



Full wwPDB EM Validation Report ⓘ

Mar 9, 2026 – 10:51 AM UTC

PDB ID : 9QCS / pdb_00009qcs
EMDB ID : EMD-53026
Title : Ku80 mediated DNA-PK dimer bound to 153 bp H2AX nucleosome
Authors : Hall, C.; Chaplin, A.K.
Deposited on : 2025-03-05
Resolution : 4.38 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:

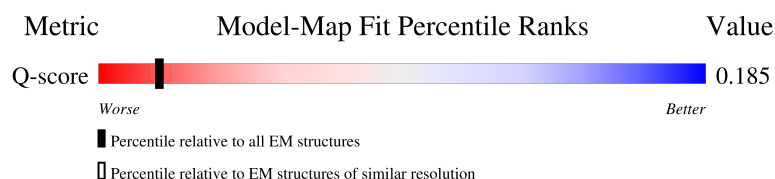
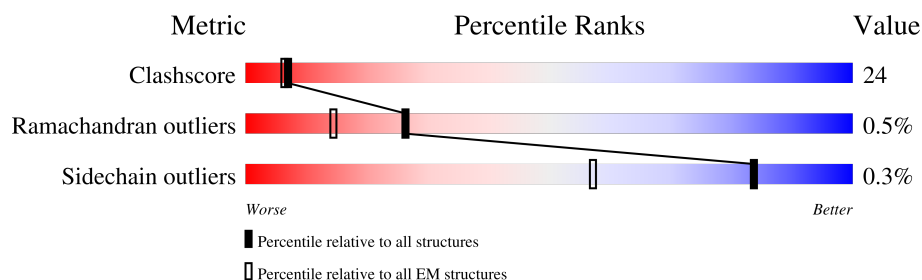
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

1 Overall quality at a glance i

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

The reported resolution of this entry is 4.38 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.



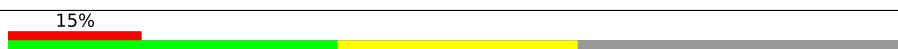
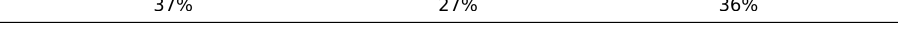
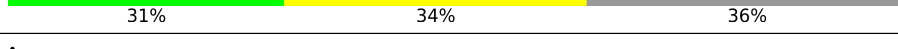
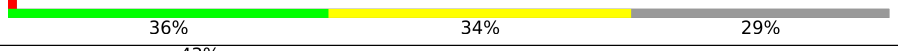
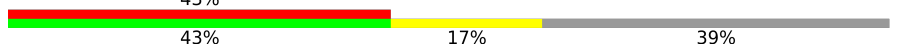
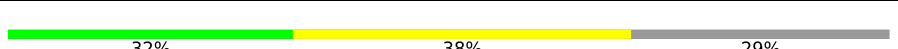
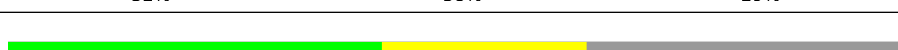
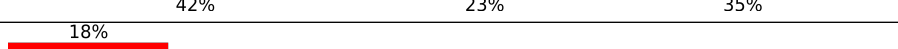
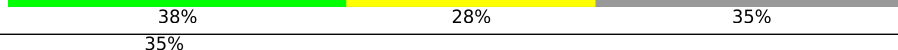
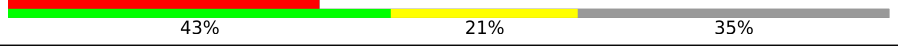
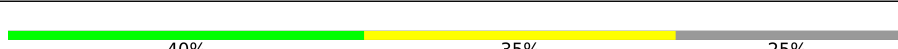
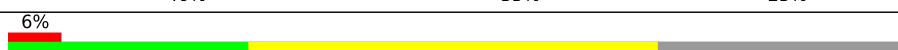
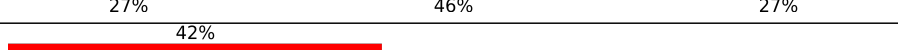
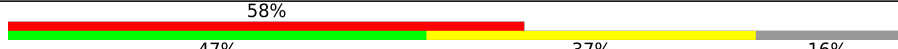
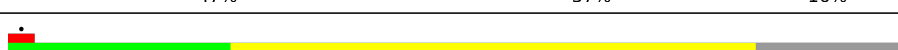
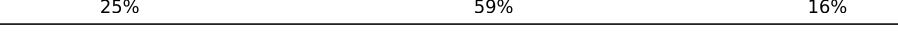
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	3702 (3.88 - 4.88)

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	43% 42% • 15%
1	o	4128	47% 38% 15%
2	D	126	39% 35% 26%
2	H	126	23% 38% 36% 26%

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

2 Entry composition

There are 9 unique types of molecules in this entry. The entry contains 94128 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	3510	Total	C	N	O	S	0	0
			27567	17688	4624	5079	176		
1	o	3506	Total	C	N	O	S	0	0
			27886	17906	4702	5095	183		

- Molecule 2 is a protein called Histone H2B type 1-J.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	D	93	Total	C	N	O	S	0	0
			714	451	126	135	2		
2	H	93	Total	C	N	O	S	0	0
			717	452	127	136	2		
2	d	92	Total	C	N	O	S	0	0
			698	437	125	134	2		
2	h	92	Total	C	N	O	S	0	0
			698	438	123	135	2		

- Molecule 3 is a protein called Histone H2AX.

Mol	Chain	Residues	Atoms				AltConf	Trace
3	C	92	Total	C	N	O	0	0
			702	442	138	122		
3	G	92	Total	C	N	O	0	0
			703	442	138	123		
3	c	101	Total	C	N	O	0	0
			761	479	147	135		
3	g	87	Total	C	N	O	0	0
			652	411	127	114		

- Molecule 4 is a protein called Histone H3.1.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	A	96	Total	C	N	O	S	0	0
			794	500	154	136	4		
4	E	88	Total	C	N	O	S	0	0
			711	451	132	124	4		
4	a	89	Total	C	N	O	S	0	0
			732	462	139	127	4		
4	e	88	Total	C	N	O	S	0	0
			709	450	129	126	4		

- Molecule 5 is a protein called Histone H4.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	B	79	Total	C	N	O		0	0
			624	394	122	108			
5	F	77	Total	C	N	O	S	0	0
			612	385	119	107	1		
5	b	75	Total	C	N	O	S	0	0
			590	375	113	101	1		
5	f	76	Total	C	N	O	S	0	0
			610	387	118	104	1		

- Molecule 6 is a DNA chain called 153 bp DNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	i	131	Total	C	N	O	P	0	0
			2691	1275	504	783	129		
6	I	131	Total	C	N	O	P	0	0
			2691	1275	504	783	129		

- Molecule 7 is a DNA chain called 153 bp DNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	j	129	Total	C	N	O	P	0	0
			2624	1247	481	769	127		
7	J	129	Total	C	N	O	P	0	0
			2624	1247	481	769	127		

- Molecule 8 is a protein called X-ray repair cross-complementing protein 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	K	471	Total	C	N	O	S	0	0
			3705	2379	609	699	18		

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Mol	Chain	Residues	Atoms					AltConf	Trace
8	M	471	Total	C	N	O	S	0	0
			3742	2395	626	703	18		

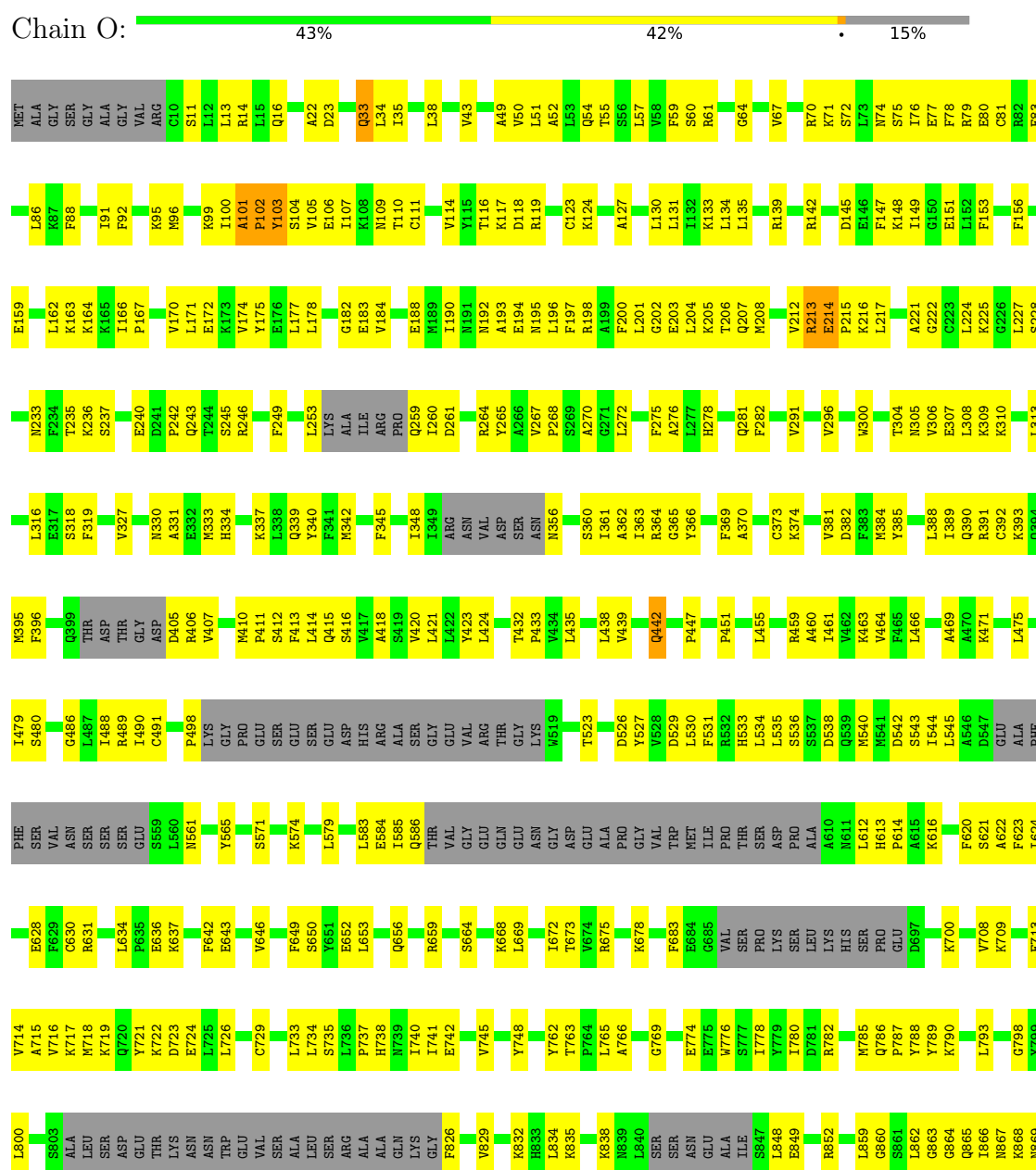
- Molecule 9 is a protein called X-ray repair cross-complementing protein 5.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	L	614	Total	C	N	O	S	0	0
			4774	3043	796	909	26		
9	N	612	Total	C	N	O	S	0	0
			4797	3062	793	916	26		

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



T1924	E1925	MET	ALA	GLY	ASN	F1778	Q1779	THR	A1619	GLY	H1477	M1403	K1334	C1286	K1193	L1111	R1026	T946	L870
E1925	ALA	GLY	ASN	F1782	GLY	S1478	V1479	GLY	T1620	SER	S1478	K1404	V1337	Y1267	F1194	A1112	R1034	Q947	LEU
MET	ALA	GLY	ASN	F1782	GLY	V1479	L1483	GLY	T1621	GLN	V1479	L1406	V1338	M1288	P1196	A1113	R1034	Q948	THR
ALA	GLY	ASN	THR	F1782	GLY	L1483	L1483	SER	T1622	VAL	L1483	M1408	R1340	I1271	L1197	A1114	S1039	A955	THR
GLY	ASN	THR	THR	F1782	VAL	L1483	L1483	VAL	T1623	ILE	L1483	M1409	I1341	R1274	R1202	A1116	S1040	P956	SER
ASN	THR	THR	THR	F1782	ILE	L1483	L1483	ILE	T1624	THR	L1483	M1410	E1342	T1275	R1202	A1117	S1041	P957	SER
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1625	THR	L1483	M1411	E1343	T1276	R1202	A1118	S1042	P958	ASP
ASN	THR	THR	THR	F1782	THR	L1483	L1483	THR	T1626	THR	L1483	M1412	E1344	T1277	R1202	A1119	S1043	P959	GLU
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1627	THR	L1483	M1413	E1345	T1278	R1202	A1120	S1044	P960	MET
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1628	THR	L1483	M1414	E1346	T1279	R1202	A1121	S1045	P961	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1629	THR	L1483	M1415	E1347	T1280	R1202	A1122	S1046	P962	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1630	THR	L1483	M1416	E1348	T1281	R1202	A1123	S1047	P963	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1631	THR	L1483	M1417	E1349	T1282	R1202	A1124	S1048	P964	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1632	THR	L1483	M1418	E1350	T1283	R1202	A1125	S1049	P965	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1633	THR	L1483	M1419	E1351	T1284	R1202	A1126	S1050	P966	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1634	THR	L1483	M1420	E1352	T1285	R1202	A1127	S1051	P967	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1635	THR	L1483	M1421	E1353	T1286	R1202	A1128	S1052	P968	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1636	THR	L1483	M1422	E1354	T1287	R1202	A1129	S1053	P969	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1637	THR	L1483	M1423	E1355	T1288	R1202	A1130	S1054	P970	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1638	THR	L1483	M1424	E1356	T1289	R1202	A1131	S1055	P971	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1639	THR	L1483	M1425	E1357	T1290	R1202	A1132	S1056	P972	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1640	THR	L1483	M1426	E1358	T1291	R1202	A1133	S1057	P973	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1641	THR	L1483	M1427	E1359	T1292	R1202	A1134	S1058	P974	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1642	THR	L1483	M1428	E1360	T1293	R1202	A1135	S1059	P975	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1643	THR	L1483	M1429	E1361	T1294	R1202	A1136	S1060	P976	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1644	THR	L1483	M1430	E1362	T1295	R1202	A1137	S1061	P977	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1645	THR	L1483	M1431	E1363	T1296	R1202	A1138	S1062	P978	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1646	THR	L1483	M1432	E1364	T1297	R1202	A1139	S1063	P979	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1647	THR	L1483	M1433	E1365	T1298	R1202	A1140	S1064	P980	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1648	THR	L1483	M1434	E1366	T1299	R1202	A1141	S1065	P981	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1649	THR	L1483	M1435	E1367	T1300	R1202	A1142	S1066	P982	THR
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GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1656	THR	L1483	M1442	E1374	T1307	R1202	A1149	S1073	P989	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1657	THR	L1483	M1443	E1375	T1308	R1202	A1150	S1074	P990	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1658	THR	L1483	M1444	E1376	T1309	R1202	A1151	S1075	P991	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1659	THR	L1483	M1445	E1377	T1310	R1202	A1152	S1076	P992	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1660	THR	L1483	M1446	E1378	T1311	R1202	A1153	S1077	P993	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1661	THR	L1483	M1447	E1379	T1312	R1202	A1154	S1078	P994	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1662	THR	L1483	M1448	E1380	T1313	R1202	A1155	S1079	P995	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1663	THR	L1483	M1449	E1381	T1314	R1202	A1156	S1080	P996	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1664	THR	L1483	M1450	E1382	T1315	R1202	A1157	S1081	P997	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1665	THR	L1483	M1451	E1383	T1316	R1202	A1158	S1082	P998	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1666	THR	L1483	M1452	E1384	T1317	R1202	A1159	S1083	P999	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1667	THR	L1483	M1453	E1385	T1318	R1202	A1160	S1084	P1000	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1668	THR	L1483	M1454	E1386	T1319	R1202	A1161	S1085	P1001	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1669	THR	L1483	M1455	E1387	T1320	R1202	A1162	S1086	P1002	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1670	THR	L1483	M1456	E1388	T1321	R1202	A1163	S1087	P1003	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1671	THR	L1483	M1457	E1389	T1322	R1202	A1164	S1088	P1004	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1672	THR	L1483	M1458	E1390	T1323	R1202	A1165	S1089	P1005	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1673	THR	L1483	M1459	E1391	T1324	R1202	A1166	S1090	P1006	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1674	THR	L1483	M1460	E1392	T1325	R1202	A1167	S1091	P1007	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1675	THR	L1483	M1461	E1393	T1326	R1202	A1168	S1092	P1008	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1676	THR	L1483	M1462	E1394	T1327	R1202	A1169	S1093	P1009	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1677	THR	L1483	M1463	E1395	T1328	R1202	A1170	S1094	P1010	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1678	THR	L1483	M1464	E1396	T1329	R1202	A1171	S1095	P1011	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1679	THR	L1483	M1465	E1397	T1330	R1202	A1172	S1096	P1012	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1680	THR	L1483	M1466	E1398	T1331	R1202	A1173	S1097	P1013	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1681	THR	L1483	M1467	E1399	T1332	R1202	A1174	S1098	P1014	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1682	THR	L1483	M1468	E1400	T1333	R1202	A1175	S1099	P1015	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1683	THR	L1483	M1469	E1401	T1334	R1202	A1176	S1100	P1016	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1684	THR	L1483	M1470	E1402	T1335	R1202	A1177	S1101	P1017	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1685	THR	L1483	M1471	E1403	T1336	R1202	A1178	S1102	P1018	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1686	THR	L1483	M1472	E1404	T1337	R1202	A1179	S1103	P1019	THR
GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1687	THR	L1483	M1473	E1405	T1338	R1202	A1180	S1104	P1020	THR
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GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1691	THR	L1483	M1477	E1409	T1342	R1202	A1184	S1108	P1024	THR
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GLY	ASN	THR	THR	F1782	THR	L1483	L1483	THR	T1693	THR	L1483	M1479	E1411	T1344	R1202	A1186	S1110	P1026	THR
GLY	ASN	THR	THR	F1782	THR	L148													

M3044	E2960	A2867	S2788	G2721	GLY	V2601	M2523	C2435	V2367	C2282	T2203	D2121	GLU
I3045	A2961	L2868	S2789	R2722	SER	L2602	F2524	L2436	T2368	C2292	D2208	L2122	VAL
R3046	R2962	L2869	T2790	T2723	SER	T2603	S2525	I2439	K2369	G2293	D2209	P2123	PRO
S3047	S2963	L2791	I2791	D2724	THR	PRO	S2526	I2439	S2370	Q2295	E2209	S2124	THR
K3048	D2872	T2792	T2792	L2725	ASP	MET	T2529	M2442	P2372	Q2295	L2211	M2126	GLY
L3052	S2883	P2793	T2793	L2726	PRO	PHE	R2530	M2443	P2373	Q2295	A2212	K2127	ARG
L3056	L2884	A2796	A2796	R2734	LEU	VAL	R2533	M2444	L2374	F2300	M2213	F2128	LYS
E3056	Q2885	Q2799	Q2799	GLN	ASP	THR	S2533	P2445	L2374	F2300	R2214	L2129	LYS
L3061	Q2886	R2800	R2800	GLU	HIS	THR	M2534	L2446	A2375	L2303	R2215	L2215	ARG
L3062	I2890	D2801	D2801	LYS	THR	ALA	T2535	L2446	R2377	V2304	L2216	L2216	ILE
D3066	L2893	K2806	K2806	LEU	SER	SER	D2537	R2452	F2378	M2307	M2217	P2136	GLU
L2976	E2894	Q2807	Q2807	SER	GLY	GLN	R2538	L2455	N2380	S2308	F2218	L2137	GLU
N2977	E2895	LEU	LEU	THR	SER	THR	R2538	L2455	A2381	F2309	L2219	V2138	ARG
M3069	L2976	LEU	LEU	GLN	ASP	LEU	L2542	V2458	V2382	M2380	M2220	P2139	GLU
H3070	A2896	GLY	GLY	GLN	SER	GLN	L2542	V2458	V2382	F2309	H2222	L2142	ALA
G3071	L2897	THR	THR	ALA	LEU	THR	L2545	F2461	L2386	K2313	V2223	R2143	ARG
Q3074	R2899	ARG	ARG	ARG	LEU	ARG	T2546	F2461	P2387	E2314	V2223	R2143	VAL
K3075	L2900	PHE	PHE	LYS	THR	THR	S2547	H2464	K2388	E2314	I2238	L2144	HIS
A3076	L2901	GLY	GLY	GLN	GLN	GLN	F2465	P2465	P2389	V2316	I2238	F2145	ASP
I3077	L2901	VAL	VAL	VAL	HIS	GLU	L2550	S2466	H2390	A2319	E2243	K2148	VAL
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L3078	GLU	GLU	GLU	GLN	ARG	SER	F2554	C2469	V2392	L2336	K2246	L2149	GLY
Y3082	LEU	D2820	D2820	LYS	GLY	LEU	L2557	Q2472	L2393	L2336	D2247	E2155	ASP
S3083	PRO	ARG	ARG	LYS	ARG	SER	A2558	M2473	K2394	L2336	C2248	F2157	SER
Q3084	ALA	GLU	GLU	ARG	LEU	ALA	T2559	M2478	L2396	L2337	V2156	GLU	GLY
E3085	L2826	L2826	L2826	LYS	GLN	TRP	T2559	M2478	L2396	R2327	I2251	Y2160	GLU
L3086	VAL	S2827	S2827	ILE	ARG	PRO	N2560	M2479	L2398	F2329	P2252	A2161	LEU
D2999	ARG	E2828	E2828	LYS	ALA	VAL	F2561	L2480	E2399	V2330	R2254	K2162	MET
D3000	GLY	K2829	K2829	SER	PRO	ALA	M2565	H2481	V2400	R2333	F2257	H2163	SER
C3001	LYS	M2830	M2830	GLY	LEU	GLY	T2566	D2486	L2402	R2333	E2258	L2165	SER
Y3002	ALA	N2831	N2831	LEU	LYS	ILE	M2567	PRO	C2403	L2336	K2259	L2165	LEU
N3003	ARG	I2832	I2832	LYS	SER	ARG	M2568	GLU	R2404	E2338	C2093	L2168	SER
H3004	L2916	T2833	T2833	MET	GLY	ALA	S2568	GLU	V2405	L2336	F2260	L2168	TYR
L3005	L2917	L2917	L2917	LYS	GLY	ALA	D2571	GLU	V2405	E2338	F2260	L2168	LEU
A3006	P2917	P2918	P2918	GLN	PRO	THR	Y2572	T2491	E2410	S2339	D2264	Q2170	ALA
E3007	P2918	G2918	G2918	GLN	ASP	GLN	P2573	D2491	L2411	S2340	P2265	L2171	D2033
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R2922	R2922	R2841	R2841	GLY	GLY	GLN	P2575	D2494	F2413	C2342	N2266	A2172	A2099
W2923	W2923	F2842	F2842	LYS	LYS	HIS	P2575	S2495	F2413	E2343	K2268	A2173	L2100
V2924	V2924	F2843	F2843	LYS	LYS	ASP	M2576	Q2496	F2413	E2343	D2269	K2102	V2101
E2925	E2925	T2846	T2846	ARG	ARG	PHE	F2577	E2497	L2415	V2345	M2270	ASN	H2103
L2929	L2929	L2771	L2771	LEU	LEU	THR	E2578	I2498	L2415	A2346	S2271	L2179	M2104
V2938	V2938	F2850	F2850	GLY	GLY	LEU	H2579	I2498	F2420	K2347	V2272	G2179	S2041
I2942	I2942	P2851	P2851	LYS	PRO	GLN	L2580	K2503	W2421	Q2348	G2273	G2179	L2107
K2950	K2950	V2855	V2855	GLY	GLY	THR	P2581	L2581	Q2422	Q2348	G2273	Y2184	L2108
Q2957	Q2957	S2856	S2856	ASP	GLY	THR	S2582	I2507	Q2422	K2350	L2274	M2185	GLY
T2963	T2963	D2778	D2778	VAL	VAL	ASP	E2583	L2510	M2424	Q2351	Q2276	M2185	PRO
Q2964	Q2964	D2779	D2779	GLY	GLY	ASP	C2584	L2510	R2425	H2352	L2276	L2189	PRO
S2965	S2965	L2780	L2780	ASP	ASP	ARG	F2586	E2513	H2426	Q2353	I2279	L2193	GLN
K3029	K3029	P2781	P2781	ASN	ASN	SER	Q2587	N2514	R2427	F2360	M2281	L2193	GLY
L3126	L3126	D2782	D2782	SER	SER	THR	E2588	E2514	D2428	L2361	K2281	L2193	GLU
E3033	E3033	I2783	I2783	VAL	VAL	SER	R2596	Q2518	D2429	V2362	A2282	W2196	ASP
K3128	K3128	Q2784	Q2784	LYS	LYS	PHE	R2596	Q2518	R2431	C2363	D2284	T2197	TYR
L3129	L3129	I2785	I2785	GLY	GLY	THR	S2599	T2521	Q2432	L2364	SER	T2197	SER
Q3130	Q3130	K2786	K2786	ALA	ALA	LEU	T2600	R2522	K2433	M2365	VAL	A2200	SER
		H2787	H2787	ALA	ALA	THR			V2434	K2366	PRO	A2200	GLN
				THR	THR	THR					P2287	T2202	ASP

W4108	G3947	Y3859	L3788	P3713	K3559	V3490	A3417	E3353	K3270	K3131
D4109	S3948	K3860	R3789	E3714	S3580	P3491	D3418	E3353	D3271	V3132
P4114	A3949	T3867	T3790	Y3715	K3561	C3492	F3419	R3357	W3272	T3136
L4117	T3950	T3867	Y3791	H3716	L3562	W3493	L3562	R3357	V3277	E3137
G4118	Q3951	F3871	V3793	R3717	D3563	Q3494	Q3422	I3359	K3276	L3138
R4119	E3957	R3872	V3794	R3718	T3568	W3498	E3427	I3359	V3277	T3142
T4120	L3958	K3872	F3795	F3722	Q3569	I3499	E3428	E3361	Q3278	L3145
G4123	M3959	R3874	M3796	R3723	D3570	S3500	E3429	E3361	S3279	G3146
W4124	P3960	S3876	T3797	E3725	F3571	H3501	ALA	S3363	L3282	K3147
W4125	S3876	S3876	R3798	R3725	L3572	M3502	ALA	S3363	L3282	G3148
P4126	K3877	K3877	R3799	V3726	N3573	V3503	VAL	SER	H3285	PRO
W4127	V3878	V3878	L3800	V3726	K3574	A3504	VAL	SER	H3285	SER
W4128	P3879	P3879	C3801	M3729	L3575	L3505	ILE	SER	C3286	G3149
K4043	L3882	L3882	L3802	R3733	D3576	L3506	ASP	E3368	R3287	N3150
I4044	L3883	L3883	T3803	R3733	Q3577	D3507	SER	E3368	ASP	L3151
C4045	L3884	L3884	W3805	R3737	E3582	D3508	ALA	E3368	ARG	S3152
A4047	R3885	R3885	L3806	R3738	L3583	K3509	ALA	E3368	MET	G3153
K4050	A3886	A3886	L3806	I3739	L3584	Q3510	LEU	E3368	GLU	K3153
L4051	S3887	S3887	T3809	I3740	F3585	A3511	GLN	E3368	VAL	K3154
G4053	T3887	T3887	V3810	R3741	D3586	A3512	GLN	E3368	GLN	V3155
A4054	A3887	A3887	T3811	G3742	D3586	V3514	L3445	E3368	GLU	P3156
N4055	K3888	K3888	L3812	H3743	D3587	V3514	V3446	E3368	GLN	K3157
P4056	R3889	R3889	K3813	D3744	N3588	V3518	V3447	E3368	GLU	K3158
A4057	S3890	S3890	D3814	E3745	S3589	V3518	E3448	E3368	GLU	K3159
V4058	E3895	E3895	L3815	R3746	K3590	N3524	E3448	E3368	GLU	L3160
I4059	A3909	A3909	L3815	E3747	R3593	Y3525	E3448	E3368	GLU	L3161
T4060	L3910	L3910	T3819	H3748	GLU	P3526	E3448	E3368	GLU	T3165
S3993	I3911	I3911	M3820	R3748	LEU	Q3527	E3448	E3368	GLU	N3166
D3994	C3912	C3912	K3824	F3750	ALA	A3528	E3448	E3368	GLU	K3167
P3995	L3913	L3913	E3824	F3751	ALA	L3529	E3448	E3368	GLU	L3168
G3996	S3914	S3914	T3828	V3752	THR	V3530	E3448	E3368	GLU	P3169
L3997	H3915	H3915	L3829	D3757	PRO	Y3531	E3448	E3368	GLU	D3170
L3998	I3917	I3917	D3830	L3758	VAL	F3533	E3448	E3368	GLU	A3171
T3999	W3916	W3916	D3831	L3758	VAL	L3534	E3448	E3368	GLU	K3172
M4002	G3919	G3919	P3832	L3758	VAL	L3535	E3448	E3368	GLU	K3173
E4008	I3920	I3920	R3833	Q3762	T3606	S3536	E3448	E3368	GLU	D3174
P4009	D3921	D3921	A3834	R3763	E3607	S3539	E3448	E3368	GLU	N3177
F4011	R3923	R3923	P3835	Q3766	K3609	TYR	E3448	E3368	GLU	T3178
D4012	H3924	H3924	P3836	Q3766	M3610	PHE	E3448	E3368	GLU	W3179
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K4014	M3929	M3929	Y3839	M3771	R3696	ASP	E3448	E3368	GLU	T3183
P4015	V3930	V3930	K3840	N3772	N3697	LYS	E3448	E3368	GLU	T3184
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GLN	M3932	M3932	W3842	L3775	L3699	T3545	E3448	E3368	GLU	M3256
LYS	E3933	E3933	L3843	A3776	E3700	S3546	E3448	E3368	GLU	K3257
MET	T3934	T3934	THR	Q3777	I3701	T3547	E3448	E3368	GLU	L3258
LEU	G3935	G3935	LYS	D3778	P3702	G3548	E3448	E3368	GLU	L3259
LYS	L3940	L3940	MET	A3779	P3623	H3549	E3448	E3368	GLU	L3260
LYS	T3941	T3941	GLY	C3780	G3624	K3550	E3448	E3368	GLU	E3261
GLY	D3942	D3942	GLY	A3780	L3625	N3551	E3448	E3368	GLU	S3191
SER	G3943	G3943	LYS	C3781	G3626	K3552	E3448	E3368	GLU	L3193
TRP	H3944	H3944	HIS	R3708	R3629	E3554	E3448	E3368	GLU	K3265
C4105	A3945	A3945	D3851	Q3763	R3630	V3555	E3448	E3368	GLU	E3266
C4106	I4046	I4046	M3856	R3784	K3631	A3556	E3448	E3368	GLU	T3267
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				Q3787	Q3634	L3558	E3448	E3368	GLU	R3269

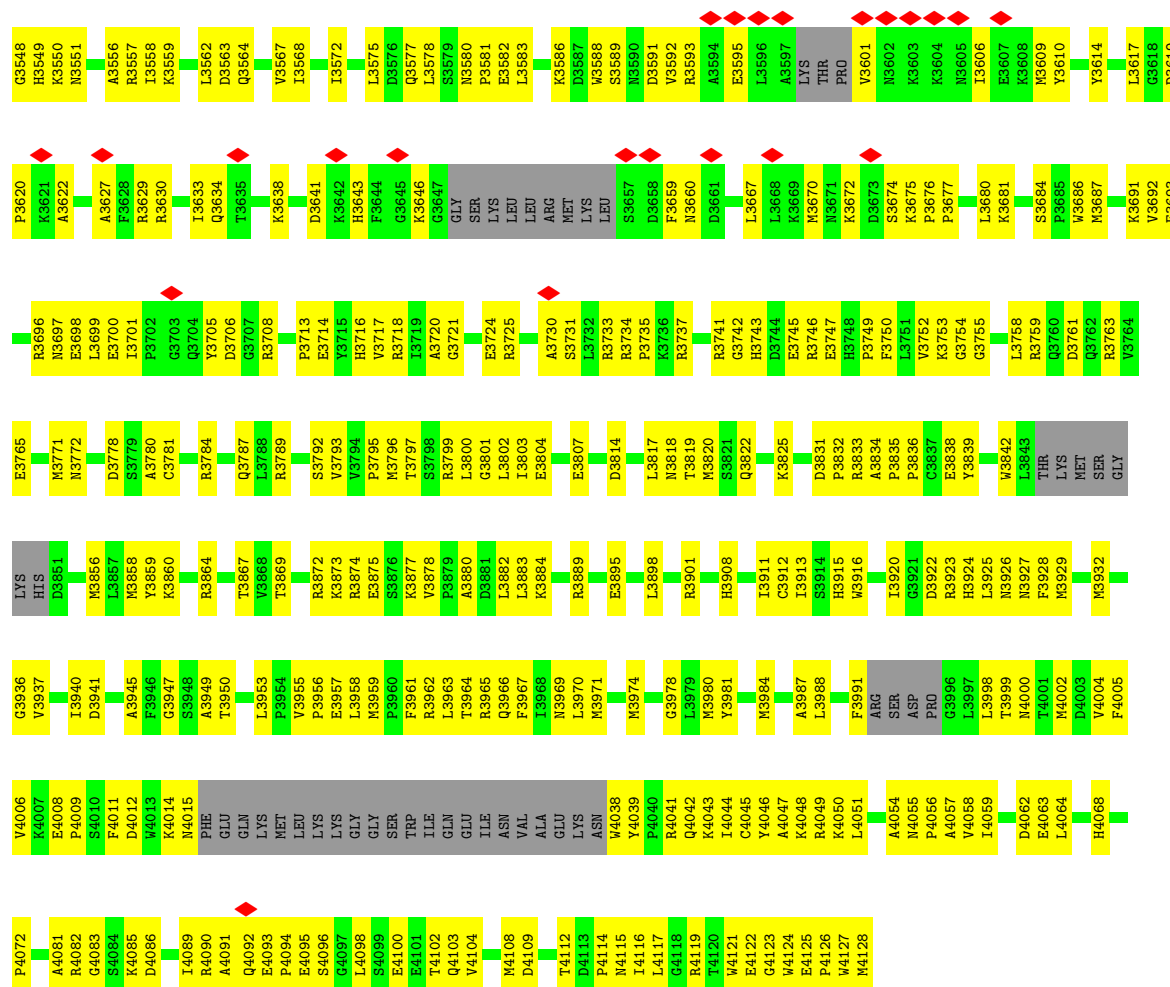
● Molecule 1: DNA-dependent protein kinase catalytic subunit

Chain o:  47% 38% 15%



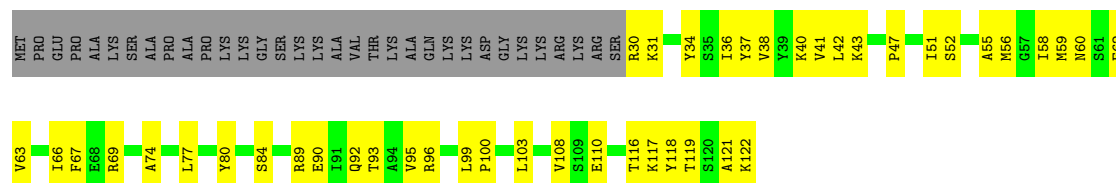
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E2338	D2269	I2189	ASP	SER	PHE	E1917	R1850	E1768	H1687	E1565	A1494	P1396	GLY	ARG
L2341	N2270	V2190	SER	TYR	SER	K1851	L1851	E1769	L1688	T1566	A1495	D1397	ASN	GLY
L2344	I2274	I2193	VAL	SER	PRO	K1852	K1852	Q1771	V1693	I1567	A1496	C1398	PRO	PHE
Q2345	Q2275	A2200	PRO	SER	VAL	E1925	SER	H1772	L1696	T1568	A1497	V1400	ARG	S1249
A2346	L2276	T2201	GLN	GLN	VAL	E1926	ARG	E1775	P1697	T1569	A1498	V1401	THR	L1250
Q2347	L2277	T2201	ASP	ASP	VAL	E1926	PHE	E1776	F1698	L1572	A1499	M1403	ASP	L1254
Q2348	G2278	P2206	ARG	ARG	VAL	E1926	THR	L1777	F1699	L1573	A1500	M1404	GLY	L1259
L2349	L2279	V2205	ALA	ALA	VAL	E1926	LYS	F1778	L1699	L1574	A1501	M1405	ASP	L1260
L2350	V2280	K2207	LEU	LEU	VAL	E1926	ASN	Q1779	THR	E1581	A1502	M1406	GLY	L1261
V2351	K2281	K2207	GLY	GLY	VAL	E1926	GLU	Q1779	LEU	E1582	A1503	L1406	ASN	L1262
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H2353	N2283	E2209	ARG	ARG	VAL	E1926	SER	F1762	LEU	S1586	A1505	Y1411	GLY	E1265
Q2354	Q2284	E2209	GLN	GLN	VAL	E1926	GLN	F1762	THR	L1587	A1506	Y1412	ASN	E1266
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Q2360	Q2290	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1593	A1512	Y1418	GLY	E1272
Q2361	Q2291	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1594	A1513	Y1419	GLY	E1273
Q2362	Q2292	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1595	A1514	Y1420	GLY	E1274
Q2363	Q2293	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1596	A1515	Y1421	GLY	E1275
Q2364	Q2294	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1597	A1516	Y1422	GLY	E1276
Q2365	Q2295	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1598	A1517	Y1423	GLY	E1277
Q2366	Q2296	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1599	A1518	Y1424	GLY	E1278
Q2367	Q2297	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1600	A1519	Y1425	GLY	E1279
Q2368	Q2298	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1601	A1520	Y1426	GLY	E1280
Q2369	Q2299	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1602	A1521	Y1427	GLY	E1281
Q2370	Q2300	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1603	A1522	Y1428	GLY	E1282
Q2371	Q2301	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1604	A1523	Y1429	GLY	E1283
Q2372	Q2302	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1605	A1524	Y1430	GLY	E1284
Q2373	Q2303	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1606	A1525	Y1431	GLY	E1285
Q2374	Q2304	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1607	A1526	Y1432	GLY	E1286
Q2375	Q2305	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1608	A1527	Y1433	GLY	E1287
Q2376	Q2306	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1609	A1528	Y1434	GLY	E1288
Q2377	Q2307	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1610	A1529	Y1435	GLY	E1289
Q2378	Q2308	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1611	A1530	Y1436	GLY	E1290
Q2379	Q2309	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1612	A1531	Y1437	GLY	E1291
Q2380	Q2310	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1613	A1532	Y1438	GLY	E1292
Q2381	Q2311	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1614	A1533	Y1439	GLY	E1293
Q2382	Q2312	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1615	A1534	Y1440	GLY	E1294
Q2383	Q2313	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1616	A1535	Y1441	GLY	E1295
Q2384	Q2314	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1617	A1536	Y1442	GLY	E1296
Q2385	Q2315	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1618	A1537	Y1443	GLY	E1297
Q2386	Q2316	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1619	A1538	Y1444	GLY	E1298
Q2387	Q2317	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1620	A1539	Y1445	GLY	E1299
Q2388	Q2318	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1621	A1540	Y1446	GLY	E1300
Q2389	Q2319	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1622	A1541	Y1447	GLY	E1301
Q2390	Q2320	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1623	A1542	Y1448	GLY	E1302
Q2391	Q2321	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1624	A1543	Y1449	GLY	E1303
Q2392	Q2322	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1625	A1544	Y1450	GLY	E1304
Q2393	Q2323	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1626	A1545	Y1451	GLY	E1305
Q2394	Q2324	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1627	A1546	Y1452	GLY	E1306
Q2395	Q2325	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1628	A1547	Y1453	GLY	E1307
Q2396	Q2326	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1629	A1548	Y1454	GLY	E1308
Q2397	Q2327	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1630	A1549	Y1455	GLY	E1309
Q2398	Q2328	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1631	A1550	Y1456	GLY	E1310
Q2399	Q2329	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1632	A1551	Y1457	GLY	E1311
Q2400	Q2330	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1633	A1552	Y1458	GLY	E1312
Q2401	Q2331	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1634	A1553	Y1459	GLY	E1313
Q2402	Q2332	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1635	A1554	Y1460	GLY	E1314
Q2403	Q2333	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1636	A1555	Y1461	GLY	E1315
Q2404	Q2334	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1637	A1556	Y1462	GLY	E1316
Q2405	Q2335	E2209	LEU	LEU	VAL	E1926	LEU	F1762	GLY	L1638	A1557	Y1463	GLY	E1317





• Molecule 2: Histone H2B type 1-J

Chain D: 39% 35% 26%

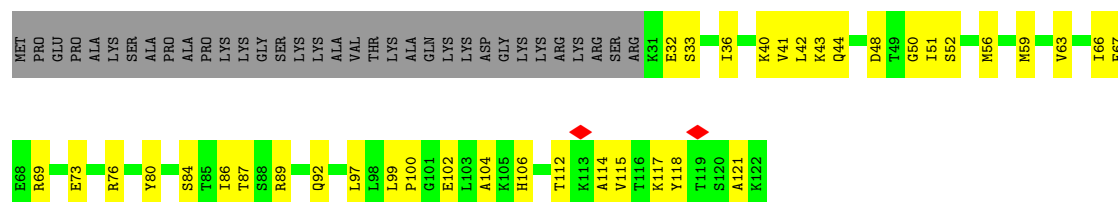


• Molecule 2: Histone H2B type 1-J

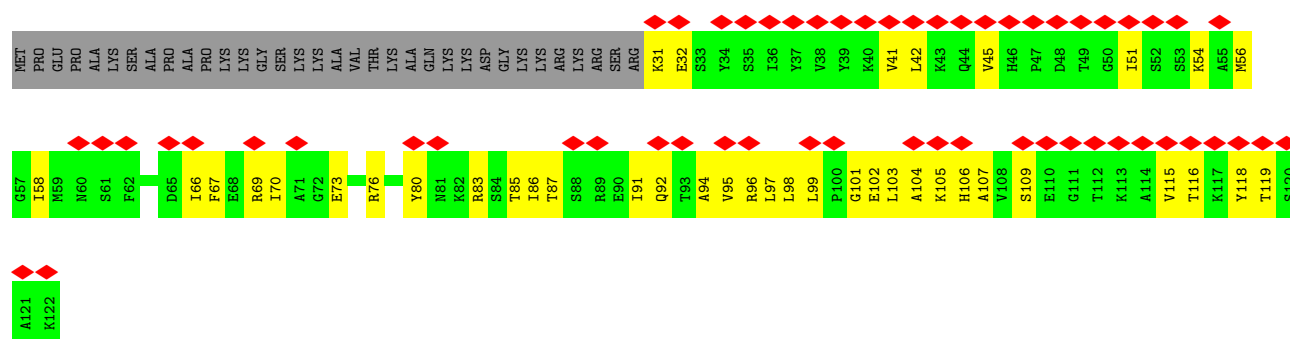
Chain H: 23% 38% 36% 26%



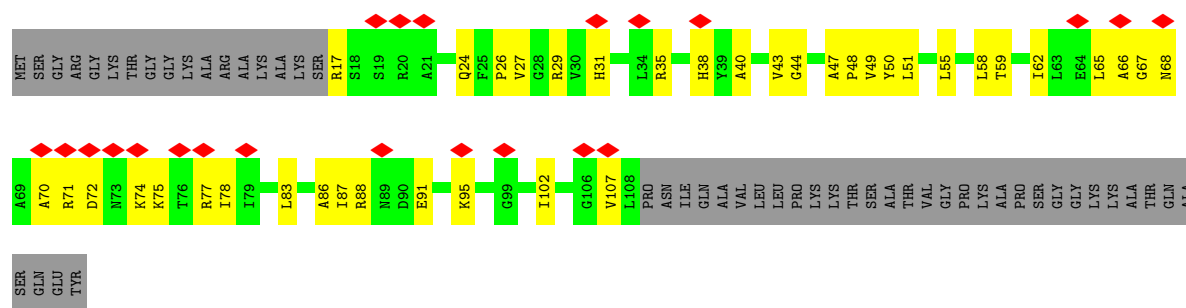
Chain d:



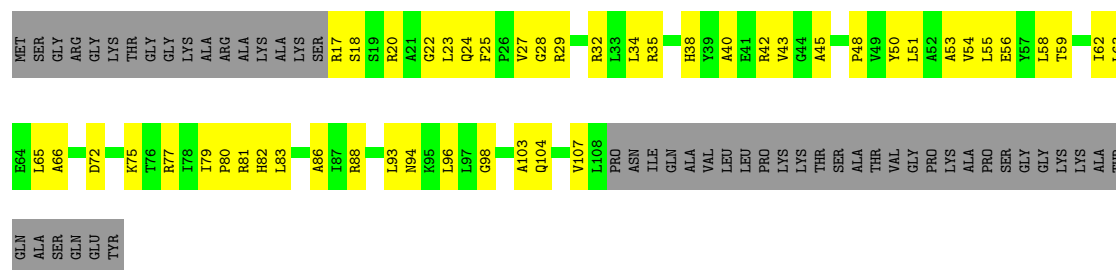
Chain h:



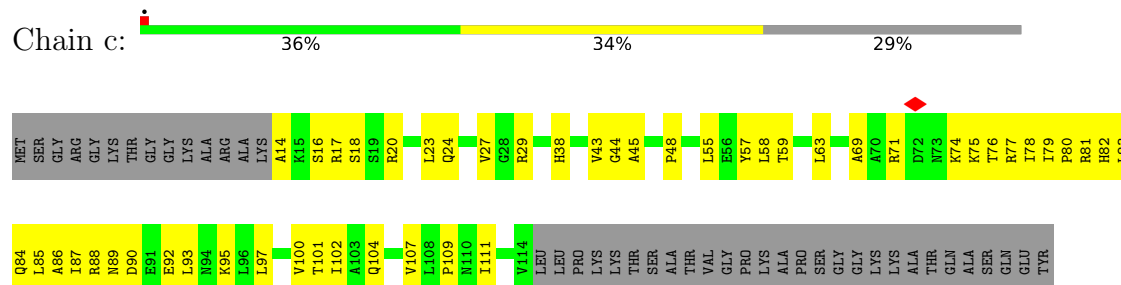
Chain C:



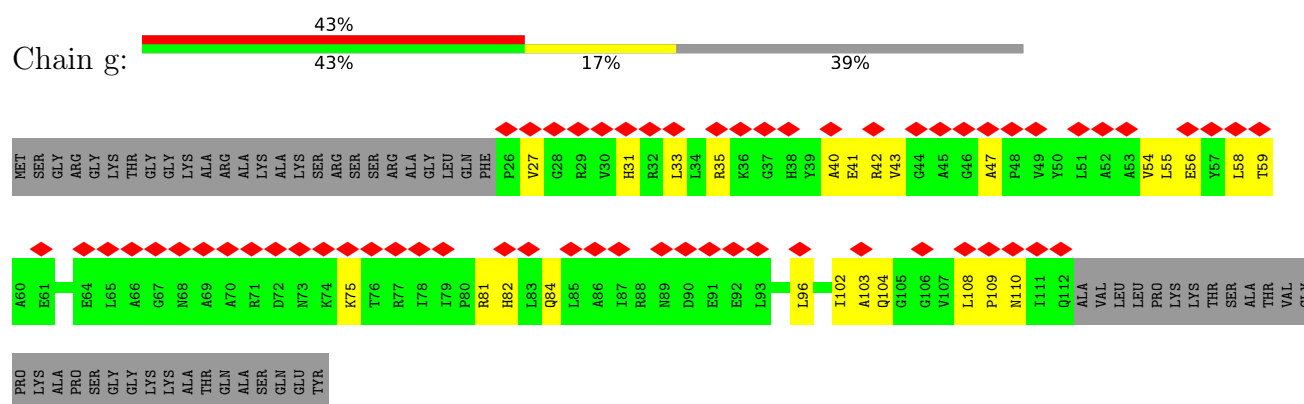
Chain G: 31% 34% 36%



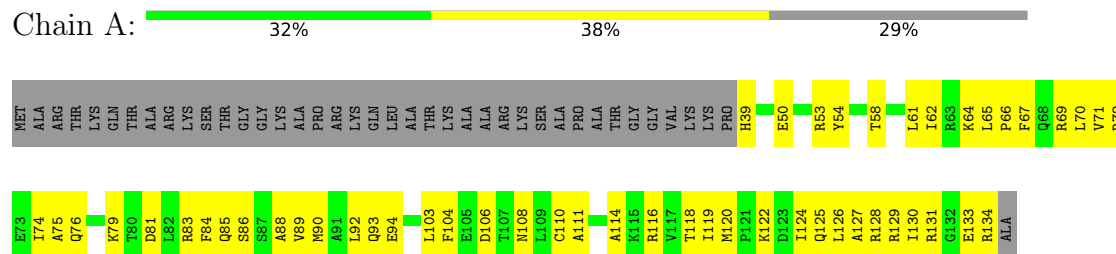
- Molecule 3: Histone H2AX



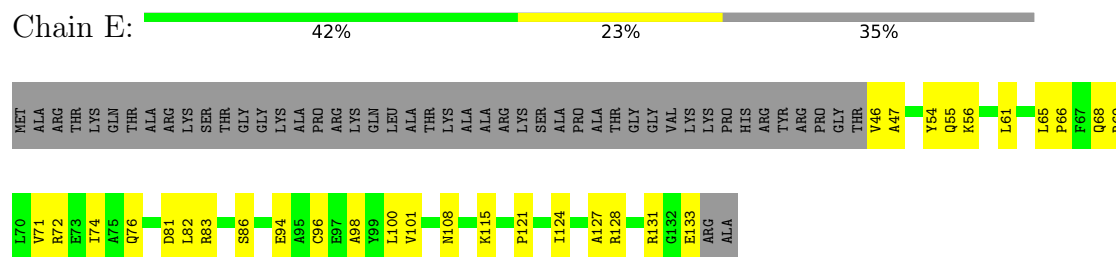
- Molecule 3: Histone H2AX



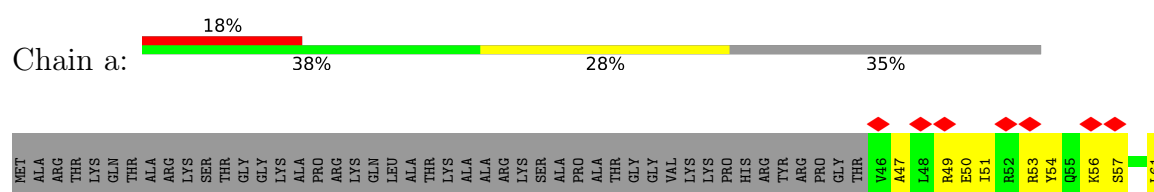
- Molecule 4: Histone H3.1

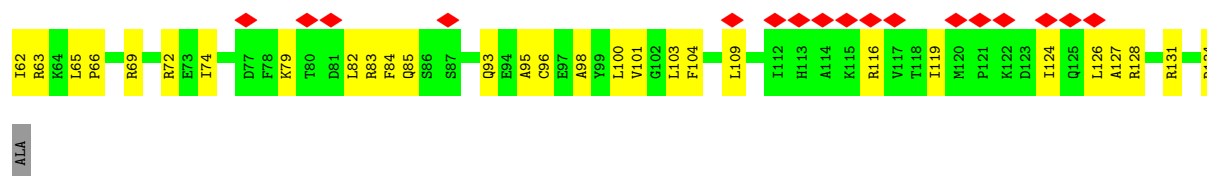


- Molecule 4: Histone H3.1

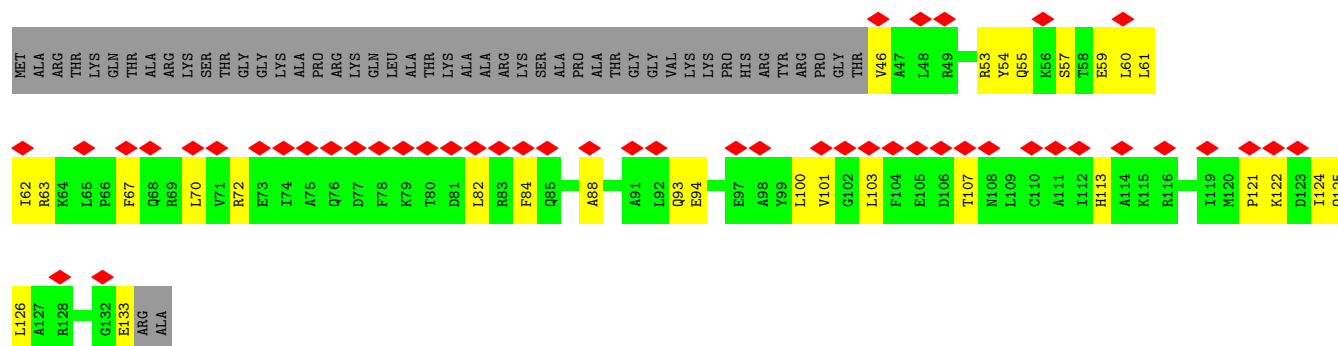
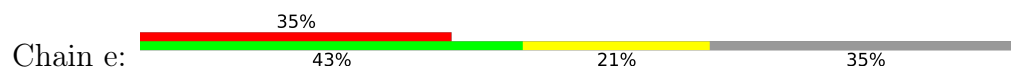


- Molecule 4: Histone H3.1

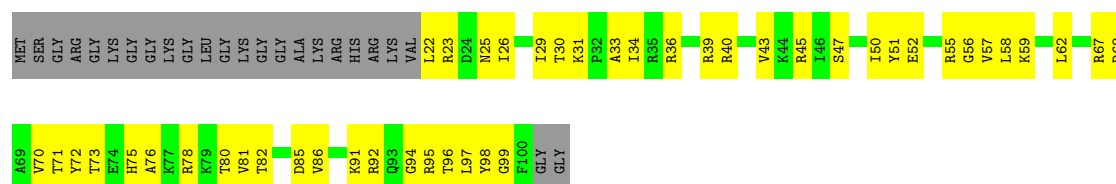




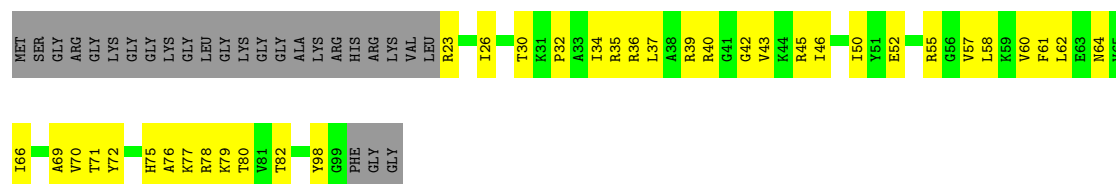
• Molecule 4: Histone H3.1



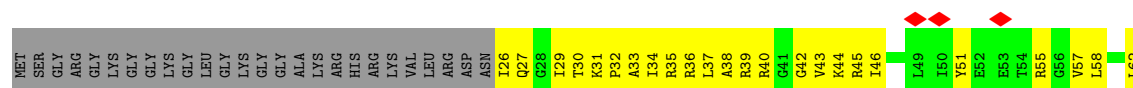
• Molecule 5: Histone H4

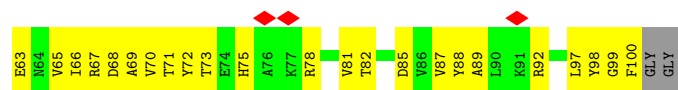


• Molecule 5: Histone H4

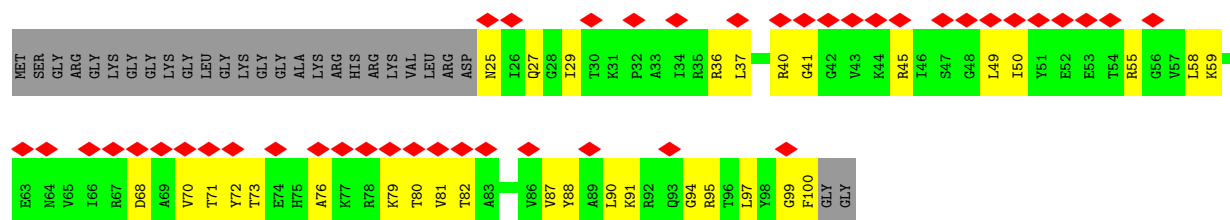
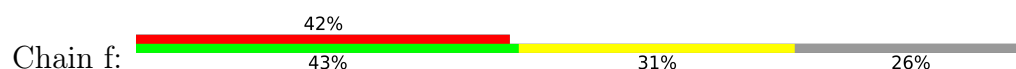


