



## Full wwPDB EM Validation Report ⓘ

Oct 5, 2024 – 11:55 PM JST

PDB ID : 5X5C  
EMDB ID : EMD-6706  
Title : Prefusion structure of MERS-CoV spike glycoprotein, conformation 1  
Authors : Yuan, Y.; Cao, D.; Zhang, Y.; Ma, J.; Qi, J.; Wang, Q.; Lu, G.; Wu, Y.; Yan, J.; Shi, Y.; Zhang, X.; Gao, G.F.  
Deposited on : 2017-02-15  
Resolution : 4.10 Å(reported)

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

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>  
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

EMDB validation analysis : 0.0.1.dev113  
MolProbity : 4.02b-467  
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) : 2.39

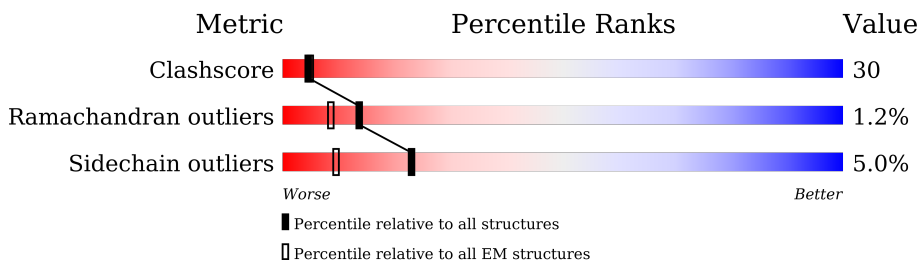
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 4.10 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  $\geq 3$ , 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	1323	<div> <div>54%</div> <div>59%</div> <div>23%</div> <div>•</div> <div>14%</div> </div>
1	B	1323	<div> <div>53%</div> <div>57%</div> <div>24%</div> <div>5%</div> <div>•</div> <div>14%</div> </div>
1	C	1323	<div> <div>53%</div> <div>58%</div> <div>24%</div> <div>•</div> <div>14%</div> </div>

## 2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 26418 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 S protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	1141	Total	C	N	O	S	1	0
			8806	5599	1457	1699	51		
1	B	1141	Total	C	N	O	S	1	0
			8806	5599	1457	1699	51		
1	C	1141	Total	C	N	O	S	1	0
			8806	5599	1457	1699	51		

There are 144 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	751	SER	ARG	engineered mutation	UNP W6A028
A	1020	GLN	ARG	engineered mutation	UNP W6A028
A	1295	GLU	-	expression tag	UNP W6A028
A	1296	PHE	-	expression tag	UNP W6A028
A	1297	ARG	-	expression tag	UNP W6A028
A	1298	LEU	-	expression tag	UNP W6A028
A	1299	VAL	-	expression tag	UNP W6A028
A	1300	PRO	-	expression tag	UNP W6A028
A	1301	ARG	-	expression tag	UNP W6A028
A	1302	GLY	-	expression tag	UNP W6A028
A	1303	SER	-	expression tag	UNP W6A028
A	1304	PRO	-	expression tag	UNP W6A028
A	1305	GLY	-	expression tag	UNP W6A028
A	1306	SER	-	expression tag	UNP W6A028
A	1307	GLY	-	expression tag	UNP W6A028
A	1308	TYR	-	expression tag	UNP W6A028
A	1309	ILE	-	expression tag	UNP W6A028
A	1310	PRO	-	expression tag	UNP W6A028
A	1311	GLU	-	expression tag	UNP W6A028
A	1312	ALA	-	expression tag	UNP W6A028
A	1313	PRO	-	expression tag	UNP W6A028
A	1314	ARG	-	expression tag	UNP W6A028
A	1315	ASP	-	expression tag	UNP W6A028
A	1316	GLY	-	expression tag	UNP W6A028

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Chain	Residue	Modelled	Actual	Comment	Reference
A	1317	GLN	-	expression tag	UNP W6A028
A	1318	ALA	-	expression tag	UNP W6A028
A	1319	TYR	-	expression tag	UNP W6A028
A	1320	VAL	-	expression tag	UNP W6A028
A	1321	ARG	-	expression tag	UNP W6A028
A	1322	LYS	-	expression tag	UNP W6A028
A	1323	ASP	-	expression tag	UNP W6A028
A	1324	GLY	-	expression tag	UNP W6A028
A	1325	GLU	-	expression tag	UNP W6A028
A	1326	TRP	-	expression tag	UNP W6A028
A	1327	VAL	-	expression tag	UNP W6A028
A	1328	LEU	-	expression tag	UNP W6A028
A	1329	LEU	-	expression tag	UNP W6A028
A	1330	SER	-	expression tag	UNP W6A028
A	1331	THR	-	expression tag	UNP W6A028
A	1332	PHE	-	expression tag	UNP W6A028
A	1333	LEU	-	expression tag	UNP W6A028
A	1334	GLY	-	expression tag	UNP W6A028
A	1335	HIS	-	expression tag	UNP W6A028
A	1336	HIS	-	expression tag	UNP W6A028
A	1337	HIS	-	expression tag	UNP W6A028
A	1338	HIS	-	expression tag	UNP W6A028
A	1339	HIS	-	expression tag	UNP W6A028
A	1340	HIS	-	expression tag	UNP W6A028
B	751	SER	ARG	engineered mutation	UNP W6A028
B	1020	GLN	ARG	engineered mutation	UNP W6A028
B	1295	GLU	-	expression tag	UNP W6A028
B	1296	PHE	-	expression tag	UNP W6A028
B	1297	ARG	-	expression tag	UNP W6A028
B	1298	LEU	-	expression tag	UNP W6A028
B	1299	VAL	-	expression tag	UNP W6A028
B	1300	PRO	-	expression tag	UNP W6A028
B	1301	ARG	-	expression tag	UNP W6A028
B	1302	GLY	-	expression tag	UNP W6A028
B	1303	SER	-	expression tag	UNP W6A028
B	1304	PRO	-	expression tag	UNP W6A028
B	1305	GLY	-	expression tag	UNP W6A028
B	1306	SER	-	expression tag	UNP W6A028
B	1307	GLY	-	expression tag	UNP W6A028
B	1308	TYR	-	expression tag	UNP W6A028
B	1309	ILE	-	expression tag	UNP W6A028
B	1310	PRO	-	expression tag	UNP W6A028

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Chain	Residue	Modelled	Actual	Comment	Reference
B	1311	GLU	-	expression tag	UNP W6A028
B	1312	ALA	-	expression tag	UNP W6A028
B	1313	PRO	-	expression tag	UNP W6A028
B	1314	ARG	-	expression tag	UNP W6A028
B	1315	ASP	-	expression tag	UNP W6A028
B	1316	GLY	-	expression tag	UNP W6A028
B	1317	GLN	-	expression tag	UNP W6A028
B	1318	ALA	-	expression tag	UNP W6A028
B	1319	TYR	-	expression tag	UNP W6A028
B	1320	VAL	-	expression tag	UNP W6A028
B	1321	ARG	-	expression tag	UNP W6A028
B	1322	LYS	-	expression tag	UNP W6A028
B	1323	ASP	-	expression tag	UNP W6A028
B	1324	GLY	-	expression tag	UNP W6A028
B	1325	GLU	-	expression tag	UNP W6A028
B	1326	TRP	-	expression tag	UNP W6A028
B	1327	VAL	-	expression tag	UNP W6A028
B	1328	LEU	-	expression tag	UNP W6A028
B	1329	LEU	-	expression tag	UNP W6A028
B	1330	SER	-	expression tag	UNP W6A028
B	1331	THR	-	expression tag	UNP W6A028
B	1332	PHE	-	expression tag	UNP W6A028
B	1333	LEU	-	expression tag	UNP W6A028
B	1334	GLY	-	expression tag	UNP W6A028
B	1335	HIS	-	expression tag	UNP W6A028
B	1336	HIS	-	expression tag	UNP W6A028
B	1337	HIS	-	expression tag	UNP W6A028
B	1338	HIS	-	expression tag	UNP W6A028
B	1339	HIS	-	expression tag	UNP W6A028
B	1340	HIS	-	expression tag	UNP W6A028
C	751	SER	ARG	engineered mutation	UNP W6A028
C	1020	GLN	ARG	engineered mutation	UNP W6A028
C	1295	GLU	-	expression tag	UNP W6A028
C	1296	PHE	-	expression tag	UNP W6A028
C	1297	ARG	-	expression tag	UNP W6A028
C	1298	LEU	-	expression tag	UNP W6A028
C	1299	VAL	-	expression tag	UNP W6A028
C	1300	PRO	-	expression tag	UNP W6A028
C	1301	ARG	-	expression tag	UNP W6A028
C	1302	GLY	-	expression tag	UNP W6A028
C	1303	SER	-	expression tag	UNP W6A028
C	1304	PRO	-	expression tag	UNP W6A028

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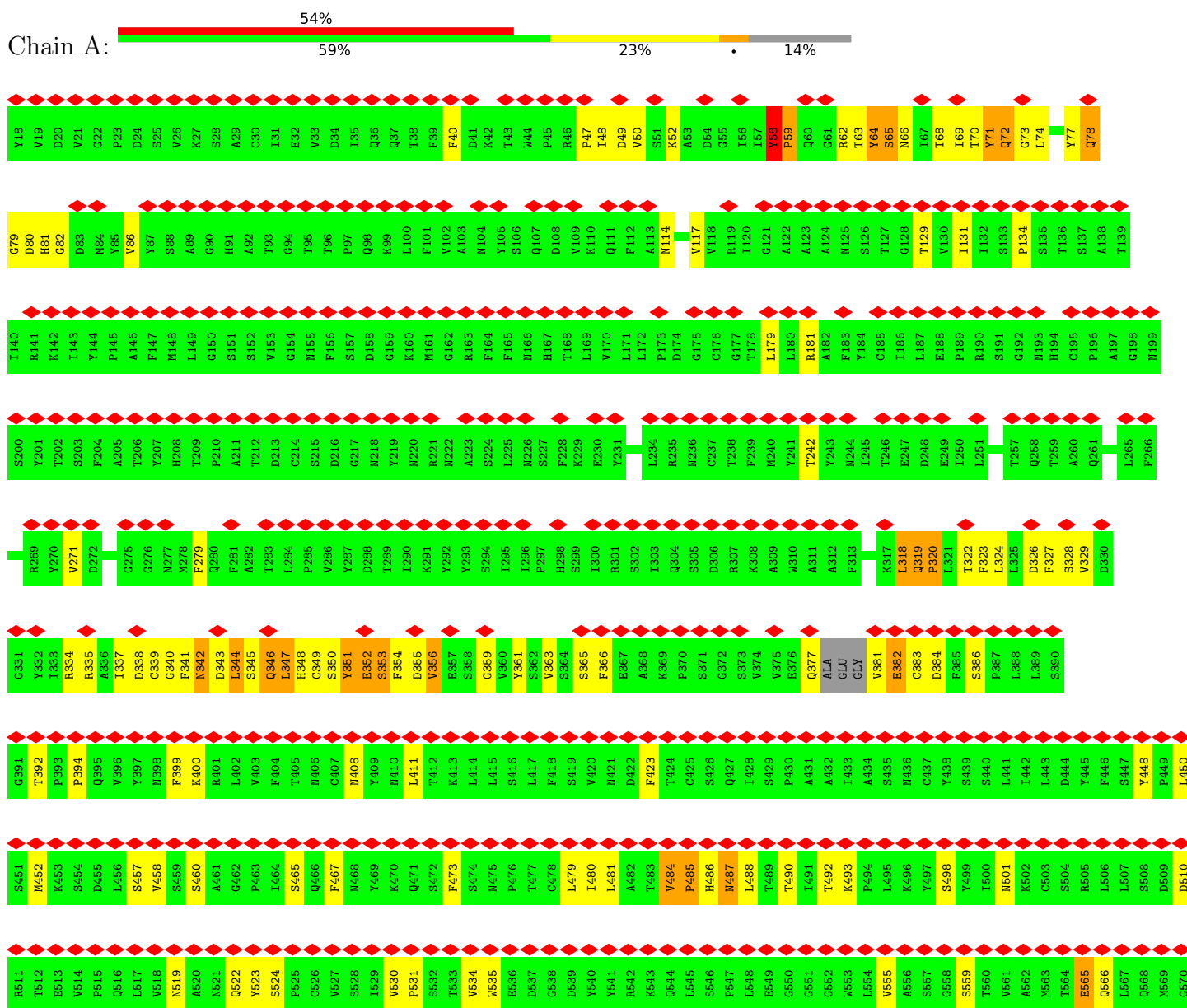
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Chain	Residue	Modelled	Actual	Comment	Reference
C	1305	GLY	-	expression tag	UNP W6A028
C	1306	SER	-	expression tag	UNP W6A028
C	1307	GLY	-	expression tag	UNP W6A028
C	1308	TYR	-	expression tag	UNP W6A028
C	1309	ILE	-	expression tag	UNP W6A028
C	1310	PRO	-	expression tag	UNP W6A028
C	1311	GLU	-	expression tag	UNP W6A028
C	1312	ALA	-	expression tag	UNP W6A028
C	1313	PRO	-	expression tag	UNP W6A028
C	1314	ARG	-	expression tag	UNP W6A028
C	1315	ASP	-	expression tag	UNP W6A028
C	1316	GLY	-	expression tag	UNP W6A028
C	1317	GLN	-	expression tag	UNP W6A028
C	1318	ALA	-	expression tag	UNP W6A028
C	1319	TYR	-	expression tag	UNP W6A028
C	1320	VAL	-	expression tag	UNP W6A028
C	1321	ARG	-	expression tag	UNP W6A028
C	1322	LYS	-	expression tag	UNP W6A028
C	1323	ASP	-	expression tag	UNP W6A028
C	1324	GLY	-	expression tag	UNP W6A028
C	1325	GLU	-	expression tag	UNP W6A028
C	1326	TRP	-	expression tag	UNP W6A028
C	1327	VAL	-	expression tag	UNP W6A028
C	1328	LEU	-	expression tag	UNP W6A028
C	1329	LEU	-	expression tag	UNP W6A028
C	1330	SER	-	expression tag	UNP W6A028
C	1331	THR	-	expression tag	UNP W6A028
C	1332	PHE	-	expression tag	UNP W6A028
C	1333	LEU	-	expression tag	UNP W6A028
C	1334	GLY	-	expression tag	UNP W6A028
C	1335	HIS	-	expression tag	UNP W6A028
C	1336	HIS	-	expression tag	UNP W6A028
C	1337	HIS	-	expression tag	UNP W6A028
C	1338	HIS	-	expression tag	UNP W6A028
C	1339	HIS	-	expression tag	UNP W6A028
C	1340	HIS	-	expression tag	UNP W6A028

