



Full wwPDB EM Validation Report ⓘ

Jul 28, 2025 – 12:02 AM EDT

PDB ID : 9D9Z / pdb_00009d9z
EMDB ID : EMD-46686
Title : Structure of human UBR4-KCMF1-CaM E3 ligase complex (Silencing Factor of the Integrated stress response, SiFI)
Authors : Yang, Z.; Rape, M.
Deposited on : 2024-08-21
Resolution : 3.40 Å(reported)

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

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<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>
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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.dev126
MolProbity : 4-5-2 with Phenix2.0rc1
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.45.1

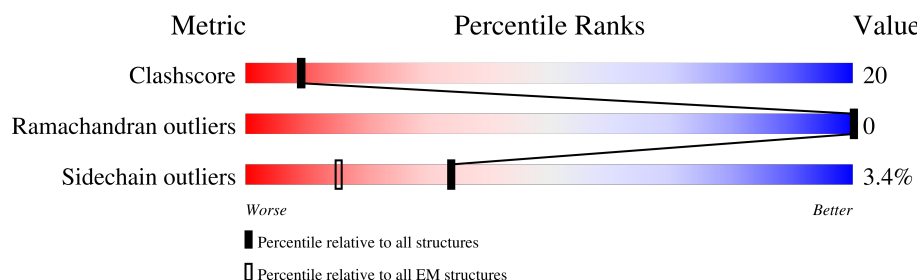
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.40 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)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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	A	5205	50% 45% 29% 25%
1	B	5205	50% 46% 28% 24%
2	C	149	83% 51% 43% • •
2	D	149	85% 47% 46% • •
3	E	381	34% 30% 17% 52%
3	F	381	35% 29% 18% 52%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
4	ZN	A	5202	-	-	X	-
4	ZN	B	5202	-	-	X	-
5	CA	D	202	-	-	X	-

2 Entry composition

There are 5 unique types of molecules in this entry. The entry contains 66746 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 UBR4 (endogenously FLAG-tagged at the N-terminus),E3 ubiquitin-protein ligase UBR4,E3 ubiquitin-protein ligase UBR4,E3 ubiquitin-protein ligase UBR4.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	3917	Total	C	N	O	S	0	0
			30658	19475	5230	5749	204		
1	B	3946	Total	C	N	O	S	0	0
			30933	19647	5279	5802	205		

- Molecule 2 is a protein called Calmodulin-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	C	144	Total	C	N	O	S	0	0
			1134	696	182	247	9		
2	D	143	Total	C	N	O	S	0	0
			1127	692	181	245	9		

- Molecule 3 is a protein called E3 ubiquitin-protein ligase KCMF1.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	E	182	Total	C	N	O	S	0	0
			1435	881	250	288	16		
3	F	182	Total	C	N	O	S	0	0
			1435	881	250	288	16		

- Molecule 4 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
4	A	6	Total	Zn	0
			6	6	
4	B	6	Total	Zn	0
			6	6	
4	E	4	Total	Zn	0
			4	4	

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Mol	Chain	Residues	Atoms		AltConf
4	F	4	Total	Zn	0
			4	4	

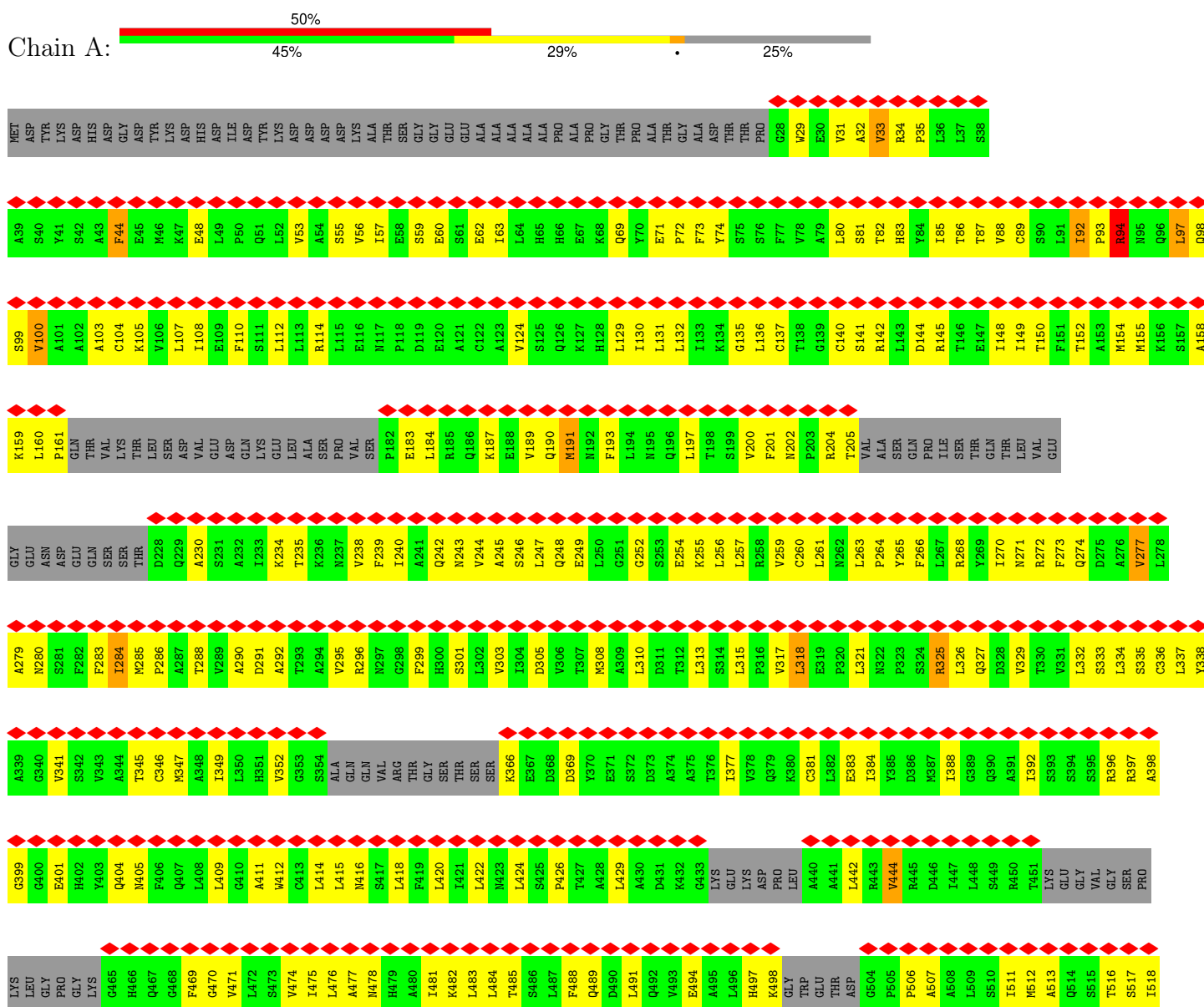
- Molecule 5 is CALCIUM ION (CCD ID: CA) (formula: Ca).

Mol	Chain	Residues	Atoms		AltConf
5	C	2	Total	Ca	0
			2	2	
5	D	2	Total	Ca	0
			2	2	

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: UBR4 (endogenously FLAG-tagged at the N-terminus),E3 ubiquitin-protein ligase UBR4,E3 ubiquitin-protein ligase UBR4,E3 ubiquitin-protein ligase UBR4



I1299	M1239	Q1179	Q1119	I1059	L999	E939	Q879	H819	R759	K699	ALA	GLU	I1299	M1239	Q1179	Q1119	I1059	L999	E939	Q879	H819	R759	K699	ASP	Q519
V1300	E1240	N1180	S1120	K1060	Q1000	A940	V880	N820	L760	G700	S640	ASP	V1300	E1240	N1180	S1120	K1060	Q1000	A940	V880	N820	L760	G700	ASP	R520
W1301	F1241	F1181	Y1121	G1061	Y1001	S941	Q881	F821	L761	S701	R641	SER	W1301	F1241	F1181	Y1121	G1061	Y1001	S941	Q881	F821	L761	S701	SER	I521
S1302	P1242	N1182	Y1122	G1062	Y1002	E942	H882	T822	L762	S702	R642	GLN	S1302	P1242	N1182	Y1122	G1062	Y1002	E942	H882	T822	L762	S702	GLN	Q522
E1304	I1244	E1184	L1124	K1064	L1004	D944	L884	T824	I763	D703	P644	ASP	E1304	I1244	E1184	L1124	K1064	L1004	D944	L884	T824	I763	D703	ASP	R523
M1305	G1245	GLY	D1125	A1065	T1005	L945	L885	Q825	Q765	E705	E645	SER	M1305	G1245	GLY	D1125	A1065	T1005	L945	L885	Q825	Q765	E705	SER	L524
N1306	S1246	THR	A1126	E1066	L1006	N946	S886	Q826	H766	F706	E646	GLU	N1306	S1246	THR	A1126	E1066	L1006	N946	S886	Q826	H766	F706	GLU	I525
P1307	W1247	GLU	A1127	H1067	W1007	R947	P887	R827	K767	A707	F647	PRO	P1307	W1247	GLU	A1127	H1067	W1007	R947	P887	R827	K767	A707	PRO	D526
P1308	R1248	LYS	I1128	A1068	R1008	L948	P888	A828	A768	A708	F648	LEU	P1308	R1248	LYS	I1128	A1068	R1008	L948	P888	A828	A768	A708	LEU	V528
Q1309	N1249	P1190	S1129	S1069	I1009	D949	PHE	R829	S769	A709	E649	GLY	Q1309	N1249	P1190	S1129	S1069	I1009	D949	PHE	R829	S769	A709	GLY	P529
V1310	A1250	S1191	K1130	S1070	L1010	S950	TRP	L830	A770	L710	L650	GLN	V1310	A1250	S1191	K1130	S1070	L1010	S950	TRP	L830	A770	L710	GLN	L530
I1311	F1251	K1192	Y1131	L1071	G1011	V951	ALA	S831	Q771	Y711	A651	PHE	I1311	F1251	K1192	Y1131	L1071	G1011	V951	ALA	S831	Q771	Y711	PHE	M531
R1312	A1252	E1193	Q1132	E1073	I1012	A952	SER	L832	G772	H712	S652	GLU	R1312	A1252	E1193	Q1132	E1073	I1012	A952	SER	L832	G772	H712	GLU	N532
T1313	N1253	K1194	V1133	E1074	L1013	C953	GLY	F833	D773	F713	R653	THR	T1313	N1253	K1194	V1133	E1074	L1013	C953	GLY	F833	D773	F713	THR	L534
L1314	D1254	L1195	S1134	L1074	P1014	D954	SER	V834	P774	N714	I654	ILE	L1314	D1254	L1195	S1134	L1074	P1014	D954	SER	V834	P774	N714	ILE	L534
L1315	T1255	Q1196	L1135	A1075	P1015	V955	ASP	Q835	W775	H715	L655	SER	L1315	T1255	Q1196	L1135	A1075	P1015	V955	ASP	Q835	W775	H715	SER	L535
P1316	I1256	G1197	D1136	S1076	S1016	L956	SER	T836	V776	S716	L656	PRO	P1316	I1256	G1197	D1136	S1076	S1016	L956	SER	T836	V776	S716	PRO	T536
L1317	P1257	F1198	E1137	T1077	S1017	F957	SER	R837	P777	L717	F657	SER	L1317	P1257	F1198	E1137	T1077	S1017	F957	SER	R837	P777	L717	SER	L537
L1318	S1258	A1199	H1138	T1078	T1018	S958	ARG	Q838	E778	V718	I658	LYS	L1318	S1258	A1199	H1138	T1078	T1018	S958	ARG	Q838	E778	V718	LYS	L538
L1319	E1259	A1200	F1139	K1079	Y1019	K959	ARG	E839	C779	T719	T659	GLU	L1319	E1259	A1200	F1139	K1079	Y1019	K959	ARG	E839	C779	T719	GLU	S539
E1320	S1260	V1201	S1140	C1080	I1020	L960	A903	L840	L780	S720	S660	ALA	E1320	S1260	V1201	S1140	C1080	I1020	L960	A903	L840	L780	S720	ALA	T540
S1321	I1261	L1202	K1141	S1081	N1021	V961	T904	S841	K781	D721	S661	PRO	S1321	I1261	L1202	K1141	S1081	N1021	V961	T904	S841	K781	D721	PRO	S541
S1322	I1262	A1203	M1142	V1082	Q1022	K962	T905	V842	W782	L722	M662	PRO	S1322	I1262	A1203	M1142	V1082	Q1022	K962	T905	V842	W782	L722	PRO	Y542
T1323	S1263	I1204	A1143	S1083	L1023	V963	P906	H843	W783	Q723	L663	PRO	T1323	S1263	I1204	A1143	S1083	L1023	V963	P906	H843	W783	Q723	PRO	R543
E1324	A1264	G1205	ALA	K1084	S1024	D964	L907	H844	D784	S724	N664	PRO	E1324	A1264	G1205	ALA	K1084	S1024	D964	L907	H844	D784	S724	PRO	K544
S1325	V1265	S1206	GLU	Y1085	M1025	E965	Y908	D845	R785	P725	S665	PRO	S1325	V1265	S1206	GLU	Y1085	M1025	E965	Y908	D845	R785	P725	PRO	A545
V1326	Q1266	R1208	THR	D1086	N1026	L966	H909	A846	F786	W726	R666	PRO	V1326	Q1266	R1208	THR	D1086	N1026	L966	H909	A846	F786	W726	PRO	C546
A1327	A1267	C1209	ASP	V1087	S1027	V967	G910	Q847	L787	L727	N657	PRO	A1327	A1267	C1209	ASP	V1087	S1027	V967	G910	Q847	L787	L727	PRO	V547
E1328	A1268	HIS	LYS	E1088	P1028	A968	F911	H848	S788	Q728	N668	PRO	E1328	A1268	HIS	LYS	E1088	P1028	A968	F911	H848	S788	Q728	PRO	L548
I1329	H1269	K1210	S1151	V1090	E1029	A969	K912	R849	T789	N729	F689	GLU	I1329	H1269	K1210	S1151	V1090	E1029	A969	K912	R849	T789	N729	GLU	Q549
S1330	L1270	A1211	S1152	Y1091	M1030	L970	E913	F850	W790	T730	I670	SER	S1330	L1270	A1211	S1152	Y1091	M1030	L970	E913	F850	W790	T730	SER	R550
S1331	G1271	M1212	E1153	E1091	S1031	T971	V914	H851	K791	L731	R671	SER	S1331	G1271	M1212	E1153	E1091	S1031	T971	V914	H851	K791	L731	SER	Q551
M1332	T1272	T1213	I1154	E1092	E1032	A972	E915	P852	Q792	L732	N672	PRO	M1332	T1272	T1213	I1154	E1092	E1032	A972	E915	P852	Q792	L732	PRO	R552
S1333	L1273	L1214	T1155	Y1093	C1033	L973	E916	L853	N793	Q733	I673	VAL	S1333	L1273	L1214	T1155	Y1093	C1033	L973	E916	L853	N793	Q733	VAL	K553
L1334	C1274	G1215	K1156	F1094	D1034	L974	N917	T854	A794	Q734	L674	LYS	L1334	C1274	G1215	K1156	F1094	D1034	L974	N917	T854	A794	Q734	LYS	G554
E1335	S1335	P1216	N1157	A1095	I1035	A975	W918	L855	L795	L735	S675	SER	E1335	S1335	P1216	N1157	A1095	I1035	A975	W918	L855	L795	L735	SER	Q554
R1336	Q1276	T1217	L1158	R1096	L1036	Q1097	S919	A856	Q796	G736	V676	PRO	R1336	Q1276	T1217	L1158	R1096	L1036	Q1097	S919	A856	Q796	G736	PRO	MET
L1337	S1277	L1218	L1159	Q1097	H1037	G977	K920	R857	L796	L736	S677	SER	L1337	S1277	L1218	L1159	Q1097	H1037	G977	K920	R857	L796	L736	SER	Q554
L1338	L1278	V1219	L1160	I1098	T1038	S978	H921	L858	V798	A738	I678	GLN	L1338	L1278	V1219	L1160	I1098	T1038	S978	H921	L858	V798	A738	GLN	ASP
G1339	P1279	Q1220	P1161	S1099	L1039	Q979	F922	L859	W799	F739	S679	ALA	G1339	P1279	Q1220	P1161	S1099	L1039	Q979	F922	L859	W799	F739	ALA	ALA
P1340	L1280	N1221	T1162	S1100	R1040	L980	S923	L860	P800	F740	E680	SER	P1340	L1280	N1221	T1162	S1100	R1040	L980	S923	L860	P800	F740	SER	PRO
A1341	A1281	L1222	L1163	F1101	W1041	D981	S924	T861	S801	S741	H681	GLY	A1341	A1281	L1222	L1163	F1101	W1041	D981	S924	T861	S801	S741	GLY	PRO
E1342	A1282	P1223	Q1164	C1102	S1042	T982	D925	F862	E802	E742	H682	LYS	E1342	A1282	P1223	Q1164	C1102	S1042	T982	D925	F862	E802	E742	LYS	THR
S1343	S1283	S1224	L1165	S1103	S1043	V983	A926	D863	T803	G743	M683	GLY	S1343	S1283	S1224	L1165	S1103	S1043	V983	A926	D863	T803	G743	GLY	ASP
D1344	L1284	S1225	I1166	T1104	R1044	R984	V927	Y864	E804	P744	A684	ASN	D1344	L1284	S1225	I1166	T1104	R1044	R984	V927	Y864	E804	P744	ASN	SER
E1345	K1285	V1226	I1166	D1105	L1045	R985	P928	L865	D805	W745	T685	THR	E1345	K1285	V1226	I1166	D1105	L1045	R985	P928	L865	D805	W745	THR	THR
F1346	H1286	Q1227	D1167	C1106	R1046	K986	H929	L866	L806	P746	L686	TYR	F1346	H1286	Q1227	D1167	C1106	R1046	K986	H929	L866	L806	P746	TYR	GLU
L1347	T1287	T1168	Y1169	T1107	I1047	E987	P930	H867	N807	L747	A687	GLY	L1347	T1287	T1168	Y1169	T1107	I1047	E987	P930	H867	N807	L747	GLY	GLU
A1348	L1288	A1170	L1170	T1108	S1048	N988	R931	Q868	V808	Y748	S688	ASP	A1348	L1288	A1170	L1170	T1108	S1048	N988	R931	Q868	V808	Y748	ASP	ASP
R1349	L1289	E1231	S1171	I1109	S1049	K989	F932	Y869	E809	T749	T689	PHE	R1349	L1289	E1231	S1171	I1109	S1049	K989	F932	Y869	E809	T749	PHE	THR
V1350	S1290	E1231	F1172	L1110	Y1050	N990	V933	S870	H810	H750	T690	SER	V1350	S1290	E1231	F1172	L1110	Y1050	N990	V933	S870	H810	H750	SER	SER
Y1351	L1291	S1232	T1173	Q1111	V1051	V991	C934	R371	L811	F751	K691	THR	Y1351	L1291	S1232	T1173	Q1111	V1051	V991	C934	R371	L811	F751	THR	GLU
E1352	V1292	W1233	R1174	L1112	N1052	T992	V935	A872	Q812	Q752	E692	SER	E1352	V1292	W1233	R1174	L1112	N1052	T992	V935	A872	Q812	Q752	SER	SER
R1353	R1293	N1234	A1175	H1113	W1053	A993	L936	P873	N813	S753	V693	THR	R1353	R1293	N1234	A1175	H1113	W1053	A993	L936	P873	N813	S753	THR	GLU
L1354	L1294	M1235	Y1176	E1114	T1054	L994	S937	H874	L814	L754	D694		L1354	L1294	M1235	Y1176	E1114	T1054	L994	S937	H874	L814	L754		
F1355	T1295	I1236	L1177	I1115	K1055	E995	P938	Y875	L815	S755	K695		F1355	T1295	I1236	L1177	I1115	K1055	E995	P938	Y875	L815	S755		
T1356	G1296	M1237																							

P2085	I2025	N1960	C1900	Q1840	E1722	LYS	S1601	V1539	S1479	L1419	Y1359
F2086	Y2026	P1961	V1901	A1841	D1723	L1663	S1602	V1540	D1480	S1420	N1360
Y2087	D2027	C1962	L1902	L1842	G1724	C1664	Y1602	M1541	Q1481	A1421	I1361
V2088	L2028	S1963	S1903	S1843	S1725	T1665	L1603	A1542	L1482	K1422	L1362
T2089	C2029	S1904	Y1905	E1844	C1726	F1666	A1604	T1543	D1483	F1423	A1363
N2090	V2030	D1965	H1906	H1845	L1727	T1667	V1606	L1544	V1484	C1424	N1364
V2091	D2031	Y1966	G1907	H1846	A1728	I1668	T1607	A1545	I1485	N1425	H1365
L2092	A2032	L1967	H1908	T1847	VAL	T1669	N1608	S1546	Q1486	R1426	A1366
L2093	L2033	A1968	ARG	V1848	LYS	GLN	A1609	A1547	E1487	V1427	D1367
I2094	S2034	C1970	THR	E1849	LYS	LYS	L1610	G1548	N1488	L1428	P1368
N2095	P2035	Q1910	VAL	K1850	THR	GLU	SER	Q1549	R1489	K1429	M1369
D2096	T2036	H1911	GLY	A1851	PRO	PHE	GLN	G1550	Q1490	F1430	S1370
D2097	F2037	L1912	CYS	I1852	SER	ASN	ASN	A1551	L1491	F1431	G1371
Y2098	Y2038	A1913	ARG	E1853	SER	Q1676	ASN	G1552	L1492	T1432	L1372
F2099	F2039	V1914	E1797	E1854	GLY	H1677	GLY	H1553	Q1493	K1433	D1373
L2100	L2040	S1915	M1854	T1855	MET	Y1678	GLN	L1554	L1494	L1434	E1374
D2101	L2041	H1916	L1799	D1856	SER	Y1679	GLY	Q1555	L1495	F1435	S1375
S2102	P2042	E1917	Q1800	Q1857	THR	H1680	PRO	L1556	T1496	Q1436	I1376
S2043	S2043	K1918	M1801	L1858	LYS	C1681	HIS	H1557	T1497	L1437	L1377
S2044	S2044	G1919	A1803	M1859	GLU	H1682	LEU	N1558	Y1498	T1438	E1378
K2045	K2045	K1920	M1804	V1860	SER	T1683	VAL	A1559	I1499	E1439	C1380
R2046	R2046	I1921	F1805	P1861	PHE	C1684	ASP	A1560	V1500	K1440	L1381
D2046	D2046	T1922	F1806	T1862	GLN	M1685	GLY	V1561	R1501	S1441	Q1382
V2049	V2049	V1923	S1806	L1863	SER	M1686	GLU	D1562	E1502	P1442	Y1383
T2050	T2050	L1924	F1807	G1864	PRO	V1687	ARG	M1563	M1503	N1443	L1384
F2051	F2051	Q1925	A1808	Q1865	ASP	GLY	ALA	L1564	S1504	L1444	L1385
L2052	L2052	L1926	P1809	S1866	ILE	V1690	ILE	S1565	Q1505	S1445	E1386
F2053	F2053	S1927	L1810	E1867	GLU	G1691	VAL	R1566	V1506	L1446	K1386
N2054	N2054	A1928	V1811	G1868	SER	V1692	ASP	C1567	E1507	L1447	Q1387
E2055	E2055	L1929	D1812	L1869	LEU	C1693	SER	K1568	G1508	H1448	L1388
E2056	E2056	L1930	D1813	F1870	VAL	T1694	TRP	K1569	G1509	L1449	E1389
G2057	G2057	K1931	M1814	E1871	ARG	V1695	ASP	K1570	V1510	C1450	S1390
K2058	K2058	Q1932	L1815	N1872	HIS	C1696	GLU	L1571	C1511	G1451	S1391
N2059	N2059	A1933	F1817	V1873	ALA	A1697	LEU	S1572	A1512	L1452	Q1392
I2060	I2060	D1934	L1818	R1874	THR	K1698	ALA	Q1573	V1513	L1453	A1393
I2061	I2061	S1935	L1819	M1875	SER	V1699	VAL	K1574	L1514	A1454	R1394
V2062	V2062	S1936	M1820	N1876	PRO	C1700	GLU	M1575	L1515	Q1455	K1395
I2063	I2063	K1937	A1821	Y1877	ALA	H1701	GLU	V1576	G1516	L1456	A1396
N2064	N2064	R1938	T1822	S1878	ASP	L1702	ASP	V1577	T1517	A1457	M1397
S2065	S2065	L1939	Q1823	G1879	LYS	D1703	SER	E1578	L1518	C1458	E1398
S2066	S2066	K1939	T1824	D1880	LYS	H1704	ALA	K1579	T1519	V1459	E1399
A2067	A2067	L1940	N1825	Q1881	VAL	E1705	ALA	L1580	P1520	E1460	F1400
Q2068	Q2068	T1941	F1826	G1882	THR	I1706	ASP	M1581	M1521	P1461	F1401
Y2069	Y2069	L1942	Q1827	Q1883	ILE	S1707	SER	A1582	A1522	L1462	S1402
I2070	I2070	R1944	Q1828	T1884	ASP	Y1708	GLU	ASN	T1523	R1463	D1403
Y2071	Y2071	L1945	ALA	I1885	GLY	ALA	ASP	VAL	E1524	L1464	S1404
T2072	T2072	A1946	SER	R1886	LYS	LYS	MET	HIS	M1525	Q1465	G1405
Q2073	Q2073	S1947	ALA	Q1887	VAL	TVR	GLY	LEU	L1526	E1466	E1406
L2074	L2074	A1948	VAL	L1888	ASP	GLY	CYS	LYS	A1527	W1467	L1407
M2075	M2075	P1949	GLY	T1889	ASP	S1713	HIS	M1528	L1468	V1408	L1408
E2076	E2076	V1950	SER	S1890	ASP	F1714	V1590	G1529	T1469	Q1409	Q1409
E2077	E2077	P1951	S1835	A1891	F1715	C1716	M1591	D1530	R1470	T1410	T1410
A2078	A2078	F1952	R1836	H1892	C1716	D1717	I1592	G1531	M1471	M1411	M1411
S2079	S2079	F1952	R1837	V1893	C1717	G1718	L1593	T1532	T1472	T1473	M1412
S2080	S2080	T1953	A1838	L1894	D1718	G1719	C1594	G1533	P1475	P1475	A1413
A2081	A2081	V1954	R1895	L1895	A1720	T1596	T1596	F1534	S1474	T1414	A1415
Q2082	Q2082	L1955	S1956	R1896	K1721	C1597	H1598	P1535	P1475	P1475	N1416
Q2083	Q2083	S1956	L1957	V1897				E1536	L1537	K1477	E1417
Q2084	Q2084	T1958	G1958	M1899				M1538		D1478	N1418





VAL	ASP	LEU	LEU	ILE	TYR	LEU	LYS	ARG	ILE	D4680	I4620	E4560	L4485	Q4364	Y4169
ASP	LEU	LEU	ILE	TYR	LEU	LEU	VAL	GLN	I4681	I4681	P4621	Q4561	E4486	G4365	L4170
ILE	ILE	TRP	ARG	LEU	ARG	LEU	ALA	ALA	I4682	I4682	Y4622	L4562	C4487	G4366	L4173
ASN	ASN	ILE	HIS	GLY	GLY	GLY	GLY	GLY	I4683	I4683	L4623	L4563	M4488	M4367	E4303
ASN	ASN	ASN	HIS	THR	THR	THR	THR	THR	Q4684	Q4684	P4624	S4564	L4489	T4306	L4186
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- Molecule 1: UBR4 (endogenously FLAG-tagged at the N-terminus), E3 ubiquitin-protein ligase UBR4, E3 ubiquitin-protein ligase UBR4, E3 ubiquitin-protein ligase UBR4



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Y1359	N1360	I1361	L1362	A1363	N1364	H1365	A1366	D1367	P1368	N1369	S1370	G1371	L1372	D1373	E1374	S1375	L1376	L1377	E1378	E1379	C1380	L1381	Q1382	Y1383	L1384	E1385	K1386	Q1387	L1388	E1389	L1390	S1391	L1392	A1393	R1394	K1395	A1396	M1397	E1398	F1399	F1400	F1401	S1402	D1403	S1404	G1405	E1406	L1407	L1408	Q1409	I1410	M1411	M1412	A1413	T1414	A1415	P1416	PRO	LYS	ASP
I1299	V1300	W1301	S1302	D1303	E1304	M1305	N1306	P1307	P1308	Q1309	V1310	I1311	R1312	T1313	L1314	L1315	P1316	L1317	L1318	L1319	E1320	S1321	S1322	T1323	E1324	S1325	V1326	A1327	E1328	I1329	S1330	M1331	M1332	L1333	L1334	E1335	R1336	I1337	L1338	G1339	P1340	A1341	E1342	S1343	D1344	E1345	F1346	L1347	L1348	R1349	V1350	Y1351	E1352	K1353	L1354	L1355	T1356	G1357	C1358	
M1239	E1240	F1241	P1242	N1243	I1244	G1245	S1246	W1247	R1248	N1249	A1250	F1251	A1252	N1253	D1254	T1255	I1256	P1257	S1258	E1259	S1260	Y1261	I1262	S1263	A1264	V1265	Q1266	A1267	A1268	H1269	L1270	G1271	L1272	L1273	C1274	S1275	Q1276	S1277	L1278	V1279	L1280	A1281	A1282	S1283	L1284	K1285	H1286	T1287	L1288	L1289	C1290	S1291	L1292	R1293	L1294	T1295	G1296	D1297	L1298	
Q1179	N1180	F1181	N1182	GLU	GLU	GLY	THR	THR	E1188	K1189	P1190	S1191	K1192	E1193	K1194	L1195	Q1196	G1197	F1198	A1199	A1200	V1201	L1202	A1203	I1204	G1205	S1206	S1207	R1208	C1209	K1210	A1211	N1212	T1213	L1214	G1215	P1216	T1217	L1218	V1219	Q1220	N1221	L1222	P1223	S1224	S1225	V1226	Q1227	T1228	V1229	C1230	E1231	S1232	W1233	M1234	N1235	I1236	N1237	T1238	
Q1119	S1120	I1121	Y1122	T1123	L1124	D1125	A1126	A1127	I1128	S1129	K1130	V1131	Q1132	V1133	S1134	L1135	D1136	E1137	H1138	F1139	K1140	K1141	M1142	A1143	ALA	GLU	THR	ASP	PRO	HIS	LYS	S1151	S1152	E1153	I1154	T1155	K1156	N1157	L1158	P1159	A1160	T1161	L1162	L1163	L1164	L1165	I1166	D1167	T1168	Y1169	A1170	S1171	F1172	T1173	R1174	A1175	Y1176	L1177	L1178	
I1069	K1060	Q1061	G1062	M1063	K1064	A1065	E1066	H1067	A1068	S1069	S1070	L1071	L1072	E1073	L1074	A1075	S1076	T1077	L1078	K1079	C1080	S1081	S1082	V1083	K1084	Y1085	D1086	V1087	E1088	I1089	V1090	E1091	E1092	Y1093	F1094	A1095	R1096	Q1097	I1098	S1099	F1101	C1102	S1103	I1104	D1105	C1106	T1107	T1108	I1109	L1110	Q1111	L1112	H1113	E1114	T1115	P1116	S1117	L1118		
L999	Q1000	Y1001	Y1002	F1003	L1004	I1005	L1006	W1007	R1008	I1009	L1010	G1011	I1012	L1013	P1014	P1015	S1016	K1017	T1018	Y1019	I1020	N1021	Q1022	L1023	S1024	M1025	N1026	S1027	P1028	E1029	M1030	S1031	E1032	C1033	D1034	I1035	L1036	H1037	T1038	L1039	R1040	W1041	S1042	S1043	R1044	L1045	R1046	I1047	N1048	S1049	Y1050	V1051	N1052	W1053	I1054	K1055	D1056	H1057	L1058	
E939	A940	S941	E942	D943	D944	L945	N946	R947	L948	D949	S950	Y951	A952	C953	D954	V955	L956	F957	S958	K959	L960	V961	K962	Y963	D964	E965	L966	Y967	A968	A969	L970	T971	A972	L973	L974	A975	A976	G977	S978	Q979	L980	D981	T982	V983	R984	R985	K986	E987	N988	K989	N990	V991	T992	A993	L994	E995	A996	C997	A998	
H819	N820	F821	T822	E823	T824	G825	R826	R827	A828	R829	L830	S831	L832	F833	V834	Q835	I836	I837	Q838	E839	L840	S841	V842	N843	M844	D845	A846	Q847	M848	R849	F850	V851	R852	L853	I854	L855	A856	R857	G977	K920	H921	L859	Q922	S923	ASP	SER	ALA	VAL	PRO	HIS	P930	R931	F932	Y933	C934	V935	L936	S937	P938	
R759	L760	L761	L762	I763	W764	Q765	H766	K767	A768	S769	A770	Q771	G772	D773	P774	D775	P776	P777	E778	C779	L780	K781	V782	W783	D784	R785	F786	L787	S788	T789	M790	K791	Q792	N793	A794	L795	Q796	G797	V798	V799	P800	S801	E802	T803	E804	D805	L806	N807	Y808	E809	H810	L811	Q812	M813	L814	L815	L816	I817	F818	
K699	G700	S701	S702	D703	E704	E705	F706	A707	A708	A709	L710	Y711	H712	F713	N714	H715	S716	L717	V718	T719	S720	D721	L722	Q723	S724	P725	N726	L727	Q728	N729	T730	L731	L732	Q733	Q734	L735	G736	V737	A738	P739	F740	S741	E742	G743	P744	W745	P746	L747	Y748	I749	H750	P751	Q752	S753	L754	S755	V756	L757	S758	

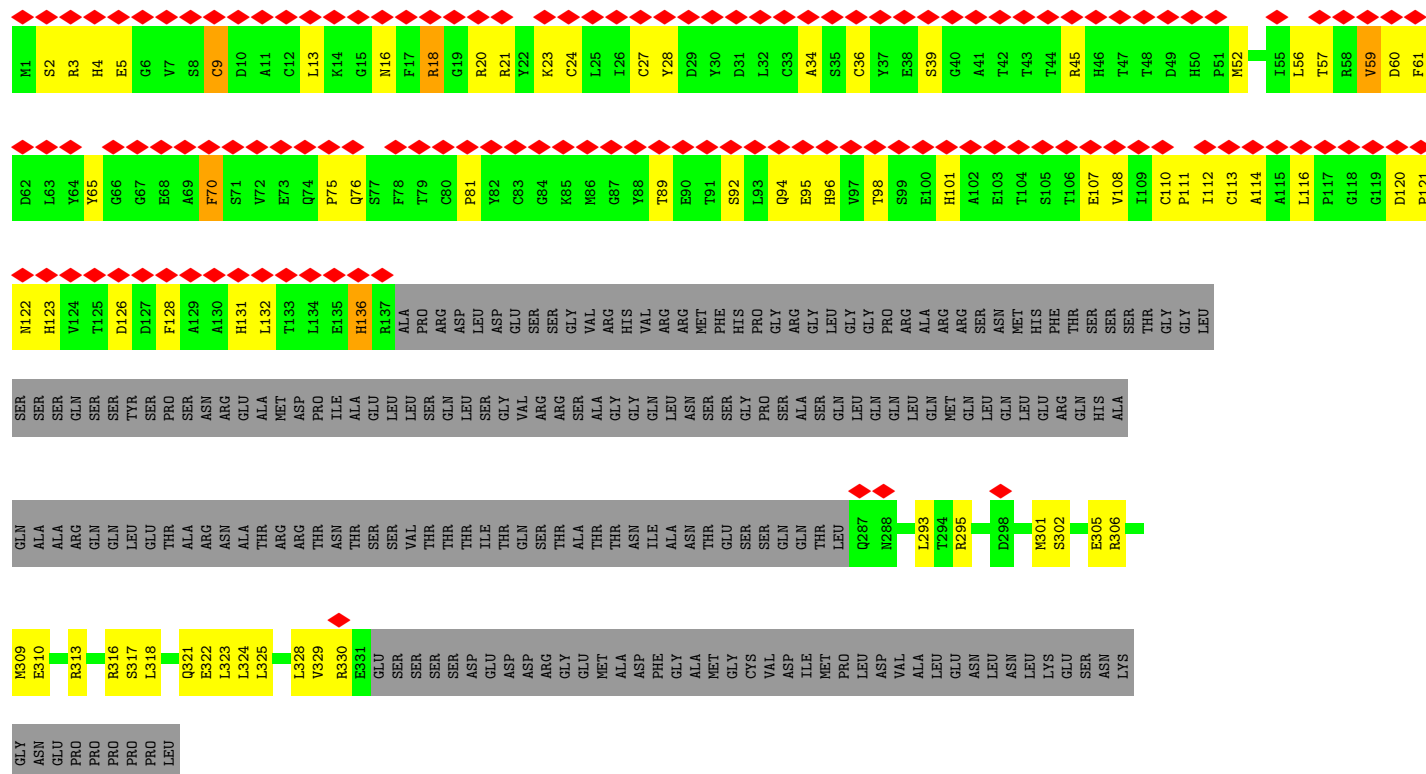
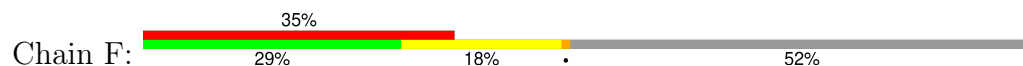
[illegible]

[illegible]

T4230	D4231	L4232	Q4233	Q4234	L4238	K4239	L4244	F4248	R4256	H4257	F4258	K4259	S4260	R4261	G4264	L4267	L4271	C4272	L4273	R4274	L4275	L4276	V4277	V4278	Q4279	R4280	T4284	D4285	E4286	T4287	Q4288	D4289	N4290	D4297	E4303	K4307	F4309	H4310	A4311	V4312	C4313	I4314	E4315	T4316	R4319	T4328	S4229							
GLU	ALA	LEU	THR	T4044	P4047	C4048	N4049	E4051	I4052	H4053	W4059	F4060	K4061	R4062	W4071	L4075	P4076	L4077	R4078	G4079	I4080	D4081	G4082	N4083	G4084	K4085	A4086	P4087	S4088	K4089	S4090	E4091	L4092	R4093	H4094	L4095	L4096	L4097	T4098	E4099	K4100	Y4101	V4102	W4103	R4104	W4105	K4106	Q4107	F4108	L4109	S4110	R4111	R4112	G4113
K4114	R4115	T4116	S4117	L4118	L4119	D4120	L4123	G4124	H4125	W4126	N4127	F4128	L4129	R4130	Q4131	V4132	F4134	T4135	C4146	I4155	R4158	K4159	L4165	Q4279	Y4169	L4170	L4173	L4186	Y4187	I4191	H4195	W4196	V4205	L4206	P4207	L4212	K4215	L4216	L4221	A4222	L4223	E4224	L4228	S4229										
ALA	SER	SER	GLY	SER	SER	ALA	SER	SER	SER	PRO	VAL	ALA	ALA	SER	GLY	GLN	THR	THR	GLN	SER	LYS	SER	THR	LYS	SER	THR	LYS	GLU	GLU	LYS	GLU	LYS	GLU	GLY	THR	SER	G3385	G3386	Q3387	E3388	C3392	L3395	V3396	N3397	Q3398	D3404								
F3250	L3251	V3256	L3269	I3270	M3273	E3274	H3275	Q3285	R3286	T3287	F3193	L3194	S3195	E3196	Y3197	L3198	K3199	I3200	Q3201	Q3202	T3203	V3206	R3207	L3213	L3214	L3215	F3216	L3217	S3220	K3221	E3222	K3223	Y3224	R3225	Q3226	L3227	L3233	D3234	S3235	H3236	V3237	R3238	G3239	K3241	L3244	E3245	E3246	I3249						

- Molecule 2: Calmodulin-1

- Molecule 3: E3 ubiquitin-protein ligase KCMF1



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	126380	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING ONLY	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	40	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2600	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	1.255	Depositor
Minimum map value	-0.578	Depositor
Average map value	0.002	Depositor
Map value standard deviation	0.021	Depositor
Recommended contour level	0.13	Depositor
Map size ($\text{\AA}$)	440.16, 440.16, 440.16	wwPDB
Map dimensions	420, 420, 420	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.048, 1.048, 1.048	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: CA, ZN

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	A	0.88	39/31195 (0.1%)	1.04	1/42247 (0.0%)
1	B	0.91	36/31477 (0.1%)	1.10	2/42619 (0.0%)
2	C	0.97	0/1146	1.24	0/1539
2	D	0.98	0/1138	1.25	0/1526
3	E	1.01	12/1463 (0.8%)	0.99	0/1978
3	F	1.00	13/1463 (0.9%)	1.01	0/1978
All	All	0.91	100/67882 (0.1%)	1.08	3/91887 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	19
1	B	0	25
2	D	0	1
3	E	0	1
3	F	0	2
All	All	0	48

All (100) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1682	HIS	C-N	-10.20	1.20	1.33
1	B	1993	HIS	C-N	8.77	1.43	1.34
1	A	2290	ASP	C-N	-8.62	1.22	1.33
1	B	1865	SER	C-N	8.21	1.44	1.33
1	A	1894	LEU	C-N	-8.11	1.21	1.33
1	A	1717	ASP	C-N	-8.11	1.23	1.33
1	A	1865	SER	C-N	8.01	1.44	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1681	CYS	C-N	-7.75	1.22	1.33
1	B	2318	LYS	C-N	-7.68	1.24	1.33
1	B	2327	TYR	C-N	-7.66	1.22	1.33
1	A	2038	TYR	C-N	7.62	1.44	1.33
1	A	2318	LYS	C-N	-7.62	1.24	1.33
1	A	1860	VAL	C-N	7.60	1.42	1.33
1	B	1860	VAL	C-N	7.54	1.42	1.33
1	B	2038	TYR	C-N	7.51	1.44	1.33
1	B	2076	GLU	C-N	-7.50	1.24	1.33
1	A	2146	LEU	C-N	7.43	1.42	1.33
3	F	9	CYS	C-N	-7.42	1.22	1.33
1	A	2076	GLU	C-N	-7.38	1.24	1.33
3	E	101	HIS	C-N	-7.38	1.24	1.34
1	B	2535	SER	C-N	-7.36	1.24	1.33
1	B	2146	LEU	C-N	7.36	1.42	1.33
3	E	9	CYS	C-N	-7.32	1.22	1.33
3	F	39	SER	C-N	-7.29	1.25	1.33
3	E	59	VAL	C-N	-7.18	1.24	1.34
3	E	39	SER	C-N	-7.18	1.25	1.33
3	F	101	HIS	C-N	-7.12	1.24	1.34
3	E	61	PHE	C-N	-7.06	1.24	1.34
3	F	59	VAL	C-N	-7.05	1.24	1.34
3	F	34	ALA	C-N	-7.03	1.24	1.33
3	F	61	PHE	C-N	-6.96	1.24	1.34
3	E	34	ALA	C-N	-6.84	1.24	1.33
1	A	2251	TYR	C-N	6.75	1.43	1.33
1	A	2294	HIS	C-N	-6.70	1.24	1.33
3	E	98	THR	C-N	-6.70	1.24	1.33
1	B	2026	TYR	C-N	-6.66	1.24	1.33
1	A	2658	ASN	C-N	-6.63	1.25	1.33
3	F	98	THR	C-N	-6.59	1.24	1.33
1	A	1973	LYS	C-N	6.58	1.43	1.33
1	B	1973	LYS	C-N	6.54	1.42	1.33
1	A	2026	TYR	C-N	-6.54	1.24	1.33
1	B	1925	GLN	C-N	6.44	1.43	1.33
1	A	1870	PHE	C-N	-6.26	1.24	1.33
1	B	2392	GLU	C-N	-6.21	1.25	1.33
1	A	2067	ALA	C-N	6.11	1.42	1.33
1	B	1870	PHE	C-N	-6.08	1.25	1.33
1	A	2374	THR	C-N	-6.03	1.25	1.33
1	A	1925	GLN	C-N	6.02	1.43	1.33
1	B	2374	THR	C-N	-5.96	1.25	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	2242	TYR	C-N	-5.91	1.25	1.33
1	B	2315	GLN	C-N	-5.89	1.26	1.33
1	B	2067	ALA	C-N	5.88	1.42	1.33
1	A	2315	GLN	C-N	-5.87	1.26	1.33
1	A	2366	SER	C-N	-5.87	1.26	1.33
1	B	2366	SER	C-N	-5.86	1.26	1.33
1	B	2177	VAL	C-N	5.78	1.41	1.33
1	B	2313	ASN	C-N	-5.64	1.26	1.33
1	A	1965	ASP	C-N	-5.61	1.25	1.33
1	B	2510	THR	C-N	-5.58	1.26	1.33
3	F	57	THR	C-N	-5.57	1.26	1.33
3	E	57	THR	C-N	-5.55	1.26	1.33
1	A	2177	VAL	C-N	5.49	1.41	1.33
1	B	2699	GLN	C-N	-5.49	1.26	1.33
3	F	36	CYS	C-N	-5.49	1.26	1.33
1	B	1965	ASP	C-N	-5.48	1.25	1.33
1	B	2350	THR	C-N	-5.42	1.26	1.33
1	B	2084	GLY	C-N	5.39	1.40	1.33
1	B	1825	ASN	C-N	5.38	1.41	1.33
1	A	1895	ARG	C-N	-5.38	1.25	1.33
1	A	2350	THR	C-N	-5.38	1.26	1.33
1	A	2577	ALA	C-N	-5.35	1.27	1.33
3	E	36	CYS	C-N	-5.34	1.27	1.33
1	A	2084	GLY	C-N	5.33	1.40	1.33
1	B	1831	ALA	C-N	5.32	1.39	1.33
3	E	95	GLU	C-N	-5.32	1.27	1.33
3	F	96	HIS	C-N	-5.29	1.27	1.33
1	A	1955	LEU	C-N	5.29	1.40	1.33
1	B	2703	ARG	C-N	-5.27	1.27	1.33
1	A	1867	GLU	C-N	5.24	1.40	1.33
3	E	60	ASP	C-N	-5.23	1.27	1.33
1	B	2234	CYS	C-N	-5.21	1.26	1.34
1	B	2091	VAL	C-N	-5.21	1.26	1.33
3	F	60	ASP	C-N	-5.20	1.27	1.33
3	F	95	GLU	C-N	-5.20	1.27	1.33
3	E	96	HIS	C-N	-5.19	1.27	1.33
1	B	2622	ILE	C-N	-5.17	1.27	1.33
1	A	2234	CYS	C-N	-5.16	1.27	1.34
1	A	1864	GLY	C-N	-5.13	1.25	1.33
3	F	110	CYS	C-N	-5.13	1.27	1.34
1	B	2216	ALA	C-N	5.12	1.40	1.33
1	A	2579	SER	C-N	-5.11	1.27	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	1867	GLU	C-N	5.09	1.40	1.33
1	A	2061	ILE	C-N	-5.09	1.27	1.33
1	B	2343	ASN	C-N	-5.09	1.25	1.33
1	B	2035	PRO	C-N	-5.07	1.27	1.33
1	A	2035	PRO	C-N	-5.05	1.27	1.33
1	A	2359	GLN	C-N	-5.03	1.27	1.33
1	A	2558	SER	C-N	-5.02	1.27	1.33
1	A	2622	ILE	C-N	-5.00	1.27	1.33
1	B	2314	ALA	C-N	-5.00	1.27	1.33

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1282	ALA	N-CA-C	-6.39	104.32	111.28
1	B	1131	VAL	N-CA-CB	5.70	117.22	110.55
1	B	529	PRO	N-CA-C	-5.06	102.05	112.47

There are no chirality outliers.