• Molecule 5: Histone H4

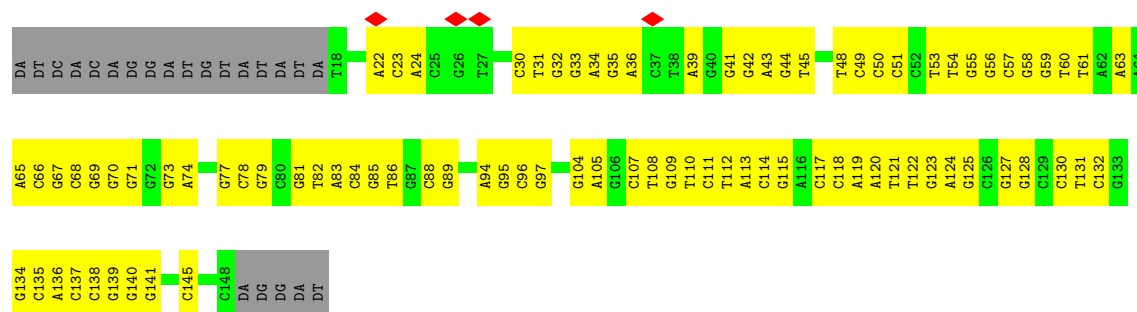




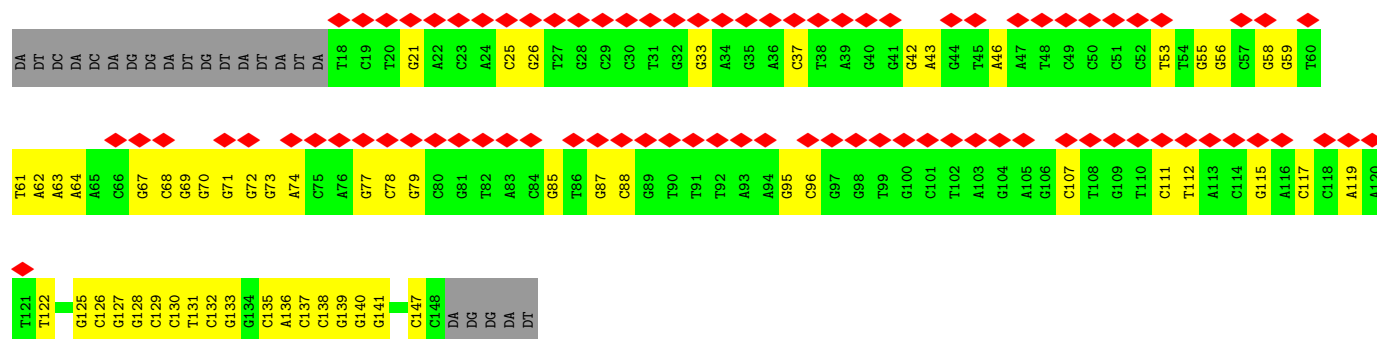
• Molecule 5: Histone H4



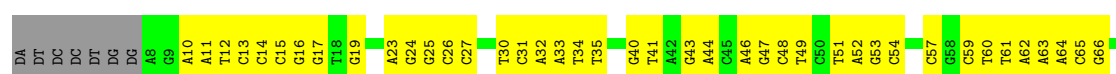
• Molecule 6: 153 bp DNA



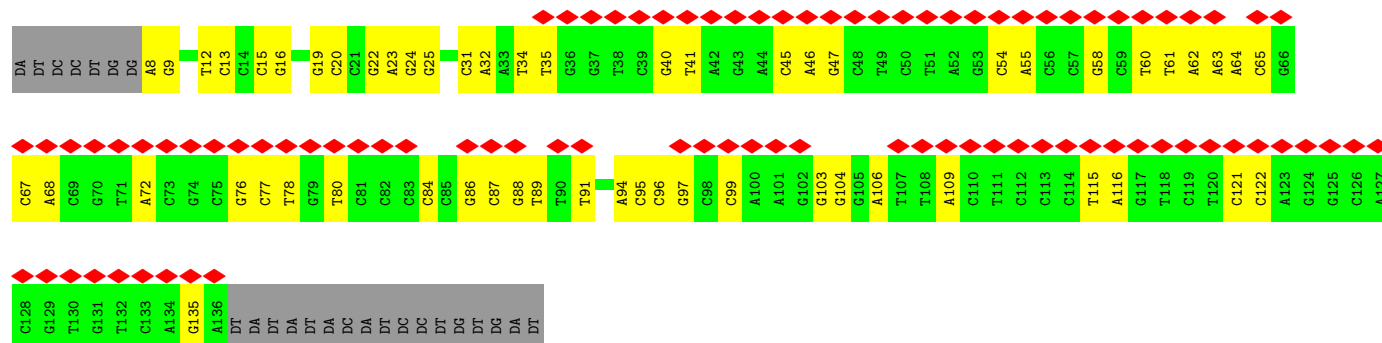
• Molecule 6: 153 bp DNA



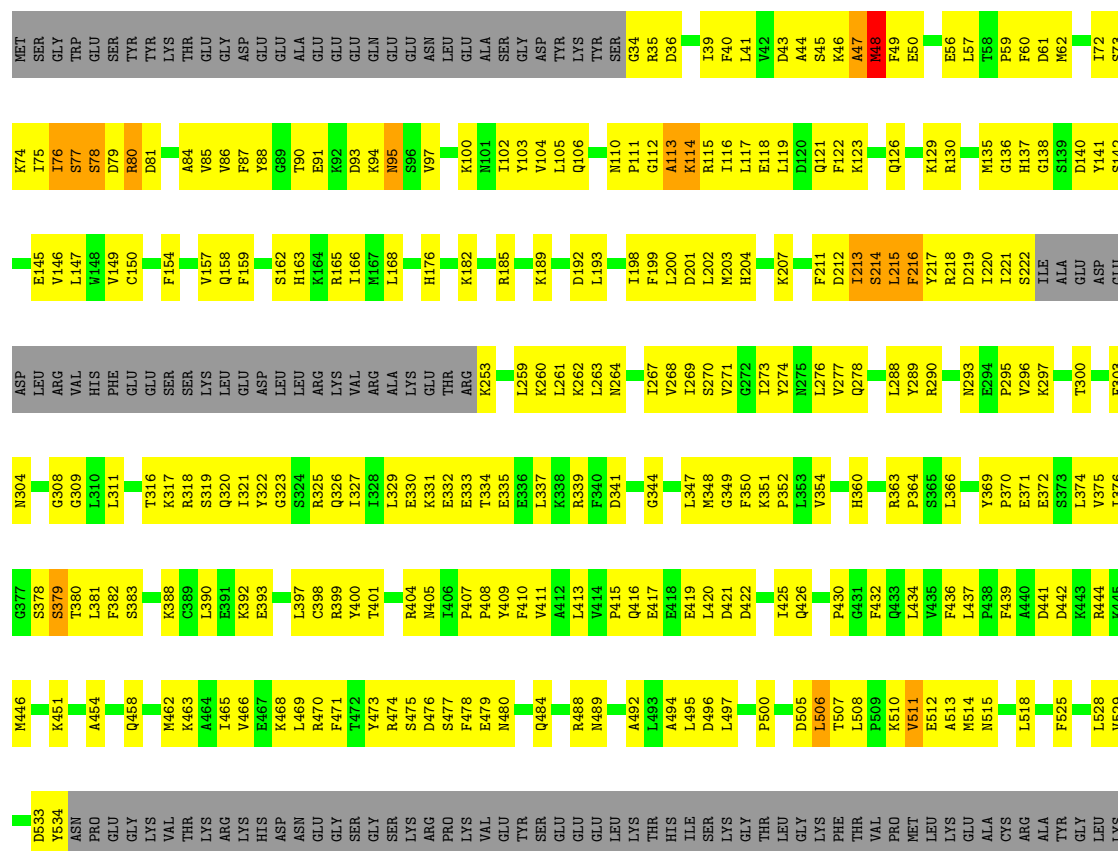
• Molecule 7: 153 bp DNA



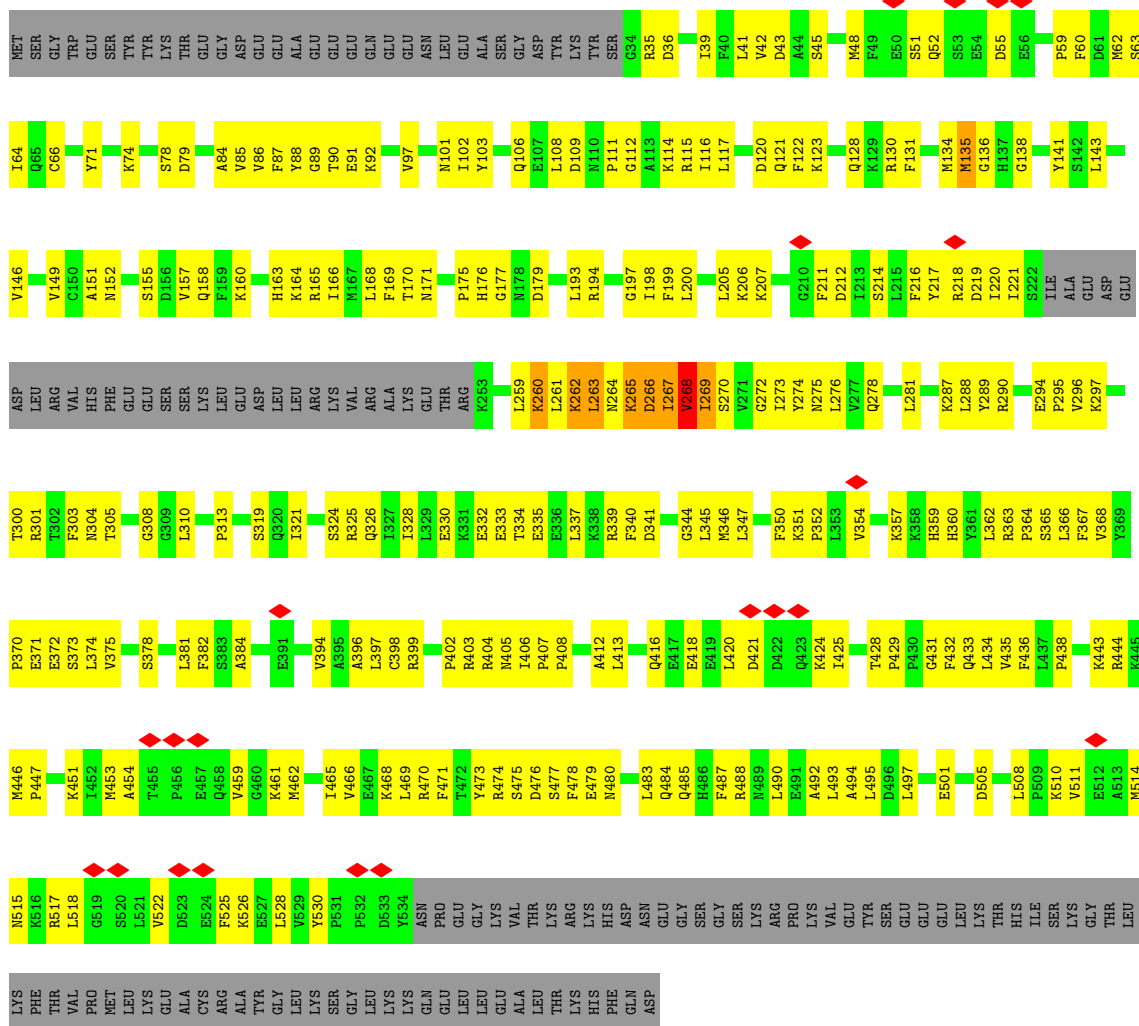
- Molecule 7: 153 bp DNA



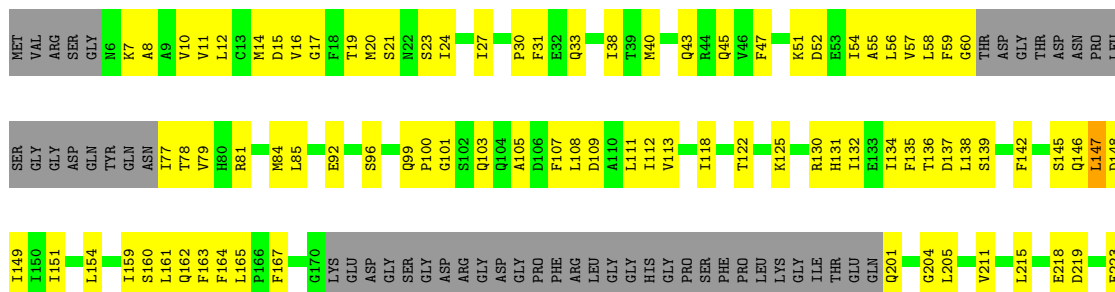
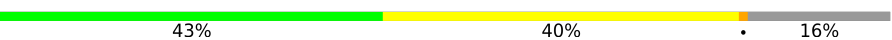
- Molecule 8: X-ray repair cross-complementing protein 6

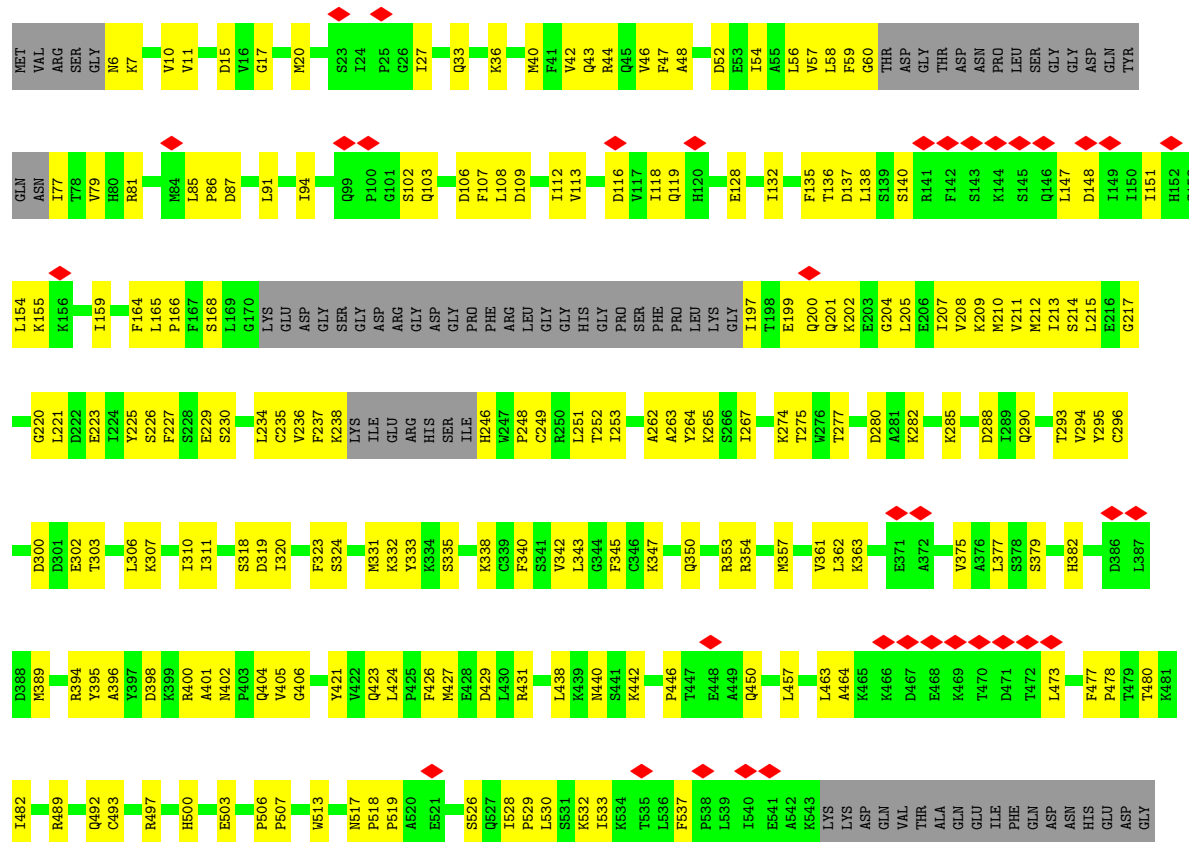


Chain M:



Chain L:







4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	27712	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 ($e^-/\text{\AA}^2$)	48.59	Depositor
Minimum defocus (nm)	700	Depositor
Maximum defocus (nm)	2200	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.809	Depositor
Minimum map value	-0.255	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.023	Depositor
Recommended contour level	0.12	Depositor
Map size (Å)	692.16, 692.16, 692.16	wwPDB
Map dimensions	420, 420, 420	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.6479999, 1.6479999, 1.6479999	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	O	0.21	0/28108	0.47	0/38054
1	o	0.13	0/28434	0.34	0/38434
2	D	0.14	0/724	0.36	0/973
2	H	0.16	0/727	0.35	0/977
2	d	0.16	0/708	0.40	0/953
2	h	0.15	0/708	0.43	0/953
3	C	0.10	0/711	0.32	0/960
3	G	0.18	0/712	0.32	0/961
3	c	0.11	0/771	0.32	0/1043
3	g	0.11	0/659	0.25	0/891
4	A	0.21	0/805	0.37	0/1079
4	E	0.10	0/719	0.27	0/965
4	a	0.10	0/740	0.31	0/991
4	e	0.11	0/717	0.27	0/963
5	B	0.13	0/631	0.34	0/849
5	F	0.12	0/618	0.36	0/829
5	b	0.14	0/597	0.39	0/803
5	f	0.18	0/617	0.36	0/827
6	I	0.29	0/3020	0.44	0/4661
6	i	0.30	0/3020	0.47	0/4661
7	J	0.30	0/2940	0.44	0/4530
7	j	0.31	0/2940	0.48	0/4530
8	K	0.24	0/3779	0.50	0/5109
8	M	0.23	0/3816	0.47	0/5152
9	L	0.17	0/4855	0.37	0/6561
9	N	0.15	0/4880	0.37	0/6589
All	All	0.20	0/96956	0.41	0/133298

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	27567	0	27400	1460	0
1	o	27886	0	28085	1238	0
2	D	714	0	733	55	0
2	H	717	0	733	44	0
2	d	698	0	697	41	0
2	h	698	0	702	38	0
3	C	702	0	730	43	0
3	G	703	0	733	46	0
3	c	761	0	791	61	0
3	g	652	0	689	29	0
4	A	794	0	831	58	0
4	E	711	0	744	33	0
4	a	732	0	772	48	0
4	e	709	0	737	32	0
5	B	624	0	647	49	0
5	F	612	0	650	36	0
5	b	590	0	619	63	0
5	f	610	0	653	35	0
6	I	2691	0	1472	61	0
6	i	2691	0	1472	112	0
7	J	2624	0	1449	62	0
7	j	2624	0	1449	126	0
8	K	3705	0	3702	280	0
8	M	3742	0	3760	264	0
9	L	4774	0	4682	272	0
9	N	4797	0	4729	217	0
All	All	94128	0	89661	4356	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 24.

