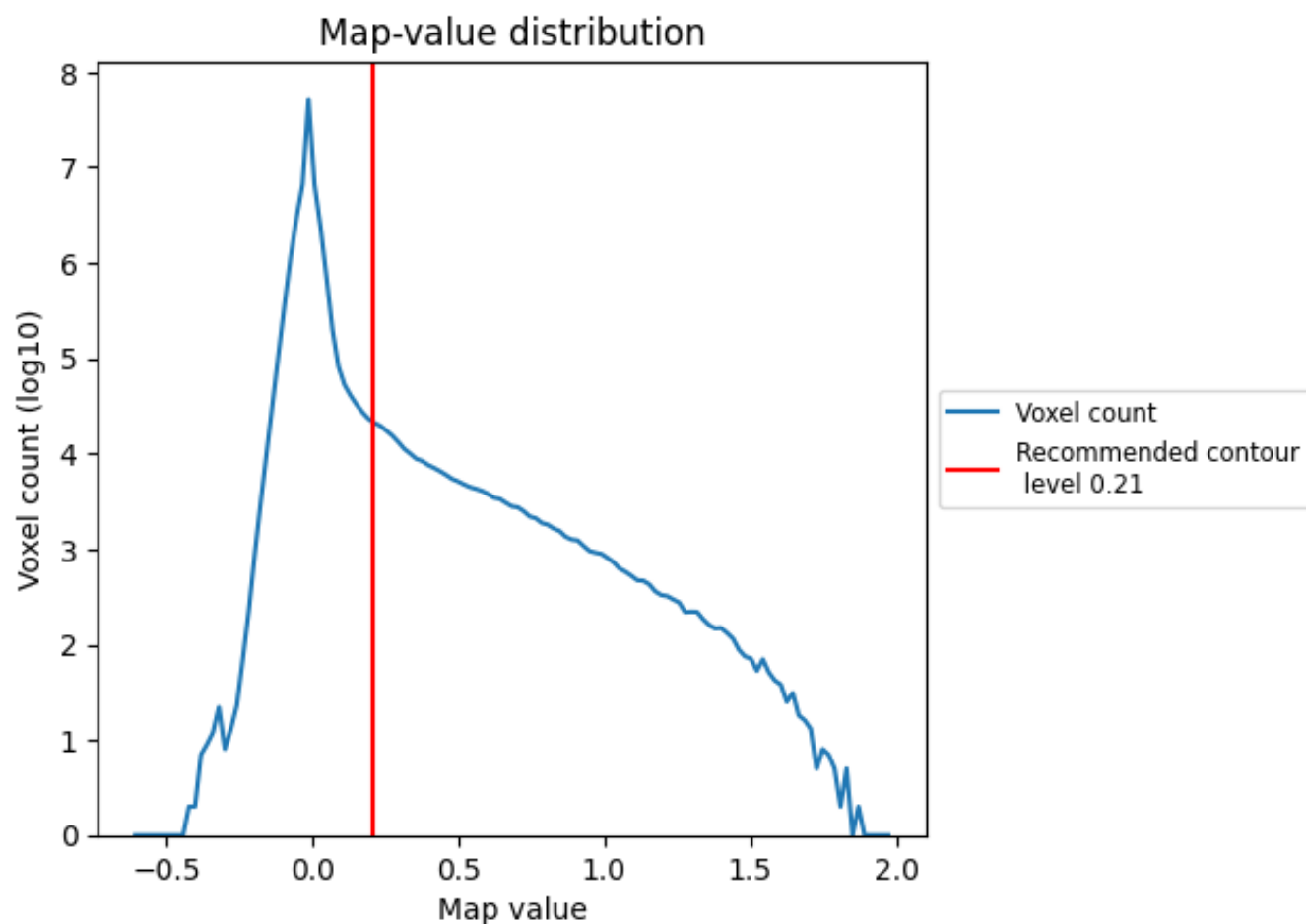
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