All (48) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1008	ARG	Sidechain
1	A	1174	ARG	Sidechain
1	A	1293	ARG	Sidechain
1	A	1394	ARG	Sidechain
1	A	2320	ARG	Sidechain
1	A	2703	ARG	Sidechain
1	A	3045	ARG	Sidechain
1	A	3142	ARG	Sidechain
1	A	3166	ARG	Sidechain
1	A	325	ARG	Sidechain
1	A	3286	ARG	Sidechain
1	A	3732	ARG	Sidechain
1	A	3825	ARG	Sidechain
1	A	3857	ARG	Sidechain
1	A	4319	ARG	Sidechain
1	A	4491	ARG	Sidechain
1	A	849	ARG	Sidechain
1	A	94	ARG	Sidechain
1	A	985	ARG	Sidechain
1	B	1008	ARG	Sidechain
1	B	1312	ARG	Sidechain

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Mol	Chain	Res	Type	Group
1	B	1336	ARG	Sidechain
1	B	1470	ARG	Sidechain
1	B	185	ARG	Sidechain
1	B	1896	ARG	Sidechain
1	B	204	ARG	Sidechain
1	B	2381	ARG	Sidechain
1	B	296	ARG	Sidechain
1	B	2974	ARG	Sidechain
1	B	2989	ARG	Sidechain
1	B	3286	ARG	Sidechain
1	B	3732	ARG	Sidechain
1	B	3836	ARG	Sidechain
1	B	396	ARG	Sidechain
1	B	397	ARG	Sidechain
1	B	4115	ARG	Sidechain
1	B	4256	ARG	Sidechain
1	B	4280	ARG	Sidechain
1	B	4319	ARG	Sidechain
1	B	4607	ARG	Sidechain
1	B	520	ARG	Sidechain
1	B	759	ARG	Sidechain
1	B	849	ARG	Sidechain
1	B	985	ARG	Sidechain
2	D	75	ARG	Sidechain
3	E	3	ARG	Sidechain
3	F	18	ARG	Sidechain
3	F	330	ARG	Sidechain

5.2 Too-close contacts [i](#)

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	A	30658	0	31020	1288	0
1	B	30933	0	31316	1262	0
2	C	1134	0	1063	68	0
2	D	1127	0	1055	61	0
3	E	1435	0	1344	44	0
3	F	1435	0	1344	52	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	A	6	0	0	2	0
4	B	6	0	0	3	0
4	E	4	0	0	0	0
4	F	4	0	0	0	0
5	C	2	0	0	0	0
5	D	2	0	0	2	0
All	All	66746	0	67142	2687	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 20.