All (4356) 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)
1:O:100:ILE:HG23	1:O:103:TYR:HB2	1.12	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:213:ARG:HB3	1:O:216:LYS:HB2	1.34	1.10
1:o:958:MET:HB2	1:o:961:LEU:HB2	1.34	1.07
1:o:1184:ARG:HH22	1:o:1265:GLU:HB3	1.14	1.06
8:M:261:LEU:HA	8:M:267:ILE:HA	1.09	1.04
1:O:100:ILE:HG23	1:O:103:TYR:CB	1.94	0.96
1:o:380:ASP:O	1:o:383:PHE:HB3	1.68	0.94
8:M:261:LEU:CA	8:M:267:ILE:HA	1.98	0.94
9:L:333:TYR:HE2	9:L:403:PRO:HG3	1.33	0.93
1:O:100:ILE:CG2	1:O:103:TYR:HB2	1.99	0.93
8:K:113:ALA:HA	8:K:116:ILE:HG22	1.54	0.88
9:N:395:TYR:O	9:N:404:GLN:HB2	1.71	0.88
3:G:18:SER:HB2	3:G:27:VAL:H	1.39	0.88
8:M:261:LEU:HA	8:M:267:ILE:CA	2.01	0.88
1:o:3183:ILE:HG13	1:o:3238:MET:HE2	1.54	0.88
1:O:2223:VAL:HG21	1:O:2238:ILE:HD11	1.58	0.85
1:O:131:LEU:HD22	1:O:177:LEU:HD11	1.60	0.83
2:D:38:VAL:HB	2:D:59:MET:HE3	1.61	0.83
1:O:1539:SER:HG	1:O:1552:HIS:N	1.77	0.82
1:o:950:GLU:HB2	1:o:957:PRO:HB3	1.60	0.82
9:L:461:MET:HB3	9:L:526:SER:HB3	1.61	0.81
3:c:59:THR:HG23	2:d:41:VAL:HG11	1.62	0.81
8:M:267:ILE:HB	8:M:345:LEU:O	1.81	0.81
8:M:121:GLN:HA	8:M:130:ARG:HE	1.44	0.80
1:O:3700:GLU:HA	1:O:3718:ARG:HA	1.61	0.80
1:O:1589:ASN:HB3	1:O:1592:MET:HE2	1.63	0.79
8:M:399:ARG:HG2	8:M:408:PRO:HB2	1.62	0.79
1:O:3103:ILE:HD11	1:O:3138:ILE:HG23	1.61	0.79
2:D:30:ARG:HD3	6:i:123:DG:H21	1.46	0.79
8:K:321:ILE:HG22	8:K:323:GLY:H	1.48	0.79
2:H:96:ARG:HA	2:H:108:VAL:HG11	1.65	0.79
1:o:2428:ASP:HB3	1:o:2431:ARG:HD3	1.65	0.79
8:M:263:LEU:HB2	8:M:267:ILE:H	1.45	0.79
1:o:4055:ASN:HD21	1:o:4091:ALA:HB1	1.49	0.78
1:o:1632:TRP:HE1	1:o:1641:THR:HG22	1.47	0.78
1:O:1754:GLN:HB3	1:O:1785:ILE:HD11	1.64	0.78
1:o:2346:ALA:HA	1:o:2349:LEU:HD12	1.65	0.78
1:O:3417:ALA:HA	1:O:3446:VAL:HG23	1.65	0.78
1:O:3392:ALA:HB1	1:O:3409:VAL:HG12	1.63	0.78
9:L:652:GLU:HG3	9:L:653:GLN:H	1.47	0.78
1:O:1111:LEU:HD12	1:O:1127:CYS:HB3	1.66	0.77
1:o:3581:PRO:HA	1:o:3617:LEU:HD13	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:b:30:THR:HG21	6:I:64:DA:H3'	1.66	0.77
1:O:3183:ILE:HD13	1:O:3242:MET:HG3	1.66	0.77
1:O:2806:LYS:HG2	1:O:2857:CYS:SG	2.25	0.77
3:c:83:LEU:HD21	2:d:59:MET:HE1	1.67	0.76
1:O:3772:ASN:HD21	1:O:3788:LEU:HB2	1.50	0.76
1:o:2563:LEU:HD13	1:o:2795:GLN:HB3	1.66	0.76
8:K:364:PRO:HB3	9:L:357:MET:HG3	1.65	0.76
7:j:43:DG:OP2	7:j:44:DA:N6	2.17	0.76
1:O:1219:PHE:O	1:O:1222:ASN:HB3	1.86	0.76
8:M:413:LEU:HD22	8:M:432:PHE:HB3	1.66	0.76
1:o:3835:PRO:HA	1:o:3839:TYR:HB2	1.66	0.76
9:L:333:TYR:CE2	9:L:403:PRO:HG3	2.21	0.76
8:M:515:ASN:HA	8:M:518:LEU:HD23	1.67	0.76
1:o:114:VAL:HG13	1:o:119:ARG:HE	1.51	0.75
8:K:94:LYS:HB3	8:K:104:VAL:H	1.50	0.75
1:O:1102:GLU:HG3	1:O:1154:PRO:HA	1.69	0.75
1:O:1364:CYS:SG	1:O:1365:ASN:N	2.59	0.75
1:O:1684:LEU:HB3	1:O:1688:LEU:HD11	1.68	0.75
1:o:487:LEU:HD11	1:o:575:ILE:HD13	1.68	0.75
8:M:263:LEU:H	8:M:268:VAL:HB	1.52	0.75
1:O:908:ASP:HA	1:O:911:LEU:HD23	1.68	0.75
1:o:1348:LEU:HA	1:o:1352:SER:HB2	1.69	0.74
8:M:45:SER:HA	8:M:138:GLY:HA3	1.68	0.74
1:O:1661:PHE:HA	1:O:1665:HIS:HB2	1.69	0.74
1:O:3742:GLY:HA3	1:O:3746:ARG:H	1.52	0.74
5:F:79:LYS:HB3	6:i:104:DG:H3'	1.68	0.74
1:o:3755:GLY:HA2	1:o:3799:ARG:HB3	1.67	0.74
8:M:120:ASP:HA	8:M:123:LYS:HB3	1.69	0.74
9:L:261:ILE:HB	9:L:366:ALA:HA	1.70	0.74
1:o:150:GLY:O	1:o:153:PHE:HB3	1.88	0.74
1:o:1226:GLY:HA2	1:o:1259:LEU:HG	1.68	0.74
1:O:3156:PRO:CB	1:O:3159:ARG:HB2	2.18	0.74
1:o:2421:VAL:O	1:o:2425:ARG:HB2	1.87	0.74
8:K:339:ARG:HA	8:K:405:ASN:HA	1.70	0.74
8:M:474:ARG:HB3	8:M:477:SER:HB3	1.69	0.74
1:o:946:THR:HG21	1:o:2581:LEU:HB2	1.69	0.74
1:O:1605:PHE:HB3	1:O:2042:GLN:HE22	1.51	0.73
1:O:3630:ARG:O	1:O:3634:GLN:NE2	2.21	0.73
8:K:74:LYS:HG3	8:K:79:ASP:HB2	1.70	0.73
1:O:848:LEU:HB3	1:O:852:ARG:HH22	1.53	0.73
8:K:426:GLN:HB2	9:L:434:MET:HE1	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:134:LEU:HD11	1:O:177:LEU:HD22	1.68	0.73
1:o:3929:MET:HE1	1:o:3940:ILE:HB	1.71	0.73
6:i:123:DG:H22	7:j:30:DT:H1'	1.53	0.73
7:J:116:DA:H61	6:I:37:DC:H42	1.36	0.73
1:O:1477:HIS:HA	1:O:1524:LEU:HD21	1.71	0.73
3:c:43:VAL:HG13	2:d:86:ILE:HB	1.71	0.73
1:o:466:LEU:HD11	1:o:541:MET:HB2	1.70	0.73
9:L:489:ARG:NH2	9:L:492:GLN:OE1	2.22	0.73
1:O:2824:LYS:O	1:O:2829:LYS:NZ	2.22	0.73
1:O:3155:VAL:O	1:O:3157:LEU:N	2.22	0.73
1:O:1406:LEU:HD13	1:O:1415:LEU:HD13	1.70	0.73
8:K:416:GLN:O	8:K:430:PRO:HA	1.89	0.73
1:O:2574:ASN:O	1:O:2787:HIS:ND1	2.21	0.73
4:E:54:TYR:HB3	5:F:40:ARG:HE	1.52	0.72
1:o:3262:LEU:O	1:o:3266:SER:HB3	1.89	0.72
1:O:709:LYS:HE3	1:O:1387:GLY:HA2	1.70	0.72
1:O:3155:VAL:HB	1:O:3157:LEU:HD22	1.69	0.72
1:o:1783:ARG:HH12	1:o:1829:TRP:HB3	1.54	0.72
1:O:3746:ARG:HH12	1:O:3748:HIS:HB3	1.54	0.72
9:N:155:LYS:NZ	9:N:214:SER:OG	2.21	0.72
1:O:925:GLN:HG3	1:O:2800:ARG:HH12	1.53	0.72
1:O:2328:ARG:HH11	1:O:2372:PRO:HD3	1.55	0.72
1:O:3156:PRO:O	1:O:3160:LEU:N	2.21	0.72
6:i:127:DG:N2	7:j:27:DC:N3	2.37	0.72
8:M:446:MET:HE3	8:M:447:PRO:HD2	1.72	0.72
1:O:2426:HIS:O	1:O:2432:GLN:NE2	2.23	0.72
2:H:101:GLY:O	2:H:105:LYS:N	2.23	0.72
1:O:2841:ASN:ND2	1:O:2872:ASP:OD1	2.23	0.72
3:G:93:LEU:HD13	3:G:96:LEU:HD21	1.70	0.72
5:B:72:TYR:OH	5:B:92:ARG:NH1	2.23	0.72
1:O:1580:LEU:HA	1:O:1583:MET:HE3	1.72	0.71
9:L:59:PHE:HA	9:L:78:THR:H	1.55	0.71
1:O:2162:LYS:HA	1:O:2165:LEU:HD12	1.73	0.71
1:o:2940:ARG:HA	1:o:2957:LEU:HD21	1.72	0.71
1:O:131:LEU:HB3	1:O:177:LEU:HD21	1.72	0.71
1:O:3762:GLN:NE2	1:O:3793:VAL:O	2.22	0.71
1:o:2044:ASP:O	1:o:2048:GLY:N	2.23	0.71
8:K:113:ALA:O	8:K:114:LYS:C	2.32	0.71
1:O:2410:GLU:O	1:O:2411:LEU:C	2.31	0.71
1:O:3971:MET:HB3	1:O:3974:MET:HB2	1.71	0.71
1:o:3503:VAL:HG13	1:o:3536:SER:HB2	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1300:SER:HA	1:O:1304:HIS:HB2	1.72	0.71
8:M:128:GLN:HA	8:M:131:PHE:CE2	2.26	0.71
1:O:1806:ARG:NH2	1:O:1873:TYR:OH	2.24	0.71
8:M:362:LEU:HB2	8:M:436:PHE:HB3	1.70	0.71
1:O:2896:ALA:O	1:O:2900:LEU:HB2	1.91	0.71
4:E:47:ALA:HB2	6:i:85:DG:H5'	1.72	0.71
1:O:1178:ARG:NH1	1:O:1183:CYS:SG	2.64	0.71
8:M:134:MET:HG2	8:M:135:MET:HG3	1.72	0.70
8:M:263:LEU:HB3	8:M:266:ASP:H	1.56	0.70
9:N:623:PHE:O	9:N:672:ASN:ND2	2.23	0.70
2:D:74:ALA:HB1	2:D:90:GLU:HB3	1.73	0.70
1:O:2161:ALA:HA	1:O:2164:TRP:HB2	1.71	0.70
1:O:3796:MET:HE1	1:O:3802:LEU:HB2	1.72	0.70
9:L:247:TRP:CD1	9:L:248:PRO:HD2	2.25	0.70
9:L:362:LEU:HB2	9:L:421:TYR:HB3	1.74	0.70
8:M:193:LEU:HD12	8:M:198:ILE:HD12	1.71	0.70
1:O:3584:LEU:HD13	1:O:3799:ARG:HD3	1.71	0.70
6:i:131:DT:H4'	6:i:132:DC:H5'	1.73	0.70
1:O:860:GLY:HA3	1:O:3136:THR:HG21	1.74	0.70
1:O:899:ARG:NH2	1:O:2533:SER:O	2.25	0.70
1:O:1039:TRP:NE1	1:O:1043:GLN:OE1	2.25	0.70
1:O:3720:ALA:HB3	1:O:3743:HIS:HA	1.73	0.70
9:L:331:MET:O	9:L:334:LYS:NZ	2.24	0.70
8:K:267:ILE:HD11	9:L:534:LYS:HG2	1.74	0.70
8:K:366:LEU:H	8:K:434:LEU:HB3	1.56	0.70
1:O:678:LYS:NZ	1:O:735:SER:O	2.24	0.70
1:O:2307:MET:O	1:O:2359:LYS:NZ	2.23	0.70
7:J:58:DG:H1	6:I:96:DC:H42	1.39	0.70
1:O:1140:LYS:HD2	1:O:1141:LYS:HG3	1.74	0.70
5:B:94:GLY:O	5:B:95:ARG:NH1	2.25	0.70
1:O:1228:GLY:H	1:O:1259:LEU:HD23	1.57	0.70
1:O:2126:MET:HB2	1:O:2164:TRP:HZ2	1.55	0.70
3:G:17:ARG:N	7:j:35:DT:OP2	2.25	0.70
1:O:901:MET:HG3	1:O:903:PRO:HD3	1.73	0.70
9:L:461:MET:SD	9:L:462:SER:N	2.64	0.69
8:M:39:ILE:HG22	8:M:84:ALA:HB3	1.73	0.69
1:O:75:SER:O	1:O:78:PHE:N	2.26	0.69
1:O:3174:ASP:O	1:O:3179:TRP:NE1	2.25	0.69
1:O:3806:LEU:HD23	1:O:3809:THR:HB	1.73	0.69
2:h:102:GLU:H	2:h:106:HIS:HB2	1.57	0.69
1:O:3589:SER:HB2	1:O:3660:ASN:HB3	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:1686:LEU:HD11	1:o:1738:ASN:HB3	1.75	0.69
1:o:2773:ARG:HG2	1:o:2774:SER:H	1.57	0.69
5:B:76:ALA:HA	2:d:89:ARG:HH21	1.57	0.69
1:o:2268:LYS:HE3	1:o:2314:GLU:HB3	1.75	0.69
1:o:2776:ARG:HD3	1:o:2784:GLN:HG2	1.73	0.69
1:o:2862:SER:HA	1:o:2868:LEU:HB3	1.75	0.69
1:O:535:LEU:O	1:O:561:ASN:ND2	2.25	0.69
1:O:1633:TRP:HB3	1:O:1645:VAL:HG21	1.74	0.69
3:C:24:GLN:HG2	2:H:41:VAL:HB	1.74	0.69
4:a:47:ALA:HB1	5:b:39:ARG:HH12	1.56	0.69
6:i:81:DG:H21	7:j:74:DG:H1	1.40	0.69
8:K:95:ASN:H	8:K:95:ASN:HD22	1.40	0.69
9:L:226:SER:H	9:L:229:GLU:HB2	1.57	0.69
9:N:60:GLY:HA2	9:N:103:GLN:HB3	1.75	0.69
1:O:1229:CYS:HB3	1:O:1233:SER:HB3	1.73	0.69
1:O:1369:MET:SD	1:O:1418:HIS:NE2	2.66	0.69
1:O:3614:TYR:HA	1:O:3617:LEU:HB2	1.75	0.69
8:K:510:LYS:H	8:K:514:MET:HE2	1.56	0.69
8:M:134:MET:O	8:M:136:GLY:N	2.26	0.69
1:O:1151:ARG:NH1	1:O:1163:LEU:O	2.25	0.69
1:O:2333:ARG:HH21	1:O:2336:ILE:HD12	1.58	0.69
1:O:3156:PRO:O	1:O:3159:ARG:N	2.26	0.69
1:O:3278:GLN:HB3	1:O:3282:ARG:HH12	1.57	0.69
3:C:17:ARG:N	7:J:35:DT:OP2	2.26	0.69
3:c:104:GLN:H	4:E:94:GLU:HG2	1.58	0.69
1:o:162:LEU:HG	1:o:164:LYS:H	1.57	0.69
6:i:89:DG:H22	7:j:65:DC:H1'	1.56	0.69
6:i:136:DA:N3	7:j:19:DG:N2	2.41	0.69
9:L:342:VAL:HA	9:L:393:VAL:HG12	1.75	0.69
9:N:526:SER:O	9:N:530:LEU:N	2.26	0.69
1:O:3169:PRO:HG2	1:O:3242:MET:HE1	1.74	0.69
1:O:3931:ALA:O	1:O:3935:GLY:N	2.26	0.69
7:J:89:DT:O4	6:I:64:DA:N6	2.25	0.69
8:K:407:PRO:HG2	9:L:486:ARG:HE	1.58	0.69
1:O:3247:ARG:NH2	1:O:3279:SER:O	2.26	0.69
4:E:69:ARG:NH1	6:i:94:DA:OP2	2.26	0.69
8:K:113:ALA:O	8:K:116:ILE:N	2.26	0.69
8:M:51:SER:HB3	8:M:55:ASP:HA	1.75	0.69
1:O:3156:PRO:O	1:O:3157:LEU:C	2.34	0.68
2:H:76:ARG:HH21	5:f:88:TYR:HB3	1.58	0.68
4:A:65:LEU:HD12	7:j:95:DC:H6	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:1184:ARG:NH2	1:o:1262:ALA:HA	2.07	0.68
1:o:1724:MET:SD	1:o:1725:GLN:HB2	2.34	0.68
1:o:3822:GLN:HA	1:o:3825:LYS:HE3	1.75	0.68
8:K:276:LEU:HA	9:L:431:ARG:HB2	1.75	0.68
9:L:616:LEU:HD22	9:L:639:ILE:HG13	1.75	0.68
1:o:1456:LYS:NZ	1:o:1516:GLU:O	2.25	0.68
4:a:49:ARG:HH11	4:a:53:ARG:HH12	1.42	0.68
9:L:663:GLN:NE2	9:L:667:GLU:OE2	2.24	0.68
1:O:1696:LEU:HD11	1:O:1758:LEU:HD21	1.75	0.68
8:K:333:GLU:HG3	9:L:505:LEU:HD23	1.74	0.68
1:O:172:GLU:HA	1:O:174:VAL:HG12	1.75	0.68
1:O:240:GLU:O	1:O:243:GLN:N	2.26	0.68
1:O:2367:VAL:O	1:O:2371:PHE:N	2.26	0.68
1:O:2965:TYR:HB2	1:O:3005:LEU:HD21	1.75	0.68
2:d:40:LYS:NZ	7:j:125:DG:OP1	2.26	0.68
1:o:358:GLU:HA	1:o:361:ILE:HD12	1.75	0.68
1:o:714:VAL:HA	1:o:717:LYS:HG2	1.76	0.68
1:O:214:GLU:HB2	1:O:215:PRO:HD2	1.76	0.68
1:O:2366:LYS:HD2	1:O:2369:LYS:HZ1	1.58	0.68
1:o:3531:TYR:HB3	1:o:3796:MET:HA	1.73	0.68
1:o:2295:GLN:HG3	1:o:2298:GLU:HG2	1.76	0.68
8:M:443:LYS:HZ3	9:N:267:ILE:HG23	1.59	0.68
1:O:3269:ARG:HE	1:O:3271:ASP:HB2	1.59	0.68
1:o:1071:ASN:HB3	1:o:1074:LYS:HB2	1.73	0.68
1:o:1307:ILE:HG23	1:o:1309:ALA:H	1.59	0.68
9:L:248:PRO:HB2	9:L:262:ALA:HB1	1.74	0.68
9:N:42:VAL:HG22	9:N:54:ILE:HD13	1.74	0.68
9:N:213:ILE:HA	9:N:217:GLY:HA2	1.73	0.68
1:O:331:ALA:O	1:O:334:HIS:ND1	2.27	0.68
1:o:2368:THR:HG21	1:o:2400:VAL:HA	1.74	0.68
1:O:2253:TYR:HB3	1:O:2288:TYR:HE1	1.59	0.68
9:N:17:GLY:HA2	9:N:102:SER:HA	1.75	0.68
1:O:3078:LEU:HA	1:O:3082:TYR:HD2	1.58	0.68
1:O:3879:PRO:HG2	1:O:3882:LEU:HD21	1.76	0.68
1:o:19:LEU:HD22	1:o:34:LEU:HA	1.75	0.68
8:K:93:ASP:HB2	8:K:95:ASN:ND2	2.09	0.68
8:K:110:ASN:O	8:K:115:ARG:NH1	2.27	0.68
8:M:262:LYS:H	8:M:266:ASP:C	2.02	0.68
6:I:61:DT:H2"	6:I:62:DA:C8	2.30	0.67
1:O:2533:SER:O	1:O:2534:ASN:C	2.36	0.67
1:o:1725:GLN:HE22	1:o:1727:ARG:HB2	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:3236:PHE:HB3	1:o:3272:TRP:CZ2	2.30	0.67
1:o:3718:ARG:H	1:o:3743:HIS:HB2	1.60	0.67
8:K:168:LEU:HB2	8:K:200:LEU:HD11	1.77	0.67
1:O:3154:GLN:O	1:O:3155:VAL:C	2.38	0.67
3:C:62:ILE:HG12	3:C:83:LEU:HD11	1.75	0.67
3:C:70:ALA:HB1	3:C:75:LYS:HB3	1.77	0.67
1:o:1102:GLU:OE1	1:o:1151:ARG:NH2	2.27	0.67
1:o:1833:LEU:HB2	1:o:1883:ARG:HH21	1.59	0.67
3:g:103:ALA:HA	4:e:94:GLU:HG2	1.77	0.67
8:K:39:ILE:HG22	8:K:84:ALA:HB3	1.76	0.67
9:L:56:LEU:HB3	9:L:81:ARG:HB3	1.75	0.67
9:L:138:LEU:HB3	9:L:204:GLY:HA3	1.75	0.67
8:M:175:PRO:HD2	8:M:216:PHE:HB3	1.76	0.67
8:K:349:GLY:HA3	9:L:463:LEU:HD13	1.76	0.67
8:K:444:ARG:NH2	9:L:270:GLU:OE2	2.25	0.67
1:O:1230:GLY:O	1:O:1292:LYS:NZ	2.28	0.67
1:O:1473:THR:O	1:O:1475:LEU:N	2.26	0.67
1:O:2243:GLU:HA	1:O:2246:LYS:HE2	1.75	0.67
1:o:240:GLU:HB2	1:o:242:PRO:HD2	1.76	0.67
8:M:378:SER:HA	8:M:381:LEU:HD13	1.75	0.67
1:O:895:ALA:O	1:O:902:LYS:NZ	2.28	0.67
1:O:963:LYS:HE2	1:O:964:ARG:HH22	1.58	0.67
1:O:1579:VAL:HG12	1:O:1583:MET:HE2	1.76	0.67
1:O:3483:MET:HE3	1:O:3510:GLN:HE21	1.60	0.67
3:G:88:ARG:HA	3:G:94:ASN:HD21	1.60	0.67
1:o:1076:LEU:HB3	1:o:1123:THR:HG22	1.75	0.67
1:o:1339:VAL:HG23	1:o:1398:VAL:HG11	1.77	0.67
1:O:3833:ARG:HA	1:O:3877:LYS:HG2	1.76	0.67
1:o:3494:GLN:HB3	1:o:3708:ARG:HG3	1.76	0.67
8:K:79:ASP:O	8:K:81:ASP:N	2.27	0.67
9:L:165:LEU:H	9:L:226:SER:HA	1.60	0.67
9:N:402:ASN:O	9:N:404:GLN:NE2	2.27	0.67
9:N:615:GLN:O	9:N:619:HIS:ND1	2.25	0.67
1:O:174:VAL:HA	1:O:177:LEU:HG	1.77	0.67
1:O:330:ASN:HB2	1:O:333:MET:HE1	1.77	0.67
1:O:1512:SER:HA	1:O:1515:LEU:HD12	1.75	0.67
1:o:2806:LYS:HB2	1:o:2857:CYS:HB2	1.76	0.67
9:L:482:ILE:HD13	9:L:516:LEU:HD13	1.77	0.67
8:M:273:ILE:HG13	8:M:368:VAL:HG22	1.76	0.67
8:M:453:MET:SD	9:N:382:HIS:NE2	2.66	0.67
1:O:912:PRO:O	1:O:915:THR:HG22	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1626:TRP:HZ2	1:O:1674:THR:HG21	1.60	0.67
1:O:2820:MET:HE1	1:O:2829:LYS:HG3	1.77	0.67
1:O:1016:GLY:HA2	1:O:1019:ASP:HB3	1.76	0.67
1:O:1208:LEU:HA	1:O:1211:VAL:HG22	1.76	0.67
1:O:3613:MET:O	1:O:3617:LEU:N	2.28	0.67
2:D:121:ALA:HB1	3:G:20:ARG:HB3	1.75	0.67
1:o:561:ASN:HB3	1:o:637:LYS:HZ1	1.59	0.67
1:o:730:LEU:HD11	1:o:765:LEU:HD22	1.77	0.67
8:M:48:MET:HB2	8:M:59:PRO:HB2	1.76	0.67
8:K:87:PHE:HE1	8:K:103:TYR:HB3	1.60	0.66
1:O:2165:LEU:HD13	1:O:2202:PRO:HG3	1.76	0.66
1:o:1419:LEU:HB3	1:o:1467:ILE:HD13	1.77	0.66
1:o:1820:VAL:HA	1:o:1824:LEU:HD23	1.77	0.66
1:o:3883:LEU:HB2	1:o:3966:GLN:HB3	1.77	0.66
8:K:79:ASP:C	8:K:81:ASP:H	2.03	0.66
8:M:263:LEU:HB2	8:M:267:ILE:N	2.10	0.66
4:A:58:THR:HA	5:B:40:ARG:HH12	1.59	0.66
1:o:760:LEU:HD13	1:o:798:GLY:HA3	1.78	0.66
1:O:1178:ARG:NH2	1:O:1183:CYS:SG	2.69	0.66
1:o:958:MET:O	1:o:962:TYR:N	2.24	0.66
1:o:2376:ASP:HB3	1:o:2404:ARG:HH21	1.61	0.66
1:o:3144:PHE:HZ	1:o:3161:LEU:HD21	1.59	0.66
8:K:413:LEU:HD22	8:K:432:PHE:HB3	1.77	0.66
9:N:405:VAL:O	9:N:423:GLN:NE2	2.29	0.66
1:O:162:LEU:HG	1:O:164:LYS:HG2	1.78	0.66
1:O:2387:PRO:O	8:K:158:GLN:NE2	2.25	0.66
2:H:51:ILE:HD11	2:H:59:MET:HE1	1.77	0.66
1:o:1238:GLN:HE22	1:o:1292:LYS:HB2	1.61	0.66
1:o:1724:MET:HB3	9:N:622:GLN:OE1	1.95	0.66
1:O:1215:GLU:OE2	1:O:1219:PHE:N	2.29	0.66
1:O:3831:ASP:HB3	1:O:3832:PRO:HD3	1.75	0.66
1:O:1949:ILE:HD11	1:O:2097:LEU:HD12	1.75	0.66
1:O:3867:THR:HG23	1:O:4118:GLY:HA3	1.76	0.66
1:O:3923:ARG:HD3	1:O:4124:TRP:HA	1.76	0.66
4:A:69:ARG:HD2	5:B:22:LEU:HG	1.77	0.66
1:o:939:MET:HB3	1:o:2785:ILE:HD13	1.77	0.66
1:o:1358:LEU:HA	1:o:1361:LYS:HE2	1.78	0.66
8:M:151:ALA:HB2	8:M:193:LEU:HD21	1.78	0.66
1:O:174:VAL:HG23	1:O:177:LEU:HD12	1.77	0.66
1:O:2582:SER:OG	1:O:2583:GLU:N	2.25	0.66
4:A:129:ARG:NH2	4:A:133:GLU:O	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:1762:MET:HA	1:o:1765:VAL:HG12	1.77	0.66
1:o:3052:LEU:HD11	1:o:3061:LEU:HD11	1.76	0.66
1:o:3285:HIS:HB2	1:o:3301:LEU:HD11	1.76	0.66
1:o:4090:ARG:NH2	1:o:4109:ASP:OD2	2.29	0.66
9:N:657:ASN:HA	9:N:660:LYS:HG2	1.76	0.66
1:O:370:ALA:HA	1:O:373:CYS:HB3	1.76	0.66
1:O:1946:ASN:HA	1:O:1949:ILE:HD12	1.78	0.66
1:O:3503:VAL:HG22	1:O:3536:SER:HB3	1.78	0.66
1:O:3971:MET:HG3	1:O:3980:MET:HE1	1.77	0.66
5:B:30:THR:HA	5:B:55:ARG:HH21	1.59	0.66
1:o:3864:ARG:HE	1:o:4085:LYS:HA	1.60	0.66
8:K:106:GLN:HB2	8:K:119:LEU:HD21	1.77	0.66
8:K:376:ILE:HB	9:L:540:ILE:HB	1.78	0.66
9:L:315:ARG:HA	9:L:320:ILE:HA	1.78	0.66
1:o:3700:GLU:HG2	1:o:3718:ARG:HD2	1.79	0.65
8:K:512:GLU:HA	8:K:515:ASN:HB2	1.78	0.65
8:K:269:ILE:HD13	8:K:381:LEU:HD11	1.78	0.65
1:O:866:ILE:O	1:O:869:ASN:ND2	2.30	0.65
1:O:1373:VAL:O	1:O:1377:CYS:N	2.29	0.65
1:O:3887:PHE:O	1:O:3891:SER:N	2.30	0.65
1:o:31:GLY:HA3	1:o:77:GLU:HB3	1.78	0.65
5:f:87:VAL:HG13	5:f:97:LEU:HD22	1.77	0.65
8:K:297:LYS:H	9:L:297:LEU:HB2	1.61	0.65
9:N:500:HIS:HB2	9:N:503:GLU:HG2	1.78	0.65
4:a:47:ALA:HB3	5:b:44:LYS:HE3	1.77	0.65
1:O:225:LYS:HD2	1:O:270:ALA:HB1	1.77	0.65
1:O:2361:ILE:HD11	1:O:2393:LEU:HD12	1.77	0.65
1:o:1220:LEU:HD13	1:o:1285:GLU:HB3	1.79	0.65
1:o:2225:HIS:HB2	1:o:2231:PHE:HB2	1.77	0.65
1:o:3048:LYS:HD3	1:o:3061:LEU:HB3	1.78	0.65
9:L:57:VAL:HG13	9:L:79:VAL:HG22	1.78	0.65
9:L:464:ALA:O	9:L:466:LYS:NZ	2.29	0.65
8:M:263:LEU:HB3	8:M:266:ASP:N	2.11	0.65
2:d:102:GLU:OE1	2:d:104:ALA:N	2.29	0.65
1:o:2218:PHE:O	1:o:2222:HIS:ND1	2.27	0.65
8:K:320:GLN:HA	9:L:274:LYS:HZ2	1.62	0.65
9:N:7:LYS:HA	9:N:52:ASP:HA	1.78	0.65
1:O:862:LEU:HB3	1:O:866:ILE:HG21	1.79	0.65
1:O:1258:ASP:HA	1:O:1261:LEU:HD12	1.77	0.65
1:O:3385:LEU:HB3	1:O:3416:LEU:HD12	1.78	0.65
1:o:3741:ARG:HB3	1:o:3745:GLU:HA	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:N:249:CYS:HB2	9:N:338:LYS:HE2	1.78	0.65
1:O:1264:LEU:O	1:O:1268:ASN:ND2	2.30	0.65
1:O:1322:THR:N	1:O:1328:GLU:H	1.95	0.65
1:O:2168:LEU:HD23	1:O:2171:LEU:HD12	1.79	0.65
1:O:2897:LEU:HD13	1:O:2922:ARG:HB2	1.79	0.65
1:O:3156:PRO:HB3	1:O:3159:ARG:HB2	1.78	0.65
3:c:79:ILE:HG22	3:c:81:ARG:H	1.61	0.65
3:c:80:PRO:HA	3:c:83:LEU:HB2	1.78	0.65
3:c:81:ARG:NH1	3:c:107:VAL:O	2.30	0.65
1:O:327:VAL:HG22	1:O:333:MET:HG3	1.78	0.65
1:O:3369:ASP:H	1:O:3372:LYS:HB2	1.62	0.65
1:O:3856:MET:O	1:O:3860:LYS:NZ	2.30	0.65
4:a:134:ARG:HH21	5:b:57:VAL:HG22	1.62	0.65
7:j:102:DG:H2"	7:j:103:DG:C8	2.31	0.65
7:I:15:DC:O2	6:I:140:DG:N2	2.29	0.65
8:K:182:LYS:HG3	8:K:185:ARG:HH21	1.62	0.65
1:O:1446:SER:O	1:O:1449:ALA:HB3	1.97	0.65
1:O:1477:HIS:O	1:O:1478:SER:C	2.40	0.65
1:o:2374:LEU:HB2	1:o:2377:ARG:HH22	1.61	0.65
1:o:2797:VAL:HG23	1:o:2804:ILE:HG21	1.79	0.65
8:K:100:LYS:NZ	8:K:140:ASP:OD2	2.30	0.65
9:L:14:MET:HE1	9:L:16:VAL:HG13	1.79	0.65
4:A:76:GLN:HG3	4:A:81:ASP:H	1.62	0.64
5:B:52:GLU:O	5:B:55:ARG:HB2	1.96	0.64
1:o:1184:ARG:HH21	1:o:1262:ALA:HA	1.62	0.64
7:J:64:DA:H1'	7:J:65:DC:H5	1.61	0.64
8:K:289:TYR:O	8:K:293:ASN:N	2.31	0.64
9:L:21:SER:HA	9:L:100:PRO:HB3	1.79	0.64
9:L:161:LEU:HD13	9:L:163:PHE:HE2	1.63	0.64
1:O:2348:GLN:OE1	1:O:2353:GLN:NE2	2.29	0.64
1:O:105:VAL:HG22	1:O:145:ASP:OD2	1.97	0.64
1:O:1300:SER:OG	1:O:1334:LYS:NZ	2.30	0.64
1:O:3684:SER:HB3	1:O:3687:MET:HB2	1.78	0.64
1:O:3830:SER:HA	1:O:3835:PRO:HG2	1.79	0.64
1:o:616:LYS:NZ	1:o:619:ASP:OD2	2.31	0.64
1:o:1360:LYS:HB3	1:o:1366:THR:HB	1.79	0.64
1:o:2328:ARG:HD3	1:o:2370:SER:HA	1.79	0.64
8:M:341:ASP:OD2	8:M:399:ARG:NH2	2.31	0.64
1:O:213:ARG:HB3	1:O:216:LYS:CB	2.20	0.64
1:O:3002:TYR:CD2	1:O:3007:GLU:HG3	2.32	0.64
1:O:3262:LEU:O	1:O:3266:SER:HB3	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:L:33:GLN:HG2	9:L:227:PHE:HB3	1.78	0.64
9:L:57:VAL:HG22	9:L:79:VAL:HG13	1.79	0.64
1:O:2103:HIS:O	1:O:2107:SER:N	2.30	0.64
1:O:3916:TRP:O	1:O:4050:LYS:NZ	2.28	0.64
3:C:62:ILE:HG13	3:C:87:ILE:HD11	1.78	0.64
3:C:77:ARG:HB3	2:H:52:SER:HB3	1.79	0.64
2:H:38:VAL:HA	2:H:41:VAL:HG12	1.79	0.64
6:i:115:DG:H22	7:j:40:DG:H21	1.43	0.64
9:L:407:VAL:HB	9:L:424:LEU:HD11	1.79	0.64
2:D:122:LYS:HE3	3:G:20:ARG:HD2	1.80	0.64
8:K:375:VAL:HG13	9:L:541:GLU:HB3	1.80	0.64
1:O:2478:MET:HB2	1:O:2524:PHE:CE1	2.32	0.64
1:o:1301:ILE:HD13	1:o:1334:LYS:HE3	1.79	0.64
8:K:213:ILE:O	8:K:214:SER:C	2.40	0.64
1:O:196:LEU:HD21	1:O:227:LEU:HD21	1.79	0.64
1:O:385:TYR:HB2	1:O:420:VAL:HG11	1.80	0.64
1:O:390:GLN:NE2	1:O:1685:ASP:OD2	2.30	0.64
1:O:944:LYS:HA	1:O:947:GLN:HE21	1.63	0.64
1:O:1172:LEU:O	1:O:1176:CYS:N	2.31	0.64
1:O:2430:GLU:O	1:O:2433:LYS:N	2.30	0.64
1:O:3410:ILE:HG23	1:O:3453:ALA:HB1	1.78	0.64
1:o:3735:PRO:HB3	1:o:3753:LYS:HG2	1.79	0.64
1:O:2535:THR:O	1:O:2536:LEU:C	2.40	0.64
1:O:3167:ARG:HH11	1:O:3168:TYR:H	1.46	0.64
1:O:3994:ASP:HB2	1:O:3997:LEU:HD23	1.80	0.64
1:o:1625:HIS:HA	1:o:1628:LYS:HD3	1.79	0.64
1:o:1783:ARG:NH1	1:o:1826:THR:O	2.31	0.64
1:o:2430:GLU:HA	1:o:2433:LYS:HD2	1.80	0.64
1:o:2442:MET:HA	1:o:2445:LYS:HD3	1.79	0.64
1:o:2528:GLU:HG2	1:o:2533:SER:H	1.63	0.64
5:b:32:PRO:HB2	5:b:36:ARG:HH21	1.63	0.64
8:M:261:LEU:CA	8:M:268:VAL:H	2.11	0.64
1:O:1686:LEU:HA	1:O:1689:LYS:HD2	1.80	0.64
1:O:2122:LEU:H	1:O:2125:TRP:HA	1.62	0.64
1:o:67:VAL:O	1:o:82:ARG:NH2	2.31	0.64
1:o:1456:LYS:HD2	1:o:1516:GLU:HG3	1.79	0.64
1:o:2865:HIS:HB2	1:o:2868:LEU:HB2	1.80	0.64
8:K:123:LYS:O	8:K:126:GLN:NE2	2.30	0.64
1:o:528:VAL:HB	1:o:633:ILE:HD11	1.79	0.63
1:o:1283:GLY:H	1:o:1286:ALA:HB2	1.64	0.63
9:L:306:LEU:HD23	9:L:309:ASP:HB3	1.78	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:L:352:GLN:HG3	9:L:354:ARG:H	1.63	0.63
1:O:2855:VAL:HA	1:O:2858:ILE:HD12	1.79	0.63
1:o:529:ASP:O	1:o:533:HIS:ND1	2.22	0.63
1:o:1092:GLU:HG2	1:o:1095:LEU:HG	1.80	0.63
1:o:1723:PRO:HG3	9:N:594:PRO:HG3	1.81	0.63
1:o:2556:SER:HB2	1:o:2799:GLN:HA	1.80	0.63
1:o:2575:PRO:HA	1:o:2786:LYS:HA	1.78	0.63
1:o:2966:SER:N	1:o:3253:SER:OG	2.32	0.63
1:o:23:ASP:HB3	1:o:34:LEU:HD21	1.79	0.63
1:o:1942:CYS:O	1:o:1946:ASN:ND2	2.31	0.63
5:b:45:ARG:HG3	7:J:84:DC:H5'	1.79	0.63
9:N:332:LYS:NZ	9:N:333:TYR:O	2.31	0.63
1:O:1502:SER:OG	1:O:1503:LEU:N	2.31	0.63
1:O:2124:SER:HB2	1:O:2129:LEU:H	1.62	0.63
1:O:2143:ARG:NH2	1:O:2171:LEU:O	2.31	0.63
2:D:34:TYR:HA	2:D:37:TYR:HD2	1.64	0.63
8:K:48:MET:HG3	8:K:60:PHE:HB2	1.80	0.63
8:M:370:PRO:HB2	9:N:438:LEU:HD21	1.80	0.63
1:O:421:LEU:HA	1:O:424:LEU:HB2	1.80	0.63
1:O:3563:ASP:HB3	1:O:3696:ARG:HH21	1.61	0.63
4:A:106:ASP:OD2	4:A:131:ARG:NH2	2.32	0.63
1:o:2349:LEU:HB3	1:o:2360:PHE:HE1	1.62	0.63
8:K:116:ILE:HA	8:K:119:LEU:HB2	1.81	0.63
9:N:660:LYS:HD3	9:N:688:LYS:HD2	1.79	0.63
1:O:2860:ASP:OD1	1:O:2864:GLN:NE2	2.31	0.63
1:O:3007:GLU:O	1:O:3008:TRP:C	2.41	0.63
1:o:1693:VAL:HG22	1:o:1696:LEU:HD23	1.80	0.63
8:M:90:THR:OG1	8:M:135:MET:HB2	1.99	0.63
8:M:263:LEU:O	8:M:264:ASN:C	2.41	0.63
9:N:246:HIS:HB2	9:N:264:TYR:HB2	1.81	0.63
1:O:1910:GLU:HG3	1:O:1911:LEU:H	1.64	0.63
1:O:2353:GLN:HB3	1:O:2360:PHE:HB2	1.80	0.63
1:o:2254:ARG:NH2	1:o:2292:CYS:SG	2.71	0.63
9:L:347:LYS:HG3	9:L:349:SER:H	1.64	0.63
1:O:2534:ASN:O	1:O:2535:THR:C	2.42	0.63
1:o:2304:VAL:HB	1:o:2348:GLN:HG3	1.81	0.63
1:o:2330:VAL:HB	1:o:2333:ARG:HH21	1.64	0.63
9:L:43:GLN:HE22	9:L:239:LYS:HD3	1.64	0.63
1:O:103:TYR:O	1:O:107:ILE:N	2.26	0.63
1:O:4009:PRO:HA	1:O:4012:ASP:HB2	1.81	0.63
5:f:90:LEU:HD22	5:f:97:LEU:HD12	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:407:VAL:HA	1:O:410:MET:HE1	1.81	0.62
1:O:1536:ALA:O	1:O:1555:HIS:ND1	2.31	0.62
1:O:2430:GLU:O	1:O:2431:ARG:C	2.41	0.62
8:M:89:GLY:N	8:M:101:ASN:O	2.32	0.62
1:O:708:VAL:HG12	1:O:740:ILE:HG23	1.80	0.62
1:O:1420:ARG:HE	1:O:1424:THR:HG22	1.64	0.62
1:O:1368:LEU:HA	1:O:1371:VAL:HG22	1.82	0.62
1:O:3153:SER:C	1:O:3155:VAL:H	2.08	0.62
1:o:736:LEU:HB3	1:o:740:ILE:HD11	1.80	0.62
1:o:3577:GLN:HA	1:o:3617:LEU:HD21	1.80	0.62
1:o:3614:TYR:O	1:o:3619:ASP:N	2.32	0.62
8:K:47:ALA:O	8:K:48:MET:C	2.41	0.62
8:M:214:SER:HB2	8:M:221:ILE:HG13	1.82	0.62
9:N:137:ASP:HA	9:N:166:PRO:HD3	1.79	0.62
9:N:457:LEU:HD22	9:N:533:ILE:HG13	1.81	0.62
8:M:48:MET:HG2	8:M:60:PHE:HB2	1.80	0.62
1:O:1627:LYS:HD2	1:O:1670:GLU:HG2	1.82	0.62
1:O:2162:LYS:O	1:O:2165:LEU:HB2	1.99	0.62
1:O:2343:GLU:O	1:O:2347:LYS:N	2.30	0.62
1:O:4055:ASN:HD22	1:O:4058:VAL:HG23	1.64	0.62
1:o:937:MET:O	1:o:941:MET:HG2	2.00	0.62
1:o:1058:SER:HA	1:o:1061:LYS:HE2	1.81	0.62
8:M:175:PRO:HG3	8:M:217:TYR:HA	1.81	0.62
1:O:1453:SER:O	1:O:1457:GLN:NE2	2.32	0.62
1:O:2391:GLY:O	1:O:2431:ARG:NH2	2.32	0.62
1:O:3190:LEU:HD22	1:O:3231:ILE:HG23	1.81	0.62
1:O:3763:ARG:HB3	1:O:4002:MET:HE1	1.80	0.62
4:A:133:GLU:HG3	3:c:95:LYS:HA	1.81	0.62
1:o:3884:LYS:NZ	1:o:3969:ASN:O	2.29	0.62
8:K:45:SER:HA	8:K:138:GLY:HA2	1.81	0.62
8:K:87:PHE:CE1	8:K:103:TYR:HB3	2.34	0.62
1:O:100:ILE:HG22	1:O:104:SER:N	2.14	0.62
1:O:411:PRO:HA	1:O:414:LEU:HD12	1.80	0.62
1:O:3860:LYS:HB3	1:O:4073:ALA:HB2	1.81	0.62
2:D:52:SER:HB3	3:G:77:ARG:HD2	1.81	0.62
3:G:65:LEU:HB3	3:G:86:ALA:HB1	1.82	0.62
4:E:46:VAL:N	7:j:72:DA:OP1	2.33	0.62
1:o:776:TRP:O	1:o:780:ILE:N	2.31	0.62
1:o:1878:ASP:OD1	1:o:1879:VAL:N	2.31	0.62
8:K:372:GLU:HG3	8:K:376:ILE:HA	1.82	0.62
8:M:473:TYR:HD2	9:N:350:GLN:HB3	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:392:CYS:HA	1:O:395:MET:HG3	1.82	0.62
1:O:3239:LYS:NZ	1:O:3265:GLU:OE2	2.32	0.62
4:A:67:PHE:HE1	5:B:62:LEU:HD11	1.65	0.62
1:o:168:ASP:HB2	1:o:171:LEU:HD13	1.82	0.62
1:o:3144:PHE:HB3	1:o:3150:ASN:HD22	1.65	0.62
1:o:3920:ILE:HG12	1:o:3945:ALA:HA	1.82	0.62
9:L:19:THR:OG1	9:L:20:MET:N	2.33	0.62
8:M:466:VAL:HG13	9:N:345:PHE:CG	2.35	0.62
8:M:485:GLN:HG3	9:N:331:MET:HE3	1.82	0.62
1:O:212:VAL:HA	8:K:404:ARG:HH22	1.64	0.62
1:O:3490:VAL:HG23	1:O:3494:GLN:H	1.65	0.62
5:B:45:ARG:HH12	6:i:71:DG:H21	1.45	0.62
1:o:3454:LEU:HA	1:o:3461:ALA:HB1	1.82	0.62
8:K:93:ASP:HB2	8:K:95:ASN:HD21	1.65	0.62
8:K:325:ARG:HH12	9:L:92:GLU:HG3	1.64	0.62
1:O:370:ALA:O	1:O:374:LYS:N	2.33	0.62
1:O:1784:ARG:O	1:O:1787:ARG:N	2.33	0.62
1:O:3259:LEU:O	1:O:3276:TRP:NE1	2.33	0.62
1:O:3528:ALA:HB2	1:O:3705:TYR:HD2	1.65	0.62
1:O:3789:ARG:NH1	1:O:3791:TYR:OH	2.32	0.62
8:K:277:VAL:HA	9:L:430:LEU:HA	1.82	0.62
1:O:3698:GLU:HB3	1:O:3718:ARG:HG2	1.80	0.61
1:o:243:GLN:OE1	1:o:246:ARG:NH1	2.32	0.61
1:o:1196:PRO:HA	1:o:1202:ARG:HE	1.65	0.61
1:o:1357:LYS:O	1:o:1360:LYS:HB2	2.00	0.61
1:o:1428:ILE:HG13	1:o:1431:LEU:HD12	1.82	0.61
1:o:2295:GLN:HE21	1:o:2298:GLU:HG3	1.64	0.61
1:o:2442:MET:HB2	1:o:2445:LYS:HB2	1.82	0.61
7:j:82:DC:H2''	7:j:83:DC:C4	2.36	0.61
9:N:15:ASP:HB3	9:N:20:MET:SD	2.40	0.61
1:O:925:GLN:HB3	1:O:2800:ARG:HH22	1.65	0.61
1:O:2092:GLU:HG3	1:O:2148:LYS:HD3	1.82	0.61
5:F:36:ARG:HH22	7:j:63:DA:H3'	1.65	0.61
1:o:1184:ARG:NH2	1:o:1265:GLU:HB3	2.00	0.61
8:K:303:PHE:HB3	8:K:308:GLY:HA2	1.81	0.61
9:L:684:THR:C	9:L:686:ILE:H	2.07	0.61
8:M:88:TYR:HD1	8:M:141:TYR:HB2	1.65	0.61
9:N:11:VAL:HB	9:N:132:ILE:HG12	1.81	0.61
9:N:27:ILE:HA	9:N:166:PRO:HB3	1.82	0.61
1:O:1076:LEU:HB2	1:O:1123:THR:HG22	1.83	0.61
1:O:1634:ALA:O	1:O:1642:LYS:NZ	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:3161:LEU:O	1:O:3166:ASN:N	2.33	0.61
1:o:895:ALA:HB1	1:o:902:LYS:HB3	1.82	0.61
1:o:1117:ASP:OD1	1:o:1118:GLU:N	2.34	0.61
1:o:2891:ARG:HE	1:o:3898:LEU:HB3	1.65	0.61
1:o:3820:MET:HE1	1:o:3882:LEU:HD13	1.82	0.61
7:J:9:DG:N2	6:I:147:DC:O4'	2.33	0.61
8:K:390:LEU:HG	8:K:415:PRO:HB2	1.82	0.61
8:M:260:LYS:HZ2	8:M:260:LYS:H	1.47	0.61
8:M:269:ILE:HG23	8:M:375:VAL:HB	1.82	0.61
8:M:288:LEU:HA	8:M:296:VAL:H	1.64	0.61
1:o:303:HIS:O	1:o:309:LYS:NZ	2.34	0.61
1:O:50:VAL:O	1:O:54:GLN:NE2	2.33	0.61
1:O:1359:LEU:O	1:O:1363:LEU:N	2.33	0.61
1:O:2268:LYS:HD2	1:O:2312:TYR:HD2	1.65	0.61
1:O:3389:VAL:HG11	1:O:3449:LYS:HE3	1.83	0.61
1:O:3921:GLY:O	1:O:3944:HIS:ND1	2.32	0.61
5:B:55:ARG:O	5:B:58:LEU:HB3	2.01	0.61
1:o:2326:ILE:O	1:o:2330:VAL:HG23	2.01	0.61
1:o:2367:VAL:O	1:o:2371:PHE:N	2.29	0.61
1:o:3842:TRP:HA	1:o:3858:MET:HG2	1.83	0.61
2:h:92:GLN:O	2:h:96:ARG:NH1	2.34	0.61
6:i:120:DA:H61	7:j:33:DA:H61	1.48	0.61
6:I:61:DT:H2'	6:I:63:DA:N6	2.16	0.61
9:L:378:SER:O	9:L:382:HIS:ND1	2.34	0.61
1:O:664:SER:OG	1:O:668:LYS:NZ	2.34	0.61
1:o:1132:ASP:OD2	1:o:1136:ARG:NH1	2.33	0.61
1:o:2799:GLN:HG3	1:o:2800:ARG:HD2	1.82	0.61
1:o:3041:LEU:HA	1:o:3044:MET:HE2	1.82	0.61
1:o:3243:ILE:HG21	1:o:3279:SER:HB2	1.82	0.61
2:h:66:ILE:HG12	2:h:106:HIS:HB3	1.82	0.61
6:i:104:DG:H2''	6:i:105:DA:C8	2.36	0.61
9:L:108:LEU:HB3	9:L:145:SER:HB2	1.82	0.61
8:M:39:ILE:H	8:M:166:ILE:HD12	1.64	0.61
8:M:288:LEU:O	9:N:311:ILE:N	2.32	0.61
8:M:290:ARG:HB2	9:N:311:ILE:HB	1.81	0.61
1:o:161:ALA:HA	8:M:313:PRO:HD3	1.82	0.61
2:D:66:ILE:HG22	2:D:69:ARG:HH21	1.66	0.61
9:L:11:VAL:HA	9:L:55:ALA:HB3	1.81	0.61
1:O:57:LEU:HB3	1:O:103:TYR:CZ	2.36	0.61
1:O:100:ILE:O	1:O:101:ALA:C	2.43	0.61
1:O:1224:PHE:HB3	1:O:1228:GLY:N	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1289:SER:HA	1:O:1292:LYS:HE2	1.82	0.61
1:O:2986:PRO:O	1:O:2991:LYS:NZ	2.33	0.61
8:K:136:GLY:O	8:K:137:HIS:ND1	2.33	0.61
8:K:214:SER:O	8:K:215:LEU:C	2.44	0.61
1:O:997:ASN:HD21	1:O:999:LYS:HE2	1.66	0.61
1:o:2975:ALA:HA	1:o:2981:TRP:HZ2	1.66	0.61
1:o:3007:GLU:HG3	1:o:3255:ALA:HA	1.83	0.61
1:o:3819:THR:OG1	1:o:3820:MET:SD	2.59	0.61
7:j:84:DC:H4'	7:j:85:DC:H5'	1.82	0.61
1:O:787:PRO:O	1:O:790:LYS:NZ	2.34	0.60
1:O:1845:VAL:HA	1:O:1848:ILE:HG22	1.83	0.60
1:o:2382:VAL:HA	1:o:2385:LEU:HG	1.81	0.60
1:o:3506:LEU:O	1:o:3551:ASN:ND2	2.34	0.60
9:L:10:VAL:HA	9:L:131:HIS:HB3	1.83	0.60
9:L:139:SER:HB3	9:L:201:GLN:HG2	1.83	0.60
1:O:2452:ARG:HD2	1:O:2498:ILE:HG13	1.82	0.60
1:O:2542:LEU:HD23	1:O:2545:LEU:HD12	1.83	0.60
1:o:466:LEU:HD13	1:o:545:LEU:HG	1.82	0.60
1:o:2232:ARG:HA	1:o:2235:LEU:HD12	1.83	0.60
8:M:370:PRO:HG2	9:N:438:LEU:HD11	1.84	0.60
1:O:148:LYS:HD2	1:O:148:LYS:O	2.01	0.60
1:O:1071:ASN:HD22	1:O:1074:LYS:HG3	1.67	0.60
4:a:95:ALA:HA	5:b:97:LEU:HD13	1.83	0.60
8:K:77:SER:O	8:K:79:ASP:N	2.33	0.60
1:O:1723:PRO:HB3	9:L:594:PRO:HB3	1.81	0.60
8:K:73:SER:O	8:K:76:ILE:HB	2.01	0.60
9:L:11:VAL:HB	9:L:132:ILE:HG12	1.82	0.60
9:L:154:LEU:HD13	9:L:215:LEU:HD11	1.83	0.60
9:L:254:GLY:HA3	9:L:257:LEU:HB2	1.83	0.60
8:M:87:PHE:O	8:M:103:TYR:N	2.35	0.60
8:M:261:LEU:N	8:M:268:VAL:H	1.98	0.60
8:M:462:MET:HA	8:M:465:ILE:HD12	1.81	0.60
1:O:2826:LEU:HA	1:O:2829:LYS:HE2	1.83	0.60
1:O:3724:GLU:HG3	1:O:3726:VAL:HG13	1.83	0.60
4:E:72:ARG:NH2	4:E:81:ASP:OD1	2.33	0.60
1:o:559:SER:O	1:o:563:LEU:N	2.33	0.60
8:K:212:ASP:O	8:K:213:ILE:C	2.44	0.60
9:L:508:ILE:HG21	9:L:513:TRP:HE3	1.65	0.60
8:M:131:PHE:HA	8:M:134:MET:SD	2.41	0.60
1:O:886:TRP:HH2	1:O:911:LEU:HB3	1.66	0.60
1:O:1071:ASN:HA	1:O:3745:GLU:HG3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:3301:LEU:HD21	1:O:3333:THR:HG22	1.84	0.60
1:O:3820:MET:HE1	1:O:3824:GLU:HG2	1.84	0.60
1:o:3932:MET:SD	1:o:3932:MET:N	2.74	0.60
1:o:4002:MET:HE1	1:o:4047:ALA:HB3	1.84	0.60
2:h:76:ARG:O	2:h:80:TYR:HB2	2.02	0.60
7:J:99:DC:H42	6:I:56:DG:H1	1.48	0.60
8:K:106:GLN:HG2	8:K:119:LEU:HD11	1.84	0.60
3:C:31:HIS:HA	3:C:48:PRO:HB3	1.82	0.60
1:O:859:LEU:HA	1:O:862:LEU:HD12	1.84	0.60
1:O:2534:ASN:O	1:O:2536:LEU:N	2.34	0.60
1:O:2587:GLN:HG3	1:O:2588:GLU:H	1.67	0.60
1:O:3155:VAL:C	1:O:3157:LEU:H	2.09	0.60
1:O:3493:TRP:CH2	1:O:3524:ASN:HB2	2.36	0.60
1:o:1086:TYR:HA	1:o:1089:PHE:HB3	1.82	0.60
1:o:1268:ASN:ND2	1:o:1343:GLU:OE2	2.35	0.60
9:N:15:ASP:HB2	9:N:59:PHE:CZ	2.37	0.60
9:N:33:GLN:HG3	9:N:36:LYS:HE3	1.84	0.60
1:O:3946:PHE:CE2	1:O:4043:LYS:HB3	2.37	0.60
6:I:61:DT:H2"	6:I:62:DA:H8	1.65	0.60
8:K:304:ASN:HB3	8:K:309:GLY:H	1.66	0.60
9:N:230:SER:HB2	9:N:235:CYS:HB2	1.83	0.60
1:O:1750:LEU:HD21	1:O:1759:LEU:HD23	1.84	0.59
1:O:2338:GLU:OE1	1:O:2338:GLU:N	2.34	0.59
1:O:3263:HIS:HB2	1:O:3276:TRP:CE2	2.36	0.59
1:o:3296:GLN:HG2	1:o:3336:ILE:HG22	1.82	0.59
8:K:214:SER:O	8:K:216:PHE:N	2.35	0.59
1:O:923:ASP:OD2	1:O:2800:ARG:NH2	2.35	0.59
1:O:1453:SER:O	1:O:1456:LYS:HG2	2.02	0.59
1:o:731:THR:HG22	1:o:768:VAL:HG21	1.83	0.59
1:o:956:PRO:HA	1:o:962:TYR:HE2	1.67	0.59
1:o:1062:ARG:NH1	1:o:1065:SER:OG	2.35	0.59
9:L:496:HIS:NE2	9:L:503:GLU:OE1	2.35	0.59
1:O:114:VAL:HG13	1:O:119:ARG:HD2	1.84	0.59
1:o:1098:GLN:O	1:o:1151:ARG:NH2	2.35	0.59
1:o:3620:PRO:HB3	1:o:3638:LYS:HG3	1.83	0.59
4:e:62:ILE:HD11	5:f:37:LEU:HD21	1.85	0.59
8:M:305:THR:H	9:N:288:ASP:HA	1.65	0.59
9:N:606:LYS:HE3	9:N:650:SER:H	1.66	0.59
1:o:2964:ASP:HA	1:o:3252:PHE:HB2	1.84	0.59
1:o:3331:GLY:HA2	1:o:3381:ALA:HA	1.84	0.59
1:o:3416:LEU:HG	1:o:3446:VAL:HG12	1.82	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:a:109:LEU:HB3	4:e:126:LEU:HD11	1.85	0.59
8:K:505:ASP:O	8:K:508:LEU:N	2.34	0.59
8:K:506:LEU:HD23	8:K:507:THR:H	1.68	0.59
9:N:210:MET:HA	9:N:213:ILE:HD12	1.84	0.59
1:O:61:ARG:O	1:O:61:ARG:NH1	2.31	0.59
1:O:96:MET:HG2	1:O:100:ILE:CD1	2.32	0.59
3:g:27:VAL:HG12	3:g:31:HIS:CD2	2.38	0.59
7:j:44:DA:C8	7:j:44:DA:H5''	2.36	0.59
6:I:62:DA:H1'	6:I:63:DA:H5'	1.85	0.59
8:K:166:ILE:O	8:K:201:ASP:N	2.31	0.59
1:O:859:LEU:O	1:O:867:ASN:ND2	2.33	0.59
1:O:1305:ASP:HB3	1:O:1307:ILE:HG12	1.85	0.59
1:O:3882:LEU:O	1:O:3885:ARG:N	2.36	0.59
3:C:65:LEU:HD23	3:C:68:ASN:HD21	1.68	0.59
2:H:73:GLU:HG2	2:H:98:LEU:HD11	1.84	0.59
1:o:1102:GLU:HA	1:o:1154:PRO:HB3	1.83	0.59
1:o:1254:LEU:HD22	1:o:1329:ARG:HH12	1.67	0.59
1:o:1407:LYS:HA	1:o:1412:LYS:HD3	1.83	0.59
1:o:2102:LYS:O	1:o:2106:ARG:HG2	2.02	0.59
1:o:3389:VAL:HG13	1:o:3413:TYR:HE1	1.65	0.59
4:e:133:GLU:H	5:f:95:ARG:HH22	1.49	0.59
5:f:88:TYR:HA	5:f:91:LYS:HD3	1.85	0.59
6:i:130:DC:O2	7:j:25:DG:N2	2.33	0.59
8:M:470:ARG:HA	9:N:345:PHE:HB2	1.84	0.59
1:O:785:MET:HA	1:O:788:TYR:CE1	2.38	0.59
3:C:71:ARG:HH22	3:C:78:ILE:HD11	1.68	0.59
1:o:114:VAL:HG22	1:o:119:ARG:HH21	1.67	0.59
1:o:165:LYS:NZ	1:o:168:ASP:O	2.36	0.59
9:N:600:VAL:HA	9:N:603:LYS:HB2	1.82	0.59
1:O:135:LEU:O	1:O:139:ARG:HG2	2.03	0.59
1:O:713:GLU:O	1:O:717:LYS:HG2	2.02	0.59
1:O:1082:PHE:HA	1:O:1085:ILE:HG12	1.84	0.59
1:O:1690:GLY:HA2	1:O:1693:VAL:HG22	1.84	0.59
1:O:2139:PRO:O	1:O:2143:ARG:N	2.32	0.59
1:O:2274:ILE:HD13	1:O:2319:ALA:HB2	1.85	0.59
1:O:3313:SER:HB3	1:O:3316:LEU:HA	1.83	0.59
1:O:3625:LEU:N	1:O:3682:GLU:O	2.35	0.59
1:O:3781:CYS:O	1:O:3785:ALA:N	2.36	0.59
1:o:2395:THR:HG22	1:o:2434:VAL:HG21	1.84	0.59
7:j:101:DA:H2''	7:j:102:DG:C8	2.38	0.59
2:D:36:ILE:HG12	2:D:40:LYS:HE2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:39:HIS:N	7:j:86:DG:N3	2.51	0.59
4:A:127:ALA:HA	4:A:130:ILE:HD12	1.85	0.59
1:o:386:VAL:O	1:o:389:ILE:HB	2.03	0.59
1:o:1180:GLN:HB2	1:o:1183:CYS:HB3	1.84	0.59
1:o:1729:PHE:HD2	1:o:1735:ARG:HE	1.50	0.59
8:K:112:GLY:O	8:K:114:LYS:N	2.36	0.59
8:K:165:ARG:NH2	8:K:201:ASP:OD1	2.36	0.59
8:M:278:GLN:N	9:N:429:ASP:O	2.29	0.59
1:O:1211:VAL:O	1:O:1215:GLU:N	2.24	0.59
1:O:1649:LEU:HD13	1:O:1652:ILE:HD11	1.85	0.59
1:O:3992:ARG:NH2	1:O:4051:LEU:O	2.32	0.59
1:o:364:ARG:HH21	1:o:412:SER:HB2	1.67	0.59
1:o:447:PRO:HB3	1:o:523:THR:HG22	1.85	0.59
1:o:2092:GLU:OE2	1:o:2148:LYS:NZ	2.35	0.59
1:o:3077:ILE:O	1:o:3081:HIS:ND1	2.30	0.59
1:o:3086:LEU:HB2	1:o:3102:TYR:CE2	2.38	0.59
1:o:3361:GLU:OE2	1:o:3368:GLU:N	2.36	0.59
1:o:3556:ALA:HA	1:o:3559:LYS:HE3	1.85	0.59
8:M:260:LYS:HA	8:M:270:SER:HA	1.84	0.59
1:O:3329:LEU:O	1:O:3333:THR:HG23	2.02	0.58
8:K:73:SER:HA	8:K:76:ILE:HB	1.85	0.58
9:L:274:LYS:NZ	9:L:275:THR:O	2.36	0.58
3:C:107:VAL:HG21	4:a:56:LYS:HE3	1.85	0.58
1:o:2208:ASP:OD1	1:o:2209:GLU:N	2.36	0.58
1:o:4050:LYS:HZ2	1:o:4059:ILE:HD12	1.68	0.58
9:N:204:GLY:HA2	9:N:207:ILE:HD12	1.84	0.58
1:O:214:GLU:CB	1:O:215:PRO:HD2	2.33	0.58
1:O:275:PHE:HA	1:O:282:PHE:HE2	1.67	0.58
1:o:2266:ASN:HA	1:o:2309:PHE:HB3	1.84	0.58
6:i:69:DG:H2"	6:i:70:DG:N7	2.17	0.58
8:K:95:ASN:OD1	8:K:97:VAL:HG23	2.03	0.58
8:K:400:TYR:O	8:K:408:PRO:HA	2.03	0.58
9:L:7:LYS:HE3	9:L:125:LYS:HA	1.85	0.58
1:o:493:LYS:HD2	1:o:522:PRO:HB2	1.84	0.58
1:o:2239:LYS:HG2	1:o:2279:ILE:HG23	1.85	0.58
1:o:3003:ASN:OD1	1:o:3046:ARG:NH1	2.37	0.58
5:f:97:LEU:HD23	5:f:99:GLY:H	1.67	0.58
6:i:112:DT:H2"	6:i:113:DA:C5	2.39	0.58
8:M:143:LEU:HD13	8:M:176:HIS:HB3	1.84	0.58
9:N:426:PHE:O	9:N:427:MET:HG2	2.03	0.58
1:O:3629:ARG:HB2	1:O:3630:ARG:HH12	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:253:LEU:HB3	1:o:268:PRO:HA	1.85	0.58
7:j:88:DG:H2"	7:j:89:DT:H5"	1.86	0.58
8:M:461:LYS:HD3	8:M:528:LEU:HD22	1.84	0.58
1:O:102:PRO:C	1:O:104:SER:N	2.59	0.58
1:O:2124:SER:HB3	1:O:2129:LEU:HD23	1.85	0.58
1:o:440:VAL:HA	1:o:443:ILE:HD12	1.85	0.58
1:o:1361:LYS:NZ	1:o:1411:TYR:OH	2.32	0.58
1:o:2313:LYS:HA	1:o:2316:TYR:CZ	2.39	0.58
1:o:2923:TRP:HZ3	1:o:2942:ILE:HD12	1.68	0.58
1:o:3226:ASP:N	1:o:3229:SER:HG	2.01	0.58
1:o:3735:PRO:HA	1:o:3752:VAL:O	2.04	0.58
1:o:3817:LEU:HD22	1:o:3825:LYS:HB2	1.85	0.58
1:o:3956:PRO:HD2	1:o:4121:TRP:HB2	1.85	0.58
5:b:75:HIS:HB3	2:h:94:ALA:HB2	1.85	0.58
8:K:40:PHE:HB2	8:K:85:VAL:HG23	1.86	0.58
1:O:104:SER:OG	1:O:105:VAL:N	2.37	0.58
1:O:208:MET:HE3	1:O:208:MET:O	2.04	0.58
1:O:3508:LYS:NZ	1:O:3510:GLN:OE1	2.36	0.58
3:c:55:LEU:HD22	2:d:63:VAL:HG13	1.84	0.58
1:o:232:CYS:HB3	1:o:278:HIS:NE2	2.19	0.58
1:o:1192:TYR:HE2	1:o:1275:THR:HG21	1.69	0.58
8:K:476:ASP:OD1	8:K:477:SER:N	2.37	0.58
9:L:408:ALA:HB1	9:L:419:LEU:HD11	1.86	0.58
8:M:207:LYS:NZ	8:M:212:ASP:OD1	2.37	0.58
1:O:202:GLY:HA2	1:O:205:LYS:HD2	1.85	0.58
1:O:3301:LEU:HD11	1:O:3333:THR:HG21	1.86	0.58
8:K:75:ILE:HD11	8:K:111:PRO:HB2	1.86	0.58
8:K:297:LYS:HB3	9:L:297:LEU:HD12	1.86	0.58
8:M:59:PRO:HA	8:M:62:MET:HG3	1.85	0.58
1:O:978:GLN:HE21	1:O:2596:ARG:HH21	1.50	0.58
1:O:1181:THR:O	1:O:1185:HIS:N	2.31	0.58
1:O:1249:SER:OG	1:O:1250:LEU:N	2.32	0.58
1:O:1282:LEU:HG	1:O:1359:LEU:HD13	1.86	0.58
1:O:3387:GLU:O	1:O:3390:GLN:NE2	2.31	0.58
1:O:4038:TRP:O	1:O:4043:LYS:NZ	2.37	0.58
9:L:249:CYS:HB2	9:L:338:LYS:HD2	1.85	0.58
8:M:281:LEU:HA	8:M:483:LEU:HD21	1.85	0.58
1:O:127:ALA:O	1:O:131:LEU:HG	2.04	0.58
1:O:1786:ALA:O	1:O:1794:GLN:NE2	2.37	0.58
1:O:2351:GLN:O	1:O:2352:HIS:ND1	2.37	0.58
2:d:36:ILE:HG21	7:j:125:DG:H5"	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:370:ALA:O	1:o:374:LYS:N	2.36	0.58
1:o:1368:LEU:HB3	1:o:1372:LEU:HD23	1.85	0.58
1:o:1711:ARG:HE	1:o:1757:MET:HB2	1.68	0.58
1:o:1726:SER:H	1:o:1772:HIS:HB2	1.68	0.58
1:o:1764:GLU:O	1:o:1768:ARG:NH1	2.37	0.58
1:o:2859:GLN:HB3	1:o:2892:LEU:HG	1.85	0.58
1:o:3923:ARG:O	1:o:3962:ARG:NH1	2.37	0.58
1:O:213:ARG:CB	1:O:216:LYS:HD2	2.33	0.57
1:O:469:ALA:HA	1:O:475:LEU:HD13	1.84	0.57
1:O:3569:GLN:O	1:O:3573:ASN:ND2	2.37	0.57
1:O:3665:MET:SD	1:O:3666:LEU:HD12	2.44	0.57
3:c:90:ASP:HB2	3:c:93:LEU:HB2	1.86	0.57
2:d:36:ILE:HG12	7:j:125:DG:H3'	1.86	0.57
1:o:658:THR:OG1	1:o:659:ARG:NH1	2.36	0.57
1:o:3312:VAL:HG13	1:o:3326:GLN:HG2	1.85	0.57
1:o:3441:ALA:N	1:o:3478:GLU:OE1	2.37	0.57
6:i:108:DT:H3	7:j:47:DG:H1	1.52	0.57
9:N:675:TRP:HA	9:N:678:VAL:HB	1.85	0.57
1:O:1209:LYS:O	1:O:1212:LEU:HB2	2.04	0.57
1:o:1356:TRP:HD1	1:o:1359:LEU:HD11	1.70	0.57
1:o:1504:ASP:N	1:o:1507:CYS:SG	2.77	0.57
1:o:3535:ILE:HG21	1:o:3795:PRO:HG2	1.86	0.57
4:e:84:PHE:HE1	5:f:81:VAL:HB	1.69	0.57
9:N:151:ILE:O	9:N:155:LYS:HG2	2.04	0.57
1:O:946:THR:HG21	1:O:2581:LEU:HD21	1.85	0.57
1:O:2576:MET:N	1:O:2576:MET:SD	2.78	0.57
1:O:3114:TYR:HE1	1:O:3125:ARG:HB3	1.69	0.57
1:O:3681:LYS:HE3	1:O:3683:CYS:HB2	1.85	0.57
5:B:70:VAL:HA	5:B:73:THR:HG22	1.86	0.57
4:a:51:ILE:HD13	5:b:39:ARG:HA	1.85	0.57
2:h:76:ARG:O	2:h:80:TYR:CB	2.52	0.57
8:M:39:ILE:HD12	8:M:86:VAL:HG21	1.86	0.57
9:N:54:ILE:O	9:N:81:ARG:NH1	2.38	0.57
1:O:405:ASP:OD1	1:O:406:ARG:N	2.36	0.57
1:O:762:TYR:HD2	1:O:765:LEU:HG	1.69	0.57
1:O:881:LYS:HD2	1:O:883:TYR:H	1.69	0.57
1:O:913:ARG:NH2	1:O:2801:ASP:OD1	2.33	0.57
1:O:1417:THR:O	1:O:1421:GLU:N	2.35	0.57
1:O:1483:LEU:HD11	1:O:1515:LEU:HA	1.86	0.57
1:O:3859:TYR:O	1:O:4119:ARG:NH1	2.37	0.57
1:O:3911:ILE:HG23	1:O:3915:HIS:CE1	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:17:ARG:HG3	7:J:34:DT:H2'	1.85	0.57
3:G:55:LEU:HD23	3:G:58:LEU:HD21	1.86	0.57
3:c:78:ILE:O	2:d:52:SER:OG	2.22	0.57
1:o:160:LEU:HD21	1:o:178:LEU:HD11	1.87	0.57
1:o:3643:HIS:HB3	1:o:3659:PHE:HZ	1.70	0.57
8:M:263:LEU:C	8:M:265:LYS:N	2.61	0.57
8:M:490:LEU:O	8:M:494:ALA:HB3	2.04	0.57
1:o:2154:GLU:OE1	1:o:2158:ARG:NH1	2.34	0.57
1:o:2201:THR:HG1	1:o:2245:TRP:CD1	2.22	0.57
1:o:3095:ASP:HB3	1:o:3098:ARG:HG2	1.86	0.57
1:o:3114:TYR:OH	1:o:3125:ARG:NH1	2.36	0.57
1:o:3443:PRO:HB2	1:o:3478:GLU:HB2	1.85	0.57
9:L:489:ARG:NH1	9:L:508:ILE:HA	2.19	0.57
8:M:359:HIS:O	8:M:360:HIS:ND1	2.38	0.57
8:M:360:HIS:HB3	8:M:438:PRO:HD2	1.86	0.57
1:O:86:LEU:HA	1:O:133:LYS:HZ1	1.69	0.57
1:O:102:PRO:O	1:O:103:TYR:C	2.47	0.57
1:O:410:MET:HA	1:O:413:PHE:HD2	1.70	0.57
1:O:978:GLN:N	1:O:978:GLN:OE1	2.37	0.57
1:O:1756:PRO:HA	1:O:1759:LEU:HD12	1.86	0.57
2:H:35:SER:HB3	2:H:56:MET:SD	2.45	0.57
1:o:111:CYS:SG	1:o:130:LEU:HG	2.44	0.57
1:o:195:ASN:HA	1:o:198:ARG:HE	1.68	0.57
1:o:655:LEU:O	1:o:659:ARG:NH1	2.37	0.57
1:o:750:PRO:O	1:o:754:MET:HE3	2.04	0.57
1:o:1282:LEU:HB2	1:o:1359:LEU:HD13	1.87	0.57
1:o:1416:GLU:HA	1:o:1419:LEU:HD12	1.86	0.57
1:o:3746:ARG:NH1	1:o:3807:GLU:OE1	2.37	0.57
1:o:3771:MET:HE1	1:o:3991:PHE:HZ	1.70	0.57
7:J:25:DG:O6	6:I:128:DG:N2	2.37	0.57
9:L:54:ILE:HB	9:L:81:ARG:HH22	1.69	0.57
9:L:154:LEU:HD23	9:L:159:ILE:HB	1.87	0.57
1:O:650:SER:HA	1:O:653:LEU:HD12	1.86	0.57
1:O:1208:LEU:O	1:O:1212:LEU:N	2.37	0.57
1:O:1298:LEU:HD12	1:O:1367:HIS:HB3	1.85	0.57
1:O:3723:ASP:H	1:O:3741:ARG:HE	1.52	0.57
1:o:1301:ILE:HA	1:o:1334:LYS:HZ1	1.69	0.57
1:o:2467:THR:HG22	1:o:2470:ARG:HH21	1.70	0.57
9:L:24:ILE:HG12	9:L:137:ASP:HB3	1.86	0.57
8:M:217:TYR:O	8:M:219:ASP:N	2.37	0.57
1:O:410:MET:SD	1:O:411:PRO:HD3	2.45	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:2550:ILE:O	1:O:2554:PHE:N	2.37	0.57
1:O:2850:PHE:HB3	1:O:2883:SER:HB3	1.87	0.57
1:o:139:ARG:HD3	1:o:142:ARG:HH22	1.69	0.57
1:o:985:GLU:HB3	1:o:989:MET:HE1	1.87	0.57
1:o:1039:TRP:HH2	1:o:2779:ASP:HB2	1.70	0.57
1:o:2371:PHE:HD2	1:o:2374:LEU:HD23	1.69	0.57
1:o:2580:PRO:HB3	1:o:2783:ILE:H	1.70	0.57
1:o:3962:ARG:NH2	1:o:4125:GLU:O	2.38	0.57
6:i:135:DC:H2'	6:i:136:DA:C8	2.40	0.57
7:j:100:DA:H2''	7:j:101:DA:H8	1.69	0.57
8:M:268:VAL:HG12	8:M:269:ILE:HG13	1.87	0.57
8:M:337:LEU:HD12	9:N:489:ARG:HH21	1.68	0.57
8:M:454:ALA:HB3	9:N:379:SER:HB2	1.85	0.57
1:O:2866:ALA:HA	1:O:2869:LEU:HD23	1.85	0.57
1:O:3114:TYR:HB2	1:O:3128:LYS:HD2	1.87	0.57
1:O:4040:PRO:HA	1:O:4043:LYS:HE2	1.87	0.57
1:o:967:PRO:HG3	1:o:1011:GLU:HG2	1.87	0.57
1:o:2254:ARG:HG3	1:o:2294:ILE:HD11	1.86	0.57
1:o:2514:ASN:HB3	1:o:2517:LEU:HB2	1.86	0.57
9:L:24:ILE:HB	9:L:30:PRO:HG2	1.87	0.57
8:M:479:GLU:HB3	9:N:427:MET:HE2	1.87	0.57
1:O:1322:THR:HB	1:O:1324:PRO:HD2	1.86	0.57
1:O:3289:ARG:NH2	1:O:3295:GLU:OE1	2.37	0.57
1:o:3874:ARG:HG2	1:o:4127:TRP:HA	1.86	0.57
1:o:4098:LEU:HD12	1:o:4102:THR:HG23	1.86	0.57
8:K:74:LYS:O	8:K:78:SER:N	2.38	0.57
9:N:251:LEU:HD22	9:N:263:ALA:HB2	1.87	0.57
1:O:149:ILE:O	1:O:153:PHE:N	2.32	0.56
1:O:281:GLN:OE1	1:O:281:GLN:N	2.36	0.56
1:O:1065:SER:O	1:O:1069:HIS:ND1	2.38	0.56
1:O:1620:THR:HA	1:O:1623:LEU:HD12	1.87	0.56
1:O:2577:PHE:O	1:O:2579:HIS:N	2.36	0.56
1:O:3531:TYR:HA	1:O:3534:ILE:HD12	1.85	0.56
1:O:3698:GLU:OE1	1:O:3718:ARG:NH1	2.37	0.56
1:O:3749:PRO:HB2	1:O:3805:TRP:HB3	1.87	0.56
1:O:3946:PHE:HE2	1:O:4043:LYS:HB3	1.70	0.56
2:D:38:VAL:HA	2:D:41:VAL:HG22	1.87	0.56
3:c:57:TYR:OH	2:d:106:HIS:HB3	2.05	0.56
1:o:2393:LEU:O	1:o:2396:LEU:HB2	2.05	0.56
1:o:2773:ARG:HA	1:o:2789:SER:HB2	1.87	0.56
1:o:3515:GLN:OE1	1:o:3557:ARG:NH1	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:e:63:ARG:NH1	5:f:27:GLN:OE1	2.38	0.56
8:K:478:PHE:HA	8:K:506:LEU:HD11	1.87	0.56
9:L:81:ARG:HE	9:L:84:MET:HE3	1.70	0.56
8:M:135:MET:SD	8:M:136:GLY:N	2.75	0.56
8:M:290:ARG:NH2	9:N:324:SER:OG	2.38	0.56
9:N:155:LYS:NZ	9:N:211:VAL:O	2.37	0.56
9:N:197:ILE:HA	9:N:202:LYS:HG3	1.87	0.56
1:O:1452:VAL:HG13	1:O:1517:LEU:HD11	1.86	0.56
1:O:2436:LEU:HB3	1:O:2472:GLN:HG2	1.87	0.56
1:O:2547:SER:HB3	1:O:2550:ILE:HG12	1.85	0.56
1:O:3779:SER:O	1:O:3783:GLN:NE2	2.38	0.56
1:o:3008:TRP:O	1:o:3011:LEU:HB2	2.05	0.56
9:L:280:ASP:HB2	9:L:288:ASP:HB3	1.88	0.56
1:O:420:VAL:O	1:O:424:LEU:N	2.37	0.56
1:O:832:LYS:HZ1	1:O:835:LYS:HG2	1.70	0.56
1:O:1181:THR:OG1	1:O:1182:GLU:N	2.37	0.56
1:O:2535:THR:O	1:O:2538:ARG:N	2.39	0.56
1:O:3172:LYS:O	1:O:3173:MET:HE2	2.06	0.56
1:O:3503:VAL:HG11	1:O:3532:PRO:HB3	1.87	0.56
1:O:3686:TRP:HE1	1:O:3692:VAL:HB	1.70	0.56
1:O:3911:ILE:O	1:O:3915:HIS:ND1	2.38	0.56
1:O:3916:TRP:CD1	1:O:3960:PRO:HB3	2.40	0.56
1:O:4055:ASN:HD21	1:O:4057:ALA:HB3	1.70	0.56
3:c:75:LYS:HE3	3:c:79:ILE:HD11	1.85	0.56
2:d:51:ILE:HD11	2:d:56:MET:HE3	1.86	0.56
5:F:76:ALA:HB3	5:F:78:ARG:HE	1.69	0.56
1:o:66:LEU:O	1:o:70:ARG:N	2.37	0.56
2:h:97:LEU:HD12	2:h:98:LEU:HB2	1.86	0.56
6:i:42:DG:H21	7:j:114:DC:H5'	1.70	0.56
8:K:303:PHE:H	9:L:290:GLN:HB2	1.71	0.56
9:N:722:GLY:O	9:N:726:ASP:N	2.37	0.56
1:O:1487:VAL:HG11	1:O:1531:LEU:HD21	1.87	0.56
1:O:1759:LEU:HD11	1:O:1797:LEU:HD13	1.88	0.56
1:O:3741:ARG:HA	1:O:3747:GLU:HG2	1.86	0.56
2:D:42:LEU:HD13	3:G:63:LEU:HB3	1.87	0.56
1:o:420:VAL:O	1:o:424:LEU:N	2.36	0.56
1:o:1341:ILE:HG13	1:o:1342:MET:HE2	1.88	0.56
1:o:2723:THR:HA	1:o:2726:LEU:HD13	1.87	0.56
1:o:3247:ARG:HH21	1:o:3286:CYS:HB3	1.69	0.56
1:o:3545:THR:O	1:o:3549:HIS:ND1	2.33	0.56
8:K:95:ASN:H	8:K:95:ASN:ND2	2.03	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:459:ARG:HD2	1:O:544:ILE:HD12	1.87	0.56
1:O:535:LEU:C	1:O:561:ASN:HD21	2.13	0.56
1:O:1672:PHE:HE2	1:O:1709:GLU:HG3	1.71	0.56
1:O:2428:ASP:HB3	1:O:2431:ARG:HB3	1.88	0.56
1:O:2918:PRO:O	1:O:2922:ARG:HG2	2.05	0.56
2:D:59:MET:O	2:D:63:VAL:HG22	2.05	0.56
2:H:58:ILE:HA	5:b:99:GLY:HA2	1.88	0.56
1:o:2477:LEU:HA	1:o:2480:ILE:HD12	1.87	0.56
1:o:3470:GLN:HG3	1:o:3474:ARG:HD3	1.87	0.56
8:K:79:ASP:C	8:K:81:ASP:N	2.62	0.56
9:L:30:PRO:HA	9:L:33:GLN:HB3	1.88	0.56
1:O:307:GLU:HA	1:O:310:LYS:HD3	1.87	0.56
1:O:538:ASP:H	1:O:561:ASN:HD22	1.53	0.56
1:O:1175:HIS:O	1:O:1178:ARG:HG3	2.06	0.56
1:O:2102:LYS:NZ	1:O:2155:GLU:OE2	2.38	0.56
1:O:3593:ARG:NH1	1:O:3657:SER:O	2.37	0.56
3:C:102:ILE:HA	5:b:98:TYR:H	1.69	0.56
1:o:172:GLU:HG3	1:o:220:LEU:HG	1.87	0.56
1:o:759:GLY:O	1:o:799:TYR:OH	2.22	0.56
1:o:1195:VAL:HB	1:o:1203:SER:HB2	1.87	0.56
1:o:1452:VAL:HG22	1:o:1517:LEU:HD11	1.87	0.56
1:o:3680:LEU:HA	1:o:3724:GLU:HB3	1.87	0.56
8:K:45:SER:OG	8:K:140:ASP:O	2.23	0.56
8:M:262:LYS:O	8:M:266:ASP:N	2.38	0.56
8:M:402:PRO:HD2	8:M:406:ILE:HG21	1.85	0.56
8:M:435:VAL:HG22	9:N:353:ARG:HG2	1.88	0.56
1:O:382:ASP:HA	1:O:385:TYR:HB3	1.86	0.56
1:O:1142:HIS:NE2	1:O:1197:LEU:O	2.37	0.56
1:O:1389:VAL:H	1:O:1392:MET:HE2	1.69	0.56
2:H:99:LEU:HB3	2:H:104:ALA:HB1	1.88	0.56
1:o:446:PHE:HA	1:o:449:TYR:CE2	2.41	0.56
1:o:936:SER:HB2	1:o:2790:LEU:HG	1.88	0.56
1:o:1049:GLN:O	1:o:1055:ASN:HB3	2.05	0.56
1:o:2295:GLN:HG2	1:o:2297:SER:H	1.70	0.56
1:o:3052:LEU:HD21	1:o:3061:LEU:HD21	1.87	0.56
6:i:42:DG:C8	6:i:42:DG:H5'	2.40	0.56
6:i:43:DA:H2''	6:i:44:DG:C8	2.41	0.56
9:L:33:GLN:NE2	9:L:227:PHE:O	2.38	0.56
8:M:354:VAL:HB	9:N:473:LEU:HD11	1.87	0.56
1:O:51:LEU:O	1:O:55:THR:HG23	2.06	0.56
1:O:1104:LEU:HD22	1:O:1134:LEU:HD13	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1209:LYS:HA	1:O:1212:LEU:HD12	1.88	0.56
1:O:2538:ARG:NH1	1:O:2561:PHE:O	2.39	0.56
1:o:172:GLU:HB2	1:o:219:VAL:HG12	1.87	0.56
1:o:3925:LEU:HD22	1:o:3964:THR:HG21	1.87	0.56
4:a:54:TYR:HD2	5:b:39:ARG:HB2	1.70	0.56
1:O:894:PHE:HZ	1:O:2787:HIS:HD2	1.52	0.56
1:O:3427:GLU:OE2	1:O:3474:ARG:NH2	2.39	0.56
5:B:91:LYS:HD3	5:B:96:THR:HB	1.88	0.56
1:o:1420:ARG:HH22	1:o:1469:PRO:HD3	1.71	0.56
1:o:1770:GLN:OE1	1:o:1822:ARG:NH2	2.39	0.56
1:o:2366:LYS:HZ3	1:o:2370:SER:HB3	1.71	0.56
1:o:2392:VAL:O	1:o:2395:THR:OG1	2.22	0.56
5:b:67:ARG:HA	5:b:70:VAL:HG12	1.87	0.56
6:I:67:DG:H2'	6:I:68:DC:H5'	1.87	0.56
1:O:1418:HIS:O	1:O:1422:LYS:N	2.35	0.56
1:O:2246:LYS:NZ	1:O:2284:ASP:OD1	2.28	0.56
4:E:100:LEU:HD12	5:F:58:LEU:HG	1.88	0.56
1:o:448:GLN:NE2	1:o:521:VAL:O	2.25	0.56
1:o:2833:THR:O	1:o:2837:LEU:HG	2.06	0.56
5:f:55:ARG:NH1	5:f:55:ARG:O	2.39	0.56
6:i:79:DG:H22	7:j:75:DC:H42	1.52	0.56
8:K:479:GLU:OE1	8:K:484:GLN:NE2	2.29	0.56
9:L:20:MET:HB3	9:L:31:PHE:HD1	1.71	0.56
9:L:411:HIS:ND1	9:L:418:CYS:SG	2.79	0.56
9:L:609:PHE:HD2	9:L:612:ALA:HB2	1.71	0.56
8:M:261:LEU:C	8:M:268:VAL:H	2.13	0.56
1:O:23:ASP:HA	1:O:34:LEU:HD11	1.88	0.55
1:O:1055:ASN:O	1:O:1058:SER:OG	2.24	0.55
1:O:1414:ILE:O	1:O:1418:HIS:ND1	2.38	0.55
1:O:1527:ARG:O	1:O:1531:LEU:N	2.33	0.55
1:O:2368:THR:HG21	1:O:2400:VAL:HG22	1.87	0.55
1:O:3772:ASN:OD1	1:O:3788:LEU:N	2.38	0.55
1:o:207:GLN:HE21	1:o:212:VAL:HG21	1.71	0.55
1:o:1725:GLN:NE2	1:o:1727:ARG:HE	2.05	0.55
1:o:3029:LYS:N	1:o:3033:GLU:OE1	2.39	0.55
1:o:3698:GLU:HG3	1:o:3720:ALA:HB2	1.87	0.55
1:O:994:TRP:HB2	1:O:2781:PRO:HD2	1.87	0.55
1:O:1444:ASP:O	1:O:1447:ARG:HB3	2.04	0.55
1:O:1696:LEU:N	1:O:1697:PRO:HD2	2.21	0.55
1:O:3007:GLU:HB3	1:O:3010:SER:HB3	1.88	0.55
1:O:3701:ILE:HB	1:O:3704:GLN:CD	2.30	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:c:97:LEU:HB3	3:c:100:VAL:HB	1.88	0.55
8:M:490:LEU:O	8:M:494:ALA:CB	2.54	0.55
1:O:91:ILE:HD12	1:O:834:LEU:HD12	1.88	0.55
1:O:1365:ASN:HD21	1:O:1370:ARG:HH12	1.54	0.55
1:O:1625:HIS:HB3	1:O:1628:LYS:HD3	1.88	0.55
1:O:2246:LYS:HZ3	1:O:2283:ASN:HB3	1.71	0.55
1:O:3793:VAL:HG13	1:O:3795:PRO:HD3	1.88	0.55
2:d:76:ARG:NH1	2:d:80:TYR:OH	2.40	0.55
4:E:83:ARG:HH12	7:j:53:DG:H21	1.52	0.55
1:o:1627:LYS:HE2	1:o:1670:GLU:HG3	1.88	0.55
1:o:3486:GLU:HB2	1:o:3513:ALA:HB3	1.88	0.55
6:i:117:DC:H2"	6:i:118:DC:C4	2.41	0.55
6:i:140:DG:N2	7:j:15:DC:O2	2.39	0.55
8:K:90:THR:HA	8:K:137:HIS:HA	1.88	0.55
1:O:124:LYS:HD2	7:j:11:DA:H5"	1.87	0.55
1:O:2535:THR:OG1	1:O:2536:LEU:N	2.39	0.55
1:O:3301:LEU:O	1:O:3302:LYS:HG2	2.06	0.55
1:O:3714:GLU:O	1:O:3718:ARG:NH2	2.38	0.55
1:O:3824:GLU:OE1	1:O:3824:GLU:N	2.39	0.55
1:O:4105:LYS:O	1:O:4109:ASP:N	2.39	0.55
1:o:759:GLY:HA2	1:o:765:LEU:HB2	1.88	0.55
1:o:2254:ARG:NH2	1:o:2293:GLY:O	2.39	0.55
1:o:3354:ASP:H	1:o:3357:ARG:HB3	1.71	0.55
1:o:3730:ALA:HA	1:o:3734:ARG:HA	1.88	0.55
1:o:3959:MET:HG2	1:o:4116:ILE:HD11	1.86	0.55
