



Full wwPDB EM Validation Report ⓘ

Mar 20, 2026 – 04:52 PM UTC

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.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
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) : 2.49

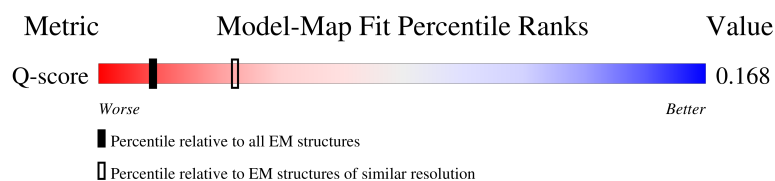
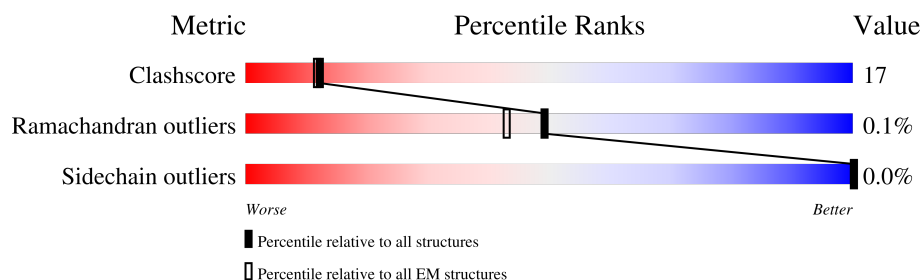
1 Overall quality at a glance

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.





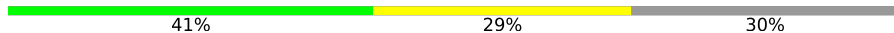










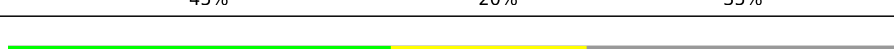
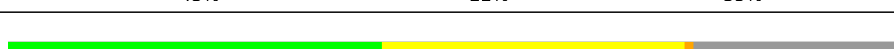
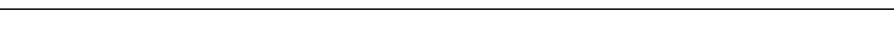

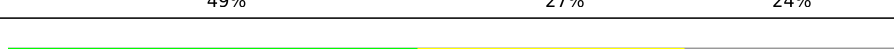


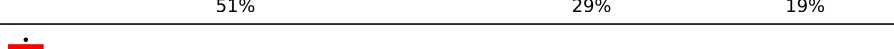



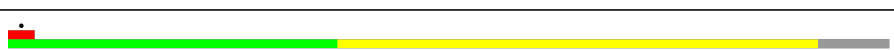
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	1057 (4.50 - 5.50)

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	<div><div></div><div>30%62%8%</div></div>

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		

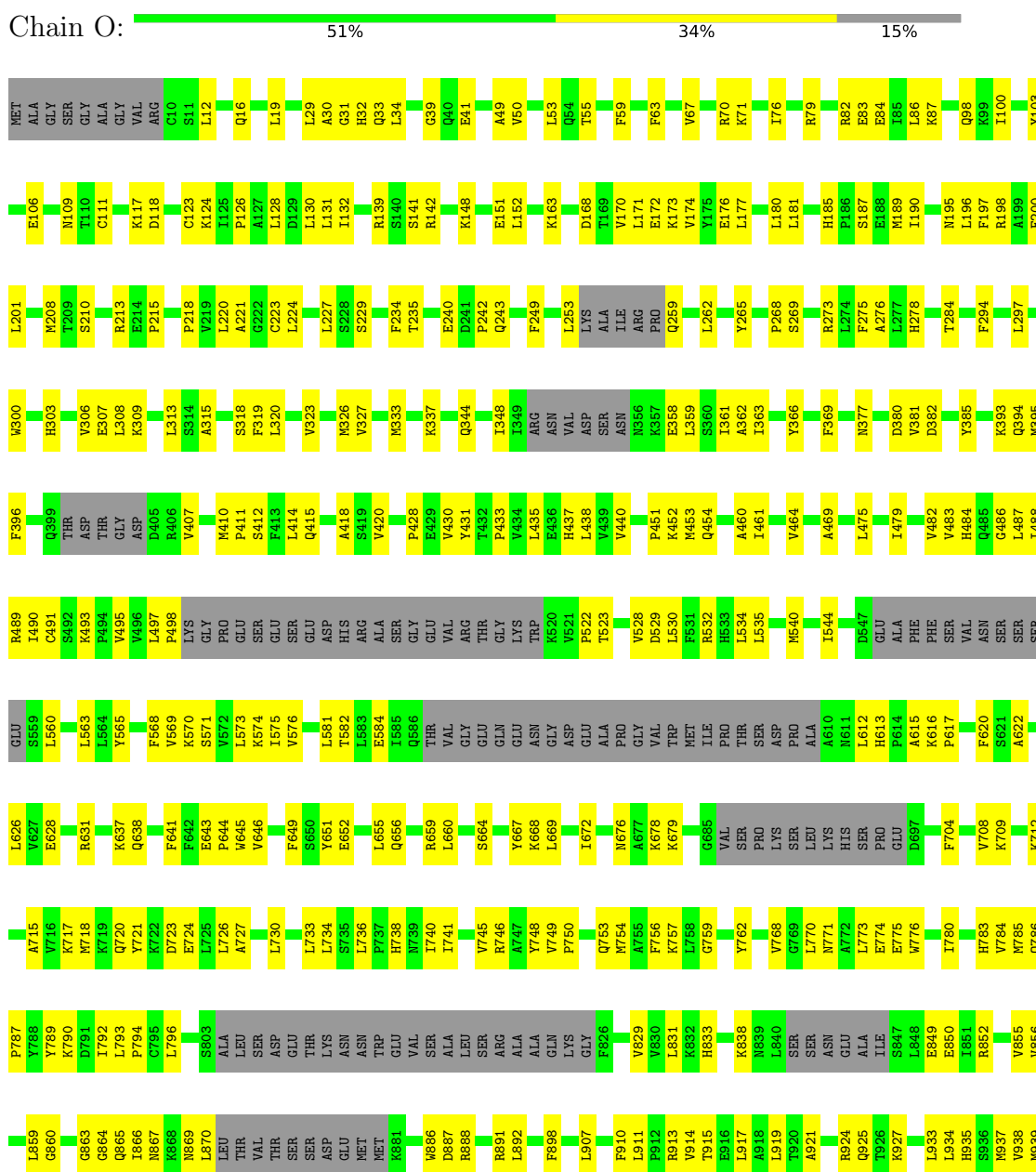
- Molecule 9 is a DNA chain called DNA.

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	M1590	GLU	D1397	C1312	T1137	T1056	M948
L2106	M2040	PHE	SER	L1824	F1746	V1671	M1592	GLN	L1398	GLY	K1140	S1058	K1057
L2107	Q2042	ASN	ILE	L1827	L1750	T1674	V1593	LEU	C1399	THR	L1145	L1059	E950
L2108	L1828	ASN	THR	L1828	P1756	Y1675	V1596	PRO	M1403	GLY	L1146	F1060	G951
L2109	H1829	ILE	THR	H1829	M1757	L1676	L1597	S1502	K1404	ALA	N1147	R1062	G952
L2110	L1836	LEU	GLY	L1836	L1758	L1679	M1600	L1505	G1234	GLY	A1148	R1063	P957
L2111	R1837	LVS	E1910	R1837	L1759	L1679	L1601	L1508	K1407	ASN	K1149	Y1064	Y959
L2112	R1838	ARG	L1911	R1838	M1762	K1683	F1605	Q1509	Y1411	ARG	K1150	Q960	Q960
L2113	F1839	ARG	T1912	F1839	W1762	L1684	F1608	L1510	R1412	THR	R1151	L961	L961
L2114	F1840	TYR	K1913	F1840	C1767	D1685	R1608	L1517	D1413	GLY	L1152	Y962	K963
L2115	A1847	ASN	T1914	A1847	R1768	L1688	Q1611	L1517	L1415	ALA	L1153	K964	R964
L2116	I1848	PHE	L1915	I1848	H1772	K1689	K1612	L1524	L1416	TYR	R1155	K1074	K1074
L2117	K1917	VAL	L1916	K1917	V1773	G1690	H1613	L1524	E1416	LEU	G1156	R1075	Y968
L2118	VAL	GLU	K1917	VAL	M1774	Q1691	H1614	L1527	T1417	ARG	F1157	L1076	Y968
L2119	ASP	GLU	K1917	ASP	E1775	T1694	Q1615	L1528	H1418	GLY	L1165	G1077	L972
L2120	PRO	VAL	A1922	PRO	E1776	T1694	K1617	L1531	K1422	PRO	L1166	F1082	C974
L2121	ALA	VAL	M1926	ALA	F1777	L1695	L1618	L1532	T1424	PHE	D1167	F1089	Y979
L2122	THR	GLU	MET	THR	L1778	L1696	A1619	L1532	A1425	LEU	L1168	Y1086	Y980
L2123	GLY	GLU	GLY	THR	Q1779	L1696	A1619	L1532	Q1426	LEU	V1169	Y1086	Y980
L2124	ARG	GLU	GLU	THR	F1782	F1699	L1623	A1536	L1428	LEU	L1170	F1089	Y980
L2125	ARG	GLU	ASN	LEU	R1783	THR	L1623	V1537	S1352	PRO	L1171	E1092	L983
L2126	ARG	GLU	ASN	LEU	K1784	LEU	V1626	L1538	P1353	LEU	L1172	Y1089	Y980
L2127	ARG	GLU	ASN	LEU	L1785	GLY	K1627	THR	E1354	LEU	L1173	E1092	P886
L2128	ARG	GLU	ASN	LEU	A1786	GLY	K1628	ALA	G1355	LEU	P1179	L1095	L1095
L2129	GLU	GLU	E1935	GLU	R1787	GLY	C1629	SER	W1356	LEU	Q1180	V1096	V1096
L2130	GLU	GLU	E1935	GLU	A1787	GLY	D1630	LEU	A1263	LEU	C1183	Q1099	Q1099
L2131	ASP	GLU	L1934	ASP	S1790	SER	S1631	GLY	L1448	LEU	R1184	F1099	F995
L2132	PRO	GLU	L1934	PRO	L1707	SER	S1631	GLY	L1448	LEU	H1185	V1100	T996
L2133	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU	K1186	F1101	T996
L2134	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU	F1191	L1104	K1000
L2135	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU	P1196	V1107	V1007
L2136	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU	P1199	M1103	V1007
L2137	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU	G1200	E1011	E1011
L2138	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU	N1201	A1012	A1012
L2139	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU	R1202	I1013	I1013
L2140	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU	S1203	A1114	L1014
L2141	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU	H1115	H1115	H1115
L2142	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU	L1206	T1017	T1017
L2143	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU	V1207	V1018	V1018
L2144	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU	L1208	S1120	S1120
L2145	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU	K1209	L1121	L1121
L2146	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU	D1210	G1122	G1122
L2147	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU	I1211	T1123	T1123
L2148	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU	L1212	R1026	R1026
L2149	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU	K1213	D1027	D1027
L2150	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU	E1214	F1028	F1028
L2151	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU	A1130	C1029	C1029
L2152	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU	S1218	T1033	T1033
L2153	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2154	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2155	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2156	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2157	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2158	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2159	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2160	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2161	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2162	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2163	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2164	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2165	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2166	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2167	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2168	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2169	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2170	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2171	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2172	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2173	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2174	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2175	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2176	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2177	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2178	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2179	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2180	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2181	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2182	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2183	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2184	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2185	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2186	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2187	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2188	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2189	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2190	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2191	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2192	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2193	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2194	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2195	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2196	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2197	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2198	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2199	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2200	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2201	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2202	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2203	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2204	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2205	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2206	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2207	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2208	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2209	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2210	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2211	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2212	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2213	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2214	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2215	THR	GLU	L1934	THR	L1707	SER	S1631	GLY	L1448	LEU			
L2216	THR	GLU	L1934	THR	L1707	SER	S						



