



Full wwPDB EM Validation Report ⓘ

Jan 5, 2026 – 05:47 pm GMT

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:

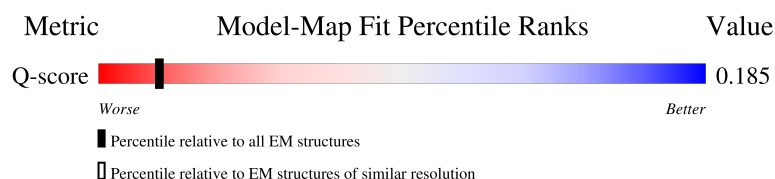
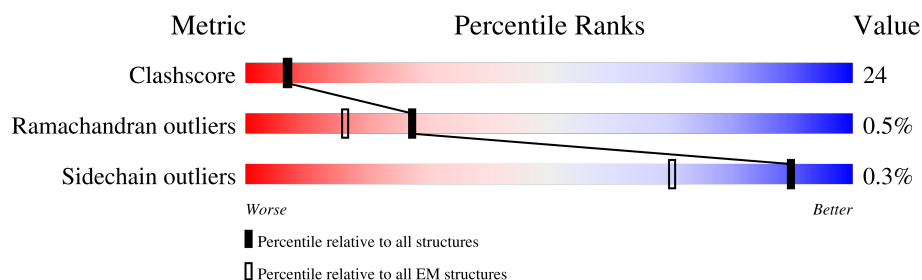
EMDB validation analysis : 0.0.1.dev129
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh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

1 Overall quality at a glance

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

The reported resolution of this entry is 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.



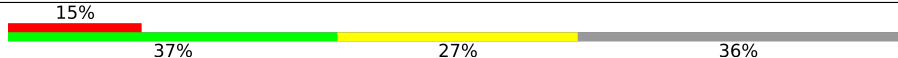
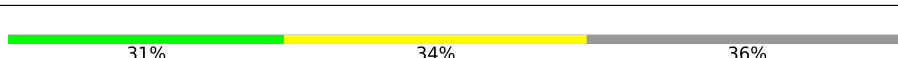
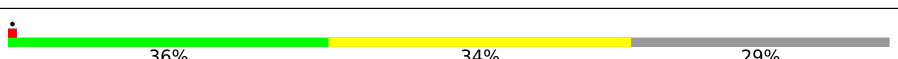
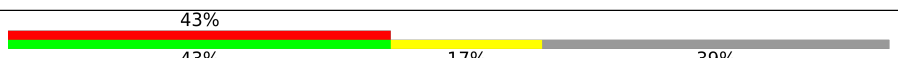
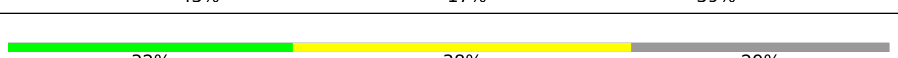
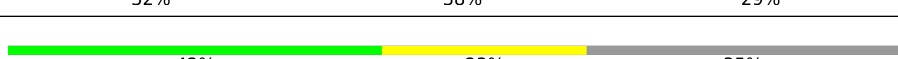
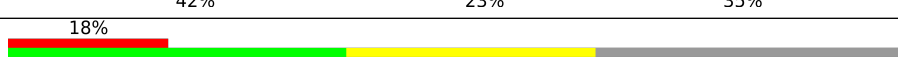
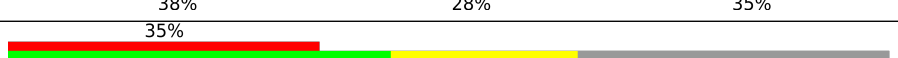
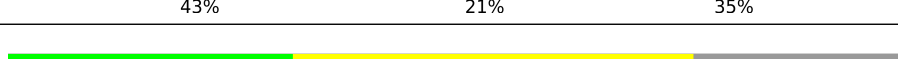
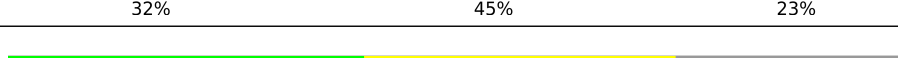
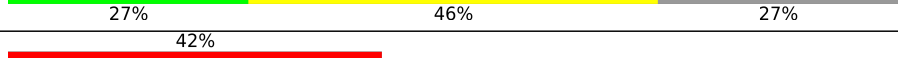
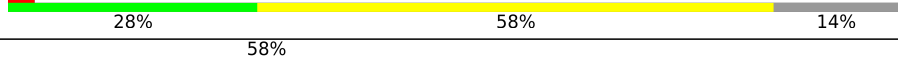
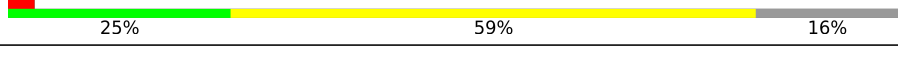
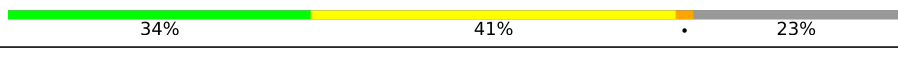
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	210492	15764	-
Ramachandran outliers	207382	16835	-
Sidechain outliers	206894	16415	-
Q-score	-	25397	3702 (3.88 - 4.88)

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	
1	o	4128	
2	D	126	
2	H	126	

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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		

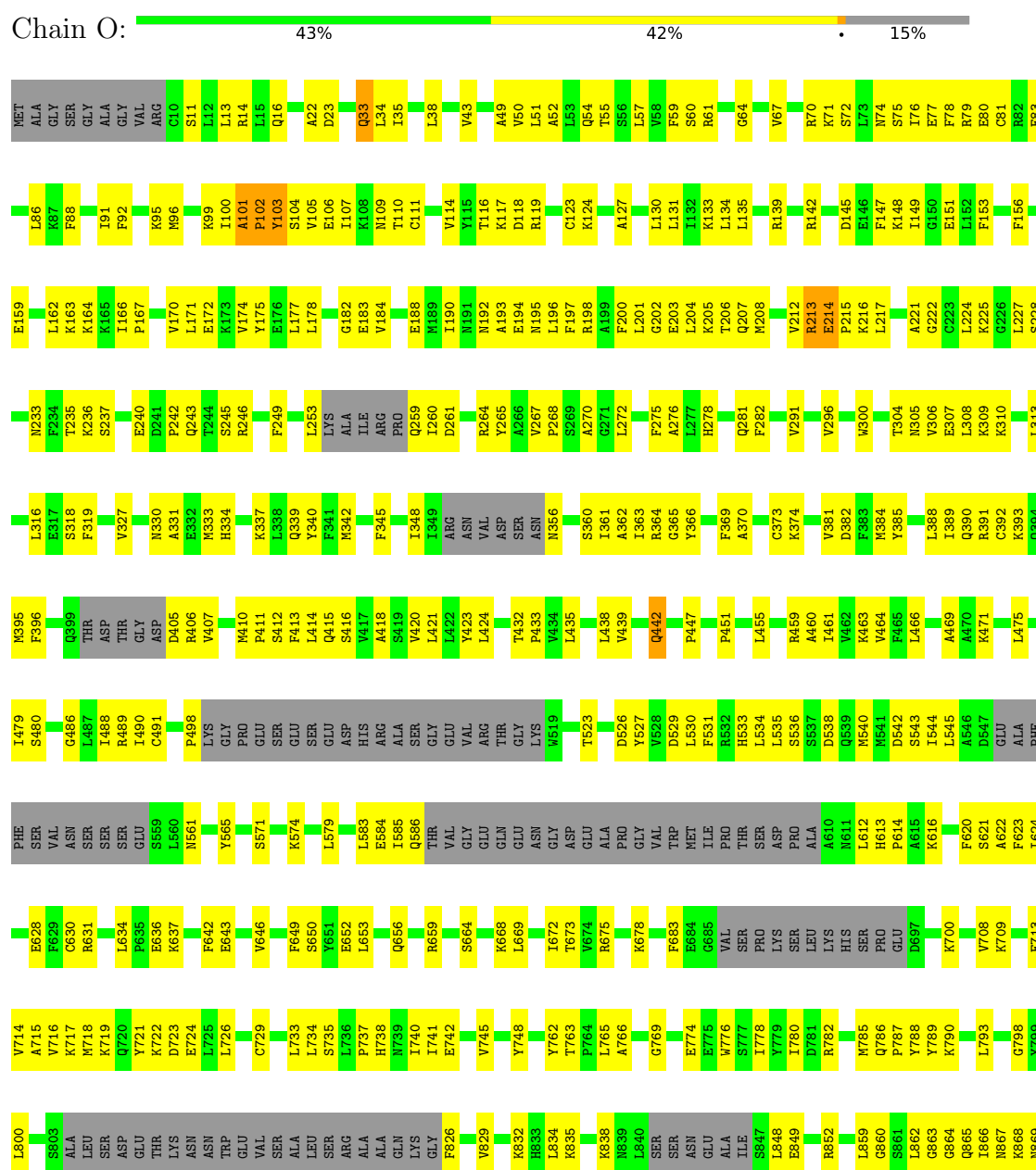
- Molecule 9 is a protein called X-ray repair cross-complementing protein 5.