### 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.

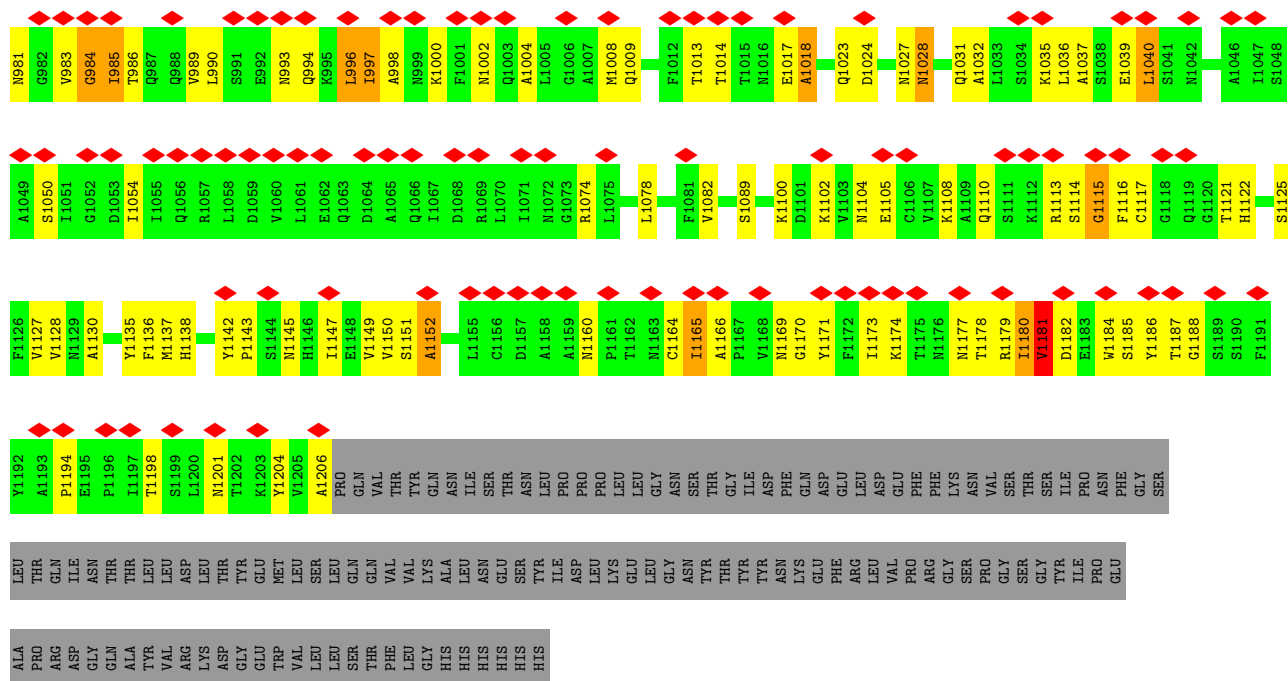
#### • Molecule 1: S protein



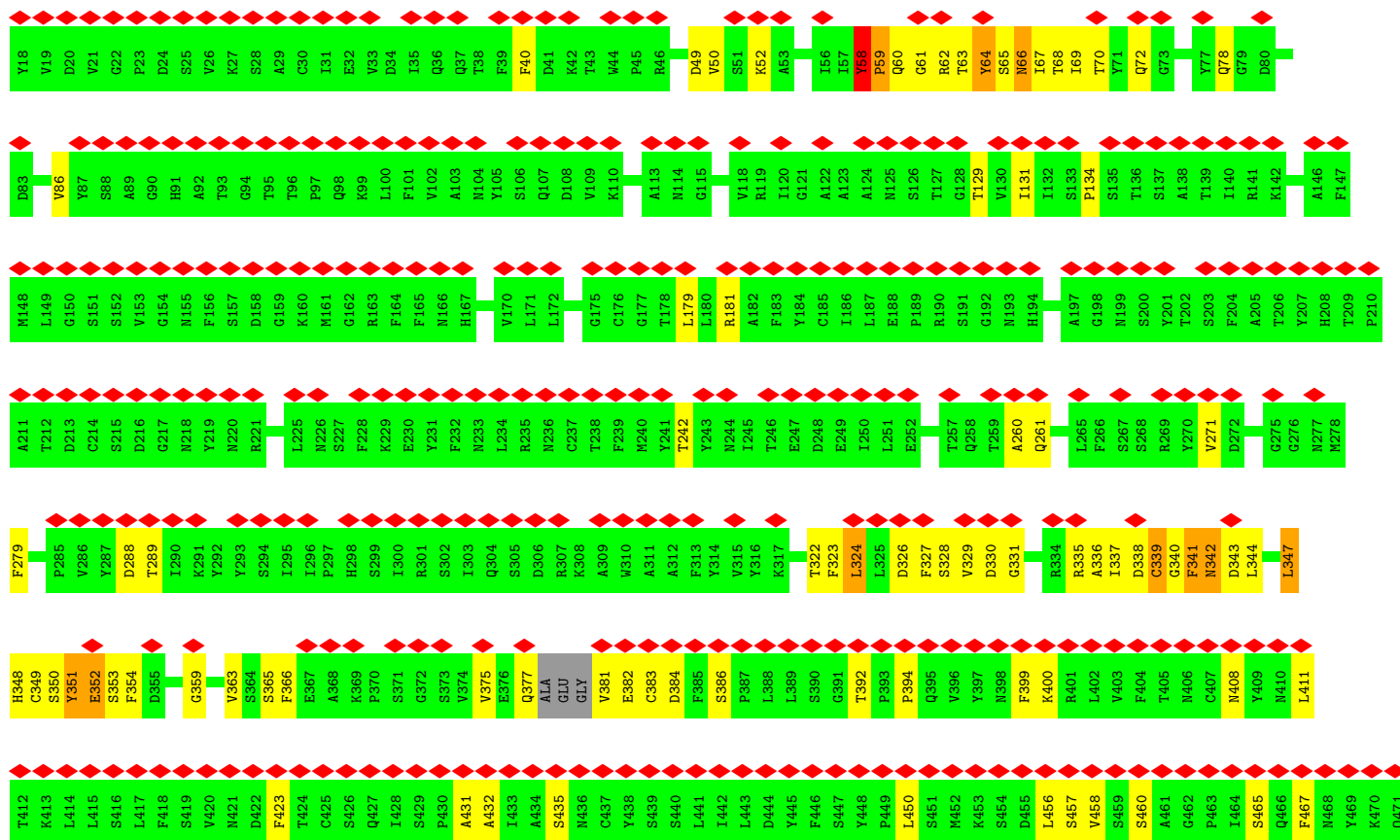




D80	H81	G82	D83	V86	Y87	S88	A89	G90	H91	A92	T93	G94	T95	T96	P97	Q98	K99	L100	F101	V102	Y105	S106	Q107	D108	V109	K110	Q111	F112	A113	N114	R119	I120	G121	A122	A123	A124	N125	S126	T127	G128	T129	V130	I131	I132	S133	P134	S135	T136	S137	T139	R141	K142	I143	Y144																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
P145	A146	F147	M148	L149	G150	S151	S152	V153	G154	N155	F156	S157	D158	G159	K160	M161	G162	R163	F164	F165	H167	T168	L169	V170	L171	L172	G175	C176	G177	T178	L179	L180	R181	A182	F183	Y184	C185	I186	L187	E188	P189	R190	S191	G192	N193	H194	C195	P196	A197	G198	N199	S200	T201	T202	S203	F204	A205																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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D272	L273	Y274	G275	G276	N277	F278	Q280	F281	A282	T283	L284	P285	V286	Y287	D288	T289	I290	K291	Y292	Y293	S294	T295	I296	P297	H298	S299	I300	R301	S302	I303	Q304	S305	D306	R307	K308	A309	W310	A311	Q319	L324	L325	D326	F327	S328	V329	D330	R334	R335	A336	I337	D338	C339	F341	N342																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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T405	N406	C407	N408	Y409	N410	L411	T412	K413	L414	L415	S416	L417	F418	S419	V420	N421	D422	F423	T424	C425	S426	Q427	I428	S429	P430	A431	A432	I433	A434	S435	N436	C437	Y438	S439	S440	L441	I442	L443	D444	Y445	F446	S447	Y448	P449	L450	S451	M452	K453	S454	D455	L456	S457	V458	S459	S460	A461	G462	P463	I464																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
S465	Q466	Q467	N468	Y469	K470	Q471	S472	F473	S474	N475	P476	T477	C478	L479	I480	L481	A482	T483	V484	P485	H486	N487	L488	T489	T490	I491	T492	K493	P494	L495	K496	Y497	S498	Y499	I500	N501	K502	C503	S504	R505	L506	L507	S508	D509	D510	R511	T512	E513	V514	P515	Q516	L517	V518	N519	A520	N521	Q522	Y523	S524																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
P525	C526	V527	S528	I529	V530	P531	S532	T533	V534	N535	E536	D537	G538	D539	Y540	B541	K542	K543	O544	L545	S546	P547	L548	E549	G550	G551	G552	N553	L554	V555	A556	S557	G558	S559	T560	V561	A562	M563	T564	E565	O566	L567	O568	M569	N570	F571	G572	I573	T574	V575	O576	V577	G578	T579	D580	T581	N582	S583	V584																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
C585	P586	K587	L588	G1Y	PHE	ASN	ASP	THR	K595	I596	A597	S598	O599	L600	G601	N602	C603	V604	E605	L608	Y609	G610	G613	R614	F617	Q618	N619	C620	T621	A622	V623	Q624	V625	R626	Q627	Q628	R629	F630	V631	Y632	D633	A634	V635	D636	N637	L638	V639	G640	Y641	V642	S643	D644	D645	Y648																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
Y649	C650	N774	L651	R652	A653	C654	P658	Y659	S660	V661	L662	Y663	D664	K665	E666	T667	K668	T669	H670	L671	T672	L673	F674	G675	S676	V677	A678	C679	E680	H681	T682	S683	S684	T685	M686	S687	Q688	Q689	V690	V691	V692	V693	V694	V695	V696	V697	V698	V699	V700	V701	V702	V703	V704	V705	V706	V707	V708	V709	V710	V711	V712	V713	V714	V715	V716	V717	V718	V719	V720	V721	V722	V723	V724	V725	V726	V727	V728	V729	V730	V731	V732	V733	V734	V735	V736	V737	V738	V739	V740	V741	V742	V743	V744	V745	V746	V747	V748	V749	V750	V751	V752	V753	V754	V755	V756	V757	V758	V759	V760	V761	V762	V763	V764	V765	V766	V767	V768	V769	V770	V771	V772	V773	V774	V775	V776	V777	V778	V779	V780	V781	V782	V783	V784	V785	V786	V787	V788	V789	V790	V791	V792	V793	V794	V795	V796	V797	V798	V799	V800	V801	V802	V803	V804	V805	V806	V807	V808	V809	V810	V811	V812	V813	V814	V815	V816	V817	V818	V819	V820	V821	V822	V823	V824	V825	V826	V827	V828	V829	V830	V831	V832	V833	V834	V835	V836	V837	V838	V839	V840	V841	V842	V843	V844	V845	V846	V847	V848	V849	V850	V851	V852	V853	V854	V855	V856	V857	V858	V859	V860	V861	V862	V863	V864	V865	V866	V867	V868	V869	V870	V871	V872	V873	V874	V875	V876	V877	V878	V879	V880	V881	V882	V883	V884	V885	V886	V887	V888	V889	V890	V891	V892	V893	V894	V895	V896	V897	V898	V899	V900	V901	V902	V903	V904	V905	V906	V907	V908	V909	V910	V911	V912	V913	V914	V915	V916	V917	V918	V919	V920	V921	V922	V923	V924	V925	V926	V927	V928	V929	V930	V931	V932	V933	V934	V935	V936	V937	V938	V939	V940	V941	V942	V943	V944	V945	V946	V947	V948	V949	V950	V951	V952	V953	V954	V955	V956	V957	V958	V959	V960	V961	V962	V963	V964	V965	V966	V967	V968	V969	V970	V971	V972	V973	V974	V975	V976	V977	V978	V979	V980	V981	V982	V983	V984	V985	V986	V987	V988	V989	V990	V991	V992	V993	V994	V995	V996	V997	V998	V999	V1000	V1001	V1002	V1003	V1004	V1005	V1006	V1007	V1008	V1009	V1010	V1011	V1012	V1013	V1014	V1015	V1016	V1017	V1018	V1019	V1020	V1021	V1022	V1023	V1024	V1025	V1026	V1027	V1028	V1029	V1030	V1031	V1032	V1033	V1034	V1035	V1036	V1037	V1038	V1039	V1040	V1041	V1042	V1043	V1044	V1045	V1046	V1047	V1048	V1049	V1050	V1051	V1052	V1053	V1054	V1055	V1056	V1057	V1058	V1059	V1060	V1061	V1062	V1063	V1064	V1065	V1066	V1067	V1068	V1069	V1070	V1071	V1072	V1073	V1074	V1075	V1076	V1077	V1078	V1079	V1080	V1081	V1082	V1083	V1084	V1085	V1086	V1087	V1088	V1089	V1090	V1091	V1092	V1093	V1094	V1095	V1096	V1097	V1098	V1099	V1100	V1101	V1102	V1103	V1104	V1105	V1106	V1107	V1108	V1109	V1110	V1111	V1112	V1113	V1114	V1115	V1116	V1117	V1118	V1119	V1120	V1121	V1122	V1123	V1124	V1125	V1126	V1127	V1128	V1129	V1130	V1131	V1132	V1133	V1134	V1135	V1136	V1137	V1138	V1139	V1140	V1141	V1142	V1143	V1144	V1145	V1146	V1147	V1148	V1149	V1150	V1151	V1152	V1153	V1154	V1155	V1156	V1157	V1158	V1159	V1160	V1161	V1162	V1163	V1164	V1165	V1166	V1167	V1168	V1169	V1170	V1171	V1172	V1173	V1174	V1175	V1176	V1177	V1178	V1179	V1180	V1181	V1182	V1183	V1184	V1185	V1186	V1187	V1188	V1189	V1190	V1191	V1192	V1193	V1194	V1195	V1196	V1197	V1198	V1199	V1200	V1201	V1202	V1203	V1204	V1205	V1206	V1207	V1208	V1209	V1210	V1211	V1212	V1213	V1214	V1215	V1216	V1217	V1218	V1219	V1220	V1221	V1222	V1223	V1224	V1225	V1226	V1227	V1228	V1229	V1230	V1231	V1232	V1233	V1234	V1235	V1236	V1237	V1238	V1239	V1240	V1241	V1242	V1243	V1244	V1245	V1246	V1247	V1248	V1249	V1250	V1251	V1252	V1253	V1254	V1255	V1256	V1257	V1258	V1259	V1260	V1261	V1262	V1263	V1264	V1265	V1266	V1267	V1268	V1269	V1270	V1271	V1272	V1273	V1274	V1275	V1276	V1277	V1278	V1279	V1280	V1281	V1282	V1283	V1284	V1285	V1286	V1287	V1288	V1289	V1290	V1291	V1292	V1293	V1294	V1295	V1296	V1297	V1298	V1299	V1300	V1301	V1302	V1303	V1304	V1305	V1306	V1307	V1308	V1309	V1310	V1311	V1312	V1313	V1314	V1315	V1316	V1317	V1318	V1319	V1320	V1321	V1322	V1323	V1324	V1325	V1326	V1327	V1328	V1329	V1330	V1331	V1332	V1333	V1334	V1335	V1336	V1337	V1338	V1339	V1340	V1341	V1342	V1343	V1344	V1345	V1346	V1347	V1348	V1349	V1350	V1351	V1352	V1353	V1354	V1355	V1356	V1357	V1358	V1359	V1360	V1361	V1362	V1363	V1364	V1365	V1366	V1367	V1368	V1369	V1370	V1371	V1372	V1373	V1374	V1375	V1376	V1377	V1378	V1379	V1380	V1381	V1382	V1383	V1384	V1385	V1386	V1387	V1388	V1389	V1390	V1391	V1392	V1393	V1394	V1395	V1396	V1397	V1398	V1399	V1400	V1401	V1402	V1403	V1404	V1405	V1406	V1407	V1408	V1409	V1410	V1411	V1412	V1413	V1414	V1415	V1416	V1417	V1418	V1419	V1420	V1421	V1422	V1423	V1424	V1425	V1426	V1427	V1428	V1429	V1430	V1431	V1432	V1433	V1434	V1435	V1436	V1437	V1438	V1439	V1440	V1441	V1442	V1443	V1444	V1445	V1446	V1447	V1448	V1449	V1450	V1451	V1452	V1453	V1454	V1455	V1456	V1457	V1458	V1459	V1460	V1461	V1462	V1463	V1464	V1465	V1466	V1467	V1468	V1469	V1470	V1471	V1472	V1473	V1474	V1475	V1476	V1477	V1478	V1479	V1480	V1481	V1482	V1483	V1484	V1485	V1486	V1487	V1488	V1489	V1490	V1491	V1492	V1493	V1494	V1495	V1496	V1497	V1498	V1499	V1500	V1501	V1502	V1503	V1504	V1505	V1506	V1507	V1508	V1509	V1510	V1511	V1512	V1513	V1514	V1515	V1516	V1517	V1518	V1519	V1520	V1521	V1522	V1523	V1524	V1525	V1526	V1527	V1528	V1529	V1530	V1531	V1532	V1533	V1534	V1535	V1536	V1537	V1538	V1539	V1540	V1541	V1542	V1543	V1544	V1545	V1546	V1547	V1548	V1549	V1550	V1551	V1552	V1553	V1554	V1555	V1556	V1557	V1558	V1559	V1560	V1561	V1562	V1563	V1564	V1565	V1566	V1567	V1568	V1569	V1570	V1571	V1572	V1573	V1574	V1575	V1576	V1577	V1578	V1579	V1580	V1581	V1582



• Molecule 1: S protein





## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	60000	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	8	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.213	Depositor
Minimum map value	-0.116	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.013	Depositor
Recommended contour level	0.0618	Depositor
Map size (Å)	233.99998, 233.99998, 233.99998	wwPDB
Map dimensions	180, 180, 180	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.3, 1.3, 1.3	Depositor

## 5 Model quality

### 5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z  > 5$	RMSZ	# $ Z  > 5$
1	A	0.52	2/9006 (0.0%)	0.79	24/12245 (0.2%)
1	B	0.52	2/9006 (0.0%)	0.79	24/12245 (0.2%)
1	C	0.51	1/9006 (0.0%)	0.78	22/12245 (0.2%)
All	All	0.51	5/27018 (0.0%)	0.79	70/36735 (0.2%)

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	20
1	B	0	19
1	C	0	18
All	All	0	57

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	586	PRO	N-CD	5.48	1.55	1.47
1	C	59	PRO	N-CD	5.20	1.55	1.47
1	B	59	PRO	N-CD	5.17	1.55	1.47
1	A	59	PRO	N-CD	5.17	1.55	1.47
1	A	320	PRO	N-CD	5.07	1.54	1.47

All (70) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	735	LEU	CA-CB-CG	11.57	141.92	115.30
1	B	735	LEU	CA-CB-CG	11.55	141.87	115.30
1	A	735	LEU	CA-CB-CG	11.55	141.86	115.30
1	C	1040	LEU	CA-CB-CG	7.83	133.30	115.30
1	A	1040	LEU	CA-CB-CG	7.83	133.30	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	1040	LEU	CA-CB-CG	7.80	133.25	115.30
1	A	1151	SER	C-N-CA	7.37	140.12	121.70
1	C	1151	SER	C-N-CA	7.35	140.09	121.70
1	B	1151	SER	C-N-CA	7.35	140.07	121.70
1	B	697	LEU	CA-CB-CG	7.28	132.05	115.30
1	A	697	LEU	CA-CB-CG	7.28	132.04	115.30
1	C	697	LEU	CA-CB-CG	7.27	132.01	115.30
1	A	1018	ALA	N-CA-C	7.12	130.24	111.00
1	B	1018	ALA	N-CA-C	7.12	130.23	111.00
1	C	1018	ALA	N-CA-C	7.11	130.20	111.00
1	A	729	LEU	CA-CB-CG	6.81	130.96	115.30
1	B	729	LEU	CA-CB-CG	6.79	130.91	115.30
1	C	729	LEU	CA-CB-CG	6.77	130.86	115.30
1	A	731	LEU	CA-CB-CG	6.66	130.62	115.30
1	B	731	LEU	CA-CB-CG	6.65	130.60	115.30
1	C	731	LEU	CA-CB-CG	6.65	130.60	115.30
1	A	1152	ALA	C-N-CA	6.45	137.83	121.70
1	C	365	SER	C-N-CA	6.44	137.80	121.70
1	C	1152	ALA	C-N-CA	6.43	137.78	121.70
1	A	365	SER	C-N-CA	6.43	137.78	121.70
1	B	1152	ALA	C-N-CA	6.42	137.76	121.70
1	B	365	SER	C-N-CA	6.41	137.72	121.70
1	B	1180	ILE	CG1-CB-CG2	-6.20	97.76	111.40
1	C	1180	ILE	CG1-CB-CG2	-6.20	97.77	111.40
1	A	1180	ILE	CG1-CB-CG2	-6.16	97.86	111.40
1	C	651	LEU	CA-CB-CG	6.10	129.32	115.30
1	B	651	LEU	CA-CB-CG	6.08	129.29	115.30
1	B	514	VAL	C-N-CD	6.08	141.17	128.40
1	A	651	LEU	CA-CB-CG	6.08	129.28	115.30
1	B	508	SER	N-CA-C	-5.95	94.93	111.00
1	A	319	GLN	C-N-CD	5.80	140.57	128.40
1	B	1116	PHE	N-CA-C	5.74	126.50	111.00
1	A	1116	PHE	N-CA-C	5.73	126.47	111.00
1	C	1116	PHE	N-CA-C	5.71	126.42	111.00
1	B	58	TYR	C-N-CD	5.60	140.16	128.40
1	B	729	LEU	C-N-CD	-5.59	108.30	120.60
1	A	58	TYR	C-N-CD	5.59	140.13	128.40
1	C	58	TYR	C-N-CD	5.58	140.12	128.40
1	A	729	LEU	C-N-CD	-5.57	108.34	120.60
1	C	729	LEU	C-N-CD	-5.57	108.34	120.60
1	A	759	LEU	CB-CG-CD1	-5.48	101.68	111.00
1	B	759	LEU	CB-CG-CD1	-5.42	101.78	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	759	LEU	CB-CG-CD1	-5.42	101.79	111.00
1	A	985	ILE	CG1-CB-CG2	-5.39	99.53	111.40
1	B	985	ILE	CG1-CB-CG2	-5.38	99.55	111.40
1	A	902	ASP	C-N-CD	-5.36	108.80	120.60
1	C	985	ILE	CG1-CB-CG2	-5.36	99.61	111.40
1	B	902	ASP	C-N-CD	-5.35	108.82	120.60
1	A	342	ASN	N-CA-C	5.34	125.41	111.00
1	C	902	ASP	C-N-CD	-5.33	108.86	120.60
1	A	724	VAL	C-N-CA	5.24	134.81	121.70
1	B	997	ILE	N-CA-C	5.23	125.12	111.00
1	C	724	VAL	C-N-CA	5.23	134.78	121.70
1	A	997	ILE	N-CA-C	5.22	125.10	111.00
1	B	724	VAL	C-N-CA	5.22	134.75	121.70
1	C	997	ILE	N-CA-C	5.21	125.07	111.00
1	A	638	LEU	CA-CB-CG	5.19	127.23	115.30
1	C	638	LEU	CA-CB-CG	5.17	127.19	115.30
1	B	638	LEU	CA-CB-CG	5.17	127.18	115.30
1	A	799	ILE	CG1-CB-CG2	-5.09	100.19	111.40
1	B	1017	GLU	C-N-CA	5.09	134.43	121.70
1	B	799	ILE	CG1-CB-CG2	-5.08	100.22	111.40
1	C	799	ILE	CG1-CB-CG2	-5.07	100.25	111.40
1	C	1017	GLU	C-N-CA	5.07	134.37	121.70
1	A	1017	GLU	C-N-CA	5.05	134.33	121.70

There are no chirality outliers.

All (57) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1115	GLY	Peptide
1	A	1152	ALA	Peptide
1	A	1170	GLY	Peptide
1	A	1180	ILE	Peptide
1	A	1188	GLY	Peptide
1	A	1204	TYR	Peptide
1	A	351	TYR	Peptide
1	A	639	VAL	Peptide
1	A	642	TYR	Peptide
1	A	65	SER	Peptide
1	A	733	GLN	Peptide
1	A	736	CYS	Peptide
1	A	788	PHE	Peptide
1	A	792	GLN	Peptide

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Mol	Chain	Res	Type	Group
1	A	795	ILE	Peptide
1	A	809	TYR	Peptide
1	A	856	SER	Peptide
1	A	967	PHE	Peptide
1	A	984	GLY	Peptide
1	A	996	LEU	Peptide
1	B	1115	GLY	Peptide
1	B	1152	ALA	Peptide
1	B	1170	GLY	Peptide
1	B	1180	ILE	Peptide
1	B	1188	GLY	Peptide
1	B	1204	TYR	Peptide
1	B	507	LEU	Peptide
1	B	639	VAL	Peptide
1	B	642	TYR	Peptide
1	B	733	GLN	Peptide
1	B	736	CYS	Peptide
1	B	788	PHE	Peptide
1	B	792	GLN	Peptide
1	B	795	ILE	Peptide
1	B	809	TYR	Peptide
1	B	856	SER	Peptide
1	B	967	PHE	Peptide
1	B	984	GLY	Peptide
1	B	996	LEU	Peptide
1	C	1115	GLY	Peptide
1	C	1152	ALA	Peptide
1	C	1170	GLY	Peptide
1	C	1180	ILE	Peptide
1	C	1188	GLY	Peptide
1	C	1204	TYR	Peptide
1	C	639	VAL	Peptide
1	C	642	TYR	Peptide
1	C	733	GLN	Peptide
1	C	736	CYS	Peptide
1	C	788	PHE	Peptide
1	C	792	GLN	Peptide
1	C	795	ILE	Peptide
1	C	809	TYR	Peptide
1	C	856	SER	Peptide
1	C	967	PHE	Peptide
1	C	984	GLY	Peptide

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Mol	Chain	Res	Type	Group
1	C	996	LEU	Peptide

## 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	8806	0	8508	532	0
1	B	8806	0	8506	697	0
1	C	8806	0	8505	624	0
All	All	26418	0	25519	1569	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 30.

All (1569) 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:439:SER:CB	1:B:582:ASN:CA	1.76	1.62
1:B:344:LEU:HD22	1:B:670:HIS:CB	1.16	1.61
1:A:623:VAL:CG1	1:B:65:SER:HB2	1.31	1.60
1:C:335:ARG:HB3	1:C:354:PHE:CE2	1.32	1.60
1:C:324:LEU:HD11	1:C:354:PHE:CD1	1.37	1.59
1:B:344:LEU:CD2	1:B:670:HIS:HB3	1.16	1.58
1:B:347:LEU:CD2	1:B:361:TYR:HB3	1.27	1.57
1:B:348:HIS:HA	1:B:356:VAL:CG2	1.21	1.57
1:B:347:LEU:HD21	1:B:361:TYR:CB	1.18	1.54
1:A:588:LEU:CD2	1:A:596:ILE:CB	1.85	1.54
1:B:348:HIS:CE1	1:B:663:TYR:HE1	1.21	1.53
1:C:1058:LEU:HD11	1:C:1063:GLN:CA	1.37	1.53
1:A:588:LEU:CD2	1:A:596:ILE:C	1.76	1.52
1:A:335:ARG:HB2	1:A:354:PHE:CZ	1.42	1.50
1:A:588:LEU:CD2	1:A:596:ILE:CA	1.86	1.50
1:C:343:ASP:HB3	1:C:661:VAL:CG2	1.39	1.49
1:A:588:LEU:CD2	1:A:596:ILE:HB	1.36	1.49
1:A:335:ARG:CD	1:A:354:PHE:HE2	1.26	1.49
1:A:335:ARG:HD3	1:A:354:PHE:CE2	1.48	1.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:663:TYR:CE2	1:B:665:LYS:HB3	1.46	1.47
1:A:588:LEU:CD2	1:A:597:ALA:N	1.76	1.46
1:A:63:THR:CG2	1:C:628:GLN:HE21	1.27	1.44
1:B:439:SER:CB	1:B:582:ASN:HA	0.97	1.43
1:B:436:ASN:CG	1:C:1056:GLN:CB	1.85	1.42
1:A:335:ARG:CB	1:A:354:PHE:CZ	2.02	1.42
1:A:588:LEU:HD23	1:A:596:ILE:CB	0.94	1.41
1:C:335:ARG:CB	1:C:354:PHE:HE2	1.33	1.41
1:B:343:ASP:CB	1:B:661:VAL:CG2	1.97	1.41
1:A:344:LEU:HD11	1:A:663:TYR:CD1	1.57	1.40
1:C:324:LEU:CD1	1:C:354:PHE:HD1	1.31	1.40
1:A:623:VAL:CG1	1:B:65:SER:CB	1.98	1.39
1:B:343:ASP:HB3	1:B:661:VAL:CG2	1.49	1.39
1:C:324:LEU:HD21	1:C:337:ILE:CG1	1.50	1.38
1:B:347:LEU:CD2	1:B:361:TYR:CB	1.85	1.38
1:B:439:SER:HB3	1:B:582:ASN:CB	1.54	1.36
1:A:588:LEU:HD21	1:A:596:ILE:C	0.99	1.36
1:B:439:SER:HB3	1:B:582:ASN:CA	1.39	1.36
1:B:348:HIS:CE1	1:B:663:TYR:CE1	2.11	1.35
1:A:341:PHE:CE2	1:A:696:MET:HG3	1.59	1.35
1:B:70:THR:CG2	1:B:324:LEU:HD12	1.56	1.34
1:A:588:LEU:CD1	1:A:597:ALA:HB3	1.58	1.34
1:A:623:VAL:HG11	1:B:65:SER:CB	1.56	1.33
1:A:323:PHE:CE1	1:A:338:ASP:OD1	1.83	1.32
1:B:436:ASN:ND2	1:C:1056:GLN:HB3	1.44	1.32
1:A:822:ARG:HG2	1:C:72:GLN:OE1	1.20	1.32
1:B:428:ILE:CG1	1:C:1056:GLN:O	1.77	1.32
1:B:436:ASN:OD1	1:C:1056:GLN:CB	1.77	1.32
1:A:596:ILE:O	1:A:598:SER:N	1.63	1.31
1:B:505:ARG:CG	1:B:553:TRP:O	1.76	1.31
1:B:436:ASN:CG	1:C:1056:GLN:HB3	0.93	1.31
1:B:348:HIS:CA	1:B:356:VAL:CG2	2.07	1.30
1:B:623:VAL:HG13	1:C:329:VAL:O	1.19	1.30
1:A:341:PHE:CD2	1:A:696:MET:HB2	1.67	1.30
1:A:271:VAL:HG22	1:C:627:GLN:OE1	1.16	1.29
1:A:347:LEU:CD2	1:A:356:VAL:HG21	1.60	1.29
1:B:432:ALA:HB1	1:C:1056:GLN:CA	1.62	1.29
1:A:63:THR:CB	1:C:625:VAL:HG21	1.59	1.29
1:A:344:LEU:CD1	1:A:663:TYR:CD1	2.15	1.29
1:C:324:LEU:CD1	1:C:354:PHE:CD1	2.07	1.28
1:B:436:ASN:OD1	1:C:1056:GLN:HB3	1.15	1.27