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	L3970	I4043	W4127
I3496	PRO	Q3704	T3869	M3971	I4044	M4128
S3497	V3601	Q3704	T3869	L3972	A4047	
W3498	V3601	Q3704	T3869	P3973	R4048	
I3499	V3606	G3707	K3873	M3974	R4049	
S3500	E3607	R3708	K3874	E3975	A4054	
V3503	K3608	R3708	E3875	I3976	V4058	
L3505	M3609	K3710	K3877	T3977	I4059	
L3506	E3611	G3716	L3882	K3975	L4064	
D3509	L3617	I3719	R3889	E3976	H4068	
Q3510	P3623	A3720	P3894	I3983	P4072	
V3512	G3624	F3722	L3898	M3984	Y4077	
A3513	G3625	V3726	A3905	V3985	A4078	
N3524	R3629	M3729	A3909	H3986	V4080	
Q3527	K3631	S3731	C3912	I3987	A4081	
F3533	G3647	L3732	C3912	L3988	G4082	
S3536	GLY	R3734	S3914	R3989	S4084	
S3537	SER	R3735	H3915	N4000	K4085	
E3538	LYS	K3736	G3919	T4001	H4087	
S3539	LEU	R3737	L3918	M4002	I4089	
TVR	ARG	I3738	I3920	D4003	R4090	
SER	MET	R3741	H3924	V4004	A4091	
PHE	LYS	G3742	L3925	F4005	Q4092	
LYS	LEU	D3744	N3926	V4006	E4093	
ASP	ASP	E3745	N3927	K4007	P4094	
T3546	T3546	R3746	F3928	F4008	E4095	
T3547	T3547	E3747	K3929	P4009	S4096	
G3548	G3548	H3748	V3930	S4010	G4097	
K3549	L3666	P3749	A3931	F4011	L4098	
K3551	L3667	F3750	L3940	D4012	T4102	
K3552	L3668	V3752	D3941	W4013	K4105	
F3553	K3669	E3756	F3946	K4014	G4106	
F3554	M3670			Y4015	L4107	
R3557	N3671			PHE	M4108	
V3567	K3672			GLU	D4109	
I3572	L3680			GLN	Q4110	
A3574	E3682			ILE	Q4111	
	G3683			ASN	D4113	
	S3684			VAL	P4114	
	P3685			ALA	L4117	
				GLU	G4118	
				LYS		
				ASN		

• Molecule 1: DNA-dependent protein kinase catalytic subunit

Chain o:  49% 35% 15%

MET	P92	I166	Q243	K626	M410
ALA	I93	P167	T244	V327	P411
GLY	E94	D168	S245	V327	S412
SER	K95	T169	R246	F413	F413
GLY	N96	V170	E247	M333	L414
ALA	G97	L171	I248	K337	V417
GLY	Q98	E172	F249	L338	A418
VAL	K99	Y175	N250	Q339	S419
ARG	I100	E176	F251	Q340	V420
C10	Y103	L177	L253	F341	
L13	S104	L181	LYS	T348	P428
R14	V106		ALA	I349	
L15			ILE	T432	
L19	K108	V184	ARG	L435	
D23	M109	H185	PRO	ASN	L435
R24	T110	P186	Q259	VAL	E436
A27	C111	S187	I260	ASP	H437
L28	T112	E188	D261	SER	L438
L29	S113	M189	L262	ASN	
L34	V114	I190	K263	N356	Q442
L35	Y115	N191	R264	L359	F446
L36	T116	N192	Y265	P447	F446
L37	K117	A193	A266	V267	Q448
L38	A120	E194	P268	S269	Y449
L39	I121	N195	L196	A270	S450
L40	C123	F197	K274	K364	M453
L41	C124	F200	L274	K374	Q454
L42	I125	L201	F275	L455	
L43	I128	L204	T284	D380	L468
L44	D129	C285	C285	V381	R459
L45	L130	Q207	L286	D382	A460
L46	L131	S210	L287	F383	V464
L47	I132	K216	Y290	K384	
L48	K133	R219	V296	V385	L468
L49	L134	L220	K299	E387	A469
L50	Q136	C223	H303	L388	P473
L51	R139	L224	E307	V396	V474
L52	R142	L227	K309	Q390	L475
L53	D145	L230	L313	C392	R476
L54	E146	L231	S314	Q393	R477
L55	F147	L232	A315	Q394	C478
L56	K148	L233	T234	F396	I479
L57	E151	L234	T235	THR	H484
L58	L152	L235	E240	GLN	Q485
L59	E159	L236	D241	THR	G486
L60	L162	L237	K164	ASP	L487
L61	L163	L238	L165	GLY	I488
L62	K164	L239		ASP	K493
L63	L165	L240		ASP	F498
L64		L241		LYS	
L65		L242		GLY	
L66				PRO	

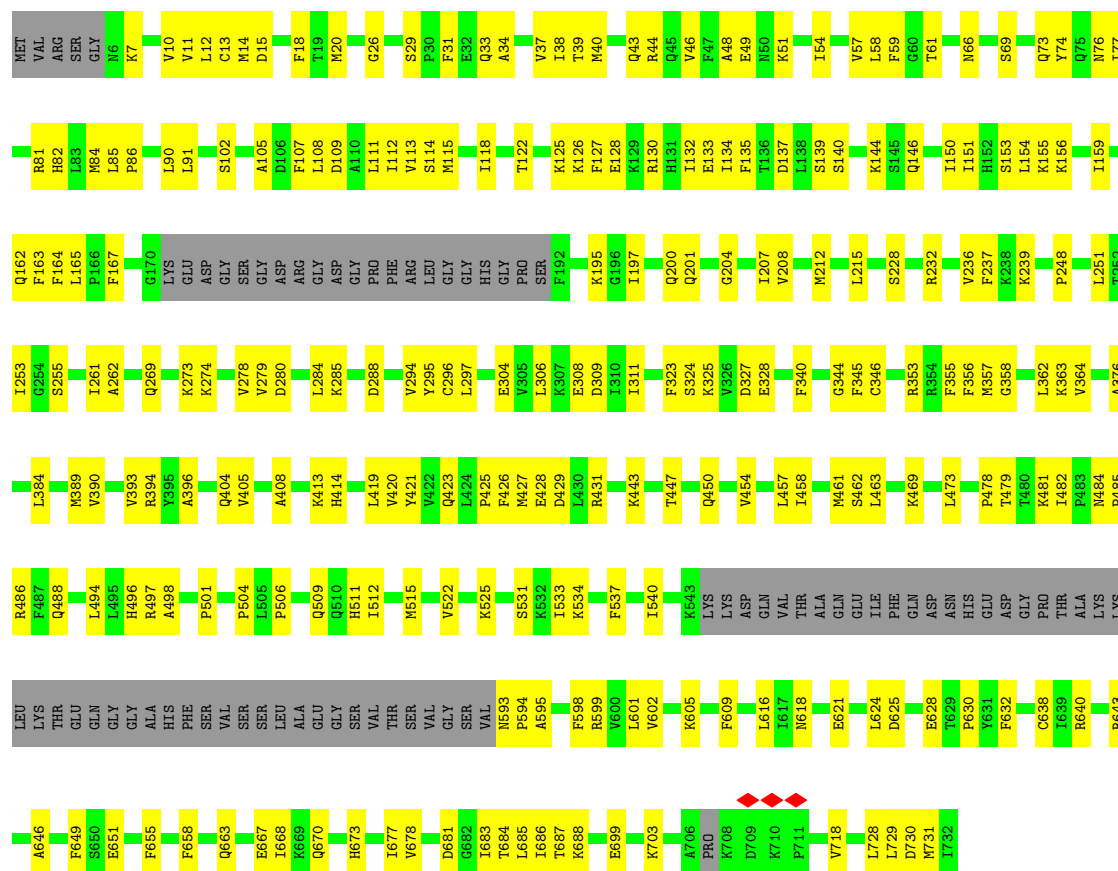
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F1699	T1622	THR	Q1457	P1363	L1259	G1177	M1071	V988	L907	ALA	V745	L655	I575	SER
THR	L1625	ALA	R1460	L1363	L1260	R1178	A1072	D908	D908	GLN	R746	L659	V576	GLU
LEU	H1626	SER	R1460	P1363	L1261	P1179	F1073	M989	F910	LYS	R746	L660	E577	SER
GLY	L1463	GLY	L1463	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	L1465	L1358	C1267	C1183	G1077	W994	T915	ALA	M754	Y667	L585	HIS
GLY	M1466	GLM	M1466	L1359	M1268	R1184	A1078	N997	A918	SER	F756	K668	Q586	ARG
SER	L1467	GLY	K1360	K1360	M1268	H1185	A1078	N997	L919	ASN	K757	L670	Q586	GLY
VAL	L1468	VAL	K1361	K1361	I1271	H1186	F1082	K1000	R924	ASN	L758	S671	VAL	VAL
ILE	D1474	ILE	D1362	D1363	T1275	S1187	F1082	F1001	R924	GLU	G759	I672	GLY	ARG
HIS	L1475	HIS	L1363	L1363	V1276	I1188	I1085	F1001	R924	ALA	Y762	I672	THR	GLY
PHE	L1476	PHE	T1366	T1366	V1276	E1188	Y1086	D1005	C931	ILE	Y762	I672	GLY	LYS
S1554	H1477	S1554	H1367	H1367	V1281	E1189	Y1086	D1005	C931	ILE	Y762	I672	GLY	LYS
E1557	S1478	E1557	L1368	L1368	L1282	F1191	R1087	A1008	L934	S847	L765	G685	ASN	W519
Y1558	V1479	Y1558	M1369	M1369	L1282	K1193	E1092	A1008	L934	L848	L770	G685	GLY	W519
F1558	L1484	F1558	R1370	R1370	K1292	F1194	L1095	E1011	L934	E849	L770	G685	ASP	TS23
Y1560	L1489	Y1560	V1371	V1371	A1293	V1195	V1096	A1012	V938	E850	R771	VAL	GLU	YS24
S1561	K1489	S1561	L1372	L1372	V1294	P1196	I1013	I1013	M939	PRO	R771	VAL	GLU	K525
F1562	K1489	F1562	L1376	L1376	F1296	L1197	F1101	L1014	M941	LYS	R771	VAL	GLY	D526
S1563	A1492	S1563	L1382	L1382	F1297	L1197	E1102	I1017	M941	LEU	W776	TRP	VAL	YS27
F1564	PRO	F1564	I1387	I1387	L1298	N1201	A1103	I1017	A945	LYS	W776	TRP	TRP	YS28
E1565	GLY	E1565	G1387	G1387	E1299	S1203	L1104	S1023	M948	HIS	I760	MET	MET	D529
T1566	ASP	T1566	L1395	L1395	I1300	L1206	L1106	T1024	G951	SER	I760	MET	MET	D529
I1567	GLU	I1567	V1391	V1391	T1301	W1207	I1106	R1026	G951	ILE	I760	MET	MET	D529
N1568	ARG	N1568	M1392	M1392	H1304	L1208	E1109	R1026	G951	SER	I760	MET	MET	D529
T1569	GLN	T1569	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
E1570	LEU	E1570	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
K1573	PRO	K1573	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
M1574	S1502	M1574	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
L1577	L1510	L1577	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
A1578	G1513	A1578	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
V1579	L1514	V1579	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
L1580	L1515	L1580	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
E1581	E1516	E1581	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
L1582	L1517	L1582	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
M1583	L1518	M1583	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
N1589	F1519	N1589	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
T1590	A1520	T1590	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
K1591	F1521	K1591	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
M1592	L1524	M1592	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
V1593	C1525	V1593	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
V1596	E1526	V1596	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
L1597	R1527	L1597	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
N1598	L1528	N1598	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
G1599	V1529	G1599	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
M1600	S1530	M1600	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
L1601	L1531	L1601	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
Q1611	L1532	Q1611	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
K1612	A1536	K1612	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
H1613	VAL	H1613	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
L1696	LEU	L1696	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
P1697		P1697	L1395	L1395	H1304	K1209	S1110	C1029	G951	LYS	I760	MET	MET	D529
F1722	K1642	F1722	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
P1723	L1646	P1723	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
R1727	L1647	R1727	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
T1733	L1648	T1733	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
F1736	L1649	F1736	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
M1737	L1650	M1737	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
N1738	L1651	N1738	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
Y1739	L1652	Y1739	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
V1740	L1653	V1740	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
D1741	L1654	D1741	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
K1742	L1655	K1742	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
M1743	L1656	M1743	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
K1744	L1657	K1744	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
K1745	L1658	K1745	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
L1750	L1659	L1750	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
E1751	L1660	E1751	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
L1752	L1661	L1752	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
P1756	L1662	P1756	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
M1757	L1663	M1757	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
L1758	L1664	L1758	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
L1759	L1665	L1759	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
E1760	L1666	E1760	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
P1766	L1667	P1766	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
M1767	L1668	M1767	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
L1768	L1669	L1768	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
L1769	L1670	L1769	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
E1770	L1671	E1770	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
P1772	L1672	P1772	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
C1767	L1673	C1767	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
R1768	L1674	R1768	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
E1769	L1675	E1769	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
H1772	L1676	H1772	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
V1773	L1677	V1773	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
K1689	L1678	K1689	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
M1774	L1679	M1774	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
E1775	L1680	E1775	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
E1776	L1681	E1776	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
L1777	L1682	L1777	L1645	L1645	V1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654
Q1779	L1683	Q1779	L1645											