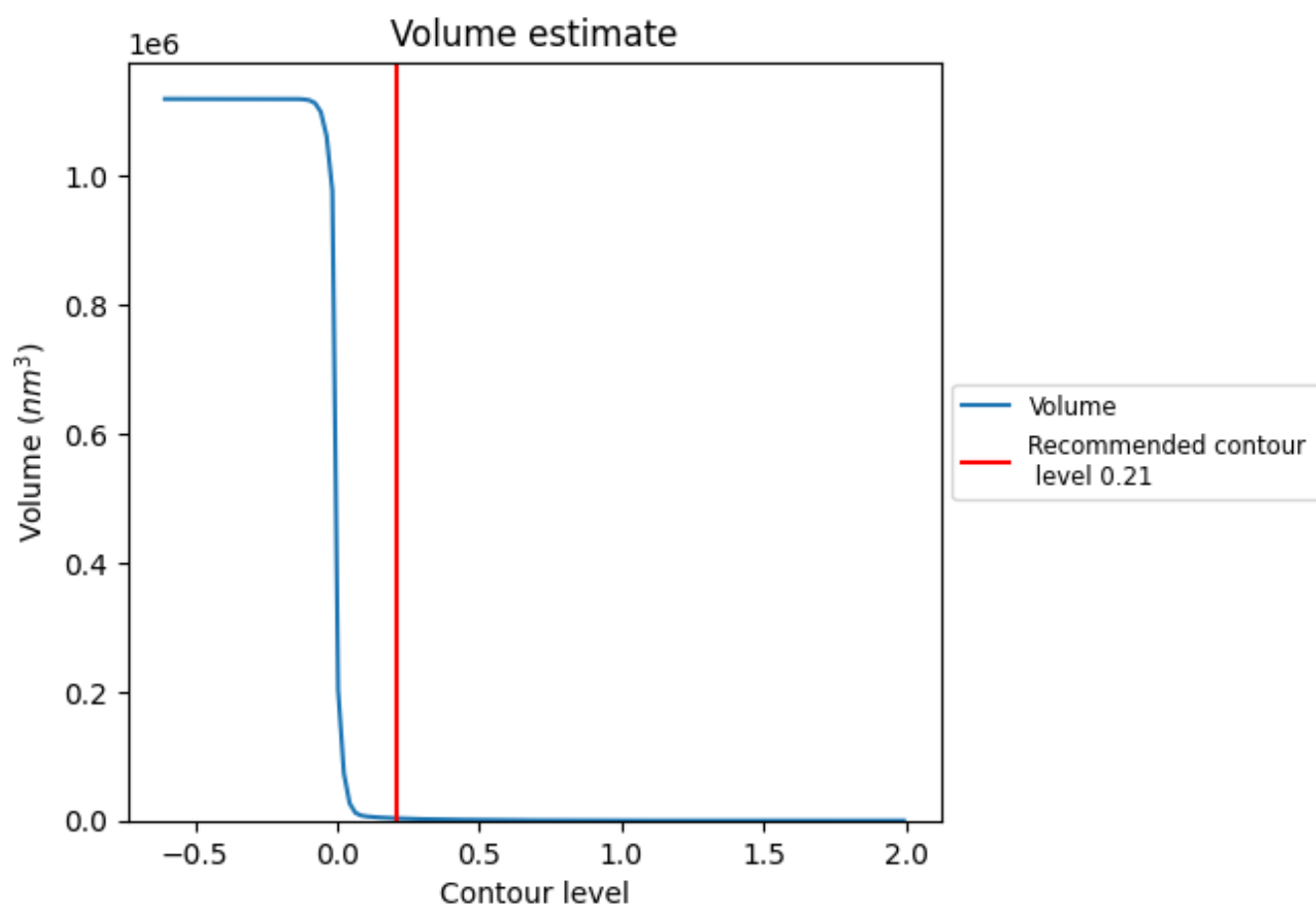
This section contains the results of statistical analysis of the map.

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.