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:71:TYR:CE2	1:A:72:GLN:O	1.87	1.27
1:B:343:ASP:CB	1:B:661:VAL:HG21	1.58	1.27
1:B:625:VAL:CG2	1:C:63:THR:HB	1.64	1.26
1:B:432:ALA:O	1:B:436:ASN:ND2	1.67	1.26
1:B:438:TYR:O	1:B:584:VAL:HB	1.21	1.25
1:B:72:GLN:OE1	1:C:822:ARG:HG2	1.33	1.25
1:B:347:LEU:HD22	1:B:361:TYR:CG	1.72	1.25
1:B:58:TYR:CD1	1:B:279:PHE:CZ	2.26	1.24
1:B:437:CYS:SG	1:B:585:CYS:HA	1.76	1.24
1:A:58:TYR:CD1	1:A:279:PHE:CZ	2.26	1.24
1:A:627:GLN:OE1	1:B:271:VAL:HG22	1.33	1.24
1:C:1050:SER:O	1:C:1051:ILE:HD13	1.17	1.24
1:C:58:TYR:CD1	1:C:279:PHE:CZ	2.26	1.24
1:A:323:PHE:HE1	1:A:338:ASP:OD1	1.13	1.23
1:A:63:THR:CG2	1:C:628:GLN:NE2	2.02	1.23
1:B:324:LEU:CD1	1:B:352:GLU:HA	1.67	1.23
1:B:663:TYR:HE2	1:B:665:LYS:CB	1.50	1.22
1:B:347:LEU:CD1	1:B:361:TYR:HB2	1.69	1.22
1:A:588:LEU:HD21	1:A:597:ALA:N	0.91	1.21
1:B:350:SER:O	1:B:351:TYR:HD1	1.18	1.21
1:B:631:VAL:HA	1:C:63:THR:O	1.38	1.21
1:C:812:ASN:HD22	1:C:1051:ILE:CD1	1.53	1.21
1:B:343:ASP:OD1	1:B:363:VAL:HG11	1.33	1.21
1:A:623:VAL:HG12	1:B:65:SER:CB	1.69	1.19
1:B:347:LEU:HD13	1:B:361:TYR:CD2	1.77	1.19
1:B:510:ASP:O	1:C:435:SER:HB3	1.35	1.19
1:B:576:GLN:HA	1:B:577:TYR:CB	1.68	1.19
1:A:627:GLN:OE1	1:B:271:VAL:CG2	1.88	1.19
1:C:78:GLN:HB2	1:C:338:ASP:HB2	1.21	1.19
1:B:348:HIS:CA	1:B:356:VAL:HG22	1.72	1.19
1:C:343:ASP:CB	1:C:661:VAL:CG2	2.21	1.18
1:A:74:LEU:HB3	1:A:318:LEU:HD23	1.24	1.18
1:A:335:ARG:CB	1:A:354:PHE:CE2	2.27	1.18
1:B:347:LEU:CD2	1:B:361:TYR:CG	2.26	1.18
1:B:432:ALA:CB	1:C:1056:GLN:HA	1.72	1.18
1:C:335:ARG:HD2	1:C:354:PHE:CD2	1.77	1.18
1:A:348:HIS:CE1	1:A:356:VAL:CG2	2.27	1.17
1:C:324:LEU:HD21	1:C:337:ILE:CD1	1.74	1.17
1:A:341:PHE:HE2	1:A:696:MET:CG	1.57	1.16
1:B:348:HIS:ND1	1:B:356:VAL:HG23	1.61	1.16
1:B:439:SER:HB3	1:B:582:ASN:HB3	1.27	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:588:LEU:HD11	1:A:597:ALA:HB3	1.17	1.16
1:C:812:ASN:HD22	1:C:1051:ILE:HD11	0.99	1.16
1:C:1051:ILE:HB	1:C:1054:ILE:HG13	1.26	1.16
1:A:63:THR:HG21	1:C:628:GLN:NE2	1.55	1.16
1:A:348:HIS:HE1	1:A:356:VAL:CG2	1.57	1.16
1:B:347:LEU:HD22	1:B:361:TYR:CD1	1.80	1.15
1:B:506:LEU:O	1:B:507:LEU:HG	1.43	1.15
1:B:579:THR:O	1:B:582:ASN:OD1	1.60	1.15
1:C:341:PHE:CZ	1:C:696:MET:HG3	1.80	1.15
1:C:341:PHE:O	1:C:342:ASN:ND2	1.77	1.15
1:A:344:LEU:HD21	1:A:670:HIS:CB	1.77	1.15
1:B:72:GLN:OE1	1:C:822:ARG:CG	1.93	1.15
1:C:335:ARG:CB	1:C:354:PHE:CE2	2.16	1.14
1:A:347:LEU:HD21	1:A:356:VAL:HG21	1.22	1.14
1:B:623:VAL:CG1	1:C:65:SER:HB2	1.76	1.14
1:C:324:LEU:CD2	1:C:337:ILE:HB	1.76	1.14
1:A:66:ASN:HB2	1:A:329:VAL:CA	1.78	1.14
1:B:439:SER:HB2	1:B:582:ASN:CA	1.56	1.13
1:B:350:SER:O	1:B:351:TYR:CD1	2.02	1.13
1:B:625:VAL:HG21	1:C:63:THR:CB	1.77	1.13
1:A:341:PHE:CE2	1:A:696:MET:CG	2.31	1.13
1:C:324:LEU:HG	1:C:354:PHE:HE1	1.14	1.13
1:A:271:VAL:CG2	1:C:627:GLN:OE1	1.95	1.12
1:C:1058:LEU:CD1	1:C:1063:GLN:HA	1.77	1.12
1:B:509:ASP:OD2	1:C:431:ALA:O	1.66	1.12
1:B:476:PRO:HD3	1:B:577:TYR:CD2	1.85	1.12
1:C:1053:ASP:HB2	1:C:1058:LEU:HD12	1.23	1.12
1:C:324:LEU:CD2	1:C:337:ILE:CG1	2.29	1.11
1:B:428:ILE:HG13	1:C:1056:GLN:O	0.96	1.11
1:C:588:LEU:O	1:C:597:ALA:CB	1.97	1.11
1:A:335:ARG:HB2	1:A:354:PHE:CE2	1.85	1.11
1:C:58:TYR:HD1	1:C:279:PHE:CZ	1.66	1.11
1:C:324:LEU:HD21	1:C:337:ILE:HG13	1.23	1.11
1:A:588:LEU:HD11	1:A:597:ALA:CB	1.79	1.10
1:B:427:GLN:O	1:C:1057:ARG:O	1.68	1.10
1:B:476:PRO:CD	1:B:577:TYR:CD2	2.33	1.10
1:B:623:VAL:HG11	1:C:65:SER:HB2	1.13	1.10
1:C:344:LEU:HD21	1:C:670:HIS:CG	1.86	1.10
1:C:375:VAL:HG21	1:C:588:LEU:HD12	1.28	1.10
1:B:476:PRO:HD3	1:B:577:TYR:CE2	1.85	1.10
1:A:58:TYR:HD2	1:A:59:PRO:HD2	1.16	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:58:TYR:HD2	1:C:59:PRO:HD2	1.16	1.09
1:A:348:HIS:CE1	1:A:356:VAL:HG22	1.86	1.09
1:B:632:TYR:CE2	1:C:62:ARG:CB	2.35	1.09
1:B:70:THR:HG23	1:B:324:LEU:HD12	1.22	1.09
1:B:509:ASP:OD2	1:C:431:ALA:C	1.90	1.09
1:A:344:LEU:HD21	1:A:670:HIS:HB3	1.27	1.09
1:B:343:ASP:HB2	1:B:661:VAL:CG2	1.70	1.09
1:A:335:ARG:CD	1:A:354:PHE:CE2	2.17	1.08
1:A:628:GLN:HE21	1:B:63:THR:HG22	1.06	1.08
1:C:1053:ASP:OD2	1:C:1066:GLN:OE1	1.70	1.08
1:B:324:LEU:HD11	1:B:352:GLU:CA	1.83	1.08
1:B:401:ARG:HH12	1:C:260:ALA:HB1	1.16	1.08
1:A:63:THR:HG22	1:C:628:GLN:HE21	0.94	1.08
1:C:1058:LEU:CD1	1:C:1063:GLN:CA	2.30	1.08
1:A:63:THR:OG1	1:C:625:VAL:HG21	1.52	1.07
1:B:442:ILE:HD11	1:C:261:GLN:HG2	1.36	1.07
1:C:70:THR:HG23	1:C:352:GLU:CG	1.82	1.07
1:B:336:ALA:HA	1:B:354:PHE:HZ	1.19	1.07
1:A:335:ARG:HB3	1:A:354:PHE:CZ	1.87	1.07
1:A:588:LEU:HD23	1:A:596:ILE:CA	1.63	1.07
1:B:663:TYR:CE2	1:B:665:LYS:CB	2.29	1.07
1:C:1058:LEU:HD11	1:C:1063:GLN:HA	1.08	1.06
1:A:66:ASN:HB2	1:A:329:VAL:HA	1.07	1.06
1:A:588:LEU:O	1:A:595:LYS:N	1.88	1.06
1:A:63:THR:HB	1:C:625:VAL:HG21	1.23	1.06
1:B:343:ASP:CB	1:B:661:VAL:HG23	1.82	1.06
1:B:70:THR:HG22	1:B:324:LEU:HD12	1.33	1.06
1:A:63:THR:HG21	1:C:628:GLN:CG	1.86	1.05
1:C:343:ASP:HB3	1:C:661:VAL:HG21	1.11	1.05
1:B:347:LEU:HD11	1:B:361:TYR:HB2	1.06	1.05
1:A:623:VAL:HG12	1:B:65:SER:HB3	1.38	1.05
1:A:63:THR:OG1	1:C:625:VAL:CG2	2.05	1.05
1:A:343:ASP:CB	1:A:661:VAL:CG2	2.33	1.05
1:C:341:PHE:O	1:C:342:ASN:CG	1.94	1.05
1:B:58:TYR:HD2	1:B:59:PRO:HD2	1.16	1.04
1:B:410:ASN:HB2	1:B:587:LYS:HD3	1.05	1.04
1:C:70:THR:HG23	1:C:352:GLU:HG3	1.06	1.04
1:C:343:ASP:HB3	1:C:661:VAL:HG22	1.36	1.04
1:A:335:ARG:CB	1:A:354:PHE:HZ	1.46	1.04
1:B:436:ASN:ND2	1:C:1056:GLN:CB	2.14	1.04
1:B:628:GLN:HG2	1:C:63:THR:HG21	1.36	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:438:TYR:O	1:B:584:VAL:CB	2.05	1.04
1:C:78:GLN:CB	1:C:338:ASP:HB2	1.87	1.04
1:B:436:ASN:OD1	1:C:1056:GLN:CG	2.06	1.03
1:A:347:LEU:HD21	1:A:356:VAL:CG2	1.87	1.03
1:A:58:TYR:HD1	1:A:279:PHE:CZ	1.67	1.03
1:A:70:THR:HB	1:A:323:PHE:O	1.59	1.03
1:A:68:THR:CG2	1:A:326:ASP:HA	1.88	1.03
1:A:342:ASN:OD1	1:A:698:LYS:O	1.75	1.03
1:B:579:THR:HB	1:B:632:TYR:OH	1.58	1.03
1:B:583:SER:OG	1:B:629:ARG:NH2	1.91	1.03
1:A:322:THR:O	1:A:339:CYS:SG	2.17	1.02
1:C:324:LEU:CD2	1:C:337:ILE:CB	2.36	1.02
1:C:324:LEU:HD23	1:C:337:ILE:HB	1.06	1.02
1:A:343:ASP:HB2	1:A:661:VAL:CG2	1.89	1.02
1:B:58:TYR:HD1	1:B:279:PHE:CZ	1.66	1.02
1:B:576:GLN:HA	1:B:577:TYR:HB3	1.06	1.02
1:C:1058:LEU:HD11	1:C:1063:GLN:CB	1.89	1.02
1:B:324:LEU:HD11	1:B:352:GLU:HA	1.02	1.02
1:B:505:ARG:NH2	1:B:507:LEU:HA	1.74	1.02
1:C:351:TYR:O	1:C:353:SER:N	1.92	1.01
1:C:324:LEU:CD2	1:C:337:ILE:HD12	1.88	1.01
1:B:65:SER:O	1:B:67:ILE:N	1.92	1.01
1:B:343:ASP:HB3	1:B:661:VAL:HG23	1.31	1.01
1:C:65:SER:O	1:C:67:ILE:N	1.92	1.01
1:C:1051:ILE:HB	1:C:1054:ILE:CG1	1.90	1.01
1:B:348:HIS:N	1:B:356:VAL:HG21	1.75	1.00
1:B:505:ARG:HG3	1:B:553:TRP:O	0.83	1.00
1:A:341:PHE:HD2	1:A:696:MET:HB2	1.00	1.00
1:A:344:LEU:CD1	1:A:663:TYR:HD1	1.60	1.00
1:C:1058:LEU:HD21	1:C:1062:GLU:HB2	1.40	1.00
1:B:432:ALA:HB2	1:C:1055:ILE:O	1.61	1.00
1:B:442:ILE:HD11	1:C:261:GLN:CG	1.92	1.00
1:A:588:LEU:HD22	1:A:596:ILE:N	1.76	1.00
1:A:65:SER:HB2	1:C:623:VAL:CG1	1.91	1.00
1:A:347:LEU:HD22	1:A:356:VAL:HG21	1.39	0.99
1:A:341:PHE:CD2	1:A:696:MET:CB	2.45	0.99
1:C:324:LEU:HD23	1:C:337:ILE:CB	1.92	0.99
1:B:343:ASP:HB3	1:B:661:VAL:HG21	1.14	0.99
1:B:505:ARG:HH21	1:B:507:LEU:HA	1.23	0.99
1:C:335:ARG:HB3	1:C:354:PHE:CZ	1.98	0.99
1:C:1054:ILE:O	1:C:1063:GLN:NE2	1.96	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:343:ASP:HB3	1:A:363:VAL:HG21	1.45	0.99
1:B:70:THR:HG23	1:B:324:LEU:CD1	1.92	0.99
1:C:588:LEU:O	1:C:597:ALA:HB3	1.58	0.99
1:B:348:HIS:CA	1:B:356:VAL:HG21	1.82	0.98
1:A:588:LEU:HD22	1:A:596:ILE:CA	1.93	0.98
1:C:1054:ILE:HA	1:C:1063:GLN:HE21	1.27	0.98
1:A:347:LEU:HD21	1:A:356:VAL:HG11	1.45	0.98
1:A:70:THR:HG22	1:A:324:LEU:HA	1.43	0.98
1:B:376:GLU:O	1:B:609:TYR:CD1	2.17	0.98
1:B:623:VAL:CG1	1:C:329:VAL:O	2.11	0.98
1:C:50:VAL:HG23	1:C:336:ALA:O	1.64	0.98
1:C:1054:ILE:HD12	1:C:1054:ILE:H	1.25	0.98
1:A:63:THR:HG21	1:C:628:GLN:CD	1.84	0.97
1:B:70:THR:CG2	1:B:324:LEU:CD1	2.43	0.97
1:C:70:THR:CG2	1:C:352:GLU:HG3	1.95	0.97
1:A:344:LEU:CD1	1:A:663:TYR:CE1	2.47	0.97
1:B:663:TYR:CZ	1:B:665:LYS:HB3	2.00	0.97
1:A:337:ILE:HD12	1:A:348:HIS:HB3	1.45	0.97
1:A:344:LEU:HD12	1:A:663:TYR:CD1	2.00	0.96
1:A:63:THR:CG2	1:C:628:GLN:CG	2.43	0.96
1:A:822:ARG:CG	1:C:72:GLN:OE1	2.12	0.96
1:C:1058:LEU:HD11	1:C:1063:GLN:N	1.80	0.96
1:A:337:ILE:HD13	1:A:348:HIS:CD2	2.01	0.96
1:A:340:GLY:O	1:A:696:MET:N	1.99	0.96
1:B:439:SER:O	1:B:584:VAL:HG23	1.66	0.96
1:C:344:LEU:HA	1:C:347:LEU:CD2	1.96	0.96
1:B:347:LEU:CD1	1:B:361:TYR:CB	2.43	0.95
1:A:68:THR:HG21	1:A:326:ASP:HA	1.48	0.95
1:C:335:ARG:CD	1:C:354:PHE:CD2	2.48	0.95
1:B:347:LEU:HD11	1:B:361:TYR:CB	1.95	0.95
1:A:628:GLN:NE2	1:B:63:THR:HG22	1.81	0.95
1:B:439:SER:OG	1:B:582:ASN:HA	1.64	0.94
1:C:377:GLN:OE1	1:C:408:ASN:CG	2.05	0.94
1:A:341:PHE:HE2	1:A:696:MET:HG3	0.78	0.94
1:C:1050:SER:O	1:C:1051:ILE:CD1	2.13	0.94
1:B:510:ASP:O	1:C:435:SER:CB	2.15	0.94
1:A:335:ARG:HD3	1:A:354:PHE:HE2	0.82	0.94
1:B:348:HIS:HE1	1:B:663:TYR:CE1	1.66	0.94
1:B:466:GLN:HA	1:B:517:LEU:HD21	1.45	0.94
1:B:580:ASP:OD2	1:B:628:GLN:HG3	1.68	0.94
1:A:65:SER:HB2	1:C:623:VAL:HG11	1.50	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:347:LEU:O	1:A:350:SER:O	1.86	0.94
1:B:582:ASN:HB2	1:B:610:GLY:HA2	1.47	0.94
1:A:588:LEU:HD21	1:A:597:ALA:H	1.27	0.94
1:C:322:THR:O	1:C:339:CYS:CB	2.15	0.94
1:C:343:ASP:O	1:C:347:LEU:CD2	2.16	0.94
1:B:336:ALA:HA	1:B:354:PHE:CZ	2.02	0.94
1:B:337:ILE:CD1	1:B:354:PHE:CD1	2.51	0.94
1:B:578:GLY:O	1:B:582:ASN:ND2	2.00	0.94
1:C:324:LEU:HG	1:C:354:PHE:CE1	2.02	0.94
1:B:348:HIS:HA	1:B:356:VAL:HG21	1.37	0.94
1:A:66:ASN:CB	1:A:329:VAL:HA	1.98	0.93
1:B:343:ASP:OD1	1:B:363:VAL:CG1	2.16	0.93
1:C:1053:ASP:HB3	1:C:1058:LEU:N	1.82	0.93
1:A:344:LEU:HD11	1:A:663:TYR:HD1	0.77	0.93
1:C:1058:LEU:CD2	1:C:1062:GLU:HB2	1.99	0.93
1:A:329:VAL:O	1:C:623:VAL:HG13	1.67	0.93
1:C:1058:LEU:HD22	1:C:1059:ASP:N	1.83	0.93
1:A:596:ILE:HG22	1:A:597:ALA:H	1.29	0.93
1:C:335:ARG:HD2	1:C:354:PHE:CE2	2.03	0.93
1:B:349:CYS:O	1:B:351:TYR:N	2.01	0.93
1:B:580:ASP:HB3	1:C:60:GLN:O	1.67	0.93
1:B:1032:ALA:O	1:B:1036:LEU:HB2	1.69	0.93
1:B:623:VAL:CG1	1:C:65:SER:CB	2.46	0.92
1:B:625:VAL:HG21	1:C:63:THR:HB	0.92	0.92
1:C:1032:ALA:O	1:C:1036:LEU:HB2	1.69	0.92
1:B:625:VAL:CG2	1:C:63:THR:CB	2.40	0.92
1:C:812:ASN:ND2	1:C:1051:ILE:HD11	1.84	0.92
1:A:342:ASN:HD22	1:A:344:LEU:H	1.04	0.92
1:B:410:ASN:HB2	1:B:587:LYS:CD	1.98	0.92
1:C:324:LEU:HD21	1:C:337:ILE:HD12	1.49	0.92
1:A:58:TYR:CD2	1:A:59:PRO:HD2	2.05	0.92
1:B:58:TYR:CD2	1:B:59:PRO:HD2	2.05	0.92
1:A:66:ASN:HA	1:A:328:SER:O	1.70	0.92
1:B:408:ASN:HA	1:B:585:CYS:O	1.70	0.92
1:A:70:THR:CG2	1:A:324:LEU:HA	1.99	0.91
1:B:634:ALA:HB2	1:C:67:ILE:CD1	2.00	0.91
1:B:476:PRO:CD	1:B:577:TYR:CE2	2.52	0.91
1:C:58:TYR:CD2	1:C:59:PRO:HD2	2.05	0.91
1:A:66:ASN:O	1:A:327:PHE:O	1.88	0.91
1:A:1032:ALA:O	1:A:1036:LEU:HB2	1.69	0.91
1:A:588:LEU:HD11	1:A:597:ALA:CA	2.01	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:506:LEU:CD2	1:B:513:GLU:CG	2.49	0.91
1:C:341:PHE:CZ	1:C:696:MET:CG	2.53	0.91
1:A:77:TYR:HE1	1:A:695:SER:OG	1.52	0.91
1:A:271:VAL:HG22	1:C:627:GLN:CD	1.90	0.91
1:B:347:LEU:CD1	1:B:361:TYR:CD2	2.53	0.90
1:B:580:ASP:OD2	1:B:628:GLN:HB2	1.71	0.90
1:C:812:ASN:ND2	1:C:1051:ILE:CD1	2.34	0.90
1:B:440:SER:OG	1:C:261:GLN:NE2	2.04	0.90
1:A:343:ASP:HB2	1:A:661:VAL:HG21	1.54	0.90
1:B:634:ALA:HB2	1:C:67:ILE:HD11	1.53	0.90
1:C:1053:ASP:CG	1:C:1058:LEU:HB3	1.92	0.90
1:B:579:THR:CB	1:B:632:TYR:OH	2.20	0.90
1:A:335:ARG:CG	1:A:354:PHE:HE2	1.85	0.89
1:C:1062:GLU:O	1:C:1065:ALA:N	2.05	0.89
1:C:324:LEU:CD2	1:C:337:ILE:CD1	2.45	0.89
1:A:943:MET:SD	1:C:738:LEU:HD11	2.13	0.89
1:B:343:ASP:CB	1:B:363:VAL:HG21	2.01	0.89
1:B:509:ASP:OD2	1:C:431:ALA:CA	2.20	0.89
1:B:631:VAL:HG23	1:C:64:TYR:HA	1.55	0.89
1:C:341:PHE:CE1	1:C:696:MET:CG	2.56	0.89
1:B:476:PRO:CG	1:B:577:TYR:CE2	2.56	0.88
1:B:348:HIS:O	1:B:353:SER:O	1.90	0.88
1:B:506:LEU:O	1:B:507:LEU:CG	2.20	0.88
1:A:347:LEU:HD21	1:A:356:VAL:CG1	2.04	0.88
1:A:596:ILE:HG22	1:A:597:ALA:N	1.87	0.88
1:C:344:LEU:HD21	1:C:670:HIS:CB	2.02	0.88
1:A:596:ILE:C	1:A:598:SER:H	1.75	0.88
1:B:376:GLU:O	1:B:609:TYR:HD1	1.55	0.88
1:B:72:GLN:OE1	1:C:822:ARG:CD	2.21	0.88
1:B:738:LEU:HD11	1:C:943:MET:SD	2.14	0.88
1:C:343:ASP:CB	1:C:661:VAL:HG22	1.95	0.88
1:A:588:LEU:CD2	1:A:597:ALA:H	1.74	0.88
1:A:63:THR:HG22	1:C:628:GLN:NE2	1.77	0.87
1:B:576:GLN:CA	1:B:577:TYR:CB	2.52	0.87
1:A:344:LEU:HD12	1:A:663:TYR:CE1	2.08	0.87
1:A:324:LEU:HD11	1:A:353:SER:N	1.88	0.87
1:A:738:LEU:HD11	1:B:943:MET:SD	2.15	0.87
1:B:476:PRO:CG	1:B:577:TYR:CD2	2.58	0.87
1:C:324:LEU:CD1	1:C:354:PHE:CE1	2.56	0.87
1:A:324:LEU:HB3	1:A:337:ILE:HB	1.55	0.87
1:B:439:SER:HA	1:B:583:SER:H	1.39	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:343:ASP:HB3	1:A:661:VAL:CG2	2.03	0.86
1:B:344:LEU:HD22	1:B:670:HIS:CA	2.04	0.86
1:A:628:GLN:HE21	1:B:63:THR:CG2	1.88	0.86
1:C:375:VAL:CG2	1:C:588:LEU:HD12	2.04	0.86
1:C:377:GLN:CD	1:C:408:ASN:ND2	2.28	0.86
1:A:588:LEU:CD1	1:A:597:ALA:CB	2.44	0.86
1:A:351:TYR:OH	1:B:833:GLN:HA	1.75	0.86
1:B:506:LEU:CD2	1:B:513:GLU:HG3	2.05	0.86
1:C:343:ASP:O	1:C:347:LEU:HD22	1.76	0.85
1:A:77:TYR:CE1	1:A:695:SER:OG	2.28	0.85
1:A:677:VAL:HG11	1:B:909:TYR:CE2	2.11	0.85
1:B:677:VAL:HG11	1:C:909:TYR:CE2	2.11	0.85
1:A:78:GLN:O	1:A:341:PHE:CE1	2.29	0.85
1:B:347:LEU:CG	1:B:361:TYR:CB	2.53	0.85
1:A:628:GLN:HG2	1:B:63:THR:CG2	2.07	0.85
1:B:632:TYR:HB2	1:C:64:TYR:CE1	2.12	0.85
1:A:337:ILE:CD1	1:A:348:HIS:HB3	2.07	0.85
1:B:324:LEU:O	1:B:354:PHE:CE1	2.29	0.85
1:C:1058:LEU:CD1	1:C:1063:GLN:CB	2.52	0.84
1:B:476:PRO:HD3	1:B:577:TYR:CZ	2.13	0.84
1:A:351:TYR:O	1:A:353:SER:N	2.09	0.84
1:C:1053:ASP:CB	1:C:1058:LEU:HD12	2.06	0.84
1:A:1024:ASP:O	1:A:1028:ASN:HB2	1.78	0.84
1:A:347:LEU:CD2	1:A:356:VAL:CG2	2.49	0.84
1:C:324:LEU:HD22	1:C:337:ILE:HD12	1.60	0.84
1:A:343:ASP:CB	1:A:661:VAL:HG21	2.04	0.84
1:C:343:ASP:OD2	1:C:661:VAL:HG23	1.78	0.84
1:A:337:ILE:CD1	1:A:348:HIS:CD2	2.61	0.84
1:B:580:ASP:O	1:B:582:ASN:ND2	2.10	0.84
1:B:347:LEU:CG	1:B:361:TYR:HB2	2.08	0.84
1:B:623:VAL:HG11	1:C:65:SER:CB	2.03	0.84
1:C:1024:ASP:O	1:C:1028:ASN:HB2	1.78	0.84
1:B:324:LEU:O	1:B:354:PHE:CZ	2.31	0.83
1:C:1054:ILE:CA	1:C:1063:GLN:HE21	1.91	0.83
1:B:437:CYS:SG	1:B:585:CYS:CA	2.64	0.83
1:B:466:GLN:HA	1:B:517:LEU:CD2	2.08	0.83
1:C:1053:ASP:OD1	1:C:1057:ARG:O	1.96	0.83
1:A:74:LEU:CB	1:A:318:LEU:HD23	2.07	0.83
1:B:347:LEU:CD1	1:B:361:TYR:CG	2.62	0.83
1:B:628:GLN:HG2	1:C:63:THR:CG2	2.06	0.83
1:A:588:LEU:CG	1:A:597:ALA:N	2.42	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:337:ILE:HG13	1:B:354:PHE:CE1	2.13	0.83
1:B:439:SER:HB2	1:B:582:ASN:HA	0.83	0.83
1:B:344:LEU:CG	1:B:670:HIS:HB3	2.08	0.82
1:B:343:ASP:OD2	1:B:363:VAL:HB	1.79	0.82
1:B:401:ARG:NH1	1:C:260:ALA:O	2.11	0.82
1:B:427:GLN:C	1:C:1057:ARG:O	2.17	0.82
1:B:476:PRO:HD3	1:B:577:TYR:CG	2.14	0.82
1:A:909:TYR:CE2	1:C:677:VAL:HG11	2.13	0.82
1:B:439:SER:CB	1:B:583:SER:N	2.42	0.82
1:A:588:LEU:CG	1:A:596:ILE:HB	2.09	0.82
1:B:580:ASP:CB	1:C:60:GLN:O	2.28	0.82
1:B:439:SER:HA	1:B:584:VAL:H	1.42	0.82
1:B:1024:ASP:O	1:B:1028:ASN:HB2	1.78	0.82
1:A:63:THR:CB	1:C:625:VAL:CG2	2.52	0.82
1:A:377:GLN:O	1:A:381:VAL:HG22	1.80	0.82
1:A:627:GLN:OE1	1:B:271:VAL:HG21	1.80	0.82
1:A:628:GLN:CG	1:B:63:THR:CG2	2.57	0.82
1:B:72:GLN:CD	1:C:822:ARG:HD3	1.99	0.81
1:B:343:ASP:HB2	1:B:661:VAL:HG22	1.59	0.81
1:B:344:LEU:HD11	1:B:663:TYR:CD1	2.14	0.81
1:B:347:LEU:CD2	1:B:361:TYR:HB2	2.04	0.81
1:B:439:SER:CA	1:B:583:SER:H	1.94	0.81
1:B:439:SER:CB	1:B:582:ASN:C	2.48	0.81
1:A:628:GLN:NE2	1:B:63:THR:CG2	2.43	0.81
1:B:632:TYR:CZ	1:C:62:ARG:CB	2.64	0.81
1:C:1053:ASP:OD1	1:C:1058:LEU:HB3	1.79	0.81
1:B:347:LEU:HD21	1:B:361:TYR:HB2	1.56	0.81
1:B:634:ALA:CB	1:C:67:ILE:HD11	2.11	0.81
1:A:348:HIS:HE1	1:A:356:VAL:HG23	1.45	0.81
1:B:337:ILE:HD12	1:B:354:PHE:CD1	2.14	0.81
1:C:377:GLN:OE1	1:C:408:ASN:ND2	2.13	0.81
1:B:436:ASN:O	1:B:438:TYR:CE2	2.34	0.81
1:B:628:GLN:CG	1:C:63:THR:HG21	2.11	0.81
1:C:324:LEU:CG	1:C:354:PHE:CE1	2.63	0.81
1:B:509:ASP:CB	1:C:432:ALA:HA	2.10	0.81
1:C:335:ARG:NE	1:C:354:PHE:HD2	1.78	0.81
1:B:476:PRO:HG3	1:B:577:TYR:CE2	2.16	0.80
1:B:348:HIS:ND1	1:B:356:VAL:CG2	2.45	0.80
1:B:349:CYS:O	1:B:352:GLU:N	2.13	0.80
1:B:677:VAL:HG21	1:C:909:TYR:HD2	1.47	0.80
1:B:954:SER:O	1:B:958:VAL:HB	1.82	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:129:THR:HG22	1:C:131:ILE:H	1.47	0.80
1:A:129:THR:HG22	1:A:131:ILE:H	1.47	0.80
1:B:663:TYR:CE2	1:B:665:LYS:CA	2.64	0.80
1:A:677:VAL:HG21	1:B:909:TYR:HD2	1.47	0.80
1:C:954:SER:O	1:C:958:VAL:HB	1.82	0.80
1:A:341:PHE:HD2	1:A:696:MET:CB	1.88	0.80
1:B:337:ILE:HD12	1:B:354:PHE:HD1	1.45	0.80
1:A:588:LEU:CD2	1:A:596:ILE:N	2.34	0.80
1:C:58:TYR:CD1	1:C:279:PHE:HZ	1.98	0.80
1:B:580:ASP:OD2	1:B:628:GLN:CG	2.29	0.80
1:A:588:LEU:HD12	1:A:597:ALA:HB3	1.62	0.79
1:B:58:TYR:CD1	1:B:279:PHE:HZ	1.98	0.79
1:B:439:SER:HB2	1:B:583:SER:N	1.95	0.79
1:C:377:GLN:HB3	1:C:381:VAL:HG13	1.64	0.79
1:A:343:ASP:HB2	1:A:661:VAL:HG22	1.63	0.79
1:B:506:LEU:HD22	1:B:513:GLU:HB3	1.64	0.79
1:B:129:THR:HG22	1:B:131:ILE:H	1.47	0.79
1:B:677:VAL:HG21	1:C:909:TYR:CD2	2.17	0.79
1:A:78:GLN:OE1	1:A:341:PHE:HD1	1.66	0.79
1:A:954:SER:O	1:A:958:VAL:HB	1.82	0.79
1:B:439:SER:CB	1:B:583:SER:H	1.95	0.79
1:B:439:SER:HB2	1:B:582:ASN:C	2.02	0.79
1:C:324:LEU:CG	1:C:354:PHE:HE1	1.92	0.79
1:B:348:HIS:HA	1:B:356:VAL:HG22	0.80	0.79
1:B:509:ASP:CG	1:C:431:ALA:O	2.20	0.79
1:B:579:THR:CG2	1:B:632:TYR:OH	2.31	0.79
1:B:70:THR:HG23	1:B:352:GLU:HG3	1.62	0.79
1:B:511:ARG:CZ	1:C:586:PRO:HG2	2.13	0.79
1:A:588:LEU:O	1:A:588:LEU:HD22	1.83	0.79
1:B:628:GLN:CG	1:C:63:THR:CG2	2.61	0.79
1:C:324:LEU:HD12	1:C:354:PHE:CD1	2.13	0.78
1:A:1061:LEU:HD21	1:B:517:LEU:HD13	1.62	0.78
1:B:58:TYR:CD1	1:B:279:PHE:CE2	2.71	0.78
1:B:348:HIS:ND1	1:B:663:TYR:HE1	1.80	0.78
1:B:433:ILE:HA	1:B:438:TYR:OH	1.83	0.78
1:A:677:VAL:HG21	1:B:909:TYR:CD2	2.18	0.78
1:B:347:LEU:HD13	1:B:361:TYR:CG	2.19	0.78
1:B:627:GLN:HG2	1:C:271:VAL:HG21	1.63	0.78
1:A:588:LEU:HD21	1:A:596:ILE:CA	1.80	0.78
1:B:505:ARG:HH21	1:B:507:LEU:CA	1.97	0.78
1:C:58:TYR:CD1	1:C:279:PHE:CE2	2.71	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:67:ILE:O	1:C:327:PHE:HD1	1.67	0.78
1:A:339:CYS:HA	1:A:345:SER:OG	1.83	0.78
1:A:909:TYR:HD2	1:C:677:VAL:HG21	1.49	0.78
1:C:335:ARG:CD	1:C:354:PHE:CE2	2.66	0.78
1:A:58:TYR:CD1	1:A:279:PHE:CE2	2.71	0.78
1:C:375:VAL:HG11	1:C:588:LEU:CD1	2.14	0.78
1:A:63:THR:CG2	1:C:628:GLN:HG3	2.13	0.77
1:A:906:MET:SD	1:C:678:ALA:HA	2.24	0.77
1:B:582:ASN:CB	1:B:610:GLY:HA2	2.15	0.77
1:B:344:LEU:CD1	1:B:663:TYR:CD1	2.68	0.77
1:B:623:VAL:HG12	1:C:65:SER:CB	2.14	0.77
1:C:1054:ILE:HA	1:C:1063:GLN:NE2	1.98	0.77
1:C:1054:ILE:C	1:C:1063:GLN:NE2	2.38	0.77
1:A:678:ALA:HA	1:B:906:MET:SD	2.25	0.77
1:B:335:ARG:HB3	1:B:354:PHE:HE2	1.48	0.77
1:C:335:ARG:HB2	1:C:354:PHE:HE2	1.44	0.77
1:C:342:ASN:OD1	1:C:344:LEU:N	2.16	0.77
1:A:63:THR:HG21	1:C:628:GLN:HG2	1.67	0.77
1:A:58:TYR:CD1	1:A:279:PHE:HZ	1.98	0.76
1:A:65:SER:HB2	1:C:623:VAL:HG12	1.65	0.76
1:B:582:ASN:O	1:B:609:TYR:CD2	2.38	0.76
1:B:678:ALA:HA	1:C:906:MET:SD	2.25	0.76
1:B:67:ILE:O	1:B:327:PHE:HD1	1.67	0.76
1:B:506:LEU:HD23	1:B:513:GLU:CG	2.14	0.76
1:C:1058:LEU:HD21	1:C:1062:GLU:CB	2.16	0.76
1:A:628:GLN:HG2	1:B:63:THR:HG21	1.66	0.76
1:B:337:ILE:HG13	1:B:354:PHE:CD1	2.21	0.76
1:A:634:ALA:HB2	1:B:67:ILE:HD11	1.68	0.76
1:A:909:TYR:CD2	1:C:677:VAL:HG21	2.20	0.76
1:C:324:LEU:HD11	1:C:354:PHE:HD1	0.60	0.76
1:C:343:ASP:OD1	1:C:363:VAL:HB	1.86	0.76
1:A:940:ASP:OD1	1:C:737:ALA:HB1	1.86	0.76
1:C:1050:SER:C	1:C:1051:ILE:HD13	2.06	0.76
1:B:715:LEU:HD21	1:C:936:PRO:HG2	1.67	0.76
1:B:401:ARG:NH1	1:C:260:ALA:HB1	1.98	0.75
1:A:335:ARG:CG	1:A:354:PHE:CE2	2.64	0.75
1:B:343:ASP:HB3	1:B:363:VAL:HG21	1.68	0.75
1:A:337:ILE:HG21	1:A:348:HIS:HB2	1.68	0.75
1:B:505:ARG:HG3	1:B:553:TRP:C	1.98	0.75
1:A:71:TYR:CZ	1:A:72:GLN:O	2.39	0.75
1:A:347:LEU:HD21	1:A:356:VAL:CB	2.16	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:340:GLY:CA	1:A:695:SER:HB2	2.17	0.75
1:A:343:ASP:CB	1:A:661:VAL:HG22	2.17	0.75
1:A:936:PRO:HG2	1:C:715:LEU:HD21	1.68	0.75
1:C:339:CYS:SG	1:C:349:CYS:HB2	2.26	0.75
1:B:344:LEU:HD22	1:B:670:HIS:CG	2.18	0.74
1:B:580:ASP:OD2	1:B:628:GLN:CB	2.34	0.74
1:C:377:GLN:NE2	1:C:408:ASN:ND2	2.34	0.74
1:A:337:ILE:CD1	1:A:348:HIS:CB	2.65	0.74
1:C:341:PHE:CE1	1:C:696:MET:HG2	2.22	0.74
1:C:343:ASP:OD1	1:C:363:VAL:CB	2.36	0.74
1:B:582:ASN:HB2	1:B:610:GLY:CA	2.17	0.74
1:C:343:ASP:OD1	1:C:363:VAL:HG11	1.87	0.74
1:C:347:LEU:HD13	1:C:347:LEU:N	2.01	0.74
1:C:1054:ILE:CA	1:C:1063:GLN:NE2	2.49	0.74
1:A:58:TYR:CE1	1:A:279:PHE:HZ	2.05	0.74
1:C:1053:ASP:O	1:C:1063:GLN:HG3	1.87	0.74
1:B:58:TYR:CE1	1:B:279:PHE:HZ	2.05	0.74
1:A:715:LEU:HD21	1:B:936:PRO:HG2	1.68	0.74
1:A:68:THR:HG21	1:A:326:ASP:CA	2.17	0.74
1:C:78:GLN:CB	1:C:338:ASP:CB	2.64	0.74
1:C:335:ARG:CZ	1:C:354:PHE:HD2	2.00	0.74
1:B:336:ALA:CA	1:B:354:PHE:CZ	2.71	0.74
1:A:623:VAL:CG1	1:B:65:SER:HB3	1.98	0.74
1:C:1053:ASP:HA	1:C:1057:ARG:HB2	1.69	0.73
1:A:344:LEU:HD21	1:A:670:HIS:HB2	1.68	0.73
1:A:588:LEU:HD22	1:A:596:ILE:C	2.01	0.73
1:C:1179:ARG:HB2	1:C:1184:TRP:HA	1.70	0.73
1:A:1179:ARG:HB2	1:A:1184:TRP:HA	1.70	0.73
1:C:323:PHE:CE1	1:C:338:ASP:O	2.41	0.73
1:B:737:ALA:HB1	1:C:940:ASP:OD1	1.88	0.73
1:B:509:ASP:HB2	1:C:432:ALA:HA	1.70	0.73
1:C:322:THR:O	1:C:339:CYS:HB2	1.87	0.73
1:C:350:SER:OG	1:C:351:TYR:CD1	2.42	0.73
1:B:506:LEU:CD2	1:B:513:GLU:HB3	2.19	0.73
1:B:1179:ARG:HB2	1:B:1184:TRP:HA	1.70	0.73
1:A:342:ASN:ND2	1:A:344:LEU:H	1.84	0.73
1:A:623:VAL:HG13	1:B:329:VAL:O	1.89	0.73
1:C:58:TYR:CE1	1:C:279:PHE:HZ	2.05	0.73
1:A:342:ASN:OD1	1:A:698:LYS:C	2.26	0.73
1:C:812:ASN:HD22	1:C:1051:ILE:HD13	1.53	0.73
1:A:66:ASN:HB2	1:A:329:VAL:N	2.02	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:323:PHE:CE1	1:A:338:ASP:CG	2.61	0.72
1:A:337:ILE:HD13	1:A:348:HIS:CG	2.23	0.72
1:A:737:ALA:HB1	1:B:940:ASP:OD1	1.88	0.72
1:C:324:LEU:HD11	1:C:354:PHE:CE1	2.15	0.72
1:C:58:TYR:CE1	1:C:279:PHE:CZ	2.78	0.72
1:A:324:LEU:CD1	1:A:353:SER:N	2.52	0.72
1:A:79:GLY:HA3	1:A:341:PHE:HE1	1.53	0.72
1:A:1104:ASN:HB3	1:C:1114:SER:HB3	1.72	0.72
1:B:58:TYR:CE1	1:B:279:PHE:CZ	2.78	0.72
1:C:343:ASP:OD1	1:C:363:VAL:CG1	2.38	0.72
1:A:351:TYR:OH	1:B:833:GLN:HG2	1.89	0.72