8:K:316:THR:OG1	8:K:318:ARG:NH2	2.30	0.55
1:o:1037:LEU:HD21	1:o:1059:LEU:HD12	1.89	0.55
1:o:2090:ARG:N	1:o:2180:GLU:OE1	2.40	0.55
1:o:2572:TYR:HE1	1:o:2791:ILE:HD11	1.70	0.55
4:a:47:ALA:HB1	5:b:39:ARG:NH1	2.22	0.55
4:a:69:ARG:NH2	7:J:94:DA:OP2	2.33	0.55
4:e:72:ARG:NH2	4:e:82:LEU:O	2.40	0.55
9:N:655:PHE:HA	9:N:658:PHE:HB2	1.87	0.55
1:O:1342:MET:O	1:O:1346:THR:HG23	2.06	0.55
1:O:1590:THR:HA	1:O:1593:VAL:HG22	1.89	0.55
1:O:2281:MET:HE1	1:O:2287:PRO:HA	1.89	0.55
1:O:2551:GLU:HA	1:O:2554:PHE:HB3	1.88	0.55
5:F:37:LEU:HD23	5:F:40:ARG:HD2	1.89	0.55
1:o:3922:ASP:HB3	1:o:3927:ASN:HB2	1.89	0.55
8:K:378:SER:O	8:K:379:SER:C	2.49	0.55
9:L:20:MET:HB3	9:L:31:PHE:CD1	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:L:335:SER:OG	9:L:399:LYS:O	2.24	0.55
8:M:74:LYS:O	8:M:78:SER:N	2.39	0.55
1:O:942:LEU:O	1:O:946:THR:HG23	2.07	0.55
1:O:1104:LEU:O	1:O:1108:MET:HG2	2.07	0.55
1:O:2410:GLU:O	1:O:2412:TYR:N	2.40	0.55
1:O:3483:MET:HE1	1:O:3514:VAL:H	1.72	0.55
2:D:58:ILE:HA	5:B:99:GLY:HA2	1.88	0.55
4:A:85:GLN:HG3	5:B:82:THR:HG22	1.88	0.55
1:o:2953:THR:OG1	1:o:2994:TRP:NE1	2.39	0.55
7:j:30:DT:H2''	7:j:31:DC:C4	2.40	0.55
8:M:262:LYS:CB	8:M:268:VAL:HB	2.37	0.55
8:M:446:MET:SD	9:N:363:LYS:NZ	2.80	0.55
9:N:20:MET:HE1	9:N:136:THR:HA	1.88	0.55
1:O:2165:LEU:HD23	1:O:2193:ILE:HD12	1.89	0.55
1:O:2342:CYS:O	1:O:2345:VAL:HB	2.07	0.55
1:O:3611:GLU:HA	1:O:3614:TYR:HB2	1.89	0.55
1:O:3813:LYS:HG2	1:O:3925:LEU:HB3	1.89	0.55
1:O:3871:PHE:CG	1:O:4117:LEU:HB2	2.40	0.55
2:d:99:LEU:N	2:d:100:PRO:HD2	2.21	0.55
1:o:2405:VAL:HG13	1:o:2441:LYS:HD2	1.88	0.55
1:o:3518:VAL:HG13	1:o:3558:ILE:HD11	1.88	0.55
1:o:3582:GLU:HG2	1:o:3672:LYS:HD2	1.89	0.55
1:O:956:PRO:HB2	1:O:957:PRO:HD3	1.87	0.55
1:O:2771:LEU:HD23	1:O:2773:ARG:H	1.70	0.55
1:O:3130:GLN:HB3	1:O:3178:ILE:HG12	1.87	0.55
1:o:1055:ASN:ND2	1:o:1057:LYS:HB2	2.21	0.55
1:o:2304:VAL:HA	1:o:2307:MET:HG2	1.88	0.55
1:o:2571:ASP:O	1:o:2787:HIS:ND1	2.40	0.55
4:a:126:LEU:HD13	4:e:113:HIS:HB2	1.89	0.55
2:h:42:LEU:HA	2:h:45:VAL:HG22	1.89	0.55
7:J:15:DC:H2''	7:J:16:DG:C8	2.42	0.55
8:M:514:MET:HA	8:M:517:ARG:HE	1.72	0.55
1:O:489:ARG:NH1	1:O:527:TYR:OH	2.40	0.55
1:O:3007:GLU:O	1:O:3010:SER:N	2.40	0.55
1:o:2392:VAL:HA	1:o:2431:ARG:HH12	1.72	0.55
1:o:3681:LYS:HE2	1:o:3684:SER:HB2	1.88	0.55
1:o:3754:GLY:HA2	1:o:3800:LEU:HD12	1.89	0.55
1:o:3795:PRO:HA	1:o:3801:GLY:HA2	1.89	0.55
2:h:31:LYS:HZ2	2:h:32:GLU:HG2	1.72	0.55
6:i:60:DT:H3	7:j:94:DA:H61	1.53	0.55
8:K:276:LEU:O	9:L:431:ARG:N	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:M:505:ASP:OD1	8:M:508:LEU:N	2.40	0.55
1:O:64:GLY:HA2	1:O:67:VAL:HG22	1.88	0.54
1:O:418:ALA:HB2	1:O:464:VAL:HG12	1.88	0.54
1:O:2294:ILE:HG13	1:O:2295:GLN:H	1.72	0.54
4:A:64:LYS:HG2	4:A:93:GLN:NE2	2.22	0.54
2:d:112:THR:O	2:d:115:VAL:HG22	2.07	0.54
1:o:827:ASN:OD1	1:o:828:LYS:NZ	2.40	0.54
1:o:892:LEU:HD11	1:o:941:MET:HE1	1.89	0.54
1:o:928:VAL:HG21	1:o:2769:VAL:HG11	1.90	0.54
1:o:2443:MET:SD	1:o:2443:MET:N	2.79	0.54
8:M:259:LEU:HD22	8:M:344:GLY:HA2	1.89	0.54
1:O:1658:SER:O	1:O:1662:ASN:ND2	2.40	0.54
1:O:1676:ILE:HG12	1:O:1713:VAL:HG11	1.89	0.54
1:O:1718:ILE:HA	1:O:1721:HIS:HD1	1.73	0.54
1:O:3154:GLN:O	1:O:3159:ARG:NH2	2.40	0.54
1:O:3590:ASN:HA	1:O:3593:ARG:HE	1.72	0.54
1:o:646:VAL:HG11	1:o:680:ILE:HD11	1.89	0.54
1:o:3959:MET:HG3	1:o:4124:TRP:HZ2	1.72	0.54
3:g:33:LEU:HB3	2:h:67:PHE:CZ	2.41	0.54
2:h:116:THR:O	2:h:119:THR:HG22	2.06	0.54
6:i:97:DG:N2	7:j:57:DC:O3'	2.40	0.54
9:L:230:SER:HA	9:L:235:CYS:HB2	1.89	0.54
9:L:313:GLY:HA2	9:L:323:PHE:H	1.73	0.54
1:O:1301:ILE:HG21	1:O:1371:VAL:HB	1.89	0.54
1:O:1537:VAL:HA	1:O:1554:SER:HA	1.89	0.54
1:O:1916:ILE:HG21	1:O:1951:VAL:HG21	1.89	0.54
1:O:3113:ASN:O	1:O:3117:ILE:HD12	2.07	0.54
1:O:3150:ASN:HB2	1:O:3153:SER:HB2	1.90	0.54
1:O:3446:VAL:O	1:O:3450:MET:HG3	2.07	0.54
2:D:92:GLN:HE22	2:D:96:ARG:HH22	1.56	0.54
4:E:65:LEU:HD22	6:i:96:DC:H41	1.71	0.54
1:o:387:GLU:O	1:o:390:GLN:HG3	2.07	0.54
1:o:531:PHE:HA	1:o:534:LEU:HD12	1.89	0.54
1:o:1783:ARG:NH1	1:o:1829:TRP:HB3	2.21	0.54
1:o:2220:MET:HE1	1:o:2238:ILE:HG13	1.90	0.54
1:o:3443:PRO:HD2	1:o:3478:GLU:HG3	1.89	0.54
6:i:51:DC:O2	7:j:104:DG:N2	2.31	0.54
7:J:88:DG:H2''	7:J:89:DT:H5''	1.90	0.54
6:I:25:DC:H2''	6:I:26:DG:C8	2.42	0.54
8:K:94:LYS:H	8:K:103:TYR:HA	1.72	0.54
1:O:1766:LEU:HA	1:O:1773:VAL:HG21	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:2588:GLU:HA	1:O:2776:ARG:HA	1.88	0.54
1:O:2967:GLU:O	1:O:2971:GLN:HG2	2.08	0.54
1:o:305:ASN:O	1:o:308:LEU:N	2.35	0.54
1:o:1037:LEU:HD13	1:o:1056:THR:HG22	1.90	0.54
1:o:1111:LEU:HG	1:o:1115:HIS:CE1	2.42	0.54
1:o:2168:LEU:HA	1:o:2171:LEU:HD12	1.89	0.54
1:o:2560:ASN:HD22	1:o:2795:GLN:HB2	1.72	0.54
1:o:3179:TRP:HZ3	1:o:3238:MET:HE1	1.71	0.54
1:o:3950:THR:O	1:o:4068:HIS:ND1	2.39	0.54
9:N:85:LEU:HD12	9:N:86:PRO:HD2	1.89	0.54
1:O:1507:CYS:HA	1:O:1510:LEU:HD12	1.89	0.54
1:O:3738:ILE:HD11	1:O:3752:VAL:HG12	1.89	0.54
4:A:69:ARG:NH2	7:j:94:DA:OP2	2.40	0.54
5:B:67:ARG:NH1	5:B:68:ASP:OD1	2.40	0.54
1:o:2863:CYS:HB3	1:o:2892:LEU:HD11	1.89	0.54
1:o:3842:TRP:CD1	1:o:3858:MET:HB3	2.42	0.54
5:b:71:THR:HG21	2:h:97:LEU:HD23	1.89	0.54
8:M:121:GLN:NE2	8:M:134:MET:SD	2.80	0.54
1:O:1093:GLU:OE1	1:O:1093:GLU:N	2.35	0.54
1:O:1715:GLU:HA	1:O:1718:ILE:HG12	1.90	0.54
1:O:3313:SER:OG	1:O:3319:ASN:O	2.24	0.54
1:O:3795:PRO:HA	1:O:3801:GLY:HA3	1.89	0.54
2:D:77:LEU:HD13	2:D:93:THR:HB	1.89	0.54
1:o:1583:MET:O	1:o:1586:SER:OG	2.22	0.54
1:o:2347:LYS:O	1:o:2351:GLN:N	2.41	0.54
1:o:3045:ILE:HA	1:o:3048:LYS:HD2	1.89	0.54
1:O:1428:ILE:HA	1:O:1431:LEU:HB2	1.88	0.54
1:O:2219:LEU:O	1:O:2223:VAL:N	2.41	0.54
1:O:2314:GLU:OE1	1:O:2314:GLU:N	2.40	0.54
1:O:3946:PHE:HZ	1:O:4047:ALA:HB2	1.73	0.54
1:o:1297:PHE:O	1:o:1370:ARG:NH2	2.41	0.54
1:o:1922:ALA:O	1:o:1941:HIS:ND1	2.41	0.54
6:I:63:DA:H2"	6:I:64:DA:C5	2.43	0.54
1:O:542:ASP:HA	1:O:545:LEU:HB2	1.89	0.54
1:O:782:ARG:HH22	1:O:3168:TYR:HE1	1.55	0.54
1:O:886:TRP:CE3	1:O:964:ARG:HG3	2.43	0.54
1:O:1092:GLU:HG3	1:O:1095:LEU:HD12	1.89	0.54
1:O:1490:GLY:C	1:O:1492:ALA:H	2.15	0.54
1:O:2461:PHE:HB2	1:O:2473:MET:HE1	1.89	0.54
5:F:80:THR:HG23	6:i:104:DG:H4'	1.89	0.54
1:o:865:GLN:OE1	1:o:3171:ALA:O	2.26	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:1528:LEU:HD13	1:o:1567:ILE:HG12	1.90	0.54
1:o:4104:VAL:O	1:o:4108:MET:HG3	2.07	0.54
7:j:11:DA:H2"	7:j:12:DT:C5	2.43	0.54
9:L:663:GLN:NE2	9:L:703:LYS:O	2.41	0.54
1:O:100:ILE:HG22	1:O:100:ILE:O	2.08	0.54
1:O:334:HIS:HA	1:O:337:LYS:HD3	1.90	0.54
1:O:4092:GLN:HG3	1:O:4106:CYS:SG	2.48	0.54
1:O:4104:VAL:HA	1:O:4107:LEU:HD12	1.90	0.54
3:C:91:GLU:HA	3:C:95:LYS:HE2	1.87	0.54
1:o:2452:ARG:HH11	1:o:2497:GLU:HB2	1.73	0.54
1:o:3327:ASN:HB3	1:o:3384:HIS:O	2.08	0.54
1:o:3485:LYS:O	1:o:3488:SER:HB2	2.08	0.54
1:o:4098:LEU:HD11	1:o:4103:GLN:HB2	1.90	0.54
5:f:55:ARG:HH11	5:f:58:LEU:HB2	1.71	0.54
7:J:22:DG:H2"	7:J:23:DA:N7	2.23	0.54
8:K:94:LYS:N	8:K:103:TYR:HA	2.23	0.54
8:K:217:TYR:O	8:K:220:ILE:N	2.40	0.54
8:K:420:LEU:HA	8:K:426:GLN:HA	1.89	0.54
9:N:533:ILE:O	9:N:537:PHE:N	2.40	0.54
1:O:2533:SER:O	1:O:2535:THR:N	2.40	0.54
1:O:3156:PRO:C	1:O:3158:LYS:N	2.64	0.54
4:A:86:SER:O	4:A:90:MET:HG2	2.08	0.54
1:o:1111:LEU:HG	1:o:1115:HIS:HE1	1.72	0.54
1:o:2123:PRO:HA	1:o:2127:LYS:HG2	1.88	0.54
1:o:3048:LYS:HB3	1:o:3061:LEU:HD22	1.90	0.54
1:o:3737:ARG:HH21	1:o:3749:PRO:HB2	1.73	0.54
7:j:130:DT:H2"	7:j:131:DG:C8	2.42	0.54
9:N:406:GLY:HA2	9:N:424:LEU:HB2	1.89	0.54
9:N:677:ILE:HA	9:N:680:GLN:HB3	1.90	0.54
1:O:333:MET:N	1:O:333:MET:SD	2.78	0.53
1:O:1288:SER:O	1:O:1292:LYS:N	2.29	0.53
1:O:1651:LYS:O	1:O:1655:ILE:HD12	2.08	0.53
1:O:2218:PHE:O	1:O:2222:HIS:ND1	2.41	0.53
1:O:2346:ALA:HA	1:O:2349:LEU:HB2	1.90	0.53
1:o:327:VAL:HA	1:o:330:ASN:HB2	1.89	0.53
1:o:718:MET:HE2	1:o:726:LEU:HD11	1.90	0.53
1:o:893:SER:O	1:o:944:LYS:NZ	2.39	0.53
1:o:897:PRO:HG3	1:o:2787:HIS:HB3	1.88	0.53
1:o:1115:HIS:CD2	1:o:1182:GLU:HB3	2.43	0.53
1:o:2337:LEU:HD12	1:o:2338:GLU:HG3	1.89	0.53
1:o:2817:LEU:HD13	1:o:2865:HIS:CG	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:j:84:DC:HI'	7:j:85:DC:C2	2.43	0.53
8:K:168:LEU:HB3	8:K:202:LEU:HB2	1.90	0.53
9:L:20:MET:HE1	9:L:136:THR:HB	1.89	0.53
9:N:87:ASP:O	9:N:91:LEU:N	2.30	0.53
9:N:656:ASN:ND2	9:N:690:GLU:OE2	2.40	0.53
1:O:13:LEU:HB2	1:O:59:PHE:CZ	2.43	0.53
1:O:2985:GLU:OE2	1:O:2991:LYS:NZ	2.31	0.53
1:O:3795:PRO:HA	1:O:3801:GLY:CA	2.39	0.53
1:o:392:CYS:HB3	1:o:438:LEU:HD21	1.89	0.53
8:K:40:PHE:HD2	8:K:85:VAL:HB	1.73	0.53
1:O:13:LEU:HB2	1:O:59:PHE:CE1	2.42	0.53
1:O:151:GLU:OE1	1:O:151:GLU:N	2.40	0.53
1:O:1536:ALA:HB3	1:O:1555:HIS:HB2	1.90	0.53
1:O:1840:PHE:O	1:O:1844:VAL:HG23	2.08	0.53
1:O:2965:TYR:HB3	1:O:3001:CYS:SG	2.48	0.53
5:B:56:GLY:O	5:B:59:LYS:HB3	2.08	0.53
1:o:1039:TRP:CH2	1:o:2779:ASP:HB2	2.44	0.53
1:o:2133:LEU:HD11	1:o:2171:LEU:HD11	1.90	0.53
1:o:2173:ALA:HA	1:o:2215:LEU:HD21	1.90	0.53
1:o:3155:VAL:H	1:o:3158:LYS:HE3	1.73	0.53
6:I:69:DG:H2'	6:I:70:DG:C8	2.43	0.53
8:K:288:LEU:HA	8:K:295:PRO:HA	1.89	0.53
8:K:383:SER:HB3	9:L:438:LEU:HD11	1.90	0.53
1:O:1505:LEU:HA	1:O:1508:LYS:HD2	1.90	0.53
1:O:1794:GLN:O	1:O:1798:LEU:HG	2.08	0.53
1:O:1820:VAL:HA	1:O:1824:LEU:HD22	1.89	0.53
1:O:2376:ASP:OD1	1:O:2404:ARG:NH2	2.40	0.53
1:O:2510:LEU:O	1:O:2518:GLN:NE2	2.39	0.53
1:O:2988:GLU:HA	1:O:2991:LYS:HE2	1.91	0.53
2:D:99:LEU:HD12	2:D:103:LEU:HB3	1.89	0.53
3:G:66:ALA:HB1	3:G:82:HIS:HE1	1.73	0.53
3:G:80:PRO:HA	3:G:83:LEU:HD12	1.91	0.53
4:A:122:LYS:O	4:A:125:GLN:HG3	2.08	0.53
1:o:3545:THR:OG1	1:o:3546:SER:N	2.40	0.53
3:g:56:GLU:HG2	2:h:41:VAL:HG22	1.91	0.53
8:K:321:ILE:HG12	8:K:326:GLN:HG2	1.90	0.53
8:K:473:TYR:HB3	9:L:350:GLN:HB3	1.88	0.53
8:M:165:ARG:HE	8:M:199:PHE:HB2	1.73	0.53
8:M:480:ASN:HB3	8:M:483:LEU:HB2	1.90	0.53
1:O:1372:LEU:HD21	1:O:1403:MET:HE1	1.91	0.53
1:O:2300:PHE:HA	1:O:2303:LEU:HD12	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:2533:SER:HB3	1:O:2538:ARG:HH21	1.73	0.53
1:O:2897:LEU:HD21	1:O:2923:TRP:CD2	2.43	0.53
1:o:132:ILE:HB	1:o:173:LYS:NZ	2.24	0.53
1:o:738:HIS:O	1:o:742:GLU:HG3	2.08	0.53
1:o:990:GLN:HB3	1:o:2781:PRO:HG3	1.89	0.53
1:o:3595:GLU:O	1:o:3601:VAL:N	2.41	0.53
8:K:60:PHE:HZ	8:K:122:PHE:HD2	1.56	0.53
9:L:483:PRO:HG2	9:L:488:GLN:HE22	1.74	0.53
9:N:140:SER:O	9:N:201:GLN:NE2	2.41	0.53
1:O:918:ALA:HB1	1:O:972:LEU:HD11	1.90	0.53
1:O:3455:LYS:HD3	1:O:3489:SER:HA	1.89	0.53
3:C:26:PRO:HD2	3:C:29:ARG:HH12	1.74	0.53
2:H:86:ILE:HD12	2:H:90:GLU:HB3	1.89	0.53
3:G:32:ARG:NE	7:j:33:DA:OP1	2.31	0.53
1:o:213:ARG:HH22	8:M:339:ARG:HG2	1.73	0.53
1:o:2213:ASN:ND2	1:o:2248:CYS:O	2.42	0.53
1:o:2331:MET:SD	1:o:2335:ASN:N	2.82	0.53
1:o:4055:ASN:HB2	1:o:4095:GLU:HA	1.91	0.53
4:a:57:SER:O	5:b:40:ARG:NH1	2.40	0.53
8:K:112:GLY:O	8:K:113:ALA:C	2.52	0.53
1:O:197:PHE:HA	1:O:200:PHE:CE2	2.44	0.53
1:O:1260:LEU:HD22	1:O:1293:ALA:HB2	1.91	0.53
1:O:1426:GLN:OE1	1:O:1426:GLN:N	2.41	0.53
1:O:1733:THR:HG23	1:O:1736:PHE:H	1.72	0.53
1:O:4120:THR:HG21	1:O:4126:PRO:HB3	1.89	0.53
2:H:93:THR:O	2:H:97:LEU:HG	2.08	0.53
4:E:72:ARG:HG3	7:j:54:DC:H5"	1.91	0.53
1:o:1173:LEU:HB2	1:o:1191:PHE:CE1	2.44	0.53
1:o:1271:ILE:O	1:o:1274:ARG:NH1	2.33	0.53
1:o:3113:ASN:O	1:o:3117:ILE:N	2.39	0.53
1:o:3295:GLU:HA	1:o:3298:LEU:HD12	1.89	0.53
1:o:3567:VAL:HG21	1:o:3696:ARG:HH12	1.74	0.53
4:e:46:VAL:HG23	6:I:85:DG:H4'	1.91	0.53
7:J:35:DT:H3	6:I:119:DA:H2	1.55	0.53
8:K:113:ALA:C	8:K:115:ARG:N	2.65	0.53
8:K:217:TYR:O	8:K:221:ILE:N	2.35	0.53
9:L:40:MET:O	9:L:43:GLN:NE2	2.40	0.53
8:M:60:PHE:O	8:M:64:ILE:HG12	2.08	0.53
1:O:863:GLY:HA3	1:O:3167:ARG:NE	2.23	0.53
1:O:1769:GLU:HB2	1:O:1772:HIS:CD2	2.43	0.53
1:O:1871:MET:HE1	1:O:1940:TYR:N	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:2254:ARG:NE	1:O:2292:CYS:O	2.32	0.53
1:o:1066:LEU:HA	1:o:1069:HIS:ND1	2.23	0.53
1:o:2349:LEU:HB3	1:o:2360:PHE:CE1	2.44	0.53
1:o:2386:LEU:HB3	1:o:2387:PRO:HD3	1.91	0.53
1:o:2474:TYR:O	1:o:2478:MET:HG2	2.09	0.53
1:o:3392:ALA:HB1	1:o:3409:VAL:HA	1.91	0.53
8:K:505:ASP:O	8:K:506:LEU:C	2.50	0.53
8:M:325:ARG:NH1	8:M:326:GLN:O	2.42	0.53
8:M:347:LEU:HA	8:M:398:CYS:HA	1.91	0.53
8:M:522:VAL:O	8:M:526:LYS:NZ	2.42	0.53
1:O:327:VAL:HA	1:O:333:MET:HE2	1.91	0.53
1:O:997:ASN:OD1	1:O:998:ASN:N	2.42	0.53
1:O:1300:SER:HA	1:O:1304:HIS:HB2	1.90	0.53
1:O:2883:SER:O	1:O:2885:GLN:NE2	2.38	0.53
3:G:81:ARG:NH1	3:G:107:VAL:O	2.37	0.53
5:B:47:SER:HB2	5:B:50:ILE:HG12	1.90	0.53
1:o:955:ALA:C	1:o:957:PRO:HD3	2.33	0.53
1:o:1038:LYS:HD2	1:o:1042:LYS:HZ2	1.72	0.53
1:o:1623:LEU:HD22	1:o:1671:VAL:HG11	1.90	0.53
1:o:2219:LEU:O	1:o:2223:VAL:HG23	2.08	0.53
1:o:2281:MET:HG2	1:o:2325:LEU:HD13	1.90	0.53
1:o:2438:ILE:O	1:o:2442:MET:HE1	2.09	0.53
8:K:397:LEU:HD13	8:K:437:LEU:HD13	1.90	0.53
8:K:492:ALA:HB2	8:K:500:PRO:HB3	1.90	0.53
9:L:109:ASP:HA	9:L:112:ILE:HD12	1.91	0.53
8:M:262:LYS:N	8:M:266:ASP:O	2.41	0.53
8:M:459:VAL:HA	8:M:462:MET:HE2	1.90	0.53
8:M:493:LEU:HD23	9:N:323:PHE:CD1	2.44	0.53
9:N:396:ALA:HA	9:N:404:GLN:HE21	1.73	0.53
1:O:79:ARG:NH2	1:O:124:LYS:HB3	2.24	0.53
1:O:741:ILE:HD13	1:O:776:TRP:NE1	2.24	0.53
1:O:1603:GLN:HA	1:O:1606:ARG:HG2	1.91	0.53
1:O:2142:ILE:HA	1:O:2145:PHE:HD2	1.74	0.53
1:O:3289:ARG:NE	1:O:3291:GLN:OE1	2.40	0.53
1:O:3909:ALA:O	1:O:3984:MET:HE1	2.09	0.53
1:o:19:LEU:HB3	1:o:34:LEU:HD23	1.90	0.53
1:o:939:MET:HG3	1:o:2783:ILE:HD13	1.90	0.53
1:o:1333:SER:O	1:o:1337:VAL:HG23	2.09	0.53
1:o:1675:TYR:OH	1:o:1693:VAL:HA	2.09	0.53
1:o:3182:ILE:O	1:o:3186:ARG:HG2	2.09	0.53
1:o:3833:ARG:HA	1:o:3877:LYS:HE3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:4011:PHE:O	1:o:4015:ASN:ND2	2.41	0.53
4:e:70:LEU:HD12	5:f:25:ASN:HB3	1.90	0.53
8:K:47:ALA:O	8:K:49:PHE:N	2.42	0.53
9:L:613:SER:HA	9:L:616:LEU:HD12	1.90	0.53
9:L:632:PHE:CZ	9:L:678:VAL:HG22	2.43	0.53
8:M:41:LEU:HG	8:M:88:TYR:CE2	2.43	0.53
8:M:86:VAL:O	8:M:86:VAL:HG12	2.09	0.53
8:M:108:LEU:HD13	8:M:157:VAL:HG22	1.89	0.53
1:O:337:LYS:HB3	1:O:369:PHE:HE1	1.74	0.52
1:O:2257:PHE:HA	1:O:2260:PHE:CE2	2.44	0.52
1:O:3311:ASN:HB3	1:O:3314:SER:HA	1.91	0.52
1:O:3589:SER:O	1:O:3593:ARG:NE	2.43	0.52
1:O:3794:VAL:O	1:O:3801:GLY:HA2	2.09	0.52
1:o:1128:CYS:HA	1:o:1131:ILE:HG12	1.92	0.52
1:o:1611:GLN:HE21	1:o:1614:GLN:HG3	1.74	0.52
1:o:3007:GLU:HA	1:o:3257:LYS:HE2	1.91	0.52
1:o:4082:ARG:NH2	1:o:4083:GLY:O	2.42	0.52
6:i:42:DG:N2	7:j:114:DC:O4'	2.43	0.52
6:l:126:DC:H1'	6:l:127:DG:H5'	1.91	0.52
8:K:480:ASN:O	8:K:484:GLN:NE2	2.42	0.52
8:K:495:LEU:HG	8:K:497:LEU:HG	1.91	0.52
9:L:417:GLU:N	9:L:417:GLU:OE1	2.42	0.52
8:M:259:LEU:HB3	8:M:344:GLY:HA2	1.91	0.52
8:M:303:PHE:HD1	8:M:310:LEU:HD13	1.74	0.52
8:M:367:PHE:CZ	8:M:429:PRO:HB2	2.44	0.52
9:N:230:SER:HA	9:N:234:LEU:HB3	1.90	0.52
1:O:643:GLU:HA	1:O:646:VAL:HG23	1.91	0.52
1:O:1165:LEU:O	1:O:1168:LEU:HG	2.09	0.52
1:O:2342:CYS:O	1:O:2346:ALA:N	2.30	0.52
1:O:3546:SER:O	1:O:3550:LYS:NZ	2.40	0.52
1:O:3680:LEU:HD23	1:O:3724:GLU:HB3	1.90	0.52
1:o:143:LEU:HD12	1:o:182:GLY:HA2	1.91	0.52
1:o:391:ARG:O	1:o:395:MET:N	2.41	0.52
1:o:894:PHE:HB2	1:o:907:LEU:HD11	1.91	0.52
4:a:72:ARG:HG2	4:a:84:PHE:CD2	2.44	0.52
7:j:116:DA:H2''	7:j:117:DG:C8	2.44	0.52
8:K:39:ILE:HA	8:K:84:ALA:O	2.08	0.52
9:L:489:ARG:HH11	9:L:508:ILE:HA	1.73	0.52
1:O:384:MET:O	1:O:388:LEU:HG	2.09	0.52
1:O:1529:VAL:O	1:O:1533:LEU:HG	2.10	0.52
1:O:2361:ILE:HA	1:O:2364:LEU:HD12	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:2776:ARG:NE	1:O:2782:ASP:OD2	2.36	0.52
1:O:4127:TRP:CD1	1:O:4128:MET:HG2	2.44	0.52
2:D:100:PRO:HD2	2:D:103:LEU:HB2	1.91	0.52
4:A:62:ILE:HA	5:B:33:ALA:HB1	1.91	0.52
1:o:911:LEU:HD22	1:o:961:LEU:HD23	1.92	0.52
1:o:2936:TYR:O	1:o:2940:ARG:HG3	2.09	0.52
9:L:147:LEU:O	9:L:151:ILE:N	2.33	0.52
8:M:335:GLU:HB2	8:M:405:ASN:CG	2.35	0.52
8:M:484:GLN:O	8:M:488:ARG:HG2	2.09	0.52
1:O:1297:PHE:O	1:O:1301:ILE:HG12	2.10	0.52
1:O:1793:THR:O	1:O:1797:LEU:HG	2.10	0.52
1:O:2209:GLU:HG3	1:O:2248:CYS:SG	2.50	0.52
1:O:2333:ARG:NH2	1:O:2338:GLU:OE2	2.42	0.52
1:O:3145:ILE:HG23	1:O:3146:SER:H	1.73	0.52
4:A:119:ILE:C	4:A:120:MET:HE2	2.34	0.52
1:o:542:ASP:OD1	1:o:543:SER:N	2.41	0.52
1:o:737:PRO:HD2	1:o:740:ILE:HD11	1.90	0.52
1:o:2094:MET:HA	1:o:2097:LEU:HD13	1.90	0.52
1:o:2270:ASN:ND2	1:o:2306:ASN:OD1	2.41	0.52
1:o:2395:THR:O	1:o:2399:GLU:N	2.30	0.52
1:o:3953:LEU:HB3	1:o:3955:VAL:HG22	1.91	0.52
7:j:100:DA:H2''	7:j:101:DA:C8	2.45	0.52
7:J:96:DC:H1'	7:J:97:DG:N7	2.24	0.52
8:K:413:LEU:HB3	8:K:432:PHE:CD1	2.44	0.52
8:M:335:GLU:O	8:M:405:ASN:ND2	2.42	0.52
9:N:212:MET:HE1	9:N:223:GLU:HB2	1.91	0.52
9:N:267:ILE:HB	9:N:361:VAL:HB	1.90	0.52
1:O:649:PHE:O	1:O:652:GLU:HG3	2.10	0.52
1:O:1357:LYS:HE3	1:O:1411:TYR:H	1.74	0.52
1:O:2197:THR:OG1	1:O:2721:GLY:N	2.43	0.52
1:O:3589:SER:OG	1:O:3664:ASN:ND2	2.32	0.52
1:O:3991:PHE:O	1:O:3992:ARG:NE	2.42	0.52
2:D:30:ARG:NH1	7:j:31:DC:O2	2.42	0.52
2:D:34:TYR:HA	2:D:37:TYR:CD2	2.45	0.52
5:F:35:ARG:HG2	5:F:46:ILE:HG21	1.91	0.52
1:o:903:PRO:HB3	1:o:2819:GLU:HB2	1.91	0.52
1:o:1064:TYR:CG	1:o:1106:ILE:HG13	2.45	0.52
1:o:1083:ASN:HA	1:o:1133:HIS:CD2	2.44	0.52
1:o:2344:LEU:O	1:o:2347:LYS:HG2	2.10	0.52
1:o:2348:GLN:NE2	1:o:2351:GLN:OE1	2.42	0.52
1:o:3482:LEU:HB3	1:o:3486:GLU:HG3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:M:194:ARG:NH2	8:M:219:ASP:O	2.43	0.52
9:N:11:VAL:HG21	9:N:118:ILE:HD11	1.91	0.52
1:O:935:HIS:CD2	1:O:2773:ARG:HH12	2.28	0.52
1:O:4092:GLN:NE2	1:O:4094:PRO:O	2.42	0.52
4:E:127:ALA:O	4:E:131:ARG:N	2.42	0.52
1:o:931:CYS:HB2	1:o:984:TYR:CE1	2.45	0.52
1:o:1139:GLU:OE2	1:o:1193:LYS:NZ	2.43	0.52
1:o:1303:MET:N	1:o:1303:MET:SD	2.83	0.52
1:o:2443:MET:HB3	1:o:2479:TRP:CZ2	2.45	0.52
1:o:3521:ILE:HG22	1:o:3529:ILE:HD11	1.92	0.52
4:e:82:LEU:HB3	5:f:81:VAL:HG23	1.90	0.52
6:i:23:DC:H2"	6:i:24:DA:N7	2.25	0.52
6:i:108:DT:H2"	6:i:109:DG:C8	2.44	0.52
8:K:154:PHE:HD2	8:K:198:ILE:HD13	1.74	0.52
8:M:262:LYS:H	8:M:267:ILE:CA	2.22	0.52
9:N:165:LEU:HD11	9:N:205:LEU:HD13	1.92	0.52
1:O:1034:ARG:NH2	1:O:1088:GLU:OE2	2.43	0.52
1:O:1824:LEU:O	1:O:1827:LEU:N	2.43	0.52
1:O:2327:LEU:O	1:O:2333:ARG:NH1	2.42	0.52
1:O:2380:ASN:ND2	8:K:192:ASP:HB2	2.23	0.52
3:G:35:ARG:HH11	3:G:43:VAL:HG12	1.75	0.52
1:o:200:PHE:HB3	1:o:224:LEU:HD13	1.92	0.52
1:o:1513:GLY:O	1:o:1516:GLU:HG2	2.10	0.52
1:o:3522:THR:HG21	1:o:3558:ILE:HG23	1.90	0.52
6:I:73:DG:N2	6:I:74:DA:N7	2.55	0.52
1:O:392:CYS:O	1:O:395:MET:HG3	2.09	0.52
1:O:865:GLN:N	1:O:3170:ASP:OD2	2.43	0.52
1:O:868:LYS:HE3	1:O:3173:MET:HG3	1.91	0.52
1:O:1206:LEU:O	1:O:1210:ASP:N	2.36	0.52
1:O:1370:ARG:O	1:O:1374:GLN:NE2	2.41	0.52
1:O:1920:TYR:O	1:O:1921:ASP:C	2.52	0.52
1:O:2168:LEU:HB2	1:O:2193:ILE:HD11	1.92	0.52
1:O:3931:ALA:O	1:O:3935:GLY:CA	2.58	0.52
1:o:658:THR:HG1	1:o:659:ARG:NH1	2.07	0.52
1:o:1413:ASP:OD1	1:o:1414:ILE:N	2.42	0.52
1:o:2814:SER:HA	1:o:2865:HIS:NE2	2.24	0.52
1:o:3157:LEU:HA	1:o:3160:LEU:HB2	1.92	0.52
1:o:3667:LEU:HA	1:o:3670:MET:SD	2.50	0.52
1:o:3859:TYR:HB3	1:o:4119:ARG:HE	1.75	0.52
5:b:26:ILE:HD12	5:b:29:ILE:HG13	1.91	0.52
8:M:260:LYS:HB3	8:M:269:ILE:C	2.35	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:N:40:MET:HG2	9:N:238:LYS:HB3	1.91	0.52
1:O:996:THR:HG21	1:O:1039:TRP:HD1	1.75	0.52
1:O:3091:LEU:HD21	1:O:3142:ILE:HD12	1.92	0.52
1:O:3378:TYR:HD1	1:O:3419:PHE:HE1	1.57	0.52
1:O:3940:ILE:HG13	1:O:3941:ASP:H	1.75	0.52
1:o:1153:LEU:HD12	1:o:1154:PRO:HD2	1.92	0.52
1:o:2133:LEU:HD21	1:o:2171:LEU:HD11	1.91	0.52
1:o:2187:VAL:HG23	1:o:2728:LEU:HD21	1.91	0.52
1:o:2477:LEU:HD22	1:o:2502:ALA:HA	1.92	0.52
1:o:2824:LYS:O	1:o:2829:LYS:NZ	2.43	0.52
1:o:3424:LEU:O	1:o:3475:TYR:OH	2.23	0.52
1:o:3742:GLY:N	1:o:3746:ARG:O	2.43	0.52
8:M:112:GLY:HA2	9:N:318:SER:HA	1.92	0.52
1:O:374:LYS:HA	1:O:381:VAL:HG22	1.92	0.52
1:O:938:VAL:HA	1:O:941:MET:HG3	1.92	0.52
1:O:984:TYR:HA	1:O:987:LEU:HB2	1.91	0.52
1:O:3285:HIS:O	1:O:3288:SER:OG	2.22	0.52
1:O:3483:MET:SD	1:O:3513:ALA:HB3	2.49	0.52
2:D:89:ARG:O	2:D:92:GLN:HG3	2.10	0.52
3:c:77:ARG:HH21	2:d:52:SER:HB3	1.75	0.52
1:o:2219:LEU:O	1:o:2223:VAL:N	2.42	0.52
1:o:4006:VAL:HG11	1:o:4009:PRO:HG3	1.92	0.52
5:b:73:THR:HG21	5:b:81:VAL:HG12	1.91	0.52
6:i:22:DA:H1'	6:i:23:DC:H5	1.74	0.52
8:K:263:LEU:HD22	8:K:347:LEU:HD22	1.92	0.52
8:K:397:LEU:HD11	8:K:410:PHE:HB3	1.90	0.52
8:K:471:PHE:H	9:L:345:PHE:HB2	1.75	0.52
9:L:14:MET:HE3	9:L:58:LEU:HD22	1.91	0.52
9:L:359:ASN:OD1	9:L:360:GLN:N	2.43	0.52
9:N:513:TRP:O	9:N:517:ASN:N	2.42	0.52
1:O:583:LEU:HD11	1:O:612:LEU:HB2	1.91	0.51
1:O:1322:THR:HG23	1:O:1328:GLU:N	2.26	0.51
1:O:1583:MET:HE1	1:O:1625:HIS:CG	2.45	0.51
1:O:1622:ILE:O	1:O:1626:TRP:N	2.42	0.51
1:O:2376:ASP:HB2	1:O:2377:ARG:HH11	1.74	0.51
1:O:3491:PRO:HD2	1:O:3494:GLN:NE2	2.25	0.51
1:O:4054:ALA:HA	1:O:4096:SER:HA	1.91	0.51
2:D:95:VAL:HG11	3:G:54:VAL:HG11	1.91	0.51
4:A:66:PRO:O	5:B:25:ASN:OD1	2.28	0.51
1:o:915:THR:HA	1:o:934:LEU:HD11	1.91	0.51
1:o:1049:GLN:HG3	1:o:1054:VAL:HG13	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:1416:GLU:O	1:o:1419:LEU:HB2	2.10	0.51
1:o:1725:GLN:HE21	1:o:1727:ARG:HE	1.58	0.51
1:o:2302:ALA:O	1:o:2306:ASN:ND2	2.43	0.51
1:o:2724:ASP:N	1:o:2724:ASP:OD1	2.41	0.51
1:o:3530:VAL:HG12	1:o:3562:LEU:HD13	1.92	0.51
1:o:3901:ARG:HG3	1:o:3970:LEU:HD12	1.92	0.51
1:o:4045:CYS:HA	1:o:4048:LYS:HG2	1.92	0.51
2:h:91:ILE:HG13	2:h:95:VAL:HG21	1.92	0.51
7:J:64:DA:H1'	7:J:65:DC:C5	2.44	0.51
8:K:320:GLN:HG2	9:L:274:LYS:HG3	1.93	0.51
9:L:108:LEU:HD23	9:L:111:LEU:HD12	1.92	0.51
8:M:149:VAL:HA	8:M:152:ASN:HD21	1.75	0.51
8:M:319:SER:N	9:N:277:THR:O	2.42	0.51
1:O:363:ILE:O	1:O:416:SER:OG	2.23	0.51
1:O:717:LYS:HB3	1:O:721:TYR:CZ	2.46	0.51
1:O:935:HIS:HD2	1:O:2773:ARG:HH12	1.58	0.51
1:O:978:GLN:O	1:O:982:GLN:N	2.24	0.51
1:O:1830:HIS:ND1	1:O:1830:HIS:O	2.41	0.51
1:O:2776:ARG:HH22	1:O:2784:GLN:HB2	1.74	0.51
1:O:2821:ASP:HA	1:O:2829:LYS:HD2	1.92	0.51
1:O:3582:GLU:HA	1:O:3585:PHE:HB3	1.92	0.51
1:O:3684:SER:HB3	1:O:3688:SER:H	1.74	0.51
1:O:3882:LEU:O	1:O:3883:LEU:C	2.53	0.51
2:D:77:LEU:HA	2:D:80:TYR:CD2	2.44	0.51
4:A:103:LEU:HD11	4:A:124:ILE:HG23	1.91	0.51
1:o:491:CYS:SG	1:o:622:ALA:HB1	2.49	0.51
1:o:584:GLU:HB2	1:o:613:HIS:HB3	1.91	0.51
1:o:1100:VAL:H	1:o:1151:ARG:NH2	2.08	0.51
7:J:77:DC:H2''	7:J:78:DT:C5	2.45	0.51
9:L:457:LEU:HD13	9:L:529:PRO:HB2	1.92	0.51
8:M:112:GLY:O	8:M:114:LYS:N	2.40	0.51
8:M:295:PRO:O	8:M:297:LYS:NZ	2.32	0.51
8:M:487:PHE:HA	8:M:490:LEU:HD12	1.92	0.51
1:O:104:SER:O	1:O:105:VAL:C	2.53	0.51
1:O:374:LYS:HD2	1:O:423:TYR:HD2	1.74	0.51
1:O:583:LEU:HB2	1:O:614:PRO:HA	1.92	0.51
1:O:738:HIS:O	1:O:742:GLU:N	2.43	0.51
1:O:3951:GLN:N	1:O:4063:GLU:OE2	2.43	0.51
1:o:296:VAL:HA	1:o:299:LYS:HG2	1.92	0.51
1:o:344:GLN:O	1:o:348:ILE:HG12	2.11	0.51
1:o:3501:HIS:HE2	1:o:3763:ARG:HG2	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:3761:ASP:O	1:O:3765:GLU:HG2	2.10	0.51
1:O:3793:VAL:HG23	1:O:3803:ILE:HA	1.92	0.51
7:J:76:DG:N2	6:I:79:DG:H1	2.09	0.51
8:K:468:LYS:HB2	8:K:518:LEU:HD12	1.91	0.51
8:M:39:ILE:HG12	8:M:166:ILE:HD12	1.93	0.51
9:N:640:ARG:NH2	9:N:681:ASP:O	2.44	0.51
1:O:1400:VAL:HG12	1:O:1404:LYS:HE2	1.92	0.51
1:O:1727:ARG:NH2	1:O:1770:GLN:O	2.42	0.51
1:O:2429:ASP:O	1:O:2432:GLN:N	2.42	0.51
1:O:3840:LYS:HA	1:O:3843:LEU:HB2	1.93	0.51
5:F:57:VAL:HA	5:F:60:VAL:HG12	1.91	0.51
1:O:165:LYS:HZ3	1:O:167:PRO:HG2	1.76	0.51
1:O:1378:GLU:HB2	1:O:1381:SER:HB2	1.93	0.51
1:O:2336:ILE:HG13	1:O:2338:GLU:H	1.73	0.51
1:O:3450:MET:HG3	1:O:3464:LYS:HD2	1.92	0.51
6:i:31:DT:H3	7:j:123:DA:H2	1.58	0.51
8:K:59:PRO:HA	8:K:62:MET:SD	2.50	0.51
8:K:115:ARG:O	8:K:119:LEU:N	2.43	0.51
8:K:189:LYS:O	8:K:193:LEU:HD23	2.10	0.51
8:K:360:HIS:HA	9:L:267:ILE:HD13	1.92	0.51
8:M:35:ARG:HB3	8:M:160:LYS:HB3	1.93	0.51
1:O:683:PHE:O	1:O:700:LYS:NZ	2.33	0.51
1:O:895:ALA:HA	1:O:904:VAL:HA	1.92	0.51
1:O:1358:LEU:O	1:O:1362:ASP:N	2.37	0.51
1:O:2094:MET:HB2	1:O:2097:LEU:HD13	1.93	0.51
1:O:2402:LEU:O	1:O:2405:VAL:HG23	2.11	0.51
1:O:2776:ARG:HH12	1:O:2784:GLN:HB2	1.76	0.51
1:O:3552:LYS:HA	1:O:3555:VAL:HG22	1.93	0.51
1:O:3569:GLN:HB2	1:O:3800:LEU:CD1	2.41	0.51
1:O:3679:ASN:OD1	1:O:3725:ARG:NH2	2.40	0.51
2:D:38:VAL:HG21	2:D:51:ILE:HD13	1.92	0.51
4:A:111:ALA:HB1	4:A:116:ARG:HB3	1.93	0.51
1:O:3559:LYS:HA	1:O:3562:LEU:HG	1.92	0.51
9:L:643:ARG:HH11	9:L:646:ALA:HB3	1.75	0.51
8:M:492:ALA:HB2	8:M:501:GLU:H	1.75	0.51
9:N:652:GLU:O	9:N:656:ASN:HB2	2.10	0.51
1:O:1034:ARG:HA	1:O:1085:ILE:HG22	1.93	0.51
1:O:2037:SER:HA	1:O:2040:MET:SD	2.50	0.51
1:O:3635:THR:O	1:O:3638:LYS:NZ	2.42	0.51
1:O:3704:GLN:OE1	1:O:3704:GLN:N	2.41	0.51
2:H:74:ALA:HB1	2:H:86:ILE:HG12	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:75:ALA:O	4:A:79:LYS:N	2.32	0.51
1:o:19:LEU:HD21	1:o:37:GLY:HA3	1.92	0.51
1:o:1341:ILE:HB	1:o:1368:LEU:HD21	1.93	0.51
1:o:2473:MET:O	1:o:2477:LEU:HG	2.10	0.51
1:o:3718:ARG:O	1:o:3743:HIS:N	2.44	0.51
7:j:103:DG:H4'	7:j:104:DG:OP1	2.10	0.51
7:J:20:DC:OP2	9:N:275:THR:OG1	2.29	0.51
7:J:91:DT:H3	6:I:64:DA:H2	1.58	0.51
6:I:139:DG:N3	8:M:403:ARG:NH2	2.59	0.51
8:K:176:HIS:CD2	8:K:182:LYS:HE2	2.46	0.51
9:N:347:LYS:HG2	9:N:389:MET:HE1	1.93	0.51
1:O:200:PHE:CE1	1:O:228:SER:HB3	2.46	0.51
1:O:304:THR:HA	1:O:309:LYS:HD3	1.93	0.51
1:O:864:GLY:O	1:O:868:LYS:N	2.43	0.51
1:O:2348:GLN:HB2	1:O:2352:HIS:HE1	1.76	0.51
1:O:3155:VAL:C	1:O:3157:LEU:N	2.69	0.51
1:O:3301:LEU:HB2	1:O:3303:THR:O	2.11	0.51
1:O:3499:ILE:O	1:O:3503:VAL:N	2.37	0.51
1:O:3859:TYR:CD1	1:O:4119:ARG:HD2	2.45	0.51
4:A:83:ARG:NH2	6:i:53:DT:O4'	2.44	0.51
4:A:118:THR:HB	5:B:45:ARG:HB2	1.93	0.51
5:F:30:THR:HG21	7:j:64:DA:H3'	1.93	0.51
1:o:1431:LEU:HB3	1:o:1447:ARG:HH12	1.75	0.51
1:o:2563:LEU:HD11	1:o:2791:ILE:HB	1.93	0.51
1:o:2975:ALA:HB1	1:o:2994:TRP:CD2	2.46	0.51
1:o:3733:ARG:NH2	1:o:4014:LYS:O	2.44	0.51
1:o:3753:LYS:HD3	1:o:3758:LEU:HD21	1.93	0.51
8:K:35:ARG:HD3	8:K:159:PHE:CE2	2.46	0.51
8:K:142:SER:HA	8:K:182:LYS:HE3	1.91	0.51
8:K:352:PRO:HD3	9:L:464:ALA:HB2	1.93	0.51
8:K:477:SER:OG	8:K:478:PHE:N	2.38	0.51
8:M:52:GLN:HB3	8:M:59:PRO:HG2	1.91	0.51
9:N:56:LEU:HD11	9:N:58:LEU:HB3	1.91	0.51
1:O:463:LYS:HA	1:O:466:LEU:HD12	1.93	0.51
1:O:1525:CYS:O	1:O:1529:VAL:N	2.28	0.51
1:O:3147:LYS:O	1:O:3148:GLN:C	2.54	0.51
1:O:3572:ILE:HG22	1:O:3800:LEU:HD22	1.93	0.51
2:D:110:GLU:HG3	3:G:53:ALA:HB1	1.93	0.51
3:c:102:ILE:HG22	5:F:98:TYR:HB2	1.92	0.51
1:o:469:ALA:HA	1:o:475:LEU:HB2	1.92	0.51
1:o:1725:GLN:NE2	1:o:1727:ARG:H	2.08	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:i:123:DG:H2''	6:i:124:DA:C8	2.46	0.51
6:I:139:DG:O3'	8:M:404:ARG:NH2	2.38	0.51
8:K:463:LYS:HZ1	9:L:386:ASP:HB3	1.76	0.51
9:L:684:THR:O	9:L:686:ILE:N	2.43	0.51
1:O:364:ARG:HG2	1:O:415:GLN:HE21	1.75	0.51
1:O:1633:TRP:CD2	1:O:1674:THR:HG23	2.46	0.51
1:O:2890:ILE:HD11	1:O:2929:LEU:HB2	1.92	0.51
1:O:3445:LEU:O	1:O:3449:LYS:HD3	2.11	0.51
1:O:3547:THR:HA	1:O:3550:LYS:HB2	1.92	0.51
1:O:3686:TRP:HZ2	1:O:3692:VAL:HG23	1.76	0.51
1:O:3738:ILE:HG22	1:O:3740:ILE:HG12	1.93	0.51
4:E:54:TYR:CZ	5:F:36:ARG:HD3	2.46	0.51
1:o:2101:VAL:HG12	1:o:2156:VAL:HG11	1.91	0.51
1:o:2253:TYR:H	1:o:2256:ILE:HD13	1.76	0.51
1:o:2589:TYR:HB3	1:o:2775:TYR:HB3	1.93	0.51
1:o:2794:LEU:HD21	1:o:2808:LEU:HD11	1.92	0.51
1:o:2960:GLU:HG3	1:o:2965:TYR:HD1	1.76	0.51
1:o:3010:SER:O	1:o:3043:TYR:OH	2.29	0.51
1:o:3912:CYS:HA	1:o:3915:HIS:CE1	2.46	0.51
4:e:61:LEU:HD23	5:f:36:ARG:HB3	1.93	0.51
9:L:146:GLN:HB3	9:L:149:ILE:HB	1.92	0.51
9:L:332:LYS:O	9:L:333:TYR:C	2.53	0.51
8:M:300:THR:HA	9:N:293:THR:HA	1.92	0.51
8:M:490:LEU:HA	9:N:323:PHE:HZ	1.75	0.51
9:N:54:ILE:HB	9:N:86:PRO:HG3	1.93	0.51
9:N:296:CYS:SG	9:N:303:THR:OG1	2.56	0.51
1:O:265:TYR:HE1	1:O:308:LEU:HD22	1.76	0.51
1:O:786:GLN:HA	1:O:789:TYR:CE2	2.46	0.51
1:O:1473:THR:HB	1:O:1477:HIS:CE1	2.45	0.51
1:O:1776:GLU:O	1:O:1779:GLN:NE2	2.44	0.51
1:O:2145:PHE:O	1:O:2149:LEU:HG	2.10	0.51
3:C:51:LEU:HD13	2:H:70:ILE:HG21	1.93	0.51
1:o:128:LEU:HG	1:o:171:LEU:HG	1.93	0.51
1:o:1294:VAL:HG11	1:o:1364:CYS:HB2	1.93	0.51
1:o:3546:SER:O	1:o:3550:LYS:NZ	2.41	0.51
1:o:3700:GLU:OE2	1:o:3718:ARG:NH1	2.43	0.51
1:o:3859:TYR:CE2	1:o:3956:PRO:HD3	2.46	0.51
1:o:3940:ILE:HG13	1:o:3941:ASP:H	1.76	0.51
3:g:42:ARG:NH1	7:J:115:DT:O2	2.44	0.51
8:K:203:MET:HG3	8:K:204:HIS:N	2.26	0.51
8:K:489:ASN:HA	8:K:500:PRO:HG3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:196:LEU:HD21	1:O:227:LEU:HD11	1.92	0.50
1:O:960:GLN:O	1:O:964:ARG:HG2	2.11	0.50
1:O:3177:ASN:OD1	1:O:3178:ILE:HD12	2.10	0.50
1:O:4069:GLU:HG2	1:O:4070:LYS:HD3	1.92	0.50
3:C:38:HIS:CG	3:g:40:ALA:HA	2.46	0.50
1:o:1783:ARG:CZ	1:o:1830:HIS:HB2	2.41	0.50
1:o:1827:LEU:O	1:o:1831:CYS:N	2.38	0.50
1:o:1925:GLU:HB3	1:o:1941:HIS:HE1	1.76	0.50
1:o:3833:ARG:HG3	1:o:3834:ALA:H	1.76	0.50
7:J:34:DT:H4'	6:I:122:DT:H4'	1.93	0.50
9:L:81:ARG:NH2	9:L:84:MET:O	2.44	0.50
8:M:164:LYS:HD2	8:M:197:GLY:HA3	1.93	0.50
9:N:207:ILE:HA	9:N:210:MET:HG2	1.94	0.50
9:N:632:PHE:HZ	9:N:678:VAL:HA	1.76	0.50
1:O:915:THR:OG1	1:O:968:VAL:HG11	2.10	0.50
1:O:1137:ILE:HA	1:O:1140:LYS:HB2	1.93	0.50
1:O:1164:CYS:SG	1:O:1165:LEU:N	2.84	0.50
1:O:1392:MET:O	1:O:1396:PRO:HD3	2.11	0.50
1:O:1721:HIS:O	9:L:593:ASN:HB2	2.11	0.50
1:O:3584:LEU:O	1:O:3588:TRP:N	2.35	0.50
1:O:3626:GLY:O	1:O:3630:ARG:NH1	2.37	0.50
1:O:3993:SER:OG	1:O:3994:ASP:N	2.41	0.50
1:O:4055:ASN:HB2	1:O:4092:GLN:NE2	2.26	0.50
4:A:86:SER:N	6:i:53:DT:OP1	2.31	0.50
3:c:20:ARG:NH2	6:i:35:DG:OP1	2.44	0.50
1:o:131:LEU:HB3	1:o:177:LEU:HD11	1.94	0.50
1:o:4093:GLU:HG2	1:o:4094:PRO:HD3	1.92	0.50
6:i:114:DC:H1'	6:i:115:DG:O4'	2.12	0.50
8:K:35:ARG:NE	8:K:80:ARG:HG3	2.26	0.50
8:K:113:ALA:O	8:K:117:LEU:N	2.34	0.50
8:K:123:LYS:H	8:K:126:GLN:NE2	2.09	0.50
9:N:6:ASN:N	9:N:128:GLU:OE2	2.43	0.50
1:O:109:ASN:OD1	1:O:148:LYS:HE2	2.11	0.50
1:O:864:GLY:HA2	1:O:867:ASN:HB2	1.93	0.50
1:O:978:GLN:HA	1:O:981:ARG:HG2	1.93	0.50
1:O:2213:ASN:HA	1:O:2216:LEU:HD12	1.93	0.50
1:O:2796:ALA:O	1:O:2800:ARG:HG2	2.12	0.50
1:O:3180:ASP:O	1:O:3184:THR:OG1	2.25	0.50
3:C:102:ILE:HG22	5:b:98:TYR:HB2	1.94	0.50
3:c:84:GLN:HA	3:c:87:ILE:HG12	1.92	0.50
1:o:131:LEU:HB2	1:o:173:LYS:HD2	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:486:GLY:O	1:o:490:ILE:HG12	2.12	0.50
1:o:3065:ILE:HD11	1:o:3086:LEU:HD13	1.94	0.50
1:o:3588:TRP:CD1	1:o:3609:MET:HE2	2.45	0.50
1:o:3898:LEU:HB2	1:o:3901:ARG:HH21	1.76	0.50
4:a:65:LEU:HD22	7:J:96:DC:H41	1.76	0.50
6:i:67:DG:H2''	6:i:68:DC:H5'	1.93	0.50
7:J:115:DT:H2''	7:J:116:DA:H5''	1.92	0.50
8:K:289:TYR:HE1	9:L:309:ASP:HB2	1.76	0.50
8:K:465:ILE:HG23	8:K:518:LEU:HD11	1.93	0.50
8:M:121:GLN:HG2	8:M:130:ARG:HB3	1.94	0.50
1:O:102:PRO:O	1:O:104:SER:N	2.45	0.50
1:O:1371:VAL:O	1:O:1374:GLN:HB2	2.10	0.50
1:O:3252:PHE:HA	1:O:3287:ARG:NH2	2.26	0.50
1:O:3913:ILE:HD13	1:O:3987:ALA:HB3	1.93	0.50
1:O:4046:TYR:HB3	1:O:4059:ILE:HD11	1.94	0.50
3:G:18:SER:O	3:G:22:GLY:N	2.44	0.50
1:o:1412:LYS:O	1:o:1415:LEU:HB3	2.12	0.50
1:o:2205:VAL:O	1:o:2207:LYS:N	2.44	0.50
1:o:2538:ARG:HH21	1:o:2561:PHE:HB3	1.75	0.50
6:i:77:DG:O6	7:j:78:DT:N3	2.44	0.50
8:K:471:PHE:HB3	9:L:345:PHE:H	1.76	0.50
8:M:171:ASN:HB3	8:M:205:LEU:HD11	1.93	0.50
8:M:259:LEU:HB2	8:M:345:LEU:HD23	1.92	0.50
9:N:33:GLN:HB3	9:N:227:PHE:HB3	1.93	0.50
9:N:601:LEU:O	9:N:605:LYS:HB2	2.11	0.50
1:O:72:SER:HA	1:O:119:ARG:HH12	1.76	0.50
1:O:849:GLU:OE1	1:O:849:GLU:N	2.33	0.50
1:O:1955:VAL:HG23	1:O:1956:PHE:CD2	2.47	0.50
1:O:2428:ASP:O	1:O:2429:ASP:C	2.54	0.50
1:O:3702:PRO:HB2	1:O:3794:VAL:HG11	1.92	0.50
1:O:3917:ILE:HA	1:O:4050:LYS:HE2	1.93	0.50
2:D:52:SER:H	2:D:55:ALA:HB3	1.76	0.50
1:o:327:VAL:HG21	1:o:369:PHE:HE1	1.76	0.50
1:o:2376:ASP:OD1	1:o:2376:ASP:N	2.45	0.50
6:i:85:DG:H21	7:j:71:DT:H5'	1.77	0.50
6:i:145:DC:N3	7:j:10:DA:N6	2.59	0.50
9:N:209:LYS:HE3	9:N:213:ILE:HD11	1.94	0.50
1:O:291:VAL:HG13	1:O:340:TYR:CZ	2.46	0.50
1:O:356:ASN:OD1	1:O:406:ARG:NH2	2.45	0.50
1:O:860:GLY:CA	1:O:3136:THR:HG21	2.41	0.50
1:O:881:LYS:NZ	1:O:3933:GLU:O	2.33	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1423:ILE:HG12	1:O:1425:ALA:H	1.77	0.50
1:O:1774:MET:HB3	1:O:1777:LEU:HG	1.93	0.50
1:O:3723:ASP:HB2	1:O:3725:ARG:NH1	2.26	0.50
3:C:65:LEU:HD22	3:C:86:ALA:HB1	1.93	0.50
4:A:74:ILE:HD12	5:B:62:LEU:HD22	1.93	0.50
1:o:1342:MET:O	1:o:1346:THR:HG23	2.10	0.50
1:o:1849:ASP:OD1	1:o:1850:VAL:N	2.43	0.50
1:o:2360:PHE:CZ	1:o:2364:LEU:HD11	2.47	0.50
7:j:23:DA:H2''	7:j:24:DG:C8	2.46	0.50
7:j:107:DT:H2'	7:j:108:DT:H72	1.92	0.50
8:K:378:SER:O	8:K:380:THR:N	2.45	0.50
8:K:454:ALA:HA	9:L:375:VAL:HG13	1.91	0.50
1:O:70:ARG:HH22	1:O:81:CYS:HB3	1.75	0.50
1:O:718:MET:HB3	1:O:729:CYS:SG	2.51	0.50
1:O:1601:LEU:HD22	1:O:1655:ILE:HD13	1.92	0.50
1:O:1670:GLU:OE1	1:O:1670:GLU:N	2.38	0.50
1:O:1764:GLU:O	1:O:1768:ARG:NH1	2.45	0.50
1:O:2893:LEU:HD11	1:O:2922:ARG:HB3	1.93	0.50
1:O:3390:GLN:HA	1:O:3393:GLU:HG2	1.92	0.50
1:o:73:LEU:HB2	1:o:78:PHE:HD2	1.76	0.50
1:o:1211:VAL:HA	1:o:1214:GLU:HG2	1.93	0.50
1:o:1414:ILE:O	1:o:1418:HIS:N	2.39	0.50
1:o:1948:ALA:HA	1:o:1951:VAL:HG22	1.94	0.50
1:o:2321:GLU:HG2	1:o:2366:LYS:HD3	1.93	0.50
1:o:2569:SER:HB2	1:o:2572:TYR:HB2	1.93	0.50
1:o:3003:ASN:HD21	1:o:3046:ARG:HD3	1.76	0.50
1:o:3124:SER:O	1:o:3128:LYS:HG2	2.11	0.50
4:a:119:ILE:HB	5:b:43:VAL:HG21	1.94	0.50
9:L:404:GLN:HG3	9:L:421:TYR:OH	2.11	0.50
1:O:908:ASP:OD1	1:O:908:ASP:N	2.44	0.50
1:O:1483:LEU:HG	1:O:1514:LEU:HG	1.93	0.50
1:O:1642:LYS:HD2	1:O:1684:LEU:HD21	1.92	0.50
1:O:2169:LEU:O	1:O:2173:ALA:N	2.40	0.50
1:O:2796:ALA:O	1:O:2799:GLN:NE2	2.45	0.50
1:O:3002:TYR:O	1:O:3006:ALA:N	2.44	0.50
1:O:3090:TYR:HB3	1:O:3095:ASP:HB2	1.93	0.50
1:O:3151:LEU:O	1:O:3152:SER:C	2.53	0.50
2:D:59:MET:HA	2:D:62:PHE:CD2	2.47	0.50
3:c:55:LEU:HD23	3:c:58:LEU:HD21	1.94	0.50
3:c:109:PRO:HA	4:E:55:GLN:HB3	1.93	0.50
1:o:391:ARG:HA	1:o:394:GLN:HG2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:661:PRO:O	1:o:721:TYR:OH	2.23	0.50
1:o:864:GLY:HA2	1:o:867:ASN:HB2	1.94	0.50
1:o:1166:LEU:HB2	1:o:1199:PRO:HD2	1.93	0.50
1:o:2379:MET:HA	1:o:2382:VAL:HG22	1.92	0.50
1:o:3911:ILE:HD12	1:o:3937:VAL:HG13	1.93	0.50
7:j:69:DC:H2"	7:j:70:DG:C5	2.47	0.50
8:K:85:VAL:HG13	8:K:105:LEU:HB3	1.93	0.50
8:K:512:GLU:O	8:K:513:ALA:C	2.53	0.50
8:M:333:GLU:OE1	9:N:497:ARG:NH2	2.45	0.50
8:M:397:LEU:HA	8:M:412:ALA:HA	1.93	0.50
1:O:1180:GLN:HB3	1:O:1183:CYS:HB3	1.94	0.50
1:O:2533:SER:HB2	1:O:2565:MET:HE3	1.93	0.50
1:O:3153:SER:C	1:O:3155:VAL:N	2.69	0.50
5:B:78:ARG:HB3	7:j:105:DG:OP1	2.11	0.50
1:o:1756:PRO:O	1:o:1760:GLU:HG2	2.11	0.50
1:o:2414:GLN:OE1	1:o:2414:GLN:N	2.40	0.50
1:o:2837:LEU:HD22	1:o:2871:LEU:HB2	1.94	0.50
1:o:2986:PRO:HB2	1:o:2991:LYS:HG3	1.94	0.50
1:o:3443:PRO:HA	1:o:3446:VAL:HG22	1.94	0.50
1:o:3467:ARG:NH1	1:o:4000:ASN:OD1	2.45	0.50
1:o:3581:PRO:HD3	1:o:3674:SER:HB3	1.93	0.50
1:o:3911:ILE:HG21	1:o:3928:PHE:HE1	1.77	0.50
3:g:103:ALA:HB2	5:f:100:PHE:HA	1.94	0.50
8:K:475:SER:OG	8:K:476:ASP:N	2.45	0.50
8:K:525:PHE:O	8:K:529:VAL:HG22	2.11	0.50
9:L:16:VAL:HB	9:L:101:GLY:HA3	1.94	0.50
9:N:357:MET:O	9:N:423:GLN:HB3	2.12	0.50
9:N:647:ILE:HA	9:N:652:GLU:HB3	1.94	0.50
1:O:76:ILE:HG23	1:O:79:ARG:HD3	1.94	0.49
1:O:103:TYR:HA	1:O:106:GLU:HB3	1.93	0.49
1:O:111:CYS:O	1:O:130:LEU:HD11	2.12	0.49
1:O:535:LEU:HD11	1:O:565:TYR:CD1	2.47	0.49
1:O:669:LEU:HD13	1:O:672:ILE:HD11	1.94	0.49
1:O:1224:PHE:CE2	1:O:1287:GLN:HG2	2.47	0.49
1:O:1567:ILE:O	1:O:1571:LEU:HG	2.12	0.49
1:O:1952:ILE:HG12	1:O:1956:PHE:HE1	1.76	0.49
1:O:3008:TRP:O	1:O:3047:SER:OG	2.27	0.49
1:O:3746:ARG:NH1	1:O:3748:HIS:HB3	2.23	0.49
3:C:47:ALA:HA	2:H:91:ILE:HG21	1.93	0.49
2:H:101:GLY:H	2:H:104:ALA:HB3	1.77	0.49
1:o:117:LYS:HD3	1:o:119:ARG:HH22	1.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:473:PRO:HG3	1:o:1558:TYR:HD1	1.76	0.49
1:o:945:ALA:HB1	1:o:955:ALA:HB1	1.94	0.49
1:o:1715:GLU:HA	1:o:1718:ILE:HG12	1.94	0.49
1:o:2133:LEU:HD22	1:o:2146:LEU:HD22	1.93	0.49
1:o:3251:ASN:HB2	1:o:3254:LEU:HD21	1.94	0.49
1:o:4049:ARG:HG2	1:o:4054:ALA:HB2	1.93	0.49
5:b:26:ILE:HD13	5:b:58:LEU:HD23	1.94	0.49
7:j:110:DC:H2''	7:j:111:DT:O4'	2.13	0.49
6:I:71:DG:H2''	6:I:72:DG:C8	2.46	0.49
8:K:43:ASP:OD1	8:K:43:ASP:N	2.43	0.49
9:L:497:ARG:HD3	9:L:501:PRO:HA	1.94	0.49
1:O:714:VAL:HG12	1:O:733:LEU:HD11	1.93	0.49
1:O:907:LEU:HB3	1:O:937:MET:HE1	1.94	0.49
1:O:1606:ARG:HD2	1:O:2042:GLN:CD	2.37	0.49
1:O:2100:LEU:O	1:O:2104:MET:N	2.39	0.49
1:O:2251:ILE:O	1:O:2253:TYR:N	2.45	0.49
1:O:2388:LYS:NZ	8:K:157:VAL:O	2.37	0.49
1:O:3717:VAL:HG13	1:O:3743:HIS:H	1.77	0.49
1:O:3918:LEU:O	1:O:3946:PHE:HD1	1.96	0.49
4:A:65:LEU:HD12	7:j:95:DC:C6	2.42	0.49
1:o:119:ARG:HA	1:o:122:LYS:HG2	1.93	0.49
1:o:1151:ARG:HG3	1:o:1163:LEU:HD12	1.94	0.49
1:o:3387:GLU:O	1:o:3390:GLN:HG2	2.11	0.49
1:o:3706:ASP:OD1	1:o:3708:ARG:NH1	2.45	0.49
4:a:49:ARG:HD2	4:a:50:GLU:N	2.27	0.49
5:b:68:ASP:O	5:b:71:THR:HB	2.12	0.49
3:g:81:ARG:NH1	4:e:55:GLN:O	2.45	0.49
6:i:134:DG:OP1	9:L:402:ASN:N	2.39	0.49
7:j:15:DC:OP2	9:L:431:ARG:NH2	2.44	0.49
7:J:86:DG:H1'	7:J:87:DC:O4'	2.12	0.49
8:K:507:THR:OG1	8:K:508:LEU:N	2.45	0.49
9:L:660:LYS:HG2	9:L:687:THR:HA	1.94	0.49
8:M:92:LYS:HE3	8:M:135:MET:N	2.26	0.49
9:N:295:TYR:HB2	9:N:310:ILE:HD12	1.94	0.49
1:O:190:ILE:HG23	1:O:235:THR:HG21	1.94	0.49
1:O:345:PHE:HB3	1:O:366:TYR:CE1	2.46	0.49
1:O:486:GLY:O	1:O:490:ILE:HG12	2.11	0.49
1:O:1041:ILE:HD11	1:O:1056:THR:HG21	1.92	0.49
1:O:2184:TYR:HE1	1:O:2734:ARG:HB2	1.78	0.49
1:O:2422:GLN:OE1	1:O:2425:ARG:NH2	2.45	0.49
1:O:3003:ASN:OD1	1:O:3046:ARG:NH1	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:3259:LEU:HB3	1:O:3276:TRP:HE1	1.78	0.49
1:O:3413:TYR:HD2	1:O:3453:ALA:HB2	1.77	0.49
1:O:3629:ARG:HB2	1:O:3630:ARG:NH1	2.27	0.49
1:O:3950:THR:HG21	1:O:4064:LEU:HD23	1.93	0.49
3:c:18:SER:HA	3:c:23:LEU:HB2	1.94	0.49
1:o:1417:THR:O	1:o:1421:GLU:N	2.44	0.49
1:o:2246:LYS:HE2	1:o:2283:ASN:HB3	1.94	0.49
1:o:2894:GLU:OE2	1:o:3901:ARG:NH1	2.44	0.49
1:o:3901:ARG:HH11	1:o:3971:MET:HB3	1.77	0.49
5:b:58:LEU:HG	5:b:62:LEU:HD13	1.93	0.49
3:g:75:LYS:HB3	3:g:82:HIS:CE1	2.48	0.49
7:J:40:DG:H2''	7:J:41:DT:OP2	2.12	0.49
6:I:55:DG:C8	6:I:55:DG:H5'	2.47	0.49
8:M:90:THR:HG21	8:M:103:TYR:HB2	1.92	0.49
9:N:109:ASP:HA	9:N:112:ILE:HD12	1.95	0.49
1:O:862:LEU:HD22	1:O:866:ILE:HD13	1.95	0.49
1:O:1018:VAL:HG12	1:O:1074:LYS:HG2	1.93	0.49
1:O:1954:CYS:SG	1:O:1955:VAL:HG22	2.53	0.49
1:O:2442:MET:HE1	1:O:2446:LEU:HD22	1.95	0.49
4:E:71:VAL:HA	4:E:74:ILE:HG22	1.95	0.49
1:o:358:GLU:HG3	1:o:359:LEU:HD12	1.94	0.49
1:o:850:GLU:HA	1:o:853:ILE:HG12	1.93	0.49
1:o:893:SER:H	1:o:944:LYS:HZ3	1.59	0.49
1:o:1347:THR:O	1:o:1352:SER:N	2.43	0.49
1:o:2288:TYR:HE2	1:o:2296:SER:HA	1.77	0.49
1:o:2978:LYS:O	1:o:2981:TRP:NE1	2.46	0.49
1:o:3114:TYR:HA	1:o:3117:ILE:HB	1.94	0.49
1:o:3778:ASP:HB3	1:o:3781:CYS:HB2	1.94	0.49
4:a:116:ARG:NH2	4:e:113:HIS:O	2.45	0.49
2:h:70:ILE:O	2:h:73:GLU:HG3	2.11	0.49
8:K:35:ARG:HE	8:K:80:ARG:HG3	1.77	0.49
9:L:465:LYS:O	9:L:474:GLU:N	2.45	0.49
1:O:245:SER:O	1:O:249:PHE:N	2.39	0.49
1:O:1588:ASP:OD1	1:O:1589:ASN:N	2.44	0.49
1:O:2412:TYR:O	1:O:2415:LEU:HG	2.13	0.49
1:O:2513:GLU:OE1	1:O:2513:GLU:N	2.45	0.49
1:O:3784:ARG:HB3	1:O:3786:LEU:HD13	1.93	0.49
2:D:117:LYS:NZ	3:G:20:ARG:O	2.46	0.49
1:o:1914:THR:HG22	9:L:728:LEU:HD21	1.93	0.49
1:o:2129:LEU:HB3	1:o:2146:LEU:HD11	1.94	0.49
5:b:78:ARG:HH22	7:J:106:DA:P	2.36	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:g:103:ALA:H	2:h:58:ILE:HD11	1.77	0.49
6:I:42:DG:H2''	6:I:43:DA:C8	2.47	0.49
8:K:260:LYS:HA	8:K:270:SER:HA	1.94	0.49
9:N:628:GLU:O	9:N:631:TYR:N	2.44	0.49
9:N:731:MET:SD	9:N:731:MET:N	2.79	0.49
1:O:123:CYS:HB2	1:O:127:ALA:HB2	1.95	0.49
1:O:242:PRO:O	1:O:245:SER:HB2	2.12	0.49
1:O:793:LEU:HD23	1:O:869:ASN:HB2	1.95	0.49
1:O:985:GLU:HA	1:O:988:VAL:HG22	1.94	0.49
1:O:1569:THR:OG1	1:O:1603:GLN:NE2	2.38	0.49
1:O:1714:LEU:HB3	1:O:1761:LEU:HD11	1.93	0.49
1:O:2135:ASN:ND2	1:O:2137:ILE:O	2.46	0.49
1:O:3691:LYS:HA	1:O:3722:PHE:HZ	1.77	0.49
1:O:3895:GLU:OE1	1:O:3895:GLU:N	2.35	0.49
3:G:104:GLN:NE2	4:A:94:GLU:OE1	2.46	0.49
3:c:57:TYR:CZ	2:d:106:HIS:HB3	2.47	0.49
4:E:121:PRO:HD3	5:F:50:ILE:HG12	1.95	0.49
1:o:433:PRO:HB3	1:o:2047:THR:HG22	1.95	0.49
1:o:473:PRO:HG3	1:o:1558:TYR:CD1	2.48	0.49
1:o:1414:ILE:HG12	1:o:1418:HIS:CE1	2.47	0.49
1:o:3481:SER:O	1:o:3485:LYS:NZ	2.46	0.49
1:o:3884:LYS:HE3	1:o:3971:MET:HA	1.94	0.49
6:I:132:DC:H5''	9:N:265:LYS:HG3	1.94	0.49
8:K:87:PHE:HE2	8:K:105:LEU:HD22	1.77	0.49
8:M:117:LEU:HD11	8:M:495:LEU:HA	1.94	0.49
8:M:141:TYR:N	8:M:179:ASP:OD2	2.46	0.49
1:O:99:LYS:C	1:O:101:ALA:H	2.20	0.49
1:O:221:ALA:O	1:O:224:LEU:HG	2.13	0.49
1:O:798:GLY:O	1:O:800:LEU:N	2.45	0.49
1:O:1568:ASN:O	1:O:1572:LEU:HG	2.11	0.49
1:O:1626:TRP:CZ2	1:O:1674:THR:HG21	2.44	0.49
1:O:2345:VAL:O	1:O:2349:LEU:N	2.43	0.49
1:O:2768:GLN:OE1	1:O:2769:VAL:N	2.44	0.49
1:O:3167:ARG:NH1	1:O:3168:TYR:O	2.46	0.49
1:O:4055:ASN:ND2	1:O:4058:VAL:HG23	2.28	0.49
4:E:76:GLN:NE2	4:E:81:ASP:O	2.42	0.49
1:o:2361:ILE:HD12	1:o:2393:LEU:HB3	1.94	0.49
1:o:3572:ILE:HG21	1:o:3797:THR:HG21	1.94	0.49
6:i:35:DG:H2''	6:i:36:DA:H5''	1.94	0.49
7:J:76:DG:H2''	7:J:77:DC:C6	2.48	0.49
8:K:147:LEU:HA	8:K:150:CYS:SG	2.53	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:L:496:HIS:O	9:L:500:HIS:N	2.32	0.49
8:M:97:VAL:O	8:M:97:VAL:HG12	2.13	0.49
8:M:304:ASN:ND2	8:M:308:GLY:O	2.45	0.49
1:O:675:ARG:NH2	1:O:735:SER:HB2	2.28	0.49
1:O:1189:GLU:O	1:O:1193:LYS:HG2	2.11	0.49
1:O:1338:VAL:O	1:O:1341:ILE:HG12	2.13	0.49
1:O:1685:ASP:OD1	1:O:1686:LEU:N	2.46	0.49
1:O:3040:TYR:HB2	1:O:3044:MET:HE1	1.94	0.49
1:O:3586:LYS:HE2	1:O:3668:LEU:HG	1.95	0.49
1:o:217:LEU:HD13	1:o:221:ALA:HB2	1.95	0.49
1:o:989:MET:HA	1:o:992:ILE:HG12	1.94	0.49
1:o:1632:TRP:CE2	1:o:1645:VAL:HG11	2.47	0.49
1:o:2234:ASN:O	1:o:2238:ILE:HG12	2.12	0.49
1:o:3052:LEU:HB3	1:o:3092:LEU:HD22	1.95	0.49
1:o:3130:GLN:HB3	1:o:3178:ILE:HG12	1.94	0.49
8:M:102:ILE:HD11	8:M:146:VAL:HG22	1.95	0.49
8:M:206:LYS:HD3	8:M:211:PHE:CD2	2.48	0.49
1:O:183:GLU:HG2	1:O:184:VAL:H	1.78	0.49
1:O:236:LYS:HD3	1:O:237:SER:H	1.77	0.49
1:O:571:SER:HA	1:O:574:LYS:HG2	1.95	0.49
1:O:579:LEU:HD21	1:O:623:PHE:HB2	1.95	0.49
1:O:1206:LEU:O	1:O:1209:LYS:N	2.46	0.49
1:O:1290:LEU:H	1:O:1290:LEU:HD12	1.78	0.49
1:O:1296:PHE:HA	1:O:1299:GLU:HG2	1.95	0.49
1:O:2394:LYS:O	1:O:2398:LEU:HG	2.13	0.49
1:O:3585:PHE:HD1	1:O:3613:MET:HE2	1.78	0.49
1:O:3872:ARG:O	1:O:3876:SER:OG	2.24	0.49
1:O:3923:ARG:NH1	1:O:4123:GLY:O	2.46	0.49
1:o:74:ASN:HA	1:o:122:LYS:HE2	1.94	0.49
1:o:174:VAL:O	1:o:177:LEU:HB2	2.13	0.49
1:o:655:LEU:O	1:o:659:ARG:HG2	2.11	0.49
1:o:3086:LEU:HB2	1:o:3102:TYR:HE2	1.77	0.49
1:o:3274:VAL:HG22	1:o:3308:ASP:HB2	1.95	0.49
1:o:3527:GLN:HE22	1:o:3700:GLU:H	1.61	0.49
4:a:83:ARG:HE	6:I:53:DT:H4'	1.78	0.49
4:a:127:ALA:C	4:a:131:ARG:HE	2.20	0.49
5:b:34:ILE:HA	5:b:37:LEU:HD12	1.93	0.49
9:L:12:LEU:HB2	9:L:57:VAL:H	1.78	0.49
8:M:289:TYR:HB2	8:M:294:GLU:H	1.77	0.49
1:O:360:SER:HA	1:O:363:ILE:HD12	1.95	0.49
1:O:621:SER:O	1:O:624:ILE:HG12	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1369:MET:HB2	1:O:1418:HIS:CG	2.48	0.49
1:O:1577:LEU:HA	1:O:1580:LEU:HD12	1.95	0.49
1:O:2121:ASP:HA	1:O:2126:MET:HG2	1.95	0.49
1:O:3950:THR:HB	1:O:4063:GLU:OE1	2.13	0.49
1:o:851:ILE:HD13	1:o:854:ARG:HH22	1.78	0.49
1:o:1278:ALA:HB2	1:o:1352:SER:HB3	1.95	0.49
1:o:1361:LYS:HA	1:o:1365:ASN:HA	1.93	0.49
1:o:1741:ASP:O	1:o:1744:LYS:HG2	2.12	0.49
1:o:3420:CYS:HB3	1:o:3446:VAL:HG21	1.95	0.49
1:o:3860:LYS:HE2	1:o:4072:PRO:HB2	1.94	0.49
5:b:92:ARG:O	5:b:92:ARG:NE	2.45	0.49
5:f:97:LEU:HA	5:f:100:PHE:CE1	2.48	0.49
6:i:34:DA:H2''	6:i:35:DG:C8	2.48	0.49
7:j:40:DG:H2''	7:j:41:DT:OP2	2.11	0.49
7:J:121:DC:O2	7:J:122:DC:N4	2.46	0.49
8:K:219:ASP:OD1	8:K:220:ILE:HG13	2.13	0.49
8:M:261:LEU:C	8:M:268:VAL:N	2.70	0.49
8:M:478:PHE:HE2	9:N:343:LEU:HD13	1.78	0.49
1:O:77:GLU:O	1:O:80:GLU:HG2	2.12	0.48
1:O:100:ILE:O	1:O:103:TYR:N	2.46	0.48
1:O:345:PHE:CZ	1:O:365:GLY:HA3	2.48	0.48
1:O:471:LYS:O	1:O:475:LEU:N	2.37	0.48
1:O:1693:VAL:HB	1:O:1696:LEU:HD23	1.94	0.48
1:O:1765:VAL:HA	1:O:1768:ARG:HH12	1.78	0.48
1:O:1785:ILE:HD12	1:O:1788:ARG:HD3	1.94	0.48
1:O:2397:CYS:O	1:O:2401:VAL:HG23	2.13	0.48
1:O:3531:TYR:HB2	1:O:3532:PRO:HD3	1.95	0.48
1:O:3531:TYR:HD1	1:O:3796:MET:HG3	1.77	0.48
1:O:3792:SER:O	1:O:3803:ILE:HG13	2.12	0.48
3:C:102:ILE:HD12	2:H:58:ILE:HD13	1.94	0.48
5:B:78:ARG:NH2	5:B:80:THR:OG1	2.46	0.48
1:o:1724:MET:HA	1:o:1768:ARG:HE	1.76	0.48
1:o:1730:PRO:HG2	1:o:1733:THR:HG21	1.94	0.48
7:J:12:DT:H2''	7:J:13:DC:H5	1.78	0.48
7:J:31:DC:H2''	7:J:32:DA:C4	2.48	0.48
8:K:441:ASP:HB2	9:L:270:GLU:HG2	1.95	0.48
9:L:118:ILE:O	9:L:122:THR:HG23	2.13	0.48
8:M:260:LYS:HB3	8:M:270:SER:N	2.28	0.48
8:M:275:ASN:OD1	8:M:278:GLN:NE2	2.46	0.48
9:N:319:ASP:OD1	9:N:320:ILE:N	2.46	0.48
9:N:489:ARG:NH1	9:N:507:PRO:O	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1060:PHE:HA	1:O:1063:LEU:HD12	1.95	0.48
1:O:2533:SER:O	1:O:2538:ARG:N	2.40	0.48
1:O:2956:ALA:O	1:O:2959:ALA:N	2.46	0.48
2:D:59:MET:HA	2:D:62:PHE:CE2	2.48	0.48
2:d:89:ARG:O	2:d:92:GLN:HG3	2.13	0.48
1:o:1712:ARG:HH21	1:o:1716:GLN:HB3	1.77	0.48
1:o:2187:VAL:HB	1:o:2728:LEU:HD11	1.95	0.48
1:o:3915:HIS:NE2	1:o:3961:PHE:HA	2.28	0.48
1:o:4054:ALA:HA	1:o:4096:SER:HA	1.95	0.48
7:j:63:DA:H2''	7:j:64:DA:C8	2.48	0.48
7:J:99:DC:N4	6:I:56:DG:H1	2.10	0.48
8:K:318:ARG:HH21	9:L:278:VAL:HG13	1.78	0.48
1:O:763:THR:O	1:O:766:ALA:N	2.47	0.48
1:O:1202:ARG:H	1:O:1206:LEU:HD12	1.78	0.48
1:O:1220:LEU:O	1:O:1224:PHE:N	2.41	0.48
1:O:2197:THR:HG1	1:O:2721:GLY:N	2.12	0.48
1:O:2429:ASP:O	1:O:2430:GLU:C	2.55	0.48
1:O:2461:PHE:CB	1:O:2473:MET:HE1	2.44	0.48
1:O:2785:ILE:HG13	1:O:2789:SER:HB2	1.95	0.48
1:O:2898:LEU:HB3	1:O:2899:ARG:CZ	2.42	0.48
1:O:2953:THR:HG22	1:O:2994:TRP:HE1	1.78	0.48
1:O:3052:LEU:HD13	1:O:3056:GLU:O	2.13	0.48
1:O:3300:VAL:HG13	1:O:3337:ILE:HG13	1.95	0.48
1:O:3360:LEU:HA	1:O:3363:SER:HB3	1.95	0.48
1:O:3463:LEU:HA	1:O:3498:TRP:CZ2	2.48	0.48
1:O:4083:GLY:HA3	1:O:4088:ASN:HD22	1.78	0.48
4:A:64:LYS:H	7:j:95:DC:P	2.35	0.48
4:E:74:ILE:HD13	5:F:66:ILE:HD11	1.94	0.48
5:F:52:GLU:HA	5:F:55:ARG:HB2	1.95	0.48
1:o:176:GLU:H	1:o:223:CYS:HB3	1.79	0.48
1:o:1452:VAL:HA	1:o:1517:LEU:HD21	1.94	0.48
1:o:2307:MET:HB3	1:o:2319:ALA:HB3	1.95	0.48
1:o:2427:ARG:HH21	1:o:2465:PRO:HG2	1.79	0.48
1:o:4047:ALA:HA	1:o:4050:LYS:HD2	1.95	0.48
7:j:10:DA:H8	7:j:11:DA:N7	2.11	0.48
7:J:121:DC:H1'	7:J:122:DC:C4	2.48	0.48
9:N:640:ARG:NH2	9:N:682:GLY:HA2	2.28	0.48
1:O:717:LYS:NZ	1:O:1120:SER:OG	2.46	0.48
1:O:734:LEU:HD23	1:O:769:GLY:HA2	1.95	0.48
1:O:986:PRO:O	1:O:990:GLN:HB2	2.13	0.48
1:O:1282:LEU:HD12	1:O:1359:LEU:HD22	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1389:VAL:HG22	1:O:1391:VAL:H	1.78	0.48
1:O:1714:LEU:HD23	1:O:1717:LEU:HD12	1.95	0.48
1:O:1824:LEU:O	1:O:1825:LEU:C	2.55	0.48
1:O:2362:VAL:O	1:O:2366:LYS:HG2	2.13	0.48
1:O:3236:PHE:HE1	1:O:3265:GLU:HG3	1.77	0.48
3:c:88:ARG:HH22	3:c:97:LEU:HB2	1.78	0.48
1:o:38:LEU:HB3	1:o:84:GLU:OE1	2.13	0.48
1:o:847:SER:N	1:o:850:GLU:OE2	2.47	0.48
1:o:932:GLU:HB3	1:o:2793:PRO:HB3	1.96	0.48
1:o:972:LEU:HA	1:o:975:ASP:HB3	1.95	0.48
1:o:1725:GLN:OE1	1:o:1728:GLU:N	2.47	0.48
1:o:2375:ALA:HB3	1:o:2404:ARG:HD3	1.96	0.48
1:o:3135:LEU:HA	1:o:3138:ILE:HG22	1.96	0.48
1:o:4082:ARG:HH12	1:o:4089:ILE:HG22	1.78	0.48
8:K:510:LYS:N	8:K:514:MET:HE2	2.27	0.48
8:K:512:GLU:HG2	8:K:513:ALA:N	2.28	0.48
9:L:529:PRO:HA	9:L:532:LYS:HD3	1.96	0.48
9:L:684:THR:C	9:L:686:ILE:N	2.71	0.48
1:O:67:VAL:HG12	1:O:70:ARG:HE	1.77	0.48
1:O:348:ILE:HG13	1:O:362:ALA:HB2	1.94	0.48
1:O:947:GLN:HG2	1:O:2577:PHE:CE1	2.48	0.48
1:O:3041:LEU:HA	1:O:3044:MET:HE2	1.94	0.48
1:O:3129:LEU:HA	1:O:3132:VAL:HG22	1.96	0.48
1:O:3809:THR:HG1	1:O:3930:VAL:C	2.21	0.48
1:o:13:LEU:HB2	1:o:59:PHE:CZ	2.48	0.48
1:o:443:ILE:HB	1:o:489:ARG:HH22	1.79	0.48
1:o:698:PRO:HD2	1:o:1442:GLN:HG3	1.95	0.48
1:o:738:HIS:HB2	1:o:780:ILE:HD11	1.95	0.48
1:o:934:LEU:HA	1:o:937:MET:HG2	1.96	0.48
1:o:1833:LEU:HB2	1:o:1883:ARG:NH2	2.26	0.48
1:o:2140:LEU:HA	1:o:2143:ARG:HD3	1.94	0.48
1:o:3008:TRP:HB2	1:o:3011:LEU:HD12	1.95	0.48
1:o:3442:TYR:HB3	1:o:3443:PRO:HD3	1.96	0.48
1:o:3691:LYS:HD2	1:o:3721:GLY:HA2	1.95	0.48
4:a:61:LEU:HB2	5:b:37:LEU:HG	1.95	0.48
2:h:69:ARG:CZ	2:h:102:GLU:HG3	2.43	0.48
6:i:94:DA:H2"	6:i:95:DG:C8	2.49	0.48
9:L:19:THR:O	9:L:23:SER:N	2.47	0.48
9:N:601:LEU:HD22	9:N:612:ALA:HB2	1.95	0.48
1:O:956:PRO:HA	1:O:959:TYR:HD2	1.78	0.48
1:O:1348:LEU:O	1:O:1352:SER:OG	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1408:MET:HE2	1:O:1408:MET:N	2.29	0.48
1:O:1605:PHE:HB3	1:O:2042:GLN:NE2	2.24	0.48
1:O:2104:MET:HB3	1:O:2123:PRO:HG3	1.96	0.48
1:O:3568:ILE:HD11	1:O:3699:LEU:HD22	1.95	0.48
1:O:3837:CYS:O	1:O:3841:ASP:HB3	2.13	0.48
4:A:90:MET:HA	4:A:93:GLN:OE1	2.13	0.48
1:o:720:GLN:OE1	1:o:1026:ARG:NH1	2.46	0.48
1:o:897:PRO:HD3	1:o:2787:HIS:HD2	1.79	0.48
1:o:994:TRP:CE2	1:o:1000:LYS:HB2	2.49	0.48
1:o:1436:LEU:HD23	1:o:1510:LEU:HB3	1.95	0.48
1:o:1632:TRP:HE1	1:o:1641:THR:CG2	2.20	0.48
1:o:2275:GLN:NE2	1:o:2275:GLN:O	2.44	0.48