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	R1026	Q947	LEU
MET	ALA	GLY	ASN	F1782	GLY	V1479	V1479	GLY	T1621	SER	V1479	A1405	V1338	M1288	P1196	A1113	R1034	Q948	THR
ALA	GLY	ASN	THR	R1783	SER	L1483	L1483	SER	T1622	GLN	L1483	A1406	V1339	I1271	L1197	A1114	S1039	A955	THR
GLY	ASN	THR	THR	R1784	VAL	L1486	L1486	VAL	Q1624	VAL	L1486	A1408	R1340	R1274	R1202	A1116	S1040	P956	SER
ASN	THR	THR	THR	R1785	ILE	L1487	L1487	ILE	H1625	ILE	L1487	A1409	I1341	T1275	R1202	D1117	S1041	P957	SER
GLN	THR	THR	THR	R1786	ILE	Y1488	Y1488	ILE	W1626	ILE	Y1488	A1410	E1342	T1276	R1202	D1117	S1042	P958	ASP
LEU	THR	THR	THR	R1787	ILE	K1489	K1489	ILE	K1627	ILE	K1489	A1412	E1343	G1277	R1202	D1117	S1043	P959	GLU
LEU	THR	THR	THR	R1788	ILE	Q1490	Q1490	ILE	C1629	ILE	Q1490	A1413	E1344	G1278	R1202	D1117	S1044	P960	MET
E1935	E1935	E1935	E1935	T1793	THR	I1491	I1491	THR	W1632	THR	I1491	A1414	T1346	A1278	R1202	D1117	S1045	P961	THR
Y1940	Y1940	Y1940	Y1940	Q1794	THR	A1492	A1492	THR	W1633	THR	A1492	A1415	T1347	V1281	R1202	D1117	S1046	P962	THR
M1946	M1946	M1946	M1946	L1797	THR	GLY	GLY	THR	W1634	THR	GLY	A1416	M1350	L1282	R1202	D1117	S1047	P963	THR
I1949	S1950	Y1881	Y1881	L1798	THR	ASP	ASP	THR	A1634	THR	ASP	E1417	T1351	Q1287	R1202	D1117	S1048	P964	THR
S1950	Y1881	Y1881	Y1881	L1799	THR	GLU	GLU	THR	K1642	THR	GLU	A1418	S1352	S1289	R1202	D1117	S1049	P965	THR
Y1881	Y1881	Y1881	Y1881	V1719	THR	GLN	GLN	THR	V1645	THR	GLN	A1419	K1357	S1290	R1202	D1117	S1050	P966	THR
P1885	C1953	C1954	V1955	Y1802	THR	ARG	ARG	THR	W1646	THR	ARG	A1420	L1358	S1291	R1202	D1117	S1051	P967	THR
LYS	ASP	ASP	ASP	F1805	THR	LYS	LYS	THR	L1649	THR	LYS	A1421	L1359	S1292	R1202	D1117	S1052	P968	THR
ASP	ASP	ASP	ASP	R1806	THR	LYS	LYS	THR	A1650	THR	LYS	A1422	L1360	S1293	R1202	D1117	S1053	P969	THR
VAL	VAL	VAL	VAL	Y1807	THR	ASP	ASP	THR	A1651	THR	ASP	A1423	L1361	S1294	R1202	D1117	S1054	P970	THR
VAL	VAL	VAL	VAL	R1727	THR	ASP	ASP	THR	I1652	THR	ASP	A1424	L1362	A1295	R1202	D1117	S1055	P971	THR
F1961	Y1962	Q1963	PHE	T1733	THR	D1576	D1576	THR	I1655	THR	D1576	A1425	M1365	F1297	R1202	D1117	S1056	P972	THR
Y1962	Q1963	Q1963	PHE	P1734	THR	S1577	S1577	THR	S1658	THR	S1577	A1426	L1366	E1299	R1202	D1117	S1057	P973	THR
GLY	GLY	GLY	GLY	R1735	THR	A1578	A1578	THR	F1661	THR	A1578	A1427	L1367	S1300	R1202	D1117	S1058	P974	THR
PHE	PHE	PHE	PHE	F1736	THR	V1579	V1579	THR	Y1662	THR	V1579	A1428	L1368	S1301	R1202	D1117	S1059	P975	THR
LEU	LEU	LEU	LEU	Y1739	THR	E1581	E1581	THR	M1662	THR	E1581	A1429	L1369	S1302	R1202	D1117	S1060	P976	THR
LEU	LEU	LEU	LEU	M1743	THR	M1583	M1583	THR	H1665	THR	M1583	A1430	L1370	S1303	R1202	D1117	S1061	P977	THR
ASN	ASN	ASN	ASN	L1750	THR	S1586	S1586	THR	E1670	THR	S1586	A1431	L1371	S1304	R1202	D1117	S1062	P978	THR
GLN	GLN	GLN	GLN	E1751	THR	V1587	V1587	THR	F1672	THR	V1587	A1432	L1372	S1305	R1202	D1117	S1063	P979	THR
VAL	VAL	VAL	VAL	Q1754	THR	D1588	D1588	THR	Y1673	THR	D1588	A1433	L1373	S1306	R1202	D1117	S1064	P980	THR
PHE	PHE	PHE	PHE	S1755	THR	M1589	M1589	THR	T1674	THR	M1589	A1434	L1374	S1307	R1202	D1117	S1065	P981	THR
GLY	GLY	GLY	GLY	T1826	THR	K1591	K1591	THR	Y1675	THR	K1591	A1435	L1375	S1308	R1202	D1117	S1066	P982	THR
ASN	ASN	ASN	ASN	L1827	THR	M1592	M1592	THR	T1676	THR	M1592	A1436	L1376	S1309	R1202	D1117	S1067	P983	THR
LEU	LEU	LEU	LEU	Y1829	THR	V1593	V1593	THR	H1684	THR	V1593	A1437	L1377	S1310	R1202	D1117	S1068	P984	THR
ILE	ILE	ILE	ILE	H1830	THR	L1594	L1594	THR	D1685	THR	L1594	A1438	L1378	S1311	R1202	D1117	S1069	P985	THR
THR	THR	THR	THR	E1759	THR	V1596	V1596	THR	L1686	THR	V1596	A1439	L1379	S1312	R1202	D1117	S1070	P986	THR
GLU	GLU	GLU	GLU	E1760	THR	L1597	L1597	THR	H1687	THR	L1597	A1440	L1380	S1313	R1202	D1117	S1071	P987	THR
GLY	GLY	GLY	GLY	L1761	THR	M1599	M1599	THR	V1688	THR	M1599	A1441	L1381	S1314	R1202	D1117	S1072	P988	THR
N1909	E1910	E1911	E1912	E1764	THR	M1600	M1600	THR	D1689	THR	M1600	A1442	L1382	S1315	R1202	D1117	S1073	P989	THR
ASN	ASN	ASN	ASN	V1765	THR	L1601	L1601	THR	L1686	THR	L1601	A1443	L1383	S1316	R1202	D1117	S1074	P990	THR
LEU	LEU	LEU	LEU	V1945	THR	K1689	K1689	THR	H1687	THR	K1689	A1444	L1384	S1317	R1202	D1117	S1075	P991	THR
ASP	ASP	ASP	ASP	L1766	THR	G1690	G1690	THR	V1688	THR	G1690	A1445	L1385	S1318	R1202	D1117	S1076	P992	THR
K1913	K1913	K1913	K1913	C1767	THR	Q1603	Q1603	THR	D1691	THR	Q1603	A1446	L1386	S1319	R1202	D1117	S1077	P993	THR
L1914	L1914	L1914	L1914	R1768	THR	S1694	S1694	THR	L1689	THR	S1694	A1447	L1387	S1320	R1202	D1117	S1078	P994	THR
LYS	LYS	LYS	LYS	E1769	THR	F1695	F1695	THR	V1694	THR	F1695	A1448	L1388	S1321	R1202	D1117	S1079	P995	THR
ARG	ARG	ARG	ARG	L1851	THR	L1696	L1696	THR	L1694	THR	L1696	A1449	L1389	S1322	R1202	D1117	S1080	P996	THR
TYR	TYR	TYR	TYR	Q1771	THR	L1697	L1697	THR	K1695	THR	L1697	A1450	L1390	S1323	R1202	D1117	S1081	P997	THR
ASN	ASN	ASN	ASN	H1772	THR	Q1611	Q1611	THR	Y1697	THR	Q1611	A1451	L1391	S1324	R1202	D1117	S1082	P998	THR
ARG	ARG	ARG	ARG	V1773	THR	F1698	F1698	THR	D1697	THR	F1698	A1452	L1392	S1325	R1202	D1117	S1083	P999	THR
THR	THR	THR	THR	M1774	THR	Q1614	Q1614	THR	V1699	THR	Q1614	A1453	L1393	S1326	R1202	D1117	S1084	P1000	THR
VAL	VAL	VAL	VAL	E1775	THR	G1615	G1615	THR	Y1699	THR	G1615	A1454	L1394	S1327	R1202	D1117	S1085	P1001	THR
GLU	GLU	GLU	GLU	E1776	THR	L1615	L1615	THR	Y1699	THR	L1615	A1455	L1395	S1328	R1202	D1117	S1086	P1002	THR
VAL	VAL	VAL	VAL	L1777	THR	L1616	L1616	THR	Y1699	THR	L1616	A1456	L1396	S1329	R1202	D1117	S1087	P1003	THR
VAL	VAL	VAL	VAL	L1777	THR	L1616	L1616	THR	Y1699	THR	L1616	A1457	L1397	S1330	R1202	D1117	S1088	P1004	THR
VAL	VAL	VAL	VAL	L1777	THR	L1616	L1616	THR	Y1699	THR	L1616	A1458	L1398	S1331	R1202	D1117	S1089	P1005	THR
VAL	VAL	VAL	VAL	L1777	THR	L1616	L1616	THR	Y1699	THR	L1616	A1459	L1399	S1332	R1202	D1117	S1090	P1006	THR
VAL	VAL	VAL	VAL	L1777	THR	L1616	L1616	THR	Y1699	THR	L1616	A1460	L1400	S1333	R1202	D1117	S1091	P1007	THR
VAL	VAL	VAL	VAL	L1777	THR	L1616	L1616	THR	Y1699	THR	L1616	A1461	L1401	S1334	R1202	D1117	S1092	P1008	THR
VAL	VAL	VAL	VAL	L1777	THR	L1616	L1616	THR	Y1699	THR	L1616	A1462	L1402	S1335	R1202	D1117	S1093	P1009	THR
VAL	VAL	VAL	VAL	L1777	THR	L1616	L1616	THR	Y1699	THR	L1616	A1463	L1403	S1336	R1202	D1117	S1094	P1010	THR
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VAL	VAL	VAL	VAL	L1777	THR	L1616	L1616	THR	Y1699	THR	L1616	A1467	L1407	S1340	R1202	D1117	S1098	P1014	THR
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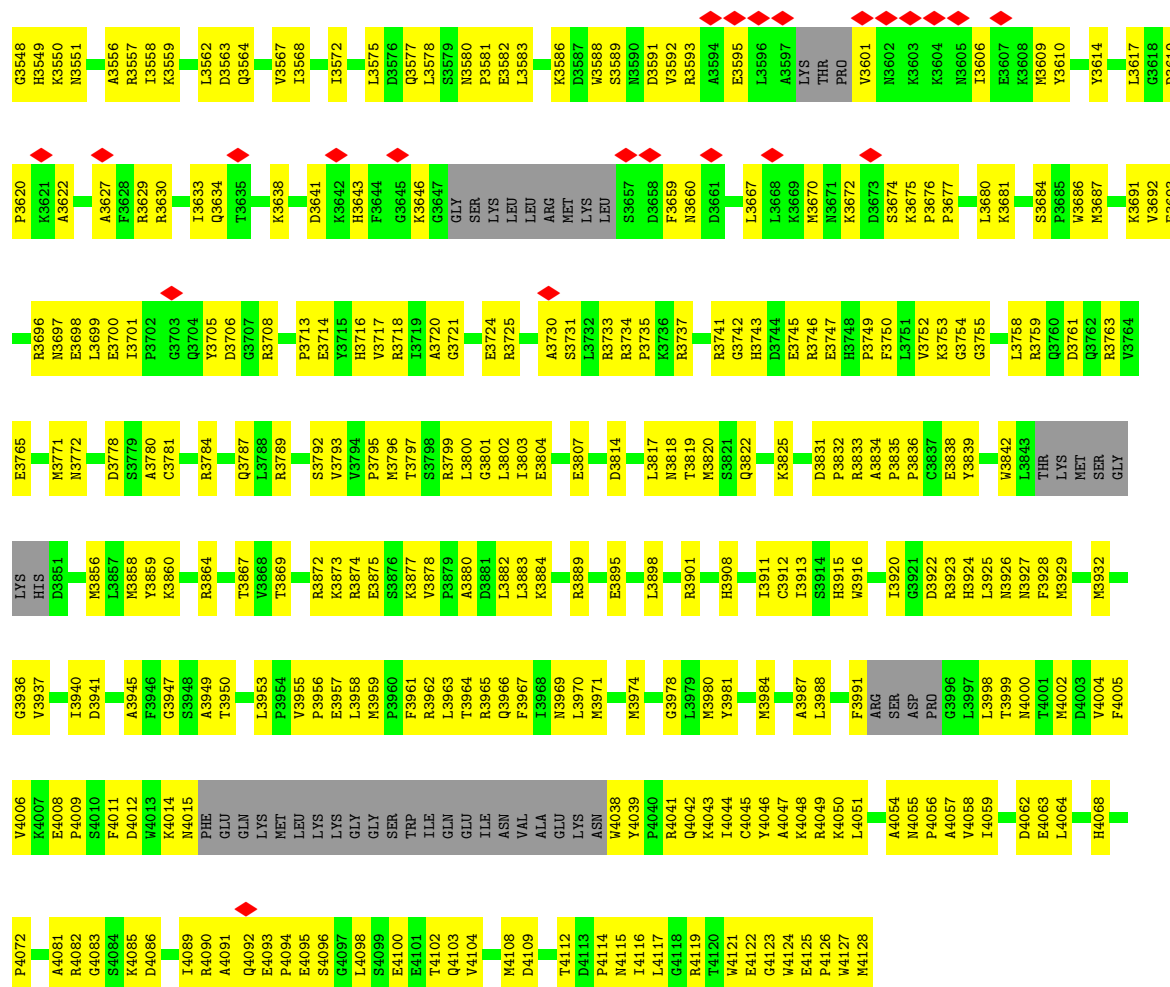
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S3047	S2963	L2791	I2791	D2724	THR	PRO	S2526	I2439	P2371	S2370	T2210	S2124	MET
K3048	D2872	T2792	T2792	L2725	ASP	MET	T2529	M2442	F2372	S2372	T2211	M2126	GLY
	S2883	P2793	P2793	L2726	PRO	PHE	R2530	M2443	P2373	S2373	A2212	K2127	ARG
L3052	L2884	A2796	A2796	R2734	LEU	VAL	R2533	M2444	L2374	F2289	A2213	F2128	LYS
E2968	Q2885	Q2799	Q2799	GLN	ASP	THR	S2533	P2445	A2375	F2300	R2214	F2129	LYS
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L2890	I2890	LYS	LYS	LYS	SER	SER	R2452	R2452	F2378	M2307	R2217	P2136	ILE
		LEU	LEU	LEU	PRO	GLN	D2537	R2452	M2379	S2308	F2218	T2137	GLU
		SER	SER	SER	GLY	GLY	R2538	L2455	N2380	F2309	L2219	V2138	ARG
L2893	L2894	Q2807	Q2807	LEU	SER	THR	L2542	L2458	A2381	F2220	M2220	P2139	LYS
E2895	E2895	MET	MET	LEU	ASP	THR	L2542	V2458	V2382	F2221	K2221	P2139	PRO
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PRO	ARG	ARG	ARG	ARG	ARG	ALA	L2857	Q2472	K2394	L2336	L2157	E2155	ASP
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LYS	T2825	LYS	T2825	LYS	LEU	THR	T2559	M2478	L2396	L2327	L2157	E2155	GLY
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ARG	E2828	LYS	E2828	LYS	PRO	ALA	F2561	M2478	L2396	L2327	L2157	E2155	GLY
GLY	K2829	SER	K2829	SER	LEU	GLY	M2565	D2486	V2400	R2333	F2257	H2163	SER
ALA	M2830	GLY	M2830	GLY	LEU	GLY	T2566	D2486	V2400	R2333	F2257	H2163	SER
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L2916	T2833	MET	T2833	MET	VAL	ARG	M2568	SER	R2404	T2336	E2259	L2165	LEU
P2917	GLY	GLY	GLY	GLY	GLY	ALA	D2571	GLU	V2405	E2338	F2260	L2169	TYR
P2918	ASP	THR	ASP	THR	PRO	THR	Y2572	T2491	V2405	E2338	F2260	L2169	LEU
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LYS	LYS	GLN	LYS	GLN	GLN	GLN	T2575	D2494	Y2412	L2341	N2266	L2171	ALA
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LEU	LEU	THR	LEU	THR	THR	THR	E2578	E2497	L2415	V2344	D2269	H2103	E2039
GLY	GLY	THR	GLY	THR	THR	THR	H2579	I2498	L2415	A2346	N2270	M2104	H2040
LEU	LEU	THR	LEU	THR	THR	THR	P2580	K2503	F2420	K2347	S2271	GLY	S2041
PRO	PRO	GLN	PRO	GLN	GLN	GLN	L2581	K2503	V2421	Q2348	V2272	Q2042	Q2042
GLY	GLY	THR	GLY	THR	THR	THR	S2582	I2507	Q2423	L2349	I2274	Y2184	Q2042
ASP	ASP	ALA	ASP	ALA	ALA	ALA	E2583	I2507	M2424	K2350	Q2275	M2185	F2045
GLU	GLU	ASP	GLU	ASP	ASP	ASP	C2584	L2510	H2426	Q2351	L2276	M2185	F2045
VAL	VAL	GLY	VAL	GLY	GLY	GLY	E2585	L2510	R2427	Q2352	L2276	M2185	F2045
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SER	SER	THR	SER	THR	THR	THR	Q2587	N2514	F2429	F2360	V2280	GLN	V2049
VAL	VAL	PHE	VAL	PHE	PHE	PHE	E2588	I2517	D2430	V2362	A2282	GLN	V2049
LYS	LYS	ASP	LYS	ASP	ASP	ASP	R2596	Q2518	R2431	C2363	T2197	TYR	V2049
GLY	GLY	THR	GLY	THR	THR	THR	S2599	I2521	Q2432	L2364	A2200	GLY	GLN
ALA	ALA	LEU	ALA	LEU	LEU	LEU	T2600	R2522	K2433	M2365	P2287	VAL	SER
ALA	ALA	THR	ALA	THR	THR	THR	T2600	R2522	V2434	K2366	Y2288	R2120	ASP