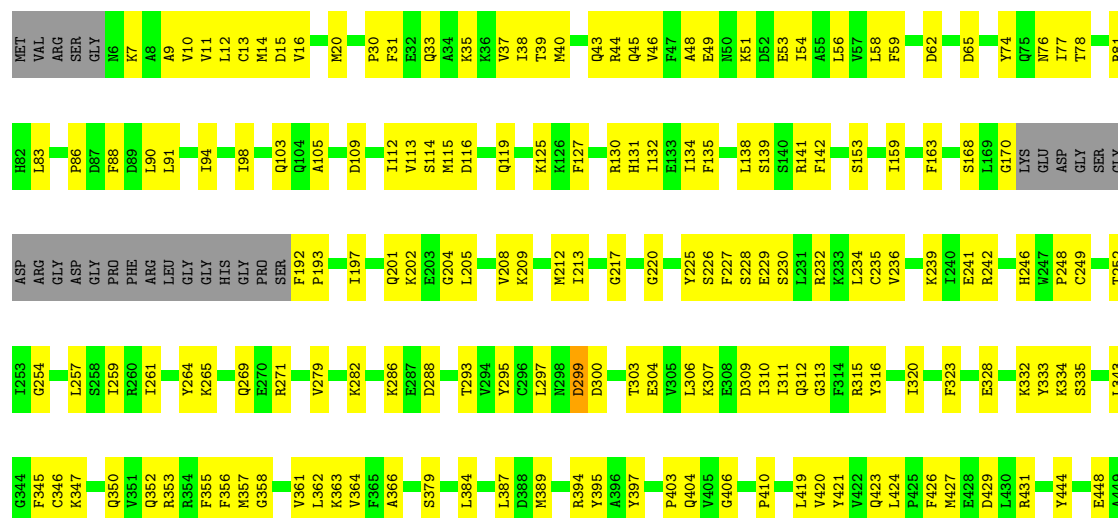
• Molecule 2: X-ray repair cross-complementing protein 5

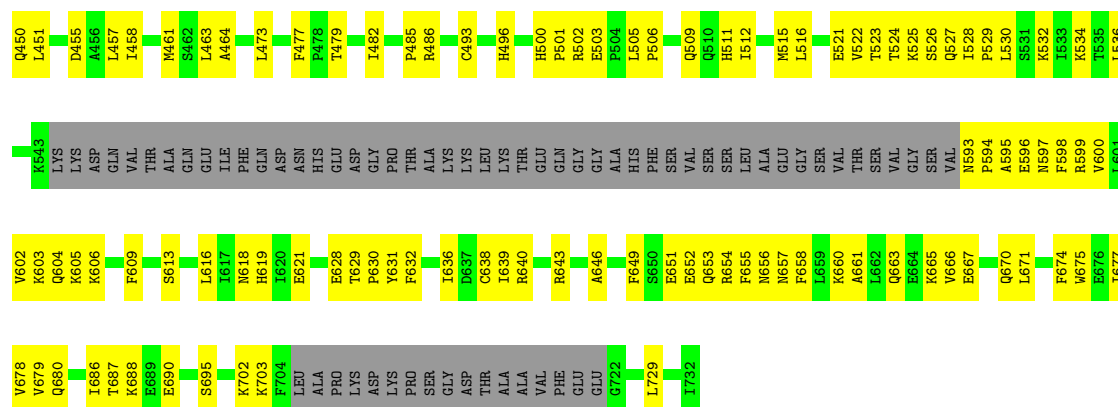
Chain L:  57% 33% 10%



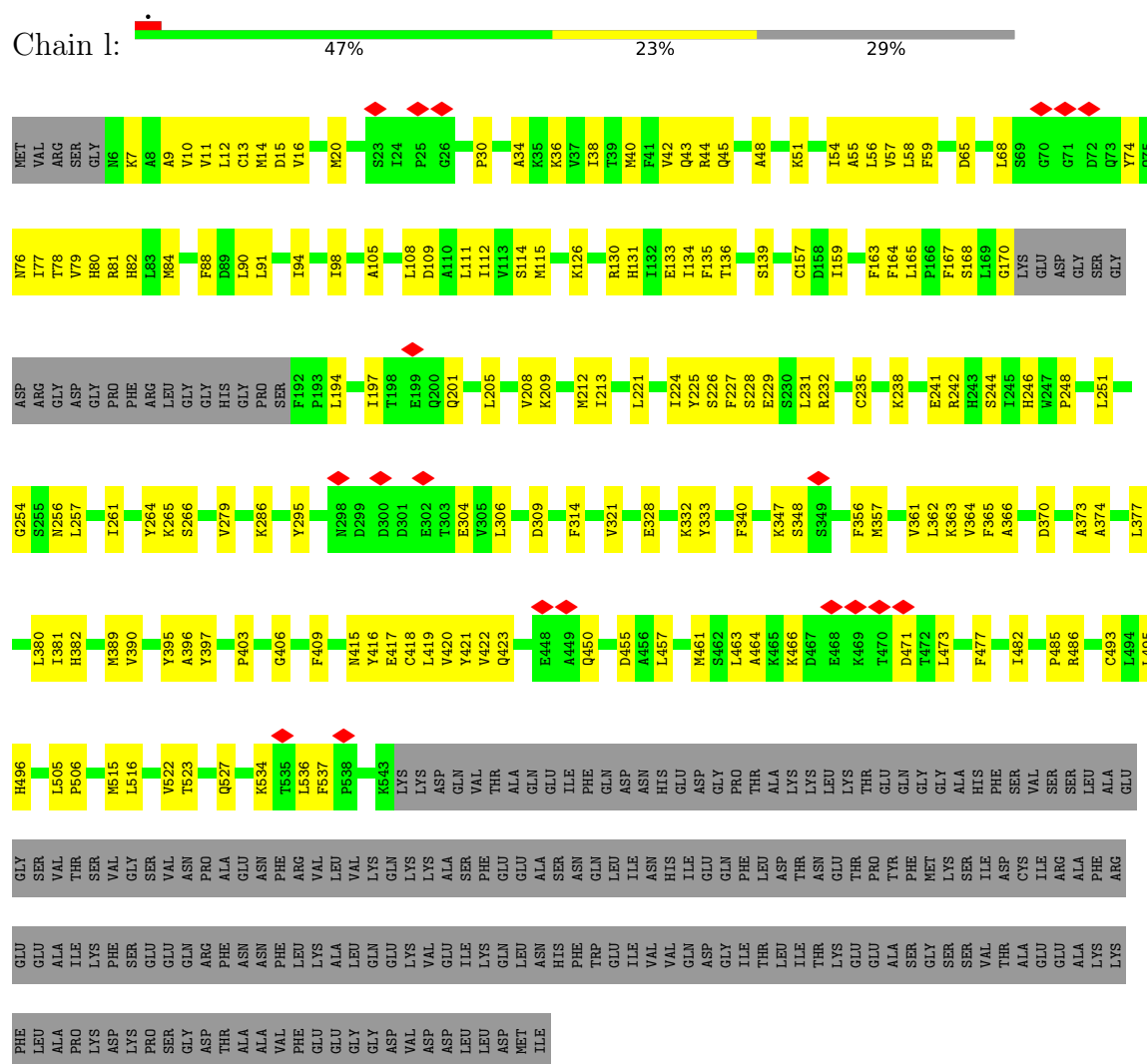
• Molecule 2: X-ray repair cross-complementing protein 5