All (2687) 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:B:3270:ILE:CD1	1:B:3632:PRO:HG2	1.66	1.25
1:A:3270:ILE:CD1	1:A:3632:PRO:HG2	1.66	1.23
1:B:3087:ALA:CB	1:B:3181:ILE:HG21	1.73	1.19
1:A:73:PHE:CD1	1:A:159:LYS:HA	1.80	1.15
2:D:98:ASN:HB2	5:D:202:CA:CA	1.06	1.15
1:B:3087:ALA:HB2	1:B:3181:ILE:HG21	1.31	1.11
1:A:3270:ILE:HD13	1:A:3632:PRO:HG2	1.25	1.10
1:A:1450:CYS:HB2	1:A:1505:GLN:HB2	1.33	1.09
1:A:1700:CYS:SG	1:A:1726:CYS:HA	1.92	1.09
1:A:2212:GLN:NE2	1:A:2235:GLU:HA	1.65	1.09
1:B:3087:ALA:HB2	1:B:3181:ILE:HD13	1.36	1.08
1:B:910:GLY:HA2	1:B:933:TYR:HA	1.19	1.08
1:B:1205:GLY:HA3	1:B:1215:GLY:CA	1.83	1.08
1:B:3270:ILE:HD13	1:B:3632:PRO:HG2	1.25	1.07
1:A:1500:VAL:HG22	1:A:1547:ALA:HB2	1.33	1.07
1:B:2564:ASP:OD1	1:B:2631:LYS:HB3	1.55	1.06
1:A:1700:CYS:SG	1:A:1727:LEU:N	2.29	1.04
2:C:106:LEU:HD22	2:C:126:ILE:HD11	1.38	1.04
1:A:3269:LEU:HB3	1:A:3633:LEU:CD1	1.89	1.03
1:B:3269:LEU:HB3	1:B:3633:LEU:CD1	1.89	1.02
1:A:2342:ASN:HB3	1:A:2399:LYS:HA	1.40	1.01
1:A:1870:PHE:CZ	1:A:1924:LEU:HD11	1.97	0.99
1:B:1870:PHE:CZ	1:B:1924:LEU:HD11	1.97	0.99
1:B:1205:GLY:HA3	1:B:1215:GLY:HA2	1.43	0.99
1:A:1873:VAL:HG11	1:A:2233:LEU:HD21	1.45	0.99
1:A:3793:ASN:HA	1:B:3521:GLU:HG3	1.43	0.99
1:B:2698:LYS:HD2	1:B:2998:PRO:HA	1.46	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2173:HIS:CD2	1:A:2253:LEU:HD11	1.99	0.98
1:B:1205:GLY:CA	1:B:1215:GLY:HA3	1.94	0.97
1:B:1901:VAL:HG11	1:B:2217:ILE:HD12	1.45	0.96
1:B:3410:GLN:HG3	1:B:3850:THR:HB	1.47	0.96
1:A:53:VAL:HG11	1:A:99:SER:HB3	1.47	0.96
2:D:50:GLN:O	2:D:53:ILE:HG22	1.65	0.96
1:A:1901:VAL:HG11	1:A:2217:ILE:HD12	1.45	0.95
1:A:2294:HIS:O	1:A:2425:LYS:HE2	1.68	0.94
2:D:101:ILE:HB	2:D:137:VAL:HB	1.48	0.93
1:B:1870:PHE:HZ	1:B:1924:LEU:CD1	1.82	0.93
1:A:1438:THR:HA	1:A:1446:LEU:HD13	1.47	0.93
1:A:1870:PHE:HZ	1:A:1924:LEU:CD1	1.82	0.92
1:B:3087:ALA:HB1	1:B:3181:ILE:HG21	1.53	0.91
1:A:690:ILE:HA	1:A:710:LEU:HD21	1.51	0.91
1:B:1438:THR:HA	1:B:1446:LEU:HD13	1.51	0.91
1:B:1394:ARG:HA	1:B:1397:MET:HE2	1.53	0.91
1:B:2564:ASP:CG	1:B:2631:LYS:HB3	1.96	0.90
1:A:1398:GLU:HA	1:A:1449:LEU:HD21	1.50	0.90
1:B:1486:GLN:HA	1:B:1489:ARG:HD2	1.52	0.90
3:F:94:GLN:HA	3:F:132:LEU:HD13	1.53	0.90
1:A:1870:PHE:HE2	1:A:2239:LEU:HD11	1.37	0.90
3:E:94:GLN:HA	3:E:132:LEU:HD13	1.54	0.90
1:B:3003:ILE:HA	1:B:3006:LEU:HD12	1.54	0.89
2:D:98:ASN:CB	5:D:202:CA:CA	1.79	0.89
1:A:1105:ASP:H	1:A:1110:LEU:HD21	1.37	0.89
1:B:3270:ILE:CD1	1:B:3632:PRO:CG	2.51	0.89
1:A:3521:GLU:HG3	1:B:3793:ASN:HA	1.53	0.89
1:B:281:SER:HB2	1:B:443:ARG:HD2	1.56	0.88
1:B:1166:ILE:HG12	1:B:1291:LEU:HB3	1.56	0.88
1:A:3270:ILE:CD1	1:A:3632:PRO:CG	2.51	0.88
1:B:1159:LEU:HA	1:B:1298:LEU:HD13	1.55	0.88
1:B:134:LYS:HA	1:B:315:LEU:HD21	1.54	0.87
1:A:4231:ASP:HB3	1:A:4234:GLN:HB2	1.56	0.87
1:B:1600:MET:HA	1:B:1603:LEU:HD12	1.55	0.87
1:B:2687:LEU:HD22	1:B:2991:VAL:HG21	1.56	0.87
1:A:2027:ASP:OD1	1:A:2029:CYS:SG	2.33	0.87
3:E:114:ALA:HA	3:E:121:PRO:HA	1.56	0.87
1:A:2040:LEU:HD13	1:A:2085:PRO:HB2	1.57	0.87
1:A:3066:THR:HG21	1:A:3082:SER:HB3	1.57	0.86
1:B:1493:GLN:HG2	1:B:1540:VAL:HG22	1.54	0.86
1:A:1401:PHE:HA	1:A:1406:GLU:HG3	1.58	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4306:THR:HG21	1:A:4338:ILE:HG12	1.57	0.86
1:A:3172:LYS:HE3	1:A:3217:ILE:HA	1.57	0.86
1:A:4232:LEU:HD13	1:B:3750:TYR:HB2	1.57	0.86
1:A:1921:ILE:HB	1:A:1948:ALA:HB3	1.57	0.86
2:C:69:PHE:CZ	2:C:73:MET:SD	2.67	0.86
1:A:2040:LEU:CD1	1:A:2085:PRO:HB2	2.06	0.86
1:A:2173:HIS:HD2	1:A:2253:LEU:HD11	1.35	0.86
1:B:2027:ASP:OD1	1:B:2029:CYS:SG	2.33	0.86
2:C:106:LEU:CD2	2:C:126:ILE:HD11	2.05	0.86
1:A:1338:LEU:HD13	1:A:1346:PHE:HA	1.56	0.85
1:A:2375:MET:HG2	1:A:2387:PHE:HE1	1.40	0.85
1:B:2040:LEU:CD1	1:B:2085:PRO:HB2	2.05	0.85
1:A:1112:LEU:HD13	1:A:1179:GLN:HB2	1.57	0.85
1:B:2040:LEU:HD13	1:B:2085:PRO:HB2	1.57	0.85
1:B:3419:SER:O	1:B:3420:ASN:CG	2.19	0.85
1:A:1453:LEU:HB3	1:A:1506:VAL:HG13	1.58	0.85
1:A:687:ALA:HB2	1:A:731:LEU:HD12	1.58	0.85
1:B:1278:LEU:HB3	1:B:1281:ALA:HB2	1.57	0.85
2:C:106:LEU:HD22	2:C:126:ILE:CD1	2.07	0.85
1:A:1960:ASN:HD21	1:A:2012:GLN:HA	1.41	0.85
1:B:4444:MET:HE3	1:B:4447:LEU:HD13	1.58	0.85
1:B:1870:PHE:HZ	1:B:1924:LEU:HD11	1.37	0.84
1:B:910:GLY:CA	1:B:933:TYR:HA	2.04	0.84
1:B:2695:PHE:CE1	1:B:2699:GLN:NE2	2.45	0.84
1:A:1205:GLY:HA2	1:A:1215:GLY:CA	2.07	0.84
1:A:3419:SER:O	1:A:3420:ASN:CG	2.19	0.84
1:B:3419:SER:O	1:B:3420:ASN:OD1	1.96	0.84
3:F:114:ALA:HA	3:F:121:PRO:HA	1.57	0.83
1:A:420:LEU:HD22	1:A:442:LEU:HG	1.61	0.83
1:B:2189:VAL:HG22	1:B:2230:MET:HE1	1.60	0.83
1:B:4705:LEU:HB3	1:B:4754:VAL:HG22	1.60	0.83
1:A:2189:VAL:CG2	1:A:2230:MET:HE1	2.08	0.83
2:C:80:THR:O	2:C:81:ASP:OD1	1.95	0.83
1:B:2189:VAL:CG2	1:B:2230:MET:HE1	2.09	0.83
1:A:73:PHE:HD1	1:A:159:LYS:HA	1.37	0.83
1:A:4444:MET:HE3	1:A:4447:LEU:HD13	1.59	0.83
1:A:3269:LEU:HB3	1:A:3633:LEU:HD11	1.61	0.82
1:A:2189:VAL:HG22	1:A:2230:MET:HE1	1.60	0.82
1:B:1407:LEU:HB3	1:B:1431:PHE:CE1	2.15	0.82
1:B:1407:LEU:HB3	1:B:1431:PHE:HE1	1.45	0.82
1:B:1414:THR:HG23	1:B:1423:PHE:HD2	1.44	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3419:SER:O	1:A:3420:ASN:OD1	1.96	0.82
1:A:4328:PRO:HA	1:A:4331:ILE:HD12	1.61	0.82
1:A:3940:THR:HG21	1:A:3985:CYS:HB3	1.60	0.82
1:B:1475:PRO:HD3	1:B:1485:ILE:HD12	1.61	0.81
1:A:349:ILE:HD12	1:A:429:LEU:HD11	1.62	0.81
1:B:1499:ILE:HG23	1:B:1506:VAL:HB	1.61	0.81
3:E:8:SER:HA	3:E:15:GLY:HA2	1.62	0.81
1:A:1417:GLU:HA	1:A:1470:ARG:HD2	1.62	0.81
1:B:2122:LEU:HD22	1:B:2136:ILE:HD11	1.63	0.81
2:C:49:LEU:C	2:C:49:LEU:HD13	2.06	0.81
1:B:1208:ARG:HD2	1:B:1327:ALA:HB3	1.63	0.81
1:B:3270:ILE:HD13	1:B:3632:PRO:CG	2.11	0.81
1:A:3164:VAL:O	1:A:3168:PRO:HD2	1.81	0.81
1:B:2698:LYS:HE3	1:B:3001:GLN:HB3	1.63	0.81
1:B:3516:LEU:HD22	1:B:3799:LEU:HD21	1.63	0.81
1:A:1700:CYS:SG	1:A:1726:CYS:CA	2.69	0.80
1:B:3269:LEU:HB3	1:B:3633:LEU:HD11	1.61	0.80
1:A:1904:SER:H	1:A:1964:GLU:HB3	1.45	0.80
1:A:2368:ILE:HG23	1:A:2377:LEU:HD11	1.62	0.80
1:A:3997:PHE:HB2	1:A:4016:CYS:HB3	1.63	0.80
1:A:124:VAL:HG12	1:A:129:LEU:HG	1.63	0.80
1:A:352:VAL:HB	1:A:426:PRO:HG3	1.64	0.80
1:B:4713:PHE:HE1	1:B:4751:LEU:HD21	1.46	0.80
1:B:2368:ILE:HD11	1:B:2387:PHE:CZ	2.16	0.80
1:A:659:THR:HA	1:A:663:LEU:HD12	1.63	0.80
1:A:712:HIS:HA	1:A:715:HIS:CD2	2.15	0.79
1:A:3760:LEU:HD11	1:A:3803:TYR:HB2	1.63	0.79
1:B:2122:LEU:CD2	1:B:2136:ILE:HD11	2.13	0.79
1:B:1554:LEU:HG	1:B:1804:ASN:OD1	1.82	0.79
1:B:2375:MET:HG2	1:B:2387:PHE:HE1	1.44	0.79
1:A:1030:MET:HB3	1:A:1034:ASP:HB3	1.62	0.79
1:B:263:LEU:HB2	1:B:266:PHE:HB2	1.65	0.79
1:A:131:LEU:HD11	1:A:142:ARG:HD2	1.64	0.79
1:A:4234:GLN:HE22	1:A:4279:GLN:HB3	1.48	0.79
1:A:4335:LEU:HD22	1:A:4511:LEU:HD11	1.63	0.79
1:B:3588:ARG:HD2	1:B:3646:ASP:OD2	1.83	0.79
1:A:1554:LEU:HG	1:A:1802:GLN:HE22	1.48	0.79
1:A:2122:LEU:HD22	1:A:2136:ILE:HD11	1.63	0.79
1:B:2122:LEU:HD22	1:B:2136:ILE:CD1	2.13	0.79
1:A:3872:CYS:SG	1:A:3875:CYS:HB2	2.23	0.78
1:A:1450:CYS:CB	1:A:1505:GLN:HB2	2.11	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3066:THR:HG21	1:B:3082:SER:HB2	1.65	0.78
1:A:313:LEU:HD13	1:A:388:ILE:HD11	1.65	0.78
1:A:2122:LEU:CD2	1:A:2136:ILE:HD11	2.13	0.78
1:A:3588:ARG:HD2	1:A:3646:ASP:OD2	1.82	0.77
1:B:1408:VAL:HA	1:B:1411:MET:HE2	1.66	0.77
1:A:910:GLY:HA2	1:A:933:TYR:HA	1.66	0.77
1:B:3315:VAL:HG22	1:B:3633:LEU:HD21	1.66	0.77
1:B:1412:MET:HB3	1:B:1463:ARG:NE	1.99	0.77
1:B:3004:LEU:HB2	1:B:3058:LEU:HD11	1.64	0.77
1:A:415:LEU:HD11	1:A:484:LEU:HD21	1.67	0.77
1:A:2122:LEU:HD22	1:A:2136:ILE:CD1	2.13	0.77
1:B:4591:LYS:HB2	1:B:4630:LYS:HE3	1.65	0.77
1:A:4635:VAL:HG11	1:A:4685:LYS:HG3	1.67	0.76
2:D:50:GLN:O	2:D:53:ILE:CG2	2.32	0.76
1:A:3270:ILE:HD13	1:A:3632:PRO:CG	2.11	0.76
1:A:793:ASN:HB2	1:A:854:ILE:HG21	1.66	0.76
1:A:984:ARG:HH11	1:A:984:ARG:HB2	1.51	0.76
1:B:1407:LEU:H	1:B:1407:LEU:HD12	1.50	0.76
1:B:352:VAL:HG22	1:B:467:GLN:HG2	1.67	0.76
1:B:2070:ILE:HD12	1:B:2094:ILE:HD11	1.67	0.76
1:A:656:ASN:HB3	1:B:204:ARG:HD3	1.67	0.76
1:B:1218:LEU:HD22	1:B:1376:ILE:HG23	1.68	0.75
1:B:2637:PRO:HD3	1:B:2648:PRO:HG2	1.67	0.75
1:B:4339:ILE:HG21	1:B:4514:TYR:HB3	1.67	0.75
1:A:3167:LEU:HB3	1:A:3168:PRO:HD3	1.66	0.75
1:B:1545:ALA:HB1	1:B:1553:HIS:HB2	1.68	0.75
1:B:2683:MET:HG3	1:B:2999:TYR:HE2	1.51	0.75
1:A:1870:PHE:HZ	1:A:1924:LEU:HD11	1.37	0.75
1:A:1814:MET:HA	1:A:1817:PHE:CE1	2.21	0.75
1:A:3965:ALA:HA	1:A:4011:ASN:HD21	1.52	0.75
1:B:286:PRO:HB3	1:B:295:VAL:HG21	1.68	0.75
1:B:1201:VAL:HG13	1:B:1218:LEU:HB3	1.67	0.75
1:B:1664:CYS:HB2	1:B:1729:LEU:HA	1.66	0.75
1:B:1489:ARG:NH2	1:B:1533:GLY:HA2	2.01	0.75
1:B:910:GLY:HA2	1:B:933:TYR:CA	2.09	0.74
1:B:1904:SER:H	1:B:1964:GLU:HB3	1.52	0.74
1:A:193:PHE:HB2	1:B:881:GLN:HE21	1.50	0.74
1:B:860:LEU:HB2	1:B:1005:ILE:HD13	1.69	0.74
1:A:1994:PRO:HG3	1:A:2002:ILE:HD11	1.68	0.74
1:A:2192:VAL:HG13	1:A:2197:PHE:HE1	1.52	0.74
1:A:3459:PRO:HA	1:A:3879:VAL:HG21	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4238:LEU:HG	1:B:4287:THR:HG21	1.68	0.74
1:B:112:LEU:HD12	1:B:250:LEU:HD12	1.68	0.74
1:B:2682:TYR:HD2	1:B:2977:LEU:HD11	1.53	0.73
1:A:1314:LEU:HD13	1:A:1317:LEU:HD12	1.69	0.73
1:B:3290:TRP:NE1	1:B:3326:ALA:HB2	2.03	0.73
1:A:1518:LEU:HD22	1:A:1537:LEU:HD11	1.68	0.73
1:B:3203:THR:HB	1:B:3206:VAL:HB	1.69	0.73
1:B:3459:PRO:HA	1:B:3879:VAL:HG21	1.69	0.73
1:B:4621:PRO:HB3	1:B:4668:GLY:HA3	1.69	0.73
1:B:1205:GLY:HA2	1:B:1215:GLY:HA3	1.71	0.73
1:A:4713:PHE:HE1	1:A:4751:LEU:HD21	1.53	0.73
1:B:3749:VAL:HG11	1:B:3813:GLU:HG2	1.70	0.73
1:B:1204:ILE:HG21	1:B:1357:GLY:HA3	1.71	0.73
1:A:200:VAL:HB	1:B:715:HIS:CE1	2.23	0.73
1:A:800:PRO:HD2	1:A:853:LEU:HD23	1.70	0.72
1:A:1205:GLY:HA2	1:A:1215:GLY:HA3	1.70	0.72
1:A:1610:LEU:HD13	1:A:1800:GLN:HA	1.71	0.72
1:A:3240:ILE:HD11	1:A:3275:HIS:HB2	1.70	0.72
1:B:3057:ARG:HB2	1:B:3163:MET:HE1	1.68	0.72
1:B:4105:TRP:HZ2	2:D:129:ALA:HB2	1.55	0.72
1:B:3240:ILE:HD11	1:B:3275:HIS:HB2	1.70	0.72
1:B:3256:VAL:HG23	1:B:3849:PRO:HA	1.71	0.72
1:A:261:LEU:HD21	1:A:332:LEU:HB2	1.72	0.72
1:A:3793:ASN:HA	1:B:3521:GLU:CG	2.20	0.72
1:B:1515:LEU:HD12	1:B:1541:MET:HG3	1.71	0.72
1:B:2305:GLY:HA3	1:B:2308:LEU:HB2	1.71	0.72
1:A:1870:PHE:CE1	1:A:1924:LEU:HD11	2.25	0.72
1:A:2212:GLN:HE21	1:A:2235:GLU:HA	1.54	0.72
1:B:4123:LEU:HD13	1:B:4165:LEU:HD22	1.71	0.72
2:C:69:PHE:CE1	2:C:73:MET:SD	2.82	0.72
3:E:107:GLU:HA	3:E:126:ASP:HA	1.71	0.72
1:A:912:LYS:O	1:A:916:GLU:HG3	1.89	0.72
1:B:1561:VAL:HG22	1:B:1810:LEU:HD22	1.71	0.72
1:B:3090:LEU:HD11	1:B:3184:PRO:HB3	1.72	0.72
1:A:73:PHE:CE1	1:A:159:LYS:HA	2.24	0.72
1:A:97:LEU:HD12	1:A:235:THR:HG23	1.72	0.72
1:A:420:LEU:HD21	1:A:444:VAL:HA	1.71	0.72
1:B:3001:GLN:HB2	1:B:3139:PHE:HE2	1.54	0.72
3:F:107:GLU:HA	3:F:126:ASP:HA	1.71	0.72
1:A:284:ILE:HD12	1:A:442:LEU:HD23	1.70	0.72
1:B:921:HIS:CD2	1:B:993:ALA:HB2	2.25	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2622:ILE:HD11	1:A:2667:TYR:CG	2.25	0.71
1:A:1863:LEU:HB3	1:A:1940:LEU:HD21	1.71	0.71
1:A:3813:GLU:O	1:A:3817:ILE:HG13	1.90	0.71
1:A:471:VAL:HG21	1:A:641:ARG:H	1.55	0.71
1:A:1854:MET:HE1	1:A:2151:ILE:HG23	1.71	0.71
1:A:2151:ILE:HD11	1:A:2164:LEU:HD11	1.72	0.71
1:A:2212:GLN:CD	1:A:2235:GLU:HA	2.14	0.71
1:A:3955:LEU:HD21	1:A:4012:ILE:HD12	1.73	0.71
1:A:3979:ILE:HG21	1:A:4019:ILE:HG23	1.72	0.71
1:B:2987:GLN:HA	1:B:2990:ASN:HD22	1.54	0.71
1:A:1554:LEU:HD11	1:A:1798:GLU:HB2	1.73	0.71
1:B:1870:PHE:CE1	1:B:1924:LEU:HD11	2.25	0.71
1:B:3547:LEU:HD13	1:B:3715:LEU:HD11	1.73	0.71
1:A:2565:LEU:HD21	1:A:2573:LEU:HD12	1.72	0.71
1:B:1117:SER:O	1:B:1121:ILE:HG13	1.91	0.71
1:B:3087:ALA:CB	1:B:3181:ILE:HD13	2.15	0.71
1:B:2626:VAL:HG21	1:B:2681:ILE:HD13	1.73	0.70
1:B:4048:TYR:HE1	1:B:4076:PRO:HD3	1.54	0.70
1:A:1576:VAL:HA	1:A:1579:LYS:HD2	1.73	0.70
1:A:4314:ILE:HG23	1:A:4487:CYS:SG	2.31	0.70
1:A:135:GLY:HA2	1:A:140:CYS:O	1.90	0.70
1:B:4127:ASN:HD21	1:B:4165:LEU:HD21	1.55	0.70
1:A:4477:GLY:HA3	1:A:4518:VAL:HG11	1.72	0.70
1:A:4011:ASN:O	1:A:4015:MET:HG2	1.90	0.70
1:A:1963:LYS:HD3	1:A:1966:TYR:CE2	2.27	0.70
1:A:3066:THR:HA	1:A:3078:SER:HB2	1.72	0.70
1:B:1538:MET:HG2	1:B:1598:HIS:HB3	1.74	0.70
1:B:1438:THR:OG1	1:B:1446:LEU:HB3	1.91	0.70
1:B:3001:GLN:HB2	1:B:3139:PHE:CE2	2.26	0.70
1:A:494:GLU:HB3	1:A:498:LYS:HD3	1.74	0.69
1:A:3955:LEU:HD22	1:A:4003:ILE:HD12	1.74	0.69
1:A:2308:LEU:HD23	1:A:2330:ASN:HD22	1.57	0.69
1:B:1338:LEU:HD13	1:B:1346:PHE:HA	1.74	0.69
1:B:3270:ILE:HD12	1:B:3632:PRO:HG2	1.72	0.69
1:B:1414:THR:HG23	1:B:1423:PHE:CD2	2.27	0.69
1:A:1335:GLU:HA	1:A:1339:GLY:O	1.93	0.69
1:A:1961:PRO:HB3	1:A:2171:MET:HE1	1.75	0.69
1:A:3518:GLY:HA2	1:B:3770:ALA:HB1	1.73	0.69
1:B:4339:ILE:HA	1:B:4475:MET:HB2	1.75	0.69
1:A:73:PHE:HD1	1:A:158:ALA:O	1.75	0.69
1:B:3556:TYR:O	1:B:3606:LYS:HE3	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:200:VAL:HB	1:B:715:HIS:ND1	2.07	0.69
1:A:3054:VAL:HA	1:A:3057:ARG:HD2	1.75	0.69
1:A:3330:SER:HB3	1:A:3333:LEU:HB3	1.74	0.69
1:A:4705:LEU:HB3	1:A:4754:VAL:HG22	1.73	0.69
1:B:3095:VAL:HG12	1:B:3190:TRP:CZ3	2.27	0.69
1:B:1963:LYS:HD3	1:B:1966:TYR:CE2	2.27	0.69
1:B:4597:LEU:HD11	1:B:4623:LEU:HD12	1.75	0.69
1:B:130:ILE:HG12	1:B:312:THR:HG23	1.74	0.69
1:B:3066:THR:HA	1:B:3078:SER:HB2	1.75	0.69
1:A:2632:LEU:O	1:A:2649:GLY:HA2	1.93	0.68
1:A:193:PHE:HB2	1:B:881:GLN:NE2	2.08	0.68
1:B:1961:PRO:HB3	1:B:2171:MET:HE1	1.75	0.68
1:B:2368:ILE:HG23	1:B:2377:LEU:HD11	1.75	0.68
1:A:797:GLY:HA3	1:A:850:PHE:HB3	1.75	0.68
1:A:3556:TYR:O	1:A:3606:LYS:HE3	1.93	0.68
1:A:329:VAL:HG12	1:A:388:ILE:HG23	1.74	0.68
1:A:1138:HIS:O	1:A:1142:MET:HG2	1.94	0.68
1:A:3812:ASP:O	1:A:3816:LYS:HG3	1.93	0.68
1:A:4238:LEU:HG	1:A:4287:THR:HG21	1.75	0.68
1:B:1191:SER:HB3	1:B:1194:LYS:HG3	1.75	0.68
1:A:845:ASP:HB3	1:A:849:ARG:HH12	1.57	0.68
1:A:286:PRO:HB3	1:A:295:VAL:HG21	1.76	0.68
1:A:1799:LEU:H	1:A:1799:LEU:HD12	1.56	0.68
1:A:2669:THR:HG22	1:A:2970:LEU:HD13	1.76	0.68
1:A:3794:ARG:N	1:B:3521:GLU:OE2	2.20	0.68
1:A:4105:TRP:HZ2	2:C:129:ALA:HB2	1.58	0.68
1:B:1338:LEU:HB3	1:B:1345:GLU:HB2	1.76	0.68
1:A:1142:MET:O	1:A:1143:ALA:C	2.35	0.68
1:A:4335:LEU:HD13	1:A:4511:LEU:HD21	1.75	0.68
1:B:763:ILE:HG22	1:B:767:LYS:HE3	1.74	0.68
1:B:852:PRO:HB2	1:B:855:LEU:HB3	1.76	0.68
1:A:288:THR:HB	1:A:291:ASP:CG	2.19	0.67
1:A:1041:TRP:CZ3	1:A:1044:ARG:HD2	2.28	0.67
1:B:3087:ALA:HA	1:B:3181:ILE:HD12	1.74	0.67
1:A:1047:ILE:HB	1:A:1050:TYR:HD2	1.59	0.67
1:A:1365:HIS:HB3	1:A:1372:LEU:HD12	1.75	0.67
1:A:1173:THR:HG22	1:A:1233:TRP:HZ2	1.60	0.67
1:A:2292:PHE:HE2	1:A:2386:ASP:HB3	1.57	0.67
1:B:4264:GLY:HA2	1:B:4312:VAL:HG11	1.76	0.67
1:A:752:GLN:HE21	1:A:888:PRO:HG3	1.59	0.67
1:A:3143:GLN:HA	1:A:3146:LYS:HE2	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1025:MET:HG2	1:B:1026:ASN:N	2.10	0.67
1:B:4522:ARG:HB3	1:B:4572:GLU:HG2	1.77	0.67
1:B:2698:LYS:HE3	1:B:3001:GLN:CB	2.25	0.67
1:B:39:ALA:HB1	1:B:44:PHE:HA	1.76	0.67
1:B:1387:GLN:HG3	1:B:1393:ALA:HB1	1.74	0.67
1:B:1555:GLN:HA	1:B:1558:ASN:HD22	1.59	0.67
1:B:2702:ILE:HD11	1:B:3001:GLN:NE2	2.10	0.67
1:B:3244:LEU:HB3	1:B:3249:ILE:HB	1.76	0.67
1:A:1218:LEU:HD13	1:A:1376:ILE:HG23	1.76	0.67
1:A:2302:GLU:HB2	1:A:2341:SER:HB2	1.76	0.67
1:B:768:ALA:HA	1:B:773:ASP:HB2	1.75	0.67
1:A:1682:HIS:CE1	1:A:2383:ARG:HB2	2.30	0.67
1:A:3244:LEU:HB3	1:A:3249:ILE:HB	1.76	0.67
1:A:3337:ALA:HB1	1:A:3423:SER:HB3	1.77	0.67
1:B:1205:GLY:CA	1:B:1215:GLY:CA	2.56	0.67
1:B:1679:TYR:CD1	1:B:1708:TYR:HA	2.30	0.67
1:A:284:ILE:HG13	1:A:442:LEU:HB3	1.77	0.66
1:A:2013:THR:HG21	1:A:2029:CYS:HB3	1.77	0.66
1:B:265:TYR:HA	1:B:268:ARG:HD3	1.77	0.66
1:B:415:LEU:HD11	1:B:484:LEU:HD21	1.76	0.66
1:B:3241:LYS:O	1:B:3245:GLU:HG2	1.95	0.66
1:B:4094:HIS:O	1:B:4098:THR:HG23	1.95	0.66
1:B:793:ASN:HB2	1:B:854:ILE:HG21	1.78	0.66
1:B:1300:VAL:HG13	1:B:1336:ARG:HD3	1.78	0.66
1:A:2480:VAL:HA	1:A:2524:GLN:CD	2.20	0.66
1:B:1087:VAL:O	1:B:1091:GLU:HG3	1.96	0.66
1:A:4271:LEU:HD22	1:A:4327:THR:HG23	1.77	0.66
1:B:1247:TRP:HA	1:B:1251:PHE:HB2	1.76	0.66
1:B:3994:LEU:HD23	1:B:4060:LEU:HD21	1.78	0.66
1:B:4714:LEU:HD11	1:B:4754:VAL:HG11	1.77	0.66
1:A:763:ILE:HG22	1:A:767:LYS:HE3	1.75	0.66
1:A:1531:GLY:HA3	1:A:1591:MET:HB3	1.77	0.66
1:A:1499:ILE:HG23	1:A:1506:VAL:HB	1.78	0.66
1:A:2636:LYS:HA	1:A:2649:GLY:HA3	1.78	0.66
1:A:3270:ILE:HD12	1:A:3632:PRO:HG2	1.72	0.66
1:B:1863:LEU:HB3	1:B:1940:LEU:HD21	1.76	0.66
1:B:4027:PRO:HD2	3:F:313:ARG:HE	1.59	0.66
1:A:274:GLN:O	1:A:277:VAL:HG22	1.95	0.66
1:A:1428:LEU:HB3	1:A:1491:LEU:HB3	1.78	0.66
1:B:787:LEU:HD12	1:B:832:LEU:HD23	1.78	0.66
1:B:2978:LEU:HD21	1:B:3024:LEU:HD22	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2259:PRO:HG3	1:A:2647:LEU:HD12	1.78	0.65
1:A:3241:LYS:O	1:A:3245:GLU:HG2	1.95	0.65
1:A:1350:VAL:O	1:A:1354:LEU:HG	1.96	0.65
1:B:471:VAL:HG21	1:B:641:ARG:HA	1.76	0.65
1:B:3175:THR:HG21	1:B:3184:PRO:HD3	1.79	0.65
1:A:4094:HIS:O	1:A:4098:THR:HG23	1.96	0.65
1:B:33:VAL:O	1:B:37:LEU:HG	1.95	0.65
1:B:2683:MET:HG3	1:B:2999:TYR:CE2	2.31	0.65
1:A:56:VAL:O	1:A:60:GLU:N	2.28	0.65
1:A:1859:MET:HE2	1:A:2230:MET:HB2	1.78	0.65
1:B:3087:ALA:HB2	1:B:3181:ILE:CD1	2.21	0.65
2:D:93:PHE:CE2	2:D:101:ILE:HA	2.31	0.65
1:A:1361:ILE:HA	1:A:1365:HIS:HB2	1.78	0.65
1:B:1408:VAL:HG11	1:B:1459:VAL:HG11	1.78	0.65
1:A:2054:ASN:HA	1:A:2138:ARG:HB3	1.78	0.65
1:A:3536:ASN:O	1:A:3538:PRO:HD3	1.97	0.65
2:D:83:GLU:HA	2:D:86:ILE:HD12	1.79	0.65
1:A:2345:SER:HA	1:A:2399:LYS:HE2	1.78	0.65
1:A:3408:LEU:HD12	1:A:3411:PHE:HE2	1.62	0.65
1:B:1519:THR:HB	1:B:1520:PRO:HD3	1.78	0.65
3:F:111:PRO:HD2	3:F:128:PHE:CE2	2.32	0.65
1:A:3270:ILE:HD12	1:A:3632:PRO:CG	2.26	0.65
1:A:3447:LEU:HA	1:A:3450:LEU:HD12	1.79	0.65
1:B:1098:ILE:HD11	1:B:1161:ALA:HA	1.78	0.65
1:B:1159:LEU:HB3	1:B:1160:PRO:HD3	1.78	0.65
1:B:1681:CYS:SG	4:B:5202:ZN:ZN	1.86	0.65
1:A:911:PHE:HB3	1:A:914:VAL:HB	1.77	0.64
1:A:2978:LEU:O	1:A:2982:LEU:HG	1.97	0.64
1:A:4495:ILE:HG21	1:A:4505:LEU:HD12	1.80	0.64
3:F:24:CYS:HA	3:F:52:MET:SD	2.37	0.64
1:A:507:ALA:O	1:A:523:ARG:NE	2.30	0.64
1:B:3516:LEU:HD23	1:B:3764:LEU:HD21	1.79	0.64
1:A:1415:ALA:HB2	1:A:1467:TRP:HB2	1.78	0.64
1:B:2054:ASN:HA	1:B:2138:ARG:HB3	1.79	0.64
1:B:3408:LEU:HD12	1:B:3411:PHE:HE2	1.61	0.64
1:A:1104:ILE:HG21	1:A:1168:THR:HG23	1.79	0.64
1:A:1500:VAL:CG2	1:A:1547:ALA:HB2	2.21	0.64
1:B:3063:MET:HG2	1:B:3174:ILE:HD11	1.77	0.64
1:A:1570:TYR:HE2	1:A:1576:VAL:HG21	1.62	0.64
1:A:1681:CYS:SG	4:A:5202:ZN:ZN	1.86	0.64
1:A:3211:ARG:HH21	1:A:3228:ARG:HH22	1.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1859:MET:HE2	1:B:2230:MET:HB2	1.78	0.64
1:A:2040:LEU:CD1	1:A:2085:PRO:CB	2.76	0.64
1:A:4487:CYS:HA	1:A:4490:ASN:HD22	1.62	0.64
1:B:337:LEU:O	1:B:341:VAL:HG13	1.97	0.64
1:A:4522:ARG:HB3	1:A:4572:GLU:HG2	1.79	0.64
1:B:3497:LEU:HD11	1:B:3913:ASN:HD21	1.62	0.64
1:B:3803:TYR:HA	1:B:3807:CYS:HB2	1.80	0.64
1:A:93:PRO:O	1:A:97:LEU:N	2.30	0.64
1:A:98:GLN:HG3	1:A:201:PHE:CE1	2.32	0.64
1:B:4713:PHE:CE1	1:B:4751:LEU:HD21	2.30	0.64
3:F:3:ARG:HG2	3:F:18:ARG:HG2	1.79	0.64
1:A:1054:ILE:O	1:A:1058:LEU:HG	1.98	0.63
1:A:1679:TYR:CD1	1:A:1708:TYR:HA	2.33	0.63
1:B:441:ALA:HB1	1:B:443:ARG:HH22	1.62	0.63
1:B:1499:ILE:HG12	1:B:1506:VAL:HG21	1.80	0.63
3:E:24:CYS:HA	3:E:52:MET:SD	2.39	0.63
1:A:1019:TYR:OH	1:A:1038:THR:HA	1.99	0.63
1:A:1474:SER:HA	1:A:1485:ILE:HD12	1.81	0.63
1:A:1570:TYR:CE2	1:A:1576:VAL:HG21	2.32	0.63
1:A:3463:ARG:HE	1:A:3535:CYS:HA	1.63	0.63
1:B:4127:ASN:HD22	3:F:328:LEU:HD22	1.62	0.63
3:E:71:SER:HB2	3:E:74:GLN:HB2	1.80	0.63
1:A:1708:TYR:HB3	1:A:2353:ARG:CZ	2.28	0.63
1:A:1873:VAL:CG1	1:A:2233:LEU:HD21	2.23	0.63
1:B:510:SER:HB3	1:B:513:ALA:HB2	1.80	0.63
1:B:1214:LEU:HD21	1:B:1354:LEU:HD22	1.81	0.63
1:B:1315:LEU:HB3	1:B:1316:PRO:HD3	1.80	0.63
1:B:2686:LEU:HD21	1:B:3002:VAL:HG21	1.79	0.63
1:B:3447:LEU:HA	1:B:3450:LEU:HD12	1.80	0.63
2:C:13:PHE:HB3	2:C:69:PHE:HE2	1.63	0.63
1:B:3270:ILE:HD12	1:B:3632:PRO:CG	2.26	0.63
1:A:73:PHE:CD1	1:A:159:LYS:CA	2.70	0.63
1:A:2692:ALA:HA	1:A:2695:PHE:HD1	1.63	0.63
1:B:867:HIS:HE1	1:B:1012:ILE:HG21	1.63	0.63
3:E:111:PRO:HD2	3:E:128:PHE:CE2	2.33	0.63
1:A:3148:HIS:CE1	1:A:3150:ALA:HB3	2.33	0.63
1:A:2192:VAL:HG13	1:A:2197:PHE:CE1	2.33	0.62
1:B:1464:LEU:HD23	1:B:1517:THR:HG21	1.81	0.62
1:A:104:CYS:HA	1:A:107:LEU:HD12	1.81	0.62
1:A:516:THR:HB	1:A:519:GLN:HG3	1.80	0.62
1:A:2705:LEU:HG	1:A:3005:MET:HB3	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1104:ILE:HG23	1:A:1110:LEU:HD11	1.82	0.62
1:A:3497:LEU:HD11	1:A:3913:ASN:HD21	1.62	0.62
1:B:46:MET:O	1:B:50:PRO:HD3	1.99	0.62
1:A:136:LEU:HD22	1:A:239:PHE:HZ	1.63	0.62
1:A:790:MET:HE3	1:A:858:LEU:HG	1.81	0.62
1:A:2665:HIS:CD2	1:A:2704:VAL:HB	2.34	0.62
1:B:303:VAL:HG22	1:B:377:ILE:HG13	1.82	0.62
1:B:1318:LEU:HA	1:B:1327:ALA:HB1	1.82	0.62
1:B:4335:LEU:HA	1:B:4338:ILE:HD12	1.81	0.62
2:D:29:THR:HG23	2:D:31:LYS:HB2	1.81	0.62
2:D:122:VAL:O	2:D:126:ILE:HG12	1.99	0.62
1:B:1550:GLY:O	1:B:1553:HIS:HB3	2.00	0.62
1:A:2291:PHE:CZ	1:A:2350:THR:O	2.52	0.62
1:B:1557:HIS:O	1:B:1561:VAL:HG23	1.99	0.62
1:B:1877:TYR:HB2	1:B:1886:ARG:HG3	1.82	0.62
1:B:3099:LEU:HD11	1:B:3193:PHE:HD1	1.65	0.62
1:B:3273:MET:HE1	1:B:3318:VAL:HG21	1.81	0.62
2:D:102:SER:HB2	2:D:105:GLU:CD	2.25	0.62
1:A:1047:ILE:HG13	1:A:1255:THR:HB	1.80	0.62
1:A:1427:VAL:HG13	1:A:1431:PHE:HE2	1.64	0.62
1:B:1178:LEU:HD11	1:B:1199:ALA:HB2	1.81	0.62
1:B:1204:ILE:HG12	1:B:1357:GLY:HA3	1.80	0.62
1:B:1726:CYS:SG	4:B:5206:ZN:ZN	1.88	0.62
1:B:2040:LEU:CD1	1:B:2085:PRO:CB	2.76	0.62
1:A:184:LEU:HD22	1:A:184:LEU:H	1.64	0.61
1:B:2567:PRO:HG3	1:B:2632:LEU:HD22	1.82	0.61
1:A:3007:THR:C	1:A:3009:ASP:H	2.08	0.61
1:B:3763:LEU:HD13	1:B:3799:LEU:HA	1.82	0.61
1:B:4232:LEU:C	1:B:4234:GLN:H	2.08	0.61
1:B:2701:LEU:HD13	1:B:3002:VAL:CG1	2.29	0.61
1:B:3327:LEU:O	1:B:3392:CYS:SG	2.55	0.61
3:E:112:ILE:HD12	3:E:136:HIS:HB3	1.80	0.61
1:A:2626:VAL:HG21	1:A:2681:ILE:HG21	1.81	0.61
1:B:2356:ILE:HD13	1:B:2377:LEU:HD13	1.81	0.61
2:C:33:LEU:CD2	2:C:72:MET:HE1	2.30	0.61
1:A:4591:LYS:HB2	1:A:4630:LYS:HD2	1.82	0.61
1:B:2517:ALA:HB3	1:B:2522:GLN:HE21	1.65	0.61
2:D:33:LEU:HD13	2:D:64:ILE:HG21	1.82	0.61
1:A:1347:LEU:HB3	1:A:1351:TYR:CE2	2.35	0.61
1:A:1681:CYS:HG	4:A:5202:ZN:ZN	1.13	0.61
1:B:414:LEU:HB3	1:B:480:ALA:HB2	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1427:VAL:HG13	1:B:1431:PHE:HE2	1.65	0.61
1:B:2698:LYS:HE2	1:B:3001:GLN:HE21	1.64	0.61
1:B:3532:CYS:SG	1:B:3868:SER:HA	2.40	0.61
1:A:252:GLY:HA2	1:A:255:LYS:HD2	1.83	0.61
1:B:1561:VAL:HG22	1:B:1810:LEU:CD2	2.30	0.61
1:B:4027:PRO:HB2	3:F:313:ARG:HH21	1.65	0.61
1:A:263:LEU:HB2	1:A:266:PHE:HB2	1.83	0.61
1:A:497:HIS:O	1:A:498:LYS:C	2.43	0.61
1:A:1564:LEU:HB2	1:A:1603:LEU:HD11	1.82	0.61
1:A:1682:HIS:HB2	1:A:1705:GLU:HB2	1.81	0.61
1:B:4635:VAL:HG11	1:B:4685:LYS:HG3	1.82	0.61
1:A:471:VAL:O	1:A:475:ILE:HG12	1.99	0.61
1:A:1680:HIS:HB3	1:A:1687:VAL:HG12	1.82	0.61
1:A:2698:LYS:HZ3	1:A:3001:GLN:HB3	1.66	0.61
1:B:806:LEU:HD21	1:B:811:LEU:HB2	1.82	0.61
1:B:3053:LEU:HD13	1:B:3160:LEU:HD12	1.81	0.61
1:B:4488:MET:HE3	1:B:4511:LEU:HB3	1.83	0.61
2:C:49:LEU:C	2:C:49:LEU:CD1	2.74	0.61
1:A:104:CYS:HB3	1:A:136:LEU:HD13	1.82	0.60
1:B:740:PHE:HD1	1:B:778:GLU:HG3	1.66	0.60
1:A:1052:ASN:O	1:A:1053:TRP:C	2.45	0.60
1:A:4594:LEU:O	1:A:4598:LEU:HG	2.01	0.60
1:B:1693:CYS:HB3	1:B:1716:CYS:HB2	1.84	0.60
2:D:50:GLN:C	2:D:53:ILE:HG22	2.26	0.60
2:D:137:VAL:HG13	2:D:141:GLU:HB2	1.83	0.60
1:A:1402:SER:HA	1:A:1452:SER:HB2	1.82	0.60
1:B:3057:ARG:HB2	1:B:3163:MET:CE	2.32	0.60
1:B:1119:GLN:HA	1:B:1122:TYR:CE2	2.36	0.60
1:B:1534:PHE:CD2	1:B:1595:CYS:HB2	2.36	0.60
1:B:2308:LEU:HD13	1:B:2328:VAL:HG11	1.84	0.60
1:A:2483:LEU:HD12	1:A:2524:GLN:HB3	1.82	0.60
1:B:851:VAL:HG11	1:B:995:GLU:HG2	1.84	0.60
2:C:33:LEU:HD21	2:C:72:MET:HE1	1.83	0.60
1:A:1594:GLU:HA	1:A:2477:ARG:HH22	1.66	0.60
1:A:2291:PHE:HZ	1:A:2350:THR:O	1.85	0.60
1:B:273:PHE:CD2	1:B:338:TYR:HB2	2.37	0.60
1:B:1124:LEU:O	1:B:1128:ILE:HG12	2.01	0.60
1:B:1290:SER:HA	1:B:1293:ARG:HD3	1.82	0.60
1:A:963:TYR:HE1	1:A:1013:LEU:HD13	1.66	0.60
1:A:3731:ASP:HA	1:A:3734:LYS:HB3	1.83	0.60
1:B:921:HIS:HD2	1:B:993:ALA:HB2	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1340:PRO:HD2	1:B:1343:SER:HB3	1.84	0.60
1:B:3087:ALA:HB2	1:B:3181:ILE:CG2	2.19	0.60
1:A:105:LYS:HG3	1:A:246:SER:HB2	1.83	0.60
1:A:202:ASN:HB3	1:A:204:ARG:NE	2.16	0.60
1:A:2354:ILE:HG12	1:A:2387:PHE:HE2	1.67	0.60
1:A:3187:ASP:H	1:A:3190:TRP:CD1	2.20	0.60
1:A:4278:VAL:O	1:B:3825:ARG:NH1	2.33	0.60
1:A:4594:LEU:HD11	1:A:4620:ILE:HG23	1.83	0.60
1:B:754:LEU:HD22	1:B:807:ASN:HD21	1.65	0.60
1:B:1063:MET:HG2	1:B:1068:ALA:HB2	1.84	0.60
1:B:2368:ILE:HD11	1:B:2387:PHE:CE1	2.37	0.60
1:B:3516:LEU:CD2	1:B:3764:LEU:HD21	2.31	0.60
1:B:4621:PRO:HG3	1:B:4665:ILE:HA	1.82	0.60
1:A:810:HIS:O	1:A:813:MET:HG3	2.01	0.60
1:B:1500:VAL:HG21	1:B:1543:THR:O	2.02	0.60
1:B:1996:LEU:HD11	1:B:2002:ILE:HG13	1.83	0.60
3:F:75:PRO:HD2	3:F:116:LEU:HD23	1.84	0.60
1:A:670:ILE:O	1:A:674:LEU:HG	2.02	0.59
1:A:1519:THR:HB	1:A:1520:PRO:HD3	1.82	0.59
1:A:3273:MET:HE1	1:A:3318:VAL:HG21	1.83	0.59
1:B:1414:THR:HG22	1:B:1424:CYS:SG	2.41	0.59
1:B:2581:ALA:HB2	1:B:2588:LEU:HD22	1.83	0.59
1:A:1171:SER:HA	1:A:1174:ARG:HD2	1.83	0.59
1:B:296:ARG:HH12	1:B:347:MET:HE3	1.67	0.59
1:A:4313:CYS:SG	1:A:4331:ILE:HG12	2.42	0.59
1:B:3894:PRO:O	1:B:3898:HIS:ND1	2.35	0.59
1:A:1607:THR:HB	1:A:2488:SER:HB2	1.84	0.59
1:B:1356:THR:HA	1:B:1400:PHE:CZ	2.36	0.59
1:B:1398:GLU:HA	1:B:1449:LEU:HD21	1.85	0.59
1:B:2682:TYR:CD2	1:B:2977:LEU:HD11	2.36	0.59
1:A:1051:VAL:HG22	1:A:1072:LEU:HD11	1.84	0.59
1:A:2487:GLU:HB2	1:A:2528:LEU:HA	1.84	0.59
1:A:3106:LEU:HG	1:A:3110:LYS:HE3	1.84	0.59
1:B:3723:VAL:HG11	1:B:3824:SER:OG	2.02	0.59
1:B:4682:ILE:HG23	1:B:4687:ILE:HD12	1.84	0.59
2:D:106:LEU:HD11	2:D:110:MET:HE2	1.83	0.59
1:A:1045:LEU:HD12	1:A:1072:LEU:HD11	1.83	0.59
1:A:1429:LYS:O	1:A:1430:PHE:C	2.45	0.59
1:B:4129:LEU:HD23	1:B:4165:LEU:HD23	1.85	0.59
1:B:4314:ILE:HG12	1:B:4484:GLY:HA2	1.85	0.59
1:A:1514:LEU:O	1:A:1518:LEU:HG	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2121:MET:HE2	1:A:2133:ALA:HB1	1.84	0.59
1:A:3201:GLN:HA	1:A:3207:ARG:HH21	1.68	0.59
1:A:4199:TYR:HA	2:C:20:PHE:CZ	2.38	0.59
1:B:151:PHE:HA	1:B:154:MET:HE2	1.84	0.59
1:B:1450:CYS:HB2	1:B:1505:GLN:HB2	1.83	0.59
1:B:2121:MET:HE2	1:B:2133:ALA:HB1	1.84	0.59
1:B:382:LEU:HD12	1:B:475:ILE:HG22	1.83	0.59
1:B:1015:PRO:HB2	1:B:1020:ILE:HD11	1.85	0.59
1:B:1468:LEU:HA	1:B:1471:MET:HE2	1.84	0.59
1:B:2173:HIS:ND1	1:B:2176:LEU:HD22	2.18	0.59
1:B:2698:LYS:HE2	1:B:3001:GLN:NE2	2.17	0.59
1:B:2702:ILE:HG12	1:B:3005:MET:HG2	1.85	0.59
1:B:4271:LEU:HD22	1:B:4274:ARG:HH21	1.67	0.59
1:A:1685:LYS:HA	1:A:2381:ARG:HH22	1.68	0.59
1:B:1515:LEU:CD1	1:B:1541:MET:HG3	2.32	0.59
1:B:1870:PHE:CZ	1:B:1924:LEU:CD1	2.65	0.59
1:A:4316:THR:HA	1:A:4319:ARG:HE	1.67	0.59
1:A:265:TYR:CZ	1:A:301:SER:HB2	2.38	0.58
1:A:2173:HIS:ND1	1:A:2176:LEU:HD22	2.18	0.58
1:B:680:GLU:HB3	1:B:730:THR:HG21	1.84	0.58
1:B:3270:ILE:O	1:B:3274:GLU:HG2	2.03	0.58
1:B:4096:TYR:CE1	2:D:48:GLU:HG2	2.38	0.58
1:B:4620:ILE:HB	1:B:4621:PRO:HD3	1.85	0.58
1:A:688:SER:O	1:A:692:GLU:HG3	2.03	0.58
1:A:2370:ILE:HD11	1:A:2401:LEU:HD11	1.85	0.58
1:B:299:PHE:O	1:B:303:VAL:HG23	2.03	0.58
1:A:1714:PHE:CZ	1:A:1716:CYS:HA	2.38	0.58
1:A:1901:VAL:CG1	1:A:2217:ILE:HD12	2.28	0.58
1:B:3683:GLN:OE1	1:B:3688:ARG:HD2	2.03	0.58
1:B:4325:TYR:HA	1:B:4504:LEU:HD22	1.86	0.58
3:F:302:SER:O	3:F:306:ARG:N	2.34	0.58
1:A:967:TYR:HE2	1:A:1015:PRO:HA	1.66	0.58
1:A:1119:GLN:HA	1:A:1122:TYR:CE2	2.38	0.58
1:A:3240:ILE:HD11	1:A:3275:HIS:CB	2.33	0.58
1:A:3679:GLU:CD	1:A:3683:GLN:HE22	2.11	0.58
1:B:4355:LYS:HE3	1:B:4365:GLY:O	2.04	0.58
1:B:4429:TRP:CE2	1:B:4438:MET:HA	2.38	0.58
1:A:1307:PRO:HB2	1:A:1308:PRO:HD3	1.84	0.58
1:B:3757:ARG:HB3	1:B:3758:PRO:HD3	1.86	0.58
1:A:56:VAL:HA	1:A:59:SER:HB2	1.85	0.58
1:A:1808:ALA:HB3	1:A:1809:PRO:HD3	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4089:LYS:HA	1:A:4092:LEU:HD12	1.86	0.58
1:A:1191:SER:HB3	1:A:1194:LYS:HG3	1.85	0.58
1:A:4429:TRP:CE2	1:A:4438:MET:HA	2.38	0.58
1:B:1361:ILE:HA	1:B:1365:HIS:HB2	1.85	0.58
1:B:3679:GLU:CD	1:B:3683:GLN:HE22	2.11	0.58
1:A:3469:VAL:HG21	1:A:3882:HIS:HB3	1.86	0.58
1:B:93:PRO:HB2	1:B:96:GLN:HB2	1.85	0.58
1:B:810:HIS:O	1:B:813:MET:HG3	2.03	0.58
1:B:2978:LEU:HA	1:B:3006:LEU:HD13	1.86	0.58
1:A:53:VAL:O	1:A:57:ILE:HG13	2.03	0.58
1:A:787:LEU:HD12	1:A:832:LEU:HD23	1.85	0.58
1:A:1428:LEU:HD13	1:A:1491:LEU:HB2	1.85	0.58
1:A:2291:PHE:O	1:A:2295:ASN:ND2	2.35	0.58
1:B:1118:LEU:HD12	1:B:1280:LEU:HD23	1.86	0.58
1:B:4221:LEU:O	1:B:4224:GLU:HG3	2.04	0.58
1:A:745:TRP:HE1	1:A:810:HIS:CE1	2.22	0.57
1:A:1090:VAL:HG13	1:A:1127:ALA:HB1	1.85	0.57
1:B:1515:LEU:HD11	1:B:1556:LEU:HD22	1.85	0.57
1:B:2162:PRO:HG2	1:B:2181:GLN:HG2	1.87	0.57
1:B:2548:LEU:HD11	1:B:2580:ILE:HG21	1.85	0.57
1:A:82:THR:HA	1:A:107:LEU:HD13	1.86	0.57
1:A:3683:GLN:OE1	1:A:3688:ARG:HD2	2.03	0.57
1:B:908:TYR:CZ	1:B:931:ARG:HD3	2.39	0.57
1:B:1600:MET:HB3	1:B:2481:SER:HB2	1.84	0.57
1:B:2310:GLN:HG3	1:B:2311:VAL:HG23	1.84	0.57
1:B:4223:LEU:O	1:B:4279:GLN:NE2	2.38	0.57
1:B:4635:VAL:CG1	1:B:4685:LYS:HG3	2.34	0.57
2:C:49:LEU:HD11	2:C:53:ILE:HD12	1.85	0.57
1:A:1203:ALA:HA	1:A:1320:GLU:HG3	1.86	0.57
1:A:1996:LEU:HD13	1:A:2001:PHE:HA	1.86	0.57
1:B:3057:ARG:HD3	1:B:3139:PHE:CD1	2.39	0.57
1:A:1870:PHE:HB3	1:A:1873:VAL:CG2	2.34	0.57
1:A:2657:VAL:HG11	1:A:2693:VAL:O	2.05	0.57
1:A:3547:LEU:HD13	1:A:3715:LEU:HD11	1.84	0.57
1:B:1929:LEU:HD11	1:B:2241:ILE:HD11	1.86	0.57
1:B:3324:SER:O	1:B:3329:GLY:N	2.36	0.57
1:B:39:ALA:CB	1:B:44:PHE:HA	2.35	0.57
1:B:1534:PHE:CE2	1:B:1595:CYS:HB2	2.39	0.57
1:B:3240:ILE:HD11	1:B:3275:HIS:CB	2.33	0.57
1:B:3469:VAL:HG21	1:B:3882:HIS:HB3	1.86	0.57
2:C:95:LYS:HG2	2:C:105:GLU:HB2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:800:PRO:HG3	1:A:854:ILE:HD11	1.85	0.57
1:A:1037:HIS:CE1	1:A:1041:TRP:HE1	2.22	0.57
1:B:1319:LEU:HD21	1:B:1350:VAL:HG13	1.87	0.57
1:B:2354:ILE:HG12	1:B:2387:PHE:HE2	1.68	0.57
1:B:3087:ALA:CA	1:B:3181:ILE:CD1	2.83	0.57
1:A:284:ILE:H	1:A:442:LEU:H	1.52	0.57
1:A:3270:ILE:O	1:A:3274:GLU:HG2	2.03	0.57
1:A:4307:LYS:HD2	1:A:4479:MET:HA	1.85	0.57
1:B:783:TRP:HD1	1:B:821:PHE:HE2	1.53	0.57
1:B:1244:ILE:HG13	1:B:1248:ARG:HB2	1.86	0.57
1:B:1429:LYS:O	1:B:1430:PHE:C	2.45	0.57
1:B:1520:PRO:HA	1:B:1523:THR:HB	1.87	0.57
1:B:2340:ILE:HD13	1:B:2422:ILE:HD11	1.86	0.57
1:A:3894:PRO:O	1:A:3898:HIS:ND1	2.35	0.57
1:B:844:MET:HB3	1:B:848:MET:HE3	1.85	0.57
1:B:1554:LEU:HD12	1:B:1557:HIS:CD2	2.40	0.57
1:B:1681:CYS:HG	4:B:5202:ZN:ZN	1.16	0.57
1:B:3220:SER:HB3	1:B:3223:LYS:HE2	1.87	0.57
1:B:4053:HIS:HB2	1:B:4071:TRP:CD1	2.39	0.57
1:A:189:VAL:HG21	1:B:874:VAL:HG13	1.85	0.57
1:A:1517:THR:O	1:A:1520:PRO:HD2	2.04	0.57
1:B:1268:ALA:O	1:B:1272:THR:HG23	2.05	0.57
1:B:1495:LEU:HA	1:B:1498:TYR:CD2	2.40	0.57
1:B:3087:ALA:CA	1:B:3181:ILE:HD12	2.35	0.57
1:B:4617:LEU:O	1:B:4621:PRO:HD2	2.05	0.57
1:A:1206:SER:HB2	1:A:1319:LEU:HA	1.87	0.57
1:A:1233:TRP:HE3	1:A:1278:LEU:HD13	1.70	0.57
1:A:4355:LYS:HE3	1:A:4365:GLY:O	2.05	0.57
1:B:1133:VAL:HG22	1:B:1246:SER:HB3	1.86	0.57
1:B:1241:PHE:CE1	1:B:1272:THR:HG21	2.39	0.57
1:B:4089:LYS:HA	1:B:4092:LEU:HD12	1.85	0.57
1:A:2308:LEU:HD13	1:A:2328:VAL:HG11	1.86	0.56
1:A:4130:ARG:HB2	1:A:4169:TYR:CE1	2.40	0.56
1:A:4714:LEU:HD11	1:A:4754:VAL:HG11	1.86	0.56
1:B:479:HIS:HA	1:B:482:LYS:HE2	1.87	0.56
1:B:1119:GLN:HA	1:B:1122:TYR:CD2	2.40	0.56
1:A:396:ARG:HH21	1:B:404:GLN:NE2	2.02	0.56
1:A:1101:PHE:CD2	1:A:1168:THR:HG21	2.40	0.56
1:A:1398:GLU:HG3	1:A:1445:SER:HA	1.86	0.56
1:A:3463:ARG:NH2	1:A:3534:VAL:O	2.38	0.56
1:B:516:THR:HB	1:B:519:GLN:HG3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1415:ALA:HB2	1:B:1467:TRP:HB2	1.87	0.56
1:B:2370:ILE:HD11	1:B:2401:LEU:HD11	1.87	0.56
2:D:93:PHE:HE2	2:D:101:ILE:HA	1.69	0.56
3:E:302:SER:O	3:E:306:ARG:N	2.34	0.56
1:A:145:ARG:O	1:A:149:ILE:HG13	2.06	0.56
1:B:470:GLY:H	1:B:473:SER:HB2	1.71	0.56
1:B:4228:LEU:HD22	1:B:4278:VAL:HG11	1.88	0.56
2:C:93:PHE:HB3	2:C:101:ILE:HD12	1.86	0.56
1:A:2027:ASP:CG	1:A:2029:CYS:HG	2.08	0.56
1:A:4598:LEU:O	1:A:4601:ILE:HG23	2.05	0.56
1:B:521:ILE:HG21	1:B:670:ILE:HD11	1.88	0.56
1:A:1169:TYR:HA	1:A:1172:PHE:HD2	1.70	0.56
1:A:1947:SER:C	1:A:3655:THR:HG21	2.30	0.56
1:B:2301:VAL:HG11	1:B:2422:ILE:HG13	1.86	0.56
1:A:1173:THR:HG22	1:A:1233:TRP:CZ2	2.41	0.56
1:A:1481:GLN:HA	1:A:1481:GLN:HE21	1.69	0.56
1:A:1519:THR:HA	1:A:1563:TRP:HZ2	1.69	0.56
1:B:1395:LYS:O	1:B:1399:GLU:HG2	2.06	0.56
1:B:1560:ALA:HA	1:B:1563:TRP:CE3	2.40	0.56
1:B:2977:LEU:HD23	1:B:3006:LEU:HD21	1.88	0.56
1:B:3948:ILE:HA	1:B:3996:LEU:HD21	1.87	0.56
1:A:273:PHE:O	1:A:277:VAL:HG13	2.06	0.56
1:A:2173:HIS:CE1	1:A:2176:LEU:HD22	2.41	0.56
1:A:4699:ILE:HD13	1:A:4747:ASN:HB3	1.87	0.56
1:B:553:LYS:O	1:B:554:GLY:C	2.48	0.56
1:B:3290:TRP:HE1	1:B:3326:ALA:HB2	1.69	0.56
1:B:3951:VAL:HG13	1:B:4012:ILE:HD13	1.87	0.56
1:A:291:ASP:O	1:A:295:VAL:HG23	2.06	0.56
1:A:491:LEU:HD21	1:A:518:ILE:HA	1.88	0.56
1:A:1948:ALA:HB1	1:A:1978:LEU:HD13	1.88	0.56
1:A:2701:LEU:O	1:A:2704:VAL:HG22	2.05	0.56
1:A:1412:MET:HB3	1:A:1463:ARG:CZ	2.36	0.56
1:A:3662:ARG:NH2	1:A:3679:GLU:OE2	2.39	0.56
1:A:4199:TYR:HA	2:C:20:PHE:HZ	1.70	0.56
1:A:4691:ALA:HB1	1:A:4722:ILE:HG23	1.88	0.56
1:B:82:THR:HG23	1:B:136:LEU:HG	1.87	0.56
1:B:4419:LEU:HD13	1:B:4459:LEU:HG	1.87	0.56
2:C:124:GLU:O	2:C:128:GLU:HG2	2.06	0.56
1:A:420:LEU:HD21	1:A:444:VAL:CA	2.35	0.55
1:A:683:MET:SD	1:A:727:LEU:HD23	2.46	0.55
1:A:1159:LEU:HB3	1:A:1160:PRO:HD3	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4682:ILE:HG23	1:A:4687:ILE:HD12	1.88	0.55
1:B:2978:LEU:HB2	1:B:3006:LEU:HB3	1.89	0.55
3:E:301:MET:O	3:E:306:ARG:NH1	2.39	0.55
1:A:404:GLN:HE21	1:B:396:ARG:HB2	1.72	0.55
1:A:1058:LEU:HB3	1:A:1063:MET:SD	2.46	0.55
1:A:1899:MET:SD	1:A:2233:LEU:HB2	2.46	0.55
1:A:4489:LEU:HD21	1:A:4532:THR:HG23	1.87	0.55
1:A:4641:TYR:HD1	1:A:4655:ASP:HA	1.71	0.55
1:B:663:LEU:HD23	1:B:674:LEU:CD1	2.36	0.55
1:B:683:MET:HE3	1:B:727:LEU:HD23	1.87	0.55
1:B:827:ARG:HG3	1:B:955:VAL:HG13	1.88	0.55
1:B:967:TYR:CE2	1:B:1015:PRO:HA	2.42	0.55
1:B:1097:GLN:HA	1:B:1097:GLN:HE21	1.71	0.55
1:B:2173:HIS:CE1	1:B:2176:LEU:HD22	2.41	0.55
1:B:3072:SER:C	1:B:3074:ILE:H	2.14	0.55
1:B:3213:LEU:O	1:B:3217:ILE:HG12	2.05	0.55
1:A:183:GLU:H	1:A:183:GLU:CD	2.13	0.55
1:A:2358:THR:HA	1:A:2382:SER:HB2	1.87	0.55
1:B:1572:SER:O	1:B:1573:GLN:C	2.49	0.55
1:B:1603:LEU:HD13	1:B:1807:PHE:CZ	2.41	0.55
1:B:1961:PRO:HB3	1:B:2171:MET:CE	2.37	0.55
1:B:3662:ARG:NH2	1:B:3679:GLU:OE2	2.39	0.55
1:B:3739:ILE:HG12	1:B:3824:SER:HB3	1.88	0.55
1:B:4216:GLU:HG2	1:B:4238:LEU:HB2	1.88	0.55
1:A:1315:LEU:HB3	1:A:1316:PRO:HD3	1.87	0.55
1:A:1556:LEU:HD22	1:A:1559:ALA:HB3	1.89	0.55
1:A:2300:ASP:HA	1:A:2318:LYS:HZ1	1.72	0.55
1:A:2371:PHE:HZ	1:A:2397:ALA:HB2	1.71	0.55
1:B:48:GLU:O	1:B:51:GLN:HB3	2.07	0.55
1:B:284:ILE:H	1:B:441:ALA:HA	1.71	0.55
1:B:1558:ASN:HD21	1:B:1803:ALA:HB1	1.70	0.55
1:B:2263:ILE:HG13	1:B:2266:MET:HE2	1.87	0.55
1:B:2312:TYR:CE2	1:B:2328:VAL:HG13	2.41	0.55
1:B:3729:GLU:HB3	1:B:3733:LYS:HE3	1.88	0.55
1:B:4423:GLU:HB3	1:B:4459:LEU:HD13	1.87	0.55
3:F:28:TYR:CE2	3:F:122:ASN:HB3	2.42	0.55
1:A:204:ARG:O	1:A:205:THR:C	2.50	0.55
1:A:2982:LEU:O	1:A:2985:LEU:HB3	2.06	0.55
1:A:4719:LEU:HB3	1:A:4720:PRO:HD3	1.88	0.55
1:B:1311:ILE:HA	1:B:1334:LEU:HD21	1.87	0.55
1:B:1453:LEU:C	1:B:1455:GLN:H	2.15	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2181:GLN:HG3	1:B:2188:LEU:HD11	1.89	0.55
1:B:4613:LEU:O	1:B:4617:LEU:HG	2.06	0.55
1:A:691:LYS:HD3	1:A:735:LEU:HA	1.88	0.55
1:A:1269:HIS:CE1	1:A:1283:SER:HB3	2.42	0.55
1:B:1088:GLU:HA	1:B:1091:GLU:CD	2.32	0.55
1:B:4313:CYS:SG	1:B:4335:LEU:HD21	2.46	0.55
1:A:674:LEU:O	1:A:678:LEU:HG	2.06	0.55
1:A:1875:MET:SD	1:A:1917:GLU:HA	2.47	0.55
1:A:4024:ILE:HD11	3:E:324:LEU:HD12	1.88	0.55
1:B:1901:VAL:CG1	1:B:2217:ILE:HD12	2.28	0.55
1:B:2212:GLN:N	1:B:2233:LEU:O	2.40	0.55
1:B:4239:LYS:HE2	1:B:4286:GLU:OE1	2.06	0.55
1:B:4771:LEU:O	1:B:4774:HIS:HB3	2.07	0.55
1:A:1118:LEU:HD21	1:A:1269:HIS:HB3	1.87	0.55
1:B:973:LEU:HB3	1:B:1002:TYR:OH	2.06	0.55
1:B:2040:LEU:HD11	1:B:2085:PRO:CB	2.37	0.55
1:B:2966:THR:HA	1:B:2969:ARG:HE	1.72	0.55
1:A:261:LEU:CD2	1:A:332:LEU:HB2	2.36	0.55
1:B:246:SER:O	1:B:250:LEU:HG	2.06	0.55
1:B:3409:ILE:HG12	1:B:3450:LEU:HD22	1.88	0.55
2:C:87:ARG:HG3	2:C:139:TYR:CE1	2.42	0.55
1:B:313:LEU:HD12	1:B:384:ILE:HG23	1.89	0.55
1:A:1529:GLY:HA2	1:A:1592:ILE:HD11	1.89	0.54
1:A:1858:LEU:HB2	1:A:2200:GLN:OE1	2.07	0.54
1:A:4131:GLN:O	1:A:4135:THR:HG23	2.07	0.54
1:B:2360:ALA:HB3	1:B:2363:ARG:HB2	1.88	0.54
1:B:3107:GLU:HA	1:B:3110:LYS:HD2	1.89	0.54
1:A:1348:ALA:O	1:A:1352:GLU:HG3	2.07	0.54
1:A:1961:PRO:HB3	1:A:2171:MET:CE	2.37	0.54
1:A:2474:VAL:HA	1:A:2477:ARG:HE	1.71	0.54
1:A:2654:GLU:HG2	1:A:2692:ALA:HB1	1.88	0.54
1:A:4159:LYS:HZ3	1:A:4196:TRP:CD1	2.25	0.54
1:B:1025:MET:HG2	1:B:1026:ASN:H	1.72	0.54
1:B:3001:GLN:NE2	1:B:3138:PRO:HD3	2.22	0.54
2:D:28:ILE:HD12	2:D:33:LEU:HA	1.88	0.54
2:D:76:LYS:HE2	2:D:76:LYS:HA	1.89	0.54
3:F:301:MET:O	3:F:306:ARG:NH1	2.39	0.54
1:A:35:PRO:HB3	1:A:48:GLU:HB3	1.90	0.54
1:A:4107:GLN:O	1:A:4111:ARG:HG2	2.07	0.54
1:B:808:VAL:HG21	1:B:931:ARG:HD2	1.90	0.54
1:A:183:GLU:O	1:A:187:LYS:HD3	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:545:ALA:O	1:A:644:PRO:HB3	2.07	0.54
1:A:1700:CYS:SG	1:A:1726:CYS:C	2.89	0.54
1:A:3738:ASN:O	1:A:3742:LEU:HG	2.07	0.54
1:A:4476:ALA:C	1:A:4521:ASN:HD21	2.15	0.54
1:B:1545:ALA:HB2	1:B:1556:LEU:HD22	1.89	0.54
1:B:1708:TYR:O	1:B:2353:ARG:NH2	2.40	0.54
1:B:1858:LEU:HB2	1:B:2200:GLN:OE1	2.07	0.54
1:B:3881:GLU:HG2	1:B:3921:MET:HG3	1.88	0.54
2:C:78:LYS:HB2	2:C:80:THR:HG23	1.88	0.54
3:E:75:PRO:HD2	3:E:116:LEU:HD23	1.88	0.54
1:A:1000:GLN:HA	1:A:1270:LEU:HD13	1.89	0.54
1:A:1474:SER:HB2	1:A:1485:ILE:HG21	1.89	0.54
1:A:3568:SER:HB3	1:A:3721:CYS:HA	1.90	0.54
1:B:3406:GLU:HG3	1:B:3850:THR:HG21	1.88	0.54
1:B:4212:LEU:HD23	1:B:4215:LYS:HD2	1.89	0.54
1:A:1047:ILE:HB	1:A:1050:TYR:CD2	2.42	0.54
1:A:1870:PHE:CZ	1:A:1924:LEU:CD1	2.66	0.54
1:A:2040:LEU:HD11	1:A:2085:PRO:CB	2.37	0.54
1:A:3095:VAL:HG12	1:A:3190:TRP:CZ3	2.43	0.54
1:A:4313:CYS:HB3	1:A:4331:ILE:HD13	1.88	0.54
1:B:194:LEU:HD13	1:B:197:LEU:HD12	1.90	0.54
1:B:2701:LEU:HD13	1:B:3002:VAL:HG11	1.90	0.54
1:B:3706:CYS:O	1:B:3710:ARG:NH1	2.41	0.54
1:B:4107:GLN:O	1:B:4111:ARG:HG2	2.07	0.54
1:B:4355:LYS:CE	1:B:4365:GLY:O	2.55	0.54
1:A:299:PHE:HZ	1:A:346:CYS:SG	2.31	0.54
1:A:2266:MET:HE1	1:A:2659:ALA:HB2	1.90	0.54
1:A:3409:ILE:HG12	1:A:3450:LEU:HD22	1.88	0.54
1:B:336:CYS:O	1:B:381:CYS:SG	2.65	0.54
1:B:1306:ASN:HD22	1:B:1309:GLN:HB2	1.72	0.54
1:B:2547:LEU:HD12	1:B:2580:ILE:HD11	1.89	0.54
1:B:2695:PHE:HE1	1:B:2699:GLN:NE2	2.02	0.54
1:B:3172:LYS:HE3	1:B:3217:ILE:HA	1.89	0.54
1:B:3198:LEU:HD22	1:B:3207:ARG:HG3	1.89	0.54
1:A:85:ILE:HA	1:A:88:VAL:HG22	1.90	0.54
1:A:4423:GLU:HB3	1:A:4459:LEU:HD13	1.89	0.54
1:B:49:LEU:C	1:B:51:GLN:N	2.63	0.54
1:B:261:LEU:HD11	1:B:328:ASP:HB3	1.90	0.54
1:B:1394:ARG:NH2	1:B:1437:LEU:HD13	2.23	0.54
1:B:2675:ILE:C	1:B:2677:THR:H	2.15	0.54
1:B:4537:LEU:HD21	1:B:4623:LEU:HD11	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:27:THR:HA	2:C:61:ASN:HA	1.88	0.54
1:A:239:PHE:HA	1:A:242:GLN:OE1	2.08	0.54
1:A:1022:GLN:O	1:A:1026:ASN:N	2.40	0.54
1:A:1435:PHE:CD1	1:A:1498:TYR:HB3	2.43	0.54
1:A:2261:SER:HB2	1:A:2263:ILE:HG22	1.90	0.54
1:A:2668:CYS:O	1:A:2973:VAL:HG21	2.08	0.54
1:A:3881:GLU:HG2	1:A:3921:MET:HG3	1.89	0.54
1:A:4540:LEU:HB2	1:A:4562:VAL:HG11	1.89	0.54
1:B:1875:MET:SD	1:B:1917:GLU:HA	2.47	0.54
1:A:3706:CYS:O	1:A:3710:ARG:NH1	2.41	0.54
1:B:2023:VAL:HG23	1:B:2046:ILE:HD13	1.89	0.54
1:B:2025:ILE:HD12	1:B:2075:MET:HE3	1.90	0.54
1:B:2698:LYS:HD2	1:B:2998:PRO:CA	2.30	0.54
1:A:2180:VAL:HG22	1:A:2214:MET:HE2	1.90	0.53
1:A:2300:ASP:HA	1:A:2318:LYS:NZ	2.23	0.53
1:A:4105:TRP:CZ2	2:C:129:ALA:HB2	2.42	0.53
1:B:44:PHE:CD1	1:B:84:TYR:HB3	2.43	0.53
1:B:231:SER:HA	1:B:234:LYS:HD2	1.89	0.53
1:B:1384:LEU:HD13	1:B:1397:MET:SD	2.48	0.53
1:B:3532:CYS:SG	1:B:3534:VAL:HB	2.48	0.53
1:B:4423:GLU:CB	1:B:4459:LEU:HD13	2.38	0.53
1:A:1407:LEU:HB3	1:A:1431:PHE:HE1	1.72	0.53
1:A:2025:ILE:HD12	1:A:2075:MET:HE3	1.90	0.53
1:B:30:GLU:O	1:B:33:VAL:HG22	2.08	0.53
1:B:63:ILE:HA	1:B:74:TYR:HD2	1.73	0.53
1:B:783:TRP:CD1	1:B:821:PHE:HE2	2.26	0.53
1:B:1044:ARG:C	1:B:1046:ARG:N	2.63	0.53
1:A:1162:THR:O	1:A:1166:ILE:HG13	2.08	0.53
1:A:2051:PHE:HB3	1:A:2059:ASN:HD21	1.73	0.53
1:A:3512:ILE:O	1:A:3516:LEU:HG	2.08	0.53
1:A:3759:GLN:HE21	1:A:3763:LEU:HG	1.74	0.53
1:B:286:PRO:HB2	1:B:346:CYS:HB2	1.89	0.53
1:B:844:MET:HE2	1:B:844:MET:HA	1.90	0.53
1:B:2352:MET:HE1	1:B:2403:LEU:HD13	1.91	0.53
1:A:3169:TYR:HD1	1:A:3213:LEU:HD13	1.74	0.53
1:B:1805:PHE:HD2	1:B:2494:PRO:HD2	1.73	0.53
2:C:87:ARG:HG3	2:C:139:TYR:HE1	1.73	0.53
1:A:552:ARG:NH2	1:A:643:ASP:HA	2.23	0.53
1:A:2096:HIS:HB3	1:A:2099:LEU:HG	1.91	0.53
2:D:138:ASN:CG	2:D:139:TYR:H	2.17	0.53
1:A:392:ILE:O	1:A:399:GLY:HA2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1015:PRO:HG3	1:A:1041:TRP:CD2	2.44	0.53
1:A:3310:LEU:HA	1:A:3859:LEU:HD23	1.90	0.53