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F1157	G1077	Q990	T920	K828	M754	R675	L583	THR	D444	A370	L272	Y175	M96	ALA
C1163	F1082	I991	E584	L840	K757	R678	L585	GLY	F446	F379	L286	E176	K99	GLY
L1165	N1083	I992	E586	SER	L758	K679	D586	K520	Q448	C374	L286	L178	C111	ALA
L1166	N1084	W994	T925	ASN	G759	L680	THR	V521	Y449	K374	L286	G182	G111	VAL
	I1085	K1000	V928	GLU	L760		VAL	P522	S450	A378	L293	E183		ARG
	Y1086	Q1004	C931	ILE	T763	F683	GLY	T523	K452	D380	L293	N195	V114	
	E1088	L1010	E932	GLY	P764	G685	GLN	D526		V381	V296	L196	Y115	S11
F1089	F1089	L1009	L934	VAL	L765	VAL	ASN	Y527	L455	D382	F197	T116	L12	L12
E1092	E1092	L1010	H935	SER	E767	PRO	GLY	V528	F456	F383	R198	K117	L13	L13
		E1011	S936	PRO	W768	LYS	ASP	D529	C457	M384	W300	D118	R14	R14
		A1012	M937	LYS		GLY	GLU	L530		Y385	C301	A199	R119	L15
		I1013	T853	SER		LEU	ALA	F531	A460	F386	A302	L201	F200	
		L1014	R854	LYS	W776	LYS	ALA	R532		A302	H303	L201	L201	
		L1015	R854	LYS		PRO	GLY	H533	K463	L388	T304	L204	A121	L19
		G1016	G864	VAL	L780	HIS	VAL	L534	V464	I389	N305	D23	K122	D23
		I1017	Q885	THR	D781	PRO	THR	L535	F485	Q390	L308	Q207	K124	
		V1018	Q885	VAL	R782	ASP	ASP	S537	A467	L466	L320	M208	I125	A28
		D1019	R867	THR	M785	GLU	PRO	D542	L468	C392	V323	V212	A127	G31
		A945	K868	GLY	Q786	PRO	ILE	L544		Q394	A312	R213	A127	
		T946	N869	THR	P787	P698	THR	L545	I479	M395		D129	L130	L34
		Q947	L870	THR	Y788	K700	THR	A546		F396	F319	L217	L130	
		N948	L871	THR	Y789	W701	ASP	D547	V482	L397	L320	P218	L131	G37
		P949	THR	VAL	K790	S702	PRO	ALA	G486	THR	V219	V219	L132	L38
		E950	THR	THR	D791	C703	ALA	F544	L487	THR	L220	L227	P143	P48
		G951	THR	THR	L792	F704	ALA	L545	I488	THR	A221	S228	M144	A49
		F1036	THR	ASP	L793		A610			THR	V327	C223	L135	C42
		L1037	ASP	GLY	P794	E713	H613			THR	N330	L224	R139	V43
		K1038	GLY	GLY	W799	K717	P614			GLY	N330	L224	R139	L44
		W1039	LEU	LEU	G798	K718	A615			ASP	K337	L227	R142	S47
		K1042	ASP	ASP	Y959	M718	K616			ASP	L487	L227	P48	P48
		Q1043	ASP	ASP	S803	K719	P617			ARG	S228	S228	M144	A49
		Q1049	LEU	LEU	ALA	Q720	D619			ARG	F341	S229	F147	A52
		P1053	LEU	LEU	ALA	W721	A622			P411	Q344	C232	G150	L53
		N1054	ASP	ASP	ASP	L726				S412	F345	E240	F153	S56
		T1056	ASP	ASP	GLY	L730	1633			F413	T348	P242	S154	F59
		K1057	THR	THR	THR	L731	P635			L414	ARG	Q243		
		S1058	LYS	LYS	LYS	F732	P636			V417	ARG	Q243		
		L1059	ASN	ASN	ASN	L733	K637			A418	ASN	Y157	Y157	L86
		F1060	TRP	TRP	TRP	L734				S419	VAL	G158	G158	V67
		K1061	GLU	GLU	GLU	S735	E642			V420	ASP	E159	E159	
		D975	VAL	VAL	VAL	L736	F643			L424	SER	L253	L160	R70
		Q978	SER	SER	SER	P737	E643				ASN	LYS	A161	K71
		Y979	ALA	ALA	ALA	H738	V646				N356	ALA	A161	K71
		T980	LEU	LEU	LEU	W739	V647				K357	ILE	L162	S72
		R981	SER	SER	SER	I741	F649				E388	ARG	K163	L73
		Q982	ARG	ARG	ARG	E742					L359	PRO	K165	N74
		L983	ALA	ALA	ALA		L655				S360	Q259	L166	E77
		N1071	ALA	ALA	ALA	W745					A362	I260	L166	F78
		Y984	GLN	GLN	GLN		T658				I363	D261	D168	R79
		E985	LYS	LYS	LYS	W748					R364	L262		
		P986	GLY	GLY	GLY	V749	L660				G365	Y265	L171	R82
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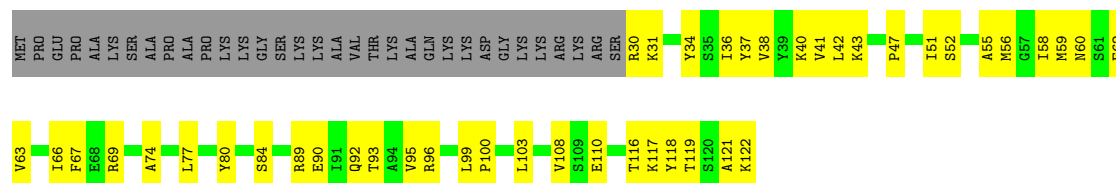
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L2341	N2270	V2190	SER	TYR	SER	K1851	L1851	E1769	L1688	T1566	ASP	D1397	ASN	GLY
L2344	I2274	I2193	PRO	SER	VAL	D1921	L1852	Q1771	V1693	I1567	GLU	D1398	PRO	PHE
Q2345	Q2275	A2200	GLN	GLN	VAL	E1925	SER	H1772	L1696	T1568	ARG	C1399	ARG	S1249
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F2378	F2309	P2159	GLU	GLU	ASP	V1952	L1885	LEU	F1729	K1628	GLY	I1431	GLY	E1287
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A2381	K2313	K2162	ASN	ASN	TYR	GLY	L1885	R1816	P1731	K1628	GLY	I1431	GLY	E1290
E2382	E2314	H2163	SER	SER	MET	PHE	L1885	R1816	Q1732	K1628	GLY	I1431	GLY	E1291
F2383	F2315	H2163	SER	SER	MET	PHE	L1885	R1816	Q1732	K1628	GLY	I1431	GLY	E1292
F2384	Y2316	W2164	LEU	LEU	SER	PHE	L1885	R1816	Q1732	K1628	GLY	I1431	GLY	E1293
L2385	L2385	P2167	LEU	LEU	SER	GLY	L1885	R1816	Q1732	K1628	GLY	I1431	GLY	E1294
L2386	A2319	L2168	LEU	LEU	TYR	GLY	L1885	R1816	Q1732	K1628	GLY	I1431	GLY	E1295
P2387	A2320	L2168	LEU	LEU	TYR	GLY	L1885	R1816	Q1732	K1628	GLY	I1431	GLY	E1296
V2392	W2245	L2171	ASN	ASN	MET	PHE	L1885	R1816	Q1732	K1628	GLY	I1431	GLY	E1297
L2393	V2322	A2172	SER	SER	SER	PHE	L1885	R1816	Q1732	K1628	GLY	I1431	GLY	E1298
K2394	L2323	A2173	SER	SER	SER	PHE	L1885	R1816	Q1732	K1628	GLY	I1431	GLY	E1299
T2395	G2324	S2174	LEU	LEU	LEU	ASN	L1885	R1816	Q1732	K1628	GLY	I1431	GLY	E1300
L2396	L2248	E2175	LEU	LEU	LEU	ASN	L1885	R1816	Q1732	K1628	GLY	I1431	GLY	E1301
C2397	L2249	E2175	LEU	LEU	LEU	ASN	L1885	R1816	Q1732	K1628	GLY	I1431	GLY	E1302
L2398	Y2253	H2104	ASN	ASN	E2039	PHE	L1885	R1816	Q1732	K1628	GLY	I1431	GLY	E1303
R2399	L2255	H2105	GLY	GLY	M2040	PHE	L1885	R1816	Q1732	K1628	GLY	I1431	GLY	E1304
E2399	L2255	H2105	GLY	GLY	M2040	PHE	L1885	R1816	Q1732	K1628	GLY	I1431	GLY	E1305
V2400	F2257	S2107	GLY	GLY	D2044	ILE	L1885	R1816	Q1732	K1628	GLY	I1431	GLY	E1306
V2401	F2257	S2107	GLY	GLY	D2044	ILE	L1885	R1816	Q1732	K1628	GLY	I1431	GLY	E1307
L2402	F2257	S2107	GLY	GLY	D2044	ILE	L1885	R1816	Q1732	K1628	GLY	I1431	GLY	E1308
C2403	F2257	S2107	GLY	GLY	D2044	ILE	L1885	R1816	Q1732	K1628	GLY	I1431	GLY	E1309
R2404	F2257	S2107	GLY	GLY	D2044	ILE	L1885	R1816	Q1732	K1628	GLY	I1431	GLY	E1310
V2405	N2266	V2186	GLY	GLY	Q2050	ARG	L1913	V1844	V1765	L1684	GLY	V1487	GLY	E1311

Q3470	V3389	I3138	A2959	Q2863	Q2784	THR	S2593	R2485	L2411
R3474	Q3390	Q3139	E2960	Q2864	I2785	GLY	G2721	R2486	Y2412
Y3475	A3391	S3143	A2961	H2865	K2786	SER	T2722	PRO	F2413
P3476	A3392	F3144	R2962	L2868	H2787	THR	T2723	GLU	Q2414
E3477	E3395	Q3147	S2963	L2869	S2788	ASP	S2788	SER	K2418
E3478	ALA	Q3149	D2964	L2871	S2789	PRO	L2775	GLU	D2419
T3479	GLN	Q3150	Y2965	G2879	L2790	LEU	L2726	GLU	D2420
L3480	PRO	L3051	S2966	G2879	L2791	VAL	L2727	VAL	F2420
S3481	D3308	L3052	E2967	S2883	L2792	GLN	L2728	THR	Q2421
L3482	GLN	L3061	Q2971	S2884	L2793	HIS	R2734	GLN	Q2422
K3485	V3312	F3064	A2975	Q2885	L2795	THR	ALA	SER	R2425
E3486	S3313	I3065	K2978	R2891	A2796	SER	GLN	E2497	I2498
I3487	S3314	I3069	Q2979	L2892	L2797	PRO	GLY	F2499	F2426
S3488	GLU	I3075	L2893	L2897	Q2798	SER	GLY	R2427	R2427
K3318	K3318	K3075	E2980	E2894	R2800	ASP	LEU	A2502	D2428
N3319	N3319	L3076	W2981	E2895	L2804	SER	GLN	D2504	E2430
A3322	A3322	L3077	W2982	L2896	K2806	LEU	THR	R2431	R2431
Q3326	Q3326	L3078	E2985	L2901	K2807	LEU	ARG	I2507	I2432
N3327	N3327	L3081	P2986	PRO	Q2807	PHE	ALA	Q2508	K2433
I3328	I3328	Y3082	T2987	ALA	L2808	ALA	GLN	G2509	V2434
L3329	L3330	Y3167	E2990	GLU	F2809	ARG	GLY	L2510	C2435
G3331	G3331	P3168	K2991	LEU	S2810	SER	VAL	N2514	I2438
I3336	I3336	P3169	W2994	ALA	S2811	GLU	ALA	I2439	I2439
I3337	I3337	A3171	E2995	PRO	F2812	ARG	GLN	Y2440	Y2440
A3341	A3341	M3176	L2999	ARG	L2813	LEU	ALA	I2520	M2442
N3251	N3251	I3178	N3003	L2916	G2814	GLN	VAL	I2521	M2443
F3252	F3252	D3180	H3004	ARG	G2815	GLY	ALA	R2522	K2444
L3254	L3254	D3181	A3005	ALA	L2816	VAL	ALA	R2523	P2445
A3255	A3255	I3182	A3006	L2916	L2817	PRO	GLY	F2524	L2446
M3256	M3256	I3183	E3007	ALA	L2818	ALA	GLY	E2528	V2449
K3257	K3257	T3184	W3008	ARG	E2819	LEU	ILE	R2529	R2452
D3354	D3354	N3185	K3009	L2916	M2820	LEU	ALA	R2530	E2453
K3355	K3355	Y3101	S3010	D2919	K2824	LYS	THR	S2533	L2454
A3356	A3356	Y3102	S3011	V2920	T2825	ASP	PRO	R2538	L2455
R3357	R3357	I3103	L3011	W2920	E2828	PHE	GLN	E2460	E2460
R3358	R3358	I3107	E3022	W2923	K2829	GLY	GLN	F2461	F2461
I3359	I3359	N3113	ASN	Y2936	L2837	LYS	ASP	H2464	H2464
L3360	L3360	Y3114	PRO	D2937	L2837	ARG	PHE	P2465	P2465
E3361	E3361	L3197	PRO	V2938	L2844	LEU	THR	L2562	S2466
Q3364	Q3364	THR	ASP	V2939	F2850	LEU	THR	L2563	T2467
SER	SER	PRO	LEU	R2940	P2851	PRO	GLN	S2569	R2470
SER	SER	LEU	ASN	I2942	P2852	GLY	THR	P2570	K2473
SER	SER	PRO	K3029	L2942	P2853	ASP	ALA	P2571	Y2474
E3368	E3368	GLU	I3030	L2942	P2854	VAL	GLY	Y2572	Y2475
D3369	D3369	R3125	W3031	L2942	P2855	ASP	THR	P2575	I2476
N3457	N3457	S3124	ASN	K2950	S2856	ASN	ARG	SER	L2477
K3461	K3461	R3128	S3032	T2953	C2857	LYS	SER	P2580	H2478
R3462	R3462	I3129	E3033	Q2954	L2858	VAL	PHE	L2581	W2479
L3463	L3463	Q3130	P3034	S2955	Q2859	GLY	TRP	I2480	I2480
A3381	A3381	I3135	Q3037	A2956	L2861	ALA	LEU	H2481	H2481
K3464	K3464	ASP	L3041	L2957	S2862				
R3467	R3467	GLN	P3042	L2958					
A3513	A3513								
V3514	V3514								
H3515	H3515								
H3516	H3516								
S3517	S3517								
V3518	V3518								
I3521	I3521								
T3522	T3522								
Q3527	Q3527								
A3528	A3528								
I3529	I3529								
V3530	V3530								
Y3531	Y3531								
P3532	P3532								
I3535	I3535								
S3536	S3536								
S3539	S3539								
TYR	TYR								
SER	SER								
PHE	PHE								
LYS	LYS								
ASP	ASP								
T3545	T3545								
S3546	S3546								
T3547	T3547								