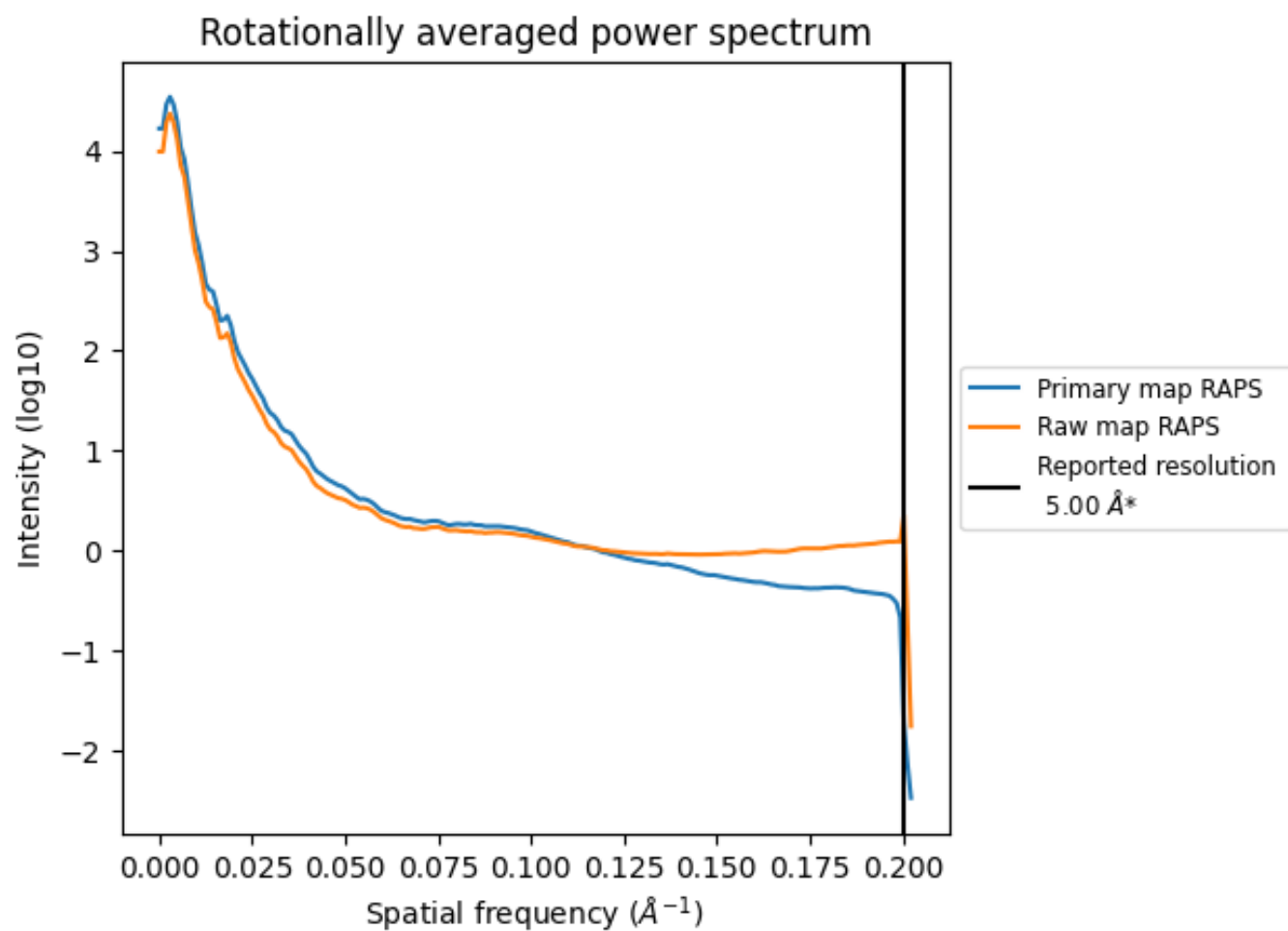
7.2 Volume estimate [i](#)