1:B:2332:LYS:HA	3:F:20:ARG:HH22	1.74	0.53
1:B:2702:ILE:HG23	1:B:3005:MET:HG2	1.89	0.53
1:B:4636:GLU:O	1:B:4640:PRO:HD3	2.08	0.53
2:C:30:THR:HB	2:C:53:ILE:HG12	1.90	0.53
3:F:23:LYS:HD3	3:F:114:ALA:HB1	1.90	0.53
1:A:834:VAL:HG13	1:A:966:LEU:HD13	1.90	0.53
1:A:1048:SER:HA	1:A:1051:VAL:HB	1.91	0.53
1:A:1877:TYR:CE1	1:A:1885:ILE:HG21	2.43	0.53
1:A:2187:PRO:HB3	1:A:2214:MET:SD	2.48	0.53
1:A:3315:VAL:HG22	1:A:3633:LEU:HD21	1.90	0.53
1:A:4123:LEU:HD13	1:A:4165:LEU:HD22	1.90	0.53
1:A:4355:LYS:CE	1:A:4365:GLY:O	2.57	0.53
1:B:49:LEU:HB3	1:B:50:PRO:HD3	1.89	0.53
1:B:443:ARG:HB2	1:B:446:ASP:CG	2.33	0.53
1:B:909:HIS:NE2	1:B:937:SER:HB2	2.24	0.53
1:B:3106:LEU:HD12	1:B:3200:ILE:HD11	1.89	0.53
2:C:33:LEU:CD1	2:C:72:MET:HE1	2.38	0.53
3:E:27:CYS:SG	3:E:45:ARG:O	2.67	0.53
1:A:103:ALA:O	1:A:107:LEU:HG	2.09	0.53
1:B:1191:SER:H	1:B:1194:LYS:HD3	1.73	0.53
1:B:1387:GLN:CG	1:B:1393:ALA:HB1	2.37	0.53
1:B:1595:CYS:SG	1:B:1596:THR:N	2.82	0.53
1:B:3547:LEU:O	1:B:3551:LYS:HG3	2.09	0.53
1:A:89:CYS:HB2	1:A:239:PHE:CD2	2.44	0.53
1:A:245:ALA:O	1:A:249:GLU:HG3	2.09	0.53
1:A:839:GLU:O	1:A:842:VAL:HG12	2.09	0.53
1:A:2698:LYS:NZ	1:A:3001:GLN:HB3	2.24	0.53
1:A:3547:LEU:O	1:A:3551:LYS:HG3	2.09	0.53
1:A:4096:TYR:CE1	2:C:48:GLU:HG2	2.44	0.53
1:B:4047:PRO:HA	1:B:4075:LEU:CD2	2.39	0.53
1:A:303:VAL:HG22	1:A:377:ILE:HG13	1.90	0.53
1:A:3746:ALA:HA	1:A:3749:VAL:HG22	1.91	0.53
1:B:136:LEU:O	1:B:243:ASN:ND2	2.42	0.53
1:B:1603:LEU:HD13	1:B:1807:PHE:HZ	1.73	0.53
1:B:3512:ILE:O	1:B:3516:LEU:HG	2.08	0.53
2:C:59:ASP:HB3	2:C:63:THR:HB	1.89	0.53
1:A:1306:ASN:HB3	1:A:1309:GLN:HB3	1.92	0.52
1:A:1525:MET:HA	1:A:1530:ASP:HB2	1.91	0.52
1:A:2352:MET:HE1	1:A:2403:LEU:HD13	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1010:LEU:HD22	1:B:1037:HIS:CE1	2.44	0.52
1:B:1435:PHE:CD1	1:B:1498:TYR:HB3	2.43	0.52
1:B:1600:MET:HB3	1:B:2481:SER:CB	2.39	0.52
1:B:2698:LYS:CE	1:B:3001:GLN:HE21	2.22	0.52
1:B:3309:PHE:CD2	1:B:3850:THR:HA	2.44	0.52
1:B:3419:SER:HB3	1:B:3425:ARG:HG3	1.92	0.52
1:A:59:SER:HA	1:A:62:GLU:HB2	1.91	0.52
1:A:4665:ILE:O	1:A:4669:ILE:HG13	2.09	0.52
1:B:272:ARG:HD2	1:B:338:TYR:HE1	1.75	0.52
1:B:420:LEU:HD13	1:B:442:LEU:HB2	1.91	0.52
1:B:859:LEU:O	1:B:1009:ILE:HD11	2.09	0.52
1:B:1542:ALA:HB1	1:B:1602:TYR:CG	2.44	0.52
1:B:1930:LEU:HD13	1:B:2219:HIS:HB3	1.91	0.52
1:B:2292:PHE:HA	1:B:2295:ASN:HD22	1.74	0.52
1:B:3997:PHE:HB2	1:B:4016:CYS:HB3	1.90	0.52
1:A:230:ALA:O	1:A:234:LYS:HG3	2.09	0.52
1:A:336:CYS:O	1:A:381:CYS:SG	2.67	0.52
1:A:545:ALA:HB2	1:A:647:PHE:HB2	1.92	0.52
1:A:2073:GLN:HB2	1:A:2088:VAL:HG13	1.91	0.52
1:A:4245:LEU:HD23	1:A:4294:MET:HE1	1.90	0.52
1:A:4644:PHE:HB3	1:A:4722:ILE:HD11	1.90	0.52
1:B:542:TYR:CE2	1:B:689:ILE:HG23	2.44	0.52
1:B:740:PHE:HA	1:B:781:LYS:HG2	1.91	0.52
1:B:1097:GLN:HA	1:B:1097:GLN:NE2	2.24	0.52
1:B:1162:THR:HG22	1:B:1166:ILE:HD11	1.90	0.52
1:B:3042:LYS:HA	1:B:3049:ASN:HB3	1.92	0.52
2:C:138:ASN:HB3	2:C:140:GLU:HG2	1.91	0.52
1:A:1094:PHE:O	1:A:1098:ILE:HG13	2.10	0.52
1:A:1875:MET:HG2	1:A:1877:TYR:CE1	2.44	0.52
1:A:2517:ALA:HB2	1:A:2521:VAL:HB	1.91	0.52
1:B:943:ASP:O	1:B:944:ASP:C	2.52	0.52
1:B:1489:ARG:NH2	1:B:1533:GLY:CA	2.72	0.52
1:B:1845:LEU:HD12	1:B:1850:LYS:HE3	1.92	0.52
1:B:2052:LEU:HG	1:B:2060:ILE:HB	1.91	0.52
1:B:2073:GLN:HB2	1:B:2088:VAL:HG13	1.91	0.52
1:B:2701:LEU:HD12	1:B:3002:VAL:HG21	1.90	0.52
1:B:4195:HIS:CD2	2:D:35:THR:HG21	2.45	0.52
1:A:478:ASN:OD1	1:A:650:LEU:HD13	2.09	0.52
1:A:906:PRO:HG2	1:A:908:TYR:HE2	1.74	0.52
1:B:1819:MET:CE	1:B:2508:LEU:HD12	2.39	0.52
1:B:2291:PHE:HZ	1:B:2350:THR:HB	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1169:TYR:HA	1:A:1172:PHE:CD2	2.44	0.52
1:A:1571:LEU:C	1:A:1573:GLN:N	2.65	0.52
1:A:2292:PHE:CE2	1:A:2386:ASP:HB3	2.40	0.52
1:A:4740:ILE:O	1:A:4744:SER:HB2	2.09	0.52
1:B:4052:ILE:N	1:B:4119:LEU:O	2.43	0.52
2:C:140:GLU:HG3	2:C:141:GLU:HG3	1.91	0.52
1:A:491:LEU:HD23	1:A:517:SER:OG	2.10	0.52
1:A:661:SER:O	1:A:665:SER:HB2	2.09	0.52
1:A:945:LEU:HA	1:A:1053:TRP:CD1	2.45	0.52
1:B:144:ASP:HB2	1:B:147:GLU:HG3	1.91	0.52
1:B:712:HIS:HA	1:B:715:HIS:CD2	2.44	0.52
1:B:3309:PHE:HE1	1:B:3411:PHE:HB3	1.74	0.52
1:B:3408:LEU:HD12	1:B:3411:PHE:CE2	2.44	0.52
1:B:3968:LEU:CD1	1:B:4012:ILE:HD11	2.39	0.52
1:B:4327:THR:HB	1:B:4328:PRO:HD3	1.90	0.52
2:C:100:TYR:CE1	2:C:138:ASN:HB2	2.45	0.52
3:E:4:HIS:O	3:E:16:ASN:HA	2.09	0.52
1:A:844:MET:HA	1:A:844:MET:HE2	1.90	0.52
1:A:2997:ILE:HB	1:A:2998:PRO:HD3	1.90	0.52
1:B:2375:MET:HG2	1:B:2387:PHE:CE1	2.35	0.52
1:B:3513:TYR:CZ	1:B:3525:TYR:HB3	2.44	0.52
1:B:4644:PHE:HB3	1:B:4722:ILE:HD11	1.92	0.52
1:B:4719:LEU:HB3	1:B:4720:PRO:HD3	1.92	0.52
2:C:20:PHE:CD2	2:C:36:VAL:HG22	2.45	0.52
1:A:405:ASN:HB2	1:A:511:ILE:HA	1.92	0.52
1:A:4560:GLU:HA	1:A:4563:LEU:HD12	1.90	0.52
1:A:4723:LEU:HD11	1:A:4760:ILE:HG23	1.91	0.52
1:B:90:SER:HA	1:B:236:LYS:HB2	1.91	0.52
1:B:313:LEU:HD13	1:B:388:ILE:HD11	1.92	0.52
1:B:1542:ALA:HB1	1:B:1602:TYR:CD1	2.45	0.52
1:B:1930:LEU:HB3	1:B:2219:HIS:CD2	2.45	0.52
1:B:2480:VAL:HG13	1:B:2524:GLN:HG3	1.91	0.52
1:B:4077:ILE:HG21	2:D:116:LYS:HE3	1.92	0.52
1:A:345:THR:O	1:A:349:ILE:HG12	2.10	0.52
1:A:470:GLY:O	1:A:474:VAL:HG23	2.10	0.52
1:A:1043:SER:HB3	1:A:1256:ILE:HG21	1.92	0.52
1:A:3950:LYS:HG2	1:A:3971:GLU:OE1	2.10	0.52
1:A:3954:ALA:HB3	1:A:3968:LEU:HD11	1.92	0.52
1:A:4155:ILE:HB	1:A:4158:ARG:HD2	1.92	0.52
1:B:1490:GLN:O	1:B:1494:LEU:HD13	2.09	0.52
1:B:1558:ASN:HD21	1:B:1803:ALA:CB	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3007:THR:HA	1:B:3010:LEU:HG	1.91	0.52
1:B:3793:ASN:OD1	1:B:3795:TYR:HB2	2.10	0.52
1:A:254:GLU:HA	1:A:257:LEU:HD12	1.90	0.51
1:A:1024:SER:HB3	1:A:1074:LEU:HD23	1.92	0.51
1:A:1309:GLN:HA	1:A:1312:ARG:HD2	1.91	0.51
1:A:1499:ILE:HG12	1:A:1506:VAL:HG21	1.92	0.51
1:A:1845:LEU:HD12	1:A:1850:LYS:HE3	1.92	0.51
1:A:3546:LYS:HG2	1:A:3714:MET:SD	2.51	0.51
1:B:723:GLN:HG2	1:B:728:GLN:HG3	1.92	0.51
1:B:1952:PHE:HE1	1:B:1976:HIS:CD2	2.28	0.51
1:B:3936:ASN:HB3	1:B:3939:ALA:HB3	1.92	0.51
1:B:4155:ILE:HB	1:B:4158:ARG:HD2	1.92	0.51
1:B:4224:GLU:HA	1:B:4279:GLN:HE21	1.74	0.51
1:B:4258:PHE:O	1:B:4259:LYS:C	2.51	0.51
2:C:49:LEU:HD13	2:C:49:LEU:O	2.09	0.51
1:A:73:PHE:HB2	1:A:161:PRO:HD3	1.92	0.51
1:A:266:PHE:O	1:A:270:ILE:HG13	2.10	0.51
1:A:3419:SER:HB3	1:A:3425:ARG:HG3	1.92	0.51
1:A:4195:HIS:CD2	2:C:35:THR:HG21	2.44	0.51
1:B:123:ALA:HB1	1:B:154:MET:SD	2.50	0.51
1:B:303:VAL:HG21	1:B:373:ASP:HB3	1.92	0.51
1:B:1214:LEU:O	1:B:1218:LEU:HG	2.10	0.51
1:B:1570:TYR:HA	1:B:1573:GLN:HE21	1.76	0.51
1:B:3063:MET:HG3	1:B:3170:GLN:HB3	1.92	0.51
1:B:3196:GLU:O	1:B:3200:ILE:HG13	2.10	0.51
1:A:80:LEU:HD11	1:A:152:THR:HA	1.92	0.51
1:A:1560:ALA:HA	1:A:1563:TRP:HE3	1.75	0.51
1:A:83:HIS:O	1:A:87:THR:HG23	2.10	0.51
1:A:546:CYS:O	1:A:550:ARG:HG3	2.11	0.51
1:A:549:GLN:O	1:A:553:LYS:HG2	2.09	0.51
1:B:2072:THR:O	1:B:2090:ASN:HB2	2.10	0.51
1:B:3458:LEU:HD11	1:B:3465:ALA:HB1	1.92	0.51
1:B:3766:LYS:HB3	1:B:3795:TYR:CD2	2.45	0.51
2:C:49:LEU:HD11	2:C:53:ILE:CD1	2.40	0.51
3:F:4:HIS:CD2	3:F:21:ARG:HB2	2.44	0.51
1:A:202:ASN:HB3	1:A:204:ARG:CZ	2.41	0.51
1:A:327:GLN:HA	1:A:511:ILE:HD11	1.92	0.51
1:A:539:SER:HB2	1:A:543:ARG:NH1	2.25	0.51
1:A:2094:ILE:HG12	1:A:2143:VAL:HG21	1.93	0.51
1:A:3071:LYS:HD2	1:A:3074:ILE:HB	1.91	0.51
1:A:3404:ASP:OD1	1:A:3404:ASP:N	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:112:LEU:HD11	1:B:247:LEU:HD12	1.92	0.51
1:A:491:LEU:CD1	1:A:670:ILE:HD11	2.40	0.51
1:A:1159:LEU:HA	1:A:1298:LEU:HD13	1.91	0.51
1:A:1814:MET:HA	1:A:1817:PHE:HE1	1.70	0.51
1:A:3998:LEU:O	1:A:4001:VAL:HG12	2.10	0.51
1:B:663:LEU:HD23	1:B:674:LEU:HD13	1.93	0.51
1:B:712:HIS:HA	1:B:715:HIS:NE2	2.25	0.51
1:B:1169:TYR:HA	1:B:1172:PHE:CD2	2.46	0.51
1:B:1401:PHE:HD2	1:B:1449:LEU:HD22	1.76	0.51
1:B:1558:ASN:O	1:B:1561:VAL:HB	2.11	0.51
1:B:3194:LEU:HB2	1:B:3214:LEU:HD13	1.93	0.51
1:B:3940:THR:HG21	1:B:3985:CYS:HB3	1.90	0.51
1:B:4130:ARG:HB2	1:B:4169:TYR:CE1	2.46	0.51
1:B:4438:MET:HE3	1:B:4440:ILE:HD11	1.93	0.51
1:A:1515:LEU:HA	1:A:1544:LEU:HD13	1.93	0.51
1:A:4423:GLU:CB	1:A:4459:LEU:HD13	2.41	0.51
1:B:31:VAL:O	1:B:35:PRO:HD2	2.11	0.51
1:B:1403:ASP:OD2	1:B:1404:SER:N	2.44	0.51
1:B:3405:LYS:HB2	1:B:3450:LEU:HD21	1.93	0.51
1:B:3519:LEU:HD13	1:B:3767:VAL:HG11	1.92	0.51
1:B:4286:GLU:HB3	1:B:4290:MET:HE3	1.92	0.51
1:B:4548:GLN:HG3	1:B:4605:PHE:HD1	1.75	0.51
2:D:42:GLN:HB2	2:D:78:LYS:HG2	1.92	0.51
1:A:918:TRP:O	1:A:922:PHE:HB2	2.10	0.51
1:A:1010:LEU:HB3	1:A:1037:HIS:CE1	2.45	0.51
1:A:1468:LEU:HD22	1:A:1518:LEU:HD21	1.92	0.51
1:A:1995:GLN:HB2	1:A:2024:LYS:NZ	2.26	0.51
1:A:3233:LEU:HD13	1:A:3290:TRP:HE3	1.76	0.51
1:A:4077:ILE:HG13	1:A:4079:GLY:H	1.75	0.51
1:A:4258:PHE:HE1	2:C:19:LEU:HD21	1.75	0.51
1:B:1893:VAL:HG12	1:B:2001:PHE:HZ	1.76	0.51
1:B:3292:LYS:O	1:B:3295:ILE:HG22	2.11	0.51
1:A:967:TYR:CE2	1:A:1015:PRO:HA	2.44	0.51
1:A:1010:LEU:HB3	1:A:1037:HIS:HE1	1.75	0.51
1:A:3286:ARG:HH21	1:A:3286:ARG:HG3	1.75	0.51
1:B:443:ARG:HB2	1:B:446:ASP:HB2	1.93	0.51
1:B:1473:THR:O	1:B:1485:ILE:HD13	2.10	0.51
1:B:1698:LYS:HG2	1:B:2289:ILE:HD12	1.92	0.51
1:B:3001:GLN:HG2	1:B:3004:LEU:HD23	1.92	0.51
1:A:44:PHE:HE2	1:A:48:GLU:HB2	1.75	0.51
1:A:1019:TYR:CZ	1:A:1023:LEU:HD21	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4679:LYS:NZ	1:A:4731:ILE:O	2.42	0.51
1:B:63:ILE:HA	1:B:74:TYR:CD2	2.46	0.51
1:B:1417:GLU:HA	1:B:1470:ARG:HD2	1.93	0.51
1:B:2359:GLN:HG2	1:B:2418:ASP:OD1	2.11	0.51
1:B:4232:LEU:C	1:B:4234:GLN:N	2.69	0.51
1:A:4282:LYS:O	1:A:4286:GLU:HG2	2.11	0.50
1:B:765:GLN:NE2	1:B:817:ILE:HG23	2.26	0.50
1:B:1091:GLU:HG2	1:B:1158:LEU:HD13	1.92	0.50
1:B:2296:GLN:HE21	1:B:2347:MET:HE1	1.76	0.50
1:A:396:ARG:HH21	1:B:404:GLN:CD	2.18	0.50
1:A:816:LEU:HD21	1:B:193:PHE:CZ	2.46	0.50
1:A:3007:THR:C	1:A:3009:ASP:N	2.65	0.50
1:B:909:HIS:CE1	1:B:937:SER:HB2	2.46	0.50
1:B:1428:LEU:CD1	1:B:1488:ASN:HA	2.42	0.50
1:B:1960:ASN:HD21	1:B:2012:GLN:HA	1.76	0.50
1:B:2023:VAL:HG21	1:B:2049:VAL:HG21	1.93	0.50
1:B:3307:VAL:O	1:B:3311:VAL:HG13	2.12	0.50
1:B:3330:SER:HA	1:B:3333:LEU:HB2	1.93	0.50
2:C:33:LEU:HD11	2:C:72:MET:HE1	1.91	0.50
1:A:548:LEU:HD11	1:A:647:PHE:CE2	2.46	0.50
1:A:1205:GLY:HA2	1:A:1215:GLY:C	2.36	0.50
1:A:1515:LEU:CA	1:A:1544:LEU:HD13	2.42	0.50
1:A:1682:HIS:CE1	1:A:2383:ARG:HD2	2.45	0.50
1:B:31:VAL:O	1:B:34:ARG:HB3	2.12	0.50
1:B:739:PRO:HB3	1:B:782:VAL:HG23	1.94	0.50
1:B:2327:TYR:CD1	1:B:2359:GLN:HG3	2.46	0.50
1:A:3511:ASN:HB2	1:B:4007:VAL:HG22	1.94	0.50
1:B:49:LEU:C	1:B:51:GLN:H	2.19	0.50
1:B:71:GLU:OE1	1:B:122:CYS:HA	2.11	0.50
1:B:143:LEU:HD13	1:B:151:PHE:CE2	2.47	0.50
1:B:808:VAL:HG11	1:B:908:TYR:HB3	1.94	0.50
1:B:834:VAL:HG11	1:B:961:VAL:HG13	1.93	0.50
1:B:3100:HIS:O	1:B:3103:LYS:HG3	2.11	0.50
3:E:324:LEU:O	3:E:328:LEU:HG	2.10	0.50
1:A:650:LEU:O	1:A:654:ILE:HG13	2.11	0.50
1:A:846:ALA:HB1	1:A:850:PHE:CE2	2.47	0.50
1:A:2385:PHE:HB3	1:A:2387:PHE:CZ	2.46	0.50
1:A:3458:LEU:HD11	1:A:3465:ALA:HB1	1.92	0.50
1:A:4597:LEU:O	1:A:4601:ILE:HG22	2.11	0.50
1:B:2009:PRO:HB2	1:B:2642:LEU:HD21	1.94	0.50
1:B:2049:VAL:HG22	1:B:2063:ILE:HG12	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:113:CYS:SG	3:E:136:HIS:CE1	3.04	0.50
1:A:3405:LYS:HB2	1:A:3450:LEU:HD21	1.93	0.50
1:B:83:HIS:O	1:B:87:THR:HG23	2.11	0.50
1:B:864:TYR:HA	1:B:936:LEU:HG	1.94	0.50
1:B:3872:CYS:O	1:B:3873:TYR:C	2.55	0.50
1:B:4749:HIS:O	1:B:4753:GLN:HG3	2.11	0.50
2:C:137:VAL:HG13	2:C:141:GLU:HB2	1.93	0.50
1:A:317:VAL:HG12	1:A:318:LEU:N	2.26	0.50
1:A:491:LEU:HD22	1:A:518:ILE:HG12	1.92	0.50
1:A:723:GLN:HG2	1:A:728:GLN:HG3	1.92	0.50
1:A:786:PHE:CE1	1:A:806:LEU:HD13	2.47	0.50
1:A:873:PRO:HG2	1:A:876:LEU:HB2	1.93	0.50
1:A:1050:TYR:HE2	1:A:1255:THR:HG21	1.77	0.50
1:A:1196:GLN:HG2	1:A:1365:HIS:HE1	1.76	0.50
1:A:2340:ILE:HD12	1:A:2401:LEU:HD23	1.93	0.50
1:A:3000:MET:HE2	1:A:3058:LEU:HD13	1.93	0.50
1:A:3200:ILE:HG22	1:A:3202:GLN:H	1.75	0.50
1:A:3408:LEU:HD12	1:A:3411:PHE:CE2	2.44	0.50
1:A:3937:PRO:HA	1:A:3940:THR:HG22	1.94	0.50
1:B:39:ALA:CB	1:B:44:PHE:CD1	2.95	0.50
1:B:2189:VAL:HG21	1:B:2230:MET:HE1	1.93	0.50
1:B:2667:TYR:O	1:B:2668:CYS:SG	2.69	0.50
1:B:2988:LEU:HD21	1:B:2999:TYR:CD1	2.47	0.50
1:B:3003:ILE:O	1:B:3007:THR:HG23	2.12	0.50
1:B:3404:ASP:OD1	1:B:3404:ASP:N	2.41	0.50
1:B:4035:LYS:O	1:B:4036:ASP:C	2.54	0.50
1:B:4077:ILE:HG22	2:D:114:GLY:O	2.11	0.50
1:B:4768:LEU:HA	1:B:4771:LEU:HD12	1.94	0.50
1:A:1058:LEU:HD23	1:A:1061:GLN:HE22	1.75	0.50
1:A:1427:VAL:HG13	1:A:1431:PHE:CE2	2.47	0.50
1:A:2311:VAL:HG13	3:E:56:LEU:HD11	1.94	0.50
1:A:4108:PHE:O	1:A:4112:ARG:HG3	2.12	0.50
1:B:1057:HIS:O	1:B:1061:GLN:HG3	2.12	0.50
1:B:1450:CYS:CB	1:B:1505:GLN:HB2	2.41	0.50
1:B:1453:LEU:C	1:B:1455:GLN:N	2.69	0.50
1:B:1553:HIS:HD2	1:B:1556:LEU:HD23	1.77	0.50
1:B:3273:MET:O	1:B:3273:MET:HE3	2.11	0.50
2:C:44:PRO:HB2	2:C:48:GLU:HB2	1.94	0.50
2:D:124:GLU:O	2:D:128:GLU:HG2	2.12	0.50
1:A:73:PHE:CD1	1:A:158:ALA:O	2.60	0.50
1:A:418:LEU:HD21	1:A:476:LEU:HB2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:683:MET:HE2	1:A:683:MET:HA	1.93	0.50
1:A:881:GLN:HA	1:A:885:LEU:HD12	1.92	0.50
1:A:1156:LYS:HG2	1:A:1304:GLU:HG2	1.94	0.50
1:A:1356:THR:HA	1:A:1400:PHE:HE2	1.77	0.50
1:A:3007:THR:HG21	1:A:3062:PHE:CZ	2.46	0.50
1:B:341:VAL:HB	1:B:417:SER:HB2	1.94	0.50
1:B:834:VAL:HG13	1:B:966:LEU:HD13	1.93	0.50
1:B:852:PRO:CB	1:B:855:LEU:HB3	2.41	0.50
1:B:1044:ARG:C	1:B:1046:ARG:H	2.19	0.50
1:B:1162:THR:O	1:B:1166:ILE:HG13	2.12	0.50
1:B:1359:TYR:CD1	1:B:1406:GLU:HB3	2.47	0.50
1:B:1485:ILE:O	1:B:1489:ARG:HG3	2.12	0.50
1:B:1570:TYR:CE2	1:B:1592:ILE:HG13	2.47	0.50
1:B:2246:VAL:HG13	1:B:2250:SER:HB3	1.94	0.50
1:B:2474:VAL:HG22	1:B:2477:ARG:NH2	2.27	0.50
3:F:27:CYS:SG	3:F:45:ARG:O	2.69	0.50
1:A:85:ILE:CG2	1:A:100:VAL:HG13	2.42	0.49
1:A:662:MET:HB3	1:A:674:LEU:HD11	1.94	0.49
1:A:3273:MET:HE3	1:A:3273:MET:O	2.11	0.49
1:A:3307:VAL:C	1:A:3309:PHE:H	2.19	0.49
1:B:37:LEU:HD12	1:B:38:SER:N	2.26	0.49
1:B:1296:GLY:O	1:B:1300:VAL:HG22	2.12	0.49
1:B:1553:HIS:O	1:B:1553:HIS:CG	2.65	0.49
1:B:2103:ASN:C	1:B:2105:GLN:H	2.19	0.49
1:B:2632:LEU:O	1:B:2649:GLY:HA2	2.12	0.49
1:B:2993:GLY:HA3	1:B:3050:GLU:OE1	2.12	0.49
1:B:4108:PHE:O	1:B:4112:ARG:HG3	2.11	0.49
2:C:24:GLY:HA3	2:C:28:ILE:HD12	1.92	0.49
2:D:86:ILE:HD11	2:D:146:MET:HG2	1.94	0.49
1:A:1233:TRP:HH2	1:A:1281:ALA:HB1	1.77	0.49
1:A:1300:VAL:HA	1:A:1336:ARG:NH1	2.27	0.49
1:A:1565:SER:O	1:A:1569:LYS:HG2	2.11	0.49
1:A:3100:HIS:O	1:A:3103:LYS:HG3	2.11	0.49
1:A:4335:LEU:HD13	1:A:4511:LEU:CD2	2.41	0.49
1:B:3000:MET:HE3	1:B:3054:VAL:HG12	1.92	0.49
1:A:535:LEU:HD12	1:A:682:HIS:CD2	2.46	0.49
1:A:914:VAL:HG11	1:A:1001:TYR:HD1	1.76	0.49
1:A:1101:PHE:HA	1:A:1104:ILE:HD13	1.95	0.49
1:A:2047:ARG:HE	1:A:2066:SER:HB3	1.78	0.49
1:A:2335:GLY:HA3	1:A:2405:ILE:O	2.12	0.49
1:A:3951:VAL:HG13	1:A:4012:ILE:HD13	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4310:MET:HE3	1:A:4335:LEU:HG	1.95	0.49
1:A:4595:VAL:HA	1:A:4598:LEU:HD12	1.94	0.49
1:B:288:THR:HG22	1:B:432:LYS:HB3	1.93	0.49
1:B:786:PHE:HZ	1:B:806:LEU:HD22	1.77	0.49
1:B:1819:MET:CE	1:B:2508:LEU:CD1	2.91	0.49
1:B:1952:PHE:CD1	1:B:1974:ASP:HB2	2.47	0.49
1:B:2070:ILE:HD12	1:B:2094:ILE:CD1	2.40	0.49
1:A:159:LYS:O	1:A:160:LEU:C	2.52	0.49
1:A:244:VAL:O	1:A:248:GLN:HG2	2.12	0.49
1:A:547:VAL:O	1:A:551:GLN:HG3	2.11	0.49
1:A:1929:LEU:HD21	1:A:2241:ILE:HD11	1.94	0.49
1:A:4413:LYS:HD3	1:A:4456:ILE:HD11	1.94	0.49
1:B:477:ALA:O	1:B:481:ILE:HG12	2.11	0.49
3:F:301:MET:SD	3:F:306:ARG:HG3	2.53	0.49
1:A:397:ARG:O	1:A:398:ALA:HB3	2.12	0.49
1:A:1460:GLU:HB2	1:A:1463:ARG:HB3	1.94	0.49
1:A:1510:VAL:O	1:A:1514:LEU:HG	2.13	0.49
1:A:1567:CYS:SG	1:A:1596:THR:HG23	2.52	0.49
1:A:1870:PHE:CE2	1:A:2239:LEU:HD11	2.30	0.49
1:A:2687:LEU:O	1:A:2688:CYS:C	2.55	0.49
1:B:745:TRP:HE1	1:B:810:HIS:CE1	2.31	0.49
1:B:808:VAL:HG22	1:B:933:TYR:CD2	2.48	0.49
1:B:867:HIS:O	1:B:949:ASP:HB2	2.13	0.49
1:B:1451:GLY:O	1:B:1454:ALA:HB3	2.12	0.49
1:B:1848:VAL:O	1:B:1850:LYS:NZ	2.38	0.49
1:B:3588:ARG:HG3	1:B:3648:TYR:CZ	2.47	0.49
1:B:4476:ALA:HB1	1:B:4515:CYS:HA	1.94	0.49
3:E:301:MET:SD	3:E:306:ARG:HG3	2.53	0.49
1:A:686:LEU:O	1:A:690:ILE:HG13	2.12	0.49
1:A:740:PHE:CD1	1:A:778:GLU:HG3	2.48	0.49
1:A:1241:PHE:HE2	1:A:1269:HIS:CD2	2.30	0.49
1:A:1347:LEU:HD22	1:A:1351:TYR:OH	2.13	0.49
1:A:1925:GLN:HB3	1:A:1943:THR:HB	1.95	0.49
1:A:2626:VAL:HG21	1:A:2681:ILE:HD13	1.93	0.49
1:A:4277:VAL:HG21	1:B:3732:ARG:HH22	1.78	0.49
1:B:1300:VAL:CG1	1:B:1336:ARG:HD3	2.43	0.49
1:B:1388:LEU:HG	1:B:1397:MET:HE1	1.95	0.49
1:B:1486:GLN:HG3	1:B:1489:ARG:HH11	1.78	0.49
1:B:3979:ILE:HG21	1:B:4019:ILE:HG23	1.93	0.49
1:B:4560:GLU:HA	1:B:4563:LEU:HD12	1.93	0.49
1:A:31:VAL:O	1:A:35:PRO:HD2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:909:HIS:CD2	1:A:937:SER:HA	2.48	0.49
1:A:1135:LEU:O	1:A:1139:PHE:HD2	1.96	0.49
1:A:1453:LEU:HB3	1:A:1506:VAL:CG1	2.37	0.49
1:A:2356:ILE:HD13	1:A:2377:LEU:HD13	1.94	0.49
1:A:2363:ARG:HH11	1:A:2416:MET:HE1	1.76	0.49
1:A:3988:LEU:H	1:A:3988:LEU:HD12	1.77	0.49
1:B:2292:PHE:CE2	1:B:2386:ASP:HB3	2.47	0.49
1:B:2295:ASN:HB3	1:B:2423:TYR:HB3	1.94	0.49
1:B:3063:MET:HE2	1:B:3170:GLN:HG2	1.95	0.49
1:B:3221:LYS:HD2	1:B:3224:TYR:HD2	1.76	0.49
1:B:4130:ARG:O	1:B:4134:PHE:HD2	1.96	0.49
2:D:60:GLY:HA2	2:D:64:ILE:HG12	1.94	0.49
3:E:309:MET:O	3:E:313:ARG:HG2	2.12	0.49
1:A:129:LEU:HA	1:A:132:LEU:HD12	1.94	0.49
1:A:531:MET:HE1	1:A:535:LEU:HD11	1.94	0.49
1:A:2405:ILE:HD12	1:A:2417:ILE:HD11	1.95	0.49
1:A:2581:ALA:HB2	1:A:2588:LEU:HD22	1.95	0.49
1:A:3412:LEU:HD22	1:A:3454:ILE:HD12	1.95	0.49
1:A:3872:CYS:SG	1:A:3875:CYS:CB	2.93	0.49
1:A:4692:LEU:HD21	1:A:4740:ILE:HG12	1.94	0.49
1:B:1159:LEU:HD13	1:B:1298:LEU:HB2	1.94	0.49
1:B:2040:LEU:HD11	1:B:2085:PRO:HB3	1.95	0.49
1:B:2052:LEU:HD11	1:B:2060:ILE:HD12	1.95	0.49
1:B:3309:PHE:HD2	1:B:3850:THR:HA	1.77	0.49
1:A:396:ARG:HH21	1:B:404:GLN:HE22	1.61	0.49
1:A:1666:PHE:HA	1:A:1669:THR:OG1	2.13	0.49
1:A:2474:VAL:HG13	1:A:2477:ARG:HH21	1.78	0.49
1:A:2548:LEU:HD11	1:A:2588:LEU:HA	1.95	0.49
1:A:2555:LEU:HD23	1:A:2565:LEU:HD22	1.95	0.49
1:A:3410:GLN:HE21	1:A:3857:ARG:HH11	1.60	0.49
1:A:3548:SER:HA	1:A:3551:LYS:HE2	1.95	0.49
1:A:4228:LEU:HD11	1:B:3829:LEU:HD22	1.95	0.49
1:B:1151:SER:O	1:B:1154:ILE:HG12	2.13	0.49
1:B:1930:LEU:HD13	1:B:2219:HIS:CB	2.42	0.49
1:B:2982:LEU:HD11	1:B:3027:GLN:CB	2.43	0.49
1:B:3735:ALA:O	1:B:3739:ILE:HG13	2.13	0.49
3:F:309:MET:O	3:F:313:ARG:HG2	2.12	0.49
1:A:1351:TYR:HA	1:A:1354:LEU:HD12	1.95	0.49
1:A:3307:VAL:C	1:A:3309:PHE:N	2.71	0.49
1:A:4001:VAL:C	1:A:4003:ILE:N	2.69	0.49
1:B:946:ASN:O	1:B:947:ARG:C	2.56	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1673:PHE:HD1	1:B:1714:PHE:HA	1.78	0.49
1:B:3226:GLN:HA	1:B:3289:ASN:ND2	2.28	0.49
2:C:10:ILE:HG13	2:C:66:PHE:HZ	1.76	0.49
2:D:100:TYR:CD1	2:D:136:GLN:HB2	2.48	0.49
1:A:675:SER:HB3	1:A:722:LEU:HD12	1.95	0.48
1:A:1515:LEU:HB2	1:A:1544:LEU:HB3	1.95	0.48
1:A:1895:ARG:NH2	1:A:2180:VAL:HG11	2.27	0.48
1:A:2373:ARG:NH2	1:A:2393:GLU:OE2	2.45	0.48
1:A:4480:ALA:HB2	1:A:4521:ASN:OD1	2.12	0.48
1:B:1355:ILE:HD13	1:B:1397:MET:HG2	1.93	0.48
1:B:2266:MET:HE1	1:B:2659:ALA:HB2	1.93	0.48
1:B:3412:LEU:HD22	1:B:3454:ILE:HD12	1.95	0.48
1:B:4309:PHE:CE1	1:B:4338:ILE:HD11	2.48	0.48
1:B:4314:ILE:HD11	1:B:4479:MET:HE1	1.95	0.48
1:B:4485:LEU:HD12	1:B:4524:GLN:HG2	1.93	0.48
3:E:3:ARG:HG2	3:E:18:ARG:HG2	1.93	0.48
1:A:92:ILE:HD12	1:A:97:LEU:HA	1.94	0.48
1:A:874:VAL:HG13	1:B:189:VAL:HG11	1.94	0.48
1:A:1383:TYR:O	1:A:1387:GLN:HG2	2.13	0.48
1:A:1515:LEU:CD2	1:A:1555:GLN:HG3	2.43	0.48
1:A:3521:GLU:N	1:B:3791:SER:O	2.46	0.48
1:B:272:ARG:HD2	1:B:338:TYR:CE1	2.47	0.48
1:B:313:LEU:HD21	1:B:332:LEU:HD21	1.95	0.48
1:B:1118:LEU:HD13	1:B:1273:LEU:HB2	1.94	0.48
1:B:1374:GLU:O	1:B:1375:SER:C	2.56	0.48
1:B:1536:GLU:O	1:B:1540:VAL:HG23	2.13	0.48
1:B:1859:MET:HE2	1:B:2230:MET:CB	2.44	0.48
1:B:2676:ASN:C	1:B:2678:ALA:N	2.70	0.48
1:B:3410:GLN:NE2	1:B:3853:ALA:HB2	2.28	0.48
2:C:106:LEU:CD2	2:C:126:ILE:CD1	2.80	0.48
2:D:16:ALA:O	2:D:20:PHE:HD2	1.95	0.48
1:A:334:LEU:HD11	1:A:409:LEU:HD13	1.95	0.48
1:A:1682:HIS:HE1	1:A:2383:ARG:HB2	1.76	0.48
1:A:3108:TYR:O	1:A:3112:GLN:HG2	2.13	0.48
1:A:4602:ASN:HA	1:A:4607:ARG:HE	1.77	0.48
1:B:711:TYR:CD2	1:B:887:PRO:HA	2.48	0.48
1:B:811:LEU:HD23	1:B:933:TYR:HE1	1.77	0.48
1:B:857:ARG:O	1:B:861:ILE:HG13	2.13	0.48
1:B:1384:LEU:HB3	1:B:1430:PHE:CE1	2.47	0.48
1:B:1555:GLN:HA	1:B:1558:ASN:ND2	2.26	0.48
1:B:4101:TYR:OH	2:D:85:GLU:HB2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4238:LEU:CG	1:B:4287:THR:HG21	2.38	0.48
1:A:548:LEU:HD13	1:A:642:LYS:C	2.38	0.48
1:A:1190:PRO:HG2	1:A:1195:LEU:HD21	1.95	0.48
1:A:1459:VAL:HG21	1:A:1464:LEU:HD13	1.95	0.48
1:A:1899:MET:CE	1:A:2233:LEU:HB2	2.43	0.48
1:A:2118:VAL:HA	1:A:2644:PRO:HA	1.94	0.48
1:A:3045:ARG:NH2	1:A:3153:PHE:HB2	2.28	0.48
1:A:3226:GLN:HA	1:A:3289:ASN:ND2	2.27	0.48
1:A:4252:GLU:O	1:A:4256:ARG:HG3	2.13	0.48
1:A:4641:TYR:CD1	1:A:4655:ASP:HA	2.48	0.48
1:B:3095:VAL:HG12	1:B:3190:TRP:HZ3	1.76	0.48
1:B:4020:LEU:O	1:B:4024:ILE:HG13	2.13	0.48
1:B:4258:PHE:O	1:B:4261:ARG:N	2.44	0.48
1:B:4696:LYS:O	1:B:4699:ILE:HG22	2.13	0.48
1:A:422:LEU:HD11	1:A:537:LEU:HD23	1.95	0.48
1:A:1665:THR:O	1:A:1669:THR:HG23	2.13	0.48
1:A:2296:GLN:HE21	1:A:2347:MET:HE1	1.77	0.48
1:A:2320:ARG:HH21	3:E:68:GLU:HB3	1.78	0.48
1:A:3212:LYS:HA	1:A:3215:LEU:HG	1.94	0.48
1:A:3922:ARG:NH1	1:A:3970:TYR:OH	2.46	0.48
1:B:2025:ILE:CD1	1:B:2075:MET:HE3	2.44	0.48
1:B:2301:VAL:HG21	1:B:2422:ILE:HG21	1.95	0.48
1:B:2564:ASP:OD1	1:B:2631:LYS:CB	2.45	0.48
1:B:3309:PHE:CE1	1:B:3411:PHE:HB3	2.48	0.48
1:A:411:ALA:O	1:A:412:TRP:C	2.56	0.48
1:A:1030:MET:HE3	1:A:1035:ILE:HD13	1.96	0.48
1:A:1118:LEU:HA	1:A:1121:ILE:HD12	1.95	0.48
1:A:2189:VAL:HG21	1:A:2230:MET:HE1	1.92	0.48
1:A:2480:VAL:HA	1:A:2524:GLN:HG3	1.95	0.48
1:A:2578:ARG:HD2	1:A:2659:ALA:HA	1.96	0.48
1:A:3161:THR:O	1:A:3165:LEU:HG	2.14	0.48
1:A:3418:GLU:HG2	1:A:3461:TYR:CE1	2.49	0.48
1:A:3521:GLU:CG	1:B:3793:ASN:HA	2.37	0.48
1:B:255:LYS:HG2	1:B:258:ARG:NH2	2.29	0.48
1:B:740:PHE:CD1	1:B:778:GLU:HG3	2.48	0.48
1:B:1009:ILE:O	1:B:1013:LEU:HG	2.14	0.48
1:B:1094:PHE:HB3	1:B:1161:ALA:HB1	1.93	0.48
1:B:4311:ALA:O	1:B:4315:GLU:HG2	2.13	0.48
2:D:20:PHE:CD2	2:D:36:VAL:HG22	2.49	0.48
3:F:112:ILE:HG22	3:F:136:HIS:CE1	2.48	0.48
1:A:349:ILE:CD1	1:A:424:LEU:HD13	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1404:SER:HB2	1:A:1406:GLU:HG2	1.95	0.48
1:A:2300:ASP:HB2	1:A:3583:ARG:HH22	1.79	0.48
1:A:3063:MET:HE1	1:A:3167:LEU:HD12	1.95	0.48
1:A:4071:TRP:O	1:A:4075:LEU:HD12	2.13	0.48
1:B:1427:VAL:HG13	1:B:1431:PHE:CE2	2.47	0.48
1:B:1428:LEU:HD13	1:B:1491:LEU:HB2	1.94	0.48
1:B:1428:LEU:HB3	1:B:1491:LEU:HB3	1.95	0.48
1:B:1457:ALA:H	1:B:1510:VAL:HG22	1.78	0.48
1:B:3308:SER:HA	1:B:3319:LEU:HD13	1.96	0.48
1:A:284:ILE:HG22	1:A:286:PRO:HD2	1.96	0.48
1:A:948:LEU:HG	1:A:953:CYS:SG	2.54	0.48
1:A:4325:TYR:CZ	1:A:4495:ILE:HA	2.48	0.48
1:B:286:PRO:HB3	1:B:295:VAL:CG2	2.41	0.48
1:B:1194:LYS:HA	1:B:1370:SER:C	2.38	0.48
1:B:1256:ILE:HG12	1:B:1259:GLU:H	1.78	0.48
1:B:1551:ALA:O	1:B:1554:LEU:HD22	2.14	0.48
1:B:1924:LEU:HD23	1:B:1944:ARG:HA	1.95	0.48
1:B:1925:GLN:HB2	1:B:1945:LEU:HD21	1.96	0.48
1:B:4071:TRP:O	1:B:4075:LEU:HD12	2.13	0.48
2:C:52:MET:O	2:C:56:VAL:HG22	2.13	0.48
1:A:738:ALA:HB3	1:A:741:SER:HB3	1.96	0.48
1:A:857:ARG:O	1:A:861:ILE:HG13	2.14	0.48
1:A:1027:SER:N	1:A:1028:PRO:HD2	2.29	0.48
1:A:1859:MET:HE2	1:A:2230:MET:CB	2.44	0.48
1:A:2405:ILE:CD1	1:A:2417:ILE:HD11	2.44	0.48
1:A:3930:CYS:HB3	1:A:3981:LYS:HG3	1.95	0.48
1:A:4307:LYS:CD	1:A:4479:MET:HA	2.44	0.48
1:A:4438:MET:HE3	1:A:4440:ILE:HD11	1.95	0.48
1:B:836:ILE:O	1:B:840:LEU:HG	2.14	0.48
1:B:1082:SER:HA	1:B:1085:TYR:HB3	1.96	0.48
1:B:1237:ASN:HA	1:B:1285:LYS:HD2	1.96	0.48
2:C:65:ASP:H	2:C:68:GLU:HB3	1.78	0.48
1:A:913:GLU:CD	1:A:913:GLU:H	2.20	0.48
1:A:1022:GLN:C	1:A:1024:SER:N	2.71	0.48
1:A:1434:LEU:CD1	1:A:1449:LEU:HD12	2.44	0.48
1:A:1601:SER:N	1:A:2481:SER:HB3	2.29	0.48
1:A:1902:LEU:HD21	1:A:1967:LEU:HD13	1.96	0.48
1:A:2517:ALA:HB3	1:A:2522:GLN:HG2	1.94	0.48
1:A:2985:LEU:HD12	1:A:2988:LEU:HD13	1.95	0.48
1:A:3226:GLN:OE1	1:A:3227:LEU:HD22	2.14	0.48
1:A:3532:CYS:O	1:A:3536:ASN:HB3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:97:LEU:HD13	1:B:201:PHE:HZ	1.79	0.48
1:B:1278:LEU:HB3	1:B:1281:ALA:CB	2.38	0.48
1:B:1895:ARG:HH22	1:B:2180:VAL:HG11	1.78	0.48
1:B:2220:THR:CG2	1:B:2224:GLU:HA	2.44	0.48
1:B:4021:GLN:HG2	1:B:4025:LYS:HE2	1.96	0.48
1:B:4665:ILE:O	1:B:4669:ILE:HG13	2.14	0.48
1:A:1177:LEU:HG	1:A:1233:TRP:CD2	2.48	0.47
1:A:2040:LEU:HD11	1:A:2085:PRO:HB3	1.95	0.47
1:B:296:ARG:HA	1:B:299:PHE:CD2	2.49	0.47
1:B:1319:LEU:HD22	1:B:1354:LEU:HD21	1.96	0.47
1:B:1921:ILE:HD11	1:B:1969:VAL:HG11	1.96	0.47
1:B:2405:ILE:HG13	1:B:2417:ILE:HD11	1.96	0.47
1:B:3516:LEU:HD11	1:B:3760:LEU:HD21	1.95	0.47
1:A:1693:CYS:HB3	1:A:1716:CYS:HB2	1.95	0.47
1:A:4596:MET:O	1:A:4600:GLN:HG2	2.14	0.47
1:B:303:VAL:HG22	1:B:377:ILE:CG1	2.44	0.47
1:B:347:MET:HE2	1:B:351:HIS:HE1	1.80	0.47
1:B:863:ASP:HB2	1:B:1009:ILE:HG12	1.96	0.47
1:B:908:TYR:CD2	1:B:908:TYR:N	2.81	0.47
1:B:1412:MET:HB3	1:B:1463:ARG:HE	1.78	0.47
1:B:3226:GLN:OE1	1:B:3227:LEU:HD22	2.14	0.47
1:A:92:ILE:HG21	1:A:100:VAL:HG21	1.96	0.47
1:A:273:PHE:HD2	1:A:338:TYR:HB2	1.79	0.47
1:A:786:PHE:HE1	1:A:806:LEU:HD13	1.78	0.47
1:A:864:TYR:HA	1:A:936:LEU:HD21	1.97	0.47
1:A:906:PRO:HG2	1:A:908:TYR:CE2	2.49	0.47
1:A:3142:ARG:O	1:A:3146:LYS:HG3	2.14	0.47
1:A:4119:LEU:HD23	3:E:329:VAL:HG21	1.96	0.47
1:B:1831:ALA:O	1:B:2568:GLU:HG2	2.14	0.47
1:B:2405:ILE:CD1	1:B:2417:ILE:HD11	2.44	0.47
1:B:3440:SER:OG	1:B:3443:GLN:OE1	2.20	0.47
1:B:3747:ASP:O	1:B:3750:TYR:HB3	2.14	0.47
1:A:137:CYS:O	1:A:240:ILE:HG23	2.13	0.47
1:A:799:VAL:HB	1:A:851:VAL:HG11	1.96	0.47
1:A:1023:LEU:HD22	1:A:1038:THR:HG23	1.96	0.47
1:A:1176:TYR:CD1	1:A:1281:ALA:HB3	2.50	0.47
1:A:1570:TYR:C	1:A:1570:TYR:CD2	2.93	0.47
1:A:2025:ILE:CD1	1:A:2075:MET:HE3	2.44	0.47
1:A:2704:VAL:O	1:A:2974:ARG:NH2	2.47	0.47
1:A:3175:THR:HA	1:A:3181:ILE:HG13	1.95	0.47
1:B:1500:VAL:HG13	1:B:1547:ALA:HA	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2181:GLN:HG3	1:B:2188:LEU:CD1	2.44	0.47
1:B:2688:CYS:O	1:B:2689:PRO:C	2.56	0.47
1:B:2982:LEU:HD11	1:B:3027:GLN:HG3	1.96	0.47
1:B:3950:LYS:HG2	1:B:3971:GLU:OE1	2.15	0.47
1:B:4745:ILE:CD1	1:B:4771:LEU:HD13	2.45	0.47
2:C:28:ILE:HG22	2:C:32:GLU:HG2	1.96	0.47
3:F:325:LEU:O	3:F:329:VAL:HG23	2.15	0.47
1:A:29:TRP:CD1	1:A:160:LEU:HD21	2.50	0.47
1:A:984:ARG:HG2	1:A:989:LYS:HB2	1.97	0.47
1:A:1825:ASN:HB3	1:A:2475:LEU:HD23	1.96	0.47
1:A:4413:LYS:CD	1:A:4456:ILE:HD11	2.45	0.47
1:B:239:PHE:O	1:B:243:ASN:ND2	2.48	0.47
1:B:345:THR:O	1:B:349:ILE:HG12	2.14	0.47
1:B:1576:VAL:HA	1:B:1579:LYS:HD2	1.96	0.47
1:B:1909:ARG:HB3	1:B:1911:HIS:CD2	2.49	0.47
1:B:3173:LYS:HA	1:B:3216:PHE:HZ	1.78	0.47
1:B:3418:GLU:HG2	1:B:3461:TYR:CE1	2.49	0.47
1:B:3884:ILE:HD11	1:B:3913:ASN:HD22	1.80	0.47
2:C:49:LEU:CD1	2:C:53:ILE:HD12	2.45	0.47
1:A:3588:ARG:HG3	1:A:3648:TYR:CZ	2.49	0.47
1:A:3772:PRO:HG2	1:B:3918:ALA:HA	1.95	0.47
1:A:4424:VAL:HA	1:A:4459:LEU:HD21	1.96	0.47
1:A:4547:GLU:HG2	1:A:4605:PHE:CE2	2.49	0.47
1:B:694:ASP:CG	1:B:750:HIS:HB3	2.40	0.47
1:B:963:TYR:OH	1:B:1013:LEU:HB3	2.15	0.47
1:B:2368:ILE:CD1	1:B:2387:PHE:CZ	2.93	0.47
1:B:3548:SER:HA	1:B:3551:LYS:HE2	1.95	0.47
1:B:4125:HIS:HA	1:B:4165:LEU:HD12	1.96	0.47
1:A:270:ILE:O	1:A:274:GLN:HG3	2.14	0.47
1:A:327:GLN:NE2	1:A:512:MET:SD	2.88	0.47
1:A:710:LEU:HG	1:A:714:ASN:HD21	1.80	0.47
1:A:860:LEU:HB2	1:A:1005:ILE:HD13	1.96	0.47
1:A:1039:LEU:CD2	1:A:1089:ILE:HD13	2.44	0.47
1:A:1159:LEU:CD2	1:A:1305:MET:HB3	2.45	0.47
1:A:1388:LEU:O	1:A:1394:ARG:NE	2.46	0.47
1:A:1708:TYR:HB3	1:A:2353:ARG:NH2	2.30	0.47
1:A:2356:ILE:HG13	1:A:2379:LEU:HD13	1.95	0.47
1:A:3455:TRP:CZ3	1:A:3458:LEU:HD22	2.50	0.47
1:A:3530:ASP:O	1:A:3531:PRO:C	2.58	0.47
1:A:3884:ILE:HD11	1:A:3913:ASN:HD22	1.79	0.47
1:A:4071:TRP:CE2	1:A:4075:LEU:HD11	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4307:LYS:NZ	1:A:4478:VAL:HB	2.30	0.47
1:A:4533:LEU:HB2	1:A:4587:LEU:HB3	1.96	0.47
1:B:49:LEU:O	1:B:51:GLN:N	2.48	0.47
1:B:544:LYS:O	1:B:548:LEU:HG	2.14	0.47
1:B:549:GLN:O	1:B:553:LYS:HG2	2.14	0.47
1:B:755:SER:O	1:B:759:ARG:HG3	2.14	0.47
1:B:1094:PHE:CE1	1:B:1162:THR:HA	2.50	0.47
1:B:1909:ARG:HB3	1:B:1911:HIS:NE2	2.30	0.47
1:B:3034:MET:SD	1:B:3034:MET:N	2.87	0.47
1:B:3098:CYS:SG	1:B:3167:LEU:HD22	2.55	0.47
1:B:3417:LEU:HD13	1:B:3461:TYR:CD2	2.50	0.47
1:B:3515:THR:O	1:B:3519:LEU:HG	2.15	0.47
1:B:4109:LEU:CD1	1:B:4114:LYS:HB2	2.45	0.47
1:B:4267:LEU:O	1:B:4271:LEU:HG	2.15	0.47
1:B:4413:LYS:HD3	1:B:4456:ILE:HD11	1.97	0.47
1:B:4615:GLY:HA2	1:B:4618:ARG:HD2	1.97	0.47
1:A:310:LEU:HD11	1:A:383:GLU:HG2	1.97	0.47
1:A:793:ASN:O	1:A:797:GLY:N	2.48	0.47
1:B:45:GLU:O	1:B:46:MET:C	2.58	0.47
1:B:283:PHE:HB3	1:B:443:ARG:NH2	2.30	0.47
1:B:1126:ALA:HB1	1:B:1262:ILE:HG23	1.96	0.47
1:B:1896:ARG:HA	1:B:1955:LEU:O	2.15	0.47
1:B:3969:GLN:O	1:B:3973:LEU:HG	2.15	0.47
1:B:4525:LEU:HB3	1:B:4532:THR:HG21	1.97	0.47
2:C:66:PHE:HB3	2:C:67:PRO:HD3	1.97	0.47
3:F:65:TYR:HB3	3:F:70:PHE:HE2	1.80	0.47
1:A:191:MET:N	1:A:191:MET:SD	2.88	0.47
1:A:271:ASN:N	1:A:271:ASN:HD22	2.13	0.47
1:A:292:ALA:HB1	1:A:346:CYS:HB2	1.95	0.47
1:A:315:LEU:O	1:A:317:VAL:HG23	2.15	0.47
1:A:1048:SER:O	1:A:1049:SER:C	2.55	0.47
1:A:1515:LEU:HD11	1:A:1556:LEU:HD23	1.97	0.47
1:A:1594:GLU:HG2	1:A:1595:CYS:N	2.30	0.47
1:A:1921:ILE:HD11	1:A:1969:VAL:HG11	1.96	0.47
1:A:3284:ALA:HA	1:A:3331:LYS:HD2	1.97	0.47
1:B:285:MET:N	1:B:286:PRO:HD2	2.30	0.47
1:B:733:GLN:HA	1:B:738:ALA:HB2	1.96	0.47
1:B:1356:THR:HA	1:B:1400:PHE:CE2	2.50	0.47
1:B:3190:TRP:CD1	1:B:3190:TRP:H	2.33	0.47
1:B:3848:GLN:HE21	1:B:3849:PRO:HD2	1.80	0.47
1:B:4071:TRP:CE2	1:B:4075:LEU:HD11	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:113:CYS:HB3	3:F:120:ASP:O	2.15	0.47
3:F:120:ASP:HB3	3:F:123:HIS:HB2	1.97	0.47
1:A:506:PRO:HG3	1:A:526:ASP:OD2	2.14	0.47
1:A:530:LEU:O	1:A:534:LEU:HG	2.14	0.47
1:A:1570:TYR:CD2	1:A:1592:ILE:HG21	2.50	0.47
1:A:1875:MET:HG2	1:A:1877:TYR:CZ	2.50	0.47
1:A:2122:LEU:HD23	1:A:2136:ILE:HD11	1.96	0.47
1:A:2223:ASN:HB2	1:A:2225:GLN:HG3	1.97	0.47
1:A:2479:VAL:HG21	1:A:2521:VAL:HG13	1.97	0.47
1:A:3292:LYS:O	1:A:3295:ILE:HG22	2.15	0.47
1:A:4006:PRO:HG2	1:B:3507:HIS:O	2.14	0.47
1:A:4135:THR:H	1:A:4142:ARG:HD3	1.79	0.47
1:B:1431:PHE:O	1:B:1435:PHE:HD2	1.98	0.47
1:B:2202:ILE:HG21	1:B:2232:LEU:HD11	1.97	0.47
1:B:2405:ILE:HD12	1:B:2417:ILE:HD11	1.96	0.47
1:B:2701:LEU:HD13	1:B:3002:VAL:HG13	1.95	0.47
1:A:82:THR:HB	1:A:132:LEU:HD22	1.96	0.46
1:A:485:THR:O	1:A:489:GLN:HG2	2.15	0.46
1:A:1233:TRP:HH2	1:A:1281:ALA:CB	2.27	0.46
1:A:1453:LEU:CB	1:A:1506:VAL:HG13	2.38	0.46
1:A:3766:LYS:HB3	1:A:3795:TYR:CE2	2.50	0.46
1:B:3090:LEU:CD1	1:B:3184:PRO:HB3	2.43	0.46
1:B:4112:ARG:NH2	2:D:128:GLU:HB3	2.30	0.46
2:D:70:LEU:O	2:D:73:MET:HG2	2.15	0.46
1:A:260:CYS:O	1:A:263:LEU:HG	2.15	0.46
1:A:317:VAL:O	1:A:318:LEU:HG	2.15	0.46
1:A:318:LEU:HD13	1:A:329:VAL:HG11	1.97	0.46
1:A:1194:LYS:HA	1:A:1370:SER:C	2.41	0.46
1:A:1295:THR:O	1:A:1299:ILE:HG13	2.15	0.46
1:A:1571:LEU:C	1:A:1573:GLN:H	2.23	0.46
1:A:3417:LEU:HD13	1:A:3461:TYR:CD2	2.49	0.46
1:A:3456:PRO:HA	1:A:3496:ILE:HD11	1.96	0.46
1:B:986:LYS:HG3	1:B:1113:HIS:CE1	2.50	0.46
1:B:1963:LYS:HD3	1:B:1966:TYR:CZ	2.50	0.46
1:B:3905:LEU:HD23	1:B:3932:LEU:HD11	1.96	0.46
1:B:4128:TRP:O	1:B:4129:LEU:C	2.57	0.46
1:B:4710:TRP:O	1:B:4714:LEU:HG	2.15	0.46
1:A:1159:LEU:HD23	1:A:1305:MET:HB3	1.98	0.46
1:A:1431:PHE:O	1:A:1435:PHE:HD2	1.98	0.46
1:A:1525:MET:SD	1:A:1534:PHE:HA	2.56	0.46
1:A:2523:GLN:HA	1:A:2526:LYS:HD2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2700:ALA:O	1:A:2704:VAL:HG13	2.14	0.46
1:A:3301:LEU:HD23	1:A:3301:LEU:HA	1.76	0.46
1:A:3419:SER:HB3	1:A:3425:ARG:CG	2.46	0.46
1:A:3749:VAL:HG21	1:A:3817:ILE:HD12	1.97	0.46
1:A:3887:LEU:HD13	1:A:3905:LEU:HD21	1.97	0.46
1:A:4328:PRO:HB2	1:A:4332:PHE:HE2	1.79	0.46
1:B:341:VAL:HB	1:B:417:SER:CB	2.45	0.46
1:B:470:GLY:O	1:B:474:VAL:HG23	2.15	0.46
1:B:765:GLN:HE22	1:B:817:ILE:HG23	1.80	0.46
1:B:1019:TYR:OH	1:B:1038:THR:HA	2.15	0.46
1:B:2053:PHE:O	1:B:2138:ARG:HD2	2.15	0.46
1:B:3456:PRO:HA	1:B:3496:ILE:HD11	1.96	0.46
1:A:273:PHE:CD2	1:A:338:TYR:HB2	2.51	0.46
1:A:471:VAL:HG21	1:A:641:ARG:HG2	1.98	0.46
1:A:847:GLN:HG3	1:A:976:ALA:HB2	1.98	0.46
1:A:1058:LEU:HD23	1:A:1061:GLN:NE2	2.29	0.46
1:A:3527:LEU:HD21	1:A:3757:ARG:HD3	1.97	0.46
1:A:3536:ASN:HD21	1:A:3815:SER:HB2	1.80	0.46
1:A:4101:TYR:HA	1:A:4104:ARG:HB2	1.97	0.46
1:A:4195:HIS:NE2	2:C:35:THR:HG21	2.30	0.46
1:B:274:GLN:O	1:B:277:VAL:HG22	2.16	0.46
1:B:471:VAL:O	1:B:475:ILE:HG12	2.15	0.46
1:B:1159:LEU:CA	1:B:1298:LEU:HD13	2.35	0.46
1:B:2262:VAL:HG13	1:B:2265:ILE:HD12	1.97	0.46
1:B:2509:ALA:HB2	1:B:2528:LEU:HD23	1.97	0.46
1:B:2985:LEU:HD23	1:B:2988:LEU:HD22	1.97	0.46
1:B:3053:LEU:HD13	1:B:3160:LEU:CD1	2.45	0.46
1:B:3419:SER:HB3	1:B:3425:ARG:CG	2.46	0.46
1:B:3455:TRP:CZ3	1:B:3458:LEU:HD22	2.50	0.46
1:B:4128:TRP:CZ2	3:F:328:LEU:HD21	2.51	0.46
1:B:4750:LYS:O	1:B:4754:VAL:HG23	2.15	0.46
1:A:71:GLU:HB2	1:A:72:PRO:HD3	1.97	0.46
1:A:718:VAL:HG12	1:A:763:ILE:HD12	1.97	0.46
1:A:862:PHE:O	1:A:866:LEU:HG	2.15	0.46
1:A:984:ARG:HH11	1:A:984:ARG:CB	2.24	0.46
1:A:1233:TRP:CE3	1:A:1278:LEU:HD13	2.51	0.46
1:A:1963:LYS:HD3	1:A:1966:TYR:CZ	2.50	0.46
1:A:2194:PRO:HG2	1:A:2251:TYR:OH	2.16	0.46
1:B:89:CYS:SG	1:B:239:PHE:CD2	2.97	0.46
1:B:284:ILE:O	1:B:441:ALA:N	2.48	0.46
1:B:387:MET:O	1:B:390:GLN:HG2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:658:ILE:O	1:B:662:MET:HB2	2.16	0.46
1:B:3001:GLN:NE2	1:B:3138:PRO:CD	2.78	0.46
1:B:3021:LEU:HD12	1:B:3024:LEU:HD23	1.97	0.46
1:B:4632:GLN:HA	1:B:4681:LEU:HD21	1.98	0.46
3:E:302:SER:OG	3:E:305:GLU:HB3	2.16	0.46
3:F:324:LEU:O	3:F:328:LEU:HG	2.16	0.46
1:A:104:CYS:SG	1:A:136:LEU:HD22	2.56	0.46
1:A:349:ILE:HG23	1:A:429:LEU:HD11	1.96	0.46
1:A:735:LEU:HD13	1:A:753:SER:HA	1.96	0.46
1:A:847:GLN:HG3	1:A:976:ALA:CB	2.46	0.46
1:A:1203:ALA:O	1:A:1204:ILE:C	2.57	0.46
1:A:1428:LEU:CD1	1:A:1488:ASN:HA	2.46	0.46
1:B:1561:VAL:CG2	1:B:1810:LEU:HD22	2.43	0.46
1:B:2264:SER:HB3	1:B:2652:HIS:CE1	2.51	0.46
1:B:2307:ASP:HB2	1:B:2336:PHE:HB2	1.97	0.46
1:B:2368:ILE:CG2	1:B:2377:LEU:HD11	2.43	0.46
2:D:6:THR:HG23	2:D:9:GLN:H	1.79	0.46
3:E:28:TYR:CE2	3:E:122:ASN:HB3	2.51	0.46
1:A:280:ASN:HD22	1:A:523:ARG:HH11	1.64	0.46
1:A:283:PHE:HA	1:A:442:LEU:O	2.16	0.46
1:A:963:TYR:OH	1:A:1013:LEU:HB3	2.16	0.46
1:A:3910:PHE:HB2	1:A:3929:MET:HE1	1.97	0.46
1:A:4001:VAL:C	1:A:4003:ILE:H	2.22	0.46
1:A:4232:LEU:HD13	1:B:3750:TYR:CB	2.36	0.46
1:A:4325:TYR:HB3	1:A:4501:GLY:HA2	1.98	0.46
1:B:1105:ASP:HB3	1:B:1108:THR:HB	1.98	0.46
1:B:1561:VAL:HG13	1:B:1810:LEU:HD22	1.97	0.46
1:B:2117:HIS:CD2	1:B:2642:LEU:HD22	2.51	0.46
1:B:2677:THR:HA	1:B:2680:LYS:HD2	1.98	0.46
1:B:4206:LEU:HB2	1:B:4207:PRO:HD3	1.98	0.46
1:B:4745:ILE:HB	1:B:4746:PRO:HD3	1.97	0.46
1:A:664:ASN:HD21	1:B:202:ASN:HB3	1.81	0.46
1:A:917:ASN:HA	1:A:920:LYS:HD2	1.98	0.46
1:A:1101:PHE:O	1:A:1104:ILE:HB	2.14	0.46
1:A:1678:TRP:HB3	1:A:1714:PHE:CD1	2.51	0.46
1:A:3313:GLU:O	1:A:3317:PRO:HD3	2.15	0.46
1:A:3880:THR:O	1:A:3884:ILE:HG12	2.16	0.46
1:A:4281:THR:HG22	1:A:4283:LEU:H	1.81	0.46
1:A:4339:ILE:HD13	1:A:4476:ALA:HB2	1.97	0.46
1:B:62:GLU:O	1:B:66:HIS:HB3	2.15	0.46
1:B:327:GLN:O	1:B:331:VAL:HG23	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1596:THR:HG22	1:B:2478:LEU:HD13	1.98	0.46
1:B:2291:PHE:CZ	1:B:2350:THR:HB	2.51	0.46
1:B:4101:TYR:HA	1:B:4104:ARG:HB2	1.97	0.46
2:D:51:ASP:HA	2:D:54:ASN:HD22	1.81	0.46
2:D:118:THR:O	2:D:119:ASP:C	2.58	0.46
1:A:110:PHE:CZ	1:A:114:ARG:HD2	2.51	0.46
1:A:506:PRO:HB2	1:A:523:ARG:NH2	2.29	0.46
1:A:1039:LEU:HD22	1:A:1130:LYS:HE2	1.98	0.46
1:A:1515:LEU:HD23	1:A:1555:GLN:HG3	1.98	0.46
1:B:269:TYR:CD1	1:B:339:ALA:HA	2.50	0.46
1:B:484:LEU:O	1:B:488:PHE:HD1	1.99	0.46
1:B:668:ASN:HA	1:B:671:ARG:HB2	1.98	0.46
1:B:1377:LEU:HD12	1:B:1377:LEU:H	1.81	0.46
1:B:2687:LEU:HD13	1:B:2991:VAL:HG11	1.98	0.46
1:B:3046:SER:HB2	1:B:3049:ASN:HD21	1.80	0.46
1:B:3108:TYR:O	1:B:3112:GLN:HG2	2.15	0.46
1:B:4730:ALA:O	1:B:4731:ILE:C	2.59	0.46
2:C:26:GLY:O	2:C:61:ASN:HA	2.16	0.46
1:A:200:VAL:CB	1:B:715:HIS:ND1	2.77	0.46
1:A:511:ILE:HG13	1:A:512:MET:N	2.31	0.46
1:A:1015:PRO:HG3	1:A:1041:TRP:CE2	2.50	0.46
1:A:1132:GLN:HE22	1:A:1293:ARG:HH21	1.62	0.46
1:A:1380:CYS:O	1:A:1380:CYS:SG	2.74	0.46
1:A:1568:LYS:HG2	1:A:1817:PHE:HZ	1.80	0.46
1:A:1877:TYR:HB2	1:A:1886:ARG:HG3	1.98	0.46
1:A:2385:PHE:HB3	1:A:2387:PHE:CE2	2.50	0.46
1:A:2405:ILE:HG13	1:A:2417:ILE:HD11	1.97	0.46
1:B:1345:GLU:CD	1:B:1345:GLU:H	2.24	0.46
1:B:3099:LEU:HB2	1:B:3190:TRP:CZ3	2.51	0.46
1:B:3909:LEU:HD22	1:B:3925:VAL:HG13	1.98	0.46
1:B:4621:PRO:HB3	1:B:4668:GLY:CA	2.44	0.46
1:A:337:LEU:HD11	1:A:414:LEU:HD21	1.98	0.45
1:A:2202:ILE:HG21	1:A:2232:LEU:HD11	1.97	0.45
1:A:3234:ASP:O	1:A:3238:ARG:HG2	2.16	0.45
1:A:3533:LEU:HD12	1:A:3819:GLN:HG2	1.98	0.45
1:B:313:LEU:CD1	1:B:384:ILE:HG23	2.45	0.45
1:B:747:LEU:HB3	1:B:806:LEU:N	2.31	0.45
1:B:858:LEU:HA	1:B:858:LEU:HD23	1.80	0.45
1:B:2356:ILE:HG13	1:B:2379:LEU:HD13	1.98	0.45
2:C:13:PHE:HB3	2:C:69:PHE:CE2	2.47	0.45
2:D:93:PHE:CZ	2:D:101:ILE:HA	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:190:GLN:O	1:A:193:PHE:HB3	2.16	0.45
1:A:285:MET:N	1:A:286:PRO:CD	2.79	0.45
1:A:1081:SER:HA	1:A:1084:LYS:HD2	1.97	0.45
1:A:1233:TRP:CH2	1:A:1281:ALA:CB	2.99	0.45
1:A:4750:LYS:O	1:A:4754:VAL:HG23	2.17	0.45
1:B:761:LEU:HB3	1:B:779:CYS:SG	2.56	0.45
1:B:1093:TYR:O	1:B:1096:ARG:HG2	2.15	0.45
1:B:1489:ARG:O	1:B:1493:GLN:HG3	2.16	0.45
1:B:3005:MET:HA	1:B:3008:THR:HG23	1.98	0.45
1:A:135:GLY:CA	1:A:140:CYS:O	2.63	0.45
1:A:338:TYR:HA	1:A:341:VAL:HG22	1.97	0.45
1:A:477:ALA:O	1:A:481:ILE:HG12	2.15	0.45
1:A:1023:LEU:CD2	1:A:1038:THR:HG23	2.46	0.45
1:A:1032:GLU:O	1:A:1033:CYS:SG	2.71	0.45
1:A:1087:VAL:O	1:A:1091:GLU:HG3	2.17	0.45
1:A:2101:ASP:HB3	1:A:2106:VAL:HG22	1.98	0.45
1:A:2371:PHE:CZ	1:A:2397:ALA:HB2	2.51	0.45
1:A:4031:SER:N	3:E:310:GLU:OE2	2.50	0.45
1:B:2295:ASN:CB	1:B:2423:TYR:HB3	2.45	0.45
1:B:2626:VAL:HG21	1:B:2681:ILE:HG21	1.98	0.45
1:B:4003:ILE:HG22	1:B:4005:THR:H	1.81	0.45
2:D:20:PHE:HB3	2:D:32:GLU:HB3	1.99	0.45
2:D:39:SER:C	2:D:41:GLY:H	2.25	0.45
2:D:121:GLU:O	2:D:125:MET:HG2	2.16	0.45
1:A:543:ARG:O	1:A:547:VAL:HG23	2.16	0.45
1:A:1959:GLY:O	1:A:1961:PRO:HD3	2.16	0.45
1:A:2092:LEU:HD23	1:A:2094:ILE:HD11	1.97	0.45
1:A:4135:THR:O	1:A:4142:ARG:NH1	2.46	0.45
1:B:827:ARG:NE	1:B:955:VAL:HG22	2.31	0.45
1:B:1240:GLU:CD	1:B:1240:GLU:H	2.24	0.45
1:B:1408:VAL:O	1:B:1412:MET:HG2	2.17	0.45
1:B:1593:LEU:HB3	1:B:2474:VAL:HG11	1.99	0.45
1:B:1902:LEU:HD21	1:B:1967:LEU:HD13	1.98	0.45
1:B:2255:PRO:C	1:B:2257:LEU:N	2.74	0.45
1:B:2636:LYS:HD2	1:B:2653:ILE:HD11	1.98	0.45
1:B:2982:LEU:HD13	1:B:2982:LEU:C	2.41	0.45
3:F:302:SER:OG	3:F:305:GLU:HB3	2.16	0.45
1:A:333:SER:HB2	1:A:388:ILE:CG1	2.46	0.45
1:A:485:THR:HG22	1:A:657:PHE:HD1	1.81	0.45
1:A:1019:TYR:CE2	1:A:1023:LEU:HD11	2.52	0.45
1:A:1039:LEU:HD21	1:A:1089:ILE:HD13	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1105:ASP:N	1:A:1110:LEU:HD21	2.18	0.45
1:A:3972:MET:HE3	1:A:3972:MET:HB3	1.73	0.45
1:B:34:ARG:HB3	1:B:35:PRO:HD3	1.99	0.45
1:B:255:LYS:HG2	1:B:258:ARG:HH21	1.80	0.45
1:B:1541:MET:HG2	1:B:1556:LEU:HD11	1.99	0.45
1:B:3410:GLN:HG3	1:B:3850:THR:CB	2.33	0.45
1:B:3910:PHE:HB2	1:B:3929:MET:HE1	1.97	0.45
1:A:144:ASP:O	1:A:148:ILE:HG13	2.17	0.45
1:A:1388:LEU:O	1:A:1394:ARG:HB2	2.17	0.45
1:A:1509:GLY:O	1:A:1513:VAL:HG23	2.17	0.45
1:A:3038:ASP:O	1:A:3042:LYS:HG2	2.17	0.45
1:A:3251:LEU:HD12	1:A:3303:PHE:CD2	2.51	0.45
1:A:3626:GLU:OE1	1:A:3628:LYS:HE3	2.17	0.45
1:A:4745:ILE:HB	1:A:4746:PRO:HD3	1.99	0.45
1:B:908:TYR:O	1:B:908:TYR:CG	2.70	0.45
1:B:985:ARG:HH11	1:B:1280:LEU:HD11	1.81	0.45
1:B:1110:LEU:H	1:B:1175:ALA:CB	2.29	0.45
1:B:1174:ARG:O	1:B:1178:LEU:HG	2.16	0.45
1:B:2698:LYS:HG3	1:B:3002:VAL:HG23	1.98	0.45
1:B:4053:HIS:HB2	1:B:4071:TRP:HD1	1.81	0.45
1:B:4711:LYS:HA	1:B:4714:LEU:HD12	1.99	0.45
1:A:44:PHE:CE2	1:A:48:GLU:HB2	2.51	0.45
1:A:136:LEU:O	1:A:243:ASN:ND2	2.49	0.45
1:A:416:ASN:HD22	1:A:416:ASN:N	2.15	0.45
1:A:680:GLU:HB3	1:A:730:THR:HG21	1.99	0.45
1:A:974:LEU:HD23	1:A:1006:LEU:HD23	1.99	0.45
1:A:1163:LEU:HA	1:A:1166:ILE:HD12	1.98	0.45
1:A:2122:LEU:HB2	1:A:2136:ILE:HD12	1.99	0.45
1:A:4170:LEU:O	1:A:4173:LEU:HB3	2.17	0.45
1:A:4313:CYS:HB3	1:A:4331:ILE:CD1	2.47	0.45
1:B:478:ASN:OD1	1:B:650:LEU:HD13	2.17	0.45
1:B:2122:LEU:HD23	1:B:2136:ILE:HD11	1.96	0.45
1:B:2622:ILE:HD11	1:B:2667:TYR:CG	2.52	0.45
1:B:2702:ILE:CD1	1:B:3001:GLN:NE2	2.79	0.45
1:B:3056:MET:HA	1:B:3059:LEU:HD12	1.99	0.45
1:B:3714:MET:HE3	1:B:3714:MET:HB3	1.78	0.45
1:A:279:ALA:O	1:A:280:ASN:C	2.59	0.45
1:A:284:ILE:O	1:A:442:LEU:N	2.50	0.45
1:A:1456:LEU:HD22	1:A:1510:VAL:HG13	1.98	0.45
1:A:3337:ALA:HB3	1:A:3427:GLN:HE21	1.81	0.45
1:A:3909:LEU:HD22	1:A:3925:VAL:HG13	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4098:THR:HB	2:C:109:VAL:HG13	1.99	0.45