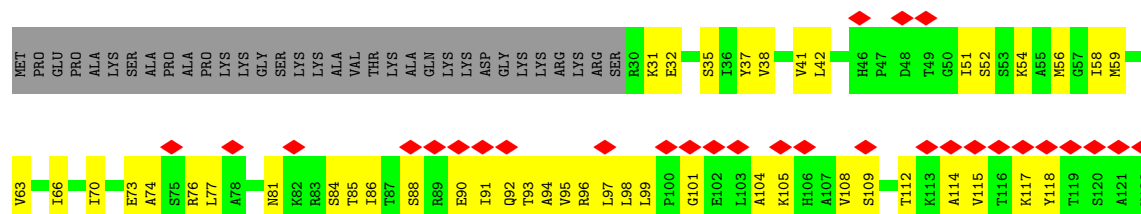
• Molecule 2: Histone H2B type 1-J

Chain D: 39% 35% 26%

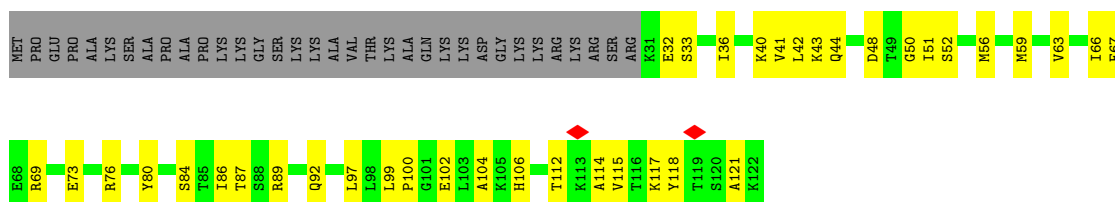


• Molecule 2: Histone H2B type 1-J

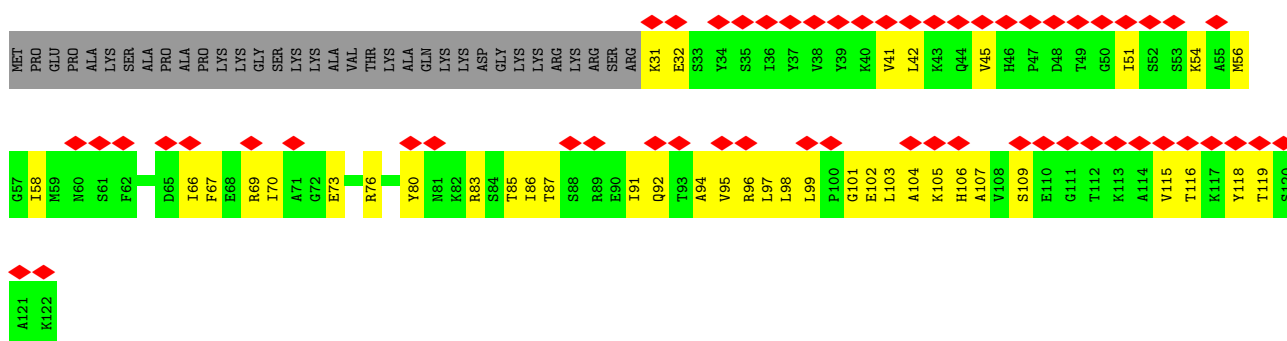
Chain H: 23% 38% 36% 26%



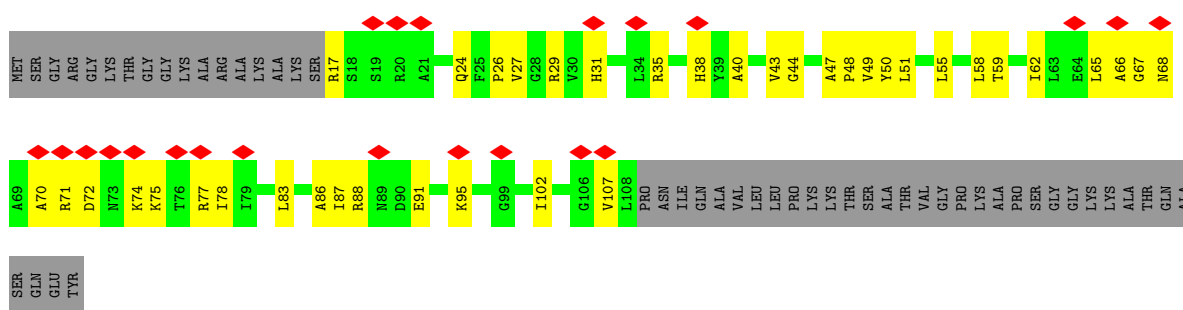
Chain d:



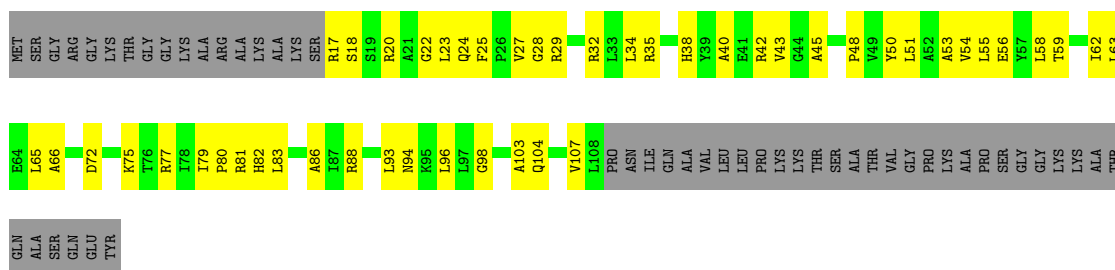
Chain h:



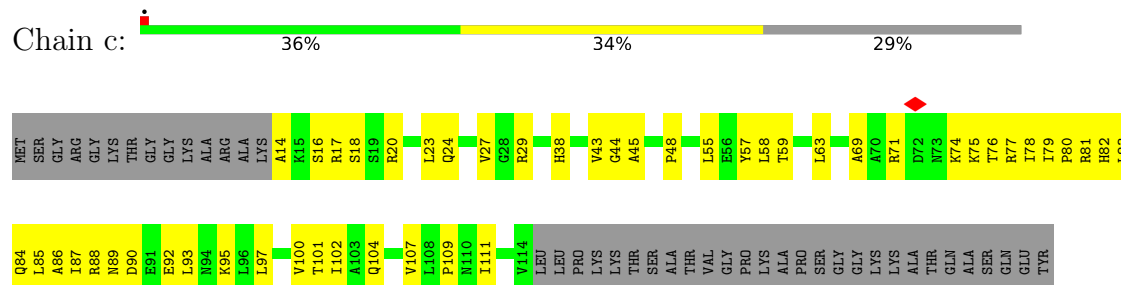
Chain C: 15% 37% 27% 36%



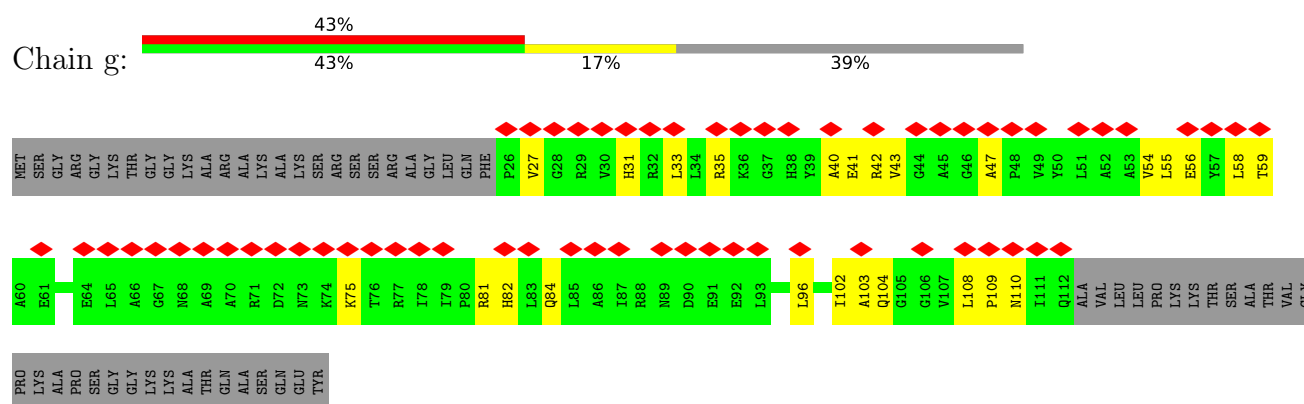
Chain G: 31% 34% 36%



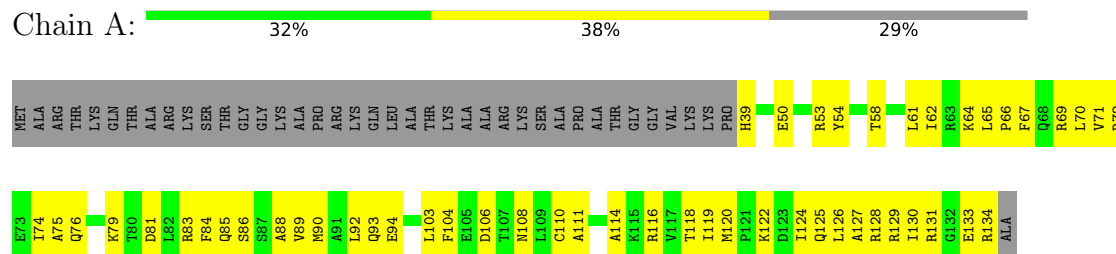
- Molecule 3: Histone H2AX



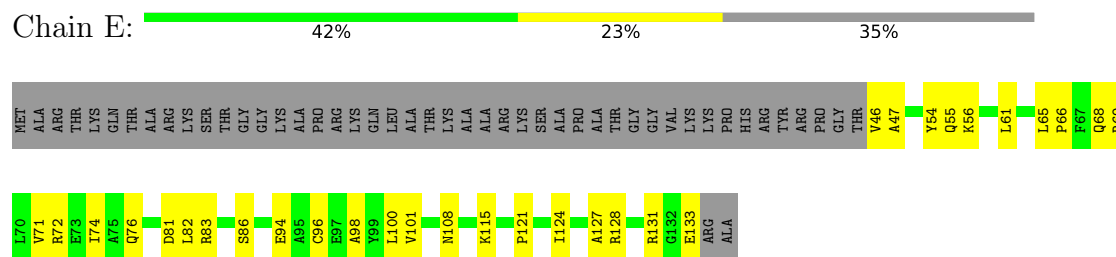
- Molecule 3: Histone H2AX



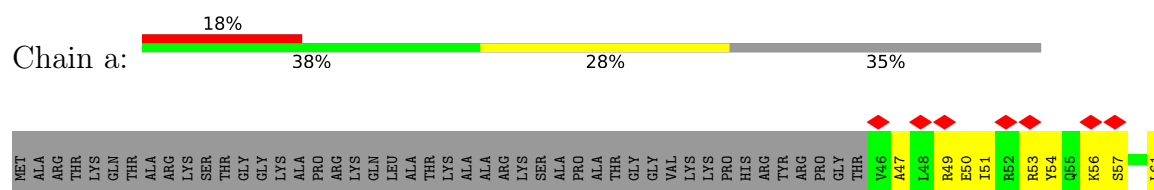
- Molecule 4: Histone H3.1

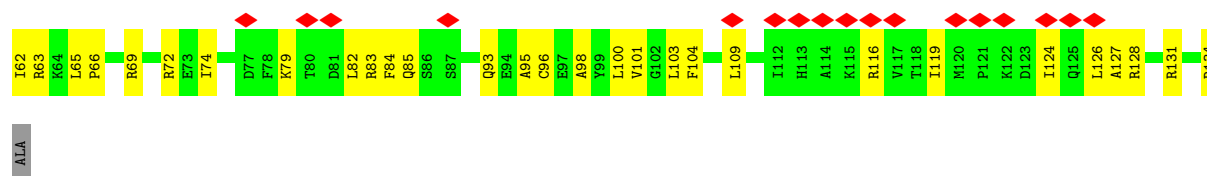


- Molecule 4: Histone H3.1

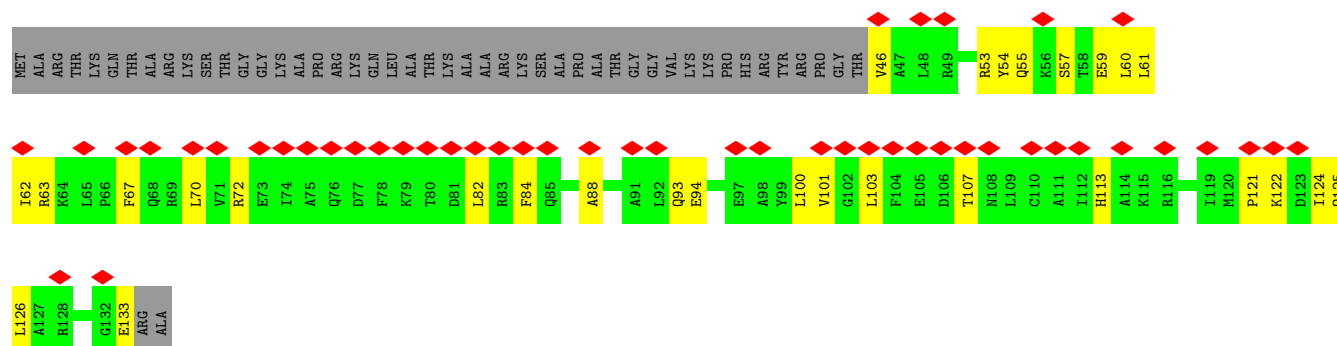
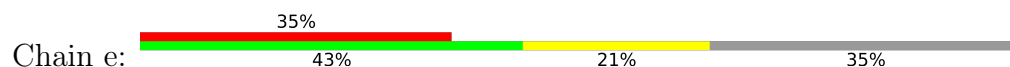