Chain N:  50% 37% 13%





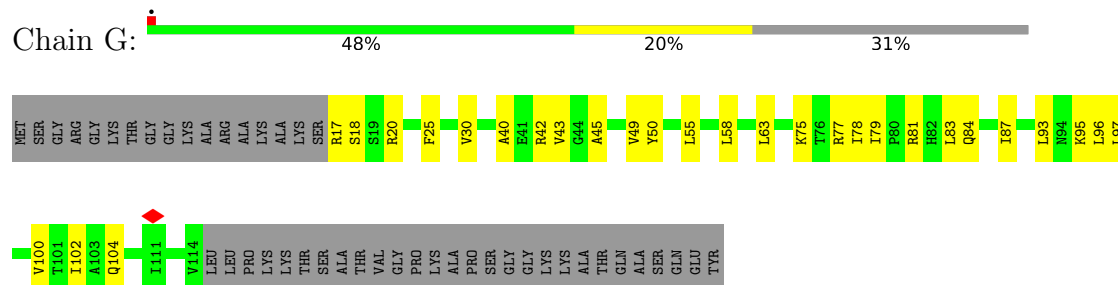
• Molecule 2: X-ray repair cross-complementing protein 5



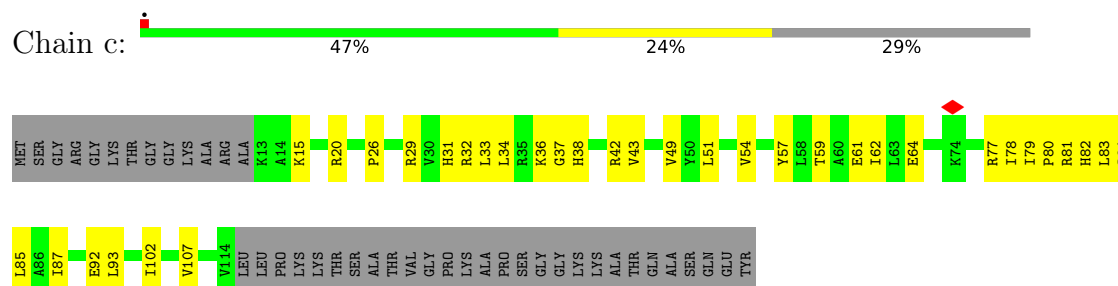
• Molecule 2: X-ray repair cross-complementing protein 5



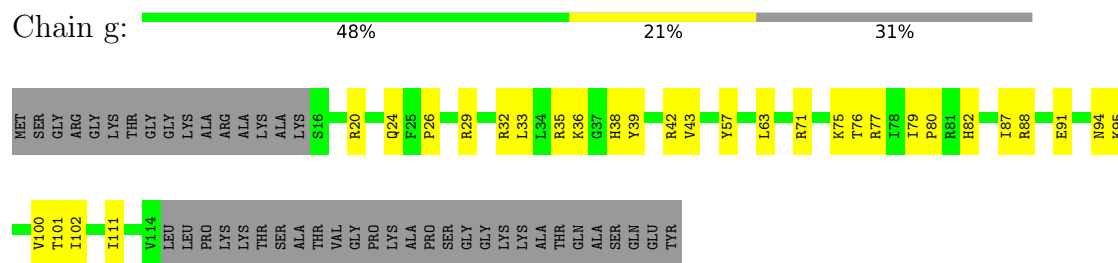
- Molecule 3: Histone H2AX



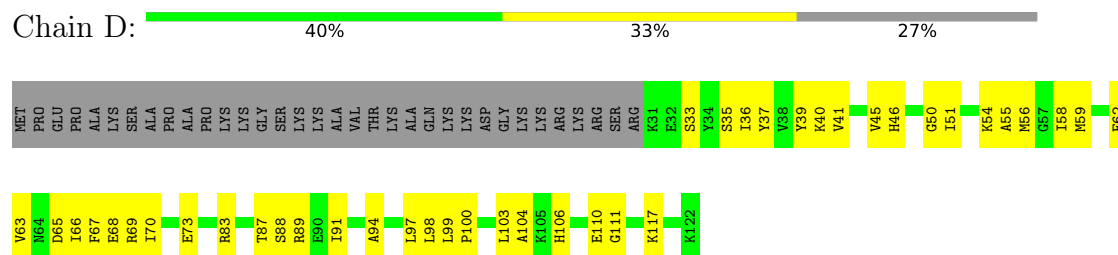
- Molecule 3: Histone H2AX



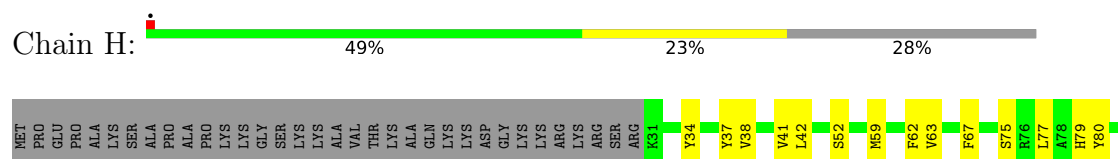
- Molecule 3: Histone H2AX

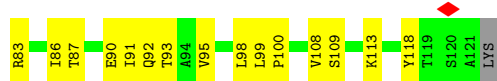


- Molecule 4: Histone H2B type 1-J

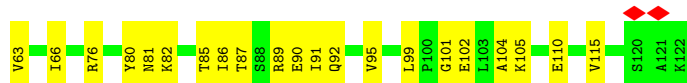
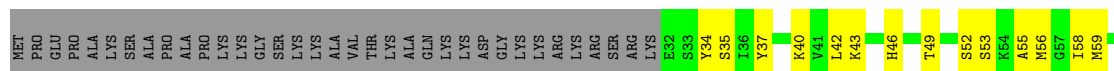


- Molecule 4: Histone H2B type 1-J

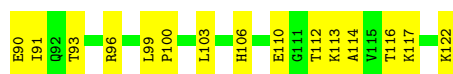
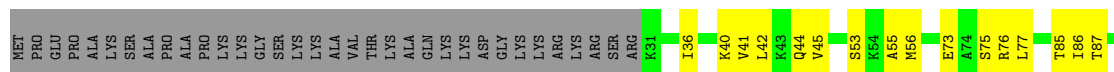