1:A:4310:MET:HG2	1:A:4335:LEU:CD1	2.47	0.45
1:A:4419:LEU:HD13	1:A:4459:LEU:HG	1.97	0.45
1:A:4710:TRP:O	1:A:4714:LEU:HG	2.16	0.45
1:B:678:LEU:HB3	1:B:727:LEU:CD2	2.46	0.45
1:B:686:LEU:HA	1:B:686:LEU:HD23	1.73	0.45
1:B:1077:THR:HA	1:B:1082:SER:HB2	1.98	0.45
1:B:1407:LEU:H	1:B:1407:LEU:CD1	2.25	0.45
1:B:3301:LEU:HD23	1:B:3301:LEU:HA	1.76	0.45
1:B:3461:TYR:O	1:B:3534:VAL:HG11	2.17	0.45
2:D:7:GLU:HA	2:D:10:ILE:HG22	1.99	0.45
1:A:55:SER:O	1:A:59:SER:N	2.36	0.45
1:A:1090:VAL:HG11	1:A:1131:VAL:HG22	1.99	0.45
1:A:1468:LEU:HA	1:A:1471:MET:HE2	1.99	0.45
1:A:1515:LEU:CD1	1:A:1541:MET:HG3	2.47	0.45
1:A:1570:TYR:CG	1:A:1592:ILE:HG21	2.52	0.45
1:A:1807:PHE:O	1:A:1810:LEU:HB3	2.17	0.45
1:A:1924:LEU:HD23	1:A:1944:ARG:HA	1.99	0.45
1:A:2390:THR:O	1:A:2391:ARG:C	2.59	0.45
1:A:2480:VAL:HA	1:A:2524:GLN:CG	2.46	0.45
1:A:2978:LEU:HB2	1:A:3006:LEU:HD13	1.99	0.45
1:A:3194:LEU:HD13	1:A:3214:LEU:HD21	1.97	0.45
1:A:3478:LYS:HD2	1:A:3478:LYS:HA	1.83	0.45
1:B:1204:ILE:CG2	1:B:1357:GLY:HA3	2.43	0.45
1:B:1831:ALA:HB2	1:B:2260:SER:HB3	1.97	0.45
1:B:3887:LEU:HD13	1:B:3905:LEU:HD21	1.98	0.45
1:B:4052:ILE:HG23	3:F:322:GLU:HB3	1.99	0.45
3:E:317:SER:O	3:E:321:GLN:HG3	2.17	0.45
1:A:31:VAL:O	1:A:34:ARG:HB3	2.17	0.45
1:A:488:PHE:HE2	1:A:670:ILE:HD12	1.82	0.45
1:A:1557:HIS:HB2	1:A:1799:LEU:HD23	1.97	0.45
1:A:1610:LEU:HD21	1:A:1799:LEU:HB2	1.99	0.45
1:A:1807:PHE:O	1:A:1811:VAL:HG23	2.17	0.45
1:A:1950:VAL:HG11	1:A:1969:VAL:HG11	1.98	0.45
1:A:2375:MET:HG2	1:A:2387:PHE:CE1	2.32	0.45
1:A:2540:HIS:HB3	1:A:2584:ARG:NE	2.32	0.45
1:A:3148:HIS:CE1	1:A:3152:VAL:H	2.34	0.45
1:A:3229:ASP:HB2	1:A:3289:ASN:HD22	1.82	0.45
1:A:3905:LEU:HD23	1:A:3932:LEU:HD11	1.99	0.45
1:A:4026:PRO:O	1:A:4027:PRO:C	2.59	0.45
1:A:4595:VAL:CG2	1:A:4630:LYS:HA	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:283:PHE:HB3	1:B:443:ARG:CZ	2.47	0.45
1:B:1047:ILE:O	1:B:1051:VAL:HG23	2.17	0.45
1:B:1498:TYR:O	1:B:1504:SER:HB2	2.17	0.45
1:B:1959:GLY:O	1:B:1961:PRO:HD3	2.16	0.45
1:B:2978:LEU:HD23	1:B:3010:LEU:HD11	1.98	0.45
1:B:3012:GLY:H	1:B:3077:SER:HB2	1.80	0.45
1:B:3226:GLN:HA	1:B:3289:ASN:HD22	1.81	0.45
1:B:3756:HIS:HB2	1:B:3807:CYS:SG	2.57	0.45
1:B:4050:ASN:OD1	2:D:38:ARG:NH2	2.50	0.45
1:A:97:LEU:HD23	1:A:98:GLN:N	2.32	0.44
1:A:3033:GLY:O	1:A:3034:MET:C	2.61	0.44
1:A:3642:ILE:HD13	1:A:3713:PHE:CE1	2.52	0.44
1:A:4570:LEU:HD13	1:A:4622:TYR:CB	2.47	0.44
1:A:4639:LYS:HB3	1:A:4640:PRO:HD3	1.99	0.44
1:B:414:LEU:O	1:B:418:LEU:HG	2.17	0.44
1:B:722:LEU:H	1:B:722:LEU:HD12	1.82	0.44
1:B:1564:LEU:HD13	1:B:1596:THR:HG23	1.98	0.44
1:B:1728:ALA:O	1:B:1729:LEU:C	2.60	0.44
1:B:2695:PHE:CZ	1:B:2699:GLN:NE2	2.84	0.44
1:B:3234:ASP:O	1:B:3238:ARG:HG2	2.16	0.44
1:A:94:ARG:H	1:A:94:ARG:HD2	1.81	0.44
1:A:252:GLY:O	1:A:256:LEU:HG	2.18	0.44
1:A:471:VAL:CG2	1:A:641:ARG:H	2.26	0.44
1:A:738:ALA:O	1:A:785:ARG:NH1	2.50	0.44
1:A:1346:PHE:O	1:A:1350:VAL:HG23	2.17	0.44
1:A:1903:SER:HB2	1:A:1910:GLN:HA	1.99	0.44
1:A:2622:ILE:HD11	1:A:2667:TYR:CB	2.47	0.44
1:A:4120:ASP:OD1	1:A:4120:ASP:N	2.46	0.44
1:A:4332:PHE:HB2	1:A:4507:VAL:HG12	2.00	0.44
1:B:418:LEU:HD11	1:B:477:ALA:HA	1.98	0.44
1:B:1174:ARG:HG2	1:B:1320:GLU:OE2	2.16	0.44
1:B:2122:LEU:HB2	1:B:2136:ILE:HD12	1.99	0.44
1:B:3058:LEU:HD12	1:B:3058:LEU:HA	1.82	0.44
1:B:3099:LEU:HD11	1:B:3193:PHE:CD1	2.51	0.44
1:B:4170:LEU:O	1:B:4173:LEU:HB3	2.17	0.44
1:B:4313:CYS:HB3	1:B:4331:ILE:HG23	1.99	0.44
3:F:24:CYS:CA	3:F:52:MET:SD	3.05	0.44
1:A:202:ASN:CG	1:A:204:ARG:HG3	2.43	0.44
1:A:288:THR:HG22	1:A:290:ALA:H	1.81	0.44
1:A:1180:ASN:O	1:A:1181:PHE:C	2.58	0.44
1:B:115:LEU:HD13	1:B:130:ILE:HG13	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:333:SER:OG	1:B:385:TYR:HA	2.18	0.44
1:B:674:LEU:O	1:B:678:LEU:HG	2.18	0.44
1:B:813:MET:HB2	1:B:813:MET:HE3	1.68	0.44
1:B:1295:THR:HG22	1:B:1299:ILE:HD13	2.00	0.44
1:B:3058:LEU:HG	1:B:3062:PHE:CZ	2.52	0.44
1:B:3642:ILE:HD13	1:B:3713:PHE:CE1	2.52	0.44
1:B:3880:THR:O	1:B:3884:ILE:HG12	2.16	0.44
1:B:4705:LEU:CD1	1:B:4753:GLN:HB2	2.47	0.44
3:E:24:CYS:CA	3:E:52:MET:SD	3.06	0.44
1:A:264:PRO:HG2	1:A:305:ASP:OD2	2.18	0.44
1:A:1381:LEU:HB3	1:A:1426:ARG:NH2	2.32	0.44
1:A:3513:TYR:CD1	1:A:3525:TYR:HD1	2.35	0.44
1:A:3525:TYR:CE2	1:A:3874:GLY:HA2	2.53	0.44
1:A:4746:PRO:O	1:A:4750:LYS:HG3	2.16	0.44
1:B:1664:CYS:HB3	1:B:1667:THR:HG23	1.99	0.44
1:B:2300:ASP:OD2	1:B:2344:ASN:ND2	2.50	0.44
1:B:4093:ARG:NH2	2:D:51:ASP:OD2	2.51	0.44
2:D:60:GLY:H	2:D:63:THR:HB	1.82	0.44
2:D:93:PHE:CE2	2:D:101:ILE:HG12	2.52	0.44
1:A:59:SER:O	1:A:63:ILE:HG13	2.17	0.44
1:A:844:MET:HB3	1:A:848:MET:HE3	1.98	0.44
1:A:1534:PHE:N	1:A:1535:PRO:HD2	2.32	0.44
1:A:1899:MET:HE2	1:A:2233:LEU:HB3	2.00	0.44
1:A:2349:MET:HB2	1:A:2397:ALA:O	2.18	0.44
1:A:3004:LEU:HD22	1:A:3061:VAL:HG11	2.00	0.44
1:A:3273:MET:HG3	1:A:3633:LEU:CD2	2.48	0.44
1:B:382:LEU:HD23	1:B:382:LEU:HA	1.82	0.44
1:B:443:ARG:HB2	1:B:446:ASP:CB	2.47	0.44
1:B:909:HIS:ND1	1:B:934:CYS:O	2.49	0.44
1:B:1859:MET:SD	1:B:2244:ALA:HA	2.58	0.44
1:B:1891:ALA:HB3	1:B:1893:VAL:HG23	1.98	0.44
1:B:1976:HIS:ND1	1:B:1989:HIS:NE2	2.57	0.44
1:B:2129:GLY:HA3	1:B:2161:SER:O	2.17	0.44
1:B:3004:LEU:O	1:B:3008:THR:HG23	2.18	0.44
2:C:13:PHE:CD1	2:C:40:LEU:HD13	2.52	0.44
1:A:284:ILE:HG22	1:A:286:PRO:CD	2.47	0.44
1:A:718:VAL:HG13	1:A:760:LEU:HD23	1.98	0.44
1:A:911:PHE:HD2	1:A:1001:TYR:CD1	2.35	0.44
1:A:1434:LEU:HD11	1:A:1449:LEU:HD12	2.00	0.44
1:A:2309:LEU:O	3:E:77:SER:OG	2.34	0.44
1:A:2522:GLN:O	1:A:2526:LYS:HG3	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2692:ALA:HA	1:A:2695:PHE:CD1	2.49	0.44
1:A:3291:GLN:HA	1:A:3395:LEU:HD11	1.99	0.44
1:A:3412:LEU:O	1:A:3416:LEU:HB2	2.18	0.44
1:A:4047:PRO:HA	1:A:4075:LEU:HD23	1.99	0.44
1:B:1414:THR:HG21	1:B:1424:CYS:HA	1.99	0.44
1:B:2048:ASP:OD1	1:B:2049:VAL:N	2.51	0.44
1:B:2215:VAL:HG23	1:B:2231:ILE:HB	1.99	0.44
1:B:2264:SER:HB3	1:B:2652:HIS:NE2	2.32	0.44
1:B:2540:HIS:HB3	1:B:2584:ARG:CZ	2.48	0.44
1:B:2985:LEU:O	1:B:2988:LEU:HB2	2.17	0.44
1:B:3273:MET:HG3	1:B:3633:LEU:CD2	2.48	0.44
1:B:4234:GLN:HE22	1:B:4279:GLN:HB3	1.83	0.44
1:A:405:ASN:ND2	1:A:513:ALA:O	2.51	0.44
1:A:1489:ARG:O	1:A:1493:GLN:HG3	2.18	0.44
1:A:1680:HIS:O	1:A:1706:ILE:HA	2.17	0.44
1:A:1867:GLU:HG2	1:A:2236:ASP:OD2	2.18	0.44
1:A:3087:ALA:HB2	1:A:3181:ILE:HG21	2.00	0.44
1:A:3963:ASP:O	1:A:3964:LEU:C	2.60	0.44
1:B:115:LEU:HD12	1:B:133:ILE:HD12	1.99	0.44
1:B:302:LEU:O	1:B:303:VAL:C	2.61	0.44
1:B:1191:SER:O	1:B:1192:LYS:C	2.61	0.44
1:B:1952:PHE:CZ	1:B:1969:VAL:HG12	2.53	0.44
1:B:2060:ILE:HG12	1:B:2074:LEU:HD12	2.00	0.44
1:B:3251:LEU:HD12	1:B:3303:PHE:CD2	2.52	0.44
1:B:3626:GLU:OE1	1:B:3628:LYS:HE3	2.17	0.44
1:B:3998:LEU:O	1:B:4001:VAL:HG12	2.18	0.44
2:D:86:ILE:CD1	2:D:146:MET:HG2	2.48	0.44
1:A:867:HIS:CD2	1:A:947:ARG:HD2	2.52	0.44
1:A:1098:ILE:O	1:A:1101:PHE:HB2	2.18	0.44
1:A:1378:GLU:HG2	1:A:1426:ARG:HG3	2.00	0.44
1:A:2973:VAL:O	1:A:2976:MET:HG3	2.17	0.44
1:A:3889:ALA:HB2	3:E:293:LEU:HD13	2.00	0.44
1:B:185:ARG:HA	1:B:185:ARG:HE	1.83	0.44
1:B:648:LEU:HD23	1:B:648:LEU:HA	1.69	0.44
1:B:1429:LYS:O	1:B:1432:THR:N	2.51	0.44
1:B:1480:ASP:HB3	1:B:1483:ASP:HB2	2.00	0.44
1:B:2151:ILE:HD12	1:B:2162:PRO:HD2	1.99	0.44
1:B:3087:ALA:CA	1:B:3181:ILE:HD13	2.47	0.44
1:B:3269:LEU:HB3	1:B:3633:LEU:HD12	1.92	0.44
1:B:3305:LEU:HB2	1:B:3323:LEU:HD21	1.99	0.44
1:B:3571:ILE:HG12	1:B:3717:ALA:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4606:VAL:HG13	1:B:4612:VAL:HG12	1.99	0.44
2:D:147:THR:O	2:D:148:ALA:C	2.60	0.44
3:E:301:MET:HE1	3:E:305:GLU:HG2	2.00	0.44
1:A:1039:LEU:HD22	1:A:1130:LYS:CD	2.48	0.44
1:A:1048:SER:O	1:A:1051:VAL:HB	2.18	0.44
1:A:1130:LYS:O	1:A:1131:VAL:C	2.59	0.44
1:A:1299:ILE:HG22	1:A:1336:ARG:HH11	1.83	0.44
1:A:1474:SER:CB	1:A:1485:ILE:HG21	2.48	0.44
1:A:1571:LEU:O	1:A:1573:GLN:N	2.51	0.44
1:A:4115:ARG:NH2	2:C:125:MET:SD	2.91	0.44
1:B:155:MET:C	1:B:157:SER:N	2.74	0.44
1:B:1077:THR:C	1:B:1078:THR:HG1	2.26	0.44
1:B:1355:ILE:HD13	1:B:1397:MET:CG	2.47	0.44
1:B:1468:LEU:O	1:B:1472:THR:HG23	2.17	0.44
1:B:2973:VAL:O	1:B:2977:LEU:HB2	2.18	0.44
1:B:3899:ILE:O	1:B:3903:GLN:HG2	2.18	0.44
1:B:3922:ARG:NH1	1:B:3970:TYR:OH	2.50	0.44
2:C:145:MET:HE3	2:C:145:MET:HB3	1.90	0.44
3:F:301:MET:HE1	3:F:305:GLU:HG2	2.00	0.44
1:A:34:ARG:HB3	1:A:35:PRO:HD3	2.00	0.43
1:A:261:LEU:HD23	1:A:332:LEU:HD13	1.99	0.43
1:A:321:LEU:HD23	1:A:321:LEU:HA	1.86	0.43
1:A:1197:GLY:C	1:A:1372:LEU:HD21	2.43	0.43
1:A:2072:THR:O	1:A:2090:ASN:HB2	2.18	0.43
1:A:2194:PRO:HD3	1:A:2251:TYR:CE1	2.52	0.43
1:A:4101:TYR:CD2	2:C:89:ALA:HB2	2.53	0.43
1:A:4159:LYS:HE2	1:A:4159:LYS:HB3	1.84	0.43
1:B:1000:GLN:HG3	1:B:1270:LEU:HD13	2.00	0.43
1:B:1815:LEU:HD12	1:B:2508:LEU:HD21	1.99	0.43
1:B:1854:MET:HE2	1:B:2152:LYS:N	2.32	0.43
1:B:4127:ASN:ND2	3:F:328:LEU:HD22	2.31	0.43
2:D:37:MET:HG2	2:D:69:PHE:HE1	1.83	0.43
2:D:101:ILE:N	2:D:137:VAL:O	2.48	0.43
1:A:539:SER:O	1:A:543:ARG:HD3	2.18	0.43
1:A:853:LEU:O	1:A:857:ARG:HG2	2.18	0.43
1:A:3083:SER:HB3	1:A:3178:ASN:HD22	1.84	0.43
1:A:3826:LYS:HE2	1:A:3826:LYS:HB3	1.84	0.43
1:A:4419:LEU:HD22	1:A:4459:LEU:HD12	1.99	0.43
1:B:1534:PHE:N	1:B:1535:PRO:HD2	2.33	0.43
1:B:3412:LEU:O	1:B:3416:LEU:HB2	2.18	0.43
1:B:3490:SER:O	1:B:3494:VAL:HG23	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3746:ALA:HA	1:B:3749:VAL:HG22	1.99	0.43
1:B:3764:LEU:HD23	1:B:3764:LEU:HA	1.83	0.43
1:B:3972:MET:HG3	1:B:4011:ASN:O	2.18	0.43
1:B:4125:HIS:HA	1:B:4165:LEU:CD1	2.48	0.43
1:A:98:GLN:HG3	1:A:201:PHE:CZ	2.54	0.43
1:A:765:GLN:NE2	1:A:817:ILE:HG23	2.33	0.43
1:A:1811:VAL:HA	1:A:1814:MET:HE2	2.00	0.43
1:A:3308:SER:HA	1:A:3319:LEU:HD13	2.00	0.43
1:A:3317:PRO:HG3	1:A:3424:VAL:CG2	2.48	0.43
1:A:4146:CYS:HA	1:A:4186:LEU:HD22	2.00	0.43
1:A:4310:MET:HE3	1:A:4335:LEU:CD2	2.49	0.43
1:A:4360:GLU:CD	1:A:4366:ARG:HH21	2.26	0.43
1:B:280:ASN:HB3	1:B:283:PHE:HE1	1.84	0.43
1:B:3068:SER:HA	1:B:3075:CYS:HB2	2.00	0.43
1:B:4413:LYS:CD	1:B:4456:ILE:HD11	2.48	0.43
3:E:9:CYS:O	3:E:13:LEU:HA	2.18	0.43
3:E:23:LYS:HD3	3:E:114:ALA:HB1	2.00	0.43
1:A:110:PHE:O	1:A:114:ARG:HG2	2.18	0.43
1:A:197:LEU:HD23	1:A:197:LEU:HA	1.84	0.43
1:A:1178:LEU:HD21	1:A:1202:LEU:HD21	2.00	0.43
1:A:1192:LYS:HA	1:A:1195:LEU:HB2	2.00	0.43
1:A:2698:LYS:NZ	1:A:2998:PRO:O	2.52	0.43
1:A:3505:THR:OG1	1:A:3916:ARG:NH1	2.37	0.43
1:A:3595:ASN:HD21	1:A:3605:LEU:HD13	1.83	0.43
1:A:4278:VAL:O	1:B:3825:ARG:HD3	2.18	0.43
1:B:124:VAL:HG21	1:B:129:LEU:HD21	1.99	0.43
1:B:855:LEU:HD23	1:B:1002:TYR:HE2	1.82	0.43
1:B:1177:LEU:HD21	1:B:1233:TRP:HB2	1.99	0.43
1:B:1209:CYS:SG	1:B:1210:LYS:N	2.91	0.43
1:B:1244:ILE:HG12	1:B:1249:ASN:HB3	2.01	0.43
1:B:2675:ILE:C	1:B:2677:THR:N	2.75	0.43
1:B:2997:ILE:HB	1:B:2998:PRO:HD3	2.00	0.43
1:B:3301:LEU:HD21	1:B:3326:ALA:HB3	1.99	0.43
1:B:3889:ALA:HB2	3:F:293:LEU:HD13	1.99	0.43
1:B:4746:PRO:O	1:B:4750:LYS:HG3	2.18	0.43
2:D:130:ASP:OD2	2:D:135:GLY:N	2.48	0.43
3:E:21:ARG:HB3	3:E:55:ILE:HB	2.01	0.43
1:A:34:ARG:O	1:A:35:PRO:C	2.61	0.43
1:A:516:THR:HG22	1:A:518:ILE:H	1.84	0.43
1:A:864:TYR:HA	1:A:936:LEU:CD2	2.48	0.43
1:A:1021:ASN:OD1	1:A:1071:LEU:HD21	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2578:ARG:HD2	1:A:2659:ALA:CB	2.48	0.43
1:A:3173:LYS:HB3	1:A:3173:LYS:HE2	1.76	0.43
1:A:3773:GLU:HB3	1:A:3794:ARG:HE	1.83	0.43
1:A:3899:ILE:O	1:A:3903:GLN:HG2	2.19	0.43
1:A:3986:TRP:CZ2	3:E:316:ARG:HG2	2.54	0.43
1:A:4007:VAL:HG22	1:B:3511:ASN:HB2	2.00	0.43
1:A:4749:HIS:O	1:A:4753:GLN:HG3	2.18	0.43
1:B:428:ALA:O	1:B:432:LYS:HG2	2.18	0.43
1:B:796:GLN:HB2	1:B:798:VAL:HG23	2.00	0.43
1:B:1289:LEU:HD11	1:B:1325:SER:HB2	2.00	0.43
1:B:2038:TYR:C	1:B:2038:TYR:CD2	2.96	0.43
1:B:2984:THR:O	1:B:2987:GLN:N	2.51	0.43
1:B:3033:GLY:C	1:B:3035:ASP:N	2.76	0.43
1:B:3727:GLU:H	1:B:3731:ASP:HB2	1.82	0.43
1:B:4146:CYS:HA	1:B:4186:LEU:HD22	2.01	0.43
1:B:4159:LYS:HZ3	1:B:4196:TRP:CD1	2.36	0.43
2:C:54:ASN:C	2:C:56:VAL:N	2.77	0.43
1:A:773:ASP:HB3	1:A:774:PRO:HD2	1.99	0.43
1:A:872:ALA:O	1:B:186:GLN:NE2	2.52	0.43
1:A:1429:LYS:O	1:A:1432:THR:N	2.51	0.43
1:A:1707:SER:O	1:A:1708:TYR:C	2.62	0.43
1:A:4136:PRO:HB2	1:B:3508:PRO:HB3	2.00	0.43
1:A:4273:LEU:HD12	1:A:4291:LEU:HD12	2.00	0.43
1:B:793:ASN:O	1:B:797:GLY:N	2.52	0.43
1:B:1345:GLU:O	1:B:1349:ARG:HG2	2.18	0.43
1:B:1996:LEU:HD22	1:B:2019:THR:HG21	2.00	0.43
1:B:2683:MET:HE2	1:B:2999:TYR:OH	2.19	0.43
1:B:3001:GLN:HG3	1:B:3139:PHE:CZ	2.54	0.43
1:B:3301:LEU:HD21	1:B:3326:ALA:CB	2.48	0.43
2:C:100:TYR:CD1	2:C:136:GLN:HB3	2.54	0.43
1:A:270:ILE:HG12	1:A:335:SER:CB	2.48	0.43
1:A:317:VAL:HG12	1:A:318:LEU:H	1.82	0.43
1:A:420:LEU:O	1:A:424:LEU:HG	2.19	0.43
1:A:1332:ASN:HA	1:A:1335:GLU:CD	2.44	0.43
1:A:1521:MET:HB2	1:A:1537:LEU:HD21	1.99	0.43
1:A:1606:VAL:O	1:A:1610:LEU:HG	2.19	0.43
1:A:2305:GLY:HA2	1:A:2339:GLU:H	1.83	0.43
1:A:2340:ILE:HD13	1:A:2422:ILE:HD11	2.00	0.43
1:A:2363:ARG:NH1	1:A:2416:MET:HE1	2.34	0.43
1:A:2698:LYS:NZ	1:A:3002:VAL:HG23	2.33	0.43
1:A:3057:ARG:HG3	1:A:3141:LEU:HG	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4128:TRP:HA	1:A:4131:GLN:HG2	2.01	0.43
1:A:4318:LYS:HA	1:A:4491:ARG:HH22	1.83	0.43
1:A:4491:ARG:O	1:A:4495:ILE:HG13	2.19	0.43
1:B:66:HIS:NE2	1:B:71:GLU:HG2	2.33	0.43
1:B:257:LEU:HD23	1:B:257:LEU:HA	1.59	0.43
1:B:1038:THR:O	1:B:1039:LEU:C	2.61	0.43
1:B:1077:THR:HG23	1:B:1082:SER:H	1.84	0.43
1:B:1191:SER:N	1:B:1194:LYS:HD3	2.32	0.43
1:B:1388:LEU:C	1:B:1390:SER:H	2.26	0.43
1:B:3540:VAL:HB	1:B:3718:LYS:HD2	1.99	0.43
1:B:4024:ILE:HD11	3:F:324:LEU:HD12	2.00	0.43
1:B:4414:ILE:HD11	1:B:4451:ALA:HB1	2.01	0.43
1:B:4601:ILE:HD11	1:B:4620:ILE:CD1	2.49	0.43
1:A:124:VAL:HG11	1:A:129:LEU:CD2	2.48	0.43
1:A:296:ARG:HA	1:A:299:PHE:CE2	2.54	0.43
1:A:404:GLN:OE1	1:A:404:GLN:HA	2.17	0.43
1:A:659:THR:HA	1:A:663:LEU:CD1	2.40	0.43
1:A:817:ILE:HG22	1:A:821:PHE:CE2	2.53	0.43
1:A:1281:ALA:HA	1:A:1284:LEU:CG	2.49	0.43
1:A:1394:ARG:HH11	1:A:1443:ASN:HD21	1.65	0.43
1:A:2661:VAL:HG11	1:A:2701:LEU:HG	2.01	0.43
1:A:2688:CYS:O	1:A:2689:PRO:C	2.61	0.43
1:A:3207:ARG:O	1:A:3211:ARG:HG3	2.18	0.43
1:B:321:LEU:HD12	1:B:395:SER:CB	2.49	0.43
1:B:862:PHE:CE1	1:B:866:LEU:HD11	2.53	0.43
1:B:2493:GLY:O	1:B:2498:LYS:HE3	2.19	0.43
1:B:2544:ASP:HA	1:B:2580:ILE:HD12	2.00	0.43
1:B:2564:ASP:OD2	1:B:2631:LYS:O	2.37	0.43
1:B:3095:VAL:HG11	1:B:3186:PHE:HE1	1.84	0.43
2:D:38:ARG:HD2	2:D:43:ASN:HA	2.00	0.43
1:A:255:LYS:O	1:A:259:VAL:HG23	2.19	0.43
1:A:732:LEU:HD21	1:A:760:LEU:HD12	2.00	0.43
1:A:1298:LEU:HA	1:A:1301:TRP:NE1	2.34	0.43
1:A:2023:VAL:HG21	1:A:2049:VAL:HG21	2.01	0.43
1:A:2368:ILE:HD11	1:A:2387:PHE:CZ	2.54	0.43
1:A:3490:SER:O	1:A:3494:VAL:HG23	2.18	0.43
1:A:4600:GLN:O	1:A:4601:ILE:C	2.62	0.43
1:B:282:PHE:HB3	1:B:420:LEU:HD11	1.99	0.43
1:B:1359:TYR:CE1	1:B:1406:GLU:HB3	2.53	0.43
1:B:1407:LEU:HB3	1:B:1431:PHE:CZ	2.51	0.43
1:B:1560:ALA:HB1	1:B:1599:ILE:HG23	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2027:ASP:CG	1:B:2029:CYS:SG	3.00	0.43
1:B:2622:ILE:HD11	1:B:2667:TYR:CB	2.47	0.43
1:B:3310:LEU:HG	1:B:3851:PHE:HB3	2.01	0.43
1:B:3409:ILE:HD13	1:B:3454:ILE:HD11	2.01	0.43
1:B:3460:ALA:O	1:B:3868:SER:N	2.40	0.43
1:B:3525:TYR:HE2	1:B:3874:GLY:HA2	1.84	0.43
3:F:317:SER:O	3:F:321:GLN:HG3	2.17	0.43
1:A:329:VAL:CG1	1:A:388:ILE:HD12	2.49	0.43
1:A:547:VAL:HA	1:A:550:ARG:HH11	1.83	0.43
1:A:811:LEU:HD23	1:A:933:TYR:HE1	1.84	0.43
1:A:852:PRO:O	1:A:853:LEU:C	2.61	0.43
1:A:1281:ALA:HB2	1:A:1284:LEU:HD12	2.01	0.43
1:A:2683:MET:HE3	1:A:2683:MET:HB2	1.90	0.43
1:A:2698:LYS:O	1:A:2702:ILE:HG13	2.19	0.43
1:A:3007:THR:O	1:A:3009:ASP:N	2.52	0.43
1:A:4477:GLY:CA	1:A:4518:VAL:HG11	2.46	0.43
1:B:29:TRP:CE3	1:B:73:PHE:HZ	2.37	0.43
1:B:194:LEU:HD13	1:B:194:LEU:HA	1.89	0.43
1:B:405:ASN:O	1:B:409:LEU:HG	2.19	0.43
1:B:801:SER:O	1:B:805:ASP:N	2.52	0.43
1:B:1514:LEU:O	1:B:1518:LEU:HG	2.19	0.43
1:B:2263:ILE:HG12	1:B:2655:ALA:HB1	2.00	0.43
1:B:3294:CYS:HB3	1:B:3301:LEU:HG	1.99	0.43
1:B:3295:ILE:HD12	1:B:3295:ILE:HA	1.93	0.43
1:B:4598:LEU:HD11	1:B:4634:LEU:HB2	2.00	0.43
1:B:4606:VAL:HG11	1:B:4616:LEU:HD22	2.00	0.43
1:B:4751:LEU:HD23	1:B:4751:LEU:HA	1.77	0.43
1:A:248:GLN:HB3	1:B:496:LEU:HD11	2.01	0.42
1:A:280:ASN:HB2	1:A:412:TRP:HE1	1.84	0.42
1:A:405:ASN:CB	1:A:511:ILE:HA	2.49	0.42
1:A:484:LEU:O	1:A:488:PHE:HD1	2.02	0.42
1:A:864:TYR:HD2	1:A:865:LEU:HD23	1.84	0.42
1:A:973:LEU:HD23	1:A:973:LEU:HA	1.85	0.42
1:A:1345:GLU:H	1:A:1345:GLU:CD	2.27	0.42
1:A:1859:MET:N	1:A:2200:GLN:OE1	2.43	0.42
1:A:2698:LYS:HG2	1:A:2998:PRO:HA	2.00	0.42
1:A:3021:LEU:O	1:A:3025:LEU:HG	2.18	0.42
1:A:3699:LEU:HD23	1:A:3706:CYS:HB2	2.01	0.42
1:A:4101:TYR:CE2	2:C:89:ALA:HB2	2.54	0.42
1:A:4622:TYR:HA	1:A:4670:LYS:HE3	2.00	0.42
1:B:256:LEU:HD12	1:B:317:VAL:HG22	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:265:TYR:HB3	1:B:302:LEU:HD13	2.01	0.42
1:B:654:ILE:O	1:B:658:ILE:HG13	2.19	0.42
1:B:881:GLN:HA	1:B:885:LEU:HD12	2.00	0.42
1:B:1032:GLU:O	1:B:1035:ILE:HB	2.19	0.42
1:B:1405:GLY:O	1:B:1409:GLN:HG2	2.18	0.42
1:B:2192:VAL:HG13	1:B:2197:PHE:HE1	1.82	0.42
1:B:3396:VAL:HG11	1:B:3438:ASN:CB	2.49	0.42
1:B:3986:TRP:CZ2	3:F:316:ARG:HG2	2.54	0.42
1:A:666:ARG:HA	1:A:671:ARG:HE	1.84	0.42
1:A:1269:HIS:ND1	1:A:1283:SER:HB3	2.35	0.42
1:A:1288:LEU:O	1:A:1292:VAL:HG23	2.18	0.42
1:A:1324:GLU:HA	1:A:1327:ALA:HB2	2.01	0.42
1:A:3440:SER:OG	1:A:3443:GLN:OE1	2.20	0.42
1:A:4003:ILE:HB	1:A:4008:VAL:HG11	2.01	0.42
1:A:4199:TYR:HE1	2:C:39:SER:HA	1.84	0.42
1:A:4727:ARG:O	1:A:4731:ILE:HG13	2.19	0.42
1:A:4744:SER:O	1:A:4748:LEU:HG	2.19	0.42
1:B:474:VAL:HG11	1:B:646:LEU:HG	1.99	0.42
1:B:866:LEU:HD13	1:B:1013:LEU:HD21	2.01	0.42
1:B:1177:LEU:HD23	1:B:1177:LEU:HA	1.84	0.42
1:B:1387:GLN:HB3	1:B:1397:MET:SD	2.59	0.42
1:B:1701:HIS:HB2	1:B:1706:ILE:HD11	2.01	0.42
1:B:3021:LEU:O	1:B:3025:LEU:HG	2.19	0.42
1:B:3525:TYR:CE2	1:B:3874:GLY:HA2	2.54	0.42
1:B:4360:GLU:CD	1:B:4366:ARG:HH21	2.25	0.42
2:D:45:THR:OG1	2:D:48:GLU:HG3	2.19	0.42
3:F:2:SER:H	3:F:59:VAL:HG21	1.84	0.42
1:A:718:VAL:HG13	1:A:760:LEU:CD2	2.49	0.42
1:A:1377:LEU:H	1:A:1377:LEU:HD12	1.84	0.42
1:A:2023:VAL:HG23	1:A:2046:ILE:HD13	2.02	0.42
1:A:3095:VAL:HG12	1:A:3190:TRP:CH2	2.54	0.42
1:A:3515:THR:HG21	1:A:3764:LEU:HD22	2.01	0.42
1:A:3736:VAL:HG12	1:A:3740:ASN:HD21	1.85	0.42
1:A:4570:LEU:HD13	1:A:4622:TYR:HB2	2.01	0.42
1:B:1097:GLN:HE21	1:B:1097:GLN:CA	2.31	0.42
1:B:1560:ALA:HB1	1:B:1599:ILE:CG2	2.49	0.42
1:B:1575:ASN:O	1:B:1579:LYS:HG3	2.20	0.42
1:B:2151:ILE:HD11	1:B:2164:LEU:HD21	2.01	0.42
1:B:2379:LEU:HD23	1:B:2379:LEU:H	1.84	0.42
1:B:3527:LEU:HD11	1:B:3757:ARG:HB2	2.00	0.42
1:B:3647:PHE:HB2	1:B:3649:GLU:HG3	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:318:LEU:O	3:E:322:GLU:HG2	2.20	0.42
1:A:240:ILE:O	1:A:244:VAL:HG23	2.19	0.42
1:A:296:ARG:HA	1:A:299:PHE:CZ	2.54	0.42
1:A:317:VAL:C	1:A:318:LEU:HG	2.44	0.42
1:A:699:LYS:O	1:A:703:ASP:HB2	2.19	0.42
1:A:1556:LEU:HD21	1:A:1563:TRP:CZ3	2.54	0.42
1:A:2071:TYR:CE1	1:A:2091:VAL:HG22	2.55	0.42
1:A:2355:GLN:HB2	1:A:2384:TRP:CE2	2.55	0.42
1:A:2695:PHE:O	1:A:2698:LYS:HB3	2.19	0.42
1:A:3023:ASN:O	1:A:3027:GLN:HG2	2.19	0.42
1:A:4281:THR:HB	1:A:4284:ILE:HG12	2.00	0.42
1:A:4484:GLY:O	1:A:4485:LEU:C	2.62	0.42
1:B:154:MET:O	1:B:157:SER:OG	2.34	0.42
1:B:183:GLU:O	1:B:187:LYS:HG2	2.19	0.42
1:B:488:PHE:HE2	1:B:670:ILE:HD12	1.84	0.42
1:B:881:GLN:HA	1:B:885:LEU:HB2	2.01	0.42
1:B:1014:PRO:HB3	1:B:1057:HIS:CD2	2.55	0.42
1:B:1110:LEU:O	1:B:1175:ALA:HB1	2.20	0.42
1:B:1912:LEU:HB2	1:B:1926:LEU:HD11	2.02	0.42
1:B:2192:VAL:HG13	1:B:2197:PHE:CE1	2.54	0.42
1:B:3595:ASN:HD21	1:B:3605:LEU:HD13	1.83	0.42
1:B:4372:TYR:HD1	1:B:4376:GLU:OE2	2.02	0.42
2:D:66:PHE:HB3	2:D:67:PRO:HD3	2.01	0.42
1:A:856:ALA:HB1	1:A:1001:TYR:HD2	1.85	0.42
1:A:1057:HIS:HA	1:A:1060:LYS:HD2	2.01	0.42
1:A:1176:TYR:CZ	1:A:1280:LEU:HB2	2.55	0.42
1:A:1817:PHE:CE2	1:A:1818:LEU:HG	2.55	0.42
1:A:1854:MET:HE2	1:A:2152:LYS:H	1.83	0.42
1:A:3409:ILE:HD13	1:A:3454:ILE:HD11	2.01	0.42
1:A:4659:LEU:HG	1:A:4721:PHE:HB3	2.01	0.42
1:A:4716:ARG:HA	1:A:4717:PRO:HD3	1.94	0.42
1:B:1473:THR:O	1:B:1485:ILE:HG21	2.19	0.42
1:B:1867:GLU:HG2	1:B:2236:ASP:OD2	2.18	0.42
1:B:2009:PRO:CB	1:B:2642:LEU:HD21	2.50	0.42
1:B:4513:SER:O	1:B:4517:LYS:HG2	2.19	0.42
3:E:4:HIS:CD2	3:E:21:ARG:HB2	2.55	0.42
3:E:113:CYS:SG	3:E:131:HIS:CE1	3.13	0.42
1:A:926:ALA:O	1:A:928:PRO:HD3	2.19	0.42
1:A:2178:CYS:HB3	1:A:2214:MET:HE1	2.02	0.42
1:A:3195:SER:HG	1:A:3231:HIS:CE1	2.34	0.42
1:A:3997:PHE:HZ	1:A:4128:TRP:CE3	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:136:LEU:HD23	1:B:136:LEU:HA	1.82	0.42
1:B:313:LEU:HD21	1:B:332:LEU:CD2	2.49	0.42
1:B:352:VAL:HG21	1:B:424:LEU:HD13	2.02	0.42
1:B:1545:ALA:HB2	1:B:1556:LEU:CD2	2.48	0.42
1:B:1597:CYS:SG	1:B:2477:ARG:HB2	2.59	0.42
1:B:2405:ILE:CG1	1:B:2417:ILE:HD11	2.49	0.42
1:B:4119:LEU:HD11	3:F:329:VAL:HG11	2.00	0.42
1:B:4346:VAL:HG21	1:B:4425:TYR:CD1	2.55	0.42
3:E:111:PRO:HD2	3:E:128:PHE:CZ	2.54	0.42
3:E:295:ARG:HG2	3:E:295:ARG:O	2.19	0.42
3:F:295:ARG:HG2	3:F:295:ARG:O	2.19	0.42
3:F:318:LEU:O	3:F:322:GLU:HG2	2.20	0.42
1:A:112:LEU:HD13	1:A:252:GLY:HA3	2.02	0.42
1:A:273:PHE:CE1	1:A:334:LEU:HB3	2.54	0.42
1:A:415:LEU:HD21	1:A:484:LEU:HD11	2.01	0.42
1:A:1219:VAL:O	1:A:1227:GLN:NE2	2.53	0.42
1:A:1233:TRP:CH2	1:A:1281:ALA:HB1	2.54	0.42
1:A:1345:GLU:O	1:A:1349:ARG:HG2	2.19	0.42
1:A:2263:ILE:HA	1:A:2575:ILE:HD11	2.02	0.42
1:A:2266:MET:SD	1:A:2575:ILE:HG12	2.60	0.42
1:A:3295:ILE:HD12	1:A:3295:ILE:HA	1.84	0.42
1:A:3550:ILE:HD11	1:A:3715:LEU:HD12	2.01	0.42
1:A:3884:ILE:HD11	1:A:3913:ASN:ND2	2.34	0.42
1:B:30:GLU:H	1:B:30:GLU:HG3	1.66	0.42
1:B:131:LEU:HD11	1:B:142:ARG:HG3	2.01	0.42
1:B:2137:SER:O	1:B:2141:LEU:N	2.51	0.42
1:B:3269:LEU:HB3	1:B:3633:LEU:HD13	1.90	0.42
1:B:4491:ARG:O	1:B:4495:ILE:HG13	2.20	0.42
2:C:123:ASP:O	2:C:127:ARG:HG2	2.20	0.42
3:F:111:PRO:HD2	3:F:128:PHE:CZ	2.55	0.42
1:A:1090:VAL:HG21	1:A:1131:VAL:HG13	2.02	0.42
1:A:1138:HIS:HA	1:A:1141:LYS:HD3	2.02	0.42
1:A:1912:LEU:HB2	1:A:1926:LEU:HD11	2.02	0.42
1:A:2049:VAL:HG22	1:A:2063:ILE:HG12	2.01	0.42
1:A:2551:ALA:HA	1:A:2573:LEU:HD22	2.01	0.42
1:A:4414:ILE:HD11	1:A:4451:ALA:HB1	2.02	0.42
1:B:115:LEU:CD1	1:B:130:ILE:HG13	2.50	0.42
1:B:255:LYS:O	1:B:259:VAL:HG23	2.20	0.42
1:B:919:SER:HA	1:B:922:PHE:CD2	2.54	0.42
1:B:943:ASP:OD2	1:B:943:ASP:N	2.52	0.42
1:B:2300:ASP:OD1	1:B:2300:ASP:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2701:LEU:HD12	1:B:3002:VAL:CG2	2.50	0.42
2:C:34:GLY:HA2	2:C:37:MET:HE2	2.01	0.42
2:C:95:LYS:HE2	2:C:109:VAL:HG23	2.02	0.42
1:A:94:ARG:O	1:A:97:LEU:HB3	2.19	0.42
1:A:130:ILE:HD12	1:A:308:MET:HG3	2.02	0.42
1:A:150:THR:O	1:A:154:MET:HG3	2.20	0.42
1:A:1848:VAL:O	1:A:1850:LYS:NZ	2.38	0.42
1:A:2042:PRO:HD3	1:A:2088:VAL:O	2.20	0.42
1:A:3749:VAL:HG23	1:A:3814:LEU:HD13	2.02	0.42
1:A:3773:GLU:O	1:A:3774:LYS:C	2.63	0.42
1:B:414:LEU:HD12	1:B:483:LEU:HD12	2.01	0.42
1:B:1591:MET:O	1:B:1594:GLU:HG2	2.20	0.42
1:B:1693:CYS:N	1:B:1716:CYS:SG	2.92	0.42
1:B:2551:ALA:HA	1:B:2573:LEU:HD22	2.01	0.42
1:B:2686:LEU:HD11	1:B:3002:VAL:HG11	2.02	0.42
1:B:3050:GLU:O	1:B:3054:VAL:HG23	2.19	0.42
1:B:3061:VAL:O	1:B:3065:ARG:N	2.44	0.42
1:B:3076:GLU:H	1:B:3076:GLU:HG3	1.73	0.42
1:B:3233:LEU:HD13	1:B:3290:TRP:HE3	1.85	0.42
1:B:3699:LEU:HD23	1:B:3706:CYS:HB2	2.01	0.42
1:B:3922:ARG:O	1:B:3926:ARG:HG3	2.20	0.42
1:B:4224:GLU:HA	1:B:4279:GLN:NE2	2.35	0.42
1:B:4510:LYS:HE2	1:B:4514:TYR:OH	2.19	0.42
2:D:28:ILE:H	2:D:28:ILE:HG12	1.48	0.42
3:E:3:ARG:HG2	3:E:18:ARG:CG	2.50	0.42
1:A:124:VAL:HG11	1:A:129:LEU:HD23	2.02	0.42
1:A:336:CYS:SG	1:A:384:ILE:HD12	2.59	0.42
1:A:699:LYS:O	1:A:704:GLU:HG3	2.20	0.42
1:A:2405:ILE:CG1	1:A:2417:ILE:HD11	2.50	0.42
1:A:3269:LEU:HB3	1:A:3633:LEU:HD13	1.91	0.42
1:A:4328:PRO:O	1:A:4331:ILE:HB	2.19	0.42
1:A:4372:TYR:HD1	1:A:4376:GLU:OE2	2.02	0.42
1:A:4748:LEU:HB2	1:A:4768:LEU:HD21	2.02	0.42
1:B:159:LYS:HA	1:B:159:LYS:HD2	1.85	0.42
1:B:321:LEU:HD23	1:B:321:LEU:HA	1.87	0.42
1:B:1307:PRO:HB2	1:B:1308:PRO:HD3	2.01	0.42
1:B:1486:GLN:HG3	1:B:1489:ARG:NH1	2.35	0.42
1:B:1554:LEU:HA	1:B:1557:HIS:CD2	2.54	0.42
1:B:1563:TRP:HD1	1:B:1566:ARG:HH11	1.68	0.42
1:B:2369:GLU:HA	1:B:2373:ARG:O	2.20	0.42
1:B:2379:LEU:HB3	1:B:2385:PHE:HZ	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3054:VAL:HG13	1:B:3057:ARG:HD2	2.02	0.42
1:B:4273:LEU:HD22	1:B:4284:ILE:CG2	2.49	0.42
1:A:184:LEU:HD22	1:A:184:LEU:N	2.32	0.41
1:A:1046:ARG:HD2	1:A:1046:ARG:HA	1.88	0.41
1:A:3453:SER:O	1:A:3456:PRO:HD2	2.20	0.41
1:B:100:VAL:HG12	1:B:239:PHE:HE1	1.85	0.41
1:B:3988:LEU:HD12	1:B:3988:LEU:H	1.85	0.41
1:B:4309:PHE:CD1	1:B:4338:ILE:HD11	2.54	0.41
2:C:73:MET:O	2:C:77:MET:N	2.46	0.41
3:F:9:CYS:O	3:F:13:LEU:HA	2.19	0.41
3:F:81:PRO:HB2	3:F:108:VAL:HB	2.02	0.41
1:A:29:TRP:HA	1:A:32:ALA:HB3	2.01	0.41
1:A:292:ALA:O	1:A:296:ARG:HG3	2.19	0.41
1:A:643:ASP:HA	1:A:644:PRO:HD2	1.96	0.41
1:A:768:ALA:HA	1:A:773:ASP:HB2	2.01	0.41
1:A:853:LEU:HD13	1:A:998:ALA:HB2	2.02	0.41
1:A:1382:GLN:N	1:A:1426:ARG:HH21	2.18	0.41
1:A:1682:HIS:HA	1:A:2381:ARG:NH2	2.35	0.41
1:A:2038:TYR:C	1:A:2038:TYR:CD2	2.96	0.41
1:A:2118:VAL:HG11	1:A:2174:PRO:HB3	2.03	0.41
1:A:3167:LEU:HB3	1:A:3168:PRO:CD	2.43	0.41
1:A:3396:VAL:HG11	1:A:3438:ASN:CB	2.49	0.41
1:A:3771:ALA:HB1	1:B:3919:ALA:HB2	2.02	0.41
1:A:3922:ARG:O	1:A:3926:ARG:HG3	2.20	0.41
1:A:4492:LEU:HD23	1:A:4492:LEU:HA	1.87	0.41
1:A:4710:TRP:HZ3	1:A:4751:LEU:HD23	1.86	0.41
1:B:943:ASP:HB3	1:B:1255:THR:HG21	2.01	0.41
1:B:1679:TYR:HB2	1:B:1692:VAL:HG22	2.02	0.41
1:B:1805:PHE:CD2	1:B:2494:PRO:HD2	2.52	0.41
1:B:2046:ILE:HG23	1:B:2063:ILE:HG23	2.01	0.41
1:B:2118:VAL:HG11	1:B:2174:PRO:HB3	2.02	0.41
1:B:2259:PRO:HB2	1:B:2651:THR:HG21	2.00	0.41
1:B:2593:GLU:HG3	1:B:2667:TYR:OH	2.20	0.41
1:B:3729:GLU:HA	1:B:3732:ARG:HB3	2.02	0.41
1:B:3884:ILE:HD11	1:B:3913:ASN:ND2	2.34	0.41
1:B:4307:LYS:HG2	1:B:4478:VAL:CG1	2.50	0.41
1:B:4695:MET:HE1	1:B:4748:LEU:HD21	2.01	0.41
1:A:73:PHE:HD2	1:A:74:TYR:HD1	1.67	0.41
1:A:366:LYS:HA	1:A:369:ASP:CG	2.45	0.41
1:A:694:ASP:CB	1:A:750:HIS:HB3	2.50	0.41
1:A:995:GLU:O	1:A:999:LEU:HG	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1060:LYS:O	1:A:1061:GLN:C	2.63	0.41
1:A:1194:LYS:HA	1:A:1370:SER:O	2.20	0.41
1:A:1201:VAL:HG13	1:A:1218:LEU:HB3	2.02	0.41
1:A:2639:ASN:HB3	1:A:2642:LEU:HG	2.01	0.41
1:A:3053:LEU:HA	1:A:3056:MET:HE2	2.01	0.41
1:A:3099:LEU:HD22	1:A:3190:TRP:CE2	2.55	0.41
1:A:3470:ASP:OD1	3:E:293:LEU:HG	2.21	0.41
1:A:3964:LEU:HA	1:A:3967:SER:HB2	2.02	0.41
1:A:3991:ARG:HA	1:A:4059:TRP:CZ3	2.55	0.41
1:A:4699:ILE:HA	1:A:4700:PRO:HD3	1.94	0.41
1:B:320:PRO:O	1:B:325:ARG:NH1	2.49	0.41
1:B:321:LEU:HD12	1:B:395:SER:HB2	2.03	0.41
1:B:655:LEU:HD23	1:B:655:LEU:HA	1.75	0.41
1:B:1243:ASN:OD1	1:B:1243:ASN:N	2.53	0.41
1:B:1678:TRP:CD1	1:B:1678:TRP:H	2.39	0.41
1:B:1859:MET:N	1:B:2200:GLN:OE1	2.43	0.41
1:B:2187:PRO:HB3	1:B:2214:MET:SD	2.59	0.41
1:B:3320:LEU:HD23	1:B:3320:LEU:HA	1.92	0.41
1:B:3387:GLN:HG2	1:B:3388:GLU:N	2.35	0.41
1:B:4108:PHE:HA	1:B:4111:ARG:CG	2.50	0.41
1:B:4363:LEU:HD21	1:B:4444:MET:HG3	2.00	0.41
2:C:10:ILE:HG13	2:C:66:PHE:CZ	2.55	0.41
3:F:5:GLU:HA	3:F:16:ASN:OD1	2.21	0.41
1:A:29:TRP:O	1:A:33:VAL:HG13	2.19	0.41
1:A:1204:ILE:HD11	1:A:1357:GLY:CA	2.50	0.41
1:A:1232:SER:O	1:A:1236:ILE:HG13	2.21	0.41
1:A:1679:TYR:CE1	1:A:1708:TYR:HA	2.55	0.41
1:A:2479:VAL:HG21	1:A:2521:VAL:HG22	2.02	0.41
1:A:2517:ALA:CB	1:A:2521:VAL:HB	2.50	0.41
1:A:3181:ILE:HA	1:A:3182:PRO:HD3	1.88	0.41
1:A:3311:VAL:HB	1:A:3315:VAL:HB	2.03	0.41
1:A:4132:VAL:CG1	1:A:4145:ALA:HB2	2.50	0.41
1:A:4244:LEU:O	1:A:4248:PHE:HD1	2.03	0.41
1:B:139:GLY:HA2	1:B:240:ILE:HD11	2.02	0.41
1:B:310:LEU:HA	1:B:313:LEU:HB2	2.03	0.41
1:B:310:LEU:O	1:B:314:SER:N	2.50	0.41
1:B:422:LEU:HD11	1:B:537:LEU:HG	2.02	0.41
1:B:1132:GLN:HE22	1:B:1293:ARG:HH21	1.69	0.41
1:B:1244:ILE:HG21	1:B:1249:ASN:HB3	2.01	0.41
1:B:1428:LEU:HB3	1:B:1491:LEU:CB	2.51	0.41
1:B:1600:MET:HG2	1:B:2478:LEU:HD12	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2025:ILE:HD13	1:B:2075:MET:CE	2.50	0.41
1:B:3102:LEU:O	1:B:3197:TYR:OH	2.31	0.41
1:B:4129:LEU:HD12	1:B:4129:LEU:HA	1.85	0.41
1:B:4187:TYR:O	1:B:4191:ILE:HG12	2.21	0.41
1:B:4331:ILE:O	1:B:4335:LEU:HG	2.21	0.41
2:C:131:ILE:HD11	2:C:144:GLN:HG2	2.03	0.41
1:A:108:ILE:O	1:A:112:LEU:HG	2.20	0.41
1:A:418:LEU:O	1:A:422:LEU:HG	2.21	0.41
1:A:1178:LEU:CD2	1:A:1202:LEU:HD21	2.50	0.41
1:A:1294:LEU:O	1:A:1298:LEU:HG	2.20	0.41
1:A:2025:ILE:HD13	1:A:2075:MET:CE	2.50	0.41
1:A:3142:ARG:HA	1:A:3142:ARG:HD3	1.85	0.41
1:A:4767:LEU:O	1:A:4771:LEU:HG	2.21	0.41
1:B:114:ARG:HD3	1:B:114:ARG:HA	1.68	0.41
1:B:694:ASP:OD2	1:B:750:HIS:HB3	2.20	0.41
1:B:808:VAL:HG11	1:B:908:TYR:CB	2.49	0.41
1:B:936:LEU:HD13	1:B:1008:ARG:NH2	2.35	0.41
1:B:1374:GLU:OE1	1:B:1423:PHE:HB2	2.21	0.41
1:B:2058:LYS:HB2	1:B:2074:LEU:HD11	2.01	0.41
1:B:2564:ASP:OD1	1:B:2631:LYS:HD3	2.20	0.41
1:B:2985:LEU:HA	1:B:2988:LEU:HD13	2.02	0.41
1:B:3311:VAL:HG23	1:B:3312:ASP:O	2.20	0.41
1:B:3396:VAL:HG11	1:B:3438:ASN:HB3	2.02	0.41
1:B:3512:ILE:HD11	1:B:3761:GLU:HG2	2.02	0.41
1:B:3901:VAL:HG11	1:B:3939:ALA:HB2	2.02	0.41
1:B:4244:LEU:O	1:B:4248:PHE:HD1	2.03	0.41
1:B:4727:ARG:NE	1:B:4766:ASN:HB3	2.35	0.41
1:A:418:LEU:HD11	1:A:477:ALA:HA	2.01	0.41
1:A:481:ILE:O	1:A:485:THR:HG23	2.20	0.41
1:A:548:LEU:HD22	1:A:642:LYS:HA	2.02	0.41
1:A:693:VAL:HG21	1:A:710:LEU:HD22	2.02	0.41
1:A:834:VAL:HG11	1:A:961:VAL:HG13	2.03	0.41
1:A:921:HIS:HB2	1:A:993:ALA:HB2	2.03	0.41
1:A:1178:LEU:HA	1:A:1181:PHE:CE2	2.55	0.41
1:A:1255:THR:OG1	1:A:1256:ILE:N	2.54	0.41
1:A:1536:GLU:O	1:A:1540:VAL:HG23	2.20	0.41
1:A:1556:LEU:HD13	1:A:1560:ALA:HB2	2.01	0.41
1:A:2054:ASN:HB3	1:A:2060:ILE:HD11	2.02	0.41
1:A:3053:LEU:HD22	1:A:3156:TYR:CD1	2.55	0.41
1:A:3463:ARG:NH2	1:A:3538:PRO:HA	2.35	0.41
1:A:3519:LEU:CD1	1:A:3767:VAL:HG11	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4108:PHE:HA	1:A:4111:ARG:CG	2.50	0.41
1:A:4694:TYR:CD1	1:A:4694:TYR:C	2.98	0.41
1:B:229:GLN:O	1:B:233:ILE:HG13	2.20	0.41
1:B:916:GLU:O	1:B:920:LYS:HG3	2.20	0.41
1:B:1388:LEU:HD23	1:B:1394:ARG:HG3	2.02	0.41
1:B:1475:PRO:HG2	1:B:1481:GLN:HB2	2.01	0.41
1:B:1590:VAL:HA	1:B:1593:LEU:HD13	2.01	0.41
1:B:2414:VAL:HG11	1:B:2416:MET:HE3	2.02	0.41
1:B:3087:ALA:CB	1:B:3181:ILE:CD1	2.89	0.41
1:A:325:ARG:O	1:A:326:LEU:C	2.64	0.41
1:A:414:LEU:HD12	1:A:483:LEU:HD12	2.01	0.41
1:A:942:GLU:HB3	1:A:947:ARG:NE	2.35	0.41
1:A:1268:ALA:O	1:A:1272:THR:HG23	2.20	0.41
1:A:1384:LEU:HD22	1:A:1384:LEU:HA	1.95	0.41
1:A:1729:LEU:HD23	1:A:1729:LEU:HA	1.90	0.41
1:A:1798:GLU:H	1:A:1798:GLU:CD	2.28	0.41
1:A:2311:VAL:HG11	3:E:64:TYR:CD1	2.56	0.41
1:A:3049:ASN:HB3	1:A:3156:TYR:OH	2.19	0.41
1:A:3283:ALA:HB1	1:A:3325:CYS:CB	2.50	0.41
1:A:4303:GLU:HB2	1:A:4475:MET:SD	2.60	0.41
1:A:4336:CYS:HB3	1:A:4514:TYR:HE2	1.85	0.41
1:A:4713:PHE:CE1	1:A:4751:LEU:HD21	2.44	0.41
1:B:1486:GLN:O	1:B:1490:GLN:HG3	2.20	0.41
1:B:1859:MET:CE	1:B:2230:MET:HB2	2.50	0.41
1:B:2094:ILE:HD13	1:B:2124:PHE:CZ	2.56	0.41
1:B:2687:LEU:O	1:B:2688:CYS:C	2.63	0.41
1:B:3003:ILE:O	1:B:3006:LEU:HB2	2.21	0.41
1:B:3105:LEU:HB2	1:B:3197:TYR:OH	2.21	0.41
1:B:3287:THR:OG1	1:B:3330:SER:HB3	2.20	0.41
1:B:3306:GLN:O	1:B:3309:PHE:HB2	2.21	0.41
1:B:3928:LEU:O	1:B:3932:LEU:HG	2.21	0.41
1:B:4562:VAL:O	1:B:4566:MET:HG3	2.20	0.41
1:B:4616:LEU:O	1:B:4620:ILE:HG13	2.21	0.41
2:C:83:GLU:HA	2:C:86:ILE:HB	2.03	0.41
1:A:108:ILE:HD11	1:A:243:ASN:HB3	2.03	0.41
1:A:925:ASP:N	1:A:925:ASP:OD1	2.54	0.41
1:A:1001:TYR:O	1:A:1005:ILE:HG13	2.21	0.41
1:A:1395:LYS:O	1:A:1399:GLU:HG2	2.21	0.41
1:A:1976:HIS:ND1	1:A:1989:HIS:NE2	2.57	0.41
1:A:2246:VAL:O	1:A:2250:SER:OG	2.37	0.41
1:A:2686:LEU:HD13	1:A:2999:TYR:HA	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2975:LEU:HD11	1:A:3020:ALA:CB	2.51	0.41
1:A:3107:GLU:HA	1:A:3110:LYS:HD2	2.02	0.41
1:A:3450:LEU:O	1:A:3454:ILE:HG13	2.21	0.41
1:A:3522:PHE:HD1	1:A:3522:PHE:H	1.67	0.41
1:A:4759:GLY:O	1:A:4763:LEU:HG	2.21	0.41
1:B:132:LEU:HD21	1:B:143:LEU:CD1	2.50	0.41
1:B:1001:TYR:CE2	1:B:1005:ILE:HD11	2.56	0.41
1:B:1169:TYR:O	1:B:1173:THR:HG23	2.21	0.41
1:B:2044:SER:OG	1:B:2065:SER:HB2	2.20	0.41
1:B:2298:LEU:N	1:B:2422:ILE:O	2.43	0.41
1:B:3236:HIS:O	1:B:3240:ILE:HG12	2.21	0.41
1:B:3320:LEU:HD12	1:B:3424:VAL:HG13	2.03	0.41
1:B:4570:LEU:HD13	1:B:4622:TYR:HB3	2.03	0.41
2:D:121:GLU:O	2:D:122:VAL:C	2.60	0.41
3:F:89:THR:N	3:F:92:SER:OG	2.50	0.41
1:A:86:THR:CG2	1:A:141:SER:HB3	2.51	0.41
1:A:469:PHE:CZ	1:A:474:VAL:HG22	2.55	0.41
1:A:884:LEU:C	1:A:886:SER:H	2.29	0.41
1:A:1039:LEU:HB3	1:A:1130:LYS:HD2	2.03	0.41
1:A:1041:TRP:HA	1:A:1044:ARG:HG3	2.03	0.41
1:A:1133:VAL:HG22	1:A:1247:TRP:CE2	2.56	0.41
1:A:1210:LYS:HE3	1:A:1210:LYS:HB2	1.93	0.41
1:A:1515:LEU:HD11	1:A:1556:LEU:CD2	2.50	0.41
1:A:1952:PHE:HE1	1:A:1976:HIS:CD2	2.39	0.41
1:A:2229:THR:CG2	1:A:2241:ILE:HG23	2.51	0.41
1:A:2250:SER:O	1:A:2254:GLN:HG3	2.21	0.41
1:A:2301:VAL:HG13	1:A:2340:ILE:HG23	2.02	0.41
1:A:2311:VAL:HG11	3:E:64:TYR:CG	2.56	0.41
1:A:2324:THR:C	1:A:2326:MET:H	2.29	0.41
1:A:2506:GLN:HG3	1:A:2546:ALA:HB1	2.02	0.41
1:A:3053:LEU:HD22	1:A:3156:TYR:CE1	2.56	0.41
1:A:3098:CYS:O	1:A:3101:VAL:HG12	2.21	0.41
1:A:3105:LEU:HB2	1:A:3197:TYR:OH	2.21	0.41
1:A:3236:HIS:O	1:A:3240:ILE:HG12	2.21	0.41
1:A:3413:ARG:NH1	1:A:3457:GLU:OE1	2.41	0.41
1:A:3951:VAL:HA	1:A:3968:LEU:HD22	2.03	0.41
1:A:4077:ILE:HG22	2:C:114:GLY:O	2.21	0.41
1:A:4717:PRO:O	1:A:4720:PRO:HD2	2.21	0.41
1:B:120:GLU:H	1:B:120:GLU:HG3	1.59	0.41
1:B:348:ALA:CB	1:B:421:ILE:HG23	2.51	0.41
1:B:945:LEU:HG	1:B:946:ASN:OD1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1213:THR:O	1:B:1217:THR:HG23	2.20	0.41
1:B:2173:HIS:HE2	1:B:2253:LEU:HD11	1.86	0.41
1:B:2255:PRO:C	1:B:2257:LEU:H	2.29	0.41
1:B:2620:SER:C	1:B:2622:ILE:N	2.78	0.41
1:B:3031:GLU:O	1:B:3052:HIS:NE2	2.54	0.41
1:B:3453:SER:O	1:B:3456:PRO:HD2	2.20	0.41
1:B:4205:VAL:HG11	1:B:4248:PHE:CE2	2.56	0.41
1:B:4476:ALA:C	1:B:4521:ASN:HD21	2.25	0.41
2:D:106:LEU:O	2:D:110:MET:HG2	2.21	0.41
3:F:3:ARG:HG2	3:F:18:ARG:CG	2.49	0.41
3:F:94:GLN:HG3	3:F:132:LEU:HB3	2.03	0.41
1:A:478:ASN:O	1:A:482:LYS:HG3	2.20	0.41
1:A:659:THR:O	1:A:663:LEU:HB2	2.21	0.41
1:A:740:PHE:CD2	1:A:781:LYS:HG2	2.56	0.41
1:A:1051:VAL:HG13	1:A:1072:LEU:HG	2.02	0.41
1:A:1218:LEU:HD22	1:A:1376:ILE:HA	2.02	0.41
1:A:1240:GLU:H	1:A:1240:GLU:CD	2.29	0.41
1:A:1428:LEU:HD12	1:A:1488:ASN:HA	2.01	0.41
1:A:1664:CYS:SG	1:A:1666:PHE:HB3	2.61	0.41
1:A:1929:LEU:HD11	1:A:2241:ILE:HD11	2.02	0.41
1:A:2054:ASN:OD1	1:A:2058:LYS:N	2.53	0.41
1:A:4132:VAL:O	1:A:4133:LEU:C	2.64	0.41
1:A:4343:GLU:HB3	1:A:4426:LYS:NZ	2.36	0.41
1:B:268:ARG:HB3	1:B:272:ARG:HH21	1.85	0.41
1:B:1035:ILE:HD13	1:B:1035:ILE:HA	1.91	0.41
1:B:1870:PHE:HE2	1:B:2239:LEU:HD11	1.86	0.41
1:B:2191:MET:HB3	1:B:2198:LEU:HB2	2.03	0.41
1:B:2198:LEU:HD23	1:B:2198:LEU:HA	1.88	0.41
1:B:3000:MET:HE2	1:B:3000:MET:HB2	1.79	0.41
1:B:3095:VAL:HG11	1:B:3186:PHE:CE1	2.56	0.41
1:B:3439:SER:HB3	1:B:3443:GLN:HB2	2.03	0.41
1:B:3450:LEU:O	1:B:3454:ILE:HG13	2.21	0.41
1:B:3470:ASP:OD1	3:F:293:LEU:HG	2.20	0.41
1:B:3729:GLU:O	1:B:3730:GLU:C	2.64	0.41
1:B:4723:LEU:HD13	1:B:4763:LEU:HB2	2.01	0.41
2:C:79:ASP:OD1	2:C:79:ASP:N	2.54	0.41
1:A:73:PHE:CE1	1:A:155:MET:SD	3.14	0.40
1:A:484:LEU:HD22	1:A:530:LEU:HD11	2.03	0.40
1:A:1118:LEU:HD13	1:A:1273:LEU:HG	2.03	0.40
1:A:1499:ILE:HG22	1:A:1511:CYS:SG	2.60	0.40
1:A:1819:MET:HA	1:A:1822:ILE:HB	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2173:HIS:CD2	1:A:2253:LEU:CD1	2.87	0.40
1:A:2410:ASP:HA	1:A:2411:PRO:HD3	1.94	0.40
1:A:3044:GLU:O	1:A:3049:ASN:ND2	2.53	0.40
1:A:3968:LEU:O	1:A:3969:GLN:C	2.63	0.40
1:A:4195:HIS:NE2	2:C:35:THR:CG2	2.85	0.40
1:A:4714:LEU:HD11	1:A:4754:VAL:CG1	2.49	0.40
1:B:129:LEU:HD23	1:B:129:LEU:HA	1.88	0.40
1:B:337:LEU:HD12	1:B:337:LEU:HA	1.94	0.40
1:B:484:LEU:HB3	1:B:657:PHE:CZ	2.56	0.40
1:B:491:LEU:HD13	1:B:521:ILE:HG13	2.03	0.40
1:B:1104:ILE:HG23	1:B:1110:LEU:CD1	2.51	0.40
1:B:1236:ILE:CG2	1:B:1282:ALA:HB2	2.51	0.40
1:B:1845:LEU:HA	1:B:2194:PRO:HA	2.02	0.40
1:B:2316:GLN:HE22	3:F:76:GLN:CD	2.29	0.40
1:B:3179:SER:O	1:B:3180:ARG:C	2.65	0.40
1:B:3298:ASP:HB3	1:B:3398:GLN:CD	2.45	0.40
1:B:4031:SER:HB3	3:F:310:GLU:OE2	2.21	0.40
1:B:4059:TRP:CE3	3:F:323:LEU:HD21	2.56	0.40
1:B:4307:LYS:HG2	1:B:4478:VAL:HG13	2.01	0.40
1:A:112:LEU:HD11	1:A:247:LEU:HD12	2.04	0.40
1:A:234:LYS:O	1:A:238:VAL:HG23	2.21	0.40
1:A:317:VAL:O	1:A:318:LEU:C	2.63	0.40
1:A:671:ARG:HB3	1:A:722:LEU:HD11	2.03	0.40
1:A:741:SER:OG	1:A:785:ARG:NH1	2.54	0.40
1:A:1025:MET:HE2	1:A:1025:MET:HB3	1.88	0.40
1:A:1137:GLU:HG2	1:A:1141:LYS:HD2	2.04	0.40
1:A:1204:ILE:HG21	1:A:1218:LEU:HD12	2.03	0.40
1:A:1392:GLN:CD	1:A:1392:GLN:H	2.28	0.40
1:A:1996:LEU:HB3	1:A:2000:ASN:HB3	2.03	0.40
1:A:2060:ILE:HG12	1:A:2074:LEU:HD12	2.03	0.40
1:A:2369:GLU:HA	1:A:2373:ARG:O	2.20	0.40
1:A:4059:TRP:CE3	3:E:323:LEU:HD21	2.56	0.40
1:A:4127:ASN:C	1:A:4129:LEU:N	2.78	0.40
1:A:4187:TYR:O	1:A:4191:ILE:HG12	2.21	0.40
1:A:4201:ALA:HA	1:A:4205:VAL:HG12	2.03	0.40
1:A:4280:ARG:NH1	1:A:4285:ASP:OD2	2.52	0.40
1:A:4363:LEU:HD21	1:A:4444:MET:HG3	2.02	0.40
1:B:322:ASN:O	1:B:323:PRO:C	2.63	0.40
1:B:336:CYS:O	1:B:337:LEU:C	2.63	0.40
1:B:684:ALA:HA	1:B:734:GLN:HG3	2.03	0.40
1:B:905:THR:HG22	1:B:906:PRO:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1079:LYS:C	1:B:1081:SER:H	2.28	0.40
1:B:2042:PRO:HD3	1:B:2088:VAL:O	2.21	0.40
1:B:2220:THR:HG23	1:B:2224:GLU:HA	2.02	0.40
1:B:3289:ASN:HA	1:B:3292:LYS:NZ	2.36	0.40
1:B:3295:ILE:HD13	1:B:3395:LEU:HD23	2.03	0.40
1:B:3742:LEU:HD13	1:B:3820:LYS:HG2	2.03	0.40
1:B:4273:LEU:O	1:B:4280:ARG:NH2	2.53	0.40
1:B:4716:ARG:HA	1:B:4717:PRO:HD3	1.92	0.40
2:D:50:GLN:HA	2:D:53:ILE:HG22	2.03	0.40
3:F:65:TYR:HB3	3:F:70:PHE:CE2	2.56	0.40
1:A:81:SER:O	1:A:85:ILE:HG13	2.21	0.40
1:A:793:ASN:HB3	1:A:854:ILE:HG13	2.02	0.40
1:A:864:TYR:C	1:A:866:LEU:H	2.30	0.40
1:A:1055:LYS:O	1:A:1059:ILE:HG13	2.22	0.40
1:A:1063:MET:SD	1:A:1068:ALA:HB2	2.62	0.40
1:A:1806:SER:C	1:A:1809:PRO:HD2	2.47	0.40
1:A:3196:GLU:HA	1:A:3199:MET:HG2	2.02	0.40
1:A:4325:TYR:CE1	1:A:4495:ILE:HA	2.56	0.40
1:B:507:ALA:O	1:B:523:ARG:NE	2.51	0.40
1:B:791:LYS:HD3	1:B:836:ILE:HG12	2.03	0.40
1:B:833:PHE:HE1	1:B:858:LEU:HD22	1.87	0.40
1:B:855:LEU:CD2	1:B:1002:TYR:HE2	2.34	0.40
1:B:1110:LEU:H	1:B:1175:ALA:HB2	1.86	0.40
1:B:1242:PRO:HB2	1:B:1251:PHE:HZ	1.87	0.40
1:B:1528:ASN:HD22	1:B:1528:ASN:H	1.68	0.40
1:B:1822:ILE:CG2	1:B:1826:PHE:CE2	3.04	0.40
1:B:2702:ILE:HA	1:B:3005:MET:HG2	2.03	0.40
1:B:3013:GLU:HG2	1:B:3077:SER:HB3	2.03	0.40
1:B:3106:LEU:HG	1:B:3110:LYS:HE3	2.02	0.40
1:B:3177:THR:OG1	1:B:3178:ASN:N	2.55	0.40
1:B:3304:LEU:HD23	1:B:3304:LEU:HA	1.93	0.40
1:B:4132:VAL:HA	1:B:4135:THR:HG23	2.02	0.40
1:B:4596:MET:O	1:B:4600:GLN:HG2	2.21	0.40
1:A:193:PHE:CZ	1:B:816:LEU:HD21	2.56	0.40
1:A:545:ALA:HB1	1:A:648:LEU:HG	2.04	0.40
1:A:718:VAL:HG13	1:A:760:LEU:HG	2.03	0.40
1:A:918:TRP:HA	1:A:918:TRP:CE3	2.56	0.40
1:A:1176:TYR:CD1	1:A:1281:ALA:CB	3.05	0.40
1:A:1219:VAL:O	1:A:1222:LEU:HB2	2.20	0.40
1:A:1312:ARG:O	1:A:1316:PRO:HD3	2.21	0.40
1:A:1447:LEU:HA	1:A:1505:GLN:HG3	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2302:GLU:HG3	1:A:2343:ASN:HD21	1.86	0.40
1:A:4251:VAL:HB	1:A:4254:ILE:HD12	2.02	0.40
1:B:408:LEU:HD13	1:B:520:ARG:HB3	2.04	0.40
1:B:952:ALA:O	1:B:956:LEU:HG	2.21	0.40
1:B:1109:ILE:HG23	1:B:1178:LEU:HD12	2.03	0.40
1:B:1127:ALA:O	1:B:1131:VAL:HG22	2.21	0.40
1:B:1314:LEU:HA	1:B:1317:LEU:HD12	2.02	0.40
1:B:1474:SER:HA	1:B:1485:ILE:CD1	2.51	0.40
1:B:2680:LYS:O	1:B:2684:GLN:HG3	2.22	0.40
1:B:2702:ILE:HD11	1:B:3001:GLN:CD	2.46	0.40
1:B:3556:TYR:O	1:B:3606:LYS:CE	2.67	0.40
1:B:3893:ASN:HB3	1:B:3896:LEU:HB2	2.03	0.40
1:B:4274:ARG:HB2	1:B:4288:GLN:HE22	1.86	0.40
1:B:4303:GLU:O	1:B:4307:LYS:HG3	2.21	0.40
1:B:4325:TYR:O	1:B:4329:VAL:HG23	2.22	0.40
1:B:4609:ASN:HB3	1:B:4612:VAL:HB	2.02	0.40
2:D:52:MET:O	2:D:55:GLU:HB3	2.21	0.40
1:A:268:ARG:O	1:A:272:ARG:HG3	2.22	0.40
1:A:659:THR:HA	1:A:663:LEU:HB2	2.02	0.40
1:A:1416:ASN:O	1:A:1470:ARG:NH1	2.52	0.40
1:A:3034:MET:HG2	1:A:3035:ASP:N	2.36	0.40
1:A:3393:THR:HA	1:A:3396:VAL:HG12	2.04	0.40
1:A:4601:ILE:HA	1:A:4606:VAL:HG11	2.02	0.40
1:B:31:VAL:O	1:B:35:PRO:CD	2.69	0.40
1:B:60:GLU:HG3	1:B:106:VAL:HG13	2.02	0.40
1:B:747:LEU:HD11	1:B:793:ASN:ND2	2.37	0.40
1:B:1424:CYS:O	1:B:1428:LEU:HG	2.21	0.40
1:B:1666:PHE:HA	1:B:1669:THR:OG1	2.21	0.40
1:B:2311:VAL:HG13	3:F:56:LEU:HD11	2.02	0.40
1:B:2686:LEU:CD2	1:B:3002:VAL:HG21	2.49	0.40
1:B:3789:SER:O	1:B:3797:LEU:HD11	2.21	0.40
1:B:4062:ARG:HB2	1:B:4062:ARG:NH1	2.37	0.40
1:B:4316:THR:O	1:B:4319:ARG:HB2	2.21	0.40
2:D:67:PRO:HA	2:D:70:LEU:HB3	2.04	0.40
2:D:137:VAL:CG1	2:D:141:GLU:HB2	2.50	0.40
2:D:143:VAL:O	2:D:147:THR:HG23	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	3853/5205 (74%)	3738 (97%)	115 (3%)	0	100	100
1	B	3884/5205 (75%)	3762 (97%)	122 (3%)	0	100	100
2	C	142/149 (95%)	136 (96%)	6 (4%)	0	100	100
2	D	139/149 (93%)	132 (95%)	7 (5%)	0	100	100
3	E	178/381 (47%)	175 (98%)	3 (2%)	0	100	100
3	F	178/381 (47%)	170 (96%)	8 (4%)	0	100	100
All	All	8374/11470 (73%)	8113 (97%)	261 (3%)	0	100	100