- Molecule 4: Histone H3.1

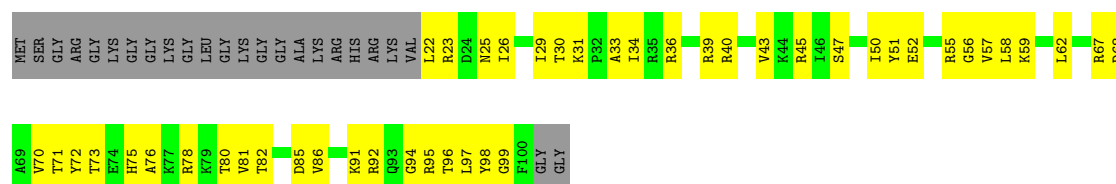




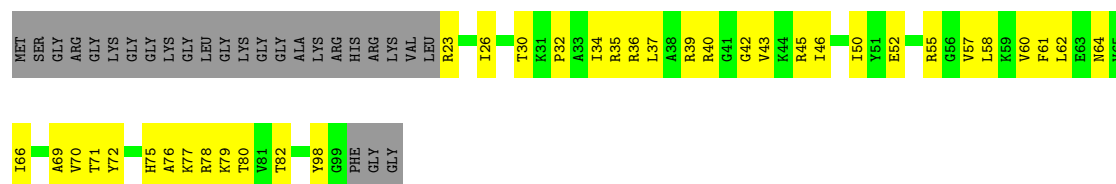
• Molecule 4: Histone H3.1



• Molecule 5: Histone H4

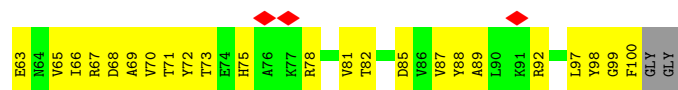


• Molecule 5: Histone H4

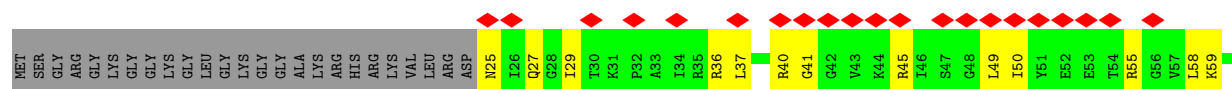
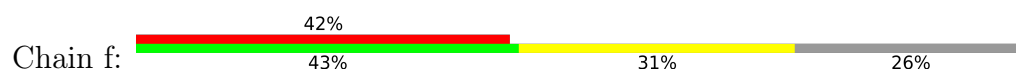


• Molecule 5: Histone H4

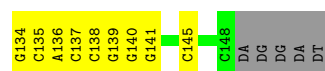
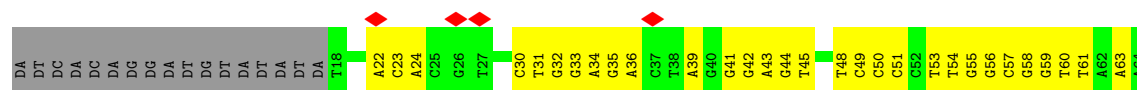




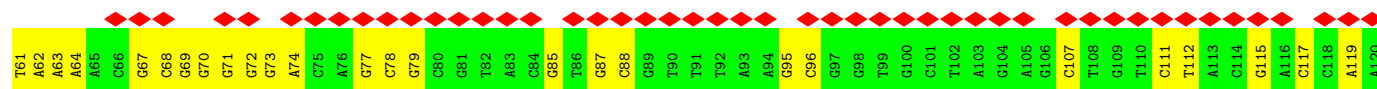
• Molecule 5: Histone H4



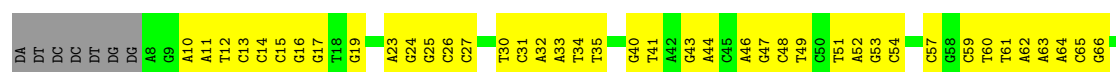
• Molecule 6: 153 bp DNA



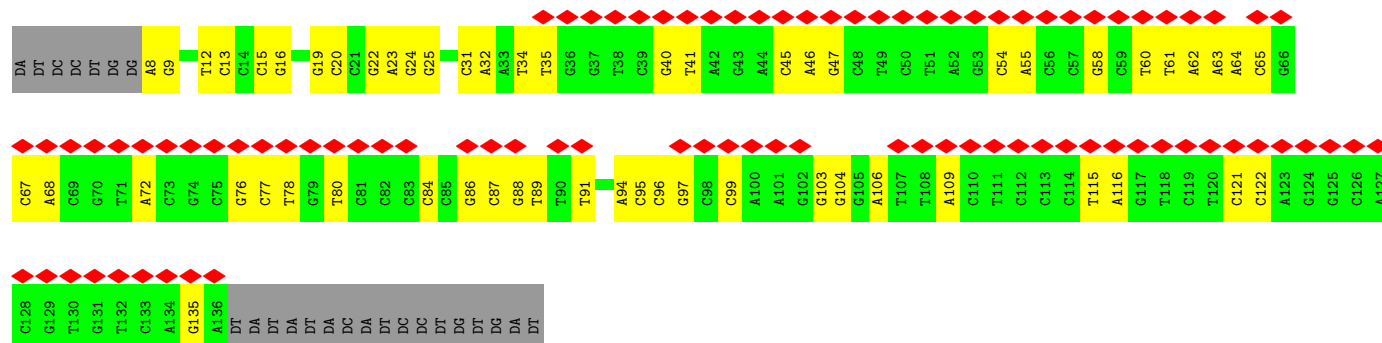
• Molecule 6: 153 bp DNA



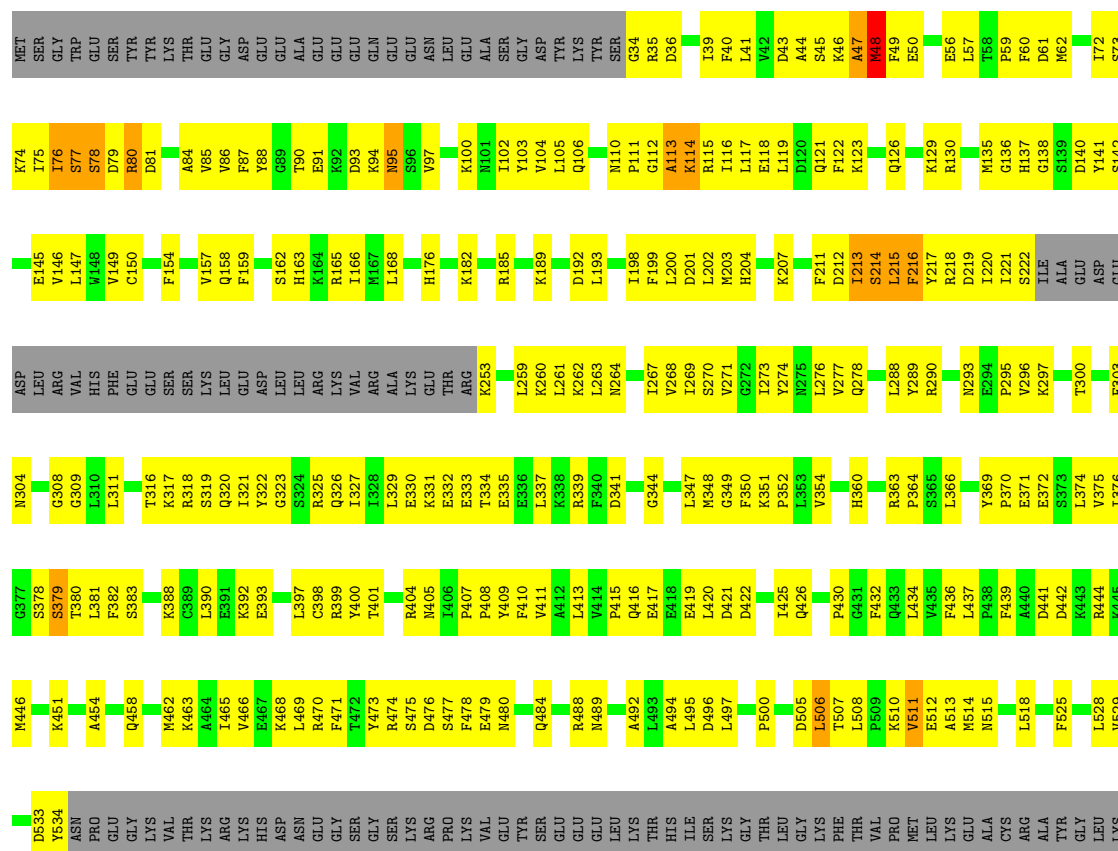
• Molecule 7: 153 bp DNA



- Molecule 7: 153 bp DNA



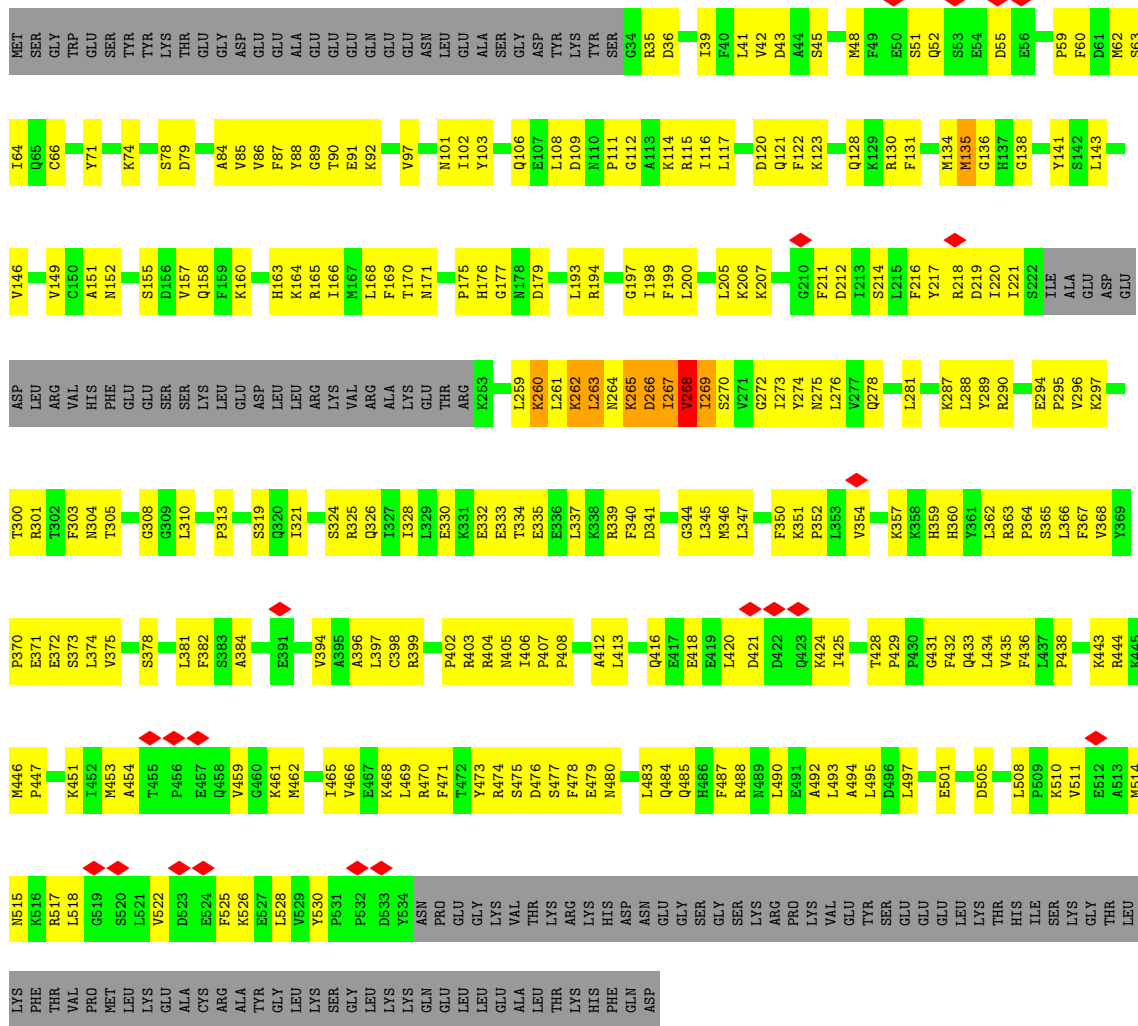
- Molecule 8: X-ray repair cross-complementing protein 6



SER
GLY
LEU
LYS
LYS
GLN
GLU
LEU
LEU
GLU
ALA
THR
LYS
HIS
PHE
GLN
ASP

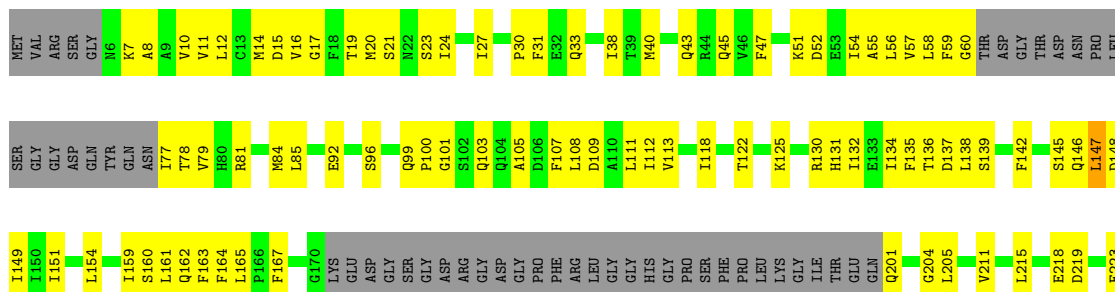
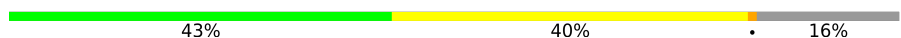
• Molecule 8: X-ray repair cross-complementing protein 6