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 ⓘ

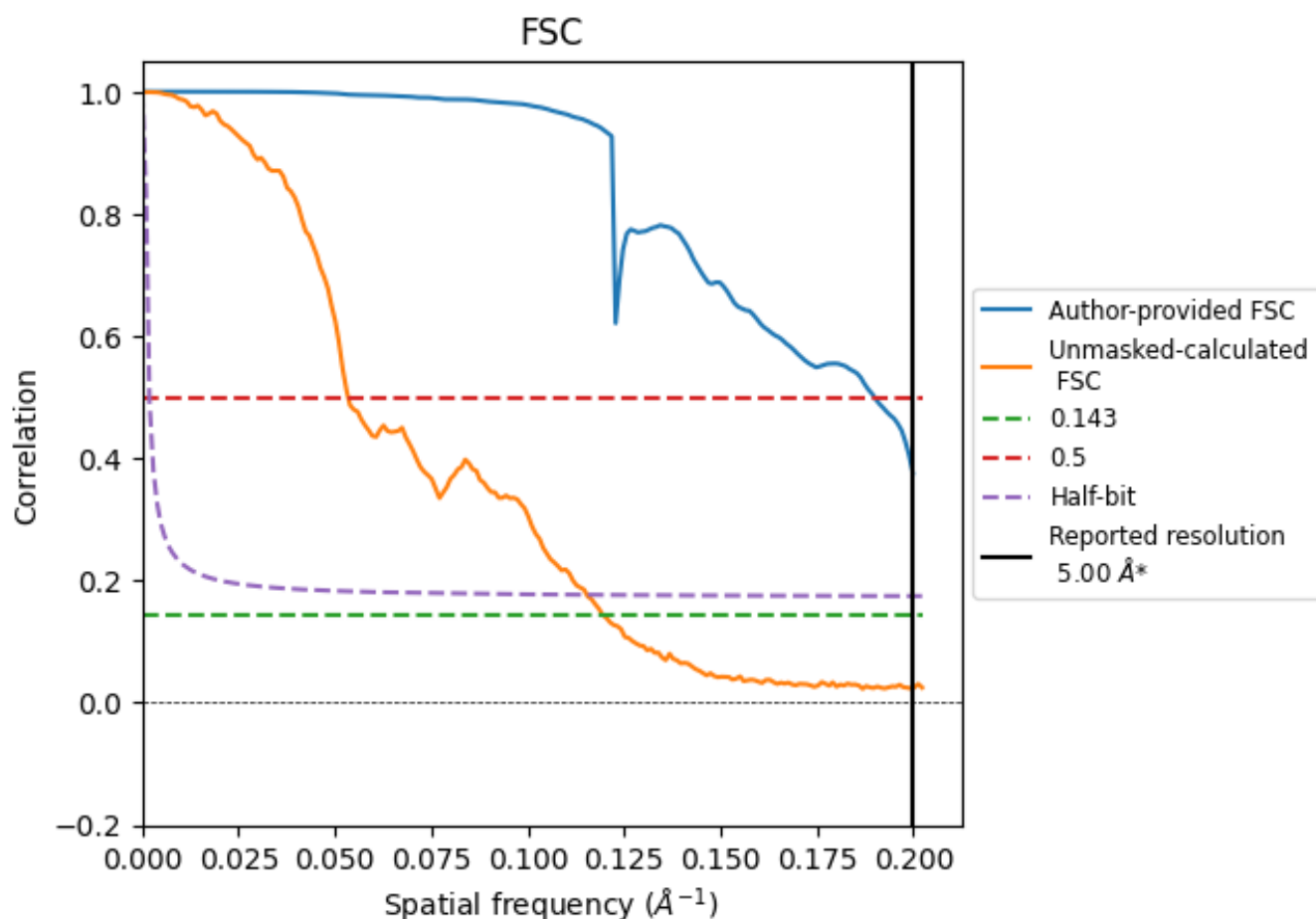


*Reported resolution corresponds to spatial frequency of 0.200 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



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

8.2 Resolution estimates [i](#)

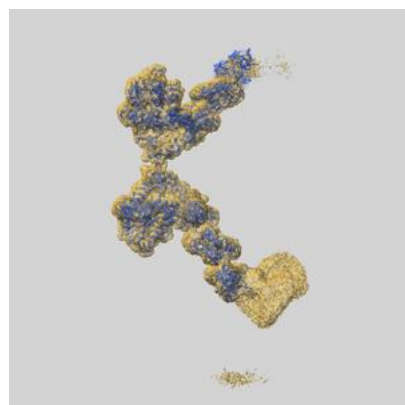
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	5.00	-	-
Author-provided FSC curve	-	5.27	-
Unmasked-calculated*	8.36	18.73	8.67

*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 %

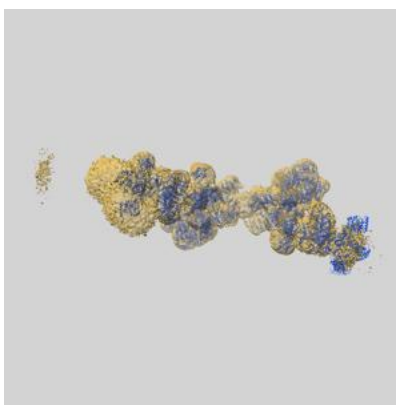
9 Map-model fit [i](#)

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](#).