There are no Ramachandran outliers to report.

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	A	3438/4542 (76%)	3329 (97%)	109 (3%)	34	59
1	B	3474/4542 (76%)	3347 (96%)	127 (4%)	29	54
2	C	123/127 (97%)	118 (96%)	5 (4%)	26	51
2	D	122/127 (96%)	115 (94%)	7 (6%)	17	43
3	E	162/330 (49%)	161 (99%)	1 (1%)	84	90
3	F	162/330 (49%)	159 (98%)	3 (2%)	52	71
All	All	7481/9998 (75%)	7229 (97%)	252 (3%)	34	57

All (252) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	33	VAL
1	A	44	PHE
1	A	69	GLN
1	A	92	ILE
1	A	94	ARG
1	A	97	LEU
1	A	100	VAL
1	A	191	MET
1	A	277	VAL
1	A	284	ILE
1	A	318	LEU
1	A	347	MET
1	A	401	GLU
1	A	444	VAL
1	A	530	LEU
1	A	686	LEU
1	A	722	LEU
1	A	771	GLN
1	A	799	VAL
1	A	807	ASN
1	A	813	MET
1	A	830	LEU
1	A	909	HIS
1	A	911	PHE
1	A	913	GLU
1	A	937	SER
1	A	984	ARG
1	A	1040	ARG
1	A	1045	LEU
1	A	1046	ARG
1	A	1061	GLN
1	A	1063	MET
1	A	1072	LEU
1	A	1113	HIS
1	A	1131	VAL
1	A	1154	ILE
1	A	1159	LEU
1	A	1173	THR
1	A	1177	LEU
1	A	1214	LEU
1	A	1244	ILE
1	A	1301	TRP