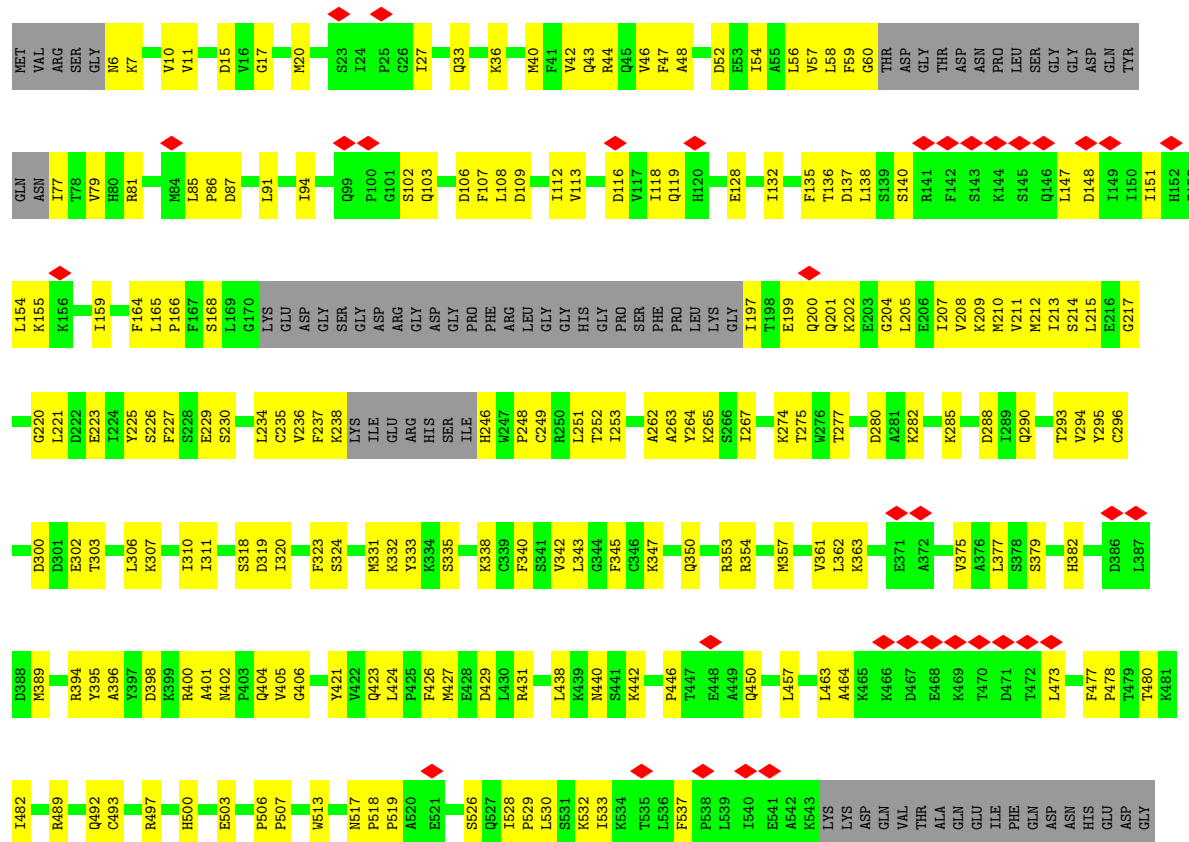
Chain M:



• Molecule 9: X-ray repair cross-complementing protein 5

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

Continued on next page...

Continued from previous page...

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:HG3	1:o:3168:TYR:HB3	2.02	0.42
1:o:865:GLN:HA	1:o:868:LYS:NZ	2.34	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%)	22	59
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%)	12	46
3	C	90/143 (63%)	82 (91%)	8 (9%)	0	100	100
3	G	90/143 (63%)	86 (96%)	3 (3%)	1 (1%)	12	46
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	25
8	M	467/609 (77%)	385 (82%)	75 (16%)	7 (2%)	8	39
9	L	604/732 (82%)	505 (84%)	94 (16%)	5 (1%)	16	53
9	N	600/732 (82%)	517 (86%)	81 (14%)	2 (0%)	37	72
All	All	10378/12970 (80%)	9233 (89%)	1095 (11%)	50 (0%)	27	63

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%)	81	87
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%)	73	82
8	M	416/548 (76%)	412 (99%)	4 (1%)	73	82
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%)	90	92

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.

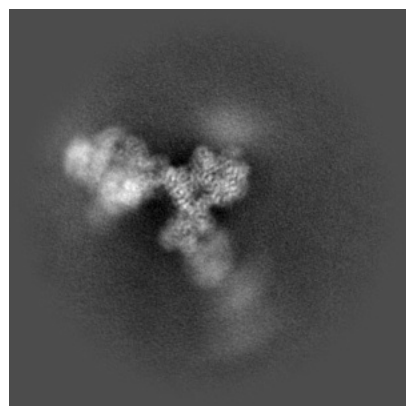
6 Map visualisation [i](#)

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.

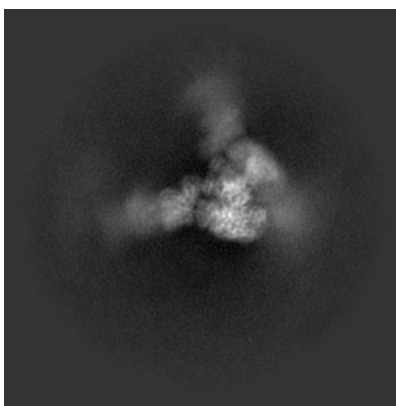
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

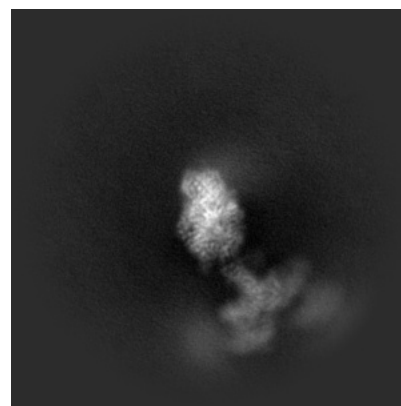
6.1.1 Primary map



X

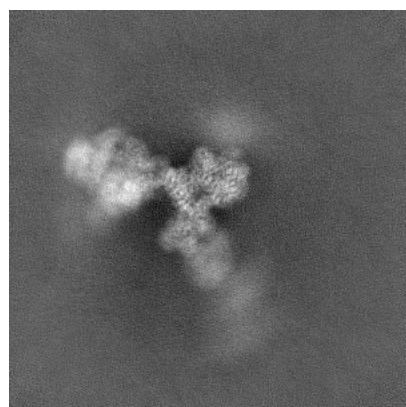


Y

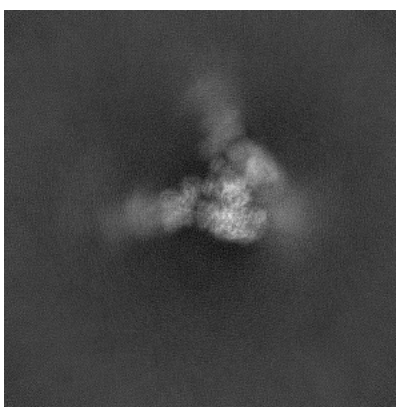


Z

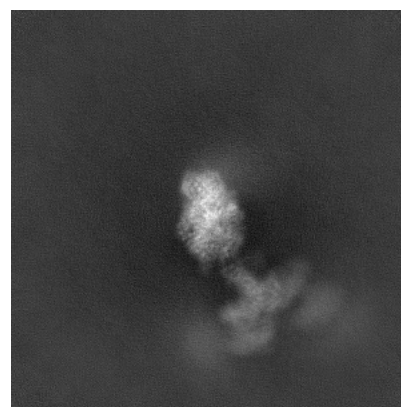
6.1.2 Raw map



X



Y

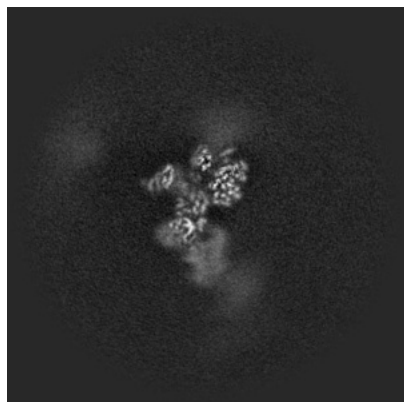


Z

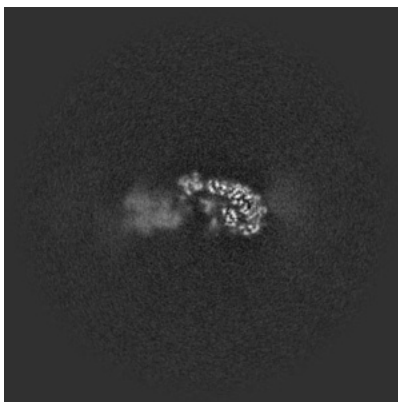
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

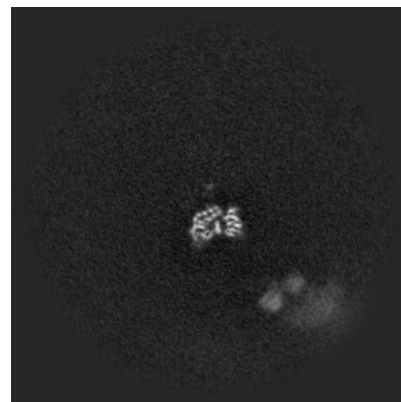
6.2.1 Primary map



X Index: 210

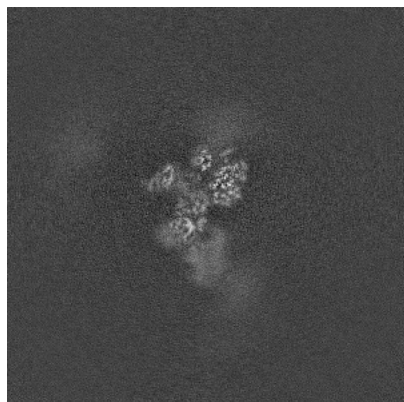


Y Index: 210



Z Index: 210

6.2.2 Raw map



X Index: 210



Y Index: 210

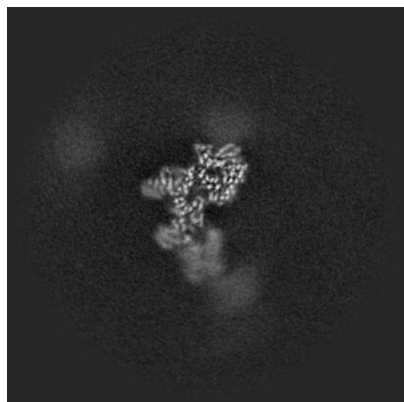


Z Index: 210

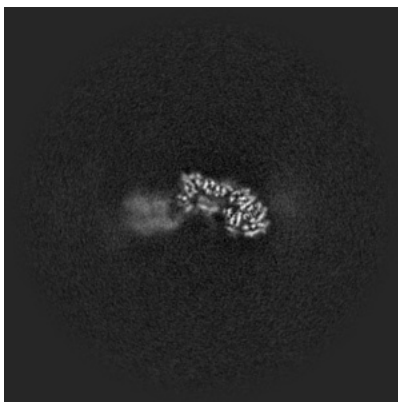
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

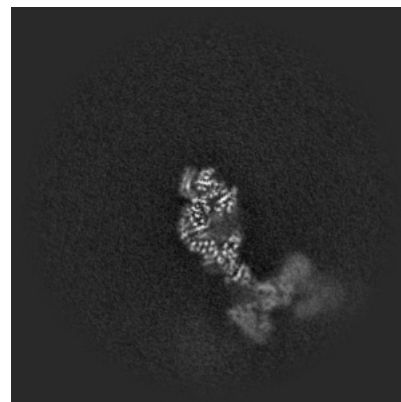
6.3.1 Primary map



X Index: 203



Y Index: 206

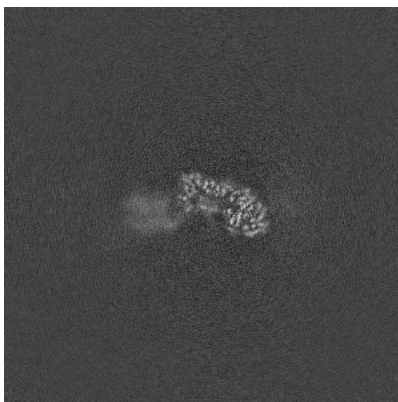


Z Index: 238

6.3.2 Raw map



X Index: 202



Y Index: 206

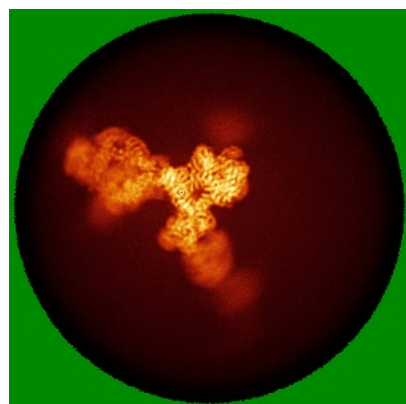


Z Index: 238

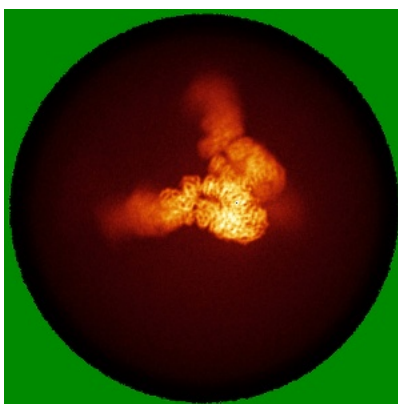
The images above show the largest variance slices of the map in three orthogonal directions.