1:B:429:SER:HB3	1:C:1059:ASP:CA	2.20	0.72
1:C:1053:ASP:CB	1:C:1058:LEU:HB3	2.19	0.72
1:A:1114:SER:HB3	1:B:1104:ASN:HB3	1.70	0.72
1:B:343:ASP:CG	1:B:363:VAL:CB	2.58	0.72
1:C:324:LEU:CD2	1:C:337:ILE:HG13	2.06	0.72
1:C:324:LEU:HB2	1:C:352:GLU:O	1.89	0.72
1:A:58:TYR:CE1	1:A:279:PHE:CZ	2.78	0.72
1:A:335:ARG:HB2	1:A:354:PHE:HZ	0.91	0.72
1:B:432:ALA:CB	1:C:1055:ILE:O	2.37	0.72
1:B:72:GLN:OE1	1:C:822:ARG:HD3	1.87	0.71
1:A:63:THR:HG23	1:C:628:GLN:HG3	1.72	0.71
1:B:339:CYS:SG	1:B:349:CYS:CB	2.78	0.71
1:C:335:ARG:NE	1:C:354:PHE:CD2	2.58	0.71
1:B:1114:SER:HB3	1:C:1104:ASN:HB3	1.71	0.71
1:A:337:ILE:HD13	1:A:348:HIS:CB	2.20	0.71
1:C:1058:LEU:CD1	1:C:1063:GLN:HB2	2.19	0.71
1:A:588:LEU:HD23	1:A:596:ILE:CG2	2.10	0.71
1:A:338:ASP:O	1:A:345:SER:OG	2.08	0.71
1:B:347:LEU:CD2	1:B:361:TYR:CD1	2.63	0.71
1:A:63:THR:OG1	1:C:625:VAL:HG23	1.91	0.71
1:B:580:ASP:HB2	1:C:61:GLY:C	2.11	0.71
1:B:427:GLN:HE21	1:C:1047:ILE:HD11	1.56	0.70
1:B:579:THR:C	1:B:582:ASN:OD1	2.28	0.70
1:C:1054:ILE:HD12	1:C:1054:ILE:N	2.03	0.70
1:A:337:ILE:HD13	1:A:348:HIS:HD2	1.54	0.70
1:A:335:ARG:HB3	1:A:354:PHE:CE2	2.16	0.70
1:B:439:SER:CB	1:B:582:ASN:CB	2.39	0.70
1:B:579:THR:HB	1:B:632:TYR:HH	1.56	0.70
1:C:377:GLN:HB3	1:C:381:VAL:CG1	2.21	0.70
1:A:68:THR:CG2	1:A:326:ASP:CA	2.68	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:40:PHE:HD1	1:B:86:VAL:HG13	1.57	0.70
1:B:631:VAL:CA	1:C:63:THR:O	2.30	0.70
1:C:343:ASP:O	1:C:347:LEU:HD21	1.91	0.70
1:B:344:LEU:HD12	1:B:663:TYR:HD1	1.55	0.70
1:C:344:LEU:HD11	1:C:670:HIS:HB3	1.74	0.70
1:A:65:SER:CB	1:C:623:VAL:HG12	2.21	0.70
1:B:523:TYR:CD2	1:C:288:ASP:OD1	2.44	0.70
1:B:339:CYS:SG	1:B:349:CYS:HB2	2.32	0.70
1:A:661:VAL:O	1:A:662:ILE:HD13	1.92	0.69
1:B:466:GLN:O	1:B:517:LEU:HD23	1.92	0.69
1:B:476:PRO:CD	1:B:577:TYR:CG	2.72	0.69
1:C:324:LEU:HG	1:C:324:LEU:O	1.92	0.69
1:B:377:GLN:HA	1:B:609:TYR:CD1	2.27	0.69
1:B:475:ASN:HA	1:B:577:TYR:CE1	2.27	0.69
1:B:429:SER:HB3	1:C:1059:ASP:HA	1.73	0.69
1:C:408:ASN:HB3	1:C:587:LYS:HB3	1.75	0.69
1:B:339:CYS:HG	1:B:349:CYS:CB	2.05	0.69
1:B:509:ASP:HB3	1:C:432:ALA:HA	1.73	0.69
1:B:337:ILE:HD11	1:B:354:PHE:HA	1.73	0.69
1:B:344:LEU:CD1	1:B:663:TYR:HD1	2.06	0.69
1:A:906:MET:SD	1:C:677:VAL:HA	2.33	0.69
1:B:523:TYR:HD2	1:C:288:ASP:OD1	1.76	0.69
1:A:40:PHE:HD1	1:A:86:VAL:HG13	1.57	0.69
1:B:432:ALA:HB1	1:C:1056:GLN:HA	0.77	0.69
1:B:442:ILE:HD11	1:C:261:GLN:HG3	1.75	0.69
1:B:632:TYR:CD2	1:C:62:ARG:CB	2.76	0.69
1:B:474:SER:O	1:B:577:TYR:HE1	1.76	0.68
1:B:608:LEU:HD22	1:B:630:PHE:HE1	1.58	0.68
1:C:40:PHE:HD1	1:C:86:VAL:HG13	1.57	0.68
1:C:375:VAL:HG11	1:C:588:LEU:HD12	1.75	0.68
1:A:63:THR:HB	1:C:625:VAL:CG2	2.13	0.68
1:A:347:LEU:CD2	1:A:356:VAL:HG11	2.23	0.68
1:B:337:ILE:CG1	1:B:354:PHE:CD1	2.76	0.68
1:A:348:HIS:O	1:A:350:SER:O	2.10	0.68
1:A:588:LEU:HD11	1:A:597:ALA:C	2.12	0.68
1:A:71:TYR:CD2	1:A:72:GLN:O	2.44	0.68
1:B:410:ASN:CB	1:B:587:LYS:HD3	2.02	0.68
1:C:67:ILE:O	1:C:327:PHE:CD1	2.46	0.68
1:B:428:ILE:HA	1:C:1057:ARG:C	2.13	0.68
1:B:634:ALA:CB	1:C:67:ILE:CD1	2.70	0.68
1:A:677:VAL:HA	1:B:906:MET:SD	2.34	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:506:LEU:O	1:B:507:LEU:CB	2.41	0.68
1:B:67:ILE:O	1:B:327:PHE:CD1	2.46	0.68
1:B:506:LEU:HD23	1:B:513:GLU:HG2	1.75	0.68
1:A:588:LEU:CG	1:A:597:ALA:HB3	2.24	0.67
1:B:343:ASP:CG	1:B:363:VAL:HB	2.14	0.67
1:B:439:SER:HB3	1:B:582:ASN:C	2.12	0.67
1:A:341:PHE:CE2	1:A:696:MET:CB	2.74	0.67
1:B:72:GLN:CD	1:C:822:ARG:CD	2.62	0.67
1:B:337:ILE:CD1	1:B:354:PHE:HA	2.24	0.67
1:B:339:CYS:HB3	1:B:349:CYS:SG	2.34	0.67
1:B:509:ASP:OD1	1:B:510:ASP:N	2.27	0.67
1:A:347:LEU:C	1:A:347:LEU:HD23	2.15	0.67
1:A:348:HIS:CE1	1:A:356:VAL:HG21	2.25	0.67
1:C:1031:GLN:O	1:C:1035:LYS:HB2	1.95	0.67
1:A:493:LYS:NZ	1:A:565:GLU:O	2.28	0.67
1:B:677:VAL:HA	1:C:906:MET:SD	2.35	0.67
1:C:343:ASP:CG	1:C:661:VAL:HG23	2.14	0.67
1:C:1058:LEU:HD13	1:C:1058:LEU:C	2.14	0.66
1:C:493:LYS:NZ	1:C:565:GLU:O	2.28	0.66
1:B:343:ASP:C	1:B:661:VAL:HG21	2.14	0.66
1:B:343:ASP:CA	1:B:661:VAL:HG21	2.25	0.66
1:A:1031:GLN:O	1:A:1035:LYS:HB2	1.95	0.66
1:B:475:ASN:OD1	1:B:577:TYR:CD1	2.49	0.66
1:B:583:SER:HA	1:B:609:TYR:CG	2.31	0.66
1:A:588:LEU:C	1:A:588:LEU:HD13	2.15	0.66
1:A:764:PHE:CD2	1:B:943:MET:SD	2.89	0.66
1:B:506:LEU:HA	1:B:513:GLU:HB3	1.78	0.66
1:A:66:ASN:CA	1:A:328:SER:O	2.43	0.66
1:B:356:VAL:O	1:B:663:TYR:CE2	2.48	0.66
1:B:1031:GLN:O	1:B:1035:LYS:HB2	1.95	0.66
1:B:348:HIS:HE1	1:B:663:TYR:CZ	2.13	0.66
1:A:79:GLY:HA3	1:A:341:PHE:CE1	2.30	0.66
1:A:335:ARG:NE	1:A:354:PHE:CE2	2.64	0.66
1:B:339:CYS:CB	1:B:349:CYS:SG	2.84	0.66
1:A:69:ILE:HD12	1:A:69:ILE:C	2.16	0.66
1:B:66:ASN:HB2	1:B:329:VAL:HA	1.77	0.66
1:B:474:SER:O	1:B:577:TYR:CE1	2.49	0.65
1:A:77:TYR:HE1	1:A:695:SER:HG	0.72	0.65
1:B:439:SER:C	1:B:584:VAL:HG23	2.16	0.65
1:B:506:LEU:HD22	1:B:513:GLU:CB	2.27	0.65
1:C:661:VAL:O	1:C:662:ILE:HD13	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:322:THR:OG1	1:B:822:ARG:NH1	2.30	0.65
1:C:70:THR:HG23	1:C:352:GLU:HA	1.79	0.65
1:A:341:PHE:CD2	1:A:696:MET:CG	2.73	0.65
1:B:335:ARG:HB3	1:B:354:PHE:CE2	2.32	0.65
1:C:66:ASN:HB2	1:C:329:VAL:HA	1.77	0.65
1:B:493:LYS:NZ	1:B:565:GLU:O	2.28	0.65
1:C:322:THR:O	1:C:339:CYS:SG	2.54	0.65
1:C:1058:LEU:HD21	1:C:1063:GLN:N	2.12	0.65
1:A:344:LEU:HG	1:A:663:TYR:HE1	1.62	0.65
1:B:377:GLN:HA	1:B:609:TYR:HD1	1.62	0.65
1:C:1058:LEU:HD22	1:C:1059:ASP:H	1.61	0.65
1:B:595:LYS:HD3	1:B:596:ILE:HG13	1.79	0.64
1:B:764:PHE:CD2	1:C:943:MET:SD	2.90	0.64
1:A:342:ASN:HD22	1:A:344:LEU:N	1.88	0.64
1:B:343:ASP:CG	1:B:363:VAL:HG21	2.17	0.64
1:B:501:ASN:ND2	1:B:559:SER:OG	2.30	0.64
1:A:943:MET:SD	1:C:764:PHE:CD2	2.90	0.64
1:A:319:GLN:HA	1:A:319:GLN:OE1	1.95	0.64
1:C:50:VAL:O	1:C:336:ALA:N	2.29	0.64
1:A:337:ILE:CD1	1:A:348:HIS:CG	2.79	0.64
1:B:505:ARG:CZ	1:B:507:LEU:HA	2.27	0.64
1:C:343:ASP:CG	1:C:661:VAL:CG2	2.65	0.64
1:A:634:ALA:HB2	1:B:67:ILE:CD1	2.28	0.64
1:A:1027:ASN:O	1:A:1031:GLN:HB2	1.98	0.64
1:B:506:LEU:HD21	1:B:513:GLU:HG3	1.80	0.64
1:B:1027:ASN:O	1:B:1031:GLN:HB2	1.98	0.64
1:B:506:LEU:CD2	1:B:513:GLU:CB	2.76	0.64
1:B:625:VAL:HG23	1:C:63:THR:CB	2.25	0.64
1:C:595:LYS:HD3	1:C:596:ILE:HG13	1.80	0.64
1:B:599:GLN:HB3	1:B:600:LEU:HD23	1.80	0.63
1:A:1110:GLN:O	1:A:1122:HIS:ND1	2.31	0.63
1:A:351:TYR:HE1	1:B:833:GLN:HB2	1.63	0.63
1:A:898:VAL:HA	1:A:1023:GLN:HE21	1.62	0.63
1:C:344:LEU:HA	1:C:347:LEU:HD22	1.80	0.63
1:A:58:TYR:HD2	1:A:59:PRO:CD	2.04	0.63
1:A:347:LEU:CD2	1:A:348:HIS:ND1	2.61	0.63
1:B:522:GLN:NE2	1:C:289:THR:HB	2.14	0.63
1:C:1027:ASN:O	1:C:1031:GLN:HB2	1.98	0.63
1:A:830:LYS:NZ	1:C:1039:GLU:OE2	2.29	0.63
1:B:898:VAL:HA	1:B:1023:GLN:HE21	1.62	0.63
1:C:599:GLN:HB3	1:C:600:LEU:HD23	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:898:VAL:HA	1:C:1023:GLN:HE21	1.62	0.63
1:B:347:LEU:HD13	1:B:361:TYR:HD2	1.57	0.62
1:B:439:SER:CB	1:B:582:ASN:HB3	2.14	0.62
1:B:439:SER:O	1:B:584:VAL:CG2	2.45	0.62
1:B:438:TYR:O	1:B:584:VAL:CG2	2.48	0.62
1:A:351:TYR:OH	1:B:833:GLN:CA	2.46	0.62
1:A:964:LEU:HD22	1:A:965:SER:HB3	1.82	0.62
1:B:964:LEU:HD22	1:B:965:SER:HB3	1.82	0.62
1:C:68:THR:O	1:C:69:ILE:CG2	2.48	0.62
1:A:382:GLU:CD	1:A:587:LYS:NZ	2.53	0.62
1:B:505:ARG:HD2	1:B:545:LEU:HD12	1.81	0.62
1:B:1110:GLN:O	1:B:1122:HIS:ND1	2.31	0.62
1:C:1110:GLN:O	1:C:1122:HIS:ND1	2.31	0.62
1:A:71:TYR:CE2	1:A:72:GLN:C	2.73	0.62
1:A:599:GLN:HB3	1:A:600:LEU:HD23	1.80	0.62
1:C:812:ASN:ND2	1:C:1051:ILE:HD13	2.11	0.62
1:B:583:SER:O	1:B:609:TYR:HB3	2.00	0.62
1:B:509:ASP:OD2	1:C:431:ALA:HB1	2.00	0.62
1:B:663:TYR:CE2	1:B:665:LYS:N	2.68	0.62
1:A:501:ASN:ND2	1:A:559:SER:OG	2.30	0.61
1:B:324:LEU:HB3	1:B:354:PHE:HE1	1.64	0.61
1:C:343:ASP:CB	1:C:661:VAL:HG23	2.29	0.61
1:C:343:ASP:OD2	1:C:661:VAL:CG2	2.47	0.61
1:A:382:GLU:CD	1:A:587:LYS:HZ3	2.04	0.61
1:B:68:THR:O	1:B:69:ILE:CG2	2.48	0.61
1:C:1053:ASP:HB2	1:C:1058:LEU:CD1	2.15	0.61
1:C:50:VAL:O	1:C:336:ALA:HB3	2.01	0.61
1:C:339:CYS:SG	1:C:349:CYS:CB	2.88	0.61
1:C:344:LEU:CA	1:C:347:LEU:CD2	2.77	0.61
1:C:964:LEU:HD22	1:C:965:SER:HB3	1.82	0.61
1:A:324:LEU:HD11	1:A:353:SER:CA	2.30	0.61
1:A:588:LEU:CD2	1:A:596:ILE:CG2	2.75	0.61
1:C:501:ASN:ND2	1:C:559:SER:OG	2.30	0.61
1:C:812:ASN:ND2	1:C:1050:SER:OG	2.34	0.61
1:A:631:VAL:HA	1:B:63:THR:O	2.01	0.61
1:A:319:GLN:OE1	1:A:320:PRO:HD2	2.01	0.60
1:A:628:GLN:CG	1:B:63:THR:HG21	2.27	0.60
1:A:812:ASN:ND2	1:A:1050:SER:OG	2.34	0.60
1:B:476:PRO:HG2	1:B:577:TYR:CD2	2.36	0.60
1:C:735:LEU:HD22	1:C:736:CYS:H	1.66	0.60
1:B:608:LEU:HD22	1:B:630:PHE:CE1	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:735:LEU:HD22	1:B:736:CYS:H	1.66	0.60
1:A:343:ASP:HB3	1:A:661:VAL:HG23	1.82	0.60
1:B:439:SER:HB2	1:B:583:SER:H	1.59	0.60
1:B:520:ALA:O	1:B:521:ASN:HB2	2.02	0.60
1:B:625:VAL:HG23	1:C:63:THR:OG1	2.02	0.60
1:C:70:THR:CG2	1:C:352:GLU:CG	2.68	0.60
1:C:323:PHE:HE1	1:C:338:ASP:O	1.83	0.60
1:B:339:CYS:CB	1:B:349:CYS:HG	2.13	0.60
1:C:588:LEU:O	1:C:597:ALA:HB2	1.99	0.60
1:A:114:ASN:OD1	1:A:319:GLN:OE1	2.19	0.60
1:B:343:ASP:CG	1:B:363:VAL:HG11	2.16	0.60
1:B:346:GLN:O	1:B:350:SER:N	2.34	0.60
1:B:432:ALA:HB1	1:C:1056:GLN:C	2.19	0.60
1:B:475:ASN:OD1	1:B:577:TYR:HD1	1.83	0.60
1:A:344:LEU:CD2	1:A:670:HIS:CB	2.68	0.60
1:A:351:TYR:OH	1:B:833:GLN:CG	2.50	0.60
1:B:324:LEU:HB3	1:B:354:PHE:CE1	2.37	0.60
1:B:324:LEU:HD13	1:B:352:GLU:HA	1.76	0.60
1:A:735:LEU:HD22	1:A:736:CYS:H	1.66	0.59
1:A:623:VAL:HG11	1:B:65:SER:HB2	0.62	0.59
1:B:406:ASN:HA	1:B:583:SER:HB3	1.83	0.59
1:B:812:ASN:ND2	1:B:1050:SER:OG	2.34	0.59
1:C:344:LEU:CD2	1:C:670:HIS:CG	2.75	0.59
1:B:511:ARG:NH2	1:C:586:PRO:HG2	2.17	0.59
1:A:63:THR:CG2	1:C:628:GLN:HG2	2.29	0.59
1:A:338:ASP:O	1:A:345:SER:CB	2.51	0.59
1:B:509:ASP:OD2	1:C:431:ALA:CB	2.50	0.59
1:A:623:VAL:CG1	1:B:65:SER:CA	2.81	0.59
1:A:68:THR:OG1	1:A:326:ASP:HA	2.02	0.59
1:B:324:LEU:O	1:B:354:PHE:HE1	1.83	0.59
1:B:507:LEU:HD12	1:B:512:THR:O	2.02	0.59
1:C:50:VAL:HG21	1:C:338:ASP:N	2.17	0.59
1:C:323:PHE:CZ	1:C:338:ASP:HA	2.38	0.59
1:A:344:LEU:CD2	1:A:670:HIS:HB3	2.18	0.58
1:C:457:SER:HB3	1:C:460:SER:HB3	1.85	0.58
1:B:1039:GLU:OE2	1:C:830:LYS:NZ	2.30	0.58
1:A:812:ASN:ND2	1:A:1050:SER:O	2.37	0.58
1:C:50:VAL:CG2	1:C:336:ALA:O	2.48	0.58
1:C:78:GLN:HB3	1:C:338:ASP:CB	2.32	0.58
1:C:323:PHE:CG	1:C:337:ILE:O	2.56	0.58
1:C:812:ASN:ND2	1:C:1050:SER:O	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:457:SER:HB3	1:A:460:SER:HB3	1.86	0.58
1:C:323:PHE:CE1	1:C:338:ASP:HA	2.39	0.58
1:A:628:GLN:HG2	1:B:63:THR:HG23	1.84	0.58
1:B:70:THR:HG22	1:B:324:LEU:CD1	2.20	0.58
1:C:602:ASN:ND2	1:C:617:PHE:O	2.37	0.58
1:C:783:PRO:HG3	1:C:1143:PRO:HB3	1.85	0.58
1:A:960:TRP:H	1:A:961:THR:HA	1.68	0.58
1:A:602:ASN:ND2	1:A:617:PHE:O	2.37	0.58
1:A:1179:ARG:H	1:A:1186:TYR:H	1.52	0.58
1:B:439:SER:HA	1:B:583:SER:N	2.15	0.58
1:B:476:PRO:HD3	1:B:577:TYR:CE1	2.37	0.58
1:C:960:TRP:H	1:C:961:THR:HA	1.68	0.58
1:C:1179:ARG:H	1:C:1186:TYR:H	1.52	0.58
1:A:1039:GLU:OE2	1:B:830:LYS:NZ	2.28	0.58
1:B:476:PRO:HD3	1:B:577:TYR:CD1	2.37	0.58
1:B:812:ASN:ND2	1:B:1050:SER:O	2.37	0.58
1:B:1179:ARG:H	1:B:1186:TYR:H	1.52	0.58
1:B:457:SER:HB3	1:B:460:SER:HB3	1.85	0.57
1:A:63:THR:HG23	1:C:628:GLN:CG	2.29	0.57
1:C:344:LEU:HA	1:C:347:LEU:HD23	1.86	0.57
1:A:588:LEU:O	1:A:596:ILE:N	2.37	0.57
1:B:335:ARG:CB	1:B:354:PHE:HE2	2.18	0.57
1:B:783:PRO:HG3	1:B:1143:PRO:HB3	1.85	0.57
1:C:1027:ASN:O	1:C:1031:GLN:CB	2.53	0.57
1:B:602:ASN:ND2	1:B:617:PHE:O	2.37	0.57
1:B:436:ASN:HD21	1:C:1056:GLN:HA	1.68	0.57
1:C:377:GLN:OE1	1:C:408:ASN:CB	2.53	0.57
1:C:1105:GLU:OE1	1:C:1113:ARG:NH2	2.38	0.57
1:A:64:TYR:N	1:A:64:TYR:CD2	2.73	0.57
1:A:80:ASP:OD1	1:A:81:HIS:N	2.37	0.57
1:A:605:GLU:HG3	1:A:614:ARG:HG2	1.87	0.57
1:B:1027:ASN:O	1:B:1031:GLN:CB	2.53	0.57
1:C:344:LEU:CA	1:C:347:LEU:HD22	2.34	0.57
1:A:343:ASP:CB	1:A:363:VAL:HG21	2.29	0.57
1:A:351:TYR:OH	1:B:833:GLN:CB	2.53	0.57
1:B:67:ILE:O	1:B:327:PHE:HB2	2.05	0.57
1:B:429:SER:HB3	1:C:1059:ASP:N	2.19	0.57
1:C:343:ASP:CB	1:C:661:VAL:HG21	2.06	0.57
1:A:78:GLN:O	1:A:341:PHE:CZ	2.57	0.57
1:A:738:LEU:HG	1:B:940:ASP:H	1.70	0.57
1:A:1023:GLN:O	1:A:1027:ASN:HB2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1023:GLN:O	1:B:1027:ASN:HB2	2.04	0.57
1:C:1023:GLN:O	1:C:1027:ASN:HB2	2.04	0.57
1:A:338:ASP:C	1:A:345:SER:OG	2.43	0.57
1:A:1105:GLU:OE1	1:A:1113:ARG:NH2	2.38	0.57
1:B:960:TRP:H	1:B:961:THR:HA	1.68	0.57
1:A:271:VAL:CG2	1:C:627:GLN:CD	2.60	0.57
1:A:596:ILE:CG2	1:A:597:ALA:H	2.00	0.57
1:A:1027:ASN:O	1:A:1031:GLN:CB	2.53	0.57
1:C:605:GLU:HG3	1:C:614:ARG:HG2	1.87	0.57
1:A:783:PRO:HG3	1:A:1143:PRO:HB3	1.86	0.56
1:B:605:GLU:HG3	1:B:614:ARG:HG2	1.87	0.56
1:C:1059:ASP:OD1	1:C:1062:GLU:HB2	2.04	0.56
1:B:64:TYR:N	1:B:64:TYR:CD2	2.73	0.56
1:B:583:SER:O	1:B:609:TYR:CB	2.53	0.56
1:B:663:TYR:OH	1:B:665:LYS:HB3	2.05	0.56
1:B:738:LEU:CD1	1:C:943:MET:SD	2.92	0.56
1:B:738:LEU:HG	1:C:940:ASP:H	1.70	0.56
1:C:67:ILE:O	1:C:327:PHE:HB2	2.05	0.56
1:C:375:VAL:HG11	1:C:588:LEU:HG	1.85	0.56
1:C:1051:ILE:CB	1:C:1054:ILE:HG13	2.16	0.56
1:B:509:ASP:CG	1:C:435:SER:OG	2.44	0.56
1:C:70:THR:CG2	1:C:352:GLU:HA	2.35	0.56
1:C:344:LEU:HD12	1:C:663:TYR:CE1	2.41	0.56
1:B:343:ASP:CG	1:B:363:VAL:CG2	2.74	0.56
1:B:509:ASP:HB3	1:C:432:ALA:CA	2.35	0.56
1:B:343:ASP:CG	1:B:363:VAL:CG1	2.74	0.56
1:B:628:GLN:HE21	1:C:63:THR:HG22	1.71	0.56
1:C:1102:LYS:HB3	1:C:1136:PHE:HE2	1.71	0.56
1:A:71:TYR:HE2	1:A:73:GLY:HA3	1.70	0.56
1:A:1061:LEU:HD21	1:B:517:LEU:CD1	2.34	0.56
1:B:793:GLU:HA	1:B:1018:ALA:HB2	1.88	0.56
1:B:1105:GLU:OE1	1:B:1113:ARG:NH2	2.38	0.56
1:C:1053:ASP:HB3	1:C:1058:LEU:CB	2.36	0.56
1:A:940:ASP:H	1:C:738:LEU:HG	1.71	0.56
1:B:663:TYR:HE2	1:B:665:LYS:HB3	0.81	0.56
1:B:787:SER:H	1:B:1000:LYS:HD3	1.71	0.56
1:C:341:PHE:HZ	1:C:696:MET:HG3	1.58	0.56
1:A:787:SER:H	1:A:1000:LYS:HD3	1.71	0.56
1:C:50:VAL:CG2	1:C:337:ILE:HA	2.35	0.56
1:C:66:ASN:HA	1:C:328:SER:O	2.06	0.56
1:A:324:LEU:CD1	1:A:353:SER:H	2.19	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:351:TYR:CE1	1:B:833:GLN:HB2	2.40	0.55
1:A:787:SER:OG	1:A:1142:TYR:O	2.24	0.55
1:B:58:TYR:HD2	1:B:59:PRO:CD	2.04	0.55
1:B:432:ALA:C	1:B:436:ASN:HD21	2.08	0.55
1:C:375:VAL:HG11	1:C:588:LEU:CG	2.36	0.55
1:C:793:GLU:HA	1:C:1018:ALA:HB2	1.88	0.55
1:B:66:ASN:HA	1:B:328:SER:O	2.06	0.55
1:C:64:TYR:N	1:C:64:TYR:CD2	2.73	0.55
1:C:673:LEU:HD13	1:C:735:LEU:HD21	1.88	0.55
1:C:50:VAL:C	1:C:336:ALA:O	2.44	0.55
1:C:351:TYR:CD1	1:C:351:TYR:N	2.72	0.55
1:C:888:SER:OG	1:C:889:ALA:N	2.40	0.55
1:A:377:GLN:O	1:A:381:VAL:CG2	2.53	0.55
1:B:433:ILE:C	1:B:438:TYR:HH	2.09	0.55
1:A:673:LEU:HD13	1:A:735:LEU:HD21	1.88	0.55
1:B:579:THR:HG21	1:B:632:TYR:OH	2.05	0.55
1:C:787:SER:OG	1:C:1142:TYR:O	2.24	0.55
1:A:47:PRO:HA	1:A:80:ASP:O	2.07	0.55
1:A:677:VAL:HG11	1:B:909:TYR:CD2	2.41	0.55
1:A:831:ILE:HG23	1:A:1082:VAL:HG21	1.89	0.55
1:A:943:MET:SD	1:C:738:LEU:CD1	2.91	0.55
1:B:677:VAL:HG11	1:C:909:TYR:CD2	2.42	0.55
1:B:1102:LYS:HB3	1:B:1136:PHE:HE2	1.71	0.55
1:C:677:VAL:HG22	1:C:678:ALA:HB2	1.89	0.55
1:C:68:THR:C	1:C:69:ILE:HG23	2.27	0.55
1:C:322:THR:O	1:C:339:CYS:HB3	2.02	0.55
1:A:677:VAL:HG22	1:A:678:ALA:HB2	1.89	0.55
1:B:353:SER:HB2	1:B:355:ASP:O	2.07	0.55
1:B:787:SER:OG	1:B:1142:TYR:O	2.24	0.55
1:B:996:LEU:HD23	1:B:998:ALA:HB3	1.89	0.55
1:B:68:THR:C	1:B:69:ILE:HG23	2.27	0.55
1:B:432:ALA:CB	1:C:1056:GLN:CA	2.56	0.55
1:B:582:ASN:O	1:B:609:TYR:HD2	1.89	0.55
1:B:831:ILE:HG23	1:B:1082:VAL:HG21	1.89	0.55
1:C:58:TYR:HD2	1:C:59:PRO:CD	2.04	0.55
1:C:831:ILE:HG23	1:C:1082:VAL:HG21	1.89	0.55
1:C:996:LEU:HD23	1:C:998:ALA:HB3	1.89	0.55
1:A:337:ILE:HG21	1:A:348:HIS:CB	2.37	0.54
1:C:787:SER:H	1:C:1000:LYS:HD3	1.71	0.54
1:A:1174:LYS:O	1:A:1177:ASN:ND2	2.40	0.54
1:B:888:SER:OG	1:B:889:ALA:N	2.39	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1174:LYS:O	1:B:1177:ASN:ND2	2.40	0.54
1:C:1174:LYS:O	1:C:1177:ASN:ND2	2.40	0.54
1:A:1102:LYS:HB3	1:A:1136:PHE:HE2	1.71	0.54
1:B:522:GLN:NE2	1:C:289:THR:CB	2.56	0.54
1:C:1058:LEU:HD13	1:C:1058:LEU:O	2.07	0.54
1:C:1062:GLU:O	1:C:1063:GLN:C	2.45	0.54
1:B:404:PHE:O	1:B:440:SER:HA	2.06	0.54
1:B:673:LEU:HD13	1:B:735:LEU:HD21	1.88	0.54
1:C:989:VAL:HB	1:C:1186:TYR:HE1	1.72	0.54
1:A:888:SER:OG	1:A:889:ALA:N	2.39	0.54
1:C:1053:ASP:HB3	1:C:1058:LEU:CA	2.37	0.54
1:A:989:VAL:HB	1:A:1186:TYR:HE1	1.72	0.54
1:A:996:LEU:HD23	1:A:998:ALA:HB3	1.89	0.54
1:B:401:ARG:HH12	1:C:260:ALA:CB	2.04	0.54
1:A:793:GLU:HA	1:A:1018:ALA:HB2	1.88	0.54
1:B:624:GLY:O	1:C:330:ASP:O	2.25	0.54
1:C:323:PHE:CD1	1:C:337:ILE:O	2.60	0.54
1:C:350:SER:OG	1:C:351:TYR:CE1	2.56	0.54
1:C:796:GLN:O	1:C:798:THR:N	2.40	0.54
1:C:1053:ASP:CB	1:C:1058:LEU:CB	2.85	0.54
1:A:71:TYR:CD2	1:A:72:GLN:C	2.82	0.54
1:B:632:TYR:HB2	1:C:64:TYR:CD1	2.42	0.54
1:C:351:TYR:C	1:C:353:SER:N	2.61	0.54
1:A:765:ASN:HD21	1:B:946:ALA:HB1	1.72	0.53
1:B:1166:ALA:HB2	1:B:1194:PRO:HD3	1.90	0.53
1:A:63:THR:CG2	1:C:628:GLN:CD	2.58	0.53
1:A:340:GLY:C	1:A:695:SER:HB2	2.29	0.53
1:A:596:ILE:CG2	1:A:597:ALA:N	2.58	0.53
1:A:1166:ALA:HB2	1:A:1194:PRO:HD3	1.90	0.53
1:B:634:ALA:N	1:C:67:ILE:HD13	2.23	0.53
1:C:1053:ASP:HB3	1:C:1058:LEU:HB3	1.88	0.53
1:A:68:THR:CB	1:A:326:ASP:HA	2.37	0.53
1:B:989:VAL:HB	1:B:1186:TYR:HE1	1.72	0.53
1:B:399:PHE:O	1:B:523:TYR:OH	2.15	0.53
1:B:506:LEU:C	1:B:506:LEU:HD13	2.28	0.53
1:B:627:GLN:HE21	1:B:628:GLN:N	2.06	0.53
1:B:677:VAL:HG22	1:B:678:ALA:HB2	1.89	0.53
1:C:1166:ALA:HB2	1:C:1194:PRO:HD3	1.90	0.53
1:A:271:VAL:CG2	1:C:627:GLN:NE2	2.71	0.53
1:A:348:HIS:C	1:A:350:SER:O	2.47	0.53
1:A:623:VAL:HG12	1:B:65:SER:CA	2.35	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:70:THR:HG23	1:B:352:GLU:CG	2.35	0.53
1:C:375:VAL:HG21	1:C:588:LEU:CD1	2.19	0.53
1:C:1058:LEU:HD13	1:C:1063:GLN:HB2	1.90	0.53
1:A:343:ASP:HB3	1:A:661:VAL:HG21	1.78	0.53
1:C:375:VAL:CG1	1:C:588:LEU:HD12	2.38	0.53
1:A:351:TYR:O	1:A:352:GLU:C	2.45	0.53
1:B:428:ILE:CA	1:C:1058:LEU:HA	2.39	0.53
1:C:1053:ASP:OD1	1:C:1057:ARG:C	2.48	0.53
1:A:627:GLN:CD	1:B:271:VAL:HG21	2.29	0.53
1:B:428:ILE:CD1	1:C:1056:GLN:O	2.55	0.53
1:B:349:CYS:SG	1:B:350:SER:N	2.81	0.52
1:B:480:ILE:HB	1:B:571:PHE:HB2	1.91	0.52
1:B:181:ARG:HG3	1:B:242:THR:HG22	1.92	0.52
1:B:440:SER:CB	1:C:261:GLN:HE22	2.23	0.52
1:B:677:VAL:CG2	1:C:909:TYR:CD2	2.91	0.52
1:C:340:GLY:O	1:C:695:SER:HB2	2.08	0.52
1:C:977:PHE:O	1:C:981:ASN:HB2	2.10	0.52
1:A:324:LEU:HD13	1:A:337:ILE:HD12	1.92	0.52
1:A:697:LEU:HD13	1:A:698:LYS:H	1.74	0.52
1:A:946:ALA:HB1	1:C:765:ASN:HD21	1.74	0.52
1:B:58:TYR:HD1	1:B:279:PHE:CE1	2.24	0.52
1:C:467:PHE:O	1:C:524:SER:HB2	2.10	0.52
1:C:480:ILE:HB	1:C:571:PHE:HB2	1.91	0.52
1:C:1051:ILE:HB	1:C:1054:ILE:HG12	1.83	0.52
1:C:1054:ILE:H	1:C:1054:ILE:CD1	1.98	0.52
1:A:114:ASN:HB2	1:A:318:LEU:O	2.09	0.52
1:A:181:ARG:HG3	1:A:242:THR:HG22	1.92	0.52
1:A:789:GLY:HA3	1:A:1004:ALA:HB1	1.91	0.52
1:A:1117:CYS:HB3	1:A:1122:HIS:CD2	2.45	0.52
1:B:337:ILE:HD11	1:B:354:PHE:CD1	2.42	0.52
1:A:909:TYR:CD2	1:C:677:VAL:HG11	2.42	0.52
1:B:507:LEU:CD1	1:B:512:THR:O	2.57	0.52
1:B:977:PHE:O	1:B:981:ASN:HB2	2.10	0.52
1:A:1147:ILE:HD12	1:A:1184:TRP:HE1	1.75	0.52
1:B:1117:CYS:HB3	1:B:1122:HIS:CD2	2.45	0.52
1:C:129:THR:HG23	1:C:134:PRO:HA	1.91	0.52
1:C:181:ARG:HG3	1:C:242:THR:HG22	1.91	0.52
1:A:588:LEU:CG	1:A:597:ALA:CB	2.86	0.52
1:A:628:GLN:CG	1:B:63:THR:HG23	2.37	0.52
1:A:660:SER:N	1:A:673:LEU:O	2.42	0.52
1:B:578:GLY:O	1:B:582:ASN:CG	2.48	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:587:LYS:CB	1:B:587:LYS:NZ	2.73	0.52
1:B:1147:ILE:HD12	1:B:1184:TRP:HE1	1.75	0.52
1:B:697:LEU:HD13	1:B:698:LYS:H	1.74	0.52
1:C:50:VAL:HG23	1:C:337:ILE:HA	1.92	0.52
1:C:335:ARG:CG	1:C:354:PHE:CE2	2.89	0.52
1:C:1059:ASP:O	1:C:1063:GLN:HB2	2.09	0.52
1:A:345:SER:O	1:A:349:CYS:SG	2.67	0.52
1:A:977:PHE:O	1:A:981:ASN:HB2	2.10	0.52
1:B:344:LEU:CD2	1:B:670:HIS:CG	2.84	0.52
1:B:347:LEU:C	1:B:356:VAL:HG21	2.28	0.52
1:B:436:ASN:HD21	1:C:1056:GLN:CB	2.19	0.52
1:C:1117:CYS:HB3	1:C:1122:HIS:CD2	2.45	0.52
1:A:399:PHE:O	1:A:523:TYR:OH	2.15	0.51
1:A:958:VAL:HG11	1:A:1108:LYS:HD2	1.92	0.51
1:B:129:THR:HG23	1:B:134:PRO:HA	1.91	0.51
1:B:326:ASP:HB3	1:B:335:ARG:HB3	1.92	0.51
1:B:509:ASP:CG	1:C:431:ALA:C	2.67	0.51
1:C:697:LEU:HD13	1:C:698:LYS:H	1.74	0.51
1:C:1169:ASN:OD1	1:C:1169:ASN:N	2.43	0.51
1:B:505:ARG:CB	1:B:553:TRP:O	2.55	0.51
1:B:765:ASN:HD21	1:C:946:ALA:HB1	1.74	0.51
1:B:958:VAL:HG11	1:B:1108:LYS:HD2	1.92	0.51
1:A:346:GLN:NE2	1:A:346:GLN:CA	2.73	0.51
1:A:870:ASN:N	1:A:1002:ASN:OD1	2.43	0.51
1:B:348:HIS:ND1	1:B:663:TYR:CE1	2.64	0.51
1:B:467:PHE:O	1:B:524:SER:HB2	2.10	0.51
1:B:627:GLN:CG	1:C:271:VAL:HG21	2.38	0.51
1:B:799:ILE:HD11	1:B:1089:SER:HA	1.93	0.51
1:A:48:ILE:HG22	1:A:78:GLN:HA	1.91	0.51
1:A:66:ASN:OD1	1:A:328:SER:HA	2.11	0.51
1:A:129:THR:HG23	1:A:134:PRO:HA	1.91	0.51
1:A:324:LEU:HD22	1:A:354:PHE:CD1	2.46	0.51
1:A:467:PHE:O	1:A:524:SER:HB2	2.10	0.51
1:A:588:LEU:HD23	1:A:596:ILE:HB	0.51	0.51
1:C:58:TYR:HD1	1:C:279:PHE:CE1	2.24	0.51
1:A:799:ILE:HD11	1:A:1089:SER:HA	1.93	0.51
1:A:1031:GLN:HG2	1:A:1035:LYS:HD3	1.92	0.51
1:A:480:ILE:HB	1:A:571:PHE:HB2	1.91	0.51
1:B:436:ASN:ND2	1:C:1056:GLN:CA	2.74	0.51
1:B:789:GLY:HA3	1:B:1004:ALA:HB1	1.91	0.51
1:C:68:THR:HG22	1:C:69:ILE:N	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:663:TYR:HE2	1:B:665:LYS:CA	2.08	0.51
1:C:1062:GLU:O	1:C:1064:ASP:N	2.44	0.51
1:B:509:ASP:HB3	1:C:432:ALA:N	2.26	0.51
1:C:789:GLY:HA3	1:C:1004:ALA:HB1	1.91	0.51
1:B:686:MET:SD	1:B:686:MET:N	2.75	0.51
1:A:796:GLN:O	1:A:798:THR:N	2.40	0.50
1:B:796:GLN:O	1:B:798:THR:N	2.40	0.50
1:B:1165:ILE:HG12	1:C:960:TRP:HH2	1.75	0.50
1:C:351:TYR:O	1:C:352:GLU:HB2	2.08	0.50
1:C:799:ILE:HD11	1:C:1089:SER:HA	1.93	0.50
1:C:872:THR:OG1	1:C:1009:GLN:NE2	2.39	0.50
1:A:351:TYR:O	1:A:353:SER:OG	2.25	0.50
1:B:870:ASN:N	1:B:1002:ASN:OD1	2.43	0.50
1:A:58:TYR:HD1	1:A:279:PHE:CE1	2.24	0.50
1:A:909:TYR:CD2	1:C:677:VAL:CG2	2.93	0.50
1:B:66:ASN:HA	1:B:327:PHE:O	2.12	0.50
1:B:437:CYS:SG	1:B:584:VAL:O	2.70	0.50
1:B:626:ARG:HA	1:B:642:TYR:HE2	1.75	0.50
1:B:663:TYR:OH	1:B:665:LYS:CB	2.59	0.50
1:C:958:VAL:HG11	1:C:1108:LYS:HD2	1.92	0.50
1:A:348:HIS:ND1	1:A:356:VAL:CG2	2.72	0.50
1:A:627:GLN:CD	1:B:271:VAL:CG2	2.74	0.50
1:A:983:VAL:HG12	1:A:1121:THR:HB	1.94	0.50
1:B:68:THR:HG22	1:B:69:ILE:N	2.26	0.50
1:B:1130:ALA:HB2	1:B:1135:TYR:HB2	1.93	0.50