1:o:3606:ILE:HG22	1:o:3610:TYR:HB2	1.95	0.48
4:e:61:LEU:O	5:f:36:ARG:NH2	2.46	0.48
8:K:47:ALA:O	8:K:50:GLU:HG2	2.13	0.48
8:K:392:LYS:NZ	9:L:459:ASP:HB3	2.29	0.48
8:M:462:MET:HB3	8:M:525:PHE:CE1	2.48	0.48
1:O:385:TYR:O	1:O:389:ILE:HG12	2.13	0.48
1:O:1766:LEU:O	1:O:1822:ARG:NH1	2.45	0.48
1:O:2157:PHE:HB3	1:O:2164:TRP:CD1	2.49	0.48
1:O:2371:PHE:CD2	1:O:2374:LEU:HB2	2.49	0.48
1:O:2958:LEU:O	1:O:2962:ARG:HG2	2.14	0.48
3:G:23:LEU:HD22	3:G:56:GLU:HG3	1.95	0.48
1:o:2517:LEU:HA	1:o:2520:ILE:HG22	1.95	0.48
1:o:3622:ALA:HB3	1:o:3630:ARG:HE	1.77	0.48
1:o:3676:PRO:HG3	1:o:3681:LYS:HG2	1.96	0.48
1:o:3693:GLU:HA	1:o:3720:ALA:HB1	1.96	0.48
1:o:3818:ASN:O	1:o:3889:ARG:NH1	2.46	0.48
1:o:3856:MET:SD	1:o:3856:MET:N	2.87	0.48
4:e:103:LEU:O	4:e:107:THR:HG23	2.14	0.48
6:i:118:DC:N4	7:j:34:DT:O4	2.46	0.48
8:K:217:TYR:O	8:K:218:ARG:C	2.55	0.48
8:K:271:VAL:HG12	8:K:370:PRO:HA	1.96	0.48
8:K:288:LEU:HD13	8:K:293:ASN:HA	1.95	0.48
9:L:14:MET:HB2	9:L:135:PHE:CE2	2.49	0.48
8:M:177:GLY:HA3	8:M:216:PHE:HE2	1.79	0.48
8:M:406:ILE:HG13	8:M:407:PRO:HD2	1.96	0.48
1:O:584:GLU:CD	1:O:585:ILE:H	2.21	0.48
1:O:3483:MET:O	1:O:3486:GLU:HG2	2.14	0.48
1:O:4040:PRO:O	1:O:4044:ILE:HG12	2.12	0.48
5:F:23:ARG:HB3	5:F:26:ILE:HG12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:175:TYR:HE2	1:o:220:LEU:HD23	1.78	0.48
1:o:447:PRO:HD3	1:o:527:TYR:OH	2.13	0.48
1:o:635:PRO:HG3	1:o:675:ARG:HH22	1.77	0.48
1:o:1053:PRO:O	1:o:1058:SER:OG	2.30	0.48
1:o:1101:PHE:HB2	1:o:1151:ARG:NH1	2.29	0.48
1:o:1346:THR:HG22	1:o:1402:LEU:HA	1.96	0.48
1:o:2155:GLU:H	1:o:2155:GLU:CD	2.22	0.48
1:o:3583:LEU:HD13	1:o:3734:ARG:HD2	1.94	0.48
6:i:41:DG:N2	6:i:42:DG:O6	2.47	0.48
7:J:122:DC:O2	6:I:33:DG:N2	2.46	0.48
8:K:34:GLY:N	8:K:162:SER:HG	2.11	0.48
8:K:446:MET:HE2	9:L:363:LYS:HG2	1.96	0.48
9:L:17:GLY:HA2	9:L:103:GLN:O	2.14	0.48
9:L:160:SER:OG	9:L:223:GLU:OE1	2.32	0.48
9:L:161:LEU:HD13	9:L:163:PHE:CE2	2.46	0.48
8:M:42:VAL:HG22	8:M:169:PHE:HB2	1.96	0.48
8:M:151:ALA:HA	8:M:193:LEU:HD11	1.95	0.48
9:N:280:ASP:OD2	9:N:282:LYS:NZ	2.46	0.48
9:N:500:HIS:ND1	9:N:503:GLU:OE2	2.37	0.48
1:O:96:MET:HG2	1:O:100:ILE:HG13	1.96	0.48
1:O:175:TYR:HB3	1:O:227:LEU:HB2	1.96	0.48
1:O:242:PRO:HB2	1:O:246:ARG:HH12	1.79	0.48
1:O:724:GLU:OE2	1:O:2600:THR:N	2.39	0.48
1:O:1961:PHE:HB3	9:N:729:LEU:HD11	1.95	0.48
1:O:2101:VAL:O	1:O:2104:MET:HB2	2.13	0.48
1:O:2533:SER:C	1:O:2535:THR:N	2.72	0.48
1:O:3575:LEU:HD21	1:O:3687:MET:HG3	1.95	0.48
2:D:40:LYS:HE3	3:G:24:GLN:HB3	1.96	0.48
3:c:63:LEU:HD22	2:d:42:LEU:HB2	1.95	0.48
2:d:114:ALA:O	2:d:118:TYR:N	2.43	0.48
1:o:943:GLY:O	1:o:946:THR:OG1	2.25	0.48
1:o:1776:GLU:O	1:o:1779:GLN:NE2	2.46	0.48
1:o:3171:ALA:HA	1:o:3179:TRP:HZ2	1.79	0.48
1:o:3609:MET:HE3	1:o:3799:ARG:HH22	1.79	0.48
1:o:3878:VAL:O	1:o:3965:ARG:NH2	2.45	0.48
1:o:3958:LEU:HD13	1:o:4064:LEU:HD11	1.96	0.48
1:o:4115:ASN:OD1	1:o:4116:ILE:N	2.47	0.48
5:b:65:VAL:HA	5:b:68:ASP:HB2	1.96	0.48
3:g:81:ARG:HH21	3:g:109:PRO:HD3	1.78	0.48
2:h:97:LEU:O	2:h:104:ALA:HB2	2.14	0.48
6:i:88:DC:H42	7:j:65:DC:H42	1.59	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:K:74:LYS:HE2	8:K:79:ASP:HB3	1.96	0.48
8:K:363:ARG:HH12	9:L:359:ASN:HB3	1.79	0.48
8:M:416:GLN:HE21	9:N:354:ARG:HD2	1.79	0.48
9:N:44:ARG:HB2	9:N:238:LYS:C	2.39	0.48
9:N:248:PRO:HB2	9:N:262:ALA:HB1	1.96	0.48
1:O:656:GLN:HA	1:O:659:ARG:HB2	1.96	0.48
1:O:776:TRP:C	1:O:785:MET:HE1	2.39	0.48
1:O:1139:GLU:HA	1:O:1142:HIS:HB2	1.95	0.48
1:O:1437:TYR:CD1	1:O:1503:LEU:HB3	2.49	0.48
1:O:2128:PHE:HD1	1:O:2129:LEU:HD22	1.79	0.48
1:O:2435:CYS:O	1:O:2439:ILE:HG12	2.13	0.48
1:O:3011:LEU:HD23	1:O:3047:SER:HB2	1.94	0.48
1:O:3265:GLU:O	1:O:3268:THR:OG1	2.30	0.48
1:O:3557:ARG:O	1:O:3561:LYS:NZ	2.45	0.48
3:C:17:ARG:HB3	3:C:27:VAL:HB	1.96	0.48
4:A:104:PHE:O	4:A:108:ASN:ND2	2.47	0.48
5:F:66:ILE:O	5:F:70:VAL:N	2.37	0.48
1:o:643:GLU:HA	1:o:646:VAL:HG13	1.94	0.48
1:o:1265:GLU:HG3	1:o:1340:ARG:HH11	1.79	0.48
1:o:1801:VAL:O	1:o:1804:MET:HG3	2.14	0.48
1:o:2398:LEU:O	1:o:2402:LEU:N	2.45	0.48
1:o:2938:VAL:O	1:o:2942:ILE:HG12	2.14	0.48
1:o:3575:LEU:HD13	1:o:3752:VAL:HG11	1.96	0.48
1:o:3643:HIS:HB3	1:o:3659:PHE:CZ	2.49	0.48
1:o:3878:VAL:HG11	1:o:4127:TRP:HD1	1.79	0.48
5:b:68:ASP:HB3	5:b:89:ALA:HB1	1.95	0.48
6:i:118:DC:H2"	6:i:119:DA:C8	2.48	0.48
9:L:146:GLN:O	9:L:148:ASP:N	2.47	0.48
8:M:266:ASP:OD1	8:M:347:LEU:N	2.47	0.48
9:N:726:ASP:HA	9:N:729:LEU:HB2	1.96	0.48
1:O:170:VAL:HG23	1:O:171:LEU:HD22	1.95	0.47
1:O:993:HIS:ND1	1:O:2779:ASP:OD1	2.43	0.47
1:O:1339:VAL:HG23	1:O:1398:VAL:HG11	1.96	0.47
1:O:3085:GLU:OE1	1:O:3085:GLU:N	2.36	0.47
1:O:3582:GLU:O	1:O:3586:LYS:HG2	2.13	0.47
2:d:40:LYS:HA	2:d:43:LYS:HB2	1.96	0.47
4:E:61:LEU:HD22	5:F:36:ARG:HD2	1.96	0.47
1:o:1250:LEU:O	1:o:1254:LEU:HG	2.14	0.47
1:o:1661:PHE:H	1:o:1665:HIS:CG	2.32	0.47
1:o:2560:ASN:ND2	1:o:2795:GLN:HB2	2.29	0.47
1:o:3034:PRO:HD2	1:o:3037:GLN:HB2	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:3049:LEU:HD12	1:o:3052:LEU:HD12	1.96	0.47
1:o:3502:MET:HB2	1:o:3514:VAL:HG11	1.94	0.47
3:g:104:GLN:HG3	2:h:54:LYS:HG3	1.95	0.47
8:K:80:ARG:HA	8:K:110:ASN:ND2	2.29	0.47
9:L:130:ARG:O	9:L:160:SER:N	2.43	0.47
9:L:361:VAL:HG13	9:L:420:VAL:HG13	1.95	0.47
9:L:676:GLU:O	9:L:679:VAL:HG12	2.14	0.47
1:O:584:GLU:O	1:O:613:HIS:N	2.45	0.47
1:O:780:ILE:HB	1:O:785:MET:HE3	1.96	0.47
1:O:899:ARG:HD3	1:O:2568:MET:HB3	1.96	0.47
1:O:1413:ASP:OD1	1:O:1414:ILE:N	2.38	0.47
1:O:3563:ASP:HB3	1:O:3696:ARG:NH2	2.29	0.47
4:A:67:PHE:CE1	5:B:62:LEU:HD21	2.49	0.47
3:c:107:VAL:HG21	5:F:40:ARG:HB2	1.95	0.47
1:o:418:ALA:HB2	1:o:464:VAL:HG12	1.95	0.47
1:o:460:ALA:O	1:o:464:VAL:HG13	2.14	0.47
1:o:1019:ASP:OD1	1:o:1019:ASP:N	2.46	0.47
1:o:2449:VAL:O	1:o:2452:ARG:HG2	2.14	0.47
1:o:3916:TRP:HH2	1:o:4103:GLN:HE21	1.63	0.47
5:b:88:TYR:CZ	2:h:80:TYR:HE2	2.32	0.47
2:h:51:ILE:HD12	2:h:56:MET:HB2	1.96	0.47
7:j:103:DG:H2''	7:j:104:DG:O5'	2.14	0.47
9:L:405:VAL:HB	9:L:426:PHE:CE2	2.49	0.47
8:M:85:VAL:HG23	8:M:106:GLN:HB3	1.95	0.47
8:M:111:PRO:HA	8:M:115:ARG:HH11	1.79	0.47
9:N:10:VAL:HB	9:N:54:ILE:HA	1.95	0.47
1:O:1069:HIS:HD2	1:O:3741:ARG:HD3	1.78	0.47
1:O:1483:LEU:HD13	1:O:1515:LEU:HD23	1.95	0.47
1:O:1490:GLY:C	1:O:1492:ALA:N	2.69	0.47
1:O:1504:ASP:OD1	1:O:1505:LEU:N	2.48	0.47
1:O:2185:MET:O	1:O:2189:ILE:HG12	2.14	0.47
1:O:2196:TRP:CD1	1:O:2200:ALA:HB3	2.49	0.47
1:O:2514:ASN:HD22	1:O:2517:LEU:HG	1.79	0.47
1:O:3469:LEU:HA	1:O:3472:ILE:HD12	1.96	0.47
2:D:58:ILE:HG12	5:B:99:GLY:HA2	1.95	0.47
3:C:43:VAL:HG22	2:H:85:THR:HG23	1.96	0.47
4:A:39:HIS:HB2	7:j:86:DG:H21	1.78	0.47
3:c:45:ALA:N	7:j:115:DT:O5'	2.46	0.47
5:F:34:ILE:HA	5:F:37:LEU:HB2	1.95	0.47
1:o:1475:LEU:HG	1:o:1524:LEU:HD22	1.95	0.47
1:o:1487:VAL:HG23	1:o:1562:LEU:HD12	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:1801:VAL:HA	1:o:1804:MET:HG3	1.97	0.47
4:a:103:LEU:HD21	4:a:124:ILE:HG23	1.96	0.47
5:b:67:ARG:O	5:b:70:VAL:HG12	2.14	0.47
3:g:59:THR:HG22	2:h:41:VAL:HG11	1.97	0.47
6:i:39:DA:H1'	7:j:116:DA:H2	1.79	0.47
8:K:145:GLU:O	8:K:149:VAL:HG23	2.13	0.47
8:M:301:ARG:HG2	9:N:294:VAL:HG22	1.96	0.47
8:M:325:ARG:HH22	8:M:328:ILE:HD12	1.77	0.47
9:N:700:GLU:HA	9:N:703:LYS:HG2	1.95	0.47
1:O:16:GLN:HG2	1:O:59:PHE:HB3	1.95	0.47
1:O:1375:THR:HG23	1:O:1395:LEU:HD11	1.96	0.47
1:O:1782:PHE:HB3	1:O:1827:LEU:HB3	1.96	0.47
1:O:1785:ILE:HA	1:O:1788:ARG:HG2	1.95	0.47
1:O:2211:LEU:O	1:O:2215:LEU:HG	2.15	0.47
1:O:3166:ASN:HB3	1:O:3186:ARG:CZ	2.44	0.47
1:O:3631:LYS:O	1:O:3635:THR:OG1	2.26	0.47
1:O:3811:THR:HA	1:O:3929:MET:HA	1.95	0.47
2:D:37:TYR:HA	2:D:40:LYS:HE3	1.96	0.47
2:D:116:THR:O	2:D:119:THR:OG1	2.26	0.47
4:A:70:LEU:HB2	5:B:25:ASN:HB3	1.96	0.47
5:B:22:LEU:O	5:B:23:ARG:NE	2.46	0.47
3:c:111:ILE:HD13	5:F:42:GLY:HA3	1.96	0.47
4:E:124:ILE:O	4:E:128:ARG:HG3	2.14	0.47
1:o:3487:ILE:HG13	1:o:3516:HIS:HB2	1.95	0.47
1:o:3498:TRP:O	1:o:3502:MET:HG2	2.14	0.47
1:o:3836:PRO:HG2	1:o:3877:LYS:HG3	1.95	0.47
4:e:122:LYS:O	4:e:125:GLN:HG3	2.12	0.47
6:i:118:DC:N3	6:i:119:DA:N6	2.62	0.47
7:j:51:DT:H1'	7:j:52:DA:N7	2.30	0.47
6:I:136:DA:H2''	6:I:137:DC:H5'	1.95	0.47
9:L:336:GLU:HG2	9:L:339:CYS:SG	2.54	0.47
8:M:370:PRO:HG3	8:M:382:PHE:CD2	2.50	0.47
9:N:252:THR:O	9:N:340:PHE:HB3	2.14	0.47
1:O:49:ALA:H	1:O:52:ALA:HB3	1.80	0.47
1:O:261:ASP:OD1	1:O:261:ASP:N	2.47	0.47
1:O:905:ILE:HG12	1:O:2811:SER:HB2	1.96	0.47
1:O:1098:GLN:HG3	1:O:1099:PHE:HD1	1.79	0.47
1:O:1184:ARG:NH2	1:O:1265:GLU:OE1	2.40	0.47
1:O:1473:THR:O	1:O:1474:ASP:C	2.57	0.47
1:O:1512:SER:O	1:O:1515:LEU:HB2	2.14	0.47
1:O:1724:MET:HE1	9:L:619:HIS:HA	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:2304:VAL:HG13	1:O:2348:GLN:HG2	1.95	0.47
1:O:3005:LEU:O	1:O:3007:GLU:N	2.48	0.47
1:O:3012:GLU:O	1:O:3015:SER:OG	2.31	0.47
1:O:3238:MET:O	1:O:3242:MET:HG2	2.14	0.47
1:O:3455:LYS:HA	1:O:3455:LYS:HD2	1.69	0.47
4:A:39:HIS:HB2	7:j:86:DG:N2	2.29	0.47
5:B:67:ARG:NH1	2:d:97:LEU:O	2.48	0.47
3:c:27:VAL:HG13	3:c:48:PRO:HB2	1.96	0.47
1:o:301:CYS:HA	1:o:309:LYS:HA	1.96	0.47
1:o:538:ASP:HA	1:o:541:MET:HG2	1.96	0.47
1:o:745:VAL:O	1:o:749:VAL:HG23	2.14	0.47
1:o:917:LEU:O	1:o:921:ALA:HB2	2.14	0.47
1:o:1418:HIS:HA	1:o:1421:GLU:HB2	1.97	0.47
1:o:1786:ALA:HB3	1:o:1830:HIS:HD2	1.80	0.47
1:o:1961:PHE:HE2	1:o:2104:MET:HB3	1.79	0.47
1:o:2395:THR:HA	1:o:2398:LEU:HB2	1.96	0.47
1:o:2429:ASP:OD1	1:o:2429:ASP:N	2.47	0.47
1:o:2850:PHE:HB3	1:o:2883:SER:HB2	1.95	0.47
1:o:3166:ASN:HB2	1:o:3186:ARG:HH22	1.78	0.47
5:b:36:ARG:HA	5:b:39:ARG:HG2	1.96	0.47
6:i:30:DC:O2	7:j:125:DG:N2	2.47	0.47
8:K:105:LEU:HG	8:K:106:GLN:H	1.78	0.47
8:K:259:LEU:HB3	8:K:273:ILE:HD11	1.96	0.47
8:K:330:GLU:HG3	8:K:332:GLU:H	1.80	0.47
8:M:330:GLU:O	8:M:334:THR:HG23	2.15	0.47
9:N:225:TYR:HB3	9:N:229:GLU:HB3	1.96	0.47
1:O:195:ASN:O	1:O:198:ARG:HG3	2.15	0.47
1:O:369:PHE:O	1:O:373:CYS:N	2.37	0.47
1:O:1393:ALA:O	1:O:1396:PRO:HD2	2.14	0.47
1:O:1440:ASP:OD1	1:O:1440:ASP:N	2.47	0.47
1:O:1569:THR:HG22	1:O:1573:LYS:NZ	2.30	0.47
1:O:2328:ARG:O	1:O:2333:ARG:HB2	2.14	0.47
1:O:2345:VAL:O	1:O:2348:GLN:NE2	2.47	0.47
1:o:866:ILE:O	1:o:869:ASN:ND2	2.32	0.47
1:o:2387:PRO:HD2	8:M:158:GLN:HG2	1.96	0.47
1:o:2481:HIS:CE1	1:o:2530:ARG:HG3	2.49	0.47
1:o:2975:ALA:HB1	1:o:2994:TRP:CE2	2.50	0.47
1:o:3148:GLN:HE21	1:o:3158:LYS:HD3	1.79	0.47
1:o:3980:MET:O	1:o:3984:MET:HG2	2.14	0.47
5:b:34:ILE:HG21	5:b:51:TYR:HB3	1.96	0.47
8:K:533:ASP:OD1	8:K:534:TYR:N	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:L:482:ILE:HD12	9:L:515:MET:SD	2.55	0.47
8:M:62:MET:SD	8:M:205:LEU:HD13	2.54	0.47
8:M:108:LEU:HD12	8:M:108:LEU:O	2.15	0.47
9:N:44:ARG:HG2	9:N:238:LYS:HE3	1.95	0.47
1:O:117:LYS:HG3	1:O:118:ASP:H	1.80	0.47
1:O:163:LYS:HB3	8:K:300:THR:HG23	1.96	0.47
1:O:955:ALA:HB3	1:O:956:PRO:HD3	1.97	0.47
1:O:1101:PHE:O	1:O:1105:VAL:HG22	2.15	0.47
1:O:1267:TYR:O	1:O:1271:ILE:HG12	2.15	0.47
1:O:1271:ILE:HG21	1:O:1278:ALA:HB2	1.95	0.47
1:O:1333:SER:O	1:O:1337:VAL:HG23	2.14	0.47
1:O:1754:GLN:HB2	1:O:1797:LEU:HD11	1.96	0.47
1:O:1772:HIS:CE1	1:O:1773:VAL:HG13	2.49	0.47
1:O:2309:PHE:HB2	1:O:2316:TYR:HD2	1.80	0.47
1:O:2461:PHE:O	1:O:2464:HIS:HB2	2.14	0.47
1:O:2897:LEU:HD21	1:O:2923:TRP:CE2	2.50	0.47
1:O:3100:LYS:HA	1:O:3103:ILE:HG22	1.97	0.47
1:O:3114:TYR:CE1	1:O:3125:ARG:HB3	2.49	0.47
1:O:3156:PRO:HB2	1:O:3159:ARG:HB2	1.97	0.47
1:O:3324:ARG:HG3	1:O:3392:ALA:HB2	1.96	0.47
1:O:3763:ARG:HA	1:O:3766:GLN:CD	2.39	0.47
1:O:3910:LEU:HA	1:O:3913:ILE:HG22	1.97	0.47
1:O:4114:PRO:O	1:O:4117:LEU:HG	2.15	0.47
3:C:40:ALA:HB1	3:C:43:VAL:HB	1.96	0.47
2:H:94:ALA:HA	2:H:97:LEU:HD12	1.96	0.47
5:B:26:ILE:HG22	5:B:58:LEU:HD23	1.95	0.47
3:c:55:LEU:O	3:c:59:THR:HG22	2.14	0.47
1:o:418:ALA:HB1	1:o:463:LYS:HB3	1.97	0.47
1:o:463:LYS:HB3	1:o:463:LYS:HE2	1.72	0.47
1:o:714:VAL:HG23	1:o:733:LEU:HD11	1.96	0.47
1:o:1049:GLN:C	1:o:1055:ASN:HB3	2.40	0.47
1:o:1082:PHE:HA	1:o:1085:ILE:HG12	1.96	0.47
1:o:1104:LEU:HA	1:o:1134:LEU:HD13	1.97	0.47
1:o:1840:PHE:O	1:o:1844:VAL:HG23	2.15	0.47
1:o:2172:ALA:HB3	1:o:2215:LEU:HD13	1.96	0.47
1:o:3005:LEU:HD13	1:o:3253:SER:HB3	1.97	0.47
1:o:3088:LEU:HD21	1:o:3185:ASN:HD21	1.80	0.47
1:o:3271:ASP:OD1	1:o:3271:ASP:N	2.48	0.47
1:o:3731:SER:H	1:o:3735:PRO:HD2	1.79	0.47
4:a:63:ARG:NH2	6:I:63:DA:H5"	2.30	0.47
7:J:12:DT:C2	7:J:13:DC:N4	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:J:94:DA:H2''	7:J:95:DC:H5''	1.96	0.47
6:I:111:DC:O2	6:I:112:DT:N3	2.47	0.47
8:K:462:MET:HE3	9:L:380:LEU:HA	1.95	0.47
9:L:497:ARG:NH1	9:L:501:PRO:O	2.47	0.47
9:L:509:GLN:HG2	9:L:512:ILE:HG12	1.96	0.47
8:M:45:SER:OG	8:M:48:MET:HE1	2.15	0.47
9:N:147:LEU:O	9:N:151:ILE:HG13	2.15	0.47
1:O:1015:ASP:O	1:O:1018:VAL:N	2.36	0.47
1:O:1066:LEU:HA	1:O:1069:HIS:ND1	2.29	0.47
1:O:1091:GLU:OE1	1:O:1091:GLU:N	2.47	0.47
1:O:2396:LEU:HA	1:O:2399:GLU:CD	2.39	0.47
1:O:2961:ALA:O	1:O:3989:ARG:NH1	2.32	0.47
1:O:3980:MET:O	1:O:3984:MET:HG2	2.15	0.47
3:C:55:LEU:HD22	2:H:63:VAL:HG13	1.96	0.47
1:o:541:MET:HA	1:o:544:ILE:HB	1.97	0.47
1:o:1506:SER:O	1:o:1509:GLN:HG2	2.15	0.47
1:o:1779:GLN:O	1:o:1783:ARG:HG2	2.15	0.47
1:o:1833:LEU:HA	1:o:1836:LEU:HD12	1.97	0.47
1:o:1864:ASP:HA	1:o:1867:ILE:HD12	1.97	0.47
1:o:2183:HIS:HA	1:o:2186:VAL:HB	1.96	0.47
1:o:2478:MET:HE1	1:o:2524:PHE:CD2	2.50	0.47
1:o:2959:ALA:HB1	1:o:2967:GLU:HG3	1.97	0.47
1:o:3908:HIS:CE1	1:o:3967:PHE:CE2	3.02	0.47
5:b:87:VAL:HG11	5:b:100:PHE:HB2	1.96	0.47
6:i:108:DT:H3	7:j:47:DG:H22	1.62	0.47
7:j:25:DG:H4'	9:L:247:TRP:CZ2	2.49	0.47
7:J:135:DG:O6	6:I:21:DG:N2	2.48	0.47
8:K:376:ILE:N	9:L:540:ILE:O	2.47	0.47
8:K:505:ASP:C	8:K:507:THR:N	2.72	0.47
8:M:301:ARG:HH12	9:N:302:GLU:HG3	1.80	0.47
1:O:636:GLU:HG2	1:O:637:LYS:HD2	1.96	0.47
1:O:1102:GLU:H	1:O:1102:GLU:CD	2.23	0.47
1:O:1533:LEU:HA	1:O:1592:MET:HE1	1.97	0.47
1:O:1590:THR:HB	1:O:1632:TRP:CZ2	2.50	0.47
1:O:1916:ILE:HG13	1:O:1917:LYS:N	2.30	0.47
1:O:2410:GLU:C	1:O:2412:TYR:N	2.73	0.47
1:O:2466:SER:OG	1:O:2469:CYS:SG	2.72	0.47
1:O:2584:CYS:SG	1:O:2585:GLU:N	2.88	0.47
1:O:3153:SER:O	1:O:3155:VAL:N	2.47	0.47
1:O:3380:ARG:NH1	1:O:3383:GLN:OE1	2.48	0.47
1:O:3945:ALA:N	1:O:3948:SER:OG	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:114:ALA:O	2:H:117:LYS:HG2	2.15	0.47
3:G:25:PHE:CZ	3:G:59:THR:HG21	2.50	0.47
1:o:96:MET:O	1:o:99:LYS:NZ	2.48	0.47
1:o:115:TYR:HB2	1:o:130:LEU:HD21	1.97	0.47
1:o:539:GLN:O	1:o:540:MET:HE2	2.14	0.47
1:o:925:GLN:HE21	1:o:2800:ARG:HH12	1.62	0.47
1:o:3183:ILE:HG13	1:o:3242:MET:HE2	1.96	0.47
1:o:3184:THR:HA	1:o:3187:CYS:SG	2.55	0.47
1:o:3190:LEU:HD23	1:o:3193:ILE:HD12	1.97	0.47
1:o:3281:CYS:SG	1:o:3329:LEU:HD11	2.55	0.47
1:o:3476:PRO:O	1:o:3480:LEU:HG	2.14	0.47
1:o:3831:ASP:HB3	1:o:3832:PRO:HD3	1.97	0.47
4:a:63:ARG:HB2	4:a:66:PRO:HD2	1.97	0.47
4:a:128:ARG:HD2	5:b:57:VAL:HG13	1.97	0.47
7:J:45:DC:H2"	7:J:46:DA:C8	2.50	0.47
8:K:451:LYS:NZ	9:L:413:LYS:O	2.48	0.47
9:N:529:PRO:O	9:N:533:ILE:HG12	2.14	0.47
1:O:832:LYS:HG3	1:O:834:LEU:H	1.80	0.47
1:O:1650:ALA:HA	1:O:1695:LEU:HD11	1.96	0.47
1:O:1864:ASP:O	1:O:1867:ILE:HG12	2.15	0.47
1:O:2455:LEU:HA	1:O:2458:VAL:HB	1.95	0.47
1:O:3370:SER:OG	1:O:3371:GLU:N	2.48	0.47
1:O:3913:ILE:HB	1:O:3984:MET:SD	2.55	0.47
2:D:69:ARG:HH12	3:G:98:GLY:HA3	1.79	0.47
2:D:108:VAL:HA	3:G:50:TYR:OH	2.14	0.47
4:A:62:ILE:HB	5:B:29:ILE:HD12	1.97	0.47
1:o:1373:VAL:O	1:o:1376:LEU:HB2	2.14	0.47
1:o:1458:LEU:HD11	1:o:1466:ASN:HD21	1.79	0.47
1:o:2891:ARG:CZ	1:o:3895:GLU:HA	2.44	0.47
1:o:3505:LEU:HD13	1:o:4005:PHE:HZ	1.80	0.47
1:o:3965:ARG:HG2	1:o:4128:MET:O	2.15	0.47
5:b:68:ASP:OD1	2:h:97:LEU:HB2	2.14	0.47
5:f:79:LYS:O	5:f:80:THR:OG1	2.28	0.47
9:L:249:CYS:SG	9:L:250:ARG:N	2.88	0.47
9:L:656:ASN:HB3	9:L:687:THR:O	2.15	0.47
8:M:474:ARG:C	8:M:475:SER:HG	2.22	0.47
8:M:475:SER:OG	8:M:476:ASP:N	2.48	0.47
9:N:57:VAL:HG13	9:N:79:VAL:HA	1.96	0.47
9:N:340:PHE:HA	9:N:394:ARG:O	2.14	0.47
1:O:1437:TYR:HD1	1:O:1503:LEU:HB3	1.80	0.46
1:O:2216:LEU:HA	1:O:2219:LEU:HD12	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:2343:GLU:HA	1:O:2346:ALA:HB3	1.97	0.46
1:O:2599:SER:OG	1:O:2600:THR:N	2.47	0.46
1:O:2860:ASP:CG	1:O:2864:GLN:HE22	2.23	0.46
1:O:3582:GLU:O	1:O:3586:LYS:N	2.37	0.46
1:O:3701:ILE:HB	1:O:3704:GLN:NE2	2.30	0.46
1:O:3792:SER:N	1:O:3804:GLU:OE2	2.48	0.46
3:C:38:HIS:CD2	3:g:40:ALA:HA	2.49	0.46
1:o:1331:ASN:ND2	1:o:1334:LYS:HE2	2.30	0.46
1:o:3064:PHE:HE2	1:o:3078:LEU:HD21	1.79	0.46
5:b:31:LYS:HB2	5:b:51:TYR:CD2	2.50	0.46
5:f:91:LYS:HG2	5:f:97:LEU:H	1.80	0.46
8:K:117:LEU:HG	8:K:495:LEU:HD12	1.96	0.46
8:K:411:VAL:HG12	8:K:436:PHE:HA	1.96	0.46
9:L:531:SER:HA	9:L:534:LYS:HE2	1.96	0.46
8:M:109:ASP:OD1	8:M:115:ARG:NE	2.48	0.46
8:M:269:ILE:HG21	8:M:378:SER:OG	2.15	0.46
8:M:350:PHE:CZ	8:M:394:VAL:HB	2.49	0.46
8:M:351:LYS:HD2	9:N:464:ALA:HB2	1.96	0.46
8:M:488:ARG:HD3	8:M:501:GLU:HG3	1.97	0.46
1:O:101:ALA:HB3	1:O:102:PRO:HD3	1.98	0.46
1:O:741:ILE:HD13	1:O:776:TRP:HE1	1.79	0.46
1:O:1105:VAL:O	1:O:1108:MET:HB2	2.14	0.46
1:O:2429:ASP:O	1:O:2432:GLN:HB2	2.15	0.46
1:O:2817:LEU:HD22	1:O:2865:HIS:ND1	2.30	0.46
1:O:2964:ASP:OD1	1:O:2965:TYR:N	2.49	0.46
1:O:3559:LYS:HD2	1:O:3562:LEU:HD21	1.97	0.46
1:O:3681:LYS:HE2	1:O:3684:SER:OG	2.16	0.46
3:C:67:GLY:O	3:C:71:ARG:HG2	2.15	0.46
3:c:69:ALA:HB3	3:c:82:HIS:HB3	1.97	0.46
1:o:384:MET:O	1:o:388:LEU:N	2.35	0.46
1:o:1101:PHE:HB2	1:o:1151:ARG:HH12	1.80	0.46
1:o:1142:HIS:O	1:o:1146:ASN:N	2.32	0.46
1:o:1411:TYR:O	1:o:1414:ILE:HG22	2.16	0.46
1:o:1413:ASP:HA	1:o:1416:GLU:HG2	1.97	0.46
1:o:1921:ASP:OD1	1:o:1921:ASP:N	2.49	0.46
1:o:2344:LEU:HG	1:o:2347:LYS:HE2	1.97	0.46
1:o:2425:ARG:NH2	1:o:2460:GLU:OE2	2.48	0.46
1:o:2504:ASP:O	1:o:2508:GLN:HG2	2.15	0.46
1:o:2825:THR:HG23	1:o:2828:GLU:H	1.79	0.46
1:o:3999:THR:HA	1:o:4002:MET:HE2	1.96	0.46
4:e:63:ARG:NH2	7:J:63:DA:H1'	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:j:25:DG:H2'	7:j:26:DC:C4	2.50	0.46
7:j:80:DT:H2''	7:j:81:DC:OP2	2.14	0.46
8:K:46:LYS:O	8:K:47:ALA:C	2.59	0.46
8:K:470:ARG:HA	9:L:345:PHE:HB2	1.97	0.46
9:L:496:HIS:CE1	9:L:500:HIS:HB2	2.50	0.46
1:O:1437:TYR:CE2	1:O:1489:LYS:CB	2.98	0.46
1:O:1618:LEU:O	1:O:1622:ILE:HG12	2.16	0.46
1:O:2216:LEU:O	1:O:2220:MET:HG2	2.16	0.46
1:O:3527:GLN:HB2	1:O:3705:TYR:CE2	2.50	0.46
1:O:4098:LEU:HD13	1:O:4102:THR:HB	1.97	0.46
2:D:122:LYS:HG3	3:G:20:ARG:HH11	1.80	0.46
3:G:42:ARG:HB3	6:i:115:DG:H4'	1.97	0.46
1:o:178:LEU:HB2	1:o:227:LEU:HD13	1.96	0.46
1:o:1135:CYS:HA	1:o:1194:PHE:HZ	1.79	0.46
1:o:1685:ASP:HB3	1:o:1688:LEU:HG	1.98	0.46
1:o:2168:LEU:HG	1:o:2193:ILE:HD11	1.96	0.46
1:o:2212:ALA:O	1:o:2216:LEU:HG	2.16	0.46
1:o:2449:VAL:HG23	1:o:2452:ARG:HE	1.80	0.46
1:o:3593:ARG:HH21	1:o:3660:ASN:HB3	1.79	0.46
1:o:3817:LEU:HB3	1:o:3825:LYS:HZ3	1.78	0.46
4:e:53:ARG:O	4:e:57:SER:OG	2.25	0.46
6:i:120:DA:H2''	6:i:121:DT:OP2	2.15	0.46
7:j:72:DA:H5'	7:j:72:DA:C8	2.51	0.46
8:K:200:LEU:O	8:K:222:SER:OG	2.32	0.46
1:O:1178:ARG:HB3	1:O:1180:GLN:HG2	1.98	0.46
1:O:2965:TYR:O	1:O:2969:ALA:N	2.39	0.46
1:O:3110:PHE:HA	1:O:3113:ASN:HD21	1.81	0.46
1:O:3263:HIS:HB2	1:O:3276:TRP:CD2	2.50	0.46
4:A:50:GLU:HG3	4:A:53:ARG:HH22	1.79	0.46
3:c:16:SER:O	3:c:20:ARG:N	2.43	0.46
5:F:78:ARG:NH1	5:F:82:THR:OG1	2.48	0.46
1:o:374:LYS:HD2	1:o:381:VAL:HG21	1.98	0.46
1:o:1296:PHE:HA	1:o:1299:GLU:HG2	1.96	0.46
1:o:1483:LEU:HD13	1:o:1515:LEU:HG	1.97	0.46
1:o:1925:GLU:HB3	1:o:1941:HIS:CE1	2.51	0.46
1:o:2142:ILE:HA	1:o:2145:PHE:HD2	1.79	0.46
1:o:2442:MET:HG3	1:o:2446:LEU:HD13	1.98	0.46
1:o:2815:GLY:HA2	1:o:2818:LYS:HG2	1.96	0.46
1:o:3578:LEU:HD11	1:o:3681:LYS:HD2	1.98	0.46
1:o:3606:ILE:HG21	1:o:3646:LYS:HD3	1.98	0.46
4:a:63:ARG:NH2	5:b:33:ALA:HB2	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:b:26:ILE:HA	5:b:29:ILE:HG12	1.98	0.46
5:b:72:TYR:HA	5:b:75:HIS:CE1	2.51	0.46
3:g:54:VAL:HG21	2:h:107:ALA:O	2.15	0.46
8:M:346:MET:HB2	8:M:399:ARG:HB3	1.97	0.46
9:N:43:GLN:HB2	9:N:47:PHE:CE2	2.51	0.46
9:N:303:THR:HB	9:N:306:LEU:HB3	1.98	0.46
9:N:307:LYS:HD3	9:N:310:ILE:O	2.16	0.46
1:O:2443:MET:N	1:O:2444:PRO:HD2	2.31	0.46
1:O:2517:LEU:O	1:O:2521:ILE:HG12	2.15	0.46
5:B:85:ASP:OD1	5:B:86:VAL:N	2.48	0.46
1:o:1799:GLU:OE2	1:o:1806:ARG:NH2	2.49	0.46
1:o:1917:LYS:HD2	9:L:725:VAL:HB	1.98	0.46
1:o:2425:ARG:NE	1:o:2460:GLU:OE1	2.49	0.46
1:o:2987:THR:HG23	1:o:2990:GLU:H	1.81	0.46
1:o:3867:THR:HG23	1:o:4117:LEU:HB2	1.97	0.46
4:a:96:CYS:HB2	5:b:58:LEU:HD11	1.96	0.46
7:j:26:DC:H1'	7:j:27:DC:C2	2.51	0.46
7:j:111:DT:H3'	7:j:112:DC:H3'	1.96	0.46
8:K:204:HIS:HA	8:K:211:PHE:CE2	2.50	0.46
8:M:421:ASP:OD1	8:M:425:ILE:N	2.48	0.46
9:N:643:ARG:HD2	9:N:659:LEU:HD22	1.98	0.46
1:O:233:ASN:OD1	1:O:278:HIS:NE2	2.49	0.46
1:O:1261:LEU:HG	1:O:1337:VAL:HG22	1.96	0.46
1:O:1412:LYS:O	1:O:1416:GLU:N	2.30	0.46
1:O:1770:GLN:N	1:O:1770:GLN:OE1	2.49	0.46
1:O:1923:PHE:HB3	1:O:1925:GLU:OE1	2.15	0.46
1:O:2443:MET:HE1	1:O:2479:TRP:CE3	2.51	0.46
1:O:3066:ASP:O	1:O:3070:HIS:ND1	2.49	0.46
3:c:16:SER:HA	6:i:34:DA:H5''	1.97	0.46
2:d:102:GLU:OE2	2:d:104:ALA:HB2	2.16	0.46
1:o:165:LYS:NZ	1:o:172:GLU:OE2	2.40	0.46
1:o:1413:ASP:O	1:o:1416:GLU:HG2	2.16	0.46
1:o:3125:ARG:O	1:o:3129:LEU:HG	2.15	0.46
1:o:4125:GLU:HG2	1:o:4128:MET:HE1	1.98	0.46
7:J:76:DG:N1	6:I:79:DG:O6	2.42	0.46
8:K:215:LEU:O	8:K:217:TYR:N	2.48	0.46
8:K:381:LEU:HB3	9:L:537:PHE:CD2	2.50	0.46
9:L:167:PHE:HE1	9:L:205:LEU:HD22	1.81	0.46
1:O:745:VAL:HG11	1:O:788:TYR:OH	2.16	0.46
1:O:1378:GLU:HG2	1:O:1380:ALA:H	1.80	0.46
1:O:3325:ASP:O	1:O:3328:ILE:HG22	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:3716:HIS:O	1:O:3718:ARG:HD2	2.16	0.46
5:F:46:ILE:N	6:i:84:DC:OP1	2.45	0.46
1:o:468:LEU:HD13	1:o:478:CYS:SG	2.56	0.46
2:h:115:VAL:O	2:h:118:TYR:HB3	2.16	0.46
7:j:75:DC:H2"	7:j:76:DG:H8	1.79	0.46
8:K:262:LYS:NZ	8:K:344:GLY:HA3	2.30	0.46
8:K:334:THR:HA	8:K:337:LEU:HG	1.98	0.46
9:L:623:PHE:CE2	9:L:669:LYS:HE3	2.51	0.46
8:M:149:VAL:HA	8:M:152:ASN:ND2	2.30	0.46
1:O:678:LYS:HE2	1:O:737:PRO:HA	1.98	0.46
1:O:762:TYR:CD2	1:O:765:LEU:HG	2.51	0.46
1:O:2976:LEU:O	1:O:2979:GLN:NE2	2.49	0.46
1:O:3370:SER:OG	1:O:3371:GLU:OE1	2.34	0.46
1:O:3499:ILE:HA	1:O:3502:MET:HE3	1.97	0.46
1:O:3500:SER:HA	1:O:3503:VAL:HG12	1.97	0.46
2:H:31:LYS:HB3	6:I:125:DG:H4'	1.97	0.46
2:H:84:SER:O	2:H:85:THR:C	2.59	0.46
1:o:411:PRO:HG3	1:o:457:CYS:HB3	1.97	0.46
1:o:1378:GLU:HG2	1:o:1450:ALA:HB1	1.98	0.46
1:o:2269:ASP:N	1:o:2269:ASP:OD1	2.46	0.46
1:o:3011:LEU:HB3	1:o:3047:SER:HB2	1.97	0.46
1:o:3103:ILE:O	1:o:3107:ILE:HG13	2.15	0.46
1:o:3792:SER:OG	1:o:3804:GLU:OE1	2.32	0.46
5:b:45:ARG:HH22	6:I:71:DG:N2	2.14	0.46
6:i:115:DG:H1	7:j:40:DG:H21	1.63	0.46
8:K:36:ASP:OD1	8:K:163:HIS:ND1	2.44	0.46
8:K:511:VAL:O	8:K:515:ASN:N	2.48	0.46
9:L:347:LYS:NZ	9:L:387:LEU:O	2.49	0.46
9:L:464:ALA:HB1	9:L:473:LEU:HB3	1.97	0.46
8:M:163:HIS:CD2	8:M:165:ARG:H	2.34	0.46
8:M:418:GLU:HA	8:M:428:THR:O	2.15	0.46
1:O:1372:LEU:O	1:O:1375:THR:HB	2.16	0.46
1:O:1769:GLU:O	1:O:1822:ARG:NH1	2.49	0.46
1:O:2162:LYS:HB3	1:O:2200:ALA:HB1	1.97	0.46
1:O:2394:LYS:HB3	1:O:2431:ARG:HH21	1.80	0.46
1:O:2866:ALA:O	1:O:2869:LEU:HB2	2.16	0.46
2:H:38:VAL:HG11	2:H:59:MET:SD	2.56	0.46
1:o:79:ARG:HG3	1:o:126:PRO:HG2	1.97	0.46
1:o:195:ASN:HA	1:o:198:ARG:NE	2.29	0.46
1:o:584:GLU:N	1:o:613:HIS:O	2.46	0.46
1:o:2507:ILE:HA	1:o:2510:LEU:HG	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:4012:ASP:HB2	1:o:4038:TRP:HB2	1.98	0.46
4:a:83:ARG:CZ	7:J:103:DG:H21	2.29	0.46
7:J:103:DG:H2''	7:J:104:DG:C8	2.51	0.46
8:K:78:SER:O	8:K:79:ASP:C	2.59	0.46
8:K:95:ASN:ND2	8:K:102:ILE:O	2.48	0.46
8:K:399:ARG:HH22	9:L:517:ASN:HD22	1.62	0.46
9:L:96:SER:C	9:L:99:GLN:HE22	2.23	0.46
9:L:691:ALA:HB1	9:L:694:SER:HB3	1.97	0.46
8:M:55:ASP:OD1	8:M:55:ASP:N	2.49	0.46
8:M:289:TYR:HD1	9:N:310:ILE:HG22	1.81	0.46
1:O:313:LEU:HA	1:O:316:LEU:HD12	1.98	0.46
1:O:488:ILE:HG21	1:O:2039:GLU:OE1	2.16	0.46
1:O:1374:GLN:HA	1:O:1377:CYS:HB3	1.98	0.46
1:O:3066:ASP:HA	1:O:3069:MET:HG3	1.98	0.46
1:O:3123:GLN:HA	1:O:3126:LEU:HD12	1.98	0.46
1:O:3485:LYS:O	1:O:3489:SER:HB2	2.15	0.46
1:O:3793:VAL:HG23	1:O:3803:ILE:HB	1.98	0.46
2:H:95:VAL:HG12	2:H:108:VAL:HG12	1.97	0.46
3:G:75:LYS:HZ1	3:G:79:ILE:HB	1.81	0.46
1:o:919:LEU:HA	1:o:972:LEU:HD21	1.98	0.46
1:o:1010:LEU:HA	1:o:1013:ILE:HG12	1.98	0.46
1:o:1034:ARG:HB2	1:o:1085:ILE:HG22	1.98	0.46
1:o:1412:LYS:NZ	1:o:1416:GLU:HB3	2.31	0.46
1:o:2257:PHE:HA	1:o:2260:PHE:CE2	2.51	0.46
1:o:2386:LEU:HD22	1:o:2418:LYS:HB3	1.97	0.46
1:o:2449:VAL:HG23	1:o:2452:ARG:HH21	1.81	0.46
1:o:2829:LYS:HB2	1:o:2829:LYS:HE2	1.78	0.46
1:o:3176:MET:HA	1:o:3179:TRP:HB2	1.97	0.46
4:a:63:ARG:HD2	7:J:94:DA:H4'	1.98	0.46
8:K:215:LEU:C	8:K:217:TYR:N	2.74	0.46
8:K:335:GLU:OE2	8:K:404:ARG:NH2	2.49	0.46
8:M:78:SER:OG	8:M:79:ASP:N	2.47	0.46
8:M:360:HIS:NE2	8:M:443:LYS:HD2	2.31	0.46
8:M:368:VAL:O	8:M:431:GLY:HA3	2.16	0.46
1:O:99:LYS:C	1:O:101:ALA:N	2.74	0.45
1:O:909:VAL:HG12	1:O:2807:GLN:NE2	2.31	0.45
1:O:919:LEU:HD13	1:O:968:VAL:HG23	1.97	0.45
1:O:1525:CYS:HA	1:O:1528:LEU:HB3	1.97	0.45
1:O:2260:PHE:HE2	1:O:2299:TYR:CE2	2.34	0.45
1:O:2938:VAL:O	1:O:2942:ILE:HG12	2.16	0.45
1:O:3686:TRP:O	1:O:3686:TRP:HD1	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:3970:LEU:O	1:O:3971:MET:HE2	2.15	0.45
3:c:17:ARG:HA	3:c:20:ARG:HB2	1.99	0.45
3:c:107:VAL:HG11	4:E:101:VAL:HG11	1.98	0.45
1:o:157:TYR:HA	1:o:160:LEU:HG	1.97	0.45
1:o:1184:ARG:HD2	1:o:1185:HIS:N	2.31	0.45
1:o:1231:GLN:N	1:o:1232:PRO:HD3	2.31	0.45
1:o:1416:GLU:HB2	1:o:1466:ASN:HB2	1.99	0.45
1:o:1783:ARG:O	1:o:1787:ARG:NH1	2.49	0.45
1:o:2225:HIS:HB3	1:o:2227:LYS:HE2	1.98	0.45
1:o:3686:TRP:HB3	1:o:3687:MET:HE2	1.97	0.45
2:h:103:LEU:HD23	2:h:103:LEU:HA	1.82	0.45
6:i:140:DG:H2"	6:i:141:DG:C8	2.51	0.45
8:K:319:SER:O	9:L:277:THR:N	2.40	0.45
8:K:439:PHE:N	8:K:442:ASP:OD2	2.49	0.45
8:K:494:ALA:HA	9:L:321:VAL:HG11	1.97	0.45
8:M:364:PRO:HB3	9:N:357:MET:HA	1.98	0.45
1:O:2400:VAL:O	1:O:2404:ARG:HG2	2.16	0.45
1:O:2792:THR:OG1	1:O:2793:PRO:HD3	2.16	0.45
1:O:3188:PHE:O	1:O:3192:LYS:HG2	2.15	0.45
1:O:3705:TYR:O	1:O:3712:LEU:HD21	2.16	0.45
4:A:61:LEU:HD22	5:B:36:ARG:HB3	1.99	0.45
1:o:127:ALA:O	1:o:131:LEU:HG	2.16	0.45
1:o:135:LEU:HD13	1:o:177:LEU:HA	1.98	0.45
1:o:970:LEU:HA	1:o:988:VAL:HG11	1.97	0.45
1:o:1154:PRO:HG2	1:o:1157:PHE:HB3	1.98	0.45
1:o:3619:ASP:N	1:o:3619:ASP:OD1	2.47	0.45
1:o:3692:VAL:O	1:o:3721:GLY:N	2.36	0.45
4:a:100:LEU:HG	5:b:58:LEU:HD13	1.98	0.45
8:K:215:LEU:O	8:K:216:PHE:C	2.58	0.45
9:L:636:ILE:HG13	9:L:640:ARG:HH11	1.81	0.45
8:M:522:VAL:HG12	8:M:526:LYS:HZ1	1.81	0.45
9:N:155:LYS:HZ3	9:N:215:LEU:HG	1.80	0.45
9:N:396:ALA:HB1	9:N:401:ALA:HB3	1.98	0.45
1:O:832:LYS:NZ	1:O:835:LYS:H	2.15	0.45
1:O:1189:GLU:HA	1:O:1192:TYR:CE2	2.51	0.45
1:O:1471:GLN:H	1:O:1471:GLN:CD	2.24	0.45
1:O:1718:ILE:HA	1:O:1721:HIS:ND1	2.30	0.45
1:O:2360:PHE:CZ	1:O:2364:LEU:HD11	2.51	0.45
1:O:2840:PHE:HA	1:O:2843:PHE:CD2	2.52	0.45
1:O:2970:LYS:O	1:O:2973:ASP:N	2.50	0.45
1:O:3297:VAL:HG21	1:O:3344:GLU:HG3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:3946:PHE:CZ	1:O:4047:ALA:HB2	2.51	0.45
3:G:42:ARG:C	6:i:115:DG:H5''	2.41	0.45
4:A:110:CYS:HB3	4:A:126:LEU:HD23	1.98	0.45
3:c:24:GLN:HG3	2:d:40:LYS:HD2	1.99	0.45
1:o:444:ASP:HB2	1:o:489:ARG:NH1	2.32	0.45
1:o:851:ILE:HD13	1:o:854:ARG:NH2	2.30	0.45
1:o:994:TRP:CE2	1:o:2581:LEU:HD21	2.52	0.45
1:o:1173:LEU:HD13	1:o:1191:PHE:CE2	2.52	0.45
1:o:2452:ARG:HA	1:o:2455:LEU:HG	1.98	0.45
1:o:3144:PHE:CZ	1:o:3161:LEU:HD21	2.46	0.45
6:i:127:DG:H1'	6:i:128:DG:O4'	2.17	0.45
7:j:94:DA:H2''	7:j:95:DC:H5''	1.97	0.45
7:J:61:DT:H1'	7:J:62:DA:C8	2.50	0.45
7:J:109:DA:H61	6:I:46:DA:H2	1.64	0.45
8:K:320:GLN:H	8:K:327:ILE:HB	1.80	0.45
9:L:269:GLN:OE1	9:L:269:GLN:N	2.49	0.45
9:N:595:ALA:HA	9:N:598:PHE:CE2	2.51	0.45
1:O:80:GLU:HA	1:O:83:GLU:CD	2.41	0.45
1:O:207:GLN:HB3	1:O:217:LEU:HD13	1.97	0.45
1:O:533:HIS:HA	1:O:536:SER:OG	2.17	0.45
1:O:1017:ILE:O	1:O:1077:GLY:HA3	2.17	0.45
1:O:1486:LEU:HD11	1:O:1514:LEU:HD23	1.99	0.45
1:O:1755:SER:HB2	1:O:1758:LEU:HD13	1.98	0.45
1:O:2161:ALA:HB1	1:O:2196:TRP:CZ2	2.52	0.45
1:O:2326:ILE:O	1:O:2330:VAL:HG13	2.16	0.45
1:O:2394:LYS:HB3	1:O:2431:ARG:NH2	2.31	0.45
1:O:2776:ARG:NH2	1:O:2782:ASP:O	2.49	0.45
1:O:2783:ILE:O	1:O:2783:ILE:HG13	2.16	0.45
1:O:3119:VAL:HG13	1:O:3120:LEU:HG	1.97	0.45
1:O:3179:TRP:HB3	1:O:3242:MET:SD	2.57	0.45
1:O:3185:ASN:HB3	1:O:3189:PHE:CZ	2.52	0.45
1:O:3312:VAL:O	1:O:3316:LEU:N	2.40	0.45
1:O:3662:ILE:O	1:O:3665:MET:HG3	2.16	0.45
1:O:3828:TYR:HA	1:O:3832:PRO:HD2	1.97	0.45
1:O:3957:GLU:OE1	1:O:3959:MET:N	2.49	0.45
2:D:100:PRO:HD3	3:G:96:LEU:HB3	1.97	0.45
3:C:27:VAL:HG11	3:C:49:VAL:HG22	1.98	0.45
3:G:28:GLY:HA3	7:j:33:DA:H2'	1.98	0.45
5:B:68:ASP:O	5:B:71:THR:HB	2.16	0.45
1:o:229:SER:HA	1:o:278:HIS:NE2	2.32	0.45
1:o:871:LEU:HD21	1:o:3125:ARG:HG3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:944:LYS:O	1:o:948:MET:N	2.38	0.45
1:o:1345:THR:HG21	1:o:1368:LEU:HD22	1.99	0.45
1:o:1554:SER:N	1:o:1557:GLU:OE2	2.49	0.45
1:o:2154:GLU:HA	1:o:2157:PHE:CZ	2.52	0.45
1:o:2187:VAL:HA	1:o:2190:VAL:HG22	1.97	0.45
1:o:2274:ILE:HA	1:o:2277:LEU:HD12	1.97	0.45
1:o:3033:GLU:HB3	1:o:3034:PRO:HD3	1.98	0.45
7:j:123:DA:H2"	7:j:124:DG:C5	2.51	0.45
8:K:296:VAL:HA	9:L:297:LEU:HD13	1.98	0.45
9:L:112:ILE:HG12	9:L:146:GLN:HE22	1.82	0.45
9:L:698:ALA:O	9:L:702:LYS:HB3	2.16	0.45
8:M:365:SER:HB3	8:M:433:GLN:OE1	2.17	0.45
8:M:492:ALA:HA	8:M:497:LEU:HD12	1.98	0.45
1:O:217:LEU:HD11	1:O:221:ALA:HB2	1.99	0.45
1:O:461:ILE:HA	1:O:464:VAL:HG22	1.97	0.45
1:O:630:CYS:HA	1:O:634:LEU:HD23	1.97	0.45
1:O:1711:ARG:O	1:O:1715:GLU:HG2	2.16	0.45
1:O:2313:LYS:HA	1:O:2316:TYR:CZ	2.52	0.45
1:O:3083:SER:HA	1:O:3086:LEU:HD12	1.99	0.45
1:O:3920:ILE:HG21	1:O:3942:PHE:HD1	1.81	0.45
3:G:72:ASP:N	3:G:72:ASP:OD1	2.49	0.45
4:A:58:THR:HA	5:B:40:ARG:NH1	2.30	0.45
1:o:162:LEU:HD21	1:o:164:LYS:HE2	1.99	0.45
1:o:697:ASP:HB2	1:o:700:LYS:HE3	1.99	0.45
1:o:911:LEU:O	1:o:915:THR:OG1	2.24	0.45
1:o:1201:ASN:HB3	1:o:1207:TRP:HD1	1.80	0.45
1:o:1287:GLN:HG3	1:o:1289:SER:H	1.81	0.45
1:o:2254:ARG:HH12	1:o:2293:GLY:H	1.65	0.45
1:o:2428:ASP:HB3	1:o:2431:ARG:HB2	1.98	0.45
1:o:3725:ARG:HE	1:o:3741:ARG:HH22	1.64	0.45
1:o:3789:ARG:HH11	1:o:3936:GLY:HA3	1.81	0.45
4:a:79:LYS:HB2	4:a:82:LEU:HD11	1.98	0.45
7:j:32:DA:H2"	7:j:33:DA:N7	2.31	0.45
8:K:351:LYS:HE3	8:K:351:LYS:HB3	1.75	0.45
8:K:363:ARG:NH1	9:L:359:ASN:HB3	2.31	0.45
9:L:407:VAL:HG12	9:L:422:VAL:HB	1.98	0.45
8:M:451:LYS:HA	8:M:451:LYS:HD2	1.84	0.45
1:O:188:GLU:O	1:O:192:ASN:ND2	2.38	0.45
1:O:412:SER:HA	1:O:415:GLN:CD	2.42	0.45
1:O:960:GLN:HA	1:O:963:LYS:HB2	1.98	0.45
1:O:1802:TYR:OH	1:O:1806:ARG:NH2	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:2812:LEU:O	1:O:2816:ILE:HG12	2.17	0.45
1:O:3815:LEU:O	1:O:3819:THR:OG1	2.29	0.45
2:H:112:THR:HA	2:H:115:VAL:HG12	1.98	0.45
3:G:25:PHE:HZ	3:G:59:THR:HG21	1.82	0.45
5:F:30:THR:HB	7:j:64:DA:OP1	2.16	0.45
1:o:475:LEU:O	1:o:479:ILE:HG12	2.16	0.45
1:o:1273:GLU:HB3	1:o:1275:THR:HG22	1.99	0.45
1:o:1911:LEU:HA	1:o:1913:LYS:HZ3	1.81	0.45
1:o:2104:MET:O	1:o:2107:SER:OG	2.29	0.45
1:o:2168:LEU:HD11	1:o:2189:ILE:HB	1.98	0.45
1:o:2276:LEU:O	1:o:2280:VAL:N	2.44	0.45
1:o:2474:TYR:HA	1:o:2477:LEU:HD12	1.98	0.45
1:o:2810:SER:HA	1:o:2861:ILE:HG22	1.98	0.45
7:j:90:DT:H2''	7:j:91:DT:O4'	2.17	0.45
7:J:54:DC:N3	7:J:55:DA:N6	2.65	0.45
8:K:379:SER:O	8:K:380:THR:C	2.59	0.45
9:L:512:ILE:HA	9:L:515:MET:HG3	1.99	0.45
8:M:340:PHE:CD1	8:M:408:PRO:HD3	2.51	0.45
9:N:251:LEU:HD12	9:N:251:LEU:HA	1.85	0.45
9:N:338:LYS:HB2	9:N:398:ASP:HA	1.99	0.45
1:O:713:GLU:O	1:O:716:VAL:HG22	2.17	0.45
1:O:1134:LEU:O	1:O:1137:ILE:HG22	2.16	0.45
1:O:1238:GLN:O	1:O:1311:LYS:HG3	2.17	0.45
1:O:2995:GLU:O	1:O:2999:LEU:HG	2.17	0.45
1:O:3328:ILE:O	1:O:3332:THR:OG1	2.30	0.45
1:O:3374:ILE:HG13	1:O:3375:ALA:N	2.31	0.45
1:O:3547:THR:O	1:O:3551:ASN:N	2.40	0.45
1:O:3771:MET:O	1:O:3775:LEU:HG	2.17	0.45
2:D:118:TYR:HA	2:D:121:ALA:HB3	1.98	0.45
2:H:32:GLU:HB3	7:J:32:DA:H5''	1.97	0.45
3:c:83:LEU:HB3	3:c:102:ILE:HD13	1.99	0.45
5:F:61:PHE:O	5:F:64:ASN:HB2	2.17	0.45
1:o:1087:ARG:H	1:o:1087:ARG:HD2	1.80	0.45
1:o:2137:ILE:H	1:o:2137:ILE:HD12	1.82	0.45
1:o:3567:VAL:HG21	1:o:3696:ARG:NH1	2.32	0.45
5:b:65:VAL:O	5:b:69:ALA:N	2.40	0.45
7:j:23:DA:H4'	9:L:400:ARG:HH22	1.81	0.45
7:j:134:DA:H1'	7:j:135:DG:H5'	1.99	0.45
8:K:90:THR:OG1	8:K:135:MET:HB3	2.17	0.45
8:K:290:ARG:HH21	9:L:310:ILE:C	2.25	0.45
9:L:135:PHE:HB2	9:L:227:PHE:CE1	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:L:610:GLU:H	9:L:610:GLU:CD	2.25	0.45
9:L:653:GLN:HA	9:L:656:ASN:HB2	1.99	0.45
8:M:48:MET:N	8:M:48:MET:SD	2.90	0.45
8:M:476:ASP:O	9:N:427:MET:HB3	2.16	0.45
9:N:138:LEU:HD22	9:N:201:GLN:HB3	1.98	0.45
9:N:333:TYR:CE2	9:N:335:SER:HB3	2.51	0.45
9:N:620:ILE:HD11	9:N:639:ILE:HD11	1.99	0.45
1:O:222:GLY:O	1:O:225:LYS:HB3	2.17	0.45
1:O:961:LEU:O	1:O:965:THR:N	2.41	0.45
1:O:1172:LEU:HD11	1:O:1187:SER:HB2	1.99	0.45
1:O:1231:GLN:HA	1:O:1292:LYS:HD3	1.99	0.45
1:O:1249:SER:O	1:O:1253:THR:N	2.45	0.45
1:O:1274:ARG:NH1	1:O:1351:THR:O	2.48	0.45
1:O:1294:VAL:HA	1:O:1297:PHE:HD2	1.81	0.45
1:O:1565:GLU:HG2	1:O:1566:THR:N	2.32	0.45
1:O:1708:GLU:CD	1:O:1708:GLU:H	2.25	0.45
1:O:1717:LEU:O	1:O:1721:HIS:ND1	2.47	0.45
1:O:1739:TYR:O	1:O:1743:MET:HG2	2.17	0.45
1:O:2269:ASP:N	1:O:2269:ASP:OD1	2.50	0.45
1:O:2821:ASP:OD1	1:O:2821:ASP:N	2.48	0.45
1:O:2988:GLU:H	1:O:2988:GLU:CD	2.25	0.45
1:O:3033:GLU:H	1:O:3033:GLU:CD	2.25	0.45
1:O:3582:GLU:O	1:O:3585:PHE:HB3	2.17	0.45
1:O:3607:GLU:HA	1:O:3610:TYR:HB2	1.99	0.45
1:O:3684:SER:CB	1:O:3687:MET:HB2	2.46	0.45
3:G:45:ALA:C	3:G:48:PRO:HD2	2.41	0.45
1:o:261:ASP:HB3	1:o:265:TYR:H	1.81	0.45
1:o:286:LEU:HD13	1:o:319:PHE:CE1	2.51	0.45
1:o:435:LEU:HA	1:o:438:LEU:HD12	1.99	0.45
1:o:582:THR:HG23	1:o:615:ALA:HB3	1.98	0.45
1:o:1265:GLU:HG3	1:o:1340:ARG:NH1	2.31	0.45
1:o:2133:LEU:HD13	1:o:2146:LEU:HD22	1.98	0.45
1:o:2338:GLU:HG2	1:o:2341:LEU:HD23	1.99	0.45
1:o:3143:SER:HA	1:o:3147:LYS:HD3	1.99	0.45
1:o:3256:MET:O	1:o:3260:LYS:HG2	2.17	0.45
1:o:3306:LEU:HG	1:o:3307:LEU:HG	1.99	0.45
1:o:3746:ARG:NH1	1:o:3747:GLU:O	2.50	0.45
1:o:3838:GLU:O	1:o:3842:TRP:HB2	2.17	0.45
1:o:3913:ILE:HG12	1:o:3987:ALA:HB3	1.99	0.45
1:o:4004:VAL:HG23	1:o:4005:PHE:H	1.81	0.45
4:e:101:VAL:HG13	5:f:41:GLY:HA2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:i:109:DG:N2	7:j:46:DA:H62	2.15	0.45
6:I:42:DG:H2'	6:I:43:DA:N7	2.31	0.45
8:K:261:LEU:HD23	8:K:271:VAL:HG21	1.99	0.45
8:M:164:LYS:HB3	8:M:197:GLY:O	2.16	0.45
8:M:351:LYS:HB3	8:M:397:LEU:HD22	1.97	0.45
1:O:391:ARG:NH1	1:O:1734:PRO:HA	2.32	0.45
1:O:675:ARG:HG2	1:O:675:ARG:HH11	1.82	0.45
1:O:1406:LEU:O	1:O:1412:LYS:HB3	2.17	0.45
1:O:1710:LEU:HA	1:O:1713:VAL:HG22	1.98	0.45
1:O:3276:TRP:HZ3	1:O:3306:LEU:HD22	1.82	0.45
1:O:3696:ARG:HG2	1:O:3697:ASN:H	1.82	0.45
1:O:4126:PRO:HD2	1:O:4127:TRP:CZ3	2.52	0.45
3:G:25:PHE:N	3:G:56:GLU:OE2	2.43	0.45
4:A:118:THR:HG23	4:A:120:MET:HE3	1.98	0.45
5:B:31:LYS:NZ	5:B:51:TYR:OH	2.50	0.45
3:c:63:LEU:HB3	2:d:42:LEU:HD13	1.98	0.45
5:F:57:VAL:HG13	5:F:58:LEU:HD22	1.98	0.45
1:o:49:ALA:O	1:o:53:LEU:N	2.49	0.45
1:o:956:PRO:N	1:o:957:PRO:HD3	2.32	0.45
1:o:1366:THR:O	1:o:1368:LEU:N	2.50	0.45
1:o:2160:TYR:HB3	1:o:2164:TRP:CD1	2.52	0.45
1:o:2205:VAL:O	1:o:2205:VAL:HG13	2.17	0.45
1:o:2940:ARG:HD2	1:o:2961:ALA:HB2	1.98	0.45
1:o:3633:ILE:HG13	1:o:3634:GLN:N	2.32	0.45
1:o:3716:HIS:O	1:o:3743:HIS:ND1	2.48	0.45
1:o:3878:VAL:HG11	1:o:4127:TRP:CD1	2.52	0.45
1:o:3963:LEU:HD22	1:o:4112:THR:HG22	1.98	0.45
4:a:103:LEU:HD12	4:a:131:ARG:HH22	1.81	0.45
3:g:81:ARG:O	3:g:84:GLN:HG3	2.16	0.45
5:f:68:ASP:HA	5:f:71:THR:HG22	1.99	0.45
6:i:30:DC:H1'	6:i:31:DT:C2	2.51	0.45
8:K:525:PHE:HA	8:K:528:LEU:HB3	1.99	0.45
9:L:135:PHE:HB3	9:L:164:PHE:HB2	1.99	0.45
9:L:313:GLY:HA2	9:L:323:PHE:N	2.32	0.45
9:L:443:LYS:HG3	9:L:444:TYR:CD2	2.51	0.45
8:M:89:GLY:O	8:M:138:GLY:HA2	2.16	0.45
8:M:305:THR:HA	9:N:290:GLN:CD	2.42	0.45
8:M:384:ALA:HB2	9:N:446:PRO:HG3	1.99	0.45
9:N:199:GLU:OE2	9:N:200:GLN:NE2	2.50	0.45
1:O:628:GLU:O	1:O:631:ARG:HG2	2.17	0.45
1:O:1413:ASP:O	1:O:1416:GLU:HG3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1751:GLU:O	1:O:1788:ARG:NH1	2.49	0.45
1:O:2389:PHE:O	1:O:2394:LYS:HD2	2.17	0.45
1:O:3582:GLU:OE1	1:O:3586:LYS:NZ	2.49	0.45
1:O:3750:PHE:CD1	1:O:3804:GLU:HA	2.52	0.45
3:C:35:ARG:NH1	6:I:117:DC:OP2	2.45	0.45
3:G:29:ARG:HB2	7:j:33:DA:H5"	1.99	0.45
4:A:128:ARG:HH21	5:B:57:VAL:HG13	1.82	0.45
4:A:133:GLU:HA	3:c:95:LYS:HG2	1.99	0.45
2:d:99:LEU:HG	2:d:102:GLU:O	2.17	0.45
4:E:108:ASN:HD21	5:F:43:VAL:HA	1.82	0.45
1:o:12:LEU:HD13	1:o:56:SER:HB3	1.99	0.45
1:o:83:GLU:HB3	1:o:126:PRO:HG3	1.98	0.45
1:o:1066:LEU:HD11	1:o:1078:ALA:HB2	1.99	0.45
1:o:1102:GLU:HG3	1:o:1154:PRO:HB3	1.97	0.45
1:o:1184:ARG:CZ	1:o:1262:ALA:HA	2.47	0.45
1:o:2162:LYS:HA	1:o:2200:ALA:HB2	1.98	0.45
1:o:2412:TYR:HB2	1:o:2446:LEU:HD11	1.98	0.45
1:o:2806:LYS:HE3	1:o:2856:SER:OG	2.17	0.45
1:o:3675:LYS:HD3	1:o:3676:PRO:HD2	1.99	0.45
1:o:3901:ARG:HD2	1:o:3971:MET:HG2	1.99	0.45
5:b:65:VAL:O	5:b:68:ASP:HB2	2.17	0.45
6:i:43:DA:H2"	6:i:44:DG:H8	1.79	0.45
6:i:58:DG:C6	6:i:59:DG:C6	3.05	0.45
6:i:127:DG:H2"	6:i:128:DG:OP2	2.17	0.45
7:j:71:DT:O2	7:j:72:DA:N6	2.47	0.45
7:J:24:DG:N2	6:I:131:DT:O2	2.48	0.45
8:K:41:LEU:HB3	8:K:88:TYR:CE1	2.52	0.45
8:K:363:ARG:HB2	8:K:436:PHE:CE2	2.51	0.45
9:L:665:LYS:HA	9:L:668:ILE:HG22	1.99	0.45
9:N:20:MET:HE2	9:N:137:ASP:OD1	2.18	0.45
9:N:598:PHE:HD1	9:N:612:ALA:HB1	1.82	0.45
1:O:11:SER:HA	1:O:14:ARG:HE	1.81	0.44
1:O:110:THR:O	1:O:114:VAL:HG23	2.17	0.44
1:O:201:LEU:HD22	1:O:249:PHE:CE2	2.51	0.44
1:O:447:PRO:HG3	1:O:526:ASP:OD2	2.17	0.44
1:O:1275:THR:HG23	1:O:1276:VAL:HG23	1.98	0.44
1:O:1349:LEU:HD22	1:O:1405:ALA:HB1	1.99	0.44
1:O:1458:LEU:O	1:O:1463:LEU:N	2.43	0.44
1:O:2724:ASP:N	1:O:2724:ASP:OD1	2.50	0.44
1:O:3152:SER:O	1:O:3153:SER:C	2.60	0.44
1:O:3382:PHE:HD1	1:O:3419:PHE:HE2	1.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:3701:ILE:HD11	1:O:3717:VAL:H	1.81	0.44
2:D:40:LYS:HD2	3:G:24:GLN:OE1	2.17	0.44
4:A:54:TYR:HD2	5:B:39:ARG:HB2	1.82	0.44
1:o:763:THR:OG1	1:o:764:PRO:HD3	2.17	0.44
1:o:782:ARG:NH2	1:o:3168:TYR:OH	2.50	0.44
1:o:1406:LEU:O	1:o:1412:LYS:HB2	2.17	0.44
1:o:1415:LEU:O	1:o:1418:HIS:HB2	2.17	0.44
1:o:1524:LEU:HD12	1:o:1527:ARG:HD3	2.00	0.44
1:o:1724:MET:HA	1:o:1768:ARG:HH21	1.81	0.44
1:o:1910:GLU:HB3	9:L:732:ILE:HA	1.99	0.44
1:o:2216:LEU:O	1:o:2220:MET:HG2	2.17	0.44
1:o:2383:PHE:HZ	1:o:2411:LEU:HD13	1.82	0.44
1:o:2919:ASP:OD1	1:o:2920:VAL:N	2.50	0.44
1:o:3069:MET:HA	1:o:3075:LYS:HD3	1.99	0.44
1:o:3692:VAL:HG11	1:o:3696:ARG:HE	1.81	0.44
1:o:3842:TRP:HD1	1:o:3858:MET:HB3	1.82	0.44
3:g:104:GLN:H	4:e:94:GLU:HG2	1.81	0.44
4:e:63:ARG:HH22	7:J:63:DA:H1'	1.82	0.44
6:i:85:DG:H2''	6:i:86:DT:H5''	1.98	0.44
6:I:132:DC:P	8:M:444:ARG:HH12	2.40	0.44
8:K:316:THR:HG21	8:K:331:LYS:NZ	2.32	0.44
9:L:38:ILE:HD11	9:L:135:PHE:CZ	2.52	0.44
8:M:276:LEU:HA	9:N:431:ARG:HB3	1.98	0.44
8:M:490:LEU:HD23	9:N:323:PHE:CZ	2.52	0.44
9:N:77:ILE:HG13	9:N:113:VAL:HG21	1.99	0.44
1:O:80:GLU:O	1:O:83:GLU:HG2	2.17	0.44
1:O:868:LYS:HZ2	1:O:3174:ASP:CG	2.23	0.44
1:O:2208:ASP:HA	1:O:2211:LEU:HD12	1.98	0.44
1:O:2411:LEU:O	1:O:2412:TYR:C	2.61	0.44
1:O:3643:HIS:HB3	1:O:3659:PHE:CZ	2.52	0.44
1:O:3796:MET:HB2	1:O:3800:LEU:HB3	1.99	0.44
2:D:74:ALA:HA	2:D:77:LEU:HD12	1.98	0.44
3:C:38:HIS:CE1	3:g:41:GLU:H	2.35	0.44
2:H:109:SER:O	2:H:112:THR:OG1	2.28	0.44
4:A:92:LEU:HD21	5:B:62:LEU:HG	1.99	0.44
5:B:45:ARG:HH12	6:i:71:DG:N2	2.15	0.44
1:o:417:VAL:HA	1:o:420:VAL:HG22	1.99	0.44
1:o:898:PHE:HB2	1:o:901:MET:O	2.18	0.44
1:o:1289:SER:HA	1:o:1292:LYS:HG2	1.99	0.44
1:o:1389:VAL:HB	1:o:1392:MET:SD	2.57	0.44
1:o:2225:HIS:NE2	1:o:2234:ASN:OD1	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:2379:MET:N	1:o:2379:MET:SD	2.90	0.44
1:o:2892:LEU:HA	1:o:2895:GLU:HG2	1.99	0.44
1:o:3170:ASP:O	1:o:3179:TRP:NE1	2.50	0.44
1:o:3467:ARG:HD2	1:o:4000:ASN:ND2	2.33	0.44
1:o:3999:THR:HG21	1:o:4048:LYS:HE3	1.97	0.44
8:K:74:LYS:HE2	8:K:79:ASP:CB	2.46	0.44
8:K:409:TYR:HA	8:K:439:PHE:HZ	1.82	0.44
9:L:77:ILE:HG13	9:L:105:ALA:HB1	1.99	0.44
9:L:251:LEU:HB2	9:L:261:ILE:HG12	1.98	0.44
8:M:324:SER:H	9:N:87:ASP:CG	2.24	0.44
9:N:135:PHE:HA	9:N:164:PHE:HB2	1.97	0.44
1:O:43:VAL:HG11	1:O:829:VAL:HA	1.99	0.44
1:O:124:LYS:HZ2	7:j:11:DA:P	2.40	0.44
1:O:460:ALA:O	1:O:463:LYS:HG2	2.16	0.44
1:O:3153:SER:HB2	1:O:3155:VAL:HG23	1.99	0.44
1:O:3165:THR:O	1:O:3186:ARG:NH1	2.50	0.44
1:O:3545:THR:O	1:O:3549:HIS:ND1	2.39	0.44
1:o:701:TYR:HA	1:o:704:PHE:CD2	2.52	0.44
1:o:786:GLN:HA	1:o:789:TYR:CE2	2.52	0.44
1:o:1265:GLU:HB2	1:o:1340:ARG:HD2	2.00	0.44
1:o:2808:LEU:HD23	1:o:2812:LEU:HD23	2.00	0.44
1:o:2852:PRO:HB3	1:o:2885:GLN:NE2	2.32	0.44
1:o:3083:SER:HA	1:o:3102:TYR:CE2	2.53	0.44
1:o:3252:PHE:HB3	1:o:3289:ARG:HH21	1.81	0.44
1:o:3730:ALA:HB2	1:o:3734:ARG:HH11	1.82	0.44
1:o:3856:MET:HA	1:o:3859:TYR:CD2	2.52	0.44
5:f:49:LEU:HD23	5:f:49:LEU:H	1.83	0.44
6:i:50:DC:H4'	6:i:51:DC:H5'	2.00	0.44
6:i:78:DC:H2''	6:i:79:DG:N7	2.32	0.44
8:K:492:ALA:O	8:K:496:ASP:N	2.43	0.44
9:L:393:VAL:HG23	9:L:421:TYR:HE1	1.82	0.44
8:M:35:ARG:HB2	8:M:160:LYS:HD3	1.98	0.44
8:M:324:SER:N	9:N:87:ASP:OD2	2.47	0.44
8:M:332:GLU:O	8:M:335:GLU:HG3	2.17	0.44
9:N:108:LEU:HD22	9:N:147:LEU:HD13	1.99	0.44
9:N:209:LYS:HD3	9:N:221:LEU:HD22	1.98	0.44
1:O:167:PRO:HB3	1:O:171:LEU:HG	2.00	0.44
1:O:342:MET:HA	1:O:345:PHE:HB2	1.99	0.44
1:O:540:MET:SD	1:O:543:SER:OG	2.75	0.44
1:O:2220:MET:HE2	1:O:2220:MET:HB3	1.86	0.44
1:O:2272:VAL:O	1:O:2276:LEU:HG	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:3227:ILE:O	1:O:3231:ILE:HG12	2.17	0.44
1:O:3407:ALA:HB1	1:O:3410:ILE:HD12	1.99	0.44
1:O:3474:ARG:NH2	1:O:3475:TYR:OH	2.51	0.44
3:G:18:SER:OG	3:G:23:LEU:O	2.32	0.44
1:o:72:SER:HA	1:o:119:ARG:NH1	2.33	0.44
1:o:463:LYS:HG2	1:o:544:ILE:HG21	1.98	0.44
1:o:1069:HIS:NE2	1:o:3745:GLU:HB2	2.32	0.44
1:o:1115:HIS:NE2	1:o:1182:GLU:HB3	2.33	0.44
1:o:1190:LEU:HA	1:o:1193:LYS:HG2	1.99	0.44
1:o:1191:PHE:O	1:o:1195:VAL:HG23	2.18	0.44
1:o:1568:ASN:O	1:o:1572:LEU:HG	2.17	0.44
1:o:1611:GLN:OE1	1:o:1613:HIS:ND1	2.50	0.44
1:o:1766:LEU:HD13	1:o:1778:PHE:CG	2.53	0.44
1:o:2289:ASP:OD2	1:o:2291:GLN:NE2	2.51	0.44
1:o:2774:SER:OG	1:o:2784:GLN:O	2.28	0.44
7:j:75:DC:H2"	7:j:76:DG:H5'	1.99	0.44
8:K:388:LYS:HA	8:K:388:LYS:HD2	1.86	0.44
8:K:417:GLU:HB3	8:K:419:GLU:HG3	1.98	0.44
8:M:337:LEU:HA	9:N:489:ARG:HE	1.82	0.44
8:M:352:PRO:HA	8:M:394:VAL:HG22	1.99	0.44
8:M:363:ARG:NH2	8:M:366:LEU:HD11	2.32	0.44
9:N:116:ASP:O	9:N:119:GLN:HG2	2.17	0.44
9:N:310:ILE:O	9:N:310:ILE:HG13	2.16	0.44
9:N:518:PRO:HA	9:N:519:PRO:HD3	1.86	0.44
1:O:100:ILE:CG2	1:O:100:ILE:O	2.65	0.44
1:O:339:GLN:OE1	1:O:339:GLN:N	2.50	0.44
1:O:620:PHE:O	1:O:624:ILE:HG23	2.18	0.44
1:O:2122:LEU:HB2	1:O:2126:MET:H	1.82	0.44
1:O:3000:ASP:O	1:O:3004:HIS:ND1	2.51	0.44
1:O:3551:ASN:HA	1:O:3554:PHE:CD2	2.52	0.44
1:O:4050:LYS:HD2	1:O:4059:ILE:HD13	1.99	0.44
1:O:4054:ALA:O	1:O:4103:GLN:NE2	2.51	0.44
3:C:38:HIS:ND1	3:g:41:GLU:HG2	2.32	0.44
3:C:66:ALA:HB1	3:C:78:ILE:HD12	1.98	0.44
1:o:785:MET:HB2	1:o:792:ILE:HD11	2.00	0.44
1:o:1305:ASP:OD2	1:o:1383:GLY:HA2	2.17	0.44
1:o:1508:LYS:NZ	1:o:1562:LEU:O	2.49	0.44
1:o:2442:MET:CG	1:o:2446:LEU:HD13	2.47	0.44
1:o:2478:MET:HE2	1:o:2478:MET:HA	2.00	0.44
1:o:3420:CYS:HB2	1:o:3446:VAL:HG11	2.00	0.44
5:b:39:ARG:HD3	5:b:46:ILE:HD11	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:j:14:DC:H2''	7:j:15:DC:C6	2.52	0.44
7:J:8:DA:H3'	7:J:9:DG:N7	2.32	0.44
8:K:469:LEU:HB2	8:K:518:LEU:HD13	1.99	0.44
9:L:393:VAL:HG23	9:L:421:TYR:CE1	2.53	0.44
8:M:511:VAL:O	8:M:515:ASN:HB2	2.18	0.44
9:N:155:LYS:NZ	9:N:215:LEU:HG	2.32	0.44
9:N:209:LYS:NZ	9:N:220:GLY:HA3	2.33	0.44
9:N:230:SER:HB2	9:N:235:CYS:H	1.83	0.44
9:N:274:LYS:NZ	9:N:277:THR:OG1	2.42	0.44
1:O:907:LEU:HB3	1:O:937:MET:CE	2.46	0.44
1:O:1727:ARG:NH2	1:O:1771:GLN:HB3	2.32	0.44
1:O:2375:ALA:HB3	1:O:2404:ARG:HD3	2.00	0.44
1:O:3048:LYS:HB3	1:O:3061:LEU:HD13	2.00	0.44
2:D:84:SER:N	7:j:43:DG:OP1	2.32	0.44
3:C:59:THR:O	3:C:62:ILE:HG22	2.17	0.44
3:c:71:ARG:NH1	2:d:48:ASP:O	2.44	0.44
4:E:96:CYS:SG	5:F:62:LEU:HD12	2.57	0.44
1:o:147:PHE:HA	1:o:183:GLU:HG3	1.99	0.44
1:o:164:LYS:HD3	6:I:138:DC:OP2	2.17	0.44
1:o:1592:MET:O	1:o:1596:VAL:HG13	2.18	0.44
1:o:1633:TRP:HB3	1:o:1674:THR:HG23	1.99	0.44
1:o:2773:ARG:NH1	1:o:2774:SER:O	2.51	0.44
1:o:2963:SER:OG	1:o:3251:ASN:HA	2.17	0.44
1:o:3179:TRP:CZ3	1:o:3238:MET:HE1	2.51	0.44
1:o:3424:LEU:O	1:o:3428:GLU:N	2.50	0.44
7:J:60:DT:O4'	6:I:95:DG:N2	2.51	0.44
8:K:270:SER:OG	8:K:371:GLU:O	2.33	0.44
8:K:290:ARG:N	9:L:309:ASP:O	2.51	0.44
8:K:325:ARG:HH22	9:L:92:GLU:HG3	1.83	0.44
8:K:348:MET:H	8:K:398:CYS:HA	1.81	0.44
9:L:15:ASP:H	9:L:20:MET:CE	2.31	0.44
9:N:478:PRO:HD2	9:N:482:ILE:HD11	1.99	0.44
9:N:722:GLY:N	9:N:724:ASP:OD1	2.51	0.44
1:O:57:LEU:O	1:O:60:SER:OG	2.26	0.44
1:O:451:PRO:O	1:O:455:LEU:HG	2.18	0.44
1:O:715:ALA:O	1:O:718:MET:HG3	2.18	0.44
1:O:959:TYR:HD1	1:O:1007:VAL:HG21	1.83	0.44
1:O:2126:MET:HB2	1:O:2160:TYR:CZ	2.53	0.44
1:O:2503:LYS:O	1:O:2507:ILE:HG12	2.17	0.44
1:O:3187:CYS:HA	1:O:3190:LEU:HD12	2.00	0.44
1:O:3269:ARG:NE	1:O:3271:ASP:HB2	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:3467:ARG:O	1:O:3471:ILE:HG12	2.18	0.44
1:O:3582:GLU:HB3	1:O:3586:LYS:HZ3	1.81	0.44
5:B:34:ILE:HD12	5:B:51:TYR:HB3	2.00	0.44
2:d:66:ILE:HA	2:d:69:ARG:HE	1.82	0.44
1:o:200:PHE:HE2	1:o:227:LEU:HD23	1.83	0.44
1:o:374:LYS:O	1:o:378:ALA:HB2	2.17	0.44
1:o:1400:VAL:HA	1:o:1403:MET:HE2	2.00	0.44
1:o:2486:ASP:OD1	1:o:2486:ASP:N	2.45	0.44
1:o:3296:GLN:HG3	1:o:3337:ILE:HG13	1.99	0.44
6:i:119:DA:H2"	6:i:120:DA:C8	2.52	0.44
8:K:318:ARG:N	8:K:329:LEU:O	2.45	0.44
9:L:51:LYS:HA	9:L:85:LEU:HD11	2.00	0.44
9:L:218:GLU:OE2	9:L:219:ASP:HB2	2.18	0.44
1:O:393:LYS:HA	1:O:396:PHE:CE1	2.52	0.44
1:O:1178:ARG:N	1:O:1184:ARG:HG3	2.33	0.44
1:O:1431:LEU:HD22	1:O:1448:LEU:HD21	1.99	0.44
1:O:3100:LYS:O	1:O:3103:ILE:HG22	2.17	0.44
1:O:3469:LEU:HD13	1:O:3505:LEU:HD11	1.99	0.44
1:O:3708:ARG:O	1:O:3710:LYS:N	2.51	0.44
2:D:52:SER:O	2:D:56:MET:N	2.47	0.44
4:A:67:PHE:CE1	5:B:62:LEU:HD11	2.49	0.44
3:c:55:LEU:O	3:c:58:LEU:HG	2.18	0.44
1:o:293:LEU:HA	1:o:296:VAL:HG22	2.00	0.44
1:o:479:ILE:HG13	1:o:567:GLU:HG2	2.00	0.44
1:o:534:LEU:O	1:o:537:SER:OG	2.26	0.44
1:o:914:VAL:HG11	1:o:937:MET:HE1	1.99	0.44
1:o:956:PRO:HB3	1:o:1004:GLN:HE21	1.83	0.44
1:o:2371:PHE:CD2	1:o:2374:LEU:HD23	2.51	0.44
1:o:2593:SER:HB2	1:o:2769:VAL:HB	1.99	0.44
1:o:3009:LYS:HA	1:o:3009:LYS:HD2	1.78	0.44
6:I:77:DG:N7	6:I:78:DC:N4	2.65	0.44
9:L:496:HIS:HE1	9:L:503:GLU:O	2.01	0.44
9:L:528:ILE:HB	9:L:529:PRO:HD3	2.00	0.44
9:L:617:ILE:HD11	9:L:662:LEU:HD13	2.00	0.44
8:M:372:GLU:HB2	8:M:375:VAL:O	2.18	0.44
8:M:396:ALA:O	8:M:413:LEU:HB2	2.18	0.44
1:O:1816:ARG:NE	9:L:625:ASP:O	2.51	0.44
1:O:2886:GLN:H	1:O:2886:GLN:CD	2.26	0.44
3:c:20:ARG:HB3	2:d:121:ALA:HA	1.99	0.44
3:c:82:HIS:HA	3:c:85:LEU:HD12	2.00	0.44
1:o:265:TYR:CG	1:o:308:LEU:HD11	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:864:GLY:HA3	1:o:3129:LEU:HB3	1.99	0.44
1:o:1034:ARG:HD2	1:o:1084:ASN:O	2.18	0.44
1:o:1100:VAL:HG12	1:o:1137:ILE:HD12	2.00	0.44
1:o:1172:LEU:O	1:o:1176:CYS:N	2.51	0.44
1:o:1177:GLY:H	1:o:1184:ARG:HB2	1.82	0.44
1:o:2036:LEU:O	1:o:2040:MET:HG2	2.18	0.44
1:o:2405:VAL:HG22	1:o:2441:LYS:HE3	2.00	0.44
1:o:3424:LEU:HB3	1:o:3475:TYR:CE2	2.52	0.44
1:o:3591:ASP:HB2	1:o:3609:MET:HE1	1.99	0.44
1:o:3681:LYS:HB2	1:o:3724:GLU:HG2	2.00	0.44
1:o:3947:GLY:HA3	1:o:4063:GLU:O	2.18	0.44
6:i:83:DA:H2"	6:i:84:DC:N4	2.33	0.44
7:j:66:DG:C8	7:j:66:DG:H5"	2.53	0.44
8:K:322:TYR:HE2	9:L:47:PHE:HA	1.82	0.44
8:K:489:ASN:OD1	9:L:331:MET:HG2	2.17	0.44
9:L:503:GLU:HG2	9:L:504:PRO:HD2	1.99	0.44
8:M:413:LEU:HB3	8:M:432:PHE:CD2	2.53	0.44
9:N:633:MET:O	9:N:636:ILE:HG12	2.18	0.44
1:O:1651:LYS:NZ	1:O:2045:PHE:O	2.51	0.43
1:O:2269:ASP:O	1:O:2272:VAL:HG22	2.17	0.43
5:F:45:ARG:HD2	5:F:45:ARG:HA	1.73	0.43
1:o:1149:LYS:HD2	1:o:1149:LYS:HA	1.61	0.43
1:o:1712:ARG:O	1:o:1715:GLU:HG2	2.18	0.43
1:o:2955:SER:OG	1:o:2971:GLN:OE1	2.31	0.43
1:o:3462:ARG:HE	1:o:3462:ARG:HB3	1.68	0.43
1:o:3586:LYS:HB3	1:o:3586:LYS:HE3	1.84	0.43
8:K:421:ASP:OD1	8:K:425:ILE:N	2.31	0.43
8:K:484:GLN:O	8:K:488:ARG:HG2	2.18	0.43
9:L:610:GLU:O	9:L:613:SER:OG	2.27	0.43
9:N:208:VAL:O	9:N:211:VAL:HB	2.17	0.43
9:N:463:LEU:HD11	9:N:477:PHE:CE2	2.53	0.43
1:O:217:LEU:HD21	1:O:267:VAL:HG11	2.00	0.43
1:O:242:PRO:HB2	1:O:246:ARG:NH1	2.33	0.43
1:O:275:PHE:HE2	1:O:319:PHE:HB2	1.83	0.43
1:O:1295:ALA:O	1:O:1298:LEU:HB3	2.17	0.43
1:O:1576:ASP:OD1	1:O:1576:ASP:N	2.49	0.43
1:O:2275:GLN:O	1:O:2279:ILE:HG12	2.19	0.43
1:O:3590:ASN:OD1	1:O:3593:ARG:NH2	2.50	0.43
2:D:90:GLU:HG3	5:F:75:HIS:NE2	2.32	0.43
4:A:120:MET:HG3	4:A:122:LYS:HE3	2.00	0.43
1:o:142:ARG:HB2	1:o:182:GLY:HA2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:176:GLU:HB3	1:o:223:CYS:HA	2.00	0.43
1:o:955:ALA:N	1:o:956:PRO:HD3	2.33	0.43
