



wwPDB EM Validation Summary Report ⓘ

Oct 5, 2024 – 07:26 PM EDT

PDB ID : 6N7K
EMDB ID : EMD-0358
Title : Cryo-EM structure of tetrameric Ptch1 in complex with ShhNp (form II)
Authors : Yan, N.; Gong, X.; Qian, H.W.
Deposited on : 2018-11-27
Resolution : 6.50 Å (reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev113
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
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

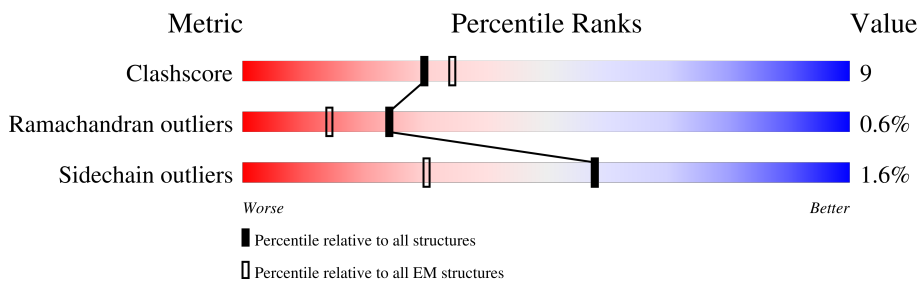
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 6.50 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



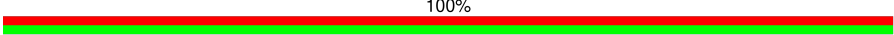

Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	1349	
1	B	1349	
1	D	1349	
1	E	1349	
2	C	174	
2	F	174	
3	G	2	
3	H	2	

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Mol	Chain	Length	Quality of chain
3	I	2	100% 
3	J	2	100% 

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
5	CLR	A	1808	-	-	X	-
5	CLR	B	1508	-	-	X	-
5	CLR	D	1808	-	-	X	-
5	CLR	E	1508	-	-	X	-
8	PLM	C	205	-	-	X	-
8	PLM	F	205	-	-	X	-

2 Entry composition [i](#)

There are 8 unique types of molecules in this entry. The entry contains 34484 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 Protein patched homolog 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	991	7807	5091	1282	1392	42	0	0
1	B	988	7708	5029	1267	1372	40	0	0
1	D	991	7807	5091	1282	1392	42	0	0
1	E	988	7708	5029	1267	1372	40	0	0

There are 176 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-20	MET	-	initiating methionine	UNP Q13635
A	-19	ALA	-	expression tag	UNP Q13635
A	-18	ASP	-	expression tag	UNP Q13635
A	-17	TYR	-	expression tag	UNP Q13635
A	-16	LYS	-	expression tag	UNP Q13635
A	-15	ASP	-	expression tag	UNP Q13635
A	-14	ASP	-	expression tag	UNP Q13635
A	-13	ASP	-	expression tag	UNP Q13635
A	-12	ASP	-	expression tag	UNP Q13635
A	-11	LYS	-	expression tag	UNP Q13635
A	-10	SER	-	expression tag	UNP Q13635
A	-9	GLY	-	expression tag	UNP Q13635
A	-8	PRO	-	expression tag	UNP Q13635
A	-7	ASP	-	expression tag	UNP Q13635
A	-6	GLU	-	expression tag	UNP Q13635
A	-5	VAL	-	expression tag	UNP Q13635
A	-4	ASP	-	expression tag	UNP Q13635
A	-3	ALA	-	expression tag	UNP Q13635
A	-2	SER	-	expression tag	UNP Q13635
A	-1	GLY	-	expression tag	UNP Q13635
A	0	ARG	-	expression tag	UNP Q13635
A	1306	LEU	-	expression tag	UNP Q13635

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Chain	Residue	Modelled	Actual	Comment	Reference
A	1307	GLU	-	expression tag	UNP Q13635
A	1308	GLY	-	expression tag	UNP Q13635
A	1309	SER	-	expression tag	UNP Q13635
A	1310	ASP	-	expression tag	UNP Q13635
A	1311	GLU	-	expression tag	UNP Q13635
A	1312	VAL	-	expression tag	UNP Q13635
A	1313	ASP	-	expression tag	UNP Q13635
A	1314	ALA	-	expression tag	UNP Q13635
A	1315	VAL	-	expression tag	UNP Q13635
A	1316	GLU	-	expression tag	UNP Q13635
A	1317	GLY	-	expression tag	UNP Q13635
A	1318	SER	-	expression tag	UNP Q13635
A	1319	HIS	-	expression tag	UNP Q13635
A	1320	HIS	-	expression tag	UNP Q13635
A	1321	HIS	-	expression tag	UNP Q13635
A	1322	HIS	-	expression tag	UNP Q13635
A	1323	HIS	-	expression tag	UNP Q13635
A	1324	HIS	-	expression tag	UNP Q13635
A	1325	HIS	-	expression tag	UNP Q13635
A	1326	HIS	-	expression tag	UNP Q13635
A	1327	HIS	-	expression tag	UNP Q13635
A	1328	HIS	-	expression tag	UNP Q13635
B	-20	MET	-	initiating methionine	UNP Q13635
B	-19	ALA	-	expression tag	UNP Q13635
B	-18	ASP	-	expression tag	UNP Q13635
B	-17	TYR	-	expression tag	UNP Q13635
B	-16	LYS	-	expression tag	UNP Q13635
B	-15	ASP	-	expression tag	UNP Q13635
B	-14	ASP	-	expression tag	UNP Q13635
B	-13	ASP	-	expression tag	UNP Q13635
B	-12	ASP	-	expression tag	UNP Q13635
B	-11	LYS	-	expression tag	UNP Q13635
B	-10	SER	-	expression tag	UNP Q13635
B	-9	GLY	-	expression tag	UNP Q13635
B	-8	PRO	-	expression tag	UNP Q13635
B	-7	ASP	-	expression tag	UNP Q13635
B	-6	GLU	-	expression tag	UNP Q13635
B	-5	VAL	-	expression tag	UNP Q13635
B	-4	ASP