1:C:341:PHE:CZ	1:C:696:MET:CB	2.95	0.50
1:C:1147:ILE:HD12	1:C:1184:TRP:HE1	1.75	0.50
1:A:340:GLY:O	1:A:695:SER:HB2	2.11	0.50
1:A:738:LEU:CD1	1:B:943:MET:SD	2.93	0.50
1:C:626:ARG:HA	1:C:642:TYR:HE2	1.76	0.50
1:C:870:ASN:N	1:C:1002:ASN:OD1	2.43	0.50
1:A:343:ASP:HB3	1:A:363:VAL:CG2	2.32	0.50
1:A:1165:ILE:HG12	1:B:960:TRP:HH2	1.75	0.50
1:B:778:PHE:CE1	1:C:971:PRO:HD3	2.47	0.50
1:B:967:PHE:HB3	1:B:968:ALA:HB2	1.94	0.50
1:A:337:ILE:CD1	1:A:348:HIS:HD2	2.16	0.50
1:A:677:VAL:CG2	1:B:909:TYR:CD2	2.91	0.50
1:A:1008:MET:HB3	1:A:1137:MET:HE3	1.93	0.50
1:B:660:SER:N	1:B:673:LEU:O	2.42	0.50
1:B:1031:GLN:HG2	1:B:1035:LYS:HD3	1.92	0.50
1:A:626:ARG:HA	1:A:642:TYR:HE2	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:764:PHE:CG	1:B:943:MET:SD	3.05	0.50
1:B:383:CYS:N	1:B:408:ASN:O	2.44	0.50
1:B:437:CYS:SG	1:B:586:PRO:HD2	2.52	0.50
1:B:510:ASP:C	1:C:435:SER:HB3	2.25	0.50
1:B:623:VAL:HG12	1:C:65:SER:HA	1.94	0.50
1:C:686:MET:SD	1:C:686:MET:N	2.75	0.50
1:A:324:LEU:HB3	1:A:337:ILE:CB	2.35	0.50
1:A:383:CYS:N	1:A:408:ASN:O	2.44	0.50
1:A:960:TRP:HH2	1:C:1165:ILE:HG12	1.77	0.50
1:A:1130:ALA:HB2	1:A:1135:TYR:HB2	1.93	0.50
1:B:382:GLU:OE2	1:B:587:LYS:HE2	2.12	0.50
1:C:660:SER:N	1:C:673:LEU:O	2.42	0.50
1:C:1031:GLN:HG2	1:C:1035:LYS:HD3	1.93	0.50
1:A:324:LEU:HD11	1:A:353:SER:C	2.32	0.49
1:A:347:LEU:HD22	1:A:348:HIS:ND1	2.25	0.49
1:C:347:LEU:N	1:C:347:LEU:CD1	2.73	0.49
1:A:778:PHE:CE1	1:B:971:PRO:HD3	2.47	0.49
1:A:738:LEU:HD13	1:A:762:ILE:HG23	1.94	0.49
1:A:804:VAL:HA	1:A:932:TYR:HA	1.94	0.49
1:B:347:LEU:O	1:B:356:VAL:CG1	2.60	0.49
1:B:436:ASN:HD21	1:C:1056:GLN:CA	2.25	0.49
1:B:583:SER:HG	1:B:629:ARG:NH2	2.04	0.49
1:C:49:ASP:HB3	1:C:52:LYS:HD2	1.95	0.49
1:C:341:PHE:CE1	1:C:696:MET:HB2	2.48	0.49
1:C:735:LEU:HD12	1:C:739:PRO:HB2	1.94	0.49
1:C:1130:ALA:HB2	1:C:1135:TYR:HB2	1.93	0.49
1:A:340:GLY:HA2	1:A:695:SER:HB2	1.95	0.49
1:B:583:SER:HA	1:B:609:TYR:CD2	2.47	0.49
1:C:347:LEU:HD13	1:C:347:LEU:H	1.74	0.49
1:C:738:LEU:HD13	1:C:762:ILE:HG23	1.94	0.49
1:A:271:VAL:HG22	1:C:627:GLN:NE2	2.25	0.49
1:A:324:LEU:CD2	1:A:354:PHE:CD1	2.96	0.49
1:A:337:ILE:HD11	1:A:348:HIS:CD2	2.46	0.49
1:B:343:ASP:CA	1:B:363:VAL:HG21	2.41	0.49
1:B:344:LEU:CD1	1:B:663:TYR:HB2	2.41	0.49
1:B:347:LEU:O	1:B:356:VAL:HG11	2.11	0.49
1:B:663:TYR:C	1:B:663:TYR:CD2	2.85	0.49
1:B:1179:ARG:HB2	1:B:1185:SER:HA	1.95	0.49
1:A:48:ILE:CG2	1:A:78:GLN:HA	2.42	0.49
1:A:588:LEU:CG	1:A:597:ALA:H	2.16	0.49
1:B:49:ASP:HB3	1:B:52:LYS:HD2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:68:THR:O	1:B:69:ILE:HG23	2.12	0.49
1:A:384:ASP:OD1	1:A:386:SER:OG	2.23	0.49
1:A:967:PHE:HB3	1:A:968:ALA:HB2	1.94	0.49
1:B:623:VAL:HG12	1:C:65:SER:CA	2.42	0.49
1:B:738:LEU:HD13	1:B:762:ILE:HG23	1.94	0.49
1:C:983:VAL:HG12	1:C:1121:THR:HB	1.93	0.49
1:A:628:GLN:CD	1:B:63:THR:CG2	2.81	0.49
1:B:580:ASP:OD1	1:B:630:PHE:CD2	2.66	0.49
1:B:587:LYS:NZ	1:B:587:LYS:HB2	2.28	0.49
1:C:50:VAL:O	1:C:336:ALA:CA	2.60	0.49
1:C:66:ASN:HA	1:C:327:PHE:O	2.11	0.49
1:A:728:LYS:H	1:A:761:SER:HG	1.61	0.49
1:A:735:LEU:HD12	1:A:739:PRO:HB2	1.94	0.49
1:B:507:LEU:CB	1:B:508:SER:O	2.61	0.49
1:C:720:SER:HG	1:C:757:MET:N	2.11	0.49
1:C:1058:LEU:CD1	1:C:1063:GLN:N	2.67	0.49
1:A:71:TYR:CD2	1:A:71:TYR:C	2.86	0.48
1:A:971:PRO:HD3	1:C:778:PHE:CE1	2.48	0.48
1:B:428:ILE:HA	1:C:1058:LEU:HA	1.95	0.48
1:B:983:VAL:HG12	1:B:1121:THR:HB	1.93	0.48
1:C:384:ASP:OD1	1:C:386:SER:OG	2.23	0.48
1:B:324:LEU:O	1:B:354:PHE:HZ	1.88	0.48
1:B:324:LEU:HD22	1:B:353:SER:C	2.34	0.48
1:B:376:GLU:C	1:B:609:TYR:CD1	2.85	0.48
1:C:1053:ASP:O	1:C:1063:GLN:NE2	2.47	0.48
1:A:347:LEU:HD12	1:A:361:TYR:CG	2.48	0.48
1:B:68:THR:O	1:B:69:ILE:HG22	2.14	0.48
1:B:1008:MET:HB3	1:B:1137:MET:HE3	1.94	0.48
1:C:804:VAL:HA	1:C:932:TYR:HA	1.95	0.48
1:C:967:PHE:HB3	1:C:968:ALA:HB2	1.94	0.48
1:C:341:PHE:O	1:C:342:ASN:CB	2.56	0.48
1:C:1008:MET:HB3	1:C:1137:MET:HE3	1.94	0.48
1:B:735:LEU:HD12	1:B:739:PRO:HB2	1.94	0.48
1:B:804:VAL:HA	1:B:932:TYR:HA	1.95	0.48
1:C:383:CYS:N	1:C:408:ASN:O	2.44	0.48
1:C:1179:ARG:HB2	1:C:1185:SER:HA	1.95	0.48
1:A:629:ARG:HB2	1:A:642:TYR:HB3	1.96	0.48
1:A:720:SER:HG	1:A:757:MET:N	2.11	0.48
1:A:872:THR:OG1	1:A:1009:GLN:NE2	2.39	0.48
1:A:344:LEU:CG	1:A:663:TYR:CE1	2.97	0.48
1:B:628:GLN:HG3	1:C:63:THR:CG2	2.40	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:764:PHE:CG	1:C:943:MET:SD	3.06	0.48
1:C:68:THR:O	1:C:69:ILE:HG22	2.14	0.48
1:C:519:ASN:HB2	1:C:522:GLN:OE1	2.13	0.48
1:C:990:LEU:HD11	1:C:1179:ARG:HD3	1.96	0.48
1:A:587:LYS:O	1:A:588:LEU:HB3	2.13	0.48
1:A:990:LEU:HD11	1:A:1179:ARG:HD3	1.96	0.48
1:B:347:LEU:CG	1:B:361:TYR:CG	2.93	0.48
1:B:432:ALA:C	1:B:436:ASN:ND2	2.57	0.48
1:B:625:VAL:CG2	1:C:63:THR:OG1	2.60	0.48
1:C:68:THR:O	1:C:69:ILE:HG23	2.12	0.48
1:C:642:TYR:HA	1:C:643:SER:HA	1.63	0.48
1:C:1054:ILE:C	1:C:1055:ILE:HG13	2.34	0.48
1:A:581:THR:O	1:A:583:SER:N	2.47	0.48
1:A:943:MET:SD	1:C:764:PHE:CG	3.07	0.48
1:B:129:THR:CG2	1:B:131:ILE:H	2.24	0.48
1:B:341:PHE:O	1:B:696:MET:O	2.32	0.48
1:B:509:ASP:HB2	1:C:435:SER:OG	2.14	0.48
1:B:625:VAL:CG1	1:C:279:PHE:CE2	2.97	0.48
1:B:720:SER:HG	1:B:757:MET:N	2.12	0.48
1:A:49:ASP:HB3	1:A:52:LYS:HD2	1.95	0.47
1:C:341:PHE:CD1	1:C:696:MET:HB2	2.49	0.47
1:B:439:SER:HA	1:B:584:VAL:N	2.22	0.47
1:B:800:GLN:HE21	1:B:934:VAL:HG11	1.78	0.47
1:A:324:LEU:CB	1:A:337:ILE:HB	2.36	0.47
1:A:785:ASN:OD1	1:A:1145:ASN:ND2	2.41	0.47
1:A:1179:ARG:HB2	1:A:1185:SER:HA	1.95	0.47
1:B:344:LEU:CD2	1:B:670:HIS:CB	2.10	0.47
1:C:629:ARG:HB2	1:C:642:TYR:HB3	1.96	0.47
1:C:800:GLN:HE21	1:C:934:VAL:HG11	1.78	0.47
1:C:804:VAL:HG11	1:C:1078:LEU:HD11	1.96	0.47
1:C:1053:ASP:CB	1:C:1058:LEU:CD1	2.85	0.47
1:A:798:THR:HB	1:A:842:GLN:HE21	1.80	0.47
1:A:519:ASN:HB2	1:A:522:GLN:OE1	2.13	0.47
1:A:628:GLN:NE2	1:B:63:THR:HG21	2.28	0.47
1:A:804:VAL:HG11	1:A:1078:LEU:HD11	1.96	0.47
1:B:509:ASP:OD2	1:C:431:ALA:HA	2.11	0.47
1:A:78:GLN:OE1	1:A:341:PHE:CD1	2.57	0.47
1:A:342:ASN:ND2	1:A:343:ASP:N	2.62	0.47
1:A:347:LEU:HD23	1:A:348:HIS:N	2.28	0.47
1:B:509:ASP:CB	1:C:431:ALA:O	2.61	0.47
1:B:804:VAL:HG11	1:B:1078:LEU:HD11	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:984:GLY:O	1:B:986:THR:N	2.48	0.47
1:B:1160:ASN:HB3	1:B:1198:THR:HG21	1.97	0.47
1:C:343:ASP:O	1:C:347:LEU:CD1	2.62	0.47
1:C:798:THR:HB	1:C:842:GLN:HE21	1.80	0.47
1:A:485:PRO:O	1:A:566:GLN:HG2	2.15	0.47
1:A:677:VAL:HG21	1:B:910:ASP:OD1	2.14	0.47
1:A:800:GLN:HE21	1:A:934:VAL:HG11	1.78	0.47
1:A:984:GLY:O	1:A:986:THR:N	2.48	0.47
1:B:433:ILE:CA	1:B:438:TYR:OH	2.57	0.47
1:B:990:LEU:HD11	1:B:1179:ARG:HD3	1.96	0.47
1:C:337:ILE:HD13	1:C:348:HIS:HD2	1.78	0.47
1:A:324:LEU:CD2	1:A:354:PHE:CE1	2.98	0.47
1:A:351:TYR:CZ	1:B:833:GLN:CG	2.98	0.47
1:B:344:LEU:HA	1:B:661:VAL:HG11	1.97	0.47
1:B:845:SER:O	1:B:849:LEU:HB2	2.15	0.47
1:C:344:LEU:HD11	1:C:670:HIS:CB	2.44	0.47
1:C:845:SER:O	1:C:849:LEU:HB2	2.15	0.47
1:A:907:GLN:O	1:A:911:ASP:CB	2.63	0.47
1:B:785:ASN:OD1	1:B:1145:ASN:ND2	2.41	0.47
1:C:377:GLN:NE2	1:C:408:ASN:HD21	2.12	0.47
1:A:339:CYS:CA	1:A:345:SER:OG	2.60	0.47
1:A:351:TYR:CE1	1:B:833:GLN:CG	2.98	0.47
1:A:686:MET:SD	1:A:686:MET:N	2.75	0.47
1:B:476:PRO:HD2	1:B:577:TYR:CD2	2.44	0.47
1:B:580:ASP:HB2	1:C:60:GLN:O	2.10	0.47
1:B:807:LYS:HA	1:B:821:LEU:HD13	1.97	0.47
1:C:50:VAL:HB	1:C:336:ALA:CB	2.44	0.47
1:C:338:ASP:OD1	1:C:340:GLY:HA3	2.16	0.47
1:C:984:GLY:O	1:C:986:THR:N	2.48	0.47
1:B:345:SER:O	1:B:348:HIS:HB2	2.15	0.46
1:B:509:ASP:CB	1:C:435:SER:OG	2.63	0.46
1:B:629:ARG:HB2	1:B:642:TYR:HB3	1.96	0.46
1:B:907:GLN:O	1:B:911:ASP:CB	2.63	0.46
1:B:1181:VAL:HA	1:B:1182:ASP:HA	1.60	0.46
1:C:661:VAL:HG12	1:C:662:ILE:N	2.30	0.46
1:A:78:GLN:CD	1:A:341:PHE:HD1	2.17	0.46
1:B:68:THR:C	1:B:69:ILE:CG2	2.83	0.46
1:B:429:SER:CB	1:C:1059:ASP:HA	2.43	0.46
1:B:438:TYR:N	1:B:438:TYR:CD2	2.83	0.46
1:B:485:PRO:O	1:B:566:GLN:HG2	2.15	0.46
1:C:68:THR:C	1:C:69:ILE:CG2	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:408:ASN:HA	1:C:585:CYS:O	2.15	0.46
1:C:485:PRO:O	1:C:566:GLN:HG2	2.15	0.46
1:C:658:PRO:HG2	1:C:675:GLY:HA3	1.98	0.46
1:A:845:SER:O	1:A:849:LEU:HB2	2.15	0.46
1:B:437:CYS:SG	1:B:586:PRO:CD	3.04	0.46
1:B:867:GLY:HA2	1:B:868:ASP:HA	1.63	0.46
1:A:807:LYS:HA	1:A:821:LEU:HD13	1.97	0.46
1:A:1128:VAL:HG23	1:A:1135:TYR:HB3	1.98	0.46
1:B:872:THR:OG1	1:B:1009:GLN:NE2	2.38	0.46
1:B:1128:VAL:HG23	1:B:1135:TYR:HB3	1.98	0.46
1:C:907:GLN:O	1:C:911:ASP:CB	2.63	0.46
1:A:628:GLN:CD	1:B:63:THR:HG21	2.36	0.46
1:A:1160:ASN:HB3	1:A:1198:THR:HG21	1.97	0.46
1:B:343:ASP:HB3	1:B:363:VAL:CG2	2.42	0.46
1:B:658:PRO:HG2	1:B:675:GLY:HA3	1.98	0.46
1:C:399:PHE:O	1:C:523:TYR:OH	2.15	0.46
1:C:1171:TYR:H	1:C:1178:THR:HG22	1.81	0.46
1:A:50:VAL:HG22	1:A:78:GLN:HB2	1.97	0.46
1:B:438:TYR:CD1	1:B:575:VAL:HB	2.51	0.46
1:B:580:ASP:OD1	1:B:630:PHE:HD2	1.98	0.46
1:B:1013:THR:HA	1:B:1014:THR:HA	1.76	0.46
1:C:377:GLN:CD	1:C:408:ASN:CG	2.67	0.46
1:C:933:LYS:NZ	1:C:934:VAL:O	2.47	0.46
1:C:1160:ASN:HB3	1:C:1198:THR:HG21	1.97	0.46
1:A:408:ASN:HA	1:A:585:CYS:O	2.15	0.46
1:A:1169:ASN:OD1	1:A:1169:ASN:N	2.43	0.46
1:A:1171:TYR:H	1:A:1178:THR:HG22	1.81	0.46
1:B:337:ILE:CG1	1:B:354:PHE:CE1	2.90	0.46
1:B:1149:VAL:HG12	1:B:1150:VAL:H	1.81	0.46
1:C:50:VAL:HB	1:C:336:ALA:HB3	1.98	0.46
1:C:351:TYR:O	1:C:352:GLU:CB	2.61	0.46
1:B:798:THR:HB	1:B:842:GLN:HE21	1.80	0.46
1:C:324:LEU:HD12	1:C:352:GLU:O	2.15	0.46
1:C:1060:VAL:O	1:C:1063:GLN:HB3	2.16	0.46
1:B:437:CYS:SG	1:B:585:CYS:CB	3.04	0.46
1:C:341:PHE:CE1	1:C:696:MET:CB	2.99	0.46
1:C:1128:VAL:HG23	1:C:1135:TYR:HB3	1.98	0.46
1:B:359:GLY:HA2	1:B:733:GLN:HB2	1.98	0.46
1:B:1171:TYR:H	1:B:1178:THR:HG22	1.81	0.46
1:C:335:ARG:NH1	1:C:354:PHE:HB3	2.31	0.46
1:C:728:LYS:HA	1:C:729:LEU:HA	1.71	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:66:ASN:HB2	1:A:328:SER:C	2.37	0.45
1:B:335:ARG:NE	1:B:354:PHE:HD2	2.14	0.45
1:C:343:ASP:CG	1:C:363:VAL:HG21	2.36	0.45
1:A:658:PRO:HG2	1:A:675:GLY:HA3	1.98	0.45
1:A:910:ASP:OD1	1:C:677:VAL:HG21	2.17	0.45
1:A:993:ASN:HA	1:A:994:GLN:HA	1.75	0.45
1:C:807:LYS:HA	1:C:821:LEU:HD13	1.97	0.45
1:C:1061:LEU:H	1:C:1061:LEU:HG	1.54	0.45
1:C:1149:VAL:HG12	1:C:1150:VAL:H	1.81	0.45
1:A:588:LEU:HD22	1:A:588:LEU:C	2.35	0.45
1:A:677:VAL:CB	1:B:909:TYR:CD2	2.99	0.45
1:B:347:LEU:C	1:B:356:VAL:HG11	2.37	0.45
1:B:514:VAL:HG12	1:B:515:PRO:CD	2.45	0.45
1:B:712:GLY:HA3	1:B:713:CYS:HA	1.67	0.45
1:C:803:THR:HG22	1:C:839:ASN:HD21	1.81	0.45
1:A:323:PHE:CZ	1:A:338:ASP:CG	2.90	0.45
1:A:588:LEU:HG	1:A:597:ALA:CB	2.46	0.45
1:B:506:LEU:HD22	1:B:513:GLU:CG	2.41	0.45
1:B:722:LEU:HG	1:B:758:ARG:HA	1.98	0.45
1:C:324:LEU:CD1	1:C:352:GLU:O	2.65	0.45
1:C:343:ASP:CG	1:C:363:VAL:HB	2.36	0.45
1:C:344:LEU:HD21	1:C:670:HIS:HB2	1.89	0.45
1:A:346:GLN:C	1:A:346:GLN:HE21	2.20	0.45
1:B:509:ASP:CB	1:C:431:ALA:C	2.84	0.45
1:C:68:THR:CG2	1:C:69:ILE:N	2.80	0.45
1:C:394:PRO:HG3	1:C:400:LYS:HG3	1.99	0.45
1:A:68:THR:HG23	1:A:326:ASP:HA	1.89	0.45
1:A:335:ARG:HD3	1:A:354:PHE:CD2	2.32	0.45
1:A:351:TYR:CE1	1:B:833:GLN:HG3	2.51	0.45
1:A:394:PRO:HG3	1:A:400:LYS:HG3	1.99	0.45
1:B:498:SER:HB3	1:B:534:VAL:HG23	1.99	0.45
1:B:677:VAL:CB	1:C:909:TYR:CD2	3.00	0.45
1:C:50:VAL:HG21	1:C:337:ILE:C	2.37	0.45
1:A:661:VAL:HG12	1:A:662:ILE:N	2.30	0.45
1:B:627:GLN:HG3	1:B:628:GLN:N	2.32	0.45
1:C:359:GLY:HA2	1:C:733:GLN:HB2	1.98	0.45
1:A:722:LEU:HG	1:A:758:ARG:HA	1.98	0.45
1:B:803:THR:HG22	1:B:839:ASN:HD21	1.81	0.45
1:C:70:THR:CG2	1:C:352:GLU:CD	2.84	0.45
1:B:1164:CYS:HA	1:B:1165:ILE:HA	1.69	0.45
1:C:722:LEU:HG	1:C:758:ARG:HA	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:348:HIS:ND1	1:A:356:VAL:HG22	2.27	0.45
1:A:359:GLY:HA2	1:A:733:GLN:HB2	1.98	0.45
1:A:728:LYS:HA	1:A:729:LEU:HA	1.71	0.45
1:A:803:THR:HG22	1:A:839:ASN:HD21	1.81	0.45
1:B:344:LEU:HD11	1:B:663:TYR:CG	2.51	0.45
1:A:80:ASP:OD1	1:A:82:GLY:N	2.37	0.44
1:A:498:SER:HB3	1:A:534:VAL:HG23	1.99	0.44
1:B:728:LYS:H	1:B:761:SER:HG	1.62	0.44
1:A:66:ASN:HA	1:A:328:SER:C	2.37	0.44
1:A:271:VAL:CG2	1:C:627:GLN:HE22	2.29	0.44
1:B:63:THR:C	1:B:64:TYR:CD2	2.91	0.44
1:B:677:VAL:HG21	1:C:910:ASP:OD1	2.17	0.44
1:B:792:GLN:HG3	1:B:1138:HIS:HB2	1.99	0.44
1:C:129:THR:CG2	1:C:131:ILE:H	2.24	0.44
1:B:509:ASP:OD1	1:C:435:SER:OG	2.35	0.44
1:B:627:GLN:HE21	1:B:627:GLN:C	2.20	0.44
1:C:498:SER:HB3	1:C:534:VAL:HG23	1.99	0.44
1:C:785:ASN:OD1	1:C:1145:ASN:ND2	2.41	0.44
1:C:964:LEU:HA	1:C:965:SER:HA	1.78	0.44
1:A:50:VAL:HG13	1:A:78:GLN:HB2	1.99	0.44
1:A:63:THR:C	1:A:64:TYR:CD2	2.91	0.44
1:A:351:TYR:CZ	1:B:833:GLN:HG2	2.51	0.44
1:A:792:GLN:HG3	1:A:1138:HIS:HB2	1.99	0.44
1:B:348:HIS:CE1	1:B:663:TYR:CZ	2.91	0.44
1:C:792:GLN:HG3	1:C:1138:HIS:HB2	1.99	0.44
1:B:476:PRO:HD2	1:B:577:TYR:CG	2.49	0.44
1:C:63:THR:C	1:C:64:TYR:CD2	2.91	0.44
1:A:718:VAL:HG11	1:A:759:LEU:HD11	2.00	0.44
1:A:964:LEU:HA	1:A:965:SER:HA	1.78	0.44
1:B:68:THR:CG2	1:B:69:ILE:N	2.80	0.44
1:C:326:ASP:HB2	1:C:354:PHE:CE2	2.53	0.44
1:A:346:GLN:NE2	1:A:346:GLN:O	2.51	0.44
1:A:909:TYR:CD2	1:C:677:VAL:CB	3.01	0.44
1:A:1149:VAL:HG12	1:A:1150:VAL:H	1.81	0.44
1:B:377:GLN:HB3	1:B:585:CYS:HB2	1.99	0.44
1:B:583:SER:C	1:B:609:TYR:HB2	2.38	0.44
1:B:933:LYS:NZ	1:B:934:VAL:O	2.47	0.44
1:B:1186:TYR:HB3	1:B:1187:THR:H	1.53	0.44
1:C:718:VAL:HG11	1:C:759:LEU:HD11	2.00	0.44
1:C:979:ARG:O	1:C:1110:GLN:NE2	2.51	0.44
1:A:1181:VAL:HA	1:A:1182:ASP:HA	1.61	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1169:ASN:OD1	1:B:1169:ASN:N	2.43	0.44
1:A:1037:ALA:HA	1:A:1040:LEU:HD12	2.00	0.44
1:B:394:PRO:HG3	1:B:400:LYS:HG3	1.99	0.44
1:C:765:ASN:HB2	1:C:766:HIS:HA	2.00	0.44
1:A:344:LEU:CG	1:A:663:TYR:HE1	2.28	0.43
1:C:581:THR:O	1:C:583:SER:N	2.47	0.43
1:A:638:LEU:HG	1:A:651:LEU:HD21	2.00	0.43
1:A:979:ARG:O	1:A:1110:GLN:NE2	2.51	0.43
1:B:70:THR:OG1	1:B:352:GLU:CD	2.57	0.43
1:B:625:VAL:CG1	1:C:279:PHE:HE2	2.31	0.43
1:C:1181:VAL:HA	1:C:1182:ASP:HA	1.60	0.43
1:A:65:SER:CB	1:C:623:VAL:CG1	2.74	0.43
1:A:933:LYS:NZ	1:A:934:VAL:O	2.47	0.43
1:B:781:SER:OG	1:C:857:GLN:NE2	2.47	0.43
1:B:993:ASN:HA	1:B:994:GLN:HA	1.75	0.43
1:C:50:VAL:HG21	1:C:337:ILE:CA	2.48	0.43
1:C:1114:SER:OG	1:C:1115:GLY:N	2.51	0.43
1:A:66:ASN:CB	1:A:329:VAL:N	2.79	0.43
1:A:867:GLY:HA2	1:A:868:ASP:HA	1.63	0.43
1:A:1173:ILE:HG22	1:A:1174:LYS:H	1.83	0.43
1:B:718:VAL:HG11	1:B:759:LEU:HD11	2.00	0.43
1:A:726:ASP:HB2	1:A:727:CYS:HB3	2.01	0.43
1:C:1060:VAL:HA	1:C:1063:GLN:OE1	2.18	0.43
1:A:129:THR:CG2	1:A:134:PRO:HA	2.49	0.43
1:A:1122:HIS:NE2	1:A:1125:SER:HB3	2.34	0.43
1:B:129:THR:CG2	1:B:134:PRO:HA	2.49	0.43
1:B:623:VAL:CG1	1:C:65:SER:CA	2.95	0.43
1:B:726:ASP:HB2	1:B:727:CYS:HB3	2.01	0.43
1:C:344:LEU:HD12	1:C:663:TYR:HE1	1.79	0.43
1:C:587:LYS:HB2	1:C:587:LYS:HE3	1.74	0.43
1:C:638:LEU:HG	1:C:651:LEU:HD21	2.00	0.43
1:C:1037:ALA:HA	1:C:1040:LEU:HD12	2.00	0.43
1:C:1173:ILE:HG22	1:C:1174:LYS:H	1.83	0.43
1:B:436:ASN:ND2	1:C:1056:GLN:HB2	2.25	0.43
1:B:493:LYS:H	1:B:493:LYS:HG2	1.58	0.43
1:B:627:GLN:HG3	1:B:628:GLN:H	1.82	0.43
1:B:627:GLN:HG3	1:B:628:GLN:OE1	2.19	0.43
1:C:129:THR:CG2	1:C:134:PRO:HA	2.49	0.43
1:A:625:VAL:HG11	1:B:63:THR:HG21	2.00	0.43
1:C:1053:ASP:O	1:C:1063:GLN:CG	2.61	0.43
1:A:765:ASN:HB2	1:A:766:HIS:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:765:ASN:HB2	1:B:766:HIS:HA	2.00	0.43
1:B:979:ARG:O	1:B:1110:GLN:NE2	2.51	0.43
1:B:1122:HIS:NE2	1:B:1125:SER:HB3	2.34	0.43
1:B:1173:ILE:HG22	1:B:1174:LYS:H	1.83	0.43
1:C:344:LEU:C	1:C:347:LEU:HD22	2.39	0.43
1:B:324:LEU:HD21	1:B:353:SER:N	2.34	0.43
1:A:342:ASN:ND2	1:A:344:LEU:HD22	2.33	0.42
1:A:485:PRO:HB2	1:A:486:HIS:H	1.61	0.42
1:B:336:ALA:C	1:B:354:PHE:CZ	2.92	0.42
1:B:475:ASN:HA	1:B:577:TYR:CD1	2.54	0.42
1:B:634:ALA:HB3	1:C:67:ILE:HD11	1.96	0.42
1:B:1114:SER:OG	1:B:1115:GLY:N	2.51	0.42
1:A:484:VAL:HA	1:A:485:PRO:HD3	1.72	0.42
1:A:1181:VAL:HB	1:B:967:PHE:CE2	2.54	0.42
1:B:324:LEU:HD11	1:B:352:GLU:C	2.35	0.42
1:C:1122:HIS:NE2	1:C:1125:SER:HB3	2.34	0.42
1:B:352:GLU:N	1:B:352:GLU:OE1	2.52	0.42
1:B:479:LEU:HD12	1:B:479:LEU:HA	1.91	0.42
1:B:514:VAL:HG12	1:B:515:PRO:HD2	2.01	0.42
1:B:627:GLN:C	1:B:627:GLN:NE2	2.73	0.42
1:C:50:VAL:HG21	1:C:337:ILE:HA	2.01	0.42
1:A:346:GLN:NE2	1:A:346:GLN:HA	2.35	0.42
1:B:344:LEU:CD1	1:B:663:TYR:CB	2.98	0.42
1:B:523:TYR:CE2	1:C:288:ASP:OD1	2.72	0.42
1:B:1037:ALA:HA	1:B:1040:LEU:HD12	2.00	0.42
1:A:347:LEU:HD23	1:A:348:HIS:ND1	2.34	0.42
1:B:347:LEU:HB3	1:B:356:VAL:HG11	2.01	0.42
1:B:727:CYS:HB2	1:B:763:ALA:HA	2.02	0.42
1:B:976:ILE:O	1:B:980:LEU:CB	2.68	0.42
1:C:366:PHE:N	1:C:691:ARG:O	2.51	0.42
1:C:456:LEU:HD12	1:C:456:LEU:HA	1.88	0.42
1:B:513:GLU:CD	1:B:513:GLU:N	2.73	0.42
1:C:377:GLN:OE1	1:C:587:LYS:HB3	2.19	0.42
1:C:990:LEU:HD23	1:C:990:LEU:HA	1.86	0.42
1:C:1013:THR:HA	1:C:1014:THR:HA	1.76	0.42
1:A:66:ASN:CB	1:A:328:SER:C	2.88	0.42
1:A:348:HIS:O	1:A:349:CYS:C	2.56	0.42
1:A:976:ILE:O	1:A:980:LEU:CB	2.68	0.42
1:A:334:ARG:C	1:A:335:ARG:HG3	2.40	0.42
1:A:857:GLN:NE2	1:C:781:SER:OG	2.49	0.42
1:A:871:LEU:HA	1:A:871:LEU:HD23	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1114:SER:OG	1:A:1115:GLY:N	2.51	0.42
1:B:506:LEU:HD23	1:B:513:GLU:CB	2.45	0.42
1:B:638:LEU:HG	1:B:651:LEU:HD21	2.00	0.42
1:B:1201:ASN:HB2	1:B:1206:ALA:HB3	2.02	0.42
1:C:1201:ASN:HB2	1:C:1206:ALA:HB3	2.02	0.42
1:A:731:LEU:HD22	1:A:732:GLY:H	1.85	0.42
1:B:506:LEU:HD23	1:B:513:GLU:HB3	1.99	0.42
1:B:624:GLY:O	1:C:331:GLY:HA3	2.20	0.42
1:C:645:ASP:HA	1:C:646:GLY:HA2	1.81	0.42
1:C:1053:ASP:CG	1:C:1066:GLN:OE1	2.50	0.42
1:A:727:CYS:HB2	1:A:763:ALA:HA	2.02	0.42
1:A:764:PHE:HA	1:A:765:ASN:HA	1.81	0.42
1:A:1036:LEU:HD23	1:A:1036:LEU:HA	1.87	0.42
1:B:810:VAL:HG22	1:B:1074:ARG:HD2	2.02	0.42
1:C:725:GLU:OE2	1:C:728:LYS:NZ	2.43	0.42
1:C:726:ASP:HB2	1:C:727:CYS:HB3	2.01	0.42
1:C:726:ASP:OD1	1:C:726:ASP:N	2.52	0.42
1:A:530:VAL:HA	1:A:531:PRO:HD2	1.90	0.41
1:B:428:ILE:HG12	1:C:1056:GLN:O	2.02	0.41
1:B:728:LYS:HA	1:B:729:LEU:HA	1.71	0.41
1:C:693:THR:HA	1:C:694:ARG:HA	1.80	0.41
1:C:810:VAL:HG22	1:C:1074:ARG:HD2	2.02	0.41
1:A:323:PHE:HA	1:A:337:ILE:O	2.20	0.41
1:A:344:LEU:HG	1:A:663:TYR:CE1	2.47	0.41
1:A:1061:LEU:HD11	1:B:517:LEU:HD11	2.02	0.41
1:C:731:LEU:HD22	1:C:732:GLY:H	1.85	0.41
1:A:62:ARG:CB	1:C:632:TYR:CE2	3.04	0.41
1:C:129:THR:HG22	1:C:131:ILE:N	2.26	0.41
1:C:392:THR:HG1	1:C:492:THR:HG1	1.66	0.41
1:A:906:MET:HG2	1:C:716:GLY:HA2	2.03	0.41
1:A:1201:ASN:HB2	1:A:1206:ALA:HB3	2.02	0.41
1:B:484:VAL:O	1:B:566:GLN:HB3	2.21	0.41
1:B:617:PHE:HB3	1:B:649:TYR:HB3	2.03	0.41
1:B:693:THR:HA	1:B:694:ARG:HA	1.80	0.41
1:C:617:PHE:HB3	1:C:649:TYR:HB3	2.03	0.41
1:C:732:GLY:HA2	1:C:734:SER:HB2	2.02	0.41
1:C:1062:GLU:C	1:C:1064:ASP:N	2.74	0.41
1:A:355:ASP:OD1	1:A:665:LYS:HB2	2.21	0.41
1:A:728:LYS:N	1:A:761:SER:OG	2.45	0.41
1:A:810:VAL:HG22	1:A:1074:ARG:HD2	2.02	0.41
1:A:967:PHE:CE2	1:C:1181:VAL:HB	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1164:CYS:HA	1:A:1165:ILE:HA	1.69	0.41
1:B:377:GLN:NE2	1:B:377:GLN:C	2.73	0.41
1:B:634:ALA:HB2	1:C:67:ILE:HD13	1.94	0.41
1:B:990:LEU:HD23	1:B:990:LEU:HA	1.86	0.41
1:C:727:CYS:HB2	1:C:763:ALA:HA	2.02	0.41
1:A:725:GLU:OE2	1:A:728:LYS:NZ	2.43	0.41
1:B:344:LEU:HB2	1:B:670:HIS:CB	2.50	0.41
1:C:484:VAL:HA	1:C:485:PRO:HD3	1.72	0.41
1:C:867:GLY:HA2	1:C:868:ASP:HA	1.63	0.41
1:C:976:ILE:O	1:C:980:LEU:CB	2.68	0.41
1:C:1056:GLN:H	1:C:1056:GLN:HG2	1.65	0.41
1:C:1164:CYS:HA	1:C:1165:ILE:HA	1.69	0.41
1:A:716:GLY:HA2	1:B:906:MET:HG2	2.01	0.41
1:B:520:ALA:O	1:B:521:ASN:CB	2.67	0.41
1:C:712:GLY:HA3	1:C:713:CYS:HA	1.67	0.41
1:C:871:LEU:HD23	1:C:871:LEU:HA	1.84	0.41
1:C:1036:LEU:HD23	1:C:1036:LEU:HA	1.87	0.41
1:A:78:GLN:CD	1:A:341:PHE:CD1	2.94	0.41
1:A:484:VAL:O	1:A:566:GLN:HB3	2.21	0.41
1:B:439:SER:CA	1:B:583:SER:N	2.70	0.41
1:B:505:ARG:NE	1:B:507:LEU:HA	2.36	0.41
1:B:691:ARG:HB3	1:B:693:THR:HG22	2.03	0.41
1:B:731:LEU:HD22	1:B:732:GLY:H	1.85	0.41
1:B:732:GLY:HA2	1:B:734:SER:HB2	2.02	0.41
1:B:1127:VAL:HG13	1:B:1136:PHE:HE1	1.86	0.41
1:A:323:PHE:CD1	1:A:338:ASP:HA	2.56	0.41
1:A:366:PHE:N	1:A:691:ARG:O	2.51	0.41
1:A:641:TYR:CD2	1:A:648:TYR:HA	2.56	0.41
1:A:642:TYR:HD1	1:A:642:TYR:HA	1.76	0.41
1:B:439:SER:HG	1:B:582:ASN:HA	1.77	0.41
1:C:78:GLN:HB2	1:C:338:ASP:CB	2.14	0.41
1:C:377:GLN:CB	1:C:381:VAL:CG1	2.96	0.41
1:C:598:SER:OG	1:C:599:GLN:N	2.54	0.41
1:C:691:ARG:HB3	1:C:693:THR:HG22	2.03	0.41
1:A:70:THR:CB	1:A:324:LEU:HA	2.50	0.41
1:B:428:ILE:HA	1:C:1058:LEU:N	2.36	0.41
1:B:437:CYS:HB3	1:B:609:TYR:HA	2.03	0.41
1:B:642:TYR:HD1	1:B:642:TYR:HA	1.76	0.41
1:C:50:VAL:O	1:C:336:ALA:O	2.38	0.41
1:C:341:PHE:CZ	1:C:696:MET:HB2	2.56	0.41
1:A:69:ILE:HD12	1:A:69:ILE:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:487:ASN:OD1	1:A:487:ASN:N	2.54	0.40
1:A:781:SER:OG	1:B:857:GLN:NE2	2.47	0.40
1:A:1127:VAL:HG13	1:A:1136:PHE:HE1	1.86	0.40
1:B:598:SER:OG	1:B:599:GLN:N	2.54	0.40
1:B:853:VAL:HG13	1:B:951:LEU:HD22	2.03	0.40
1:C:50:VAL:O	1:C:336:ALA:CB	2.66	0.40
1:A:588:LEU:HG	1:A:597:ALA:HB3	2.03	0.40
1:B:909:TYR:O	1:B:928:TYR:OH	2.40	0.40
1:A:335:ARG:C	1:A:354:PHE:HZ	2.24	0.40
1:A:392:THR:HG1	1:A:492:THR:HG1	1.68	0.40
1:A:448:TYR:OH	1:A:452:MET:O	2.36	0.40
1:A:778:PHE:CD1	1:B:971:PRO:HD3	2.56	0.40
1:B:506:LEU:C	1:B:507:LEU:CG	2.88	0.40
1:B:507:LEU:HB2	1:B:508:SER:O	2.21	0.40
1:B:518:VAL:HG22	1:B:519:ASN:O	2.21	0.40
1:A:117:VAL:HG13	1:A:318:LEU:HD13	2.03	0.40
1:A:129:THR:CG2	1:A:131:ILE:H	2.24	0.40
1:A:712:GLY:HA3	1:A:713:CYS:HA	1.67	0.40
1:A:990:LEU:HA	1:A:990:LEU:HD23	1.86	0.40
1:A:1100:LYS:O	1:A:1104:ASN:ND2	2.54	0.40
1:B:641:TYR:CD2	1:B:648:TYR:HA	2.56	0.40
1:B:1100:LYS:O	1:B:1104:ASN:ND2	2.54	0.40
1:C:641:TYR:CD2	1:C:648:TYR:HA	2.56	0.40
1:C:728:LYS:H	1:C:761:SER:HG	1.64	0.40
1:C:1100:LYS:O	1:C:1104:ASN:ND2	2.54	0.40
1:A:344:LEU:O	1:A:348:HIS:N	2.41	0.40
1:B:428:ILE:C	1:C:1058:LEU:HA	2.42	0.40
1:B:625:VAL:HG13	1:C:279:PHE:CE2	2.56	0.40
1:B:1181:VAL:HB	1:C:967:PHE:CE2	2.56	0.40
1:C:484:VAL:O	1:C:566:GLN:HB3	2.21	0.40
1:C:782:ILE:H	1:C:782:ILE:HG13	1.59	0.40
1:C:853:VAL:HG13	1:C:951:LEU:HD22	2.03	0.40
1:C:1127:VAL:HG13	1:C:1136:PHE:HE1	1.86	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	1128/1323 (85%)	966 (86%)	149 (13%)	13 (1%)	11	44
1	B	1128/1323 (85%)	964 (86%)	149 (13%)	15 (1%)	10	42
1	C	1128/1323 (85%)	966 (86%)	149 (13%)	13 (1%)	11	44
All	All	3384/3969 (85%)	2896 (86%)	447 (13%)	41 (1%)	14	44