1:o:1412:LYS:HD2	1:o:1415:LEU:HD23	2.00	0.43
1:o:1428:ILE:HD13	1:o:1451:VAL:HG21	1.99	0.43
1:o:2321:GLU:HA	1:o:2366:LYS:HG2	2.01	0.43
3:g:55:LEU:HD21	2:h:67:PHE:HB2	2.00	0.43
6:i:60:DT:H2''	6:i:61:DT:C5	2.53	0.43
6:i:122:DT:H2''	6:i:123:DG:C8	2.53	0.43
7:j:59:DC:H1'	7:j:60:DT:C2	2.54	0.43
8:K:165:ARG:NH2	8:K:222:SER:OG	2.51	0.43
8:K:274:TYR:HE2	8:K:369:TYR:HB2	1.82	0.43
9:L:352:GLN:HG2	9:L:354:ARG:CZ	2.48	0.43
9:L:598:PHE:O	9:L:602:VAL:HG23	2.18	0.43
8:M:303:PHE:HA	8:M:310:LEU:HD13	1.99	0.43
8:M:370:PRO:HG3	8:M:382:PHE:HD2	1.82	0.43
9:N:676:GLU:HG2	9:N:677:ILE:N	2.33	0.43
1:O:13:LEU:HD12	1:O:16:GLN:HE21	1.82	0.43
1:O:669:LEU:O	1:O:672:ILE:HG12	2.19	0.43
1:O:745:VAL:HA	1:O:748:TYR:CD2	2.53	0.43
1:O:1016:GLY:O	1:O:1026:ARG:HG2	2.18	0.43
1:O:1876:ILE:HA	1:O:1879:VAL:HG22	2.00	0.43
1:O:2098:THR:O	1:O:2102:LYS:HG2	2.19	0.43
1:O:2220:MET:HG3	1:O:2259:LYS:NZ	2.33	0.43
1:O:2925:GLU:O	1:O:2929:LEU:HG	2.18	0.43
1:O:2953:THR:OG1	1:O:2954:GLN:OE1	2.36	0.43
1:O:3048:LYS:O	1:O:3052:LEU:HD23	2.18	0.43
1:O:3380:ARG:O	1:O:3384:HIS:ND1	2.51	0.43
2:D:96:ARG:NH2	5:F:71:THR:OG1	2.45	0.43
3:C:43:VAL:HG21	2:H:86:ILE:HG22	2.00	0.43
3:c:55:LEU:HD21	2:d:67:PHE:HB2	2.00	0.43
3:c:104:GLN:N	4:E:94:GLU:HG2	2.29	0.43
1:o:1420:ARG:NH1	1:o:1467:ILE:O	2.52	0.43
1:o:1556:GLY:HA2	1:o:1559:PHE:CD2	2.53	0.43
1:o:2806:LYS:HD2	1:o:2853:PRO:HA	2.00	0.43
1:o:3869:THR:HA	1:o:3872:ARG:NE	2.34	0.43
4:a:65:LEU:HB2	4:a:66:PRO:HD3	2.00	0.43
5:b:27:GLN:OE1	5:b:27:GLN:N	2.46	0.43
5:b:82:THR:HG23	5:b:85:ASP:H	1.82	0.43
5:b:92:ARG:HG2	2:h:103:LEU:HD12	2.01	0.43
6:i:95:DG:N1	7:j:60:DT:O2	2.51	0.43
6:i:139:DG:H2''	6:i:140:DG:OP2	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:j:96:DC:H2''	7:j:97:DG:C8	2.53	0.43
8:K:264:ASN:HB2	9:L:530:LEU:HD22	2.00	0.43
9:L:84:MET:SD	9:L:85:LEU:N	2.91	0.43
9:L:432:GLN:HB3	9:L:433:TYR:H	1.65	0.43
9:L:632:PHE:HZ	9:L:678:VAL:HG22	1.81	0.43
8:M:335:GLU:OE1	8:M:405:ASN:ND2	2.50	0.43
9:N:251:LEU:HD13	9:N:263:ALA:HB2	1.99	0.43
9:N:440:ASN:HD21	9:N:442:LYS:HB3	1.83	0.43
1:O:785:MET:O	1:O:785:MET:HG2	2.18	0.43
1:O:1249:SER:HB2	1:O:1313:PHE:HA	2.01	0.43
1:O:1910:GLU:CG	1:O:1911:LEU:H	2.30	0.43
1:O:2246:LYS:NZ	1:O:2283:ASN:HB3	2.34	0.43
1:O:2828:GLU:HA	1:O:2831:ASN:HD21	1.82	0.43
1:O:3577:GLN:OE1	1:O:3629:ARG:HG3	2.18	0.43
2:D:30:ARG:HD3	6:i:123:DG:N2	2.24	0.43
1:o:114:VAL:O	1:o:119:ARG:HB2	2.18	0.43
1:o:754:MET:HA	1:o:757:LYS:HG2	2.00	0.43
1:o:785:MET:HA	1:o:788:TYR:CE1	2.53	0.43
1:o:932:GLU:CD	1:o:2772:TYR:H	2.24	0.43
1:o:1456:LYS:NZ	1:o:1520:ALA:HB2	2.33	0.43
1:o:1866:GLN:O	1:o:1870:LYS:HG2	2.17	0.43
1:o:1877:LEU:HA	1:o:1880:MET:HB3	2.01	0.43
1:o:2398:LEU:HA	1:o:2401:VAL:HG22	2.00	0.43
1:o:2419:ASP:O	1:o:2422:GLN:HG2	2.18	0.43
1:o:3256:MET:N	1:o:3256:MET:SD	2.91	0.43
6:i:33:DG:H1'	6:i:34:DA:H5'	1.98	0.43
7:j:95:DC:H2''	7:j:96:DC:OP2	2.17	0.43
8:K:350:PHE:HB2	9:L:461:MET:SD	2.59	0.43
8:M:134:MET:O	8:M:135:MET:C	2.61	0.43
1:O:1431:LEU:O	1:O:1434:VAL:HG22	2.19	0.43
1:O:2165:LEU:O	1:O:2169:LEU:HG	2.18	0.43
1:O:2494:ASP:HA	1:O:2497:GLU:CD	2.42	0.43
1:O:3623:PRO:HB2	1:O:3685:PRO:HG3	2.01	0.43
1:o:201:LEU:HD21	1:o:246:ARG:HB3	1.99	0.43
1:o:220:LEU:O	1:o:224:LEU:HG	2.18	0.43
1:o:647:TYR:CD1	1:o:699:GLU:HB2	2.53	0.43
1:o:726:LEU:HG	1:o:730:LEU:HD23	2.00	0.43
1:o:1649:LEU:HA	1:o:1652:ILE:HD12	2.01	0.43
1:o:2923:TRP:CZ3	1:o:2942:ILE:HD12	2.52	0.43
1:o:3614:TYR:CE1	1:o:3619:ASP:HA	2.53	0.43
1:o:4083:GLY:HA2	1:o:4114:PRO:HG3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:i:73:DG:H21	6:i:74:DA:H62	1.67	0.43
8:K:75:ILE:C	8:K:78:SER:H	2.26	0.43
8:K:374:LEU:HG	8:K:375:VAL:HG23	2.01	0.43
9:L:11:VAL:N	9:L:131:HIS:O	2.47	0.43
9:L:134:ILE:HB	9:L:163:PHE:CE1	2.53	0.43
9:L:484:ASN:ND2	9:L:486:ARG:HB3	2.34	0.43
8:M:91:GLU:N	8:M:101:ASN:HA	2.33	0.43
9:N:253:ILE:HD11	9:N:342:VAL:HB	2.00	0.43
9:N:703:LYS:HA	9:N:703:LYS:HD2	1.75	0.43
1:O:67:VAL:O	1:O:70:ARG:HG2	2.19	0.43
1:O:114:VAL:O	1:O:119:ARG:HB2	2.17	0.43
1:O:145:ASP:O	1:O:147:PHE:N	2.43	0.43
1:O:1069:HIS:HA	1:O:3741:ARG:NH1	2.34	0.43
1:O:2328:ARG:HD3	1:O:2371:PHE:HA	2.01	0.43
1:O:3393:GLU:OE2	1:O:3413:TYR:OH	2.35	0.43
1:O:3506:LEU:HD21	1:O:3555:VAL:HG12	2.00	0.43
1:O:4008:GLU:OE2	1:O:4011:PHE:HB2	2.19	0.43
1:O:4055:ASN:ND2	1:O:4057:ALA:HB3	2.33	0.43
3:G:103:ALA:N	5:B:98:TYR:O	2.47	0.43
4:A:111:ALA:O	4:A:116:ARG:N	2.52	0.43
1:o:571:SER:HA	1:o:574:LYS:HE2	2.01	0.43
1:o:781:ASP:OD1	1:o:781:ASP:N	2.51	0.43
1:o:1157:PHE:HE2	1:o:1163:LEU:HD22	1.84	0.43
1:o:1504:ASP:OD1	1:o:1505:LEU:N	2.49	0.43
1:o:2127:LYS:HE3	1:o:2160:TYR:CZ	2.53	0.43
1:o:2168:LEU:HD12	1:o:2171:LEU:HB2	2.01	0.43
1:o:2435:CYS:O	1:o:2439:ILE:HG12	2.18	0.43
1:o:3100:LYS:HA	1:o:3103:ILE:HG22	2.01	0.43
1:o:3239:LYS:HB3	1:o:3262:LEU:HD11	2.00	0.43
1:o:3568:ILE:HG12	1:o:3699:LEU:HD11	2.00	0.43
1:o:4092:GLN:HG2	1:o:4093:GLU:N	2.34	0.43
5:b:26:ILE:HG13	5:b:55:ARG:HG2	2.00	0.43
2:h:91:ILE:HA	2:h:95:VAL:HG23	2.01	0.43
2:h:105:LYS:O	2:h:109:SER:HB2	2.18	0.43
6:i:113:DA:H2''	6:i:114:DC:C5	2.54	0.43
7:j:59:DC:H1'	7:j:60:DT:N3	2.33	0.43
8:K:44:ALA:N	8:K:88:TYR:O	2.51	0.43
8:K:458:GLN:O	8:K:462:MET:HG3	2.18	0.43
9:L:131:HIS:HD1	9:L:160:SER:HB3	1.83	0.43
9:L:622:GLN:OE1	9:L:628:GLU:HG2	2.19	0.43
8:M:92:LYS:HB2	8:M:135:MET:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:N:650:SER:O	9:N:653:GLN:NE2	2.43	0.43
1:O:156:PHE:HA	1:O:159:GLU:HB3	2.01	0.43
1:O:860:GLY:C	1:O:3136:THR:HG21	2.43	0.43
1:O:933:LEU:HD12	1:O:933:LEU:HA	1.83	0.43
1:O:1844:VAL:HG11	1:O:1910:GLU:HG2	2.00	0.43
1:O:2815:GLY:HA2	1:O:2818:LYS:HE3	2.00	0.43
1:O:3448:GLU:OE2	1:O:3482:LEU:HB3	2.18	0.43
3:c:74:LYS:HD2	3:c:74:LYS:HA	1.81	0.43
5:F:32:PRO:HB2	7:j:64:DA:OP2	2.18	0.43
1:o:1070:PRO:HG3	1:o:3743:HIS:CE1	2.53	0.43
1:o:2440:TYR:HA	1:o:2476:ILE:HD11	2.00	0.43
1:o:2524:PHE:CZ	1:o:2530:ARG:HG2	2.53	0.43
1:o:3041:LEU:O	1:o:3045:ILE:HG12	2.19	0.43
1:o:3867:THR:HA	1:o:4117:LEU:O	2.19	0.43
1:o:3974:MET:HE1	1:o:3978:GLY:H	1.84	0.43
5:b:35:ARG:O	5:b:39:ARG:HG2	2.19	0.43
4:e:133:GLU:HA	5:f:95:ARG:HH12	1.84	0.43
5:f:45:ARG:HH12	7:J:72:DA:H2	1.67	0.43
6:i:55:DG:O6	7:j:99:DC:N4	2.52	0.43
7:J:67:DC:H2''	7:J:68:DA:H5'	2.00	0.43
6:I:25:DC:H2''	6:I:26:DG:N9	2.33	0.43
8:K:329:LEU:HD23	8:K:334:THR:HG22	2.00	0.43
9:L:405:VAL:H	9:L:426:PHE:HZ	1.67	0.43
9:N:251:LEU:HD11	9:N:340:PHE:HB2	1.99	0.43
1:O:363:ILE:O	1:O:366:TYR:HB2	2.19	0.43
1:O:395:MET:HE1	1:O:410:MET:HE3	2.01	0.43
1:O:675:ARG:HH22	1:O:735:SER:HB2	1.82	0.43
1:O:826:PHE:O	1:O:834:LEU:HD22	2.19	0.43
1:O:935:HIS:ND1	1:O:987:LEU:HD21	2.34	0.43
1:O:1292:LYS:HE2	1:O:1292:LYS:HB3	1.73	0.43
1:O:1386:ILE:HG13	1:O:1387:GLY:H	1.83	0.43
1:O:1471:GLN:NE2	1:O:1478:SER:H	2.17	0.43
1:O:1615:GLY:O	1:O:1619:ALA:N	2.34	0.43
1:O:1914:THR:OG1	1:O:1915:LEU:N	2.51	0.43
1:O:2142:ILE:HA	1:O:2145:PHE:HB2	1.99	0.43
1:O:3463:LEU:HA	1:O:3498:TRP:HZ2	1.84	0.43
1:O:3606:ILE:HB	1:O:3647:GLY:HA3	2.01	0.43
2:D:92:GLN:OE1	2:D:96:ARG:NH1	2.51	0.43
1:o:197:PHE:O	1:o:201:LEU:HG	2.19	0.43
1:o:366:TYR:HE2	1:o:384:MET:HG3	1.83	0.43
1:o:1911:LEU:HA	1:o:1913:LYS:NZ	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:2563:LEU:HD22	1:o:2795:GLN:OE1	2.18	0.43
4:e:54:TYR:HB3	4:e:61:LEU:HD21	2.00	0.43
6:i:48:DT:H2''	6:i:49:DC:H5'	2.01	0.43
8:K:129:LYS:NZ	8:K:130:ARG:HE	2.17	0.43
8:K:270:SER:H	8:K:375:VAL:HB	1.83	0.43
8:K:420:LEU:HG	8:K:426:GLN:HG2	2.00	0.43
9:L:45:GLN:HG3	9:L:54:ILE:HD11	1.99	0.43
9:L:298:ASN:HB2	9:L:301:ASP:HB2	1.99	0.43
1:O:96:MET:SD	1:O:99:LYS:CB	3.07	0.43
1:O:345:PHE:HB3	1:O:366:TYR:HE1	1.84	0.43
1:O:642:PHE:HZ	1:O:673:THR:HG23	1.83	0.43
1:O:962:TYR:HB3	1:O:966:PHE:CE2	2.54	0.43
1:O:2428:ASP:HB3	1:O:2431:ARG:HD2	2.01	0.43
1:O:2977:ASN:HA	1:O:2979:GLN:HE22	1.84	0.43
1:O:3472:ILE:HG12	1:O:3479:THR:HB	2.00	0.43
1:O:3514:VAL:O	1:O:3518:VAL:HG13	2.19	0.43
1:O:3643:HIS:HB3	1:O:3659:PHE:HZ	1.84	0.43
1:O:4057:ALA:HA	1:O:4060:THR:HG22	1.99	0.43
2:D:59:MET:SD	2:D:60:ASN:N	2.92	0.43
3:C:44:GLY:H	6:I:115:DG:P	2.42	0.43
5:B:75:HIS:CE1	2:d:89:ARG:HG2	2.54	0.43
1:o:320:LEU:HA	1:o:323:VAL:HG22	2.01	0.43
1:o:745:VAL:HA	1:o:748:TYR:HD2	1.84	0.43
1:o:1365:ASN:O	1:o:1369:MET:HE1	2.18	0.43
1:o:1513:GLY:O	1:o:1517:LEU:HG	2.18	0.43
5:f:29:ILE:CG2	5:f:55:ARG:HE	2.32	0.43
6:i:57:DC:H1'	7:j:97:DG:H22	1.84	0.43
6:i:65:DA:H2''	6:i:66:DC:O4'	2.19	0.43
6:i:130:DC:H5'	9:L:273:LYS:NZ	2.33	0.43
7:j:123:DA:H2''	7:j:124:DG:N7	2.34	0.43
9:L:622:GLN:HG2	9:L:631:TYR:CD2	2.54	0.43
8:M:102:ILE:HG13	8:M:149:VAL:HG21	2.01	0.43
8:M:522:VAL:HA	8:M:525:PHE:HB3	2.01	0.43
9:N:285:LYS:HZ3	9:N:285:LYS:HG2	1.65	0.43
9:N:450:GLN:HB3	9:N:537:PHE:CZ	2.53	0.43
1:O:35:ILE:HD12	1:O:38:LEU:HD23	2.00	0.43
1:O:455:LEU:HB2	1:O:459:ARG:HH22	1.83	0.43
1:O:529:ASP:OD1	1:O:530:LEU:N	2.51	0.43
1:O:933:LEU:HD13	1:O:2793:PRO:HB2	2.01	0.43
1:O:1001:PHE:HZ	1:O:1044:ILE:HD12	1.83	0.43
1:O:1750:LEU:HD11	1:O:1759:LEU:HG	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1825:LEU:HA	1:O:1828:LEU:HB2	2.00	0.43
1:O:1916:ILE:HD13	1:O:1951:VAL:HG21	2.01	0.43
1:O:2786:LYS:HB2	1:O:2789:SER:H	1.84	0.43
1:O:3193:ILE:O	1:O:3197:LEU:N	2.52	0.43
1:O:3289:ARG:HE	1:O:3291:GLN:HB3	1.83	0.43
1:O:3410:ILE:HD11	1:O:3456:LEU:HD23	2.01	0.43
2:D:43:LYS:HG3	2:D:47:PRO:HB3	2.00	0.43
2:H:84:SER:OG	2:H:85:THR:N	2.52	0.43
4:A:119:ILE:HG12	5:B:43:VAL:HG11	1.99	0.43
3:c:92:GLU:HB3	2:d:99:LEU:HD22	2.01	0.43
1:o:154:SER:O	1:o:158:GLY:N	2.37	0.43
1:o:1042:LYS:HG3	1:o:1043:GLN:N	2.34	0.43
1:o:1164:CYS:SG	1:o:1165:LEU:N	2.92	0.43
1:o:1696:LEU:N	1:o:1697:PRO:HD2	2.34	0.43
1:o:2133:LEU:HD23	1:o:2167:PRO:HB2	2.01	0.43
1:o:3107:ILE:HG12	1:o:3135:LEU:HD11	2.00	0.43
1:o:3547:THR:O	1:o:3551:ASN:N	2.43	0.43
1:o:3563:ASP:C	1:o:3564:GLN:HG3	2.44	0.43
1:o:3789:ARG:H	1:o:3789:ARG:HG2	1.63	0.43
1:o:4039:TYR:O	1:o:4043:LYS:HG2	2.18	0.43
5:f:70:VAL:O	5:f:73:THR:HG22	2.19	0.43
6:I:135:DC:H2''	6:I:136:DA:O5'	2.18	0.43
8:K:74:LYS:CG	8:K:79:ASP:HB2	2.46	0.43
8:K:422:ASP:OD1	8:K:422:ASP:N	2.51	0.43
8:K:512:GLU:O	8:K:515:ASN:N	2.52	0.43
9:L:346:CYS:SG	9:L:390:VAL:HG23	2.58	0.43
9:L:664:GLU:HA	9:L:667:GLU:HG2	2.01	0.43
8:M:263:LEU:N	8:M:268:VAL:HB	2.28	0.43
9:N:42:VAL:HG11	9:N:94:ILE:HD11	2.01	0.43
9:N:377:LEU:HD23	9:N:377:LEU:HA	1.91	0.43
1:O:835:LYS:O	1:O:838:LYS:HG2	2.19	0.42
1:O:1144:SER:HA	1:O:1147:LYS:NZ	2.34	0.42
1:O:1711:ARG:HD2	1:O:1711:ARG:HA	1.74	0.42
1:O:2533:SER:HA	1:O:2538:ARG:HB2	2.02	0.42
1:O:2970:LYS:O	1:O:2971:GLN:C	2.61	0.42
3:C:50:TYR:CE2	2:H:92:GLN:HA	2.54	0.42
4:A:64:LYS:HG2	4:A:93:GLN:HE22	1.81	0.42
1:o:11:SER:O	1:o:14:ARG:HG3	2.19	0.42
1:o:574:LYS:O	1:o:577:GLU:HG2	2.19	0.42
1:o:764:PRO:O	1:o:767:GLU:HG2	2.18	0.42
1:o:982:GLN:O	1:o:2589:TYR:OH	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:1070:PRO:HG3	1:o:3743:HIS:CG	2.54	0.42
1:o:1184:ARG:HD2	1:o:1184:ARG:C	2.44	0.42
1:o:1696:LEU:HD21	1:o:1749:ALA:HB1	2.01	0.42
1:o:2101:VAL:O	1:o:2104:MET:HG3	2.19	0.42
1:o:2353:GLN:HB3	1:o:2360:PHE:HB2	2.00	0.42
4:a:62:ILE:HG22	4:a:93:GLN:HE22	1.84	0.42
3:g:40:ALA:HB3	2:h:86:ILE:HG12	2.01	0.42
7:j:74:DG:H2''	7:j:75:DC:C5	2.54	0.42
7:j:105:DG:H1'	7:j:106:DA:N7	2.33	0.42
9:L:308:GLU:OE1	9:L:308:GLU:N	2.52	0.42
9:L:609:PHE:CD2	9:L:612:ALA:HB2	2.51	0.42
8:M:217:TYR:HA	8:M:220:ILE:HD13	2.01	0.42
9:N:197:ILE:HG23	9:N:202:LYS:HD3	2.00	0.42
9:N:404:GLN:HB3	9:N:421:TYR:OH	2.19	0.42
1:O:22:ALA:HB1	1:O:33:GLN:OE1	2.19	0.42
1:O:74:ASN:OD1	1:O:75:SER:N	2.52	0.42
1:O:105:VAL:HG22	1:O:145:ASP:CG	2.44	0.42
1:O:253:LEU:HD11	1:O:259:GLN:C	2.44	0.42
1:O:616:LYS:HD2	1:O:616:LYS:HA	1.87	0.42
1:O:865:GLN:HB2	1:O:3170:ASP:CG	2.44	0.42
1:O:1573:LYS:HE2	1:O:1573:LYS:HB2	1.88	0.42
1:O:1582:LEU:HD21	1:O:1597:LEU:HG	2.01	0.42
1:O:2270:ASN:O	1:O:2274:ILE:HG13	2.19	0.42
1:O:2522:ARG:NH1	1:O:2560:ASN:OD1	2.52	0.42
1:O:2852:PRO:HB3	1:O:2885:GLN:NE2	2.34	0.42
1:O:3119:VAL:HA	1:O:3125:ARG:NH1	2.34	0.42
1:O:3531:TYR:O	1:O:3535:ILE:HG12	2.18	0.42
1:O:3859:TYR:HA	1:O:4119:ARG:HD2	2.01	0.42
2:D:103:LEU:HG	3:G:96:LEU:CD2	2.49	0.42
4:E:82:LEU:HD23	4:E:82:LEU:HA	1.92	0.42
1:o:42:CYS:SG	1:o:88:PHE:HB2	2.58	0.42
1:o:893:SER:H	1:o:944:LYS:NZ	2.18	0.42
1:o:985:GLU:HA	1:o:988:VAL:HG22	2.01	0.42
1:o:1013:ILE:HG13	1:o:1014:LEU:N	2.35	0.42
1:o:1359:LEU:O	1:o:1362:ASP:HB2	2.20	0.42
1:o:2278:GLY:O	1:o:2282:ALA:N	2.51	0.42
1:o:2494:ASP:O	1:o:2498:ILE:HG13	2.19	0.42
1:o:2773:ARG:HH11	1:o:2785:ILE:HG22	1.84	0.42
1:o:2844:LEU:HD22	1:o:2879:GLY:HA3	2.01	0.42
1:o:3713:PRO:HG2	1:o:3716:HIS:CE1	2.54	0.42
1:o:3963:LEU:HB3	1:o:4116:ILE:HD13	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:3998:LEU:HD12	1:o:4051:LEU:HD21	1.99	0.42
6:i:32:DG:H2'	6:i:33:DG:C8	2.54	0.42
7:J:80:DT:H6	7:J:80:DT:H2'	1.71	0.42
8:K:441:ASP:N	8:K:441:ASP:OD1	2.52	0.42
9:L:107:PHE:CZ	9:L:142:PHE:HB3	2.53	0.42
9:L:109:ASP:O	9:L:113:VAL:HG23	2.18	0.42
9:N:44:ARG:HH21	9:N:48:ALA:HB2	1.84	0.42
9:N:635:SER:O	9:N:639:ILE:HG12	2.19	0.42
1:O:96:MET:HG2	1:O:100:ILE:HD12	2.01	0.42
1:O:103:TYR:O	1:O:106:GLU:HB3	2.19	0.42
1:O:268:PRO:O	1:O:272:LEU:HG	2.19	0.42
1:O:529:ASP:O	1:O:533:HIS:N	2.42	0.42
1:O:945:ALA:O	1:O:946:THR:C	2.60	0.42
1:O:1049:GLN:O	1:O:1055:ASN:HB3	2.20	0.42
1:O:1251:GLN:HA	1:O:1254:LEU:HD12	2.00	0.42
1:O:1772:HIS:ND1	1:O:1773:VAL:HG13	2.34	0.42
1:O:2253:TYR:HB3	1:O:2288:TYR:CE1	2.47	0.42
1:O:2481:HIS:NE2	1:O:2530:ARG:HG3	2.34	0.42
1:O:2522:ARG:O	1:O:2526:SER:OG	2.28	0.42
1:O:3256:MET:O	1:O:3260:LYS:HD3	2.20	0.42
1:O:3570:ASP:HA	1:O:3573:ASN:HD21	1.84	0.42
1:O:3705:TYR:CD1	1:O:3712:LEU:HG	2.54	0.42
4:A:72:ARG:NE	6:i:54:DT:OP2	2.52	0.42
1:o:1071:ASN:H	1:o:1075:ARG:NH1	2.18	0.42
1:o:1300:SER:O	1:o:1334:LYS:NZ	2.53	0.42
1:o:1396:PRO:O	1:o:1400:VAL:HG23	2.20	0.42
1:o:3006:ALA:HB3	1:o:3255:ALA:N	2.34	0.42
1:o:3031:TRP:HD1	1:o:3044:MET:HE3	1.83	0.42
1:o:3622:ALA:HB2	1:o:3633:ILE:HD11	2.02	0.42
4:a:51:ILE:HG23	5:b:42:GLY:HA2	2.00	0.42
4:a:74:ILE:HG22	5:b:66:ILE:HG21	2.01	0.42
3:g:108:LEU:HD22	3:g:110:ASN:HB2	2.01	0.42
7:j:81:DC:H6	7:j:81:DC:H2'	1.65	0.42
8:K:142:SER:O	8:K:146:VAL:HG23	2.20	0.42
8:K:317:LYS:HD3	8:K:317:LYS:HA	1.83	0.42
8:K:444:ARG:N	9:L:266:SER:O	2.47	0.42
8:M:134:MET:HE3	8:M:134:MET:HB3	1.80	0.42
1:O:723:ASP:OD1	1:O:723:ASP:N	2.52	0.42
1:O:921:ALA:HB3	1:O:927:LYS:HB2	2.01	0.42
1:O:963:LYS:HB3	1:O:964:ARG:NH2	2.34	0.42
1:O:1114:ALA:O	1:O:1115:HIS:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1331:ASN:C	1:O:1331:ASN:HD22	2.25	0.42
1:O:2340:SER:O	1:O:2343:GLU:HB2	2.19	0.42
1:O:2369:LYS:HB2	1:O:2369:LYS:HE2	1.87	0.42
1:O:3557:ARG:HE	1:O:3558:ILE:HG13	1.84	0.42
3:C:26:PRO:HG3	2:H:37:TYR:CZ	2.54	0.42
2:H:88:SER:O	2:H:91:ILE:HG22	2.19	0.42
4:A:88:ALA:HB2	5:B:82:THR:C	2.44	0.42
3:c:38:HIS:ND1	3:c:38:HIS:O	2.52	0.42
3:c:101:THR:HG21	4:E:98:ALA:HB1	2.01	0.42
2:d:84:SER:N	6:i:43:DA:OP1	2.39	0.42
1:o:451:PRO:O	1:o:455:LEU:HG	2.20	0.42
1:o:573:LEU:HD22	1:o:649:PHE:HD1	1.84	0.42
1:o:1675:TYR:CZ	1:o:1679:LEU:HD11	2.55	0.42
1:o:1910:GLU:O	1:o:1913:LYS:NZ	2.51	0.42
1:o:1949:ILE:O	1:o:1952:ILE:HG22	2.18	0.42
1:o:2310:VAL:HG13	1:o:2316:TYR:HE2	1.84	0.42
1:o:3135:LEU:O	1:o:3139:GLN:HG2	2.20	0.42
1:o:3148:GLN:O	1:o:3153:SER:OG	2.37	0.42
1:o:3369:ASP:HB3	1:o:3372:LYS:HE2	2.00	0.42
1:o:3836:PRO:O	1:o:3873:LYS:HB3	2.20	0.42
8:K:93:ASP:HB3	8:K:102:ILE:H	1.84	0.42
8:K:304:ASN:O	8:K:308:GLY:N	2.42	0.42
9:L:509:GLN:HB2	9:L:511:HIS:CE1	2.55	0.42
8:M:112:GLY:H	8:M:115:ARG:HD3	1.84	0.42
8:M:207:LYS:H	8:M:211:PHE:HB2	1.84	0.42
9:N:212:MET:HA	9:N:215:LEU:HB2	2.01	0.42
9:N:660:LYS:HA	9:N:687:THR:HG22	2.02	0.42
1:O:118:ASP:OD1	9:L:297:LEU:HG	2.19	0.42
1:O:142:ARG:HH11	1:O:182:GLY:HA2	1.85	0.42
1:O:213:ARG:O	1:O:216:LYS:HB2	2.19	0.42
1:O:475:LEU:O	1:O:479:ILE:HG12	2.18	0.42
1:O:1596:VAL:HG22	1:O:1600:MET:HE2	2.02	0.42
1:O:1611:GLN:OE1	1:O:1614:GLN:HB2	2.18	0.42
1:O:1784:ARG:O	1:O:1785:ILE:C	2.63	0.42
1:O:2382:VAL:O	1:O:2386:LEU:HG	2.20	0.42
1:O:2815:GLY:HA2	1:O:2818:LYS:HG2	2.01	0.42
1:O:3625:LEU:HB3	1:O:3630:ARG:CZ	2.49	0.42
1:O:3714:GLU:OE1	1:O:3714:GLU:N	2.39	0.42
1:O:3890:MET:HE3	1:O:3932:MET:HB2	2.00	0.42
4:A:84:PHE:HA	5:B:81:VAL:HB	2.02	0.42
3:c:17:ARG:HG2	6:i:34:DA:OP1	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:265:TYR:HB3	1:o:308:LEU:HD21	2.00	0.42
1:o:865:GLN:HA	1:o:868:LYS:NZ	2.34	0.42
1:o:865:GLN:HG3	1:o:3168:TYR:HB3	2.02	0.42
1:o:913:ARG:O	1:o:916:GLU:HG3	2.19	0.42
1:o:1108:MET:HE2	1:o:1178:ARG:HH22	1.84	0.42
1:o:2126:MET:HE3	1:o:2126:MET:HB3	1.64	0.42
1:o:2145:PHE:O	1:o:2149:LEU:HD23	2.19	0.42
1:o:2323:LEU:HD23	1:o:2323:LEU:HA	1.83	0.42
1:o:3151:LEU:HD23	1:o:3151:LEU:H	1.84	0.42
1:o:3674:SER:O	1:o:3674:SER:OG	2.37	0.42
1:o:4056:PRO:HA	1:o:4059:ILE:HB	2.01	0.42
7:J:13:DC:N3	6:I:141:DG:N2	2.64	0.42
8:K:217:TYR:HD1	8:K:220:ILE:HD12	1.83	0.42
9:L:154:LEU:HA	9:L:159:ILE:HD12	2.01	0.42
1:O:1301:ILE:N	1:O:1303:MET:SD	2.93	0.42
1:O:1379:PRO:HB3	1:O:1385:ASN:HB3	2.02	0.42
1:O:1417:THR:O	1:O:1420:ARG:HB2	2.20	0.42
1:O:1714:LEU:O	1:O:1718:ILE:HG23	2.19	0.42
1:O:2260:PHE:O	1:O:2270:ASN:HB2	2.18	0.42
1:O:2530:ARG:N	1:O:2530:ARG:HD2	2.35	0.42
1:O:2567:SER:HA	1:O:2572:TYR:CG	2.54	0.42
1:O:3262:LEU:HD22	1:O:3276:TRP:HD1	1.84	0.42
1:O:3483:MET:HE3	1:O:3511:ALA:HB3	2.01	0.42
1:O:3717:VAL:HG13	1:O:3743:HIS:N	2.35	0.42
1:O:3797:THR:HG23	1:O:3800:LEU:HB2	2.00	0.42
3:c:76:THR:C	2:d:50:GLY:H	2.28	0.42
1:o:337:LYS:HA	1:o:341:PHE:HD1	1.84	0.42
1:o:933:LEU:HB2	1:o:2793:PRO:HB2	2.02	0.42
1:o:946:THR:OG1	1:o:947:GLN:NE2	2.49	0.42
1:o:1157:PHE:CE2	1:o:1163:LEU:HD22	2.54	0.42
1:o:1231:GLN:HB3	1:o:1235:ILE:HG13	2.00	0.42
1:o:1718:ILE:HD11	1:o:1761:LEU:HD22	2.00	0.42
1:o:3627:ALA:H	1:o:3677:PRO:HG2	1.85	0.42
1:o:3859:TYR:CZ	1:o:3956:PRO:HD3	2.54	0.42
4:e:121:PRO:HD3	5:f:50:ILE:HG12	2.02	0.42
7:j:98:DC:H2"	7:j:99:DC:H5"	2.02	0.42
8:K:94:LYS:HB2	8:K:103:TYR:CD2	2.54	0.42
8:K:311:LEU:HD12	8:K:311:LEU:HA	1.88	0.42
9:L:253:ILE:HD11	9:L:342:VAL:HB	2.01	0.42
9:L:612:ALA:O	9:L:616:LEU:HG	2.20	0.42
9:L:682:GLY:O	9:L:683:ILE:C	2.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:M:71:TYR:HB3	8:M:116:ILE:HD13	2.01	0.42
8:M:287:LYS:HA	8:M:287:LYS:HD3	1.91	0.42
8:M:352:PRO:HA	8:M:394:VAL:HG13	2.02	0.42
8:M:454:ALA:HB2	9:N:375:VAL:HG13	2.02	0.42
9:N:489:ARG:O	9:N:492:GLN:HG2	2.19	0.42
9:N:493:CYS:HB2	9:N:506:PRO:HG3	2.01	0.42
1:O:88:PHE:HA	1:O:91:ILE:HG12	2.01	0.42
1:O:200:PHE:HA	1:O:203:GLU:HB3	2.01	0.42
1:O:204:LEU:HD12	1:O:224:LEU:HD11	2.02	0.42
1:O:1093:GLU:HA	1:O:1096:VAL:HG12	2.02	0.42
1:O:1219:PHE:CE1	1:O:1281:VAL:HG12	2.54	0.42
1:O:3459:ASN:O	1:O:3463:LEU:HG	2.19	0.42
1:O:3529:ILE:HD12	1:O:3532:PRO:HB2	2.01	0.42
1:O:3625:LEU:HB3	1:O:3630:ARG:NH1	2.35	0.42
2:H:97:LEU:HD22	5:f:72:TYR:CD1	2.55	0.42
4:A:94:GLU:HB3	5:B:97:LEU:HD21	2.02	0.42
2:d:41:VAL:HA	2:d:44:GLN:OE1	2.19	0.42
1:o:618:LYS:HD2	1:o:2034:SER:HB2	2.01	0.42
1:o:867:ASN:HB2	1:o:3129:LEU:HD13	2.01	0.42
1:o:958:MET:HE3	1:o:958:MET:HB3	1.87	0.42
1:o:1424:THR:C	1:o:1426:GLN:H	2.27	0.42
1:o:1848:ILE:HD11	1:o:1912:THR:HG22	2.00	0.42
1:o:1936:ARG:HA	1:o:1939:LEU:HD12	2.02	0.42
1:o:3457:ASN:HB2	1:o:3708:ARG:HG2	2.01	0.42
1:o:3532:PRO:HA	1:o:3535:ILE:HG12	2.01	0.42
1:o:4085:LYS:O	1:o:4089:ILE:HG12	2.19	0.42
7:j:16:DG:H2"	7:j:17:DG:H8	1.85	0.42
8:K:46:LYS:O	8:K:48:MET:N	2.53	0.42
8:K:407:PRO:HD2	9:L:486:ARG:HH21	1.85	0.42
8:K:505:ASP:O	8:K:507:THR:N	2.52	0.42
9:L:426:PHE:H	9:L:429:ASP:CB	2.33	0.42
8:M:263:LEU:HD22	8:M:267:ILE:HG23	2.02	0.42
9:N:212:MET:SD	9:N:220:GLY:HA2	2.59	0.42
1:O:498:PRO:HD2	1:O:2601:VAL:HG11	2.02	0.42
1:O:715:ALA:HA	1:O:718:MET:HG3	2.02	0.42
1:O:1112:ALA:HB1	1:O:1180:GLN:HG3	2.00	0.42
1:O:1142:HIS:CD2	1:O:1197:LEU:HD12	2.54	0.42
1:O:1308:ALA:HB3	1:O:1312:CYS:HB3	2.01	0.42
1:O:2300:PHE:O	1:O:2304:VAL:HG23	2.19	0.42
1:O:2420:PHE:CE2	1:O:2439:ILE:HD11	2.55	0.42
1:O:3588:TRP:CD1	1:O:3609:MET:HG2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:3705:TYR:HA	1:O:3712:LEU:HD11	2.02	0.42
2:D:84:SER:O	3:G:40:ALA:HB1	2.19	0.42
2:H:77:LEU:HD13	2:H:97:LEU:HD12	2.02	0.42
4:A:71:VAL:HG11	4:A:89:VAL:HG13	2.02	0.42
1:O:144:MET:N	1:O:144:MET:SD	2.93	0.42
1:O:1105:VAL:HG21	1:O:1154:PRO:HB2	2.01	0.42
1:O:1149:LYS:O	1:O:1163:LEU:N	2.52	0.42
1:O:1819:PHE:O	1:O:1823:SER:OG	2.28	0.42
1:O:2522:ARG:NH2	1:O:2560:ASN:HB3	2.34	0.42
1:O:3545:THR:HG23	1:O:3548:GLY:H	1.85	0.42
1:O:3772:ASN:O	1:O:3787:GLN:NE2	2.46	0.42
1:O:4081:ALA:HA	1:O:4115:ASN:HB3	2.02	0.42
4:a:85:GLN:HG3	6:I:53:DT:OP1	2.20	0.42
4:a:98:ALA:HB3	5:b:97:LEU:HD11	2.02	0.42
4:a:127:ALA:O	4:a:131:ARG:NE	2.45	0.42
6:I:58:DG:H2''	6:I:59:DG:C8	2.55	0.42
6:I:133:DG:H1'	9:N:400:ARG:HH12	1.84	0.42
8:K:341:ASP:HB3	8:K:401:THR:HG21	2.02	0.42
8:K:510:LYS:O	8:K:511:VAL:C	2.63	0.42
8:M:64:ILE:HG21	8:M:122:PHE:C	2.44	0.42
8:M:357:LYS:NZ	9:N:480:THR:HG21	2.35	0.42
8:M:465:ILE:HA	8:M:468:LYS:HE3	2.01	0.42
9:N:621:GLU:O	9:N:671:LEU:HD11	2.20	0.42
9:N:623:PHE:CZ	9:N:632:PHE:HB2	2.55	0.42
1:O:718:MET:HA	1:O:721:TYR:HB2	2.02	0.42
1:O:1296:PHE:O	1:O:1300:SER:N	2.53	0.42
1:O:1445:ARG:O	1:O:1448:LEU:HB2	2.20	0.42
1:O:1529:VAL:O	1:O:1532:LEU:HB2	2.20	0.42
1:O:1922:ALA:O	1:O:1924:THR:HG23	2.20	0.42
1:O:1955:VAL:HG23	1:O:1956:PHE:CE2	2.54	0.42
1:O:2034:SER:O	1:O:2037:SER:N	2.52	0.42
1:O:2122:LEU:N	1:O:2125:TRP:HA	2.33	0.42
1:O:2491:THR:O	1:O:2496:GLN:NE2	2.53	0.42
1:O:2894:GLU:HG2	1:O:3973:PRO:HG3	2.01	0.42
1:O:3477:GLU:OE1	1:O:3477:GLU:N	2.33	0.42
1:O:3758:LEU:HD13	1:O:3793:VAL:HG21	2.01	0.42
1:O:132:ILE:HB	1:O:173:LYS:HZ3	1.84	0.42
1:O:526:ASP:OD1	1:O:526:ASP:N	2.43	0.42
1:O:933:LEU:HD22	1:O:2794:LEU:HA	2.02	0.42
1:O:3229:SER:N	1:O:3232:ARG:HH21	2.18	0.42
1:O:3696:ARG:HD2	1:O:3697:ASN:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:3988:LEU:HG	1:o:4100:GLU:HG2	2.02	0.42
4:a:96:CYS:HB2	5:b:58:LEU:HD21	2.01	0.42
6:i:56:DG:H2''	6:i:57:DC:C2	2.55	0.42
6:i:131:DT:H3'	6:i:131:DT:OP2	2.20	0.42
8:K:268:VAL:H	9:L:539:LEU:HD21	1.85	0.42
9:L:164:PHE:HE1	9:L:225:TYR:HB2	1.84	0.42
9:L:346:CYS:N	9:L:390:VAL:O	2.49	0.42
9:L:457:LEU:O	9:L:461:MET:HG3	2.20	0.42
9:L:646:ALA:HA	9:L:651:GLU:HG3	2.01	0.42
8:M:339:ARG:HB2	8:M:405:ASN:ND2	2.35	0.42
8:M:351:LYS:C	8:M:394:VAL:HG13	2.45	0.42
1:O:1397:ASP:HA	1:O:1460:ARG:HH12	1.85	0.42
1:O:2346:ALA:O	1:O:2349:LEU:HB2	2.20	0.42
1:O:2375:ALA:HA	1:O:2378:PHE:HD2	1.84	0.42
1:O:2576:MET:HE3	1:O:2790:LEU:HD23	2.02	0.42
1:O:2842:ARG:O	1:O:2846:THR:OG1	2.32	0.42
1:O:3301:LEU:C	1:O:3303:THR:H	2.27	0.42
1:O:3585:PHE:CD1	1:O:3613:MET:HE2	2.54	0.42
1:O:4070:LYS:HE2	1:O:4070:LYS:HB2	1.93	0.42
5:F:77:LYS:HE3	5:F:77:LYS:HB3	1.91	0.42
1:o:28:ALA:HA	1:o:77:GLU:HG3	2.02	0.42
1:o:565:TYR:CE1	1:o:642:PHE:HB2	2.55	0.42
1:o:881:LYS:HZ2	1:o:3119:VAL:HG22	1.85	0.42
1:o:1261:LEU:HD21	1:o:1337:VAL:HG22	2.02	0.42
1:o:3717:VAL:HA	1:o:3743:HIS:HB3	2.02	0.42
1:o:3924:HIS:ND1	1:o:3926:ASN:HB2	2.35	0.42
3:g:102:ILE:HB	2:h:58:ILE:HG13	2.02	0.42
4:e:67:PHE:HB3	4:e:93:GLN:HE21	1.85	0.42
6:i:67:DG:N7	7:j:88:DG:N2	2.68	0.42
7:j:16:DG:OP2	8:K:278:GLN:NE2	2.53	0.42
8:K:321:ILE:HG23	8:K:326:GLN:HA	2.01	0.42
8:K:514:MET:O	8:K:518:LEU:CB	2.68	0.42
9:L:7:LYS:HB2	9:L:125:LYS:O	2.19	0.42
9:L:8:ALA:H	9:L:52:ASP:HA	1.85	0.42
9:L:261:ILE:HD11	9:L:364:VAL:HG13	2.01	0.42
9:L:484:ASN:HD21	9:L:486:ARG:HB3	1.84	0.42
9:L:663:GLN:HG2	9:L:686:ILE:HD12	2.02	0.42
8:M:372:GLU:HG2	8:M:373:SER:H	1.85	0.42
1:O:194:GLU:O	1:O:197:PHE:HB2	2.20	0.41
1:O:203:GLU:O	1:O:206:THR:OG1	2.30	0.41
1:O:491:CYS:HB3	1:O:622:ALA:HB1	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:974:CYS:SG	1:O:1024:THR:HG22	2.60	0.41
1:O:2160:TYR:HD2	1:O:2164:TRP:CE2	2.38	0.41
1:O:3839:TYR:HB2	1:O:3840:LYS:HD2	2.02	0.41
2:D:31:LYS:HB2	6:i:125:DG:H4'	2.01	0.41
3:C:74:LYS:NZ	9:N:335:SER:O	2.53	0.41
2:H:31:LYS:HD3	2:H:31:LYS:HA	1.85	0.41
3:c:44:GLY:HA3	2:d:87:THR:HG22	2.01	0.41
4:E:82:LEU:HD23	5:F:79:LYS:O	2.20	0.41
1:o:272:LEU:HD13	1:o:312:ALA:HB2	2.01	0.41
1:o:749:VAL:HB	1:o:750:PRO:HD3	2.02	0.41
1:o:794:PRO:HA	1:o:870:LEU:HD12	2.01	0.41
1:o:1483:LEU:HD11	1:o:1514:LEU:HB3	2.02	0.41
1:o:3252:PHE:CE1	1:o:3289:ARG:HG2	2.55	0.41
1:o:3278:GLN:HB3	1:o:3282:ARG:NH1	2.35	0.41
1:o:3780:ALA:HB1	1:o:3784:ARG:HH22	1.85	0.41
5:b:36:ARG:HH22	6:I:63:DA:H3'	1.85	0.41
6:i:95:DG:C8	6:i:95:DG:H5'	2.54	0.41
7:j:48:DC:H2''	7:j:49:DT:C6	2.55	0.41
8:K:47:ALA:O	8:K:50:GLU:N	2.53	0.41
8:K:113:ALA:O	8:K:115:ARG:N	2.53	0.41
9:L:666:VAL:HA	9:L:669:LYS:HB2	2.02	0.41
8:M:168:LEU:HD23	8:M:200:LEU:HB3	2.02	0.41
8:M:339:ARG:NH1	8:M:405:ASN:H	2.18	0.41
8:M:372:GLU:HG2	8:M:373:SER:N	2.35	0.41
8:M:420:LEU:HB2	8:M:424:LYS:HA	2.01	0.41
9:N:137:ASP:HB3	9:N:227:PHE:HE2	1.85	0.41
1:O:117:LYS:HD2	1:O:117:LYS:HA	1.91	0.41
1:O:164:LYS:HA	1:O:164:LYS:HD3	1.83	0.41
1:O:265:TYR:O	1:O:268:PRO:HD2	2.19	0.41
1:O:432:THR:N	1:O:433:PRO:HD2	2.34	0.41
1:O:1202:ARG:N	1:O:1206:LEU:HD12	2.35	0.41
1:O:1455:CYS:O	1:O:1458:LEU:HB2	2.20	0.41
1:O:2100:LEU:O	1:O:2104:MET:HG2	2.20	0.41
1:O:2307:MET:HB3	1:O:2348:GLN:OE1	2.20	0.41
1:O:3257:LYS:HA	1:O:3260:LYS:HB2	2.02	0.41
1:O:3681:LYS:HG2	1:O:3683:CYS:H	1.85	0.41
1:O:4127:TRP:HD1	1:O:4128:MET:HE3	1.85	0.41
2:D:67:PHE:CD1	3:G:51:LEU:HD22	2.56	0.41
3:C:72:ASP:OD1	3:C:72:ASP:N	2.52	0.41
2:d:114:ALA:O	2:d:117:LYS:HG2	2.19	0.41
1:o:532:ARG:O	1:o:536:SER:OG	2.30	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:1373:VAL:HG11	1:o:1418:HIS:HD2	1.84	0.41
1:o:1531:LEU:HD23	1:o:1531:LEU:HA	1.85	0.41
1:o:2242:VAL:O	1:o:2249:LEU:HD11	2.21	0.41
1:o:2328:ARG:HB2	1:o:2370:SER:HB2	2.01	0.41
1:o:2940:ARG:HH22	1:o:3981:TYR:HD1	1.68	0.41
1:o:3475:TYR:O	1:o:3479:THR:OG1	2.35	0.41
1:o:4055:ASN:HB3	1:o:4058:VAL:HB	2.01	0.41
4:a:98:ALA:HA	4:a:101:VAL:HG22	2.03	0.41
5:b:71:THR:HG23	2:h:94:ALA:O	2.19	0.41
6:i:59:DG:N2	7:j:95:DC:O2	2.51	0.41
6:i:81:DG:H2''	6:i:82:DT:OP2	2.20	0.41
6:i:114:DC:H6	6:i:114:DC:H2'	1.66	0.41
6:i:128:DG:N2	7:j:26:DC:C2	2.88	0.41
8:K:72:ILE:O	8:K:76:ILE:N	2.53	0.41
8:K:463:LYS:NZ	9:L:386:ASP:HB3	2.34	0.41
9:L:164:PHE:CE1	9:L:225:TYR:HB2	2.55	0.41
9:L:346:CYS:O	9:L:390:VAL:N	2.53	0.41
8:M:92:LYS:HE3	8:M:135:MET:CA	2.50	0.41
9:N:27:ILE:HG23	9:N:166:PRO:HG3	2.01	0.41
1:O:741:ILE:HG21	1:O:776:TRP:CE2	2.55	0.41
1:O:1206:LEU:O	1:O:1207:TRP:C	2.63	0.41
1:O:2264:ASP:N	1:O:2265:PRO:HD3	2.35	0.41
1:O:2860:ASP:O	1:O:2863:CYS:N	2.53	0.41
1:O:3375:ALA:O	1:O:3379:GLN:HG2	2.19	0.41
1:O:3607:GLU:O	1:O:3610:TYR:HB2	2.20	0.41
3:C:47:ALA:HB3	3:C:48:PRO:HD3	2.03	0.41
4:A:119:ILE:O	4:A:120:MET:HE2	2.20	0.41
1:o:49:ALA:HB3	1:o:52:ALA:HB3	2.02	0.41
1:o:204:LEU:O	1:o:208:MET:HB3	2.19	0.41
1:o:647:TYR:HD1	1:o:703:CYS:SG	2.43	0.41
1:o:1017:ILE:HG22	1:o:1018:VAL:HG13	2.00	0.41
1:o:1934:LEU:HA	1:o:1937:ARG:HD2	2.02	0.41
1:o:2036:LEU:HA	1:o:2039:GLU:HG2	2.01	0.41
1:o:2461:PHE:HB2	1:o:2473:MET:SD	2.61	0.41
1:o:3050:LYS:NZ	1:o:3181:ASP:OD1	2.39	0.41
5:f:55:ARG:HH12	5:f:59:LYS:N	2.18	0.41
6:i:44:DG:H2''	6:i:45:DT:C6	2.55	0.41
9:L:16:VAL:HG23	9:L:60:GLY:C	2.45	0.41
9:L:666:VAL:HG11	9:L:678:VAL:HG11	2.02	0.41
8:M:434:LEU:HB3	8:M:436:PHE:CE1	2.55	0.41
8:M:469:LEU:HD23	8:M:517:ARG:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:N:168:SER:HB2	9:N:226:SER:N	2.35	0.41
1:O:738:HIS:HB2	1:O:780:ILE:HD11	2.02	0.41
1:O:1196:PRO:O	1:O:1197:LEU:HB2	2.20	0.41
1:O:1586:SER:HB3	1:O:1632:TRP:HH2	1.85	0.41
1:O:1629:CYS:O	1:O:1633:TRP:NE1	2.52	0.41
1:O:1935:GLU:OE1	1:O:1935:GLU:N	2.48	0.41
1:O:2723:THR:O	1:O:2726:LEU:HB2	2.20	0.41
1:O:3773:GLY:O	1:O:3777:GLN:NE2	2.31	0.41
1:O:3995:PRO:O	1:O:3999:THR:HG23	2.20	0.41
2:D:31:LYS:H	2:D:31:LYS:HD2	1.85	0.41
3:C:49:VAL:HG11	2:H:118:TYR:CD1	2.55	0.41
3:C:50:TYR:CE1	2:H:92:GLN:HG2	2.55	0.41
2:d:33:SER:O	2:d:36:ILE:HG22	2.21	0.41
1:o:139:ARG:HE	1:o:142:ARG:HH12	1.68	0.41
1:o:345:PHE:HE1	1:o:363:ILE:HA	1.84	0.41
1:o:790:LYS:HA	1:o:869:ASN:HB3	2.02	0.41
1:o:942:LEU:O	1:o:946:THR:HG23	2.21	0.41
1:o:990:GLN:HG3	1:o:2777:HIS:CE1	2.55	0.41
1:o:1730:PRO:HA	1:o:1731:PRO:HD3	1.95	0.41
1:o:1786:ALA:HB3	1:o:1830:HIS:CD2	2.55	0.41
1:o:2816:ILE:O	1:o:2820:MET:HG2	2.19	0.41
1:o:2893:LEU:HD23	1:o:2893:LEU:HA	1.97	0.41
1:o:3966:GLN:HA	1:o:3969:ASN:HB2	2.02	0.41
4:a:128:ARG:HD3	4:a:134:ARG:NE	2.35	0.41
6:i:77:DG:H5''	6:i:78:DC:C5	2.55	0.41
6:i:115:DG:H1	7:j:40:DG:N2	2.17	0.41
6:I:87:DG:H4'	6:I:88:DC:OP1	2.20	0.41
9:L:27:ILE:O	9:L:30:PRO:HD3	2.21	0.41
9:L:461:MET:O	9:L:522:VAL:HG23	2.20	0.41
1:O:523:THR:HG23	1:O:526:ASP:OD1	2.19	0.41
1:O:713:GLU:HA	1:O:716:VAL:HG22	2.03	0.41
1:O:848:LEU:HB3	1:O:852:ARG:NH2	2.30	0.41
1:O:966:PHE:O	1:O:970:LEU:HG	2.20	0.41
1:O:1042:LYS:HE3	1:O:1042:LYS:HB3	1.88	0.41
1:O:1137:ILE:HA	1:O:1137:ILE:HD12	1.96	0.41
1:O:1881:TYR:CG	1:O:1950:SER:HB3	2.55	0.41
1:O:2203:THR:HG22	1:O:2247:ASP:OD2	2.20	0.41
1:O:2529:THR:HB	1:O:2530:ARG:HH11	1.85	0.41
1:O:4039:TYR:HE2	1:O:4066:LEU:HD21	1.86	0.41
3:c:92:GLU:O	3:c:95:LYS:HB2	2.19	0.41
4:E:68:GLN:O	4:E:71:VAL:HG22	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:382:ASP:O	1:o:386:VAL:N	2.31	0.41
1:o:713:GLU:C	1:o:717:LYS:HZ2	2.29	0.41
1:o:945:ALA:HA	1:o:949:PRO:HA	2.03	0.41
1:o:992:ILE:HB	1:o:1036:PHE:HD2	1.85	0.41
1:o:1396:PRO:HB3	1:o:1457:GLN:NE2	2.35	0.41
1:o:2155:GLU:HA	1:o:2158:ARG:HD3	2.03	0.41
1:o:3271:ASP:HA	1:o:3314:SER:HB2	2.01	0.41
1:o:3467:ARG:HH22	1:o:3474:ARG:CZ	2.34	0.41
1:o:3502:MET:HE1	1:o:3521:ILE:HD12	2.02	0.41
1:o:3506:LEU:HD11	1:o:3515:GLN:HB3	2.01	0.41
1:o:3589:SER:HA	1:o:3592:VAL:HG12	2.02	0.41
3:g:58:LEU:HD11	2:h:106:HIS:HD2	1.85	0.41
4:e:88:ALA:HB2	5:f:82:THR:HA	2.03	0.41
6:i:63:DA:C8	6:i:65:DA:N1	2.89	0.41
7:j:31:DC:H2''	7:j:32:DA:N7	2.36	0.41
7:J:25:DG:H21	6:I:131:DT:H5'	1.86	0.41
8:K:41:LEU:HD13	8:K:86:VAL:O	2.20	0.41
8:K:56:GLU:H	8:K:56:GLU:CD	2.28	0.41
8:K:466:VAL:HG22	9:L:345:PHE:CZ	2.56	0.41
9:L:131:HIS:NE2	9:L:162:GLN:HG2	2.34	0.41
8:M:134:MET:C	8:M:135:MET:HG3	2.46	0.41
8:M:413:LEU:HB3	8:M:432:PHE:HD2	1.85	0.41
9:N:107:PHE:CE1	9:N:108:LEU:HG	2.56	0.41
1:O:260:ILE:HD12	1:O:260:ILE:HA	1.93	0.41
1:O:361:ILE:HD13	1:O:364:ARG:HD2	2.02	0.41
1:O:745:VAL:HG21	1:O:788:TYR:CZ	2.55	0.41
1:O:1289:SER:HA	1:O:1292:LYS:HB3	2.02	0.41
1:O:2950:LYS:HB2	1:O:2953:THR:HG23	2.01	0.41
1:O:3186:ARG:NH1	1:O:3238:MET:SD	2.94	0.41
1:O:3306:LEU:C	1:O:3308:ASP:H	2.28	0.41
1:O:3419:PHE:O	1:O:3422:GLN:HG3	2.20	0.41
1:O:3729:MET:SD	1:O:3737:ARG:HB2	2.60	0.41
1:O:3873:LYS:C	1:O:3877:LYS:HZ3	2.29	0.41
1:O:4047:ALA:HA	1:O:4050:LYS:HG2	2.03	0.41
3:c:63:LEU:HD13	2:d:42:LEU:HB2	2.02	0.41
4:E:86:SER:HB2	7:j:53:DG:OP1	2.20	0.41
1:o:660:LEU:HD12	1:o:660:LEU:HA	1.92	0.41
1:o:992:ILE:HG13	1:o:993:HIS:N	2.35	0.41
1:o:1373:VAL:HG21	1:o:1418:HIS:HB3	2.02	0.41
1:o:1505:LEU:HD12	1:o:1506:SER:N	2.36	0.41
1:o:2184:TYR:HA	1:o:2734:ARG:HH21	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:2238:ILE:HD13	1:o:2241:LEU:HD21	2.02	0.41
1:o:2295:GLN:OE1	1:o:2295:GLN:N	2.53	0.41
1:o:2366:LYS:NZ	1:o:2370:SER:HB3	2.35	0.41
1:o:2962:ARG:NH2	1:o:2967:GLU:OE2	2.49	0.41
1:o:3506:LEU:HD22	1:o:3518:VAL:HG11	2.03	0.41
1:o:3880:ALA:HA	1:o:3966:GLN:HE22	1.86	0.41
1:o:4057:ALA:HB1	1:o:4082:ARG:HA	2.01	0.41
2:h:101:GLY:HA3	2:h:106:HIS:ND1	2.36	0.41
6:i:60:DT:H3	7:j:94:DA:N6	2.18	0.41
7:j:31:DC:H2''	7:j:32:DA:C5	2.56	0.41
8:K:36:ASP:H	8:K:81:ASP:CG	2.29	0.41
8:K:75:ILE:O	8:K:76:ILE:C	2.63	0.41
8:K:207:LYS:HA	8:K:207:LYS:HD3	1.69	0.41
8:K:261:LEU:O	8:K:268:VAL:HA	2.21	0.41
9:L:530:LEU:O	9:L:534:LYS:HG3	2.20	0.41
8:M:177:GLY:HA3	8:M:216:PHE:CE2	2.55	0.41
1:O:76:ILE:O	1:O:79:ARG:HB3	2.21	0.41
1:O:190:ILE:O	1:O:193:ALA:HB3	2.19	0.41
1:O:392:CYS:HA	1:O:395:MET:CG	2.50	0.41
1:O:406:ARG:HA	1:O:406:ARG:HD2	1.85	0.41
1:O:523:THR:HG23	1:O:526:ASP:CG	2.46	0.41
1:O:962:TYR:HB2	1:O:1007:VAL:HG11	2.01	0.41
1:O:1019:ASP:HA	1:O:1020:PRO:HD3	1.92	0.41
1:O:1108:MET:HE1	1:O:1131:ILE:HD12	2.02	0.41
1:O:1380:ALA:HA	1:O:1384:PHE:HA	2.03	0.41
1:O:2833:THR:HG21	1:O:2867:ALA:HB1	2.02	0.41
1:O:3462:ARG:NH2	1:O:3707:GLY:O	2.54	0.41
1:O:3871:PHE:O	1:O:3875:GLU:HG3	2.21	0.41
5:B:80:THR:N	7:j:105:DG:OP1	2.45	0.41
3:c:83:LEU:HD23	3:c:83:LEU:HA	1.84	0.41
3:c:86:ALA:HA	3:c:89:ASN:OD1	2.21	0.41
3:c:87:ILE:HG13	3:c:88:ARG:HG2	2.02	0.41
1:o:15:LEU:O	1:o:19:LEU:HG	2.20	0.41
1:o:173:LYS:HA	1:o:223:CYS:SG	2.61	0.41
1:o:411:PRO:HA	1:o:414:LEU:HD12	2.03	0.41
1:o:683:PHE:HA	1:o:704:PHE:CZ	2.56	0.41
1:o:1069:HIS:HE2	1:o:3745:GLU:CD	2.29	0.41
1:o:1166:LEU:HA	1:o:1198:LEU:HD22	2.03	0.41
1:o:2097:LEU:O	1:o:2101:VAL:HG23	2.21	0.41
1:o:2185:MET:O	1:o:2189:ILE:HG12	2.21	0.41
1:o:2384:PHE:HA	8:M:155:SER:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:2950:LYS:HB2	1:o:2953:THR:OG1	2.21	0.41
1:o:3179:TRP:HB3	1:o:3242:MET:HE1	2.02	0.41
1:o:3247:ARG:HA	1:o:3286:CYS:SG	2.60	0.41
1:o:3496:ILE:HG13	1:o:3521:ILE:HD13	2.03	0.41
1:o:3580:ASN:OD1	1:o:3583:LEU:N	2.49	0.41
1:o:3629:ARG:O	1:o:3633:ILE:HG12	2.21	0.41
1:o:3705:TYR:HE2	1:o:3714:GLU:HG3	1.86	0.41
1:o:3814:ASP:N	1:o:3814:ASP:OD1	2.53	0.41
4:a:74:ILE:HD13	5:b:63:GLU:HG3	2.02	0.41
4:a:85:GLN:HA	6:l:53:DT:H5''	2.01	0.41
3:g:31:HIS:ND1	3:g:35:ARG:HD3	2.36	0.41
2:h:83:ARG:O	2:h:85:THR:N	2.53	0.41
4:e:121:PRO:O	4:e:124:ILE:HG12	2.20	0.41
4:e:133:GLU:N	5:f:95:ARG:HH22	2.17	0.41
6:i:110:DT:H1'	6:i:111:DC:H5'	2.03	0.41
7:j:23:DA:H2''	7:j:24:DG:O5'	2.21	0.41
8:K:462:MET:HB3	8:K:525:PHE:CE2	2.56	0.41
8:K:514:MET:O	8:K:518:LEU:HB2	2.20	0.41
9:L:235:CYS:O	9:L:236:VAL:C	2.63	0.41
9:L:327:ASP:HB3	9:L:331:MET:HE1	2.03	0.41
8:M:36:ASP:HA	8:M:163:HIS:HB2	2.02	0.41
8:M:289:TYR:CD2	8:M:294:GLU:HB3	2.56	0.41
8:M:301:ARG:NH1	9:N:300:ASP:OD2	2.54	0.41
8:M:321:ILE:HG12	8:M:326:GLN:HA	2.01	0.41
9:N:532:LYS:HE3	9:N:532:LYS:HB3	1.94	0.41
9:N:727:ASP:HA	9:N:731:MET:SD	2.60	0.41
1:O:116:THR:O	1:O:116:THR:HG22	2.19	0.41
1:O:178:LEU:HB2	1:O:227:LEU:HD13	2.02	0.41
1:O:240:GLU:O	1:O:243:GLN:HG2	2.21	0.41
1:O:616:LYS:HE2	1:O:2034:SER:HA	2.02	0.41
1:O:963:LYS:HE2	1:O:964:ARG:NH2	2.31	0.41
1:O:1291:LEU:HD11	1:O:1363:LEU:HA	2.03	0.41
1:O:1349:LEU:HD11	1:O:1409:SER:HB3	2.03	0.41
1:O:1771:GLN:HA	1:O:1775:GLU:HG2	2.03	0.41
1:O:1788:ARG:O	1:O:1794:GLN:NE2	2.34	0.41
1:O:1805:PHE:CE2	1:O:1869:LYS:HD3	2.55	0.41
1:O:3314:SER:HB2	1:O:3318:LYS:HG3	2.03	0.41
1:O:3353:GLU:OE2	1:O:3358:ARG:NH1	2.50	0.41
1:O:4125:GLU:HA	1:O:4127:TRP:CZ3	2.56	0.41
3:c:75:LYS:HG2	3:c:77:ARG:HB2	2.03	0.41
4:E:56:LYS:HA	4:E:56:LYS:HD2	1.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:35:ARG:CZ	5:F:39:ARG:HE	2.34	0.41
1:o:44:LEU:O	1:o:47:SER:OG	2.37	0.41
1:o:118:ASP:O	1:o:121:ALA:HB3	2.21	0.41
1:o:173:LYS:O	1:o:176:GLU:HG2	2.21	0.41
1:o:386:VAL:HG22	1:o:431:TYR:HE2	1.86	0.41
1:o:979:VAL:O	1:o:982:GLN:HG2	2.20	0.41
1:o:994:TRP:NE1	1:o:2581:LEU:HD21	2.36	0.41
1:o:1015:ASP:OD2	1:o:1029:CYS:HB2	2.20	0.41
1:o:1322:THR:HB	1:o:1323:SER:H	1.68	0.41
1:o:1326:GLU:HB3	1:o:1329:ARG:HE	1.85	0.41
1:o:1713:VAL:HA	1:o:1716:GLN:CD	2.46	0.41
1:o:1782:PHE:HA	1:o:1785:ILE:HG12	2.02	0.41
1:o:3238:MET:HE2	1:o:3242:MET:HE2	2.01	0.41
1:o:3958:LEU:HD13	1:o:4064:LEU:HD21	2.01	0.41
4:e:61:LEU:HD13	5:f:40:ARG:HD2	2.03	0.41
6:i:130:DC:N3	6:i:131:DT:C4	2.88	0.41
8:K:34:GLY:N	8:K:162:SER:OG	2.54	0.41
8:K:74:LYS:HA	8:K:79:ASP:OD2	2.20	0.41
8:K:141:TYR:CD1	8:K:176:HIS:HD2	2.38	0.41
8:K:297:LYS:O	9:L:295:TYR:HA	2.21	0.41
8:K:354:VAL:N	8:K:393:GLU:OE2	2.35	0.41
9:L:211:VAL:O	9:L:215:LEU:HG	2.20	0.41
8:M:63:SER:HA	8:M:66:CYS:SG	2.61	0.41
8:M:433:GLN:OE1	8:M:434:LEU:N	2.54	0.41
9:N:699:GLU:HG3	9:N:703:LYS:HD3	2.03	0.41
1:O:276:ALA:HA	1:O:318:SER:OG	2.21	0.41
1:O:296:VAL:HG12	1:O:300:TRP:NE1	2.36	0.41
1:O:531:PHE:O	1:O:534:LEU:HB2	2.21	0.41
1:O:722:LYS:O	1:O:726:LEU:HB2	2.21	0.41
1:O:1000:LYS:O	1:O:1002:GLU:N	2.52	0.41
1:O:1114:ALA:C	1:O:1116:ALA:H	2.27	0.41
1:O:1220:LEU:HB2	1:O:1224:PHE:CE2	2.56	0.41
1:O:1378:GLU:HG2	1:O:1380:ALA:N	2.35	0.41
1:O:1411:TYR:O	1:O:1415:LEU:HG	2.21	0.41
1:O:1449:ALA:HA	1:O:1452:VAL:HB	2.03	0.41
1:O:1554:SER:OG	1:O:1555:HIS:N	2.54	0.41
1:O:1849:ASP:OD1	1:O:1850:VAL:N	2.53	0.41
1:O:2303:LEU:HD13	1:O:2323:LEU:HD21	2.02	0.41
1:O:2410:GLU:O	1:O:2413:PHE:N	2.54	0.41
1:O:2536:LEU:H	1:O:2536:LEU:HG	1.63	0.41
1:O:2785:ILE:HD12	1:O:2785:ILE:HA	1.94	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:3269:ARG:NH1	1:O:3272:TRP:HB2	2.36	0.41
1:O:3283:LEU:HD11	1:O:3287:ARG:HH12	1.85	0.41
1:O:3326:GLN:O	1:O:3329:LEU:HG	2.20	0.41
1:O:3340:ALA:O	1:O:3344:GLU:N	2.54	0.41
1:O:3679:ASN:CG	1:O:3680:LEU:H	2.29	0.41
1:O:3842:TRP:CZ2	1:O:4119:ARG:HA	2.56	0.41
1:O:3975:LYS:HA	1:O:3975:LYS:HD3	1.77	0.41
1:O:4073:ALA:O	1:O:4077:TYR:N	2.47	0.41
3:C:58:LEU:HD21	2:H:66:ILE:HG21	2.03	0.41
2:H:35:SER:O	2:H:38:VAL:HG12	2.21	0.41
2:H:42:LEU:HD22	2:H:51:ILE:HB	2.03	0.41
5:B:72:TYR:OH	2:d:73:GLU:OE2	2.32	0.41
3:c:81:ARG:HD2	4:E:56:LYS:HZ2	1.86	0.41
1:o:124:LYS:HB2	1:o:126:PRO:HD2	2.02	0.41
1:o:262:LEU:HD21	7:J:9:DG:H5'	2.03	0.41
1:o:478:CYS:SG	1:o:479:ILE:N	2.94	0.41
1:o:734:LEU:HD11	1:o:768:VAL:HB	2.02	0.41
1:o:935:HIS:CE1	1:o:987:LEU:HD21	2.56	0.41
1:o:1173:LEU:HD22	1:o:1191:PHE:CZ	2.55	0.41
1:o:1558:TYR:CZ	1:o:1562:LEU:HD11	2.56	0.41
1:o:1565:GLU:O	1:o:1569:THR:OG1	2.36	0.41
1:o:1642:LYS:HD3	1:o:1684:LEU:HD21	2.03	0.41
1:o:2175:GLU:HG3	1:o:2186:VAL:HG22	2.03	0.41
1:o:2381:ALA:O	1:o:2384:PHE:HB3	2.21	0.41
1:o:2418:LYS:HA	1:o:2418:LYS:HD3	1.81	0.41
1:o:2461:PHE:C	1:o:2464:HIS:HD1	2.29	0.41
1:o:2467:THR:HG22	1:o:2470:ARG:NH2	2.34	0.41
1:o:2485:ARG:HA	1:o:2499:PHE:CE2	2.56	0.41
1:o:2816:ILE:HD12	1:o:2816:ILE:HA	1.92	0.41
1:o:2820:MET:O	1:o:2824:LYS:N	2.53	0.41
1:o:2897:LEU:O	1:o:2901:LEU:N	2.54	0.41
1:o:3266:SER:HB2	1:o:3272:TRP:CD1	2.56	0.41
1:o:3318:LYS:HD2	1:o:3322:ALA:HB2	2.03	0.41
1:o:3610:TYR:CD2	1:o:3646:LYS:HB2	2.56	0.41
1:o:3619:ASP:O	1:o:3633:ILE:HB	2.21	0.41
1:o:3759:ARG:HH21	1:o:4008:GLU:H	1.68	0.41
1:o:3864:ARG:NH2	1:o:4086:ASP:OD1	2.54	0.41
1:o:4041:ARG:HA	1:o:4044:ILE:HG12	2.03	0.41
1:o:4046:TYR:CZ	1:o:4062:ASP:HB2	2.56	0.41
3:g:35:ARG:HA	3:g:43:VAL:HG21	2.02	0.41
3:g:75:LYS:HB3	3:g:82:HIS:NE2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:e:100:LEU:HD13	5:f:58:LEU:HD11	2.02	0.41
6:i:137:DC:H2'	6:i:138:DC:C6	2.55	0.41
7:J:19:DG:H8	7:J:19:DG:OP1	2.04	0.41
7:J:24:DG:N2	6:I:131:DT:O4'	2.54	0.41
8:K:329:LEU:HD12	8:K:329:LEU:HA	1.97	0.41
9:L:284:LEU:O	9:L:285:LYS:HE2	2.21	0.41
9:L:306:LEU:HG	9:L:308:GLU:H	1.85	0.41
8:M:220:ILE:H	8:M:220:ILE:HD12	1.86	0.41
8:M:276:LEU:HD23	8:M:276:LEU:H	1.85	0.41
8:M:339:ARG:CZ	8:M:405:ASN:H	2.34	0.41
8:M:373:SER:OG	8:M:374:LEU:N	2.50	0.41
9:N:438:LEU:HD12	9:N:438:LEU:O	2.20	0.41
9:N:528:ILE:HB	9:N:529:PRO:HD3	2.03	0.41
9:N:665:LYS:O	9:N:669:LYS:N	2.54	0.41
9:N:674:PHE:HB2	9:N:675:TRP:H	1.72	0.41
1:O:135:LEU:HD23	1:O:135:LEU:HA	1.92	0.41
1:O:1097:GLU:OE2	1:O:1151:ARG:NE	2.54	0.41
1:O:1191:PHE:O	1:O:1195:VAL:HG23	2.21	0.41
1:O:1953:CYS:HA	1:O:2103:HIS:CE1	2.56	0.41
1:O:2452:ARG:NH1	1:O:2497:GLU:OE2	2.54	0.41
1:O:3071:GLY:C	1:O:3075:LYS:HZ2	2.29	0.41
1:O:3526:PRO:O	1:O:3530:VAL:HG13	2.20	0.41
1:O:3658:ASP:O	1:O:3662:ILE:HG12	2.21	0.41
2:D:56:MET:O	2:D:60:ASN:ND2	2.54	0.41
2:D:67:PHE:HE1	3:G:51:LEU:HD13	1.85	0.41
1:o:370:ALA:HA	1:o:373:CYS:HB3	2.02	0.41
1:o:452:LYS:HE2	1:o:452:LYS:HB2	1.84	0.41
1:o:643:GLU:O	1:o:646:VAL:HG22	2.21	0.41
1:o:1610:ASN:OD1	1:o:1610:ASN:N	2.54	0.41
1:o:1766:LEU:HD21	1:o:1775:GLU:HG2	2.03	0.41
1:o:2365:ASN:HD22	1:o:2396:LEU:HG	1.86	0.41
1:o:3833:ARG:HH22	1:o:4122:GLU:HB2	1.86	0.41
1:o:4039:TYR:CD2	1:o:4042:GLN:HG2	2.55	0.41
7:j:61:DT:C2	7:j:62:DA:N7	2.89	0.41
8:K:379:SER:O	8:K:382:PHE:N	2.53	0.41
9:L:17:GLY:N	9:L:60:GLY:HA3	2.35	0.41
9:L:312:GLN:HE22	9:L:324:SER:C	2.29	0.41
9:L:457:LEU:HD22	9:L:533:ILE:HG13	2.01	0.41
8:M:43:ASP:HB2	8:M:48:MET:HE2	2.01	0.41
8:M:212:ASP:OD1	8:M:212:ASP:N	2.54	0.41
8:M:272:GLY:N	8:M:371:GLU:HB3	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:M:274:TYR:CE1	8:M:367:PHE:HD2	2.38	0.41
9:N:148:ASP:N	9:N:148:ASP:OD1	2.53	0.41
9:N:594:PRO:HG2	9:N:619:HIS:NE2	2.36	0.41
1:O:306:VAL:HA	1:O:309:LYS:NZ	2.36	0.40
1:O:584:GLU:CD	1:O:586:GLN:H	2.29	0.40
1:O:996:THR:O	1:O:1044:ILE:HD11	2.21	0.40
1:O:1069:HIS:CD2	1:O:3741:ARG:HD3	2.55	0.40
1:O:1716:GLN:O	1:O:1719:VAL:HG12	2.21	0.40
1:O:1917:LYS:HE3	9:N:729:LEU:HD13	2.02	0.40
1:O:2034:SER:O	1:O:2037:SER:HB3	2.21	0.40
1:O:2211:LEU:HD23	1:O:2214:ARG:HH22	1.86	0.40
1:O:2424:MET:HA	1:O:2432:GLN:HE22	1.85	0.40
1:O:2428:ASP:O	1:O:2431:ARG:HB3	2.21	0.40
1:O:2586:PHE:HD1	1:O:2778:GLY:HA3	1.86	0.40
1:O:3170:ASP:HB2	1:O:3174:ASP:OD2	2.21	0.40
1:O:3244:ASP:HA	1:O:3247:ARG:NH1	2.36	0.40
2:D:62:PHE:CZ	3:G:62:ILE:HD13	2.56	0.40
2:H:54:LYS:HA	2:H:54:LYS:HD3	1.82	0.40
4:E:128:ARG:HG2	4:E:133:GLU:C	2.47	0.40
1:o:584:GLU:O	1:o:613:HIS:N	2.55	0.40
1:o:1009:LEU:O	1:o:1013:ILE:HG12	2.21	0.40
1:o:1456:LYS:HE2	1:o:1456:LYS:HA	2.04	0.40
1:o:2560:ASN:OD1	1:o:2799:GLN:HB3	2.20	0.40
1:o:2995:GLU:O	1:o:2999:LEU:HG	2.22	0.40
1:o:3610:TYR:OH	1:o:3641:ASP:HA	2.21	0.40
1:o:3874:ARG:CZ	1:o:4126:PRO:HB2	2.51	0.40
1:o:3916:TRP:HZ2	1:o:4056:PRO:HA	1.86	0.40
1:o:3949:ALA:HB1	1:o:3957:GLU:OE1	2.21	0.40
1:o:4054:ALA:H	1:o:4103:GLN:NE2	2.18	0.40
5:b:92:ARG:HH21	3:g:96:LEU:HD11	1.86	0.40
6:i:107:DC:H2'	6:i:108:DT:C5	2.56	0.40
8:K:35:ARG:HD3	8:K:159:PHE:HE2	1.86	0.40
8:K:91:GLU:H	8:K:137:HIS:H	1.68	0.40
8:K:118:GLU:O	8:K:121:GLN:HG2	2.21	0.40
8:K:444:ARG:HA	8:K:444:ARG:HD3	1.93	0.40
9:L:271:ARG:HD3	9:L:271:ARG:HA	1.83	0.40
9:L:345:PHE:HA	9:L:391:ALA:HA	2.02	0.40
9:L:510:GLN:HG3	9:L:514:ASN:HD21	1.86	0.40
1:O:264:ARG:HA	1:O:305:ASN:HD21	1.86	0.40
1:O:435:LEU:O	1:O:438:LEU:HG	2.21	0.40
1:O:719:LYS:HZ2	1:O:719:LYS:HG3	1.72	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:774:GLU:O	1:O:778:ILE:HG12	2.21	0.40
1:O:1087:ARG:HG3	1:O:1090:ARG:NH2	2.36	0.40
1:O:1153:LEU:HA	1:O:1154:PRO:HD3	1.86	0.40
1:O:1205:ASN:O	1:O:1206:LEU:C	2.63	0.40
1:O:1437:TYR:HE2	1:O:1489:LYS:CB	2.33	0.40
1:O:1479:VAL:HG21	1:O:1521:PHE:HD2	1.85	0.40
1:O:1565:GLU:O	1:O:1569:THR:OG1	2.27	0.40
1:O:1951:VAL:HG22	1:O:1956:PHE:CZ	2.56	0.40
1:O:2388:LYS:NZ	8:K:159:PHE:O	2.54	0.40
1:O:2510:LEU:HB3	1:O:2557:LEU:CD1	2.51	0.40
1:O:2824:LYS:C	1:O:2829:LYS:HZ3	2.29	0.40
3:C:88:ARG:O	3:C:95:LYS:NZ	2.50	0.40
4:A:134:ARG:HD2	3:c:95:LYS:NZ	2.36	0.40
3:c:14:ALA:HB3	7:j:122:DC:H4'	2.01	0.40
1:o:478:CYS:O	1:o:482:VAL:HG13	2.21	0.40
1:o:488:ILE:HG21	1:o:2040:MET:HE3	2.03	0.40
1:o:493:LYS:HE3	1:o:493:LYS:HB3	1.82	0.40
1:o:978:GLN:O	1:o:981:ARG:HG3	2.21	0.40
1:o:1526:GLU:HG3	1:o:1581:GLU:OE1	2.21	0.40
1:o:1816:ARG:HG2	9:N:625:ASP:HB3	2.04	0.40
1:o:4039:TYR:HD2	1:o:4042:GLN:HG2	1.85	0.40
4:a:63:ARG:HH22	5:b:36:ARG:NH2	2.19	0.40
4:a:79:LYS:HA	4:a:79:LYS:HD2	1.91	0.40
4:a:119:ILE:HG22	5:b:46:ILE:HA	2.03	0.40
3:g:47:ALA:HB2	2:h:87:THR:C	2.46	0.40
2:h:54:LYS:O	2:h:58:ILE:HG12	2.21	0.40
5:f:94:GLY:O	5:f:95:ARG:HB2	2.22	0.40
7:j:12:DT:H2''	7:j:13:DC:C5	2.57	0.40
7:j:15:DC:H4'	7:j:16:DG:H5'	2.02	0.40
7:j:110:DC:OP2	7:j:110:DC:H2'	2.22	0.40
6:I:129:DC:H2''	6:I:130:DC:C6	2.56	0.40
8:K:253:LYS:HB2	9:L:433:TYR:CD1	2.56	0.40
8:M:479:GLU:C	9:N:426:PHE:HB3	2.46	0.40
1:O:13:LEU:O	1:O:16:GLN:HG3	2.20	0.40
1:O:92:PHE:HD1	1:O:95:LYS:HE3	1.86	0.40
1:O:105:VAL:HG22	1:O:145:ASP:CB	2.51	0.40
1:O:197:PHE:O	1:O:201:LEU:HG	2.21	0.40
1:O:584:GLU:N	1:O:613:HIS:O	2.54	0.40
1:O:1141:LYS:NZ	1:O:1144:SER:HB3	2.35	0.40
1:O:1709:GLU:O	1:O:1712:ARG:HG2	2.20	0.40
1:O:1851:LEU:HD11	1:O:1918:LEU:HB2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:1952:ILE:HG12	1:O:1956:PHE:CE1	2.56	0.40
1:O:2542:LEU:HD22	1:O:2558:ALA:HA	2.04	0.40
1:O:2964:ASP:OD1	1:O:3253:SER:OG	2.33	0.40
1:O:3074:GLN:O	1:O:3077:ILE:HG12	2.21	0.40
1:O:3245:SER:O	1:O:3249:GLN:HG2	2.21	0.40
1:O:3259:LEU:C	1:O:3276:TRP:HE1	2.29	0.40
1:O:3266:SER:HB2	1:O:3272:TRP:C	2.46	0.40
1:O:3297:VAL:HG12	1:O:3349:ALA:HB2	2.03	0.40
1:O:3733:ARG:HH22	1:O:4014:LYS:HD3	1.87	0.40
2:H:81:ASN:HB3	5:f:76:ALA:HA	2.03	0.40
3:G:34:LEU:HD13	3:G:43:VAL:HG21	2.03	0.40
3:G:59:THR:HA	3:G:62:ILE:HG22	2.03	0.40
4:A:85:GLN:HA	6:i:53:DT:H5''	2.04	0.40
3:c:29:ARG:HD2	2:d:32:GLU:OE1	2.21	0.40
4:E:65:LEU:HB3	4:E:66:PRO:HD3	2.02	0.40
1:o:678:LYS:HB3	1:o:678:LYS:HE2	1.78	0.40
1:o:2235:LEU:O	1:o:2239:LYS:HG3	2.21	0.40
1:o:3578:LEU:HD23	1:o:3578:LEU:HA	1.88	0.40
4:a:104:PHE:CD2	5:b:38:ALA:HA	2.57	0.40
4:e:59:GLU:HG3	4:e:60:LEU:H	1.87	0.40
7:J:47:DG:H1	6:I:107:DC:H42	1.70	0.40
8:K:344:GLY:N	8:K:401:THR:OG1	2.52	0.40
9:L:295:TYR:H	9:L:304:GLU:CD	2.28	0.40
9:L:437:SER:OG	9:L:438:LEU:N	2.54	0.40
8:M:262:LYS:H	8:M:267:ILE:HA	1.86	0.40
8:M:471:PHE:CD1	8:M:510:LYS:HE2	2.56	0.40
9:N:106:ASP:OD1	9:N:108:LEU:N	2.52	0.40
9:N:362:LEU:HD21	9:N:395:TYR:CZ	2.55	0.40
9:N:593:ASN:HB2	9:N:594:PRO:HD3	2.04	0.40
1:O:71:LYS:HE3	1:O:119:ARG:HD3	2.04	0.40
1:O:166:ILE:HD12	1:O:166:ILE:H	1.86	0.40
1:O:345:PHE:CD1	1:O:362:ALA:HA	2.56	0.40
1:O:1234:GLY:HA2	1:O:1237:ALA:HB3	2.04	0.40
1:O:1343:GLU:O	1:O:1346:THR:OG1	2.30	0.40
1:O:1486:LEU:O	1:O:1487:VAL:C	2.64	0.40
1:O:1555:HIS:HB3	1:O:1559:PHE:CZ	2.56	0.40
1:O:1913:LYS:HD2	1:O:1913:LYS:HA	1.96	0.40
1:O:2313:LYS:HA	1:O:2316:TYR:CE1	2.56	0.40
1:O:2330:VAL:HG23	1:O:2330:VAL:O	2.21	0.40
1:O:2340:SER:HA	1:O:2343:GLU:HB2	2.02	0.40
1:O:2571:ASP:OD1	1:O:2571:ASP:N	2.42	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:2785:ILE:HG13	1:O:2789:SER:CB	2.51	0.40
1:O:2799:GLN:H	1:O:2799:GLN:HG3	1.78	0.40
1:O:3357:ARG:O	1:O:3361:GLU:HG3	2.22	0.40
1:O:3756:GLU:C	1:O:3758:LEU:H	2.29	0.40
4:A:114:ALA:HB1	4:E:115:LYS:HZ3	1.86	0.40
5:F:69:ALA:O	5:F:72:TYR:HB2	2.22	0.40
1:o:684:GLU:OE2	1:o:700:LYS:HD3	2.21	0.40
1:o:764:PRO:HA	1:o:767:GLU:HG2	2.04	0.40
1:o:957:PRO:HD2	1:o:958:MET:SD	2.61	0.40
1:o:958:MET:O	1:o:959:TYR:C	2.64	0.40
1:o:1060:PHE:HD2	1:o:1099:PHE:HD2	1.67	0.40
1:o:1627:LYS:HG2	1:o:1670:GLU:CD	2.47	0.40
1:o:2225:HIS:HD2	1:o:2231:PHE:HD1	1.69	0.40
1:o:2454:LEU:HD12	1:o:2454:LEU:HA	1.92	0.40
8:K:57:LEU:HG	8:K:61:ASP:HB2	2.03	0.40
8:K:60:PHE:HZ	8:K:122:PHE:CD2	2.38	0.40
8:K:165:ARG:CZ	8:K:199:PHE:HB2	2.51	0.40
8:K:474:ARG:O	8:K:476:ASP:N	2.54	0.40
9:L:601:LEU:HD23	9:L:609:PHE:HZ	1.87	0.40
8:M:480:ASN:N	9:N:426:PHE:HB3	2.36	0.40
8:M:526:LYS:HB3	8:M:530:TYR:CZ	2.56	0.40
9:N:154:LEU:HG	9:N:159:ILE:HB	2.03	0.40
9:N:235:CYS:O	9:N:237:PHE:N	2.55	0.40
1:O:57:LEU:HD22	1:O:103:TYR:CD2	2.56	0.40
1:O:439:VAL:O	1:O:442:GLN:HG3	2.22	0.40
1:O:479:ILE:HG13	1:O:480:SER:N	2.35	0.40
1:O:1102:GLU:HA	1:O:1154:PRO:HB3	2.03	0.40
1:O:1117:ASP:OD1	1:O:1117:ASP:N	2.51	0.40
1:O:1325:GLN:O	1:O:1327:GLY:N	2.54	0.40
1:O:1525:CYS:O	1:O:1528:LEU:HB3	2.20	0.40
1:O:2575:PRO:HA	1:O:2785:ILE:O	2.20	0.40
1:O:3062:LEU:HD13	1:O:3089:LEU:HD21	2.04	0.40
1:O:3614:TYR:CD1	1:O:3617:LEU:HD12	2.57	0.40
1:O:3909:ALA:HB1	1:O:3984:MET:HE3	2.04	0.40
1:O:4053:GLY:O	1:O:4096:SER:OG	2.33	0.40
1:O:4054:ALA:H	1:O:4103:GLN:NE2	2.19	0.40
1:o:1474:ASP:OD1	1:o:1474:ASP:N	2.46	0.40
1:o:2363:CYS:O	1:o:2367:VAL:HG22	2.22	0.40
1:o:2440:TYR:O	1:o:2443:MET:HE1	2.21	0.40
1:o:3238:MET:HE3	1:o:3238:MET:O	2.22	0.40
1:o:3487:ILE:HD11	1:o:3517:SER:HB3	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:o:3701:ILE:HG12	1:o:3750:PHE:HZ	1.85	0.40
1:o:3875:GLU:HA	1:o:3965:ARG:HH12	1.86	0.40
1:o:3923:ARG:HH21	1:o:4123:GLY:HA3	1.86	0.40
5:b:31:LYS:CG	5:b:32:PRO:HD3	2.51	0.40
6:i:84:DC:H6	6:i:84:DC:H2'	1.75	0.40
9:L:345:PHE:CD1	9:L:391:ALA:HB2	2.56	0.40
8:M:168:LEU:HD13	8:M:170:THR:HG23	2.04	0.40
8:M:462:MET:O	8:M:466:VAL:HG23	2.22	0.40
9:N:46:VAL:HG21	9:N:86:PRO:O	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	O	3434/4128 (83%)	3001 (87%)	414 (12%)	19 (1%)	21	58
1	o	3428/4128 (83%)	3172 (92%)	254 (7%)	2 (0%)	48	83
2	D	91/126 (72%)	82 (90%)	9 (10%)	0	100	100
2	H	91/126 (72%)	84 (92%)	7 (8%)	0	100	100
2	d	90/126 (71%)	78 (87%)	12 (13%)	0	100	100
2	h	90/126 (71%)	70 (78%)	19 (21%)	1 (1%)	11	45
3	C	90/143 (63%)	82 (91%)	8 (9%)	0	100	100
3	G	90/143 (63%)	86 (96%)	3 (3%)	1 (1%)	11	45
3	c	99/143 (69%)	92 (93%)	7 (7%)	0	100	100
3	g	85/143 (59%)	82 (96%)	3 (4%)	0	100	100
4	A	94/136 (69%)	86 (92%)	8 (8%)	0	100	100
4	E	86/136 (63%)	79 (92%)	7 (8%)	0	100	100
4	a	87/136 (64%)	83 (95%)	4 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	e	86/136 (63%)	79 (92%)	7 (8%)	0	100	100
5	B	77/103 (75%)	71 (92%)	6 (8%)	0	100	100
5	F	75/103 (73%)	72 (96%)	3 (4%)	0	100	100
5	b	73/103 (71%)	64 (88%)	9 (12%)	0	100	100
5	f	74/103 (72%)	62 (84%)	12 (16%)	0	100	100
8	K	467/609 (77%)	401 (86%)	53 (11%)	13 (3%)	4	24
8	M	467/609 (77%)	385 (82%)	75 (16%)	7 (2%)	8	38
9	L	604/732 (82%)	505 (84%)	94 (16%)	5 (1%)	16	52
9	N	600/732 (82%)	517 (86%)	81 (14%)	2 (0%)	36	71
All	All	10378/12970 (80%)	9233 (89%)	1095 (11%)	50 (0%)	26	62