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

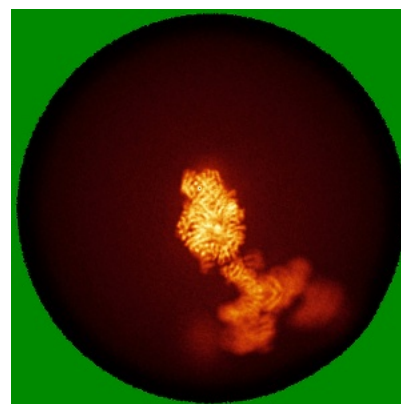
6.4.1 Primary map



X

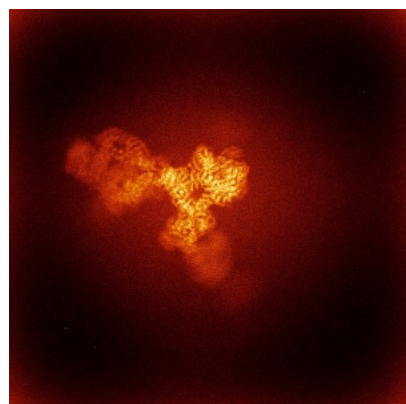


Y

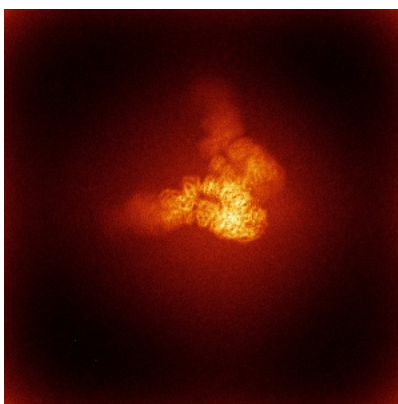


Z

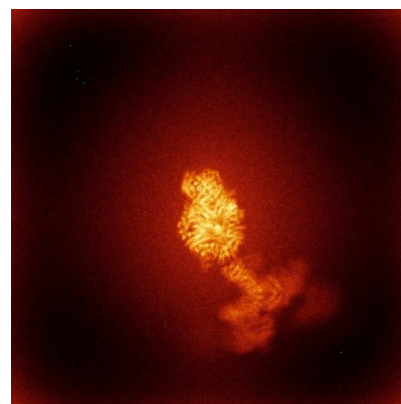
6.4.2 Raw map



X



Y

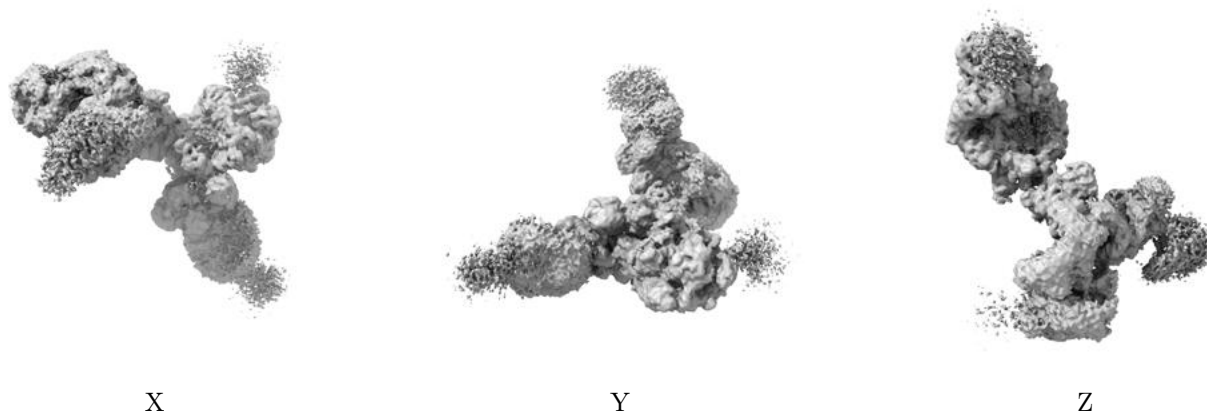


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

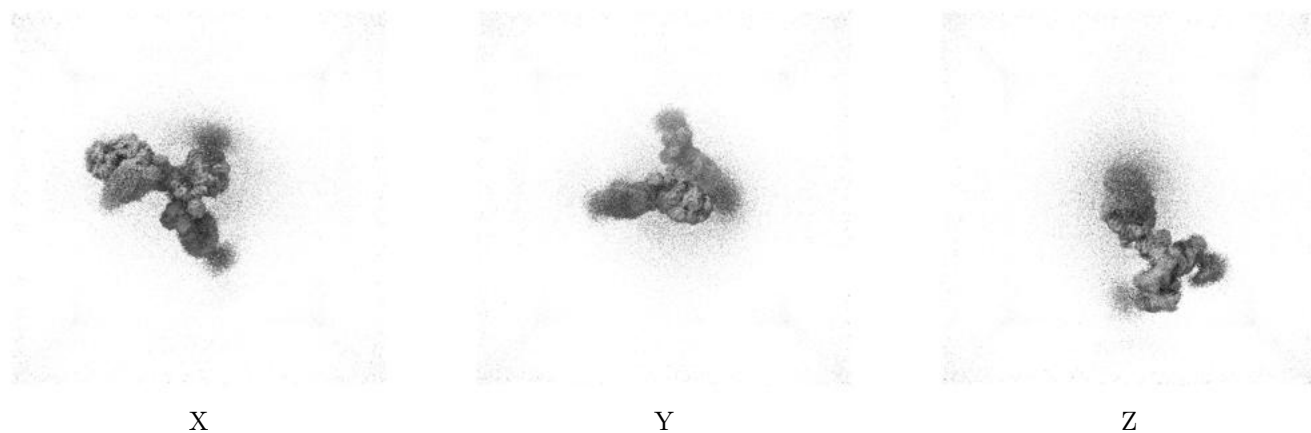
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.12. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

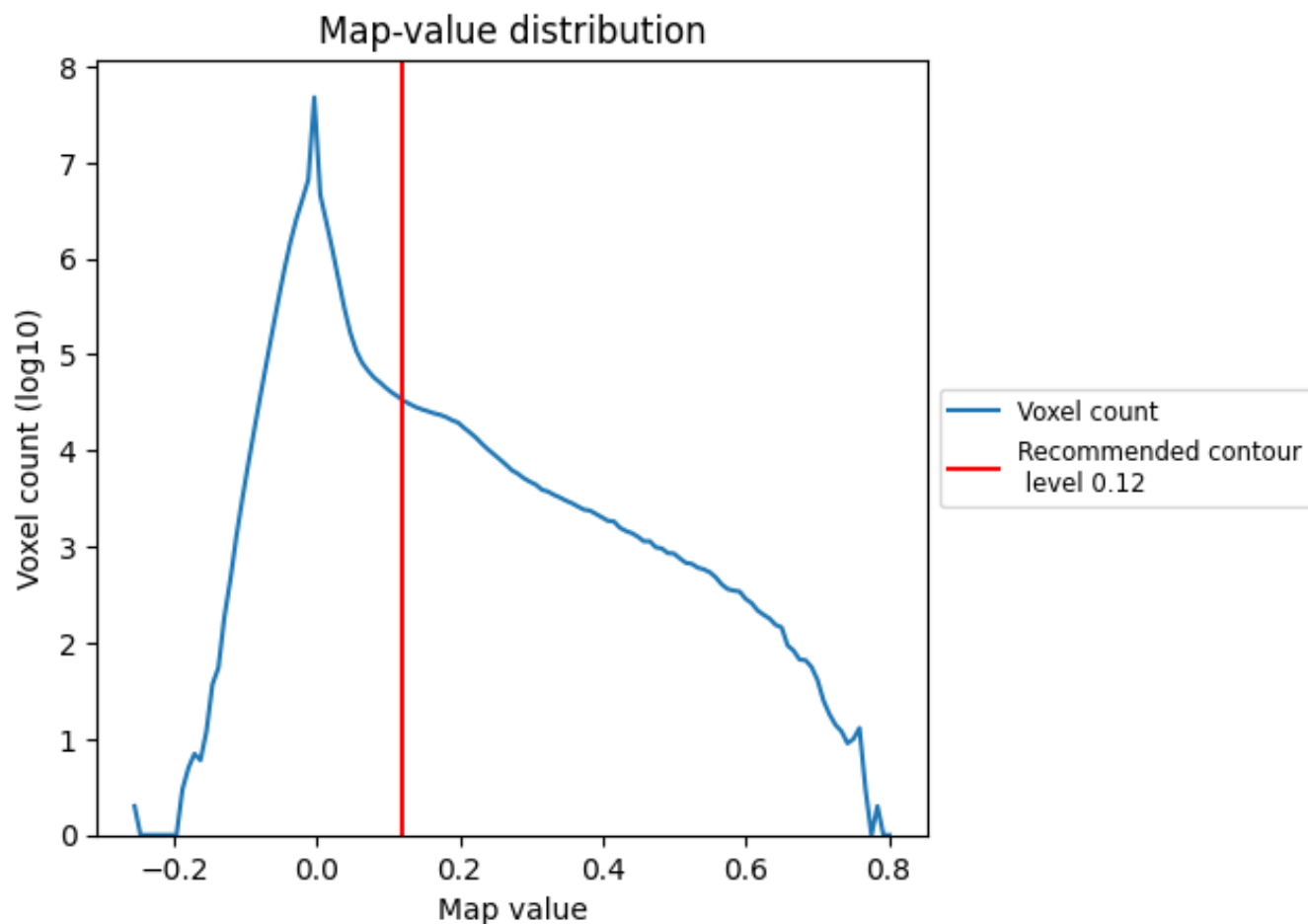
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

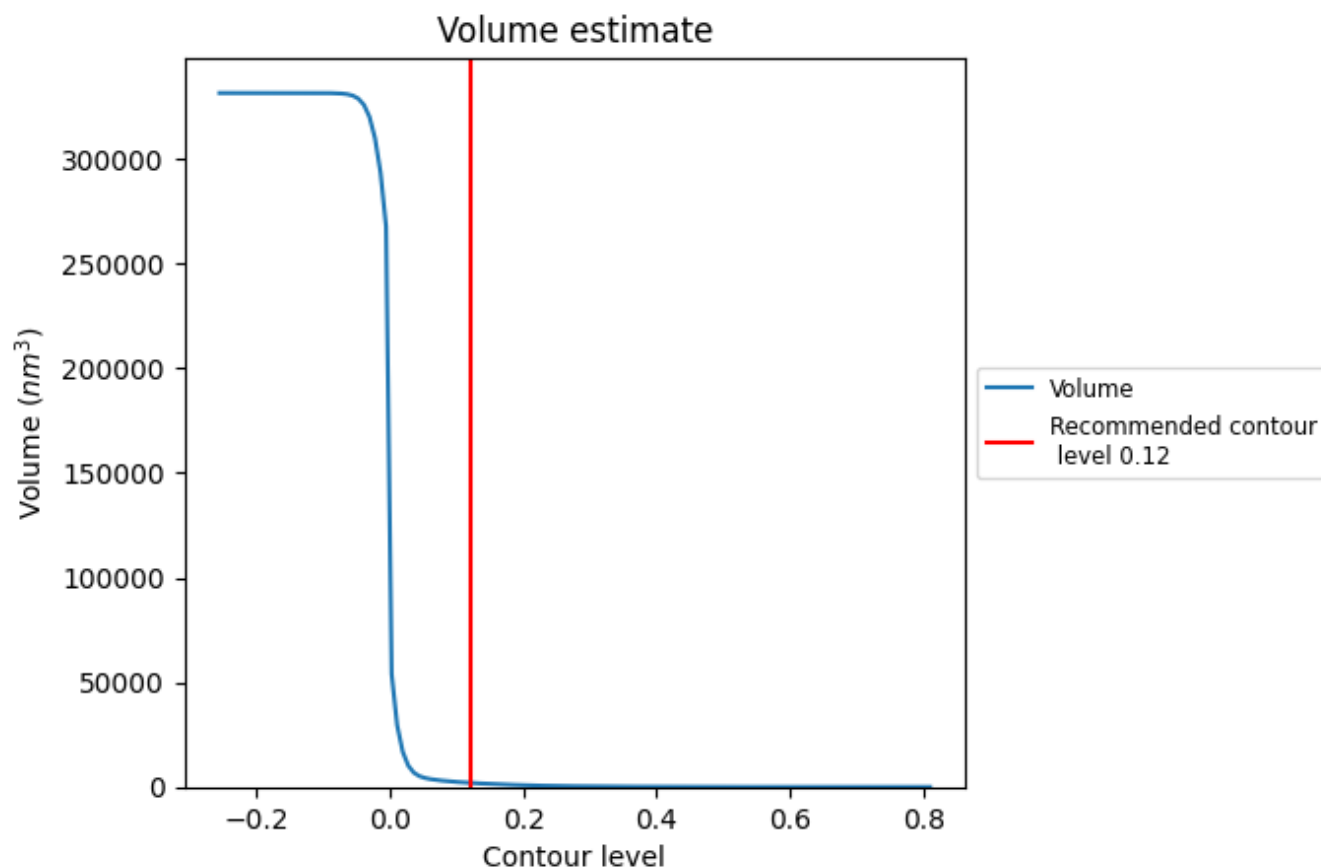
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

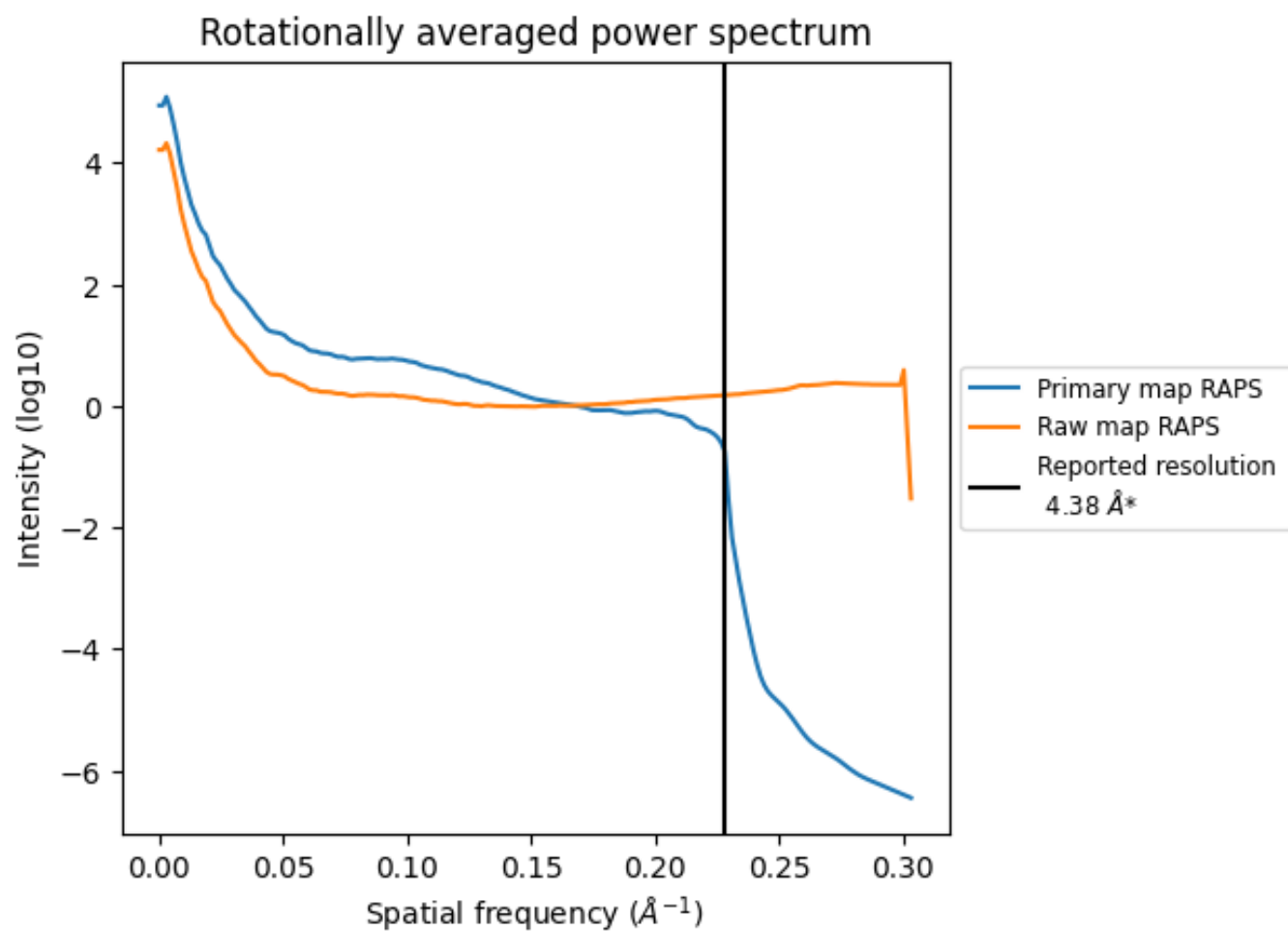
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 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 ⓘ