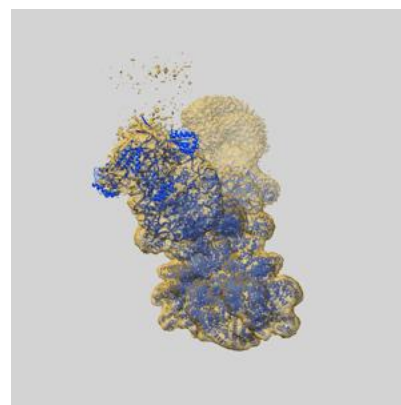
9.1 Map-model overlay [i](#)



X



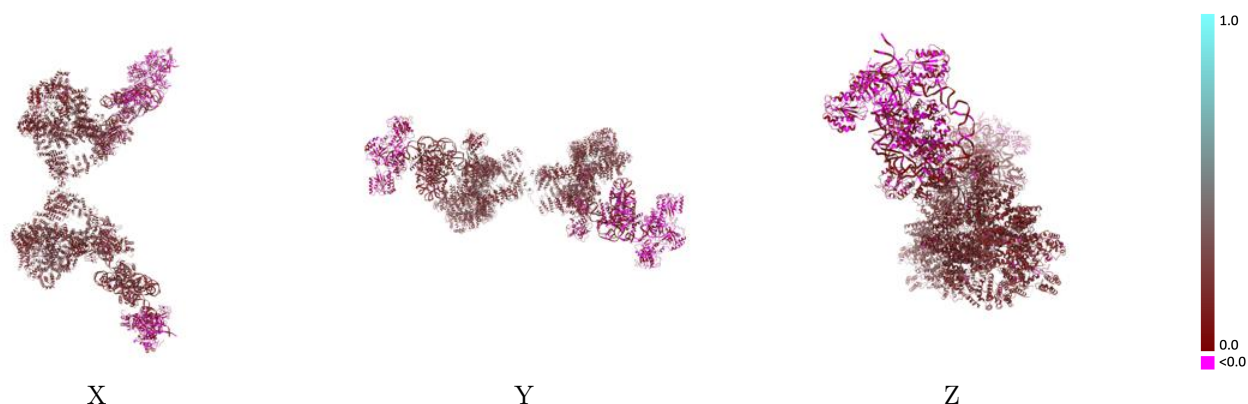
Y



Z

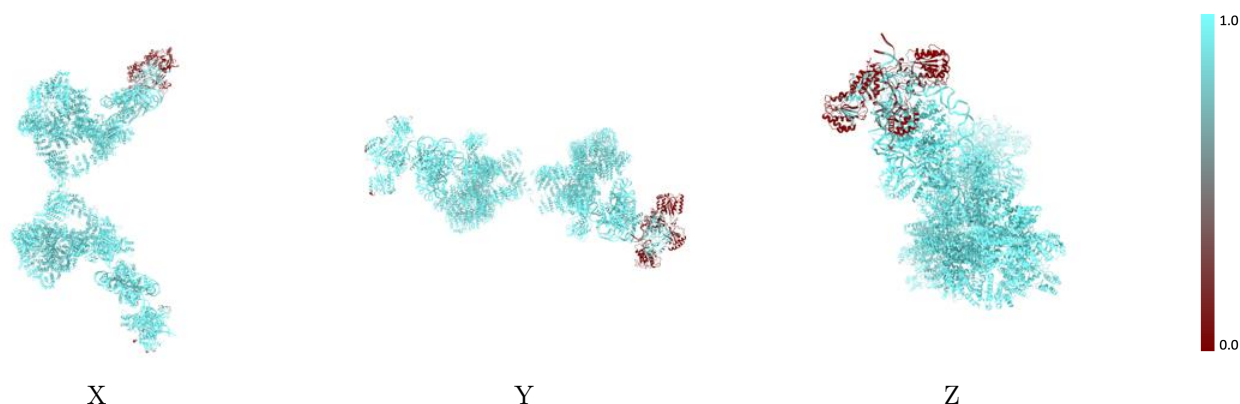
The images above show the 3D surface view of the map at the recommended contour level 0.21 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