All (50) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	O	1474	ASP
1	O	1478	SER
1	O	3151	LEU
1	o	956	PRO
8	K	113	ALA
8	M	135	MET
8	M	262	LYS
8	M	265	LYS
8	M	268	VAL
1	O	214	GLU
1	O	2265	PRO
1	O	2534	ASN
1	O	2535	THR
1	O	3008	TRP
1	O	3154	GLN
1	O	3156	PRO
8	K	80	ARG
8	K	215	LEU
9	L	236	VAL
9	L	683	ILE
8	M	218	ARG
9	N	236	VAL
1	O	101	ALA
1	O	2266	ASN
2	h	99	LEU

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Mol	Chain	Res	Type
8	K	379	SER
8	K	511	VAL
9	L	147	LEU
9	N	674	PHE
1	O	948	MET
1	O	2429	ASP
3	G	38	HIS
1	o	1723	PRO
8	K	48	MET
8	K	78	SER
8	K	213	ILE
8	K	214	SER
8	K	216	PHE
9	L	685	LEU
8	M	266	ASP
1	O	103	TYR
1	O	2411	LEU
1	O	3006	ALA
8	K	47	ALA
8	K	506	LEU
8	M	263	LEU
8	K	114	LYS
9	L	247	TRP
1	O	1491	ILE
1	O	102	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	3005/3671 (82%)	2983 (99%)	22 (1%)	76	79
1	o	3077/3671 (84%)	3076 (100%)	1 (0%)	100	100
2	D	76/105 (72%)	76 (100%)	0	100	100
2	H	76/105 (72%)	76 (100%)	0	100	100
2	d	73/105 (70%)	73 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	h	74/105 (70%)	74 (100%)	0	100	100
3	C	68/106 (64%)	68 (100%)	0	100	100
3	G	69/106 (65%)	69 (100%)	0	100	100
3	c	75/106 (71%)	75 (100%)	0	100	100
3	g	64/106 (60%)	64 (100%)	0	100	100
4	A	84/111 (76%)	84 (100%)	0	100	100
4	E	75/111 (68%)	75 (100%)	0	100	100
4	a	78/111 (70%)	78 (100%)	0	100	100
4	e	75/111 (68%)	75 (100%)	0	100	100
5	B	62/79 (78%)	62 (100%)	0	100	100
5	F	63/79 (80%)	63 (100%)	0	100	100
5	b	59/79 (75%)	59 (100%)	0	100	100
5	f	63/79 (80%)	63 (100%)	0	100	100
8	K	410/548 (75%)	406 (99%)	4 (1%)	68	76
8	M	416/548 (76%)	412 (99%)	4 (1%)	68	76
9	L	514/649 (79%)	514 (100%)	0	100	100
9	N	525/649 (81%)	525 (100%)	0	100	100
All	All	9081/11340 (80%)	9050 (100%)	31 (0%)	84	84