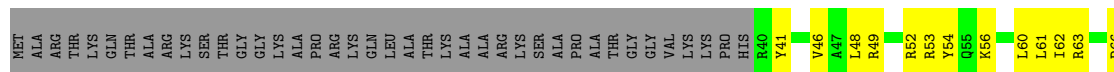
• Molecule 4: Histone H2B type 1-J



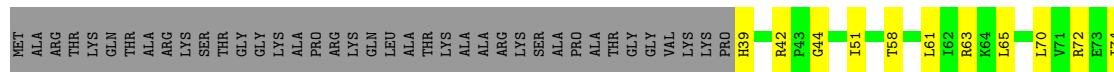
• Molecule 4: Histone H2B type 1-J



• Molecule 5: Histone H3.1

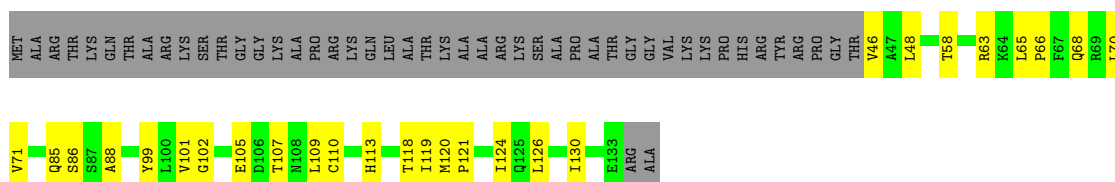


• Molecule 5: Histone H3.1



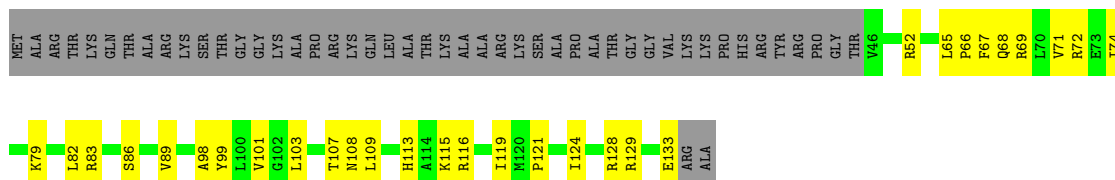
• Molecule 5: Histone H3.1





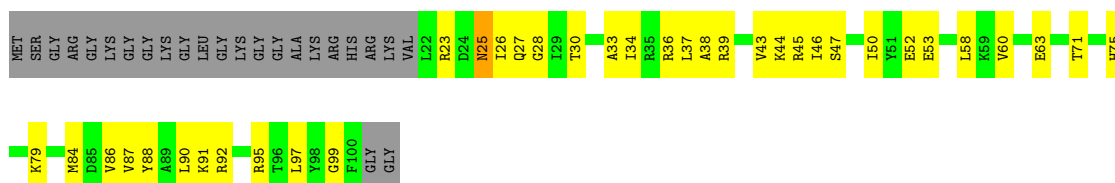
• Molecule 5: Histone H3.1

Chain e: 43% 22% 35%



• Molecule 6: Histone H4

Chain B: 42% 34% 23%



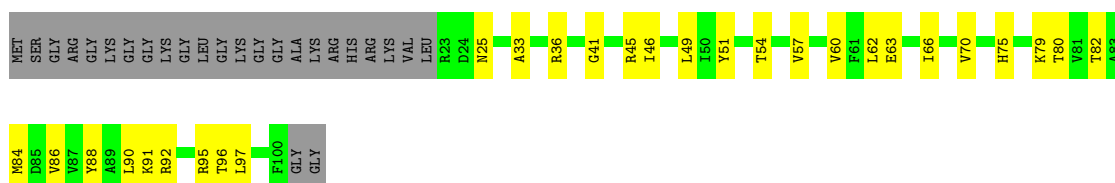
• Molecule 6: Histone H4

Chain F: 57% 19% 23%



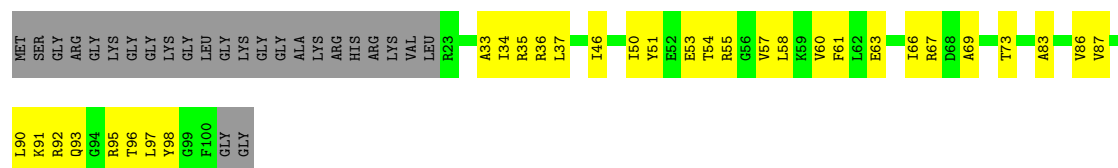
• Molecule 6: Histone H4

Chain b: 49% 27% 24%



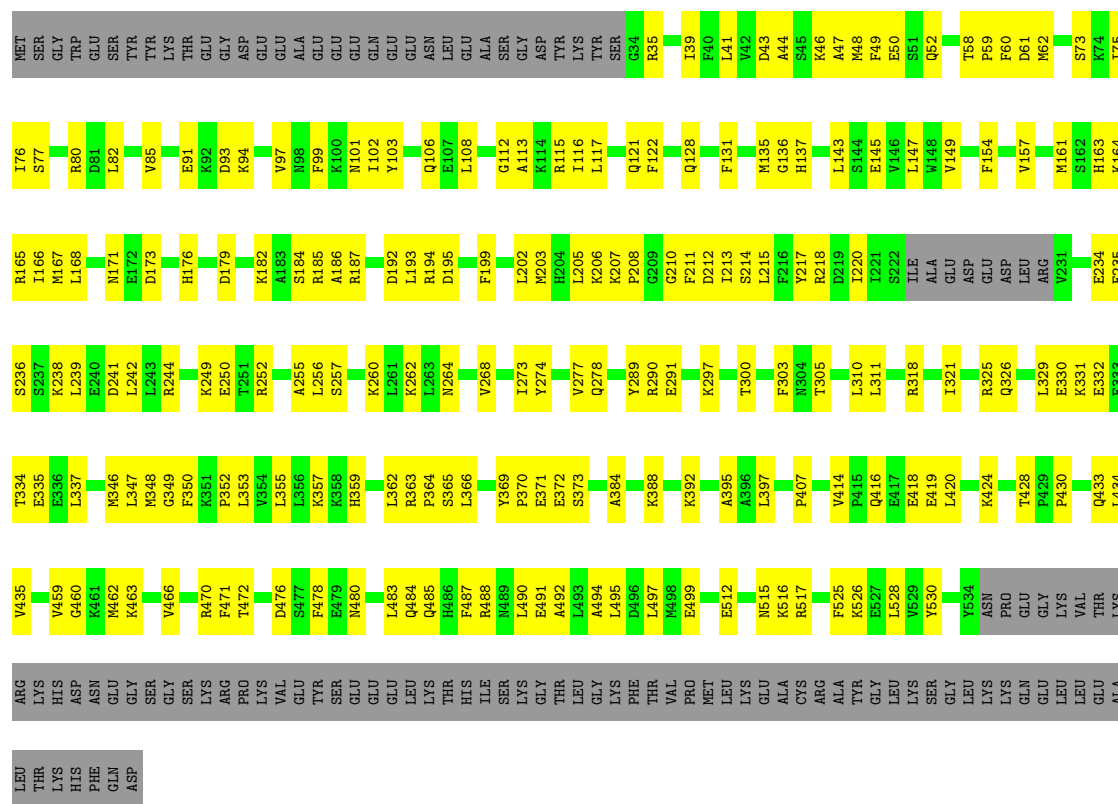
• Molecule 6: Histone H4

Chain f: 46% 30% 24%



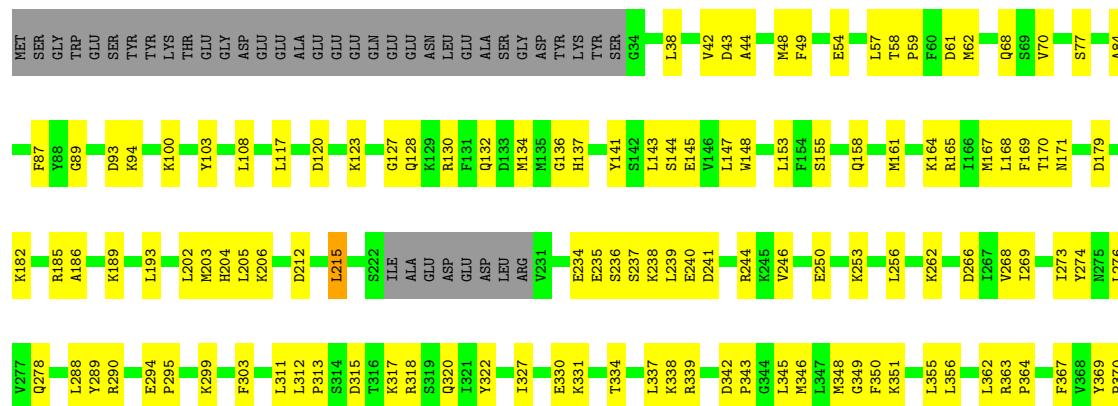
• Molecule 7: X-ray repair cross-complementing protein 6

Chain K: 49% 32% 19%

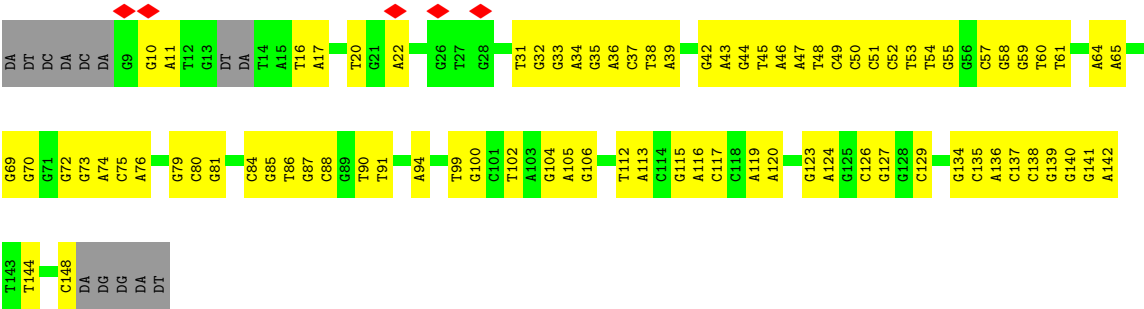


• Molecule 7: X-ray repair cross-complementing protein 6

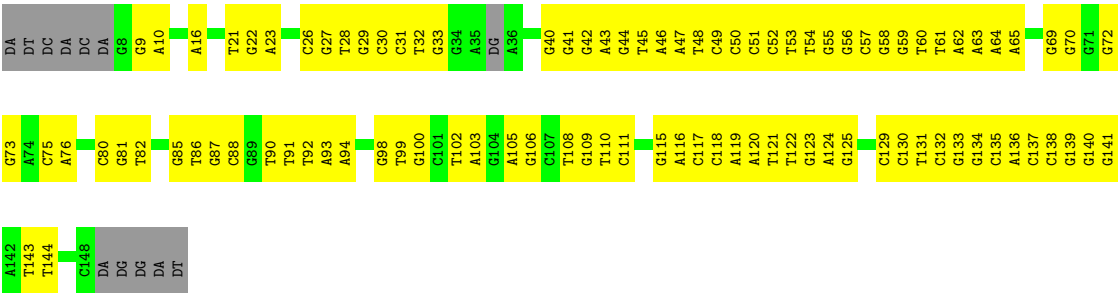
Chain M: 51% 29% 19%







• Molecule 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:14:MET:HE2	2.20	0.42
2:n:13:CYS:O	2:n:134:ILE:HA	2.19	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%)	43	77
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%)	12	47
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%)	12	47
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%)	11	45
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	67
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%)	43	77
All	All	12537/15652 (80%)	11500 (92%)	1023 (8%)	14 (0%)	49	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%)	88	88
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%)	57	71
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.

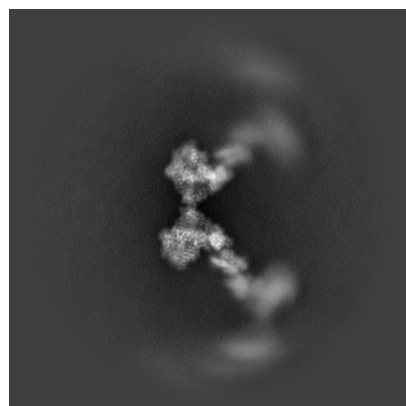
6 Map visualisation [i](#)

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.

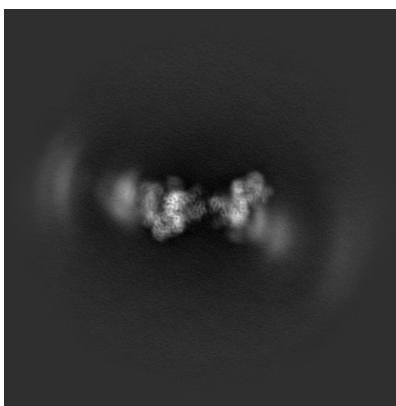
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