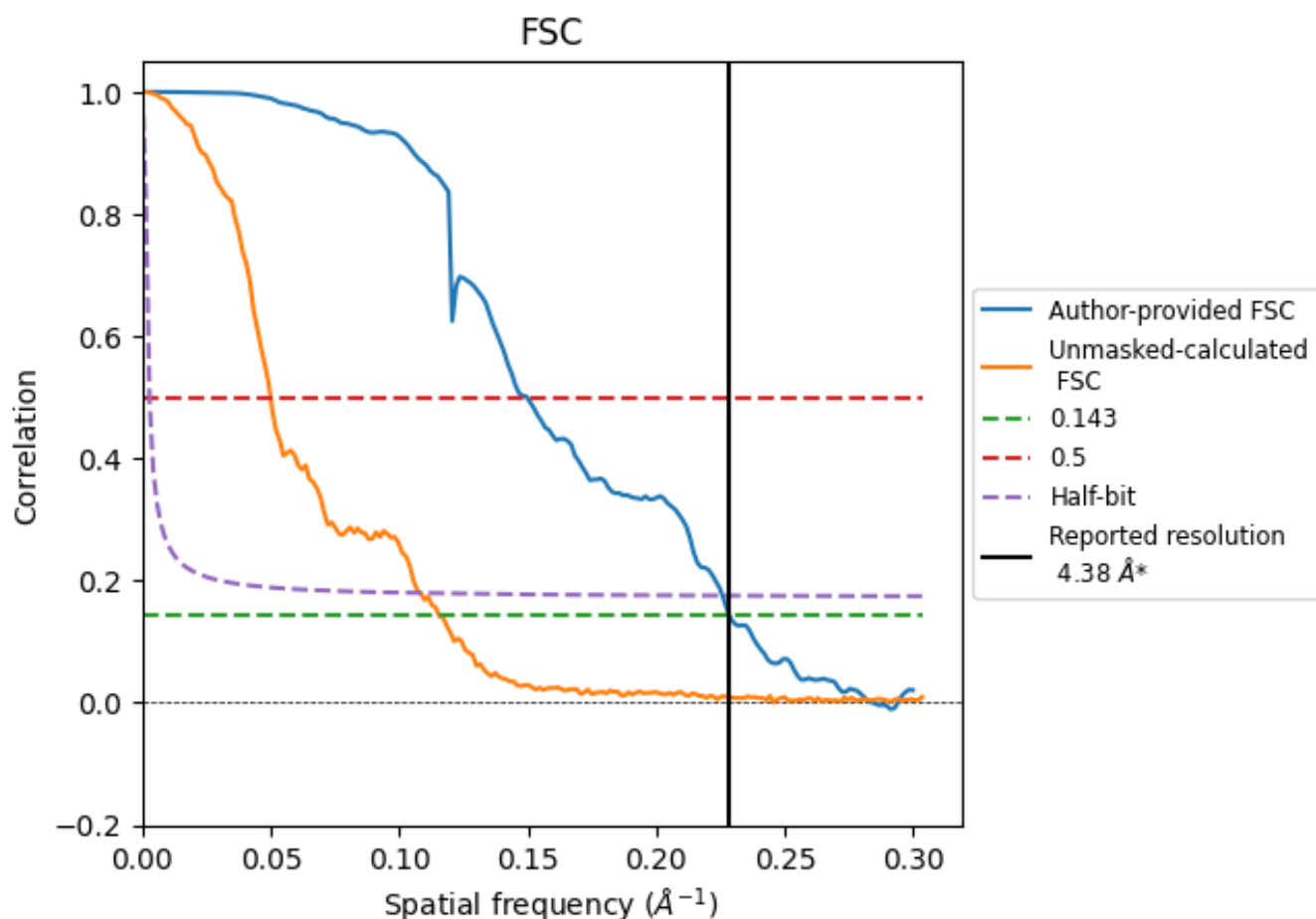


*Reported resolution corresponds to spatial frequency of 0.228 $\text{\AA}^{-1}$

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](#)

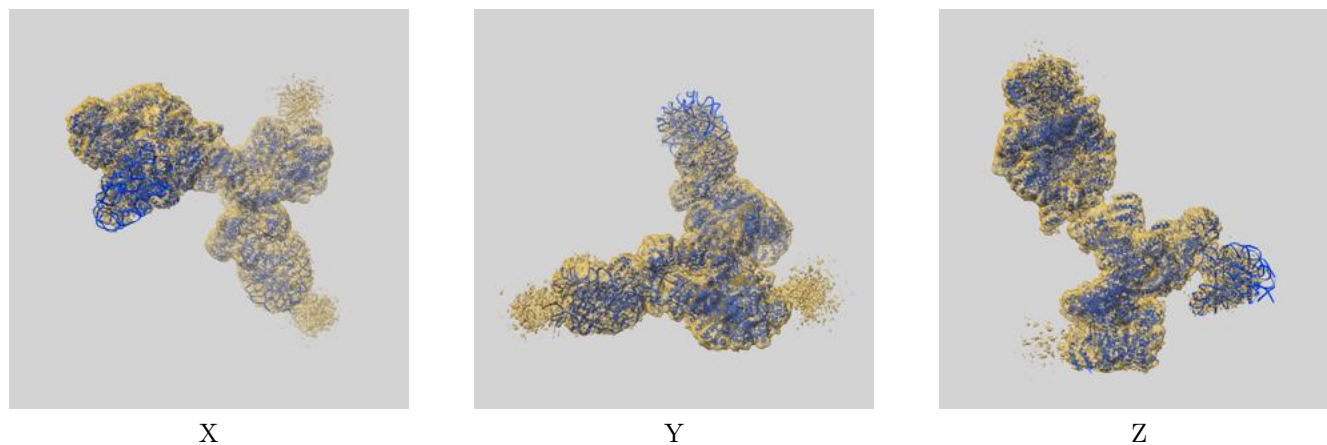
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.38	-	-
Author-provided FSC curve	4.38	6.68	4.43
Unmasked-calculated*	8.67	20.04	9.23

*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](#)

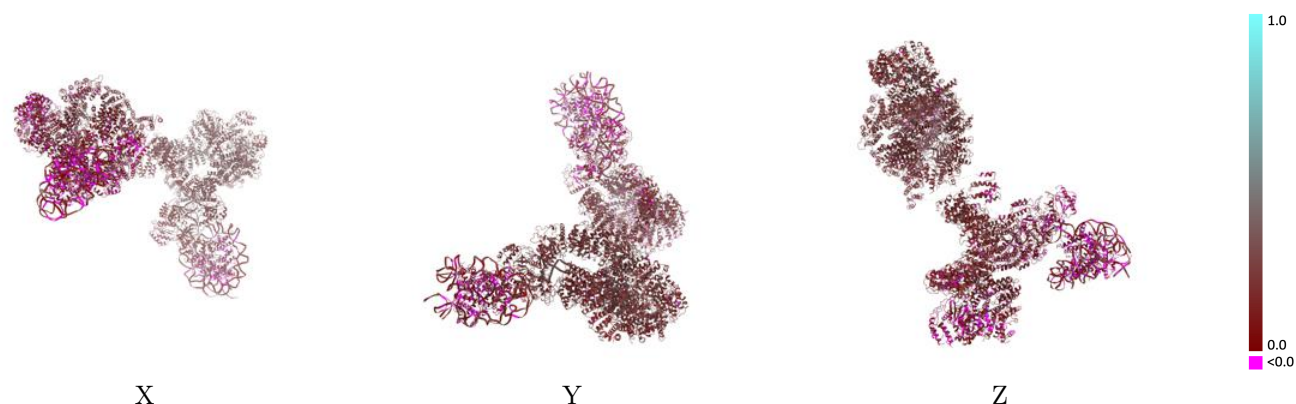
This section contains information regarding the fit between EMDB map EMD-53026 and PDB model 9QCS. Per-residue inclusion information can be found in section [3](#) on page [7](#).

9.1 Map-model overlay [i](#)



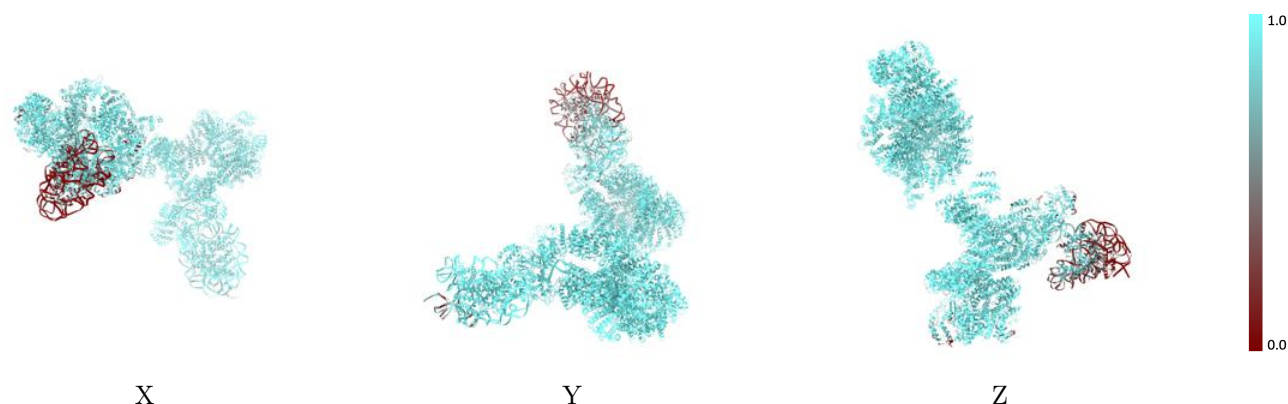
The images above show the 3D surface view of the map at the recommended contour level 0.12 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



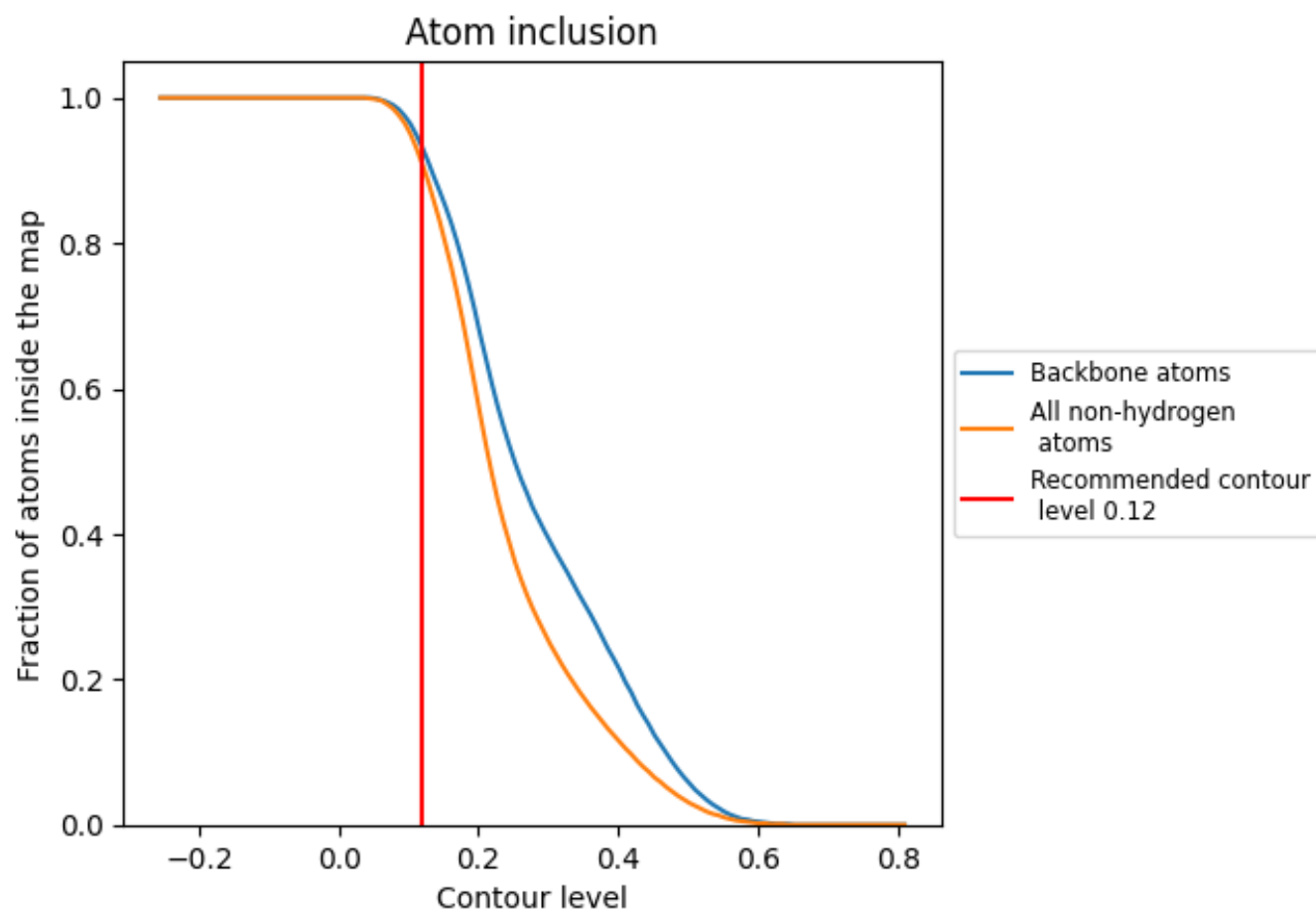
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.12).

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