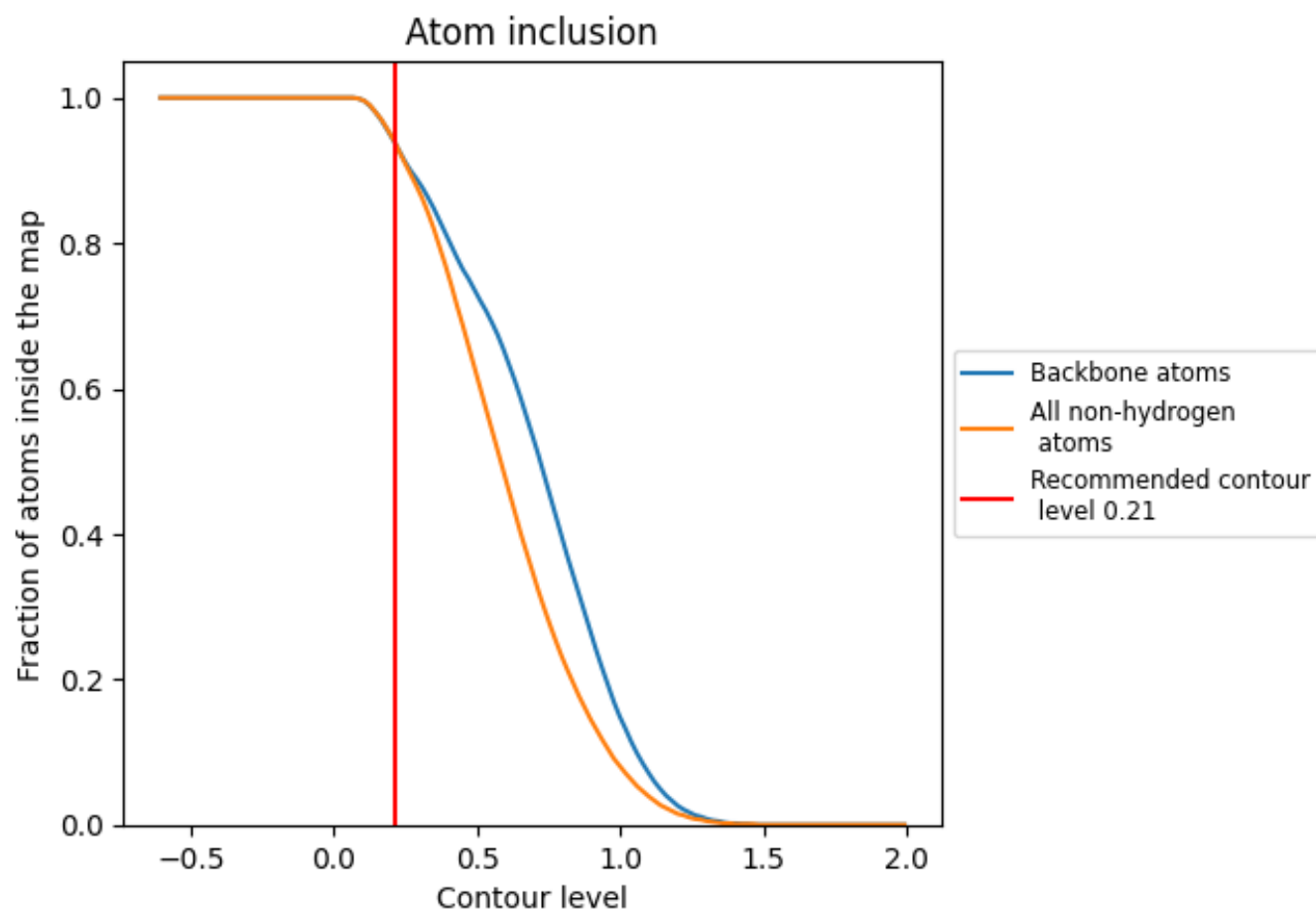
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