All (41) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	596	ILE
1	A	597	ALA
1	A	797	THR
1	B	66	ASN
1	B	350	SER
1	B	351	TYR
1	B	507	LEU
1	B	797	THR
1	C	66	ASN
1	C	797	THR
1	A	485	PRO
1	A	582	ASN
1	A	997	ILE
1	B	485	PRO
1	B	997	ILE
1	C	485	PRO
1	C	582	ASN
1	C	997	ILE
1	A	855	SER
1	B	855	SER
1	C	342	ASN
1	C	855	SER
1	C	1063	GLN
1	A	382	GLU

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Mol	Chain	Res	Type
1	B	382	GLU
1	C	382	GLU
1	A	642	TYR
1	B	642	TYR
1	B	736	CYS
1	C	642	TYR
1	A	736	CYS
1	B	515	PRO
1	C	736	CYS
1	A	1181	VAL
1	B	1181	VAL
1	C	1181	VAL
1	A	1054	ILE
1	B	1054	ILE
1	A	985	ILE
1	B	985	ILE
1	C	985	ILE

### 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	973/1143 (85%)	929 (96%)	44 (4%)	23	47
1	B	973/1143 (85%)	917 (94%)	56 (6%)	17	40
1	C	973/1143 (85%)	928 (95%)	45 (5%)	23	46
All	All	2919/3429 (85%)	2774 (95%)	145 (5%)	23	44