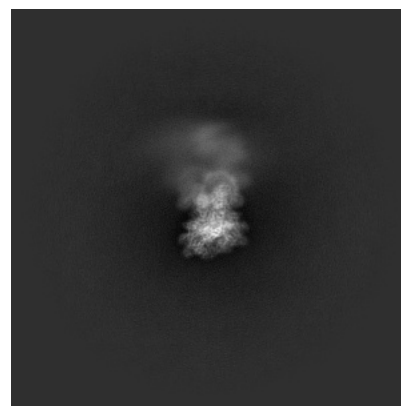
6.1.1 Primary map



X

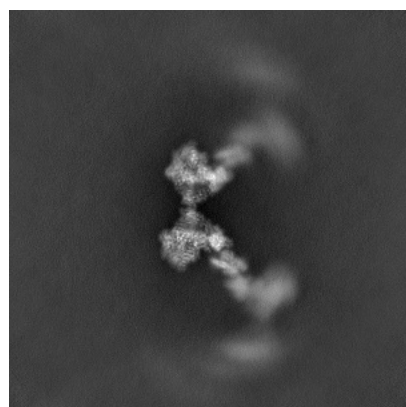


Y

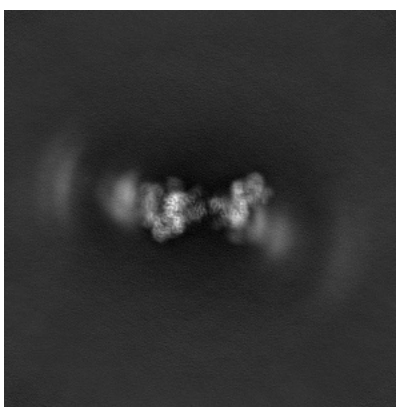


Z

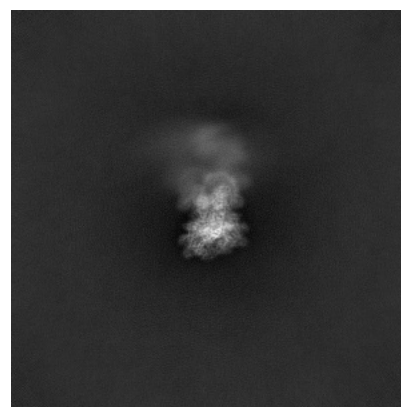
6.1.2 Raw map



X



Y

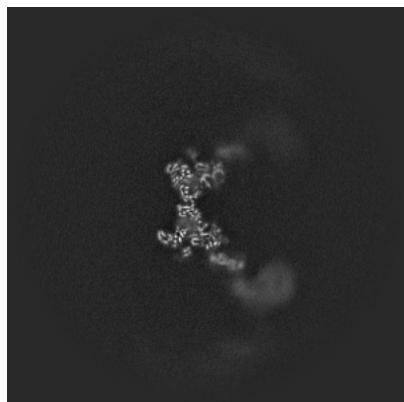


Z

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

6.2 Central slices [i](#)

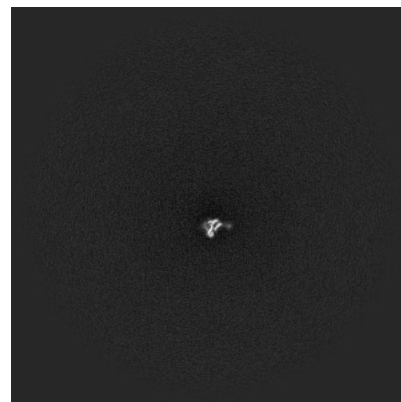
6.2.1 Primary map



X Index: 210

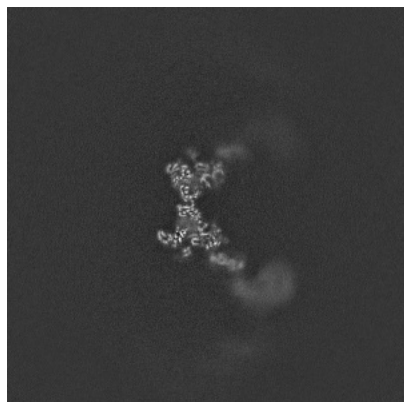


Y Index: 210



Z Index: 210

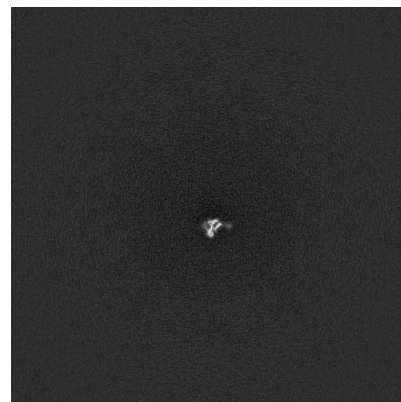
6.2.2 Raw map



X Index: 210



Y Index: 210

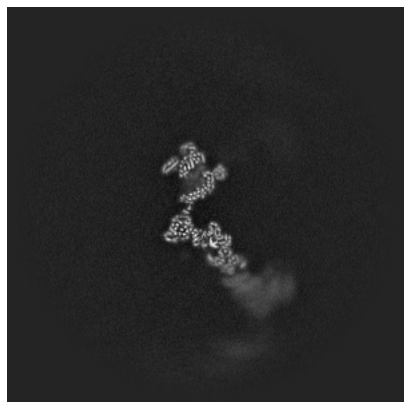


Z Index: 210

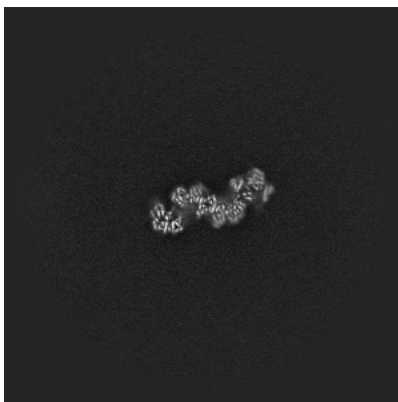
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

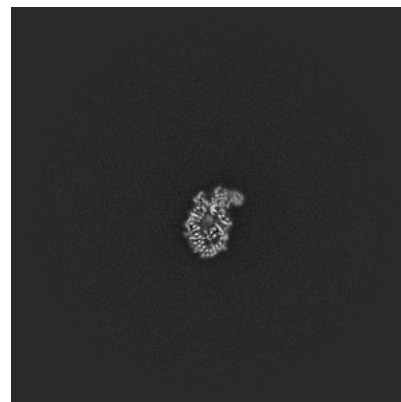
6.3.1 Primary map



X Index: 220



Y Index: 189

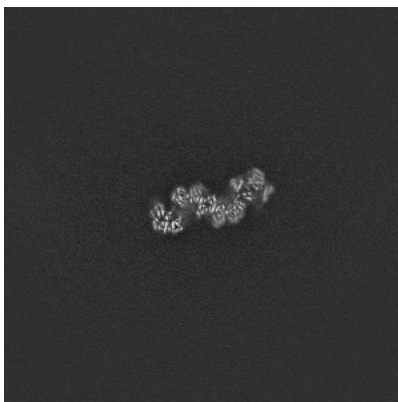


Z Index: 181

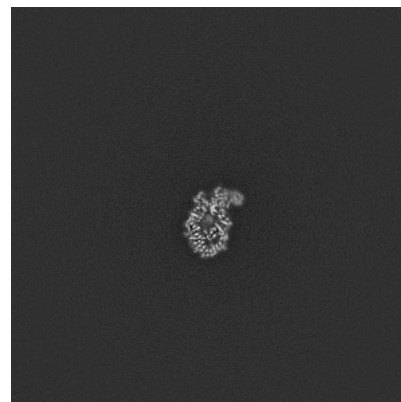
6.3.2 Raw map



X Index: 220



Y Index: 189

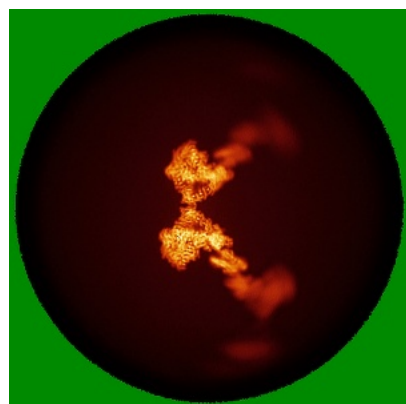


Z Index: 181

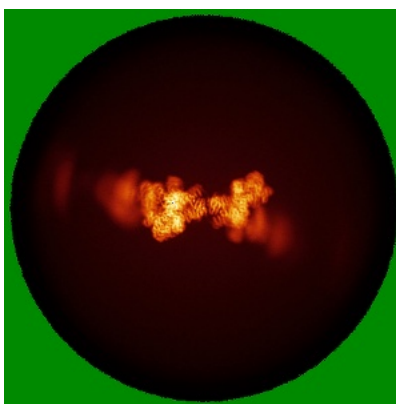
The images above show the largest variance slices of the map in three orthogonal directions.

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

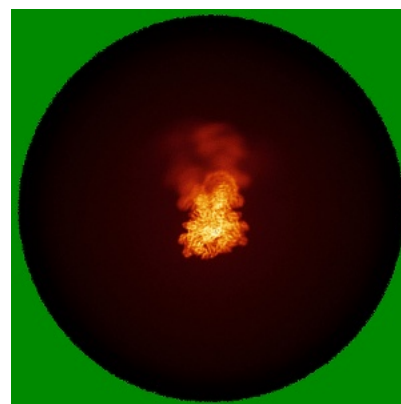
6.4.1 Primary map



X



Y

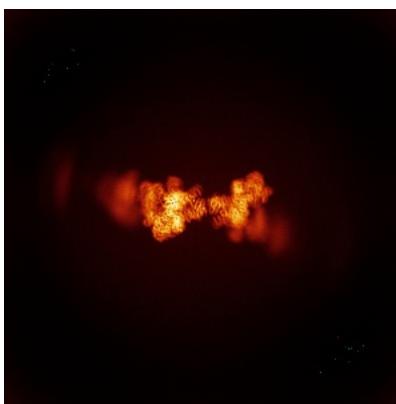


Z

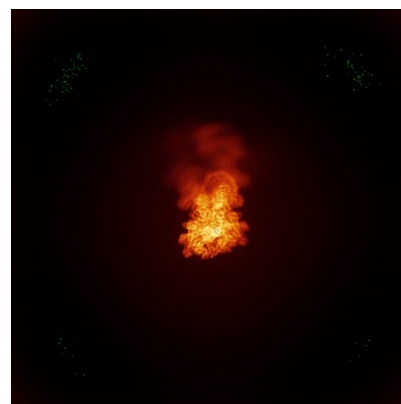
6.4.2 Raw map



X



Y

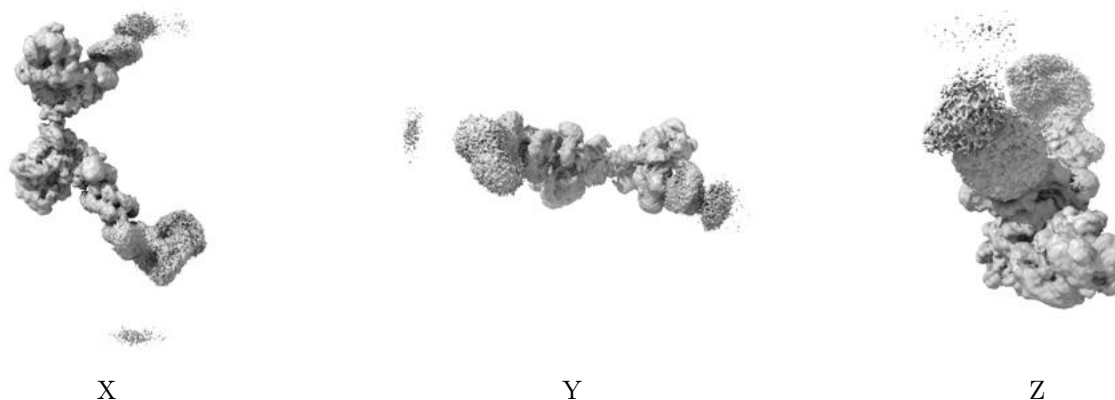


Z

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.

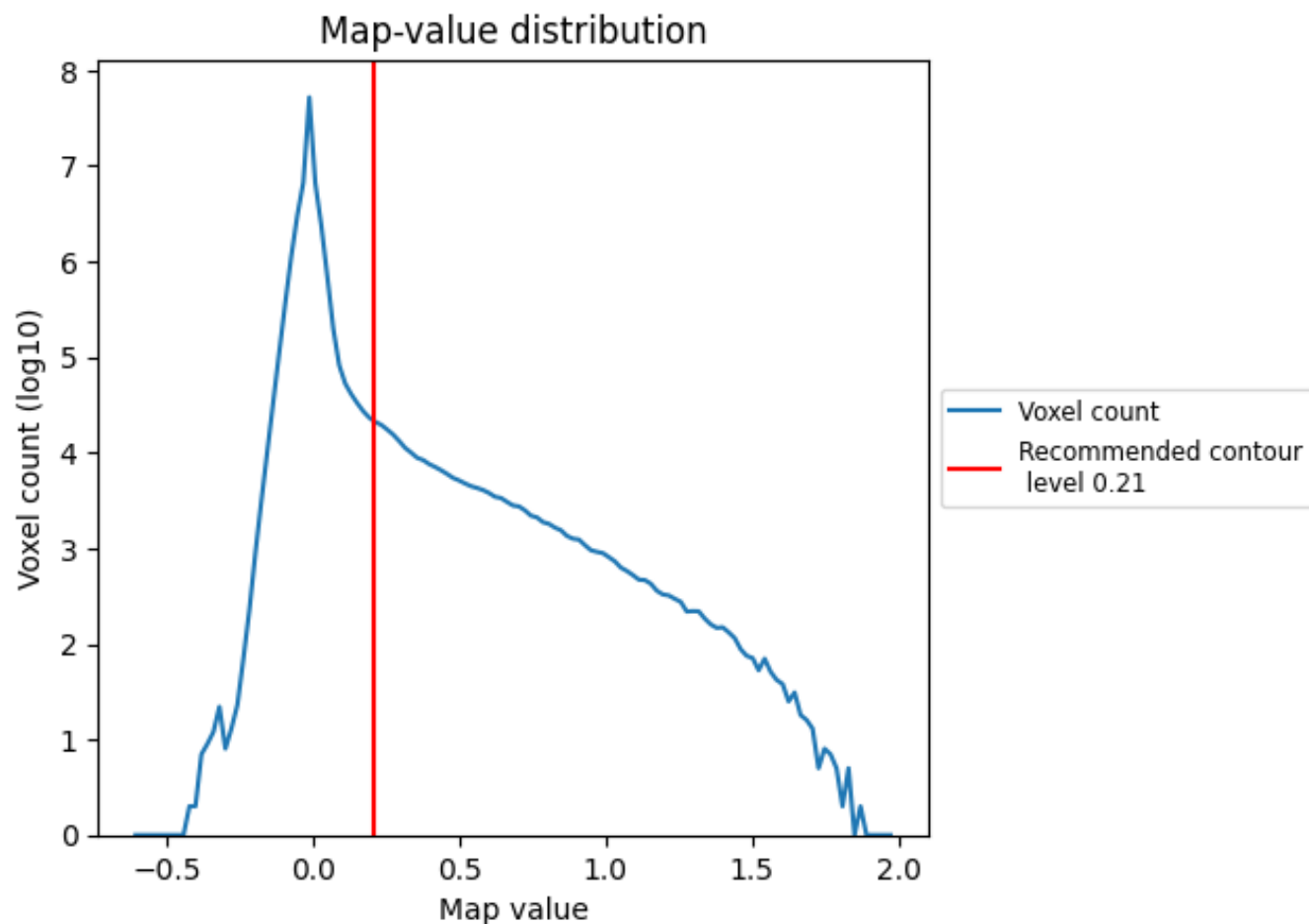
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