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Mol	Chain	Res	Type
1	A	1303	ASP
1	A	1318	LEU
1	A	1384	LEU
1	A	1471	MET
1	A	1481	GLN
1	A	1484	VAL
1	A	1485	ILE
1	A	1486	GLN
1	A	1496	THR
1	A	1500	VAL
1	A	1528	ASN
1	A	1553	HIS
1	A	1554	LEU
1	A	1556	LEU
1	A	1594	GLU
1	A	1607	THR
1	A	1690	VAL
1	A	1714	PHE
1	A	1894	LEU
1	A	1906	HIS
1	A	1950	VAL
1	A	1956	SER
1	A	2180	VAL
1	A	2184	THR
1	A	2204	THR
1	A	2301	VAL
1	A	2475	LEU
1	A	2488	SER
1	A	2667	TYR
1	A	2695	PHE
1	A	2698	LYS
1	A	2984	THR
1	A	2994	VAL
1	A	3056	MET
1	A	3108	TYR
1	A	3141	LEU
1	A	3159	LEU
1	A	3237	VAL
1	A	3286	ARG
1	A	3315	VAL
1	A	3332	VAL
1	A	3458	LEU

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Mol	Chain	Res	Type
1	A	3522	PHE
1	A	3536	ASN
1	A	3581	LEU
1	A	3765	CYS
1	A	3793	ASN
1	A	3866	HIS
1	A	3994	LEU
1	A	3999	MET
1	A	4007	VAL
1	A	4127	ASN
1	A	4129	LEU
1	A	4135	THR
1	A	4230	THR
1	A	4277	VAL
1	A	4309	PHE
1	A	4310	MET
1	A	4316	THR
1	A	4335	LEU
1	A	4400	LEU
1	A	4447	LEU
1	A	4478	VAL
1	A	4505	LEU
1	A	4520	VAL
1	A	4601	ILE
1	A	4616	LEU
1	B	33	VAL
1	B	37	LEU
1	B	70	TYR
1	B	86	THR
1	B	92	ILE
1	B	96	GLN
1	B	97	LEU
1	B	113	LEU
1	B	124	VAL
1	B	130	ILE
1	B	147	GLU
1	B	154	MET
1	B	194	LEU
1	B	200	VAL
1	B	204	ARG
1	B	243	ASN
1	B	283	PHE

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Mol	Chain	Res	Type
1	B	312	THR
1	B	313	LEU
1	B	318	LEU
1	B	325	ARG
1	B	367	GLU
1	B	378	VAL
1	B	379	GLN
1	B	381	CYS
1	B	408	LEU
1	B	424	LEU
1	B	448	LEU
1	B	511	ILE
1	B	528	VAL
1	B	677	SER
1	B	680	GLU
1	B	686	LEU
1	B	698	LEU
1	B	703	ASP
1	B	717	LEU
1	B	727	LEU
1	B	799	VAL
1	B	813	MET
1	B	830	LEU
1	B	844	MET
1	B	867	HIS
1	B	909	HIS
1	B	911	PHE
1	B	922	PHE
1	B	936	LEU
1	B	939	GLU
1	B	943	ASP
1	B	948	LEU
1	B	981	ASP
1	B	992	THR
1	B	1036	LEU
1	B	1040	ARG
1	B	1045	LEU
1	B	1057	HIS
1	B	1112	LEU
1	B	1131	VAL
1	B	1204	ILE
1	B	1212	ASN

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Mol	Chain	Res	Type
1	B	1240	GLU
1	B	1299	ILE
1	B	1318	LEU
1	B	1326	VAL
1	B	1334	LEU
1	B	1338	LEU
1	B	1358	CYS
1	B	1387	GLN
1	B	1392	GLN
1	B	1470	ARG
1	B	1474	SER
1	B	1486	GLN
1	B	1528	ASN
1	B	1536	GLU
1	B	1549	GLN
1	B	1553	HIS
1	B	1554	LEU
1	B	1557	HIS
1	B	1595	CYS
1	B	1597	CYS
1	B	1664	CYS
1	B	1800	GLN
1	B	1805	PHE
1	B	1817	PHE
1	B	1873	VAL
1	B	1934	ASP
1	B	2300	ASP
1	B	2301	VAL
1	B	2673	ASP
1	B	2676	ASN
1	B	2974	ARG
1	B	2982	LEU
1	B	2985	LEU
1	B	2995	ARG
1	B	3001	GLN
1	B	3002	VAL
1	B	3003	ILE
1	B	3005	MET
1	B	3034	MET
1	B	3038	ASP
1	B	3045	ARG
1	B	3049	ASN

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Mol	Chain	Res	Type
1	B	3050	GLU
1	B	3098	CYS
1	B	3197	TYR
1	B	3285	GLN
1	B	3286	ARG
1	B	3328	CYS
1	B	3458	LEU
1	B	3543	CYS
1	B	3581	LEU
1	B	3968	LEU
1	B	4135	THR
1	B	4228	LEU
1	B	4230	THR
1	B	4276	LEU
1	B	4277	VAL
1	B	4279	GLN
1	B	4297	ASP
1	B	4329	VAL
1	B	4331	ILE
1	B	4400	LEU
1	B	4447	LEU
1	B	4593	GLN
1	B	4612	VAL
1	B	4634	LEU
1	B	4752	GLU
1	B	4773	GLU
2	C	33	LEU
2	C	49	LEU
2	C	79	ASP
2	C	96	ASP
2	C	101	ILE
2	D	21	ASP
2	D	28	ILE
2	D	33	LEU
2	D	49	LEU
2	D	63	THR
2	D	64	ILE
2	D	105	GLU
3	E	131	HIS
3	F	70	PHE
3	F	131	HIS
3	F	136	HIS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (140) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	96	GLN
1	A	98	GLN
1	A	196	GLN
1	A	229	GLN
1	A	243	ASN
1	A	271	ASN
1	A	274	GLN
1	A	327	GLN
1	A	402	HIS
1	A	407	GLN
1	A	466	HIS
1	A	479	HIS
1	A	664	ASN
1	A	712	HIS
1	A	714	ASN
1	A	729	ASN
1	A	792	GLN
1	A	867	HIS
1	A	868	GLN
1	A	879	GLN
1	A	881	GLN
1	A	917	ASN
1	A	1067	HIS
1	A	1182	ASN
1	A	1227	GLN
1	A	1253	ASN
1	A	1364	ASN
1	A	1365	HIS
1	A	1418	ASN
1	A	1481	GLN
1	A	1486	GLN
1	A	1493	GLN
1	A	1553	HIS
1	A	1598	HIS
1	A	1682	HIS
1	A	1802	GLN
1	A	1892	HIS
1	A	1916	HIS
1	A	2296	GLN
1	A	2343	ASN
1	A	2990	ASN

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Mol	Chain	Res	Type
1	A	3023	ASN
1	A	3148	HIS
1	A	3178	ASN
1	A	3321	GLN
1	A	3397	ASN
1	A	3410	GLN
1	A	3491	GLN
1	A	3536	ASN
1	A	3591	ASN
1	A	3639	ASN
1	A	3683	GLN
1	A	3740	ASN
1	A	3759	GLN
1	A	3835	GLN
1	A	4011	ASN
1	A	4127	ASN
1	A	4161	GLN
1	A	4234	GLN
1	A	4279	GLN
1	A	4490	ASN
1	A	4602	ASN
1	B	69	GLN
1	B	83	HIS
1	B	98	GLN
1	B	192	ASN
1	B	229	GLN
1	B	243	ASN
1	B	262	ASN
1	B	274	GLN
1	B	379	GLN
1	B	407	GLN
1	B	656	ASN
1	B	729	ASN
1	B	867	HIS
1	B	881	GLN
1	B	882	HIS
1	B	921	HIS
1	B	979	GLN
1	B	1022	GLN
1	B	1097	GLN
1	B	1111	GLN
1	B	1113	HIS

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Mol	Chain	Res	Type
1	B	1132	GLN
1	B	1227	GLN
1	B	1234	ASN
1	B	1266	GLN
1	B	1306	ASN
1	B	1309	GLN
1	B	1364	ASN
1	B	1387	GLN
1	B	1418	ASN
1	B	1486	GLN
1	B	1493	GLN
1	B	1528	ASN
1	B	1553	HIS
1	B	1558	ASN
1	B	1573	GLN
1	B	1800	GLN
1	B	1925	GLN
1	B	2182	GLN
1	B	2219	HIS
1	B	2258	GLN
1	B	2294	HIS
1	B	2296	GLN
1	B	2316	GLN
1	B	2319	HIS
1	B	2522	GLN
1	B	2524	GLN
1	B	2699	GLN
1	B	2983	GLN
1	B	2990	ASN
1	B	3001	GLN
1	B	3049	ASN
1	B	3209	GLN
1	B	3397	ASN
1	B	3438	ASN
1	B	3491	GLN
1	B	3591	ASN
1	B	3639	ASN
1	B	3683	GLN
1	B	3740	ASN
1	B	3756	HIS
1	B	3835	GLN
1	B	3848	GLN

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Mol	Chain	Res	Type
1	B	4002	ASN
1	B	4021	GLN
1	B	4233	GLN
1	B	4490	ASN
1	B	4602	ASN
1	B	4766	ASN
2	C	43	ASN
2	C	54	ASN
2	C	98	ASN
2	C	138	ASN
2	D	54	ASN
2	D	61	ASN
2	D	98	ASN
3	F	74	GLN
3	F	76	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

Of 24 ligands modelled in this entry, 24 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

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.