All (145) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	58	TYR
1	A	64	TYR
1	A	71	TYR
1	A	72	GLN
1	A	78	GLN

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Mol	Chain	Res	Type
1	A	179	LEU
1	A	318	LEU
1	A	344	LEU
1	A	346	GLN
1	A	347	LEU
1	A	352	GLU
1	A	353	SER
1	A	356	VAL
1	A	411	LEU
1	A	423	PHE
1	A	450	LEU
1	A	458	VAL
1	A	465	SER
1	A	473	PHE
1	A	479	LEU
1	A	481	LEU
1	A	484	VAL
1	A	487	ASN
1	A	488	LEU
1	A	490	THR
1	A	510	ASP
1	A	535	TRP
1	A	555	VAL
1	A	565	GLU
1	A	573	ILE
1	A	587	LYS
1	A	588	LEU
1	A	602	ASN
1	A	665	LYS
1	A	677	VAL
1	A	722	LEU
1	A	799	ILE
1	A	832	ASN
1	A	848	ASN
1	A	854	LYS
1	A	870	ASN
1	A	1028	ASN
1	A	1165	ILE
1	A	1181	VAL
1	B	58	TYR
1	B	64	TYR
1	B	179	LEU

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Mol	Chain	Res	Type
1	B	324	LEU
1	B	335	ARG
1	B	349	CYS
1	B	352	GLU
1	B	353	SER
1	B	356	VAL
1	B	377	GLN
1	B	411	LEU
1	B	423	PHE
1	B	436	ASN
1	B	437	CYS
1	B	438	TYR
1	B	441	LEU
1	B	450	LEU
1	B	458	VAL
1	B	465	SER
1	B	473	PHE
1	B	479	LEU
1	B	481	LEU
1	B	484	VAL
1	B	487	ASN
1	B	488	LEU
1	B	490	THR
1	B	505	ARG
1	B	508	SER
1	B	511	ARG
1	B	512	THR
1	B	513	GLU
1	B	535	TRP
1	B	555	VAL
1	B	565	GLU
1	B	573	ILE
1	B	579	THR
1	B	582	ASN
1	B	585	CYS
1	B	587	LYS
1	B	588	LEU
1	B	602	ASN
1	B	608	LEU
1	B	609	TYR
1	B	627	GLN
1	B	663	TYR

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Mol	Chain	Res	Type
1	B	665	LYS
1	B	677	VAL
1	B	722	LEU
1	B	799	ILE
1	B	832	ASN
1	B	848	ASN
1	B	854	LYS
1	B	870	ASN
1	B	1028	ASN
1	B	1165	ILE
1	B	1181	VAL
1	C	58	TYR
1	C	64	TYR
1	C	179	LEU
1	C	324	LEU
1	C	339	CYS
1	C	341	PHE
1	C	347	LEU
1	C	351	TYR
1	C	352	GLU
1	C	411	LEU
1	C	423	PHE
1	C	450	LEU
1	C	458	VAL
1	C	465	SER
1	C	473	PHE
1	C	479	LEU
1	C	481	LEU
1	C	484	VAL
1	C	487	ASN
1	C	488	LEU
1	C	490	THR
1	C	510	ASP
1	C	535	TRP
1	C	555	VAL
1	C	565	GLU
1	C	573	ILE
1	C	588	LEU
1	C	602	ASN
1	C	665	LYS
1	C	677	VAL
1	C	722	LEU

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Mol	Chain	Res	Type
1	C	799	ILE
1	C	832	ASN
1	C	848	ASN
1	C	854	LYS
1	C	870	ASN
1	C	1028	ASN
1	C	1054	ILE
1	C	1055	ILE
1	C	1056	GLN
1	C	1058	LEU
1	C	1059	ASP
1	C	1061	LEU
1	C	1165	ILE
1	C	1181	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (60) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	342	ASN
1	A	346	GLN
1	A	348	HIS
1	A	599	GLN
1	A	602	ASN
1	A	628	GLN
1	A	792	GLN
1	A	800	GLN
1	A	812	ASN
1	A	832	ASN
1	A	839	ASN
1	A	842	GLN
1	A	870	ASN
1	A	1009	GLN
1	A	1023	GLN
1	A	1028	ASN
1	A	1072	ASN
1	A	1104	ASN
1	B	348	HIS
1	B	377	GLN
1	B	427	GLN
1	B	475	ASN
1	B	516	GLN
1	B	522	GLN

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Mol	Chain	Res	Type
1	B	599	GLN
1	B	602	ASN
1	B	627	GLN
1	B	792	GLN
1	B	800	GLN
1	B	812	ASN
1	B	832	ASN
1	B	839	ASN
1	B	842	GLN
1	B	848	ASN
1	B	870	ASN
1	B	1009	GLN
1	B	1023	GLN
1	B	1028	ASN
1	B	1072	ASN
1	B	1104	ASN
1	C	261	GLN
1	C	346	GLN
1	C	348	HIS
1	C	408	ASN
1	C	599	GLN
1	C	602	ASN
1	C	628	GLN
1	C	792	GLN
1	C	800	GLN
1	C	812	ASN
1	C	832	ASN
1	C	839	ASN
1	C	842	GLN
1	C	848	ASN
1	C	870	ASN
1	C	1009	GLN
1	C	1023	GLN
1	C	1028	ASN
1	C	1072	ASN
1	C	1104	ASN

### 5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

## 5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

There are no ligands in this entry.

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

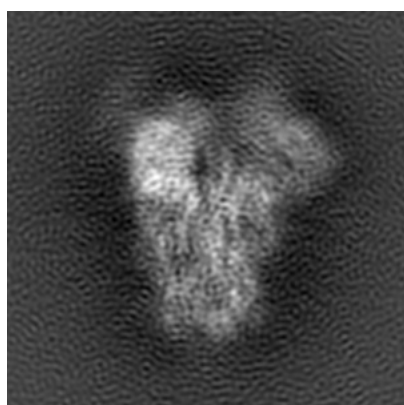
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-6706. These allow visual inspection of the internal detail of the map and identification of artifacts.

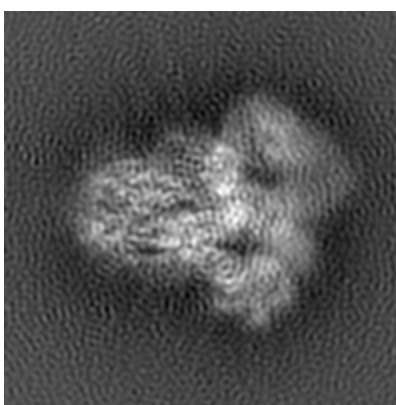
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

### 6.1 Orthogonal projections [i](#)

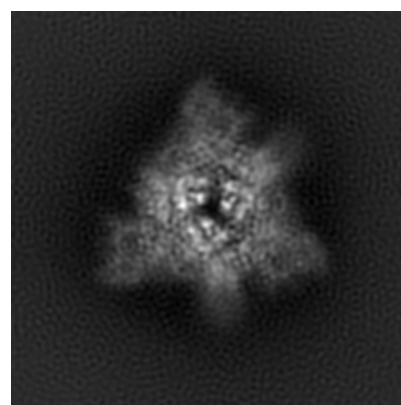
#### 6.1.1 Primary map



X



Y

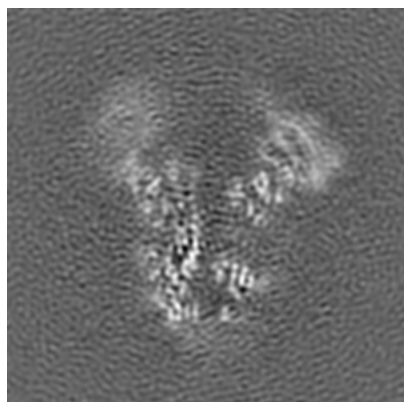


Z

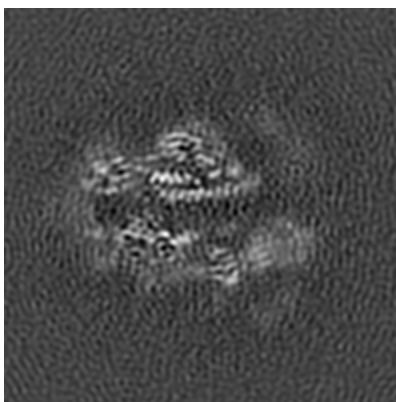
The images above show the map projected in three orthogonal directions.