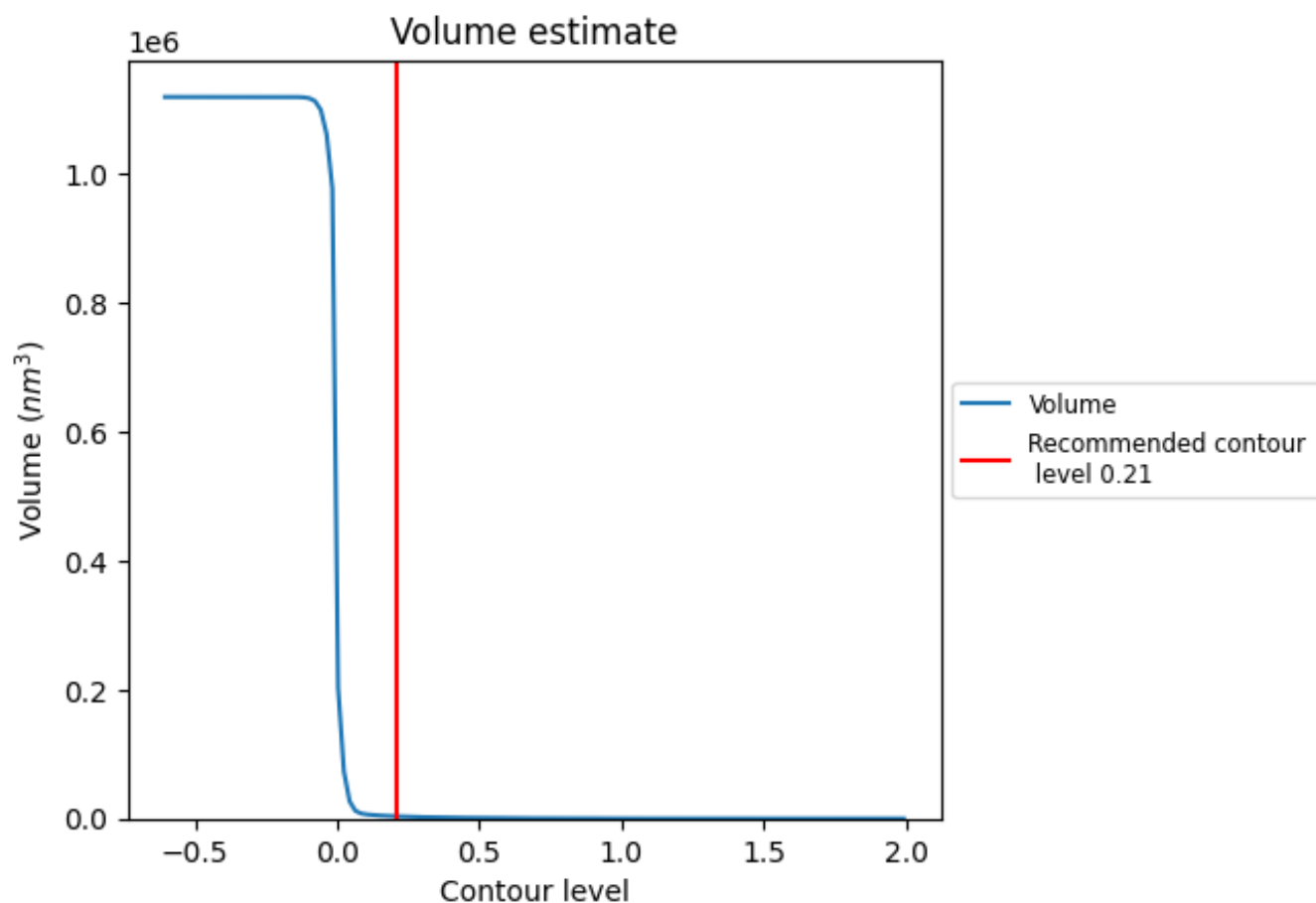
This section contains the results of statistical analysis of the map.

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.

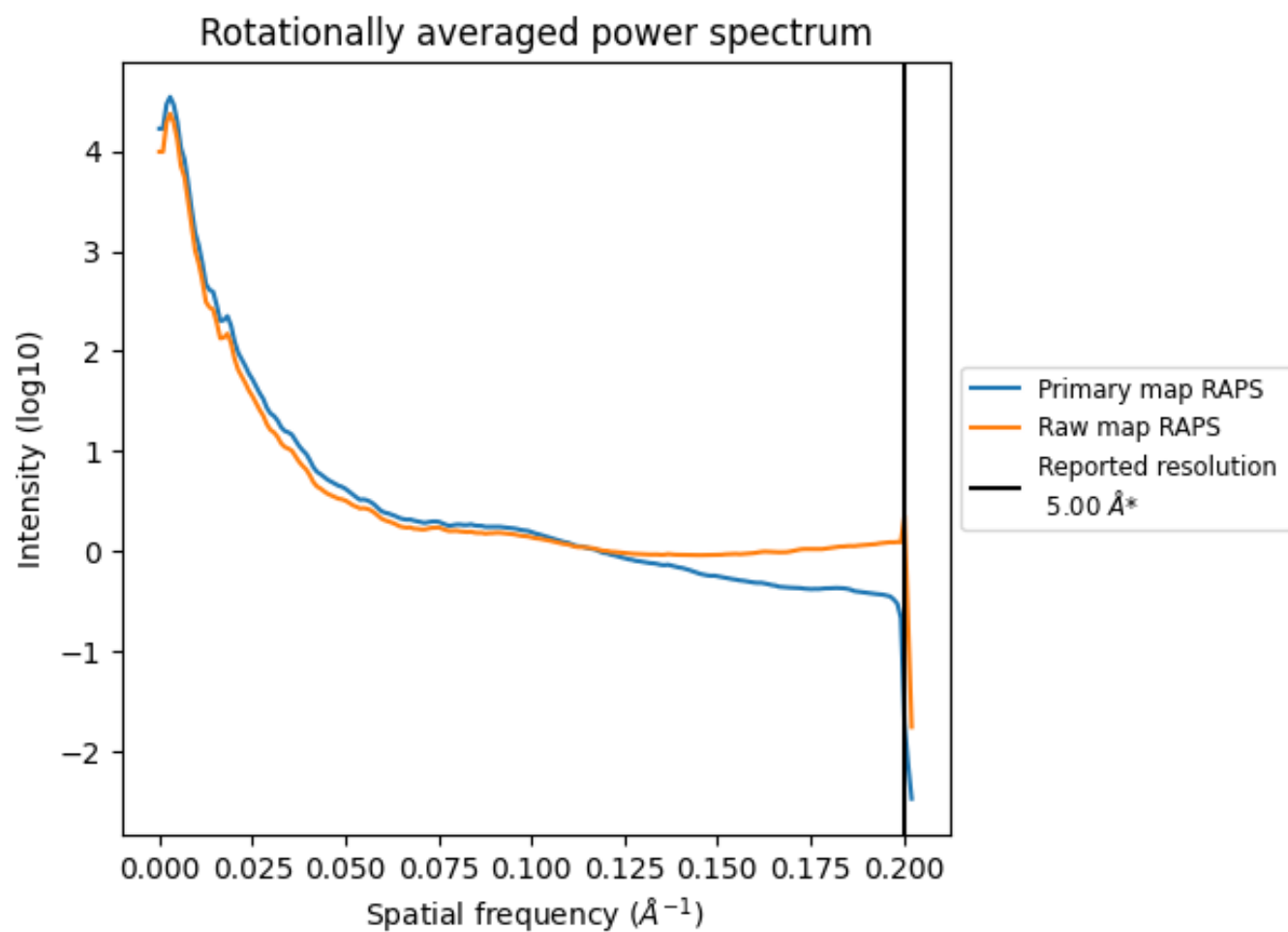
7.2 Volume estimate [i](#)