All (31) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	O	33	GLN
1	O	213	ARG
1	O	442	GLN
1	O	958	MET
1	O	959	TYR
1	O	960	GLN
1	O	963	LYS
1	O	1474	ASP
1	O	1477	HIS
1	O	1479	VAL
1	O	1486	LEU
1	O	1487	VAL
1	O	1491	ILE
1	O	1921	ASP

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Mol	Chain	Res	Type
1	O	2410	GLU
1	O	2536	LEU
1	O	3145	ILE
1	O	3146	SER
1	O	3150	ASN
1	O	3153	SER
1	O	3154	GLN
1	O	3157	LEU
1	o	958	MET
8	K	48	MET
8	K	76	ILE
8	K	77	SER
8	K	95	ASN
8	M	260	LYS
8	M	267	ILE
8	M	268	VAL
8	M	269	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (15) such sidechains are listed below:

Mol	Chain	Res	Type
1	O	613	HIS
1	O	960	GLN
1	O	3105	ASN
1	O	3148	GLN
3	C	94	ASN
4	E	85	GLN
1	o	192	ASN
1	o	3664	ASN
1	o	3908	HIS
9	L	450	GLN
9	L	488	GLN
9	L	517	ASN
8	M	110	ASN
8	M	405	ASN
9	N	350	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

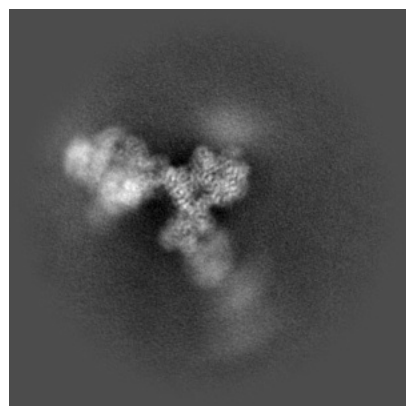
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-53026. These allow visual inspection of the internal detail of the map and identification of artifacts.

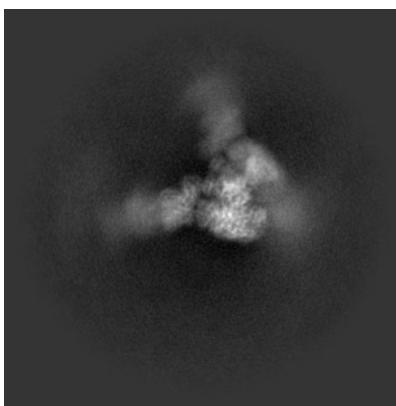
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

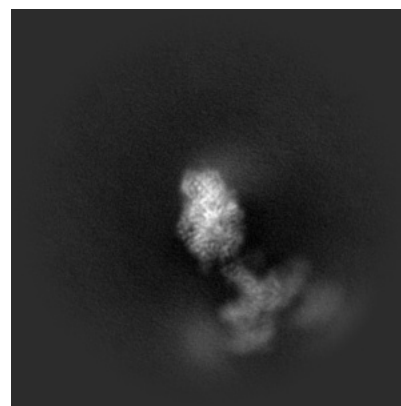
6.1.1 Primary map



X

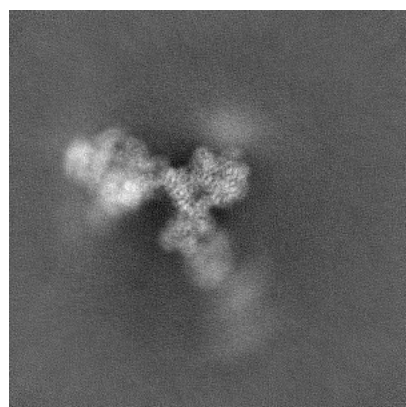


Y

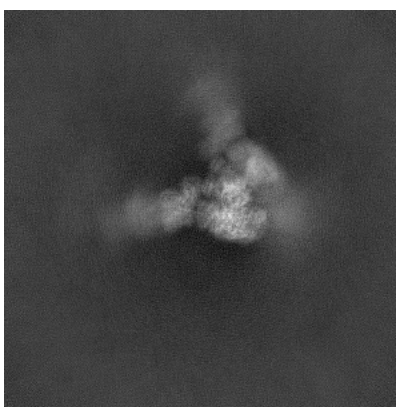


Z

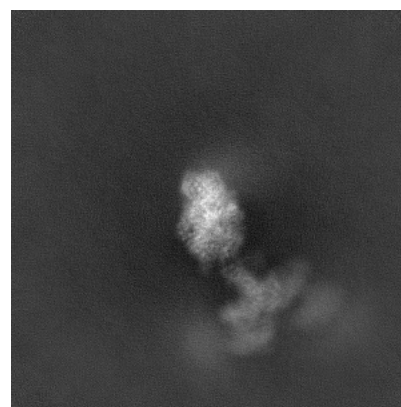
6.1.2 Raw map



X



Y

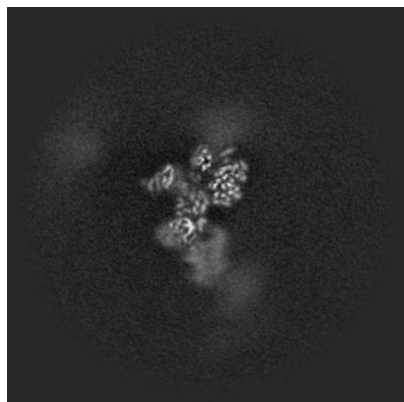


Z

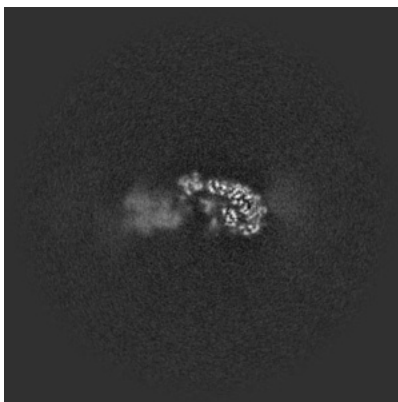
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

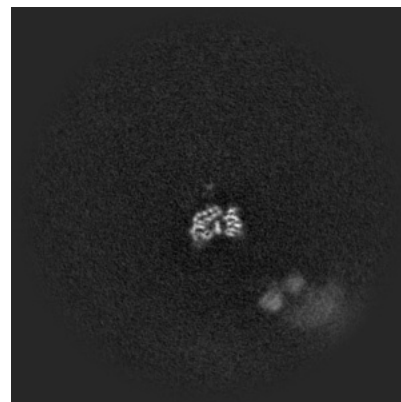
6.2.1 Primary map



X Index: 210

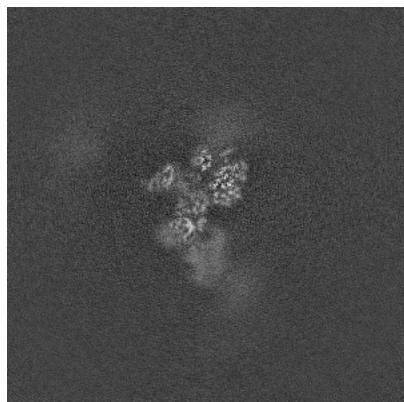


Y Index: 210



Z Index: 210

6.2.2 Raw map



X Index: 210



Y Index: 210

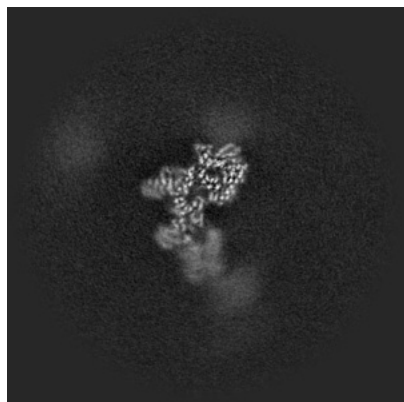


Z Index: 210

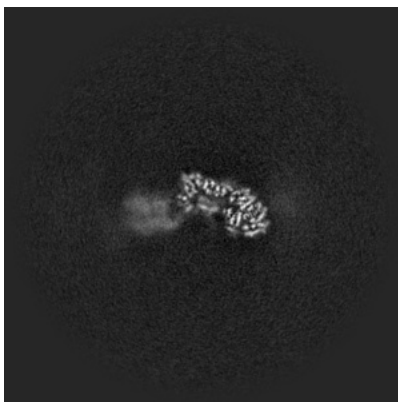
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

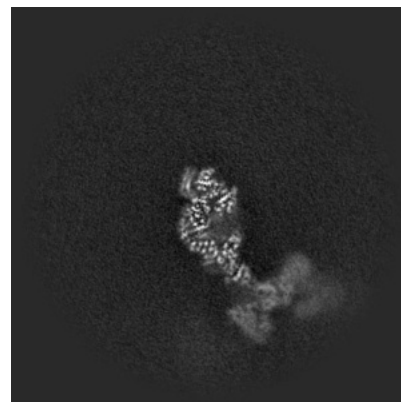
6.3.1 Primary map



X Index: 203



Y Index: 206

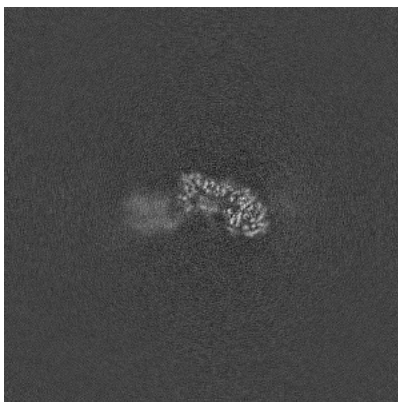


Z Index: 238

6.3.2 Raw map



X Index: 202



Y Index: 206

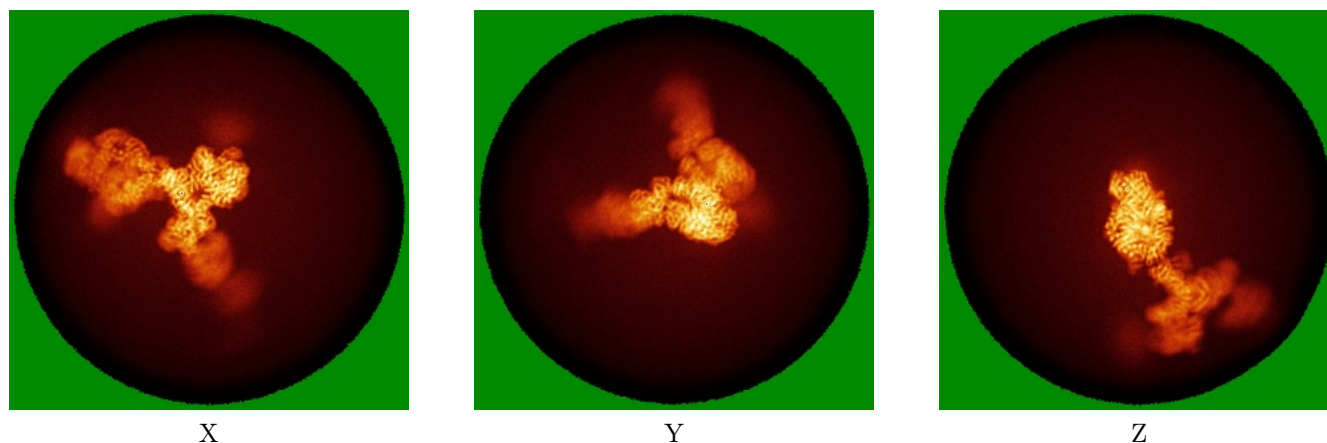


Z Index: 238

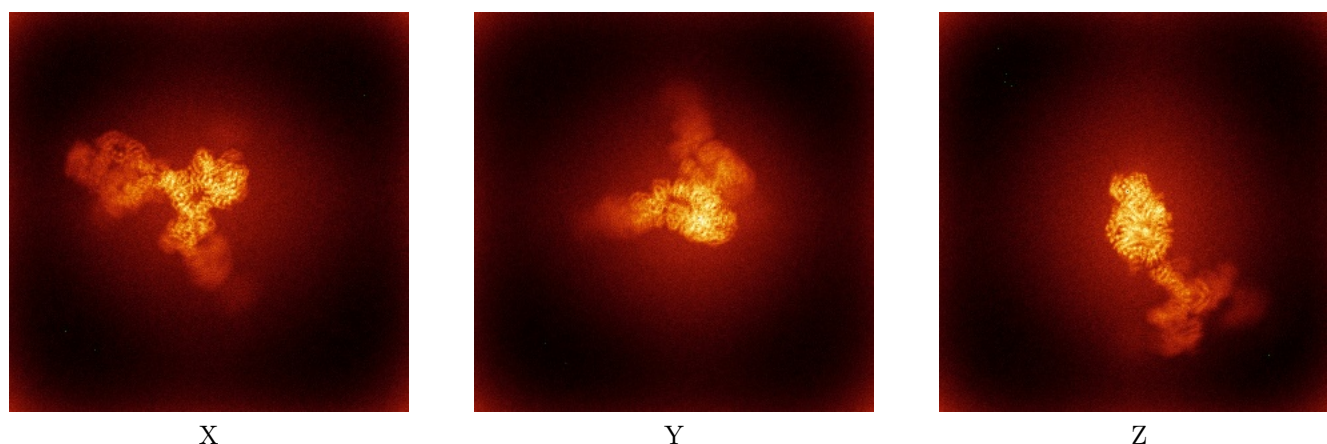
The images above show the largest variance slices of the map in three orthogonal directions.

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

6.4.1 Primary map



6.4.2 Raw map



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](#)

This section was not generated.

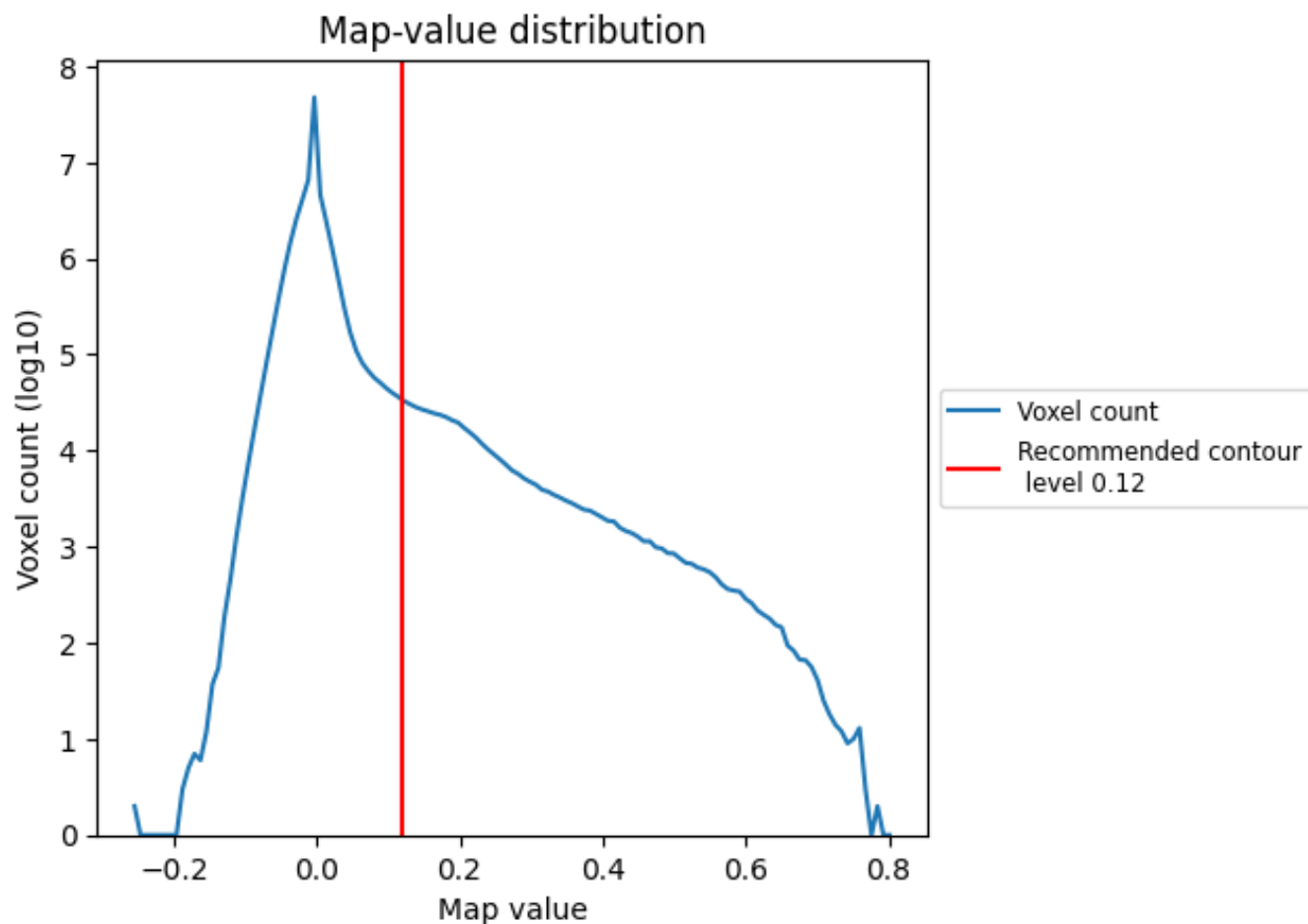
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

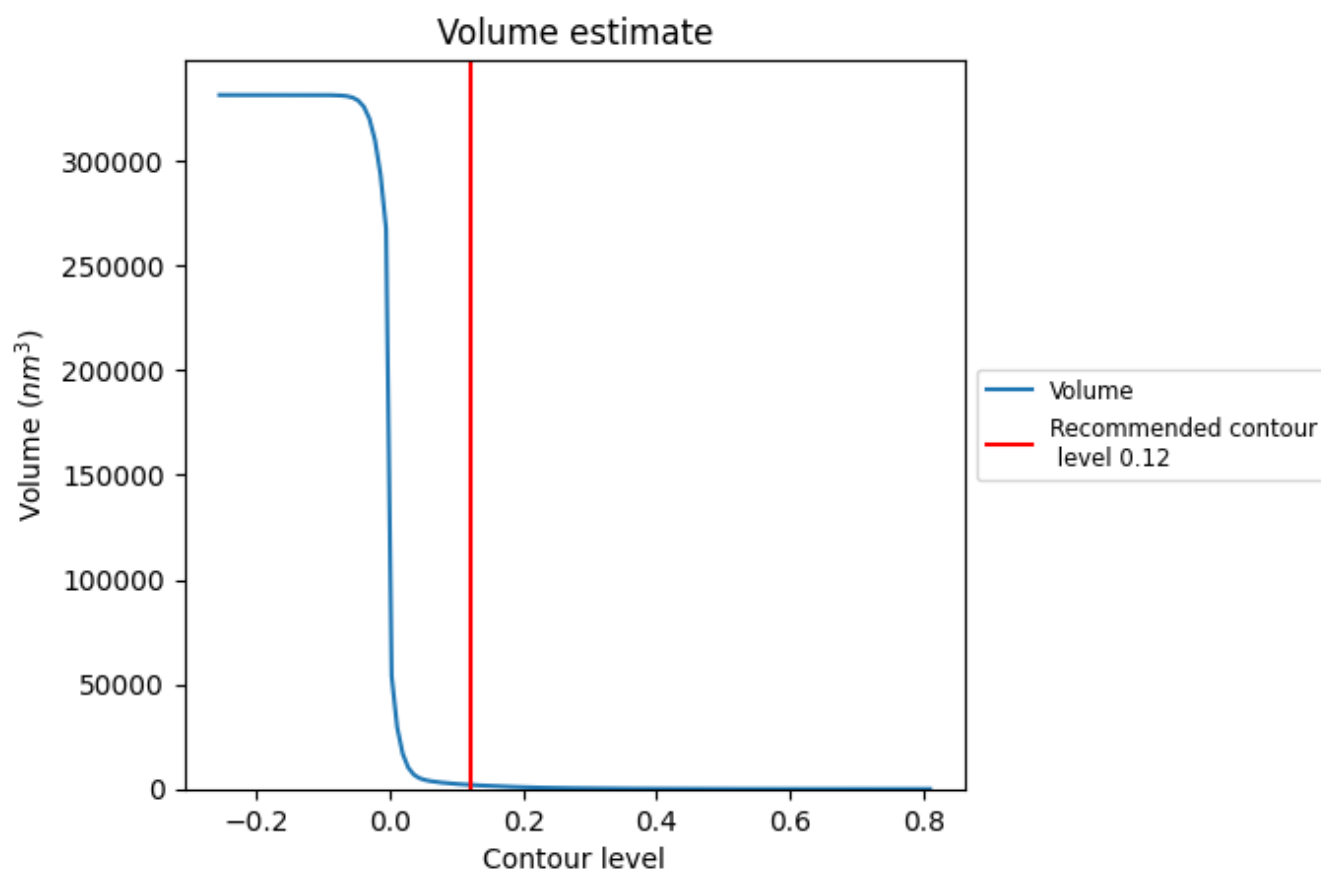
This section contains the results of statistical analysis of the map.

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.

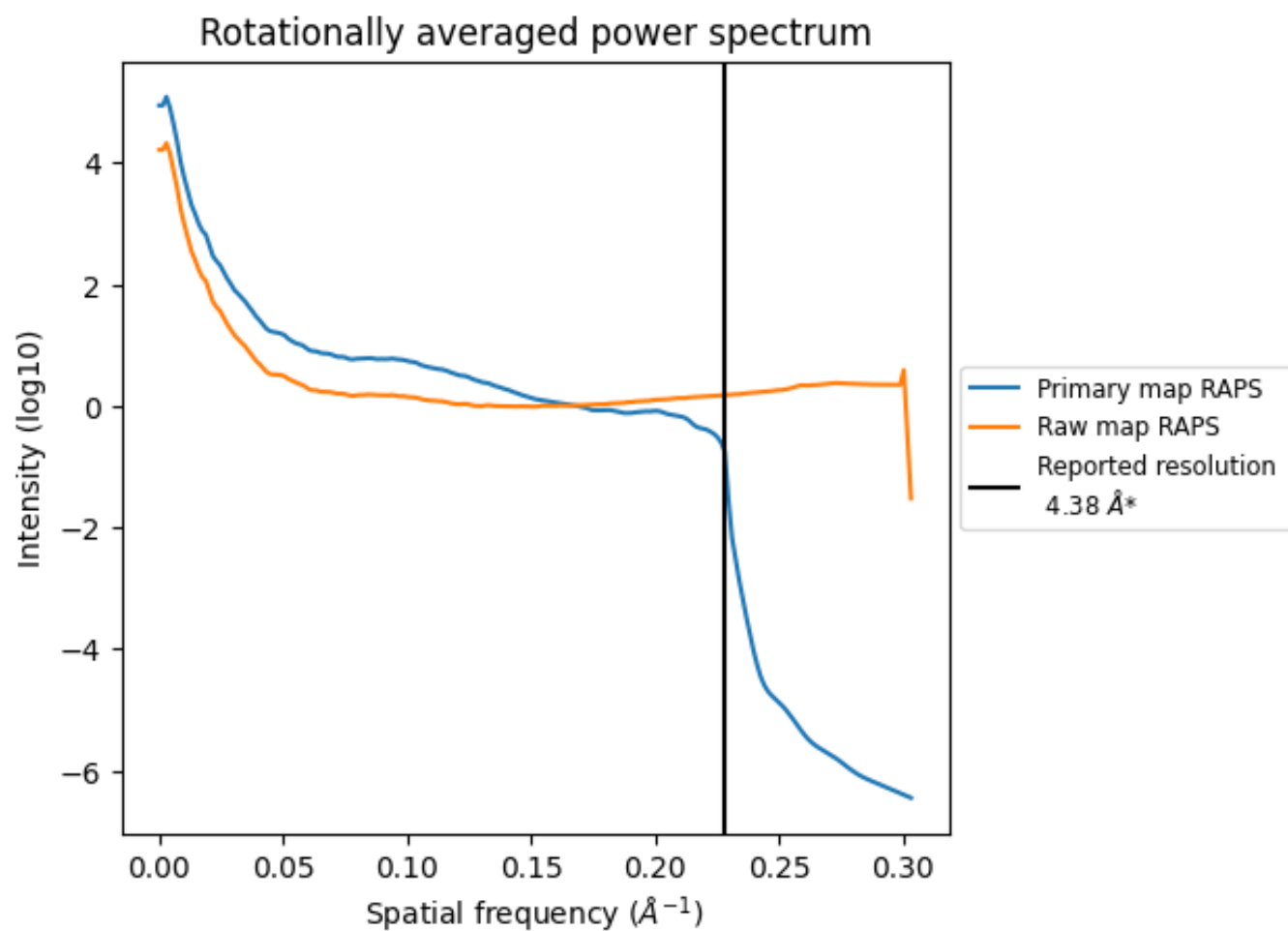
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1965 nm^3 ; this corresponds to an approximate mass of 1775 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 ⓘ

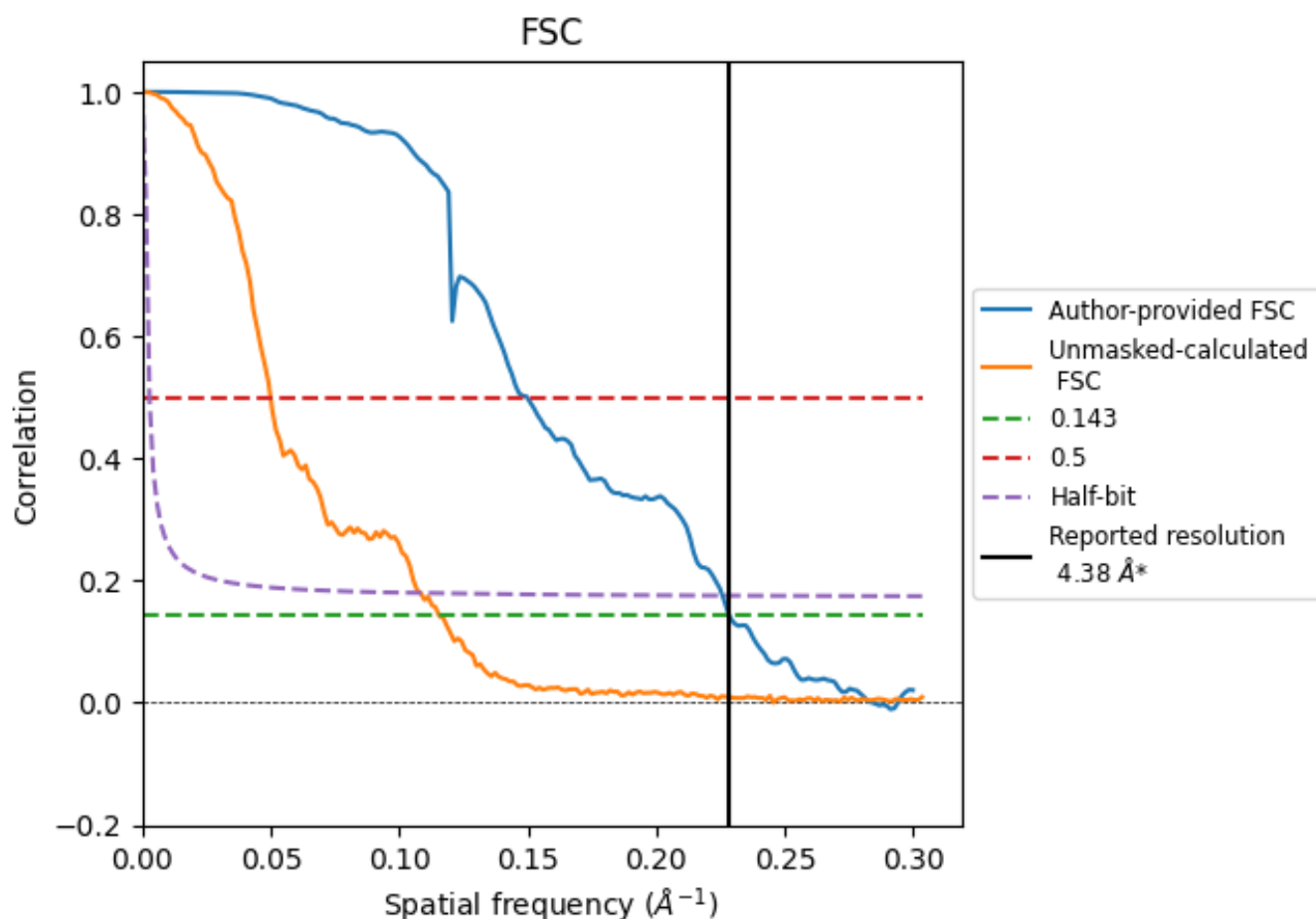


*Reported resolution corresponds to spatial frequency of $0.228 \text{ \AA}^{-1}$

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.228 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

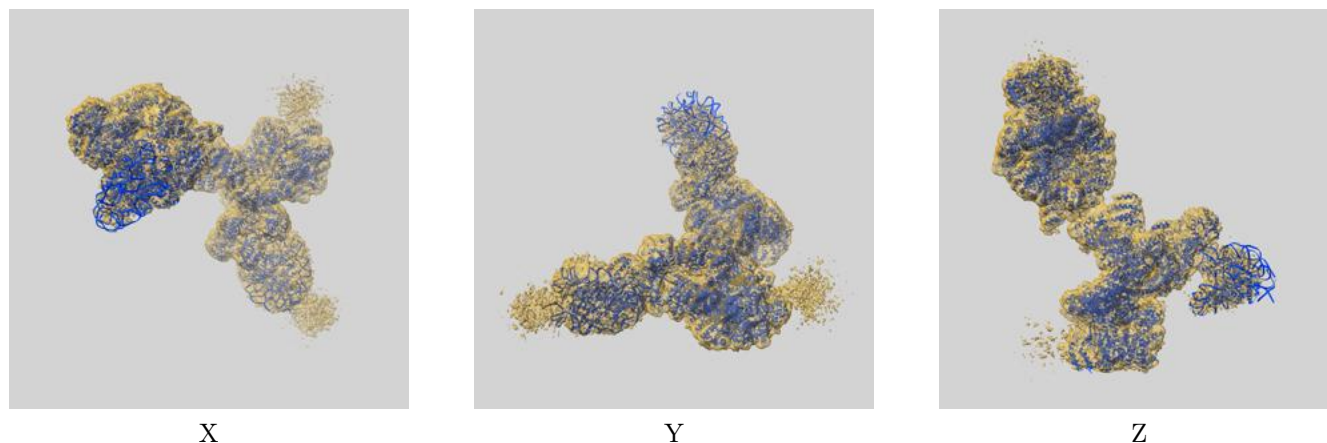
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.38	-	-
Author-provided FSC curve	4.38	6.68	4.43
Unmasked-calculated*	8.67	20.04	9.23

*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 8.67 differs from the reported value 4.38 by more than 10 %

9 Map-model fit [i](#)

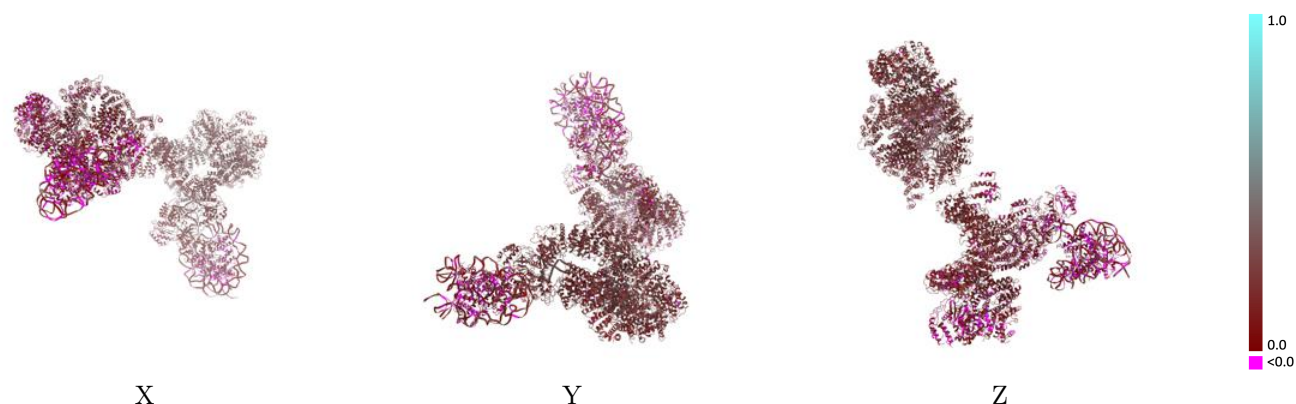
This section contains information regarding the fit between EMDB map EMD-53026 and PDB model 9QCS. Per-residue inclusion information can be found in section [3](#) on page [7](#).

9.1 Map-model overlay [i](#)



The images above show the 3D surface view of the map at the recommended contour level 0.12 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](#)

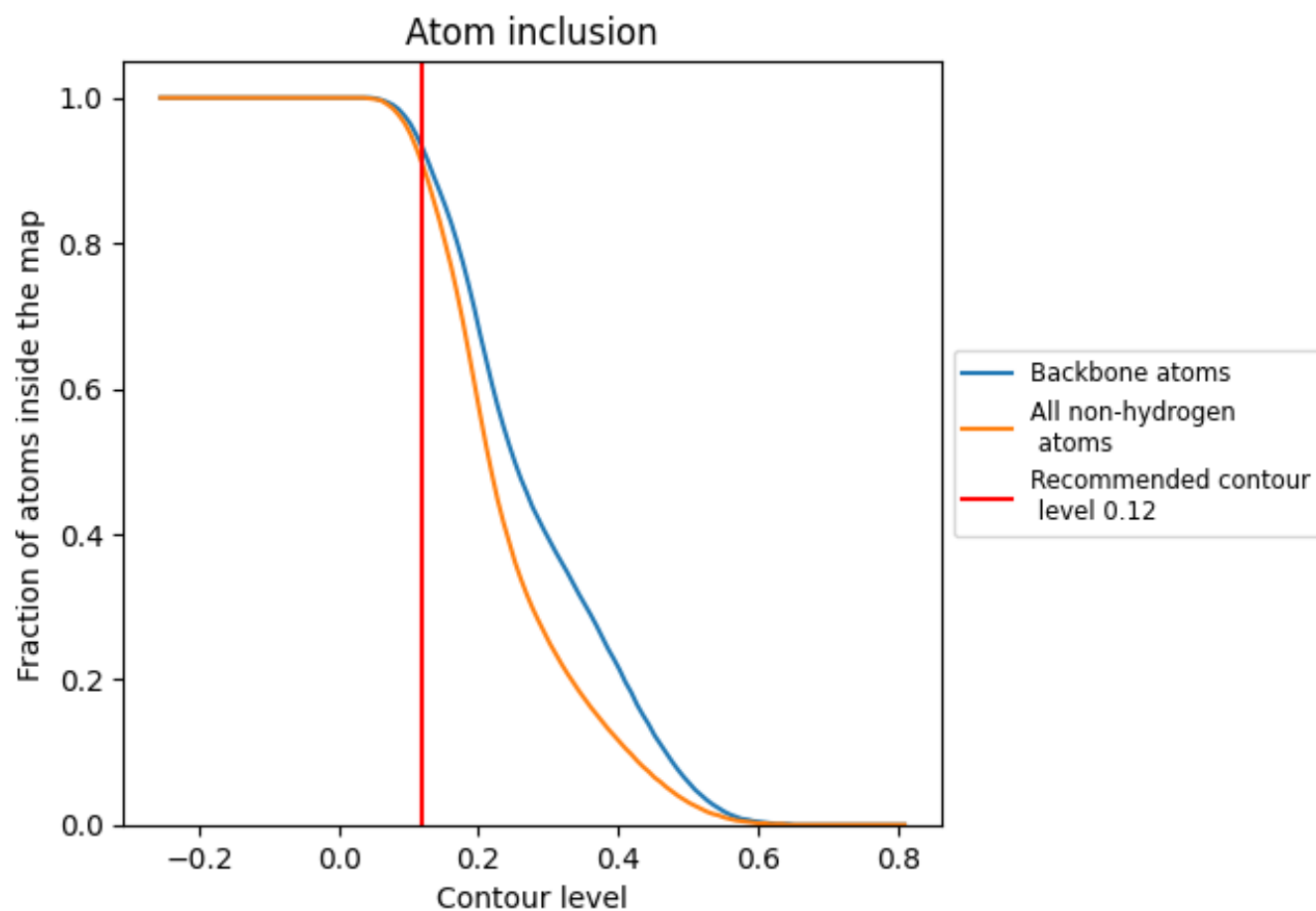


The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

This section was not generated.

9.4 Atom inclusion [i](#)



At the recommended contour level, 93% of all backbone atoms, 91% 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 (0.12) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9080	 0.1850
A	 0.9960	 0.1090
B	 1.0000	 0.1320
C	 0.6740	 0.0840
D	 1.0000	 0.1480
E	 1.0000	 0.1000
F	 0.9980	 0.1110
G	 0.9990	 0.1390
H	 0.6470	 0.0800
I	 0.3430	 0.1470
J	 0.3270	 0.1340
K	 0.9960	 0.2520
L	 0.9970	 0.2150
M	 0.9210	 0.1300
N	 0.9070	 0.1360
O	 0.9880	 0.2520
a	 0.6640	 0.0750
b	 0.8460	 0.0750
c	 0.9580	 0.0840
d	 0.9490	 0.0870
e	 0.4060	 0.1060
f	 0.4100	 0.0880
g	 0.2960	 0.0590
h	 0.3350	 0.0820
i	 0.9120	 0.1730
j	 0.9130	 0.1690
o	 0.9670	 0.1660