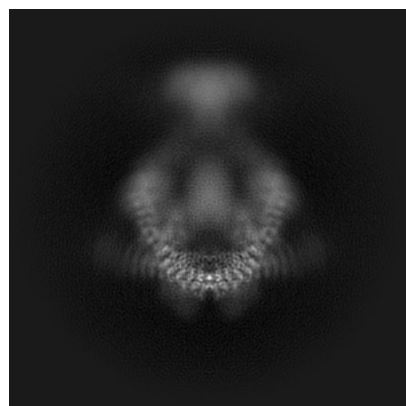
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-46686. These allow visual inspection of the internal detail of the map and identification of artifacts.

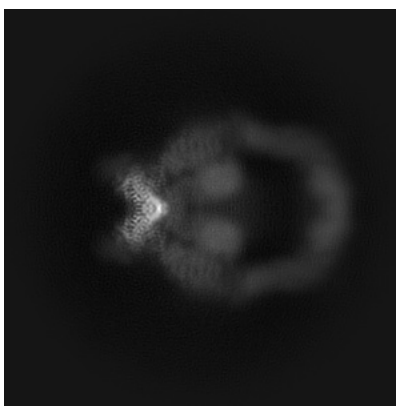
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

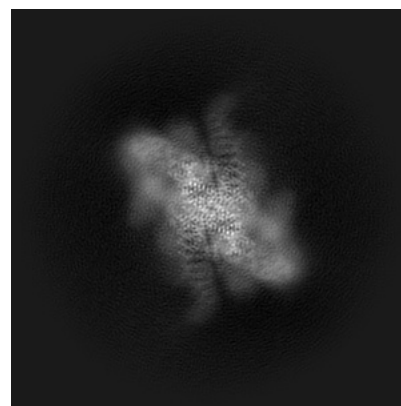
6.1.1 Primary map



X

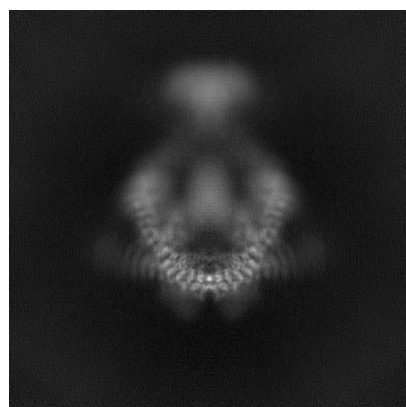


Y

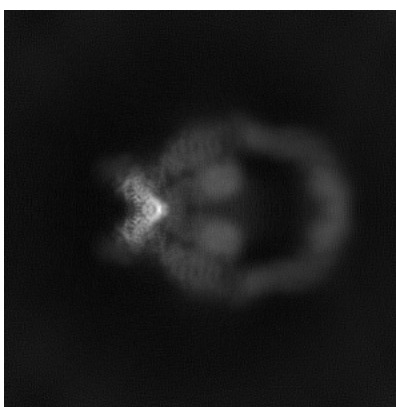


Z

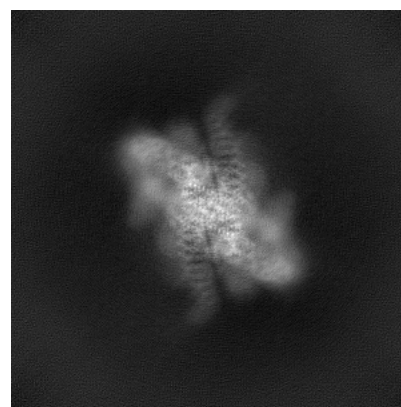
6.1.2 Raw map



X



Y

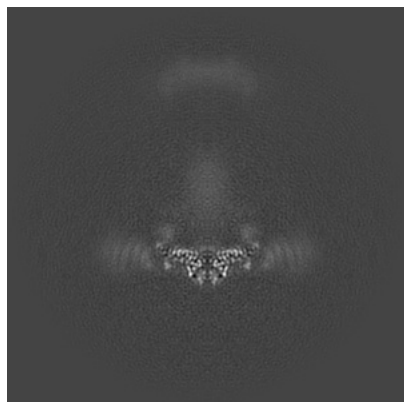


Z

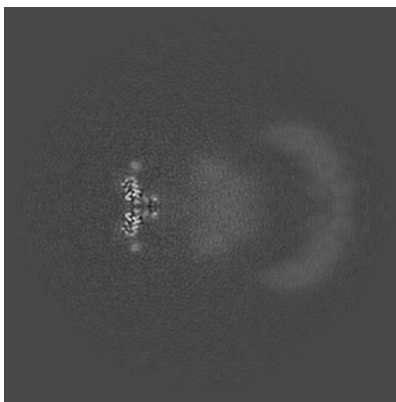
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

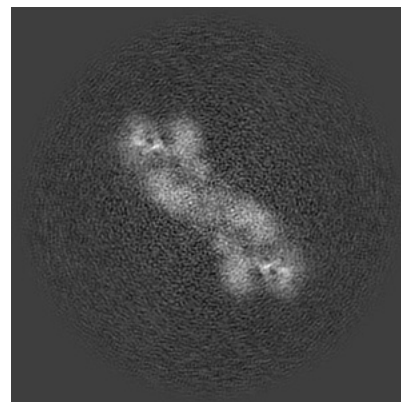
6.2.1 Primary map



X Index: 210



Y Index: 210

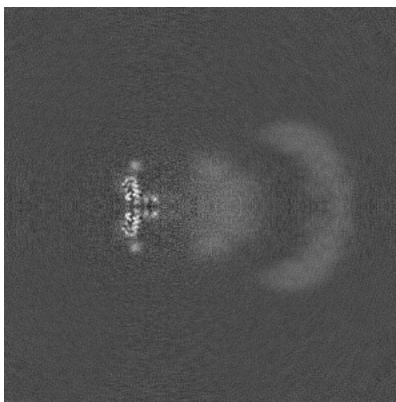


Z Index: 210

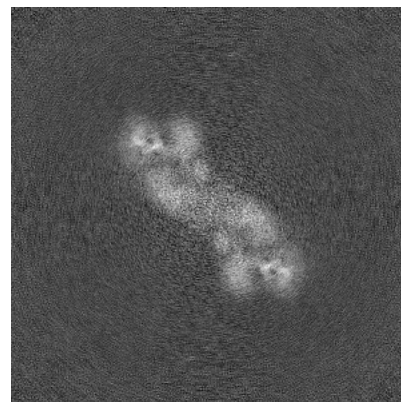
6.2.2 Raw map



X Index: 210



Y Index: 210



Z Index: 210

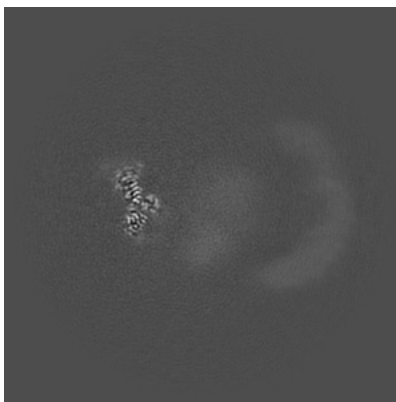
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

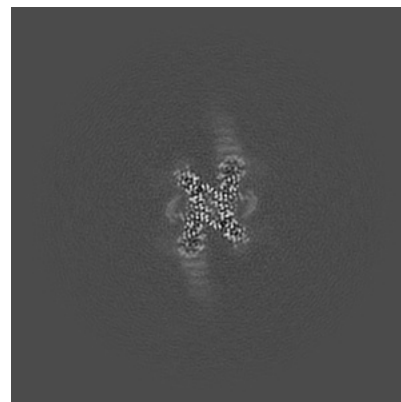
6.3.1 Primary map



X Index: 193

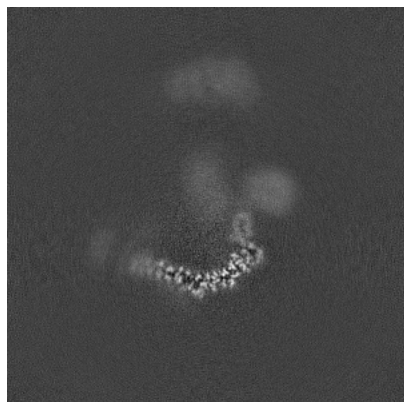


Y Index: 221

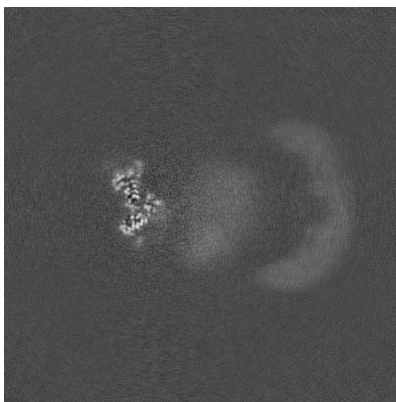


Z Index: 140

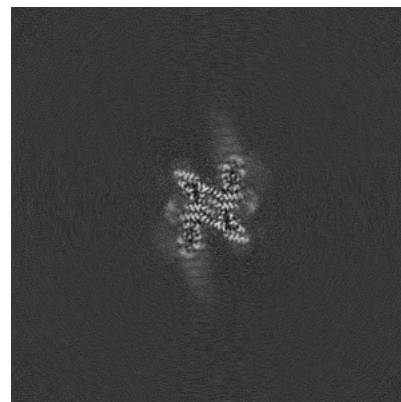
6.3.2 Raw map



X Index: 188



Y Index: 218

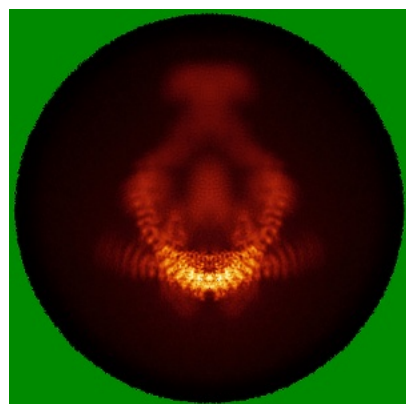


Z Index: 138

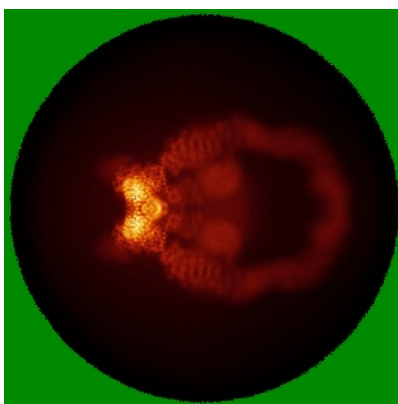
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) ⓘ

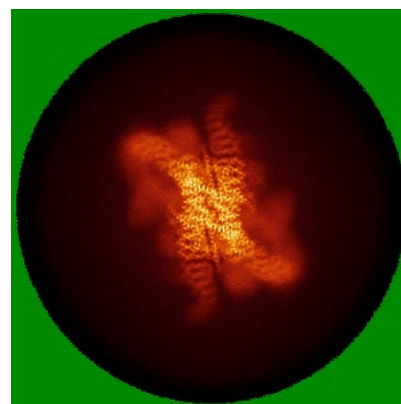
6.4.1 Primary map



X

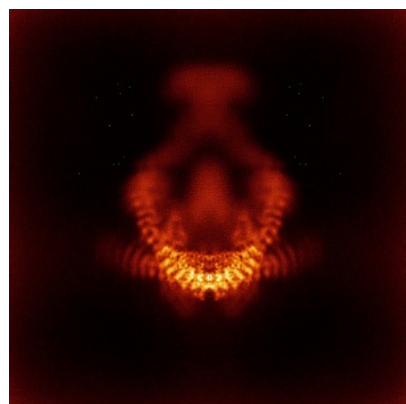


Y

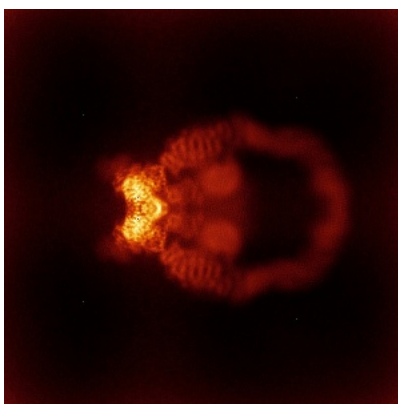


Z

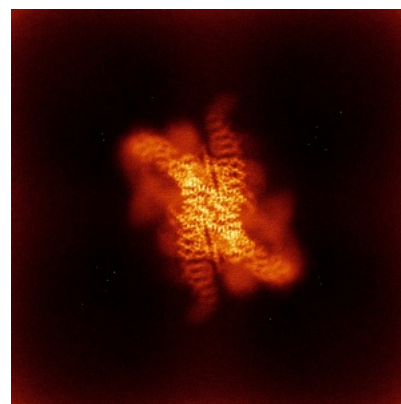
6.4.2 Raw map



X



Y

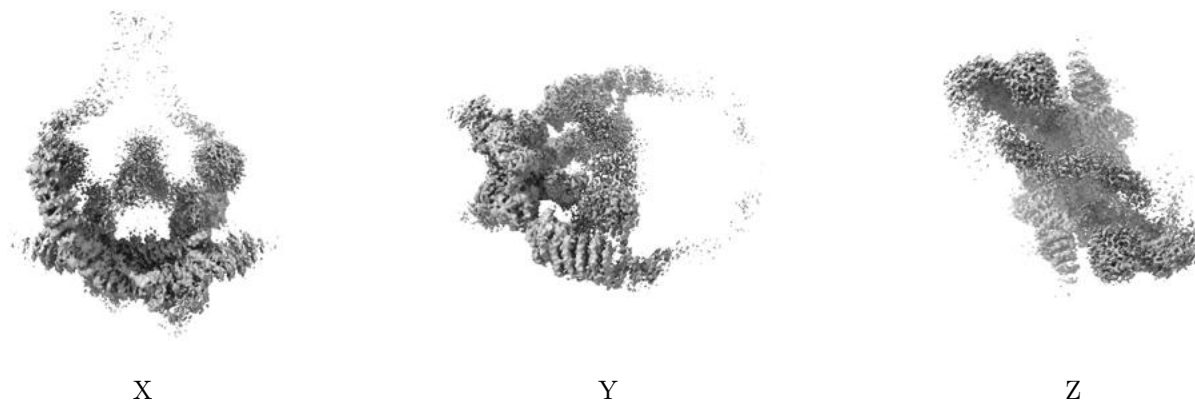


Z

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.

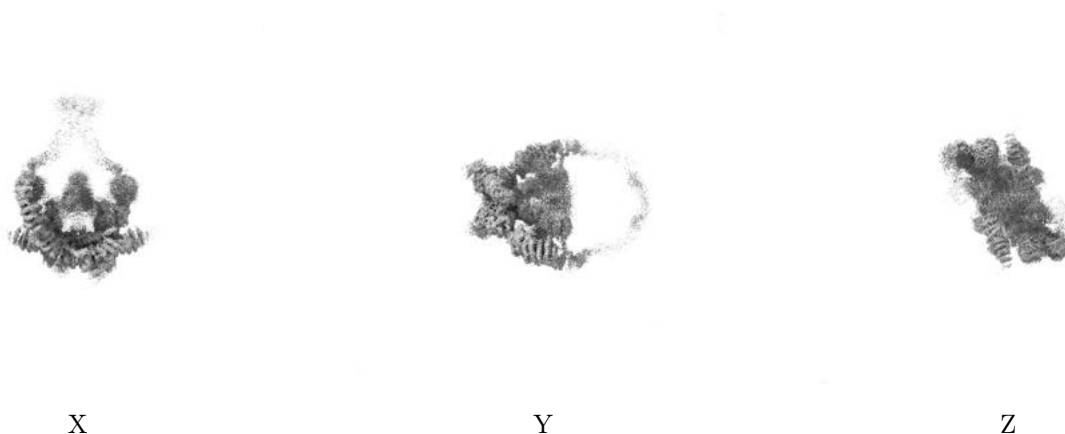
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.13. 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 shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

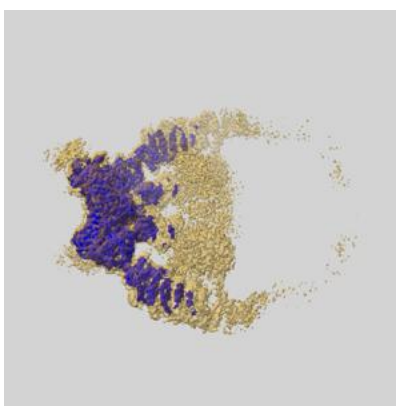
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

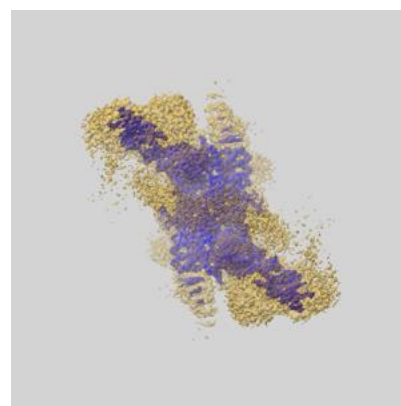
6.6.1 emd_46686_msk_1.map [i](#)



X



Y

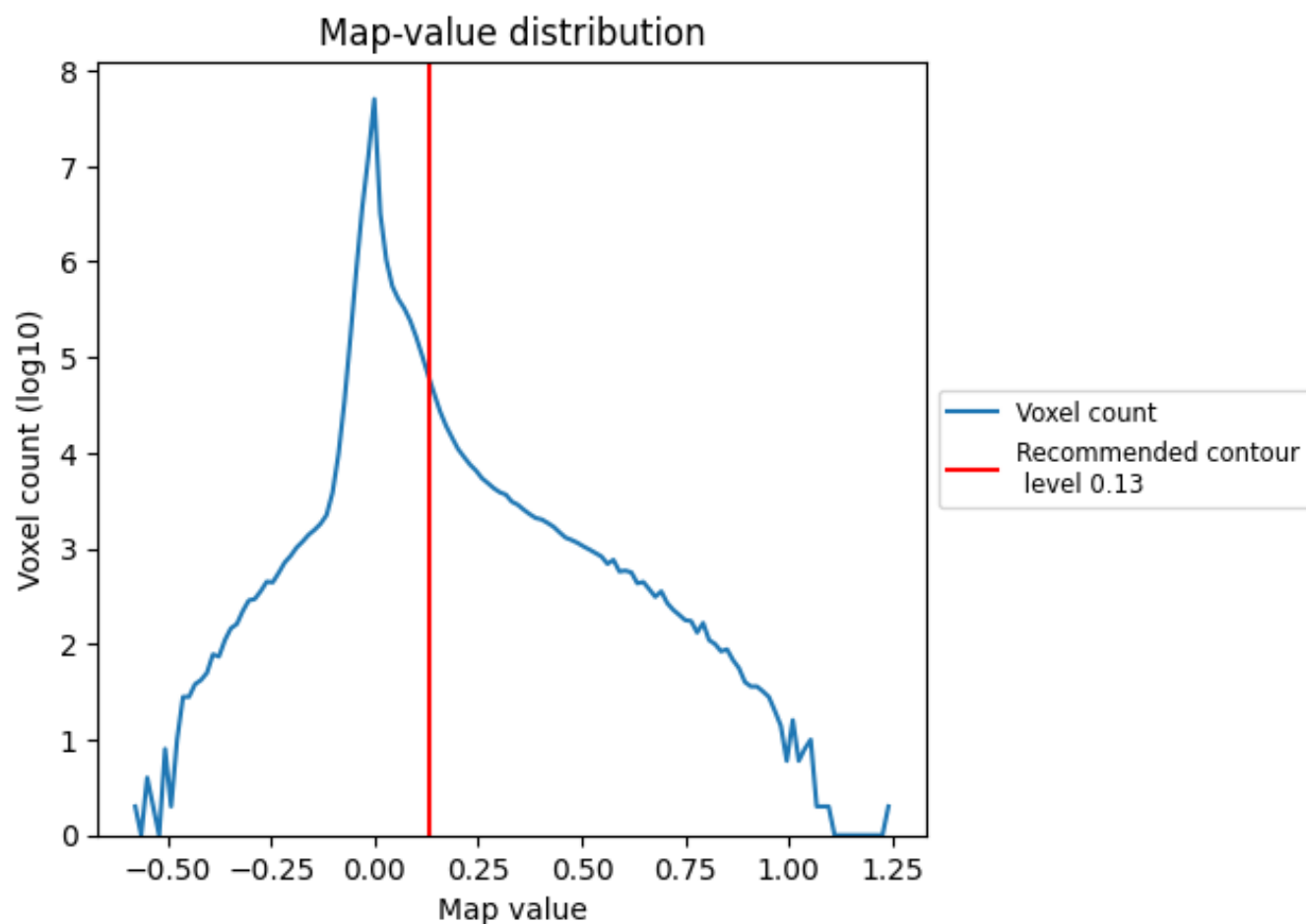


Z

7 Map analysis [i](#)

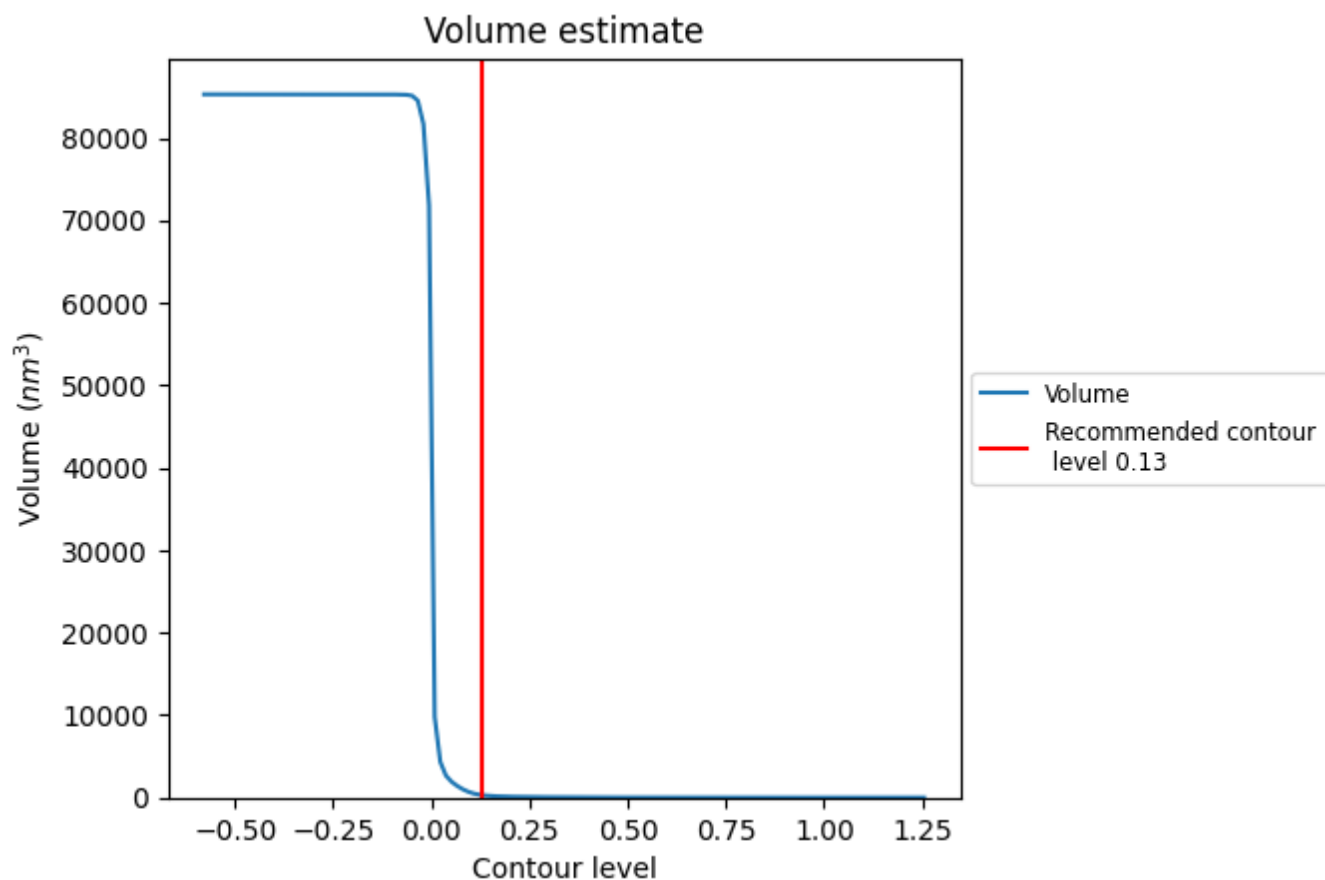
This section contains the results of statistical analysis of the map.

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.

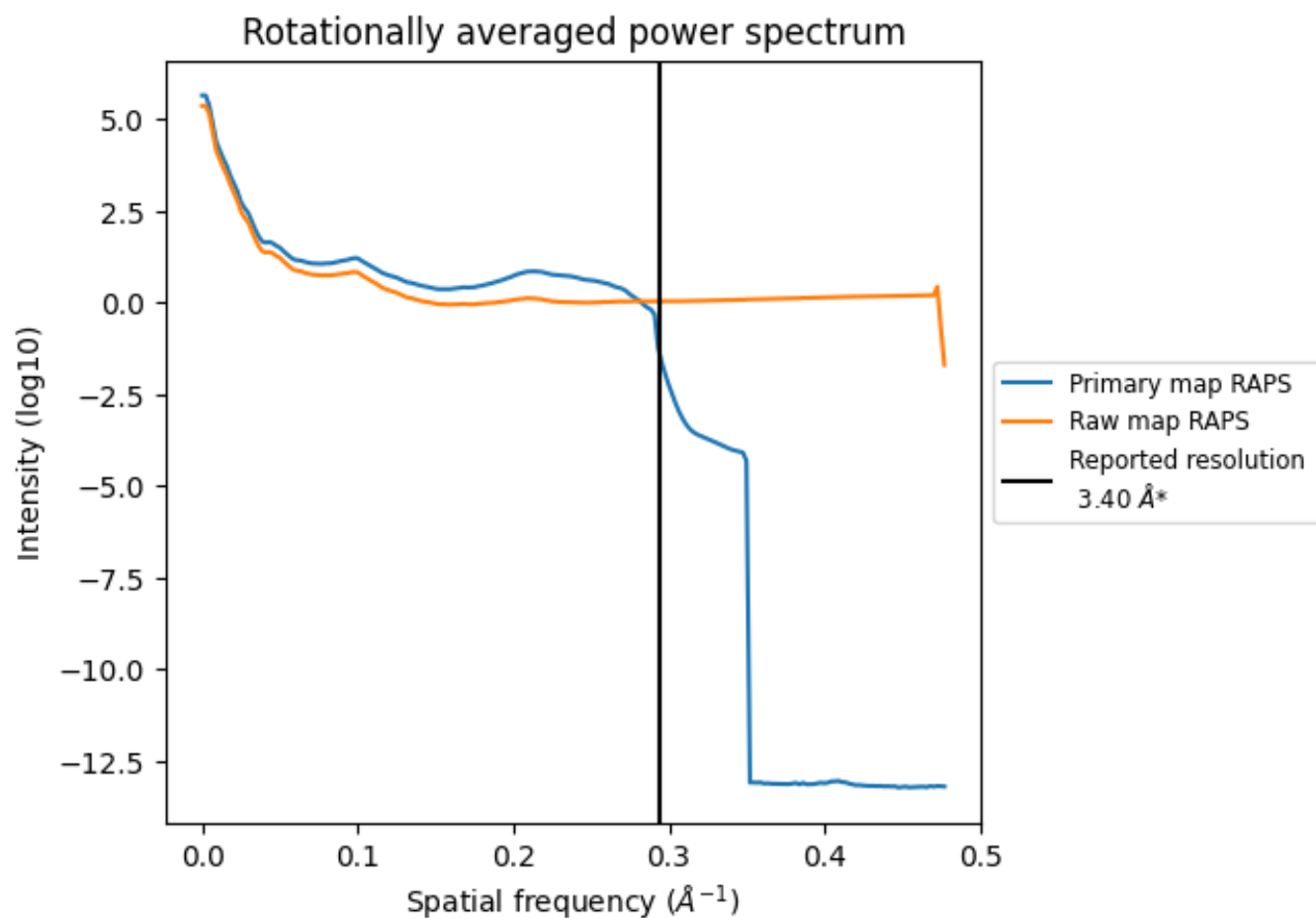
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 296 nm³; this corresponds to an approximate mass of 268 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 ⓘ

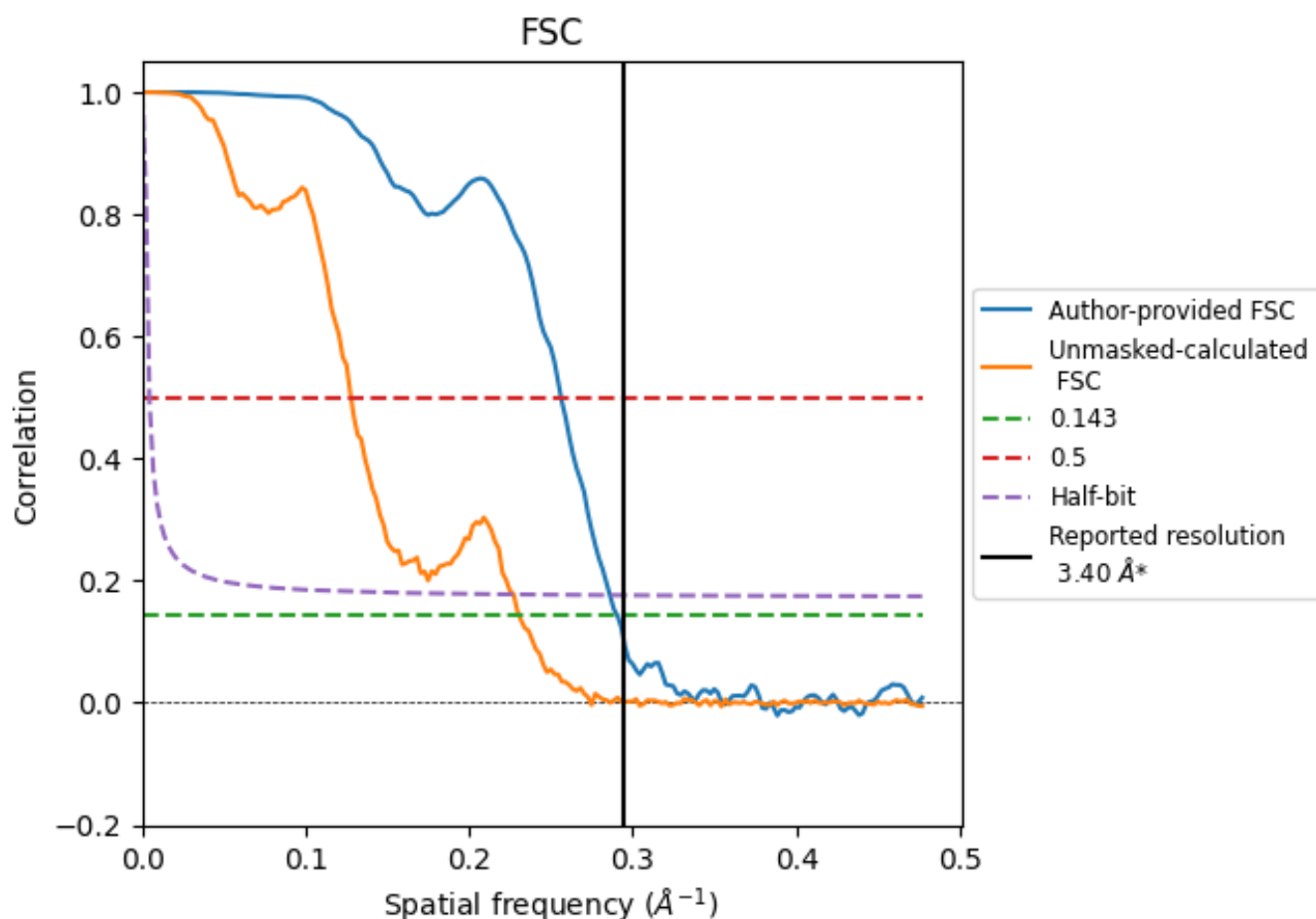


*Reported resolution corresponds to spatial frequency of 0.294 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.294 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

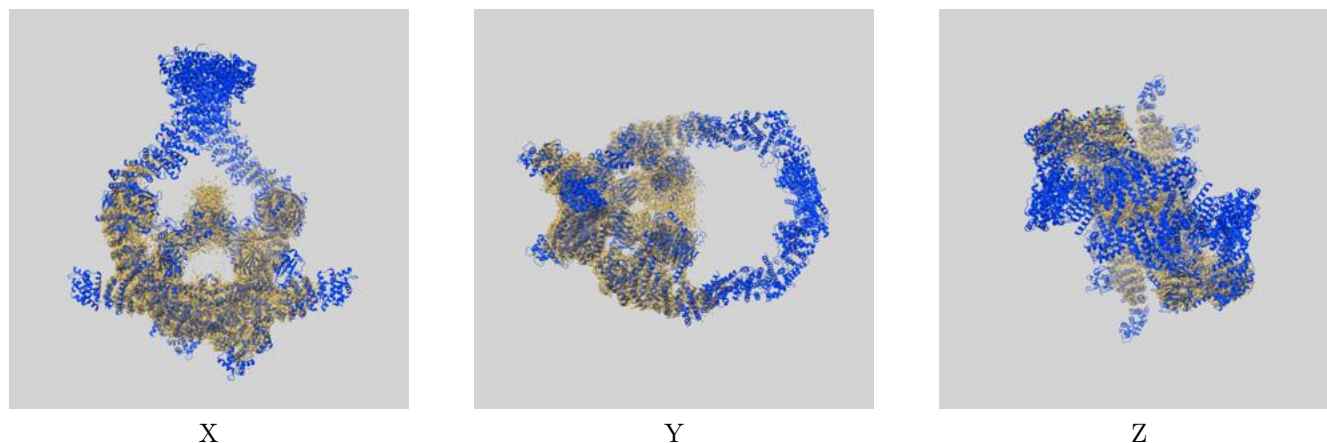
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.40	-	-
Author-provided FSC curve	3.44	3.90	3.50
Unmasked-calculated*	4.34	7.83	4.40

*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 4.34 differs from the reported value 3.4 by more than 10 %

9 Map-model fit [i](#)

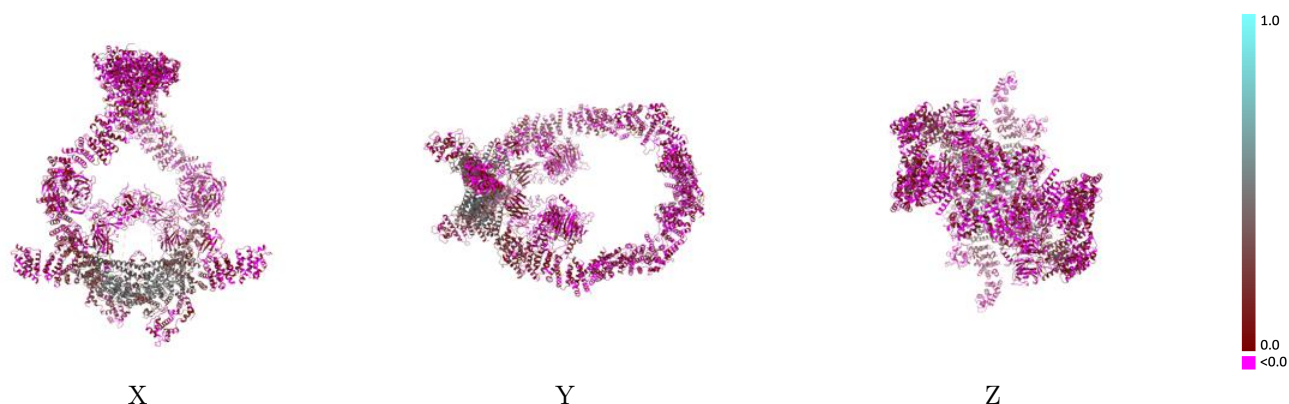
This section contains information regarding the fit between EMDB map EMD-46686 and PDB model 9D9Z. Per-residue inclusion information can be found in section [3](#) on page [6](#).

9.1 Map-model overlay [i](#)



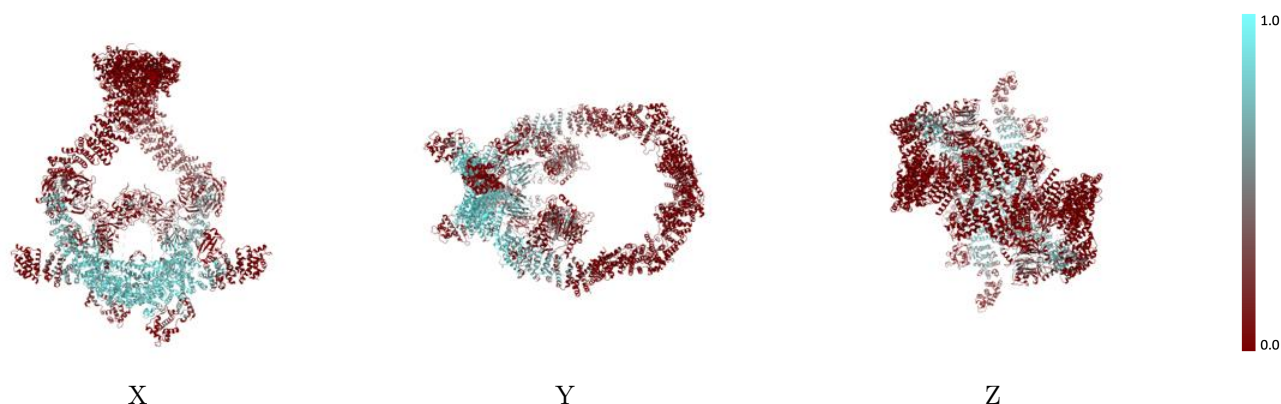
The images above show the 3D surface view of the map at the recommended contour level 0.13 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



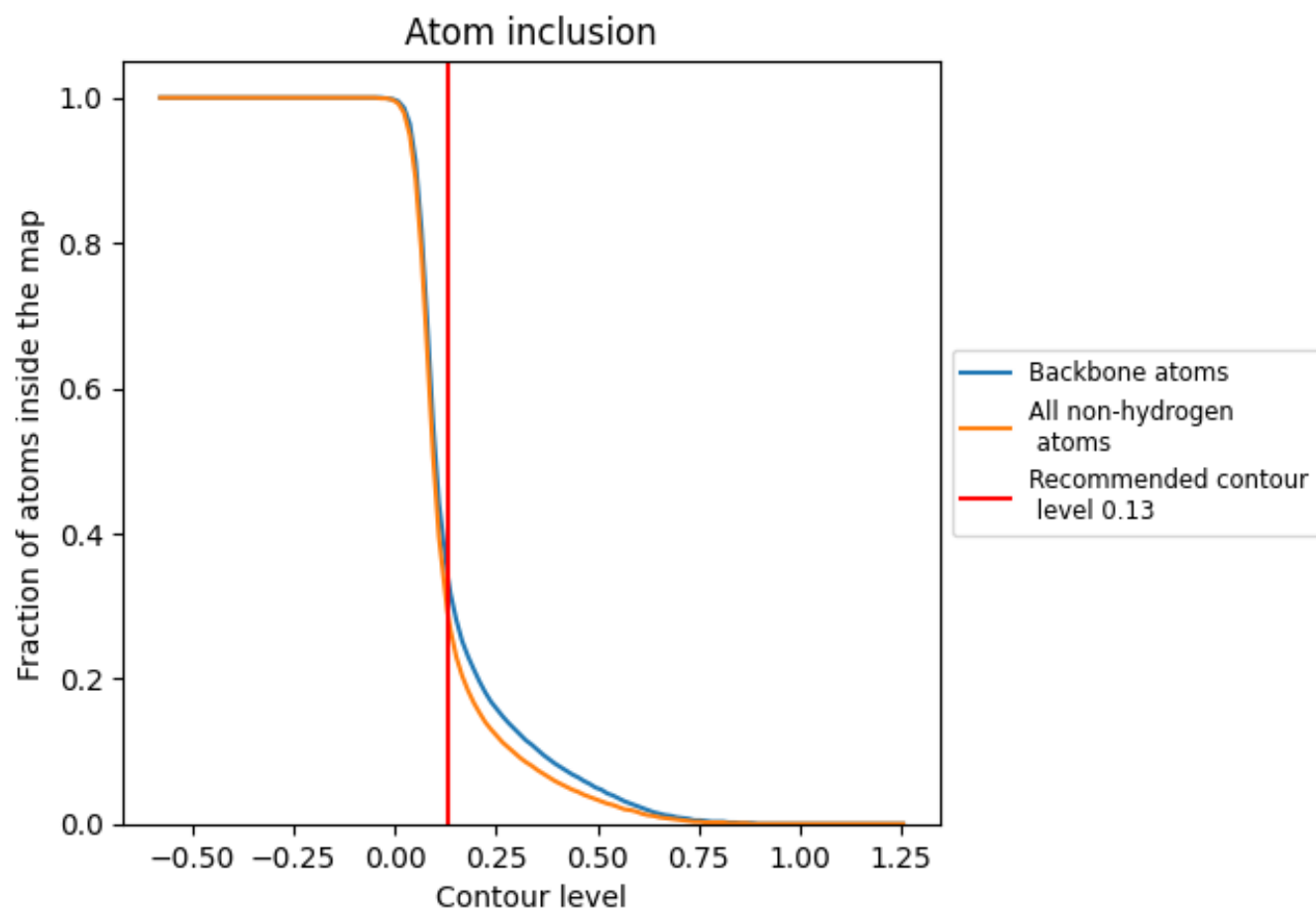
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.13).

9.4 Atom inclusion [i](#)



At the recommended contour level, 34% of all backbone atoms, 29% 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 (0.13) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.2930	0.1100
A	0.3000	0.1120
B	0.2990	0.1130
C	0.1500	0.0740
D	0.1350	0.0820
E	0.2720	0.0850
F	0.2740	0.0890

1.0

0.0

<0.0