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 ⓘ

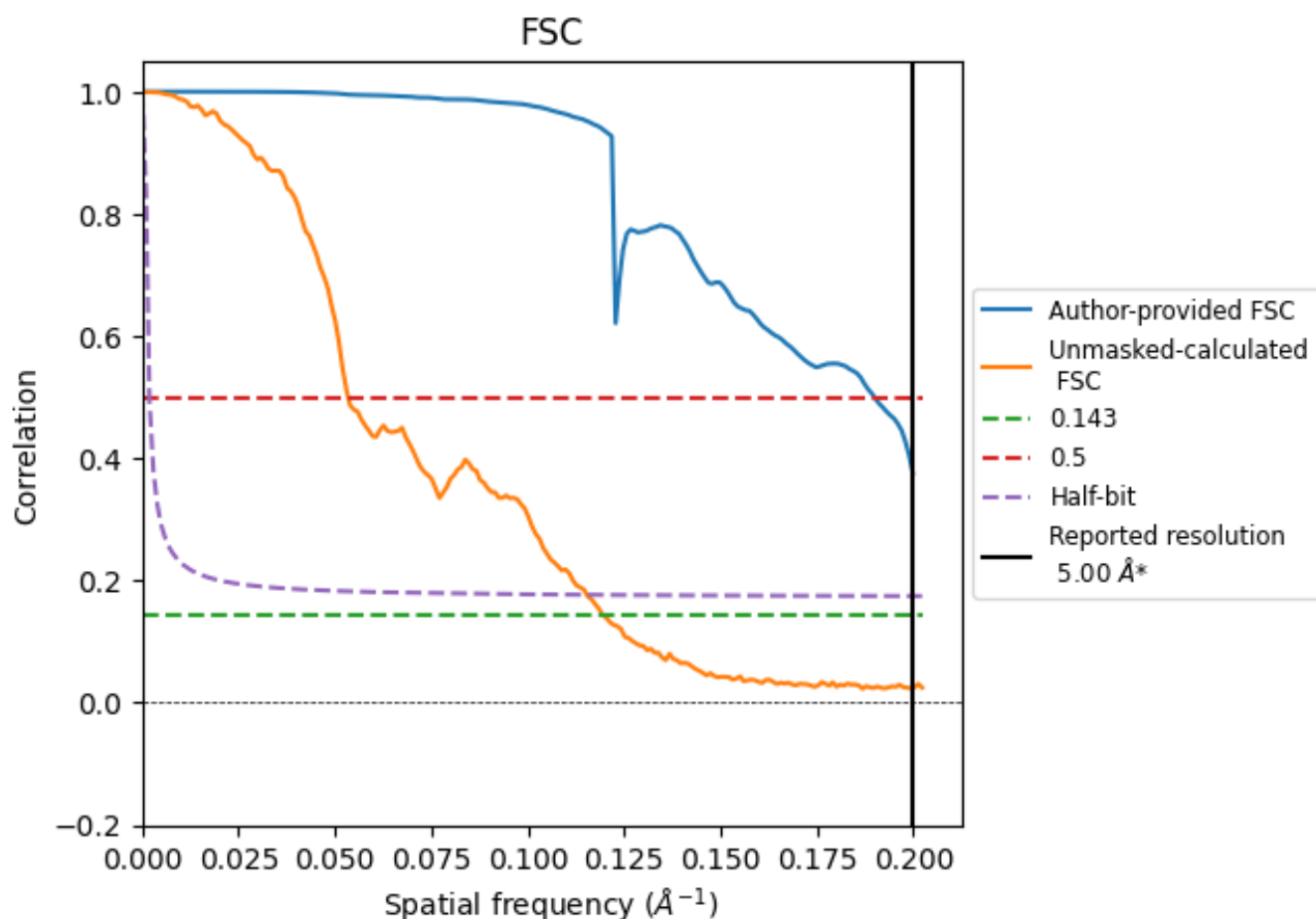


*Reported resolution corresponds to spatial frequency of 0.200 \AA^{-1}

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



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

8.2 Resolution estimates [i](#)

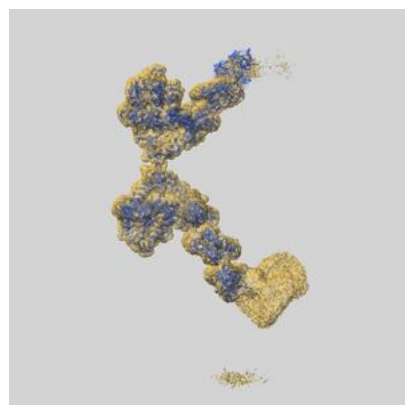
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	5.00	-	-
Author-provided FSC curve	-	5.27	-
Unmasked-calculated*	8.36	18.73	8.67

*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 %

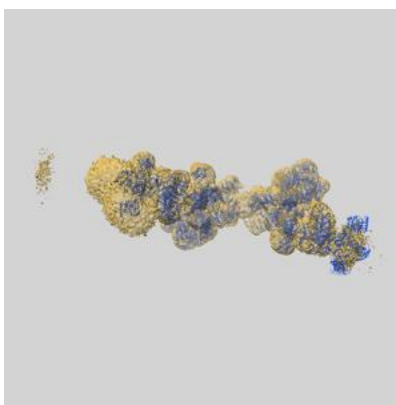
9 Map-model fit [i](#)

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](#).

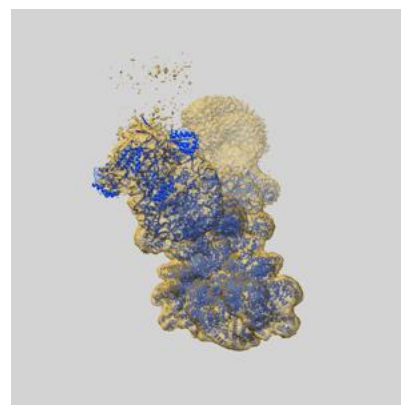
9.1 Map-model overlay [i](#)



X



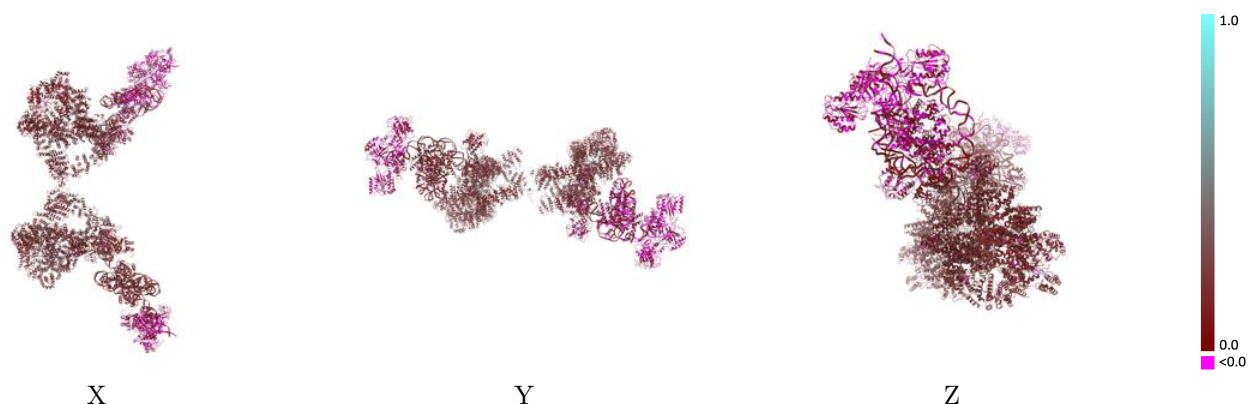
Y



Z

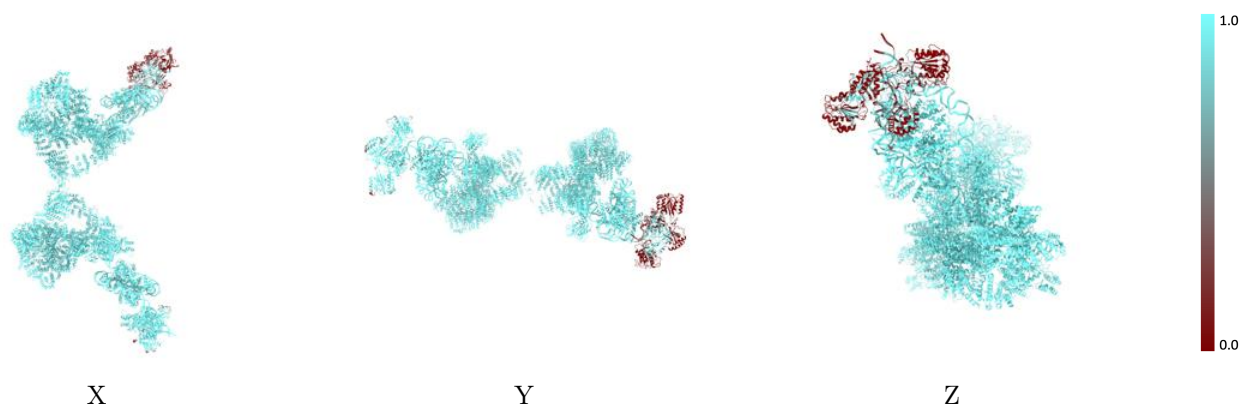
The images above show the 3D surface view of the map at the recommended contour level 0.21 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



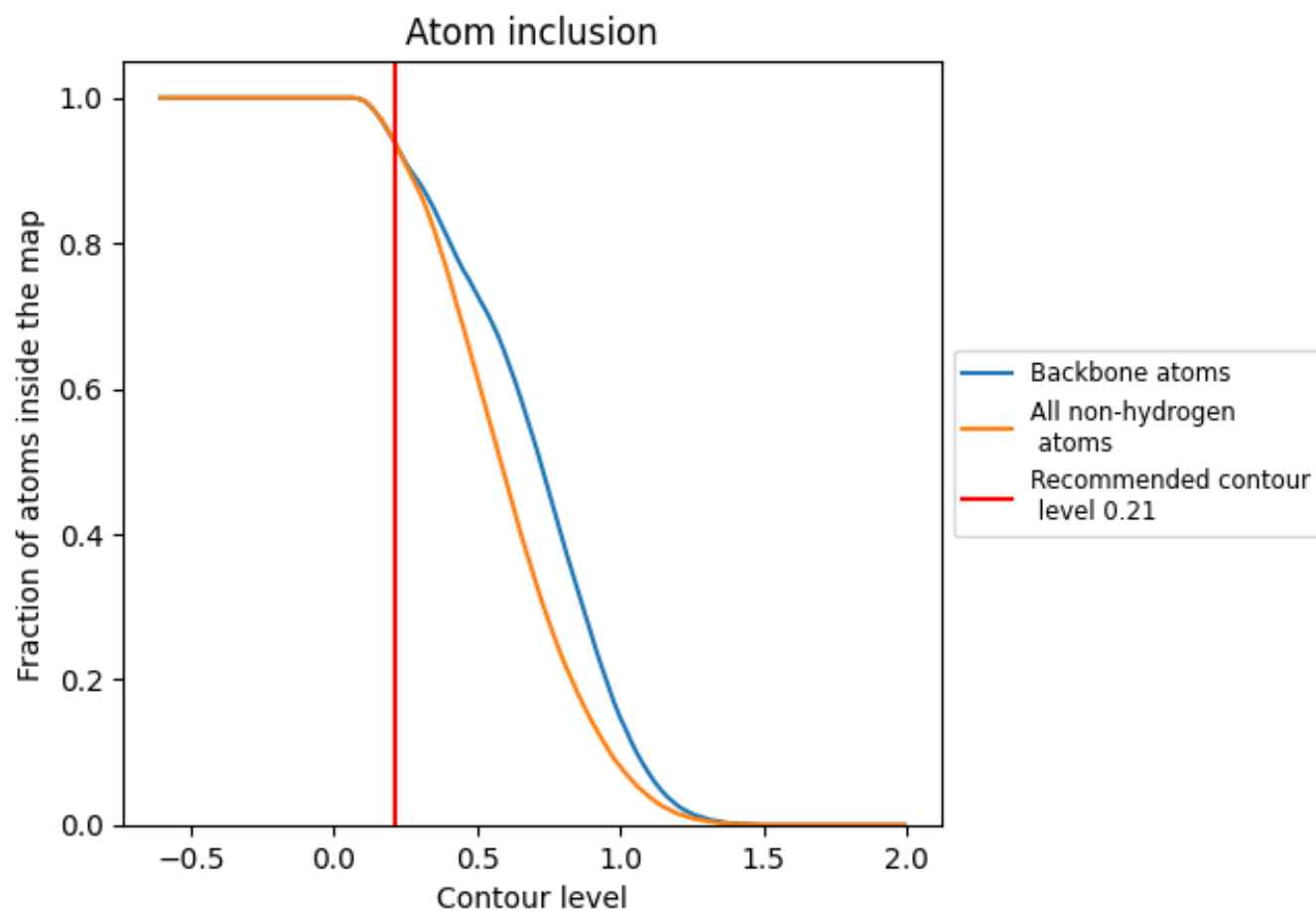
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