### 6.2 Central slices [i](#)

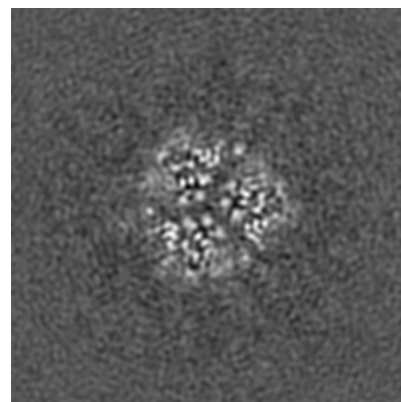
#### 6.2.1 Primary map



X Index: 90



Y Index: 90

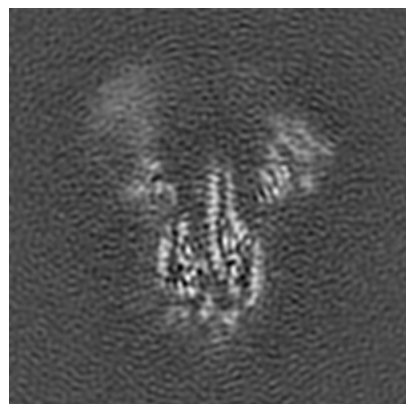


Z Index: 90

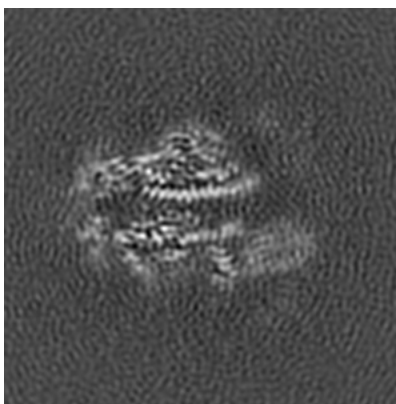
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices [i](#)

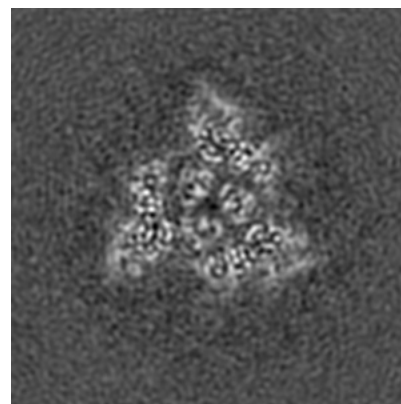
### 6.3.1 Primary map



X Index: 97



Y Index: 92

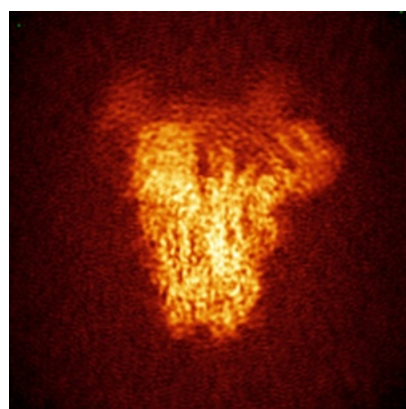


Z Index: 100

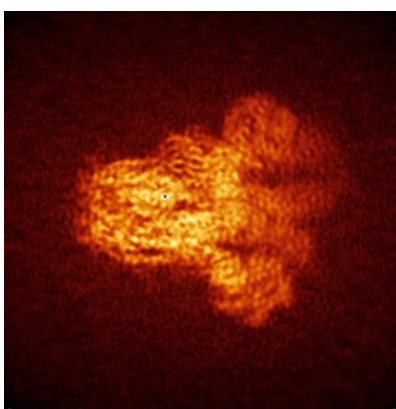
The images above show the largest variance slices of the map in three orthogonal directions.

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

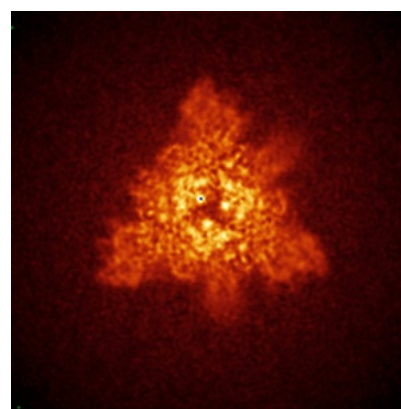
### 6.4.1 Primary map



X



Y

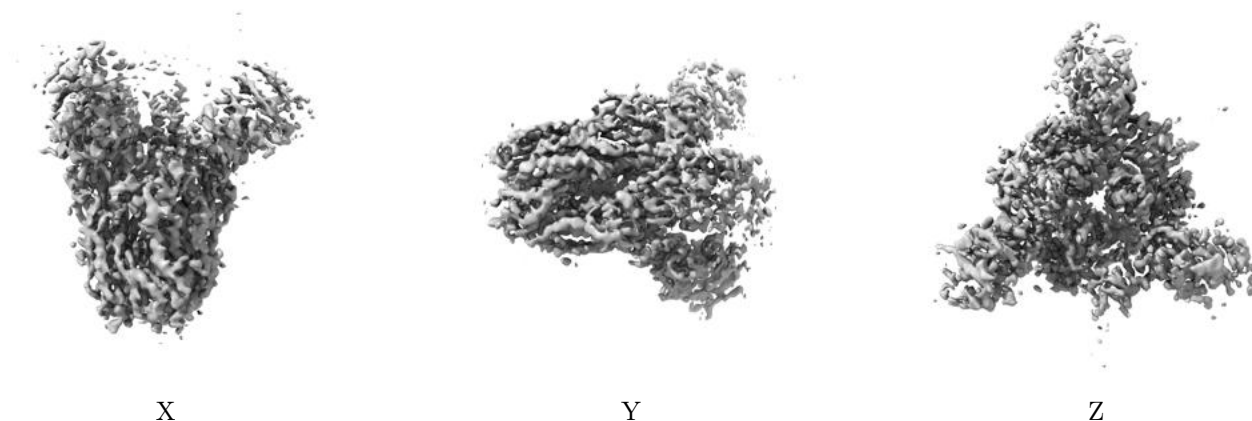


Z

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 0.0618. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

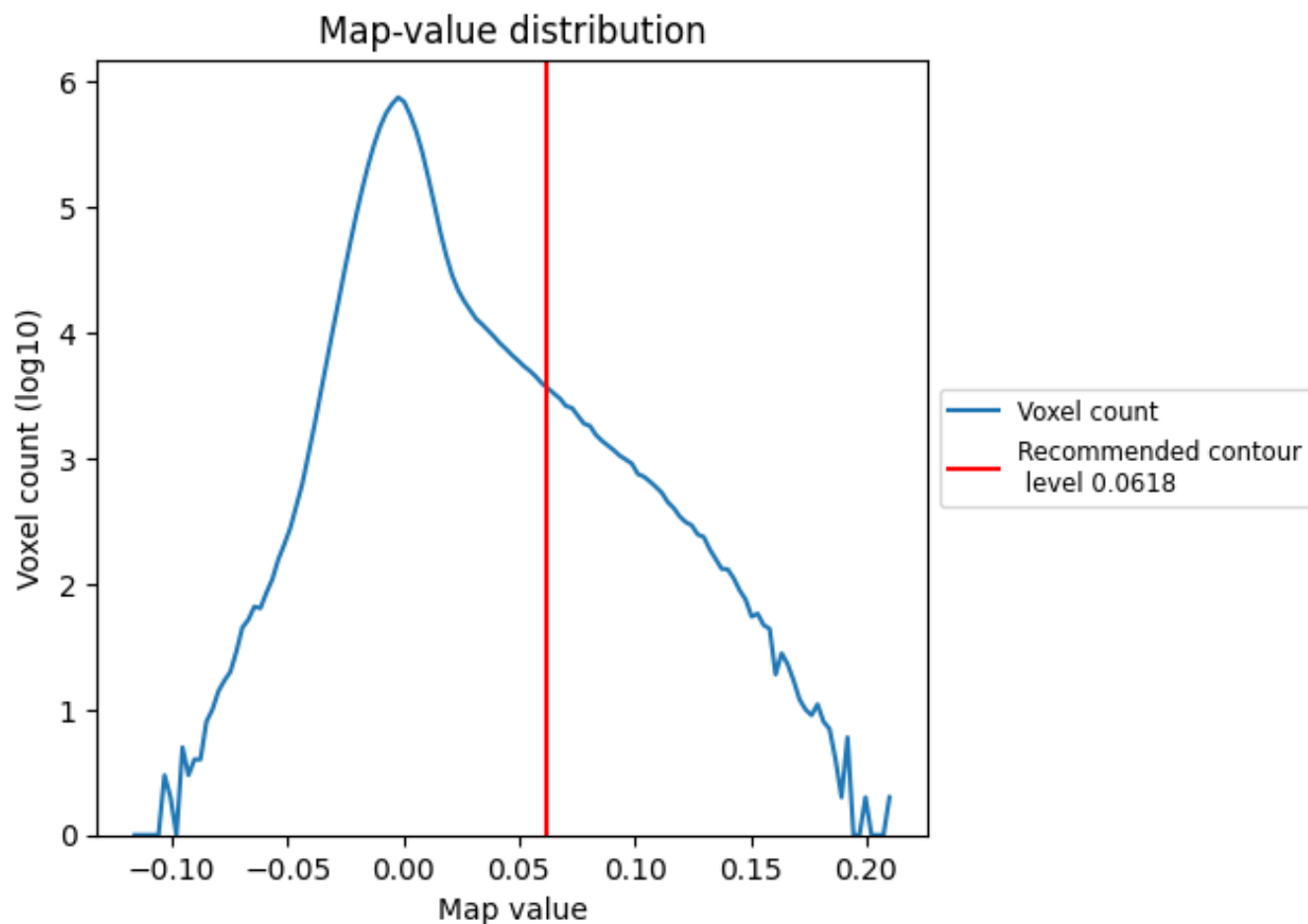
## 6.6 Mask visualisation [i](#)

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

## 7 Map analysis [i](#)

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

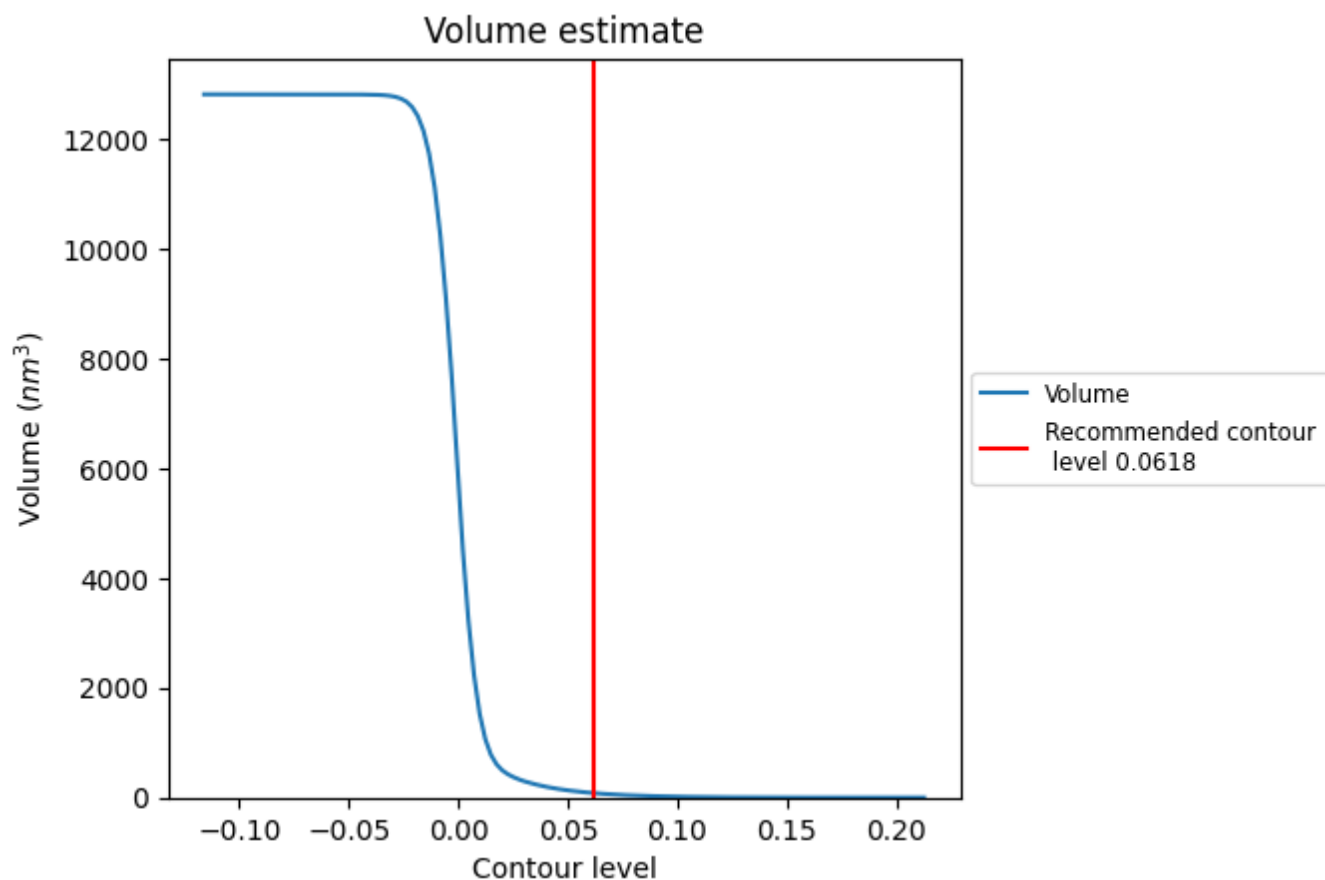
### 7.1 Map-value distribution [i](#)



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



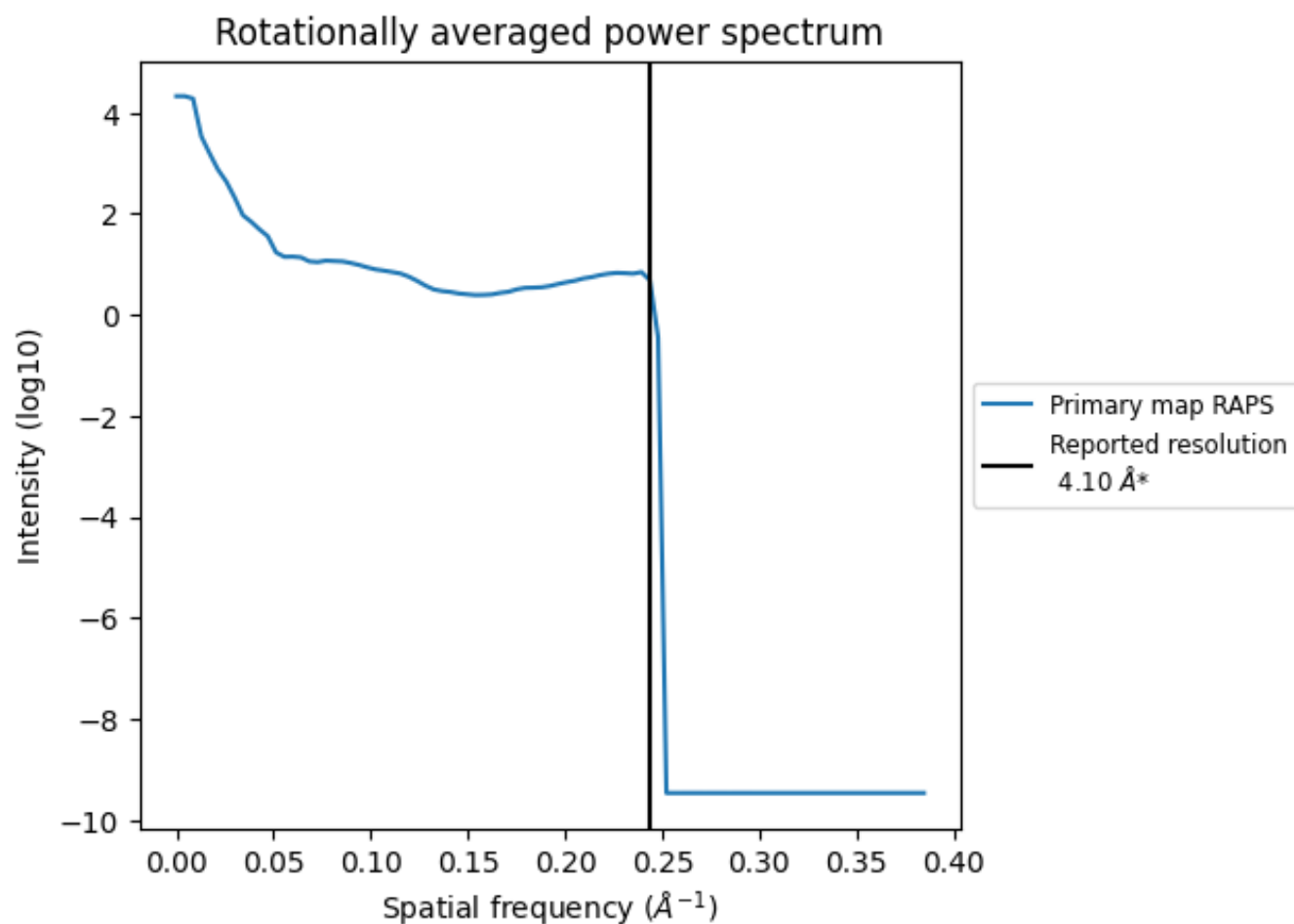
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 82 nm<sup>3</sup>; this corresponds to an approximate mass of 74 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 0.244 Å<sup>-1</sup>

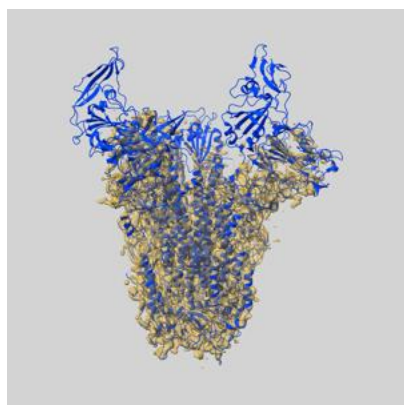
## 8 Fourier-Shell correlation ⓘ

This section was not generated. No FSC curve or half-maps provided.

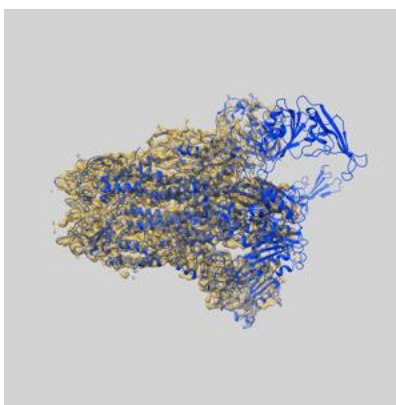
## 9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-6706 and PDB model 5X5C. Per-residue inclusion information can be found in [section 3](#) on [page 7](#).

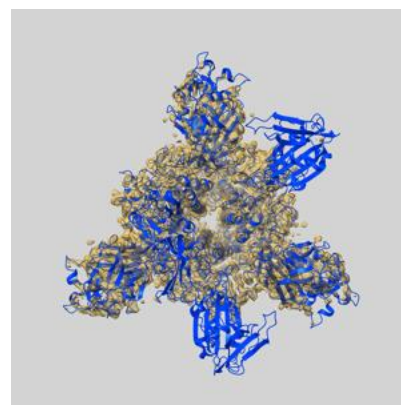
### 9.1 Map-model overlay [i](#)



X



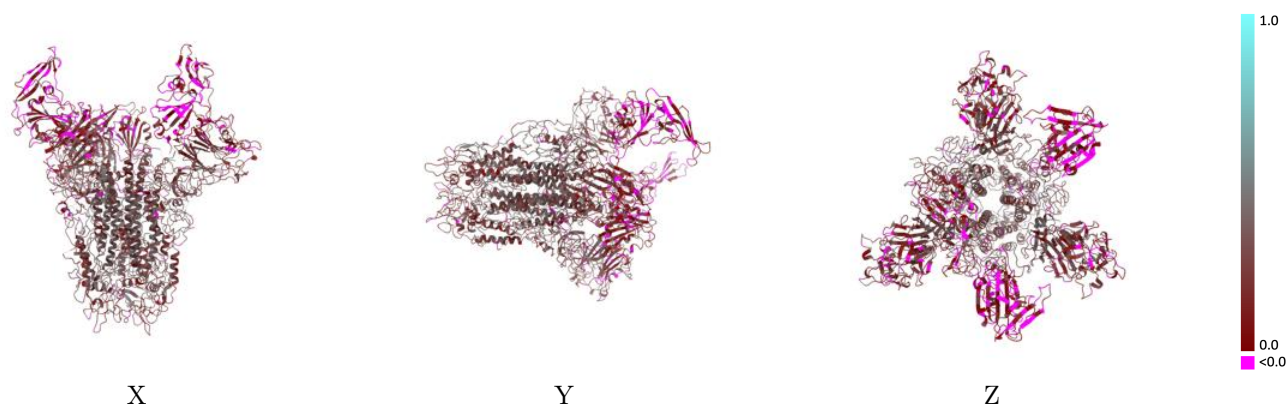
Y



Z

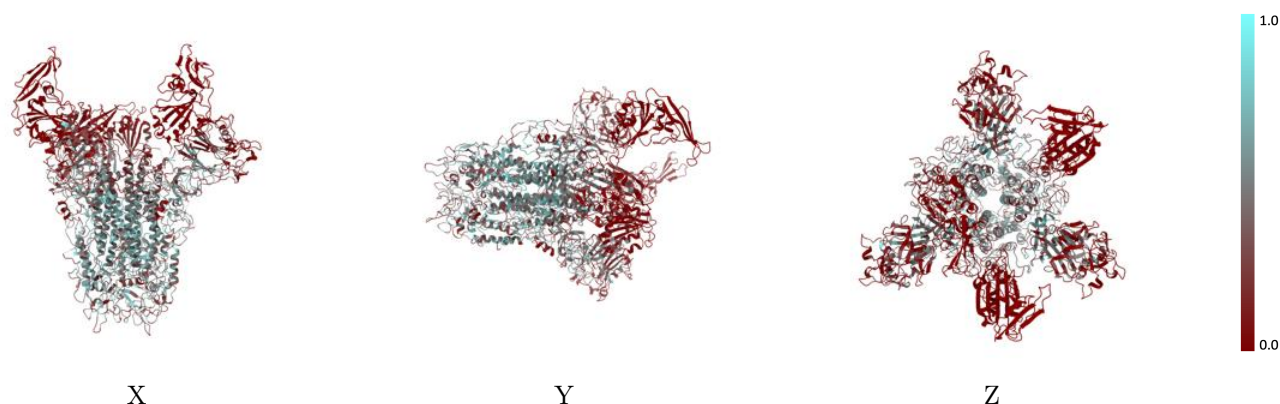
The images above show the 3D surface view of the map at the recommended contour level 0.0618 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



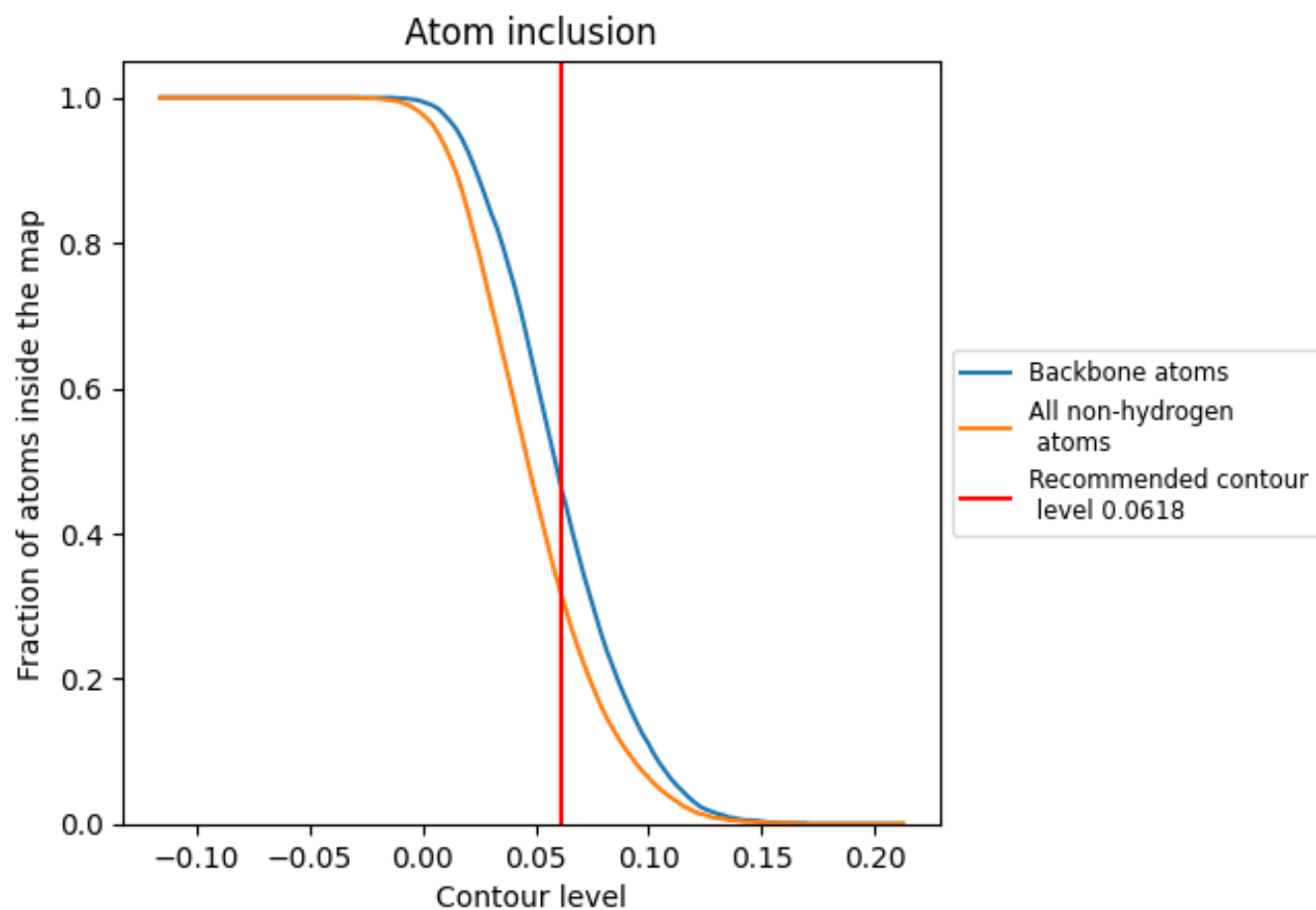
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.0618).

## 9.4 Atom inclusion [i](#)



At the recommended contour level, 46% of all backbone atoms, 31% 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 (0.0618) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	<div></div> 0.3110	<div></div> 0.2350
A	<div></div> 0.3100	<div></div> 0.2390
B	<div></div> 0.3110	<div></div> 0.2420
C	<div></div> 0.3130	<div></div> 0.2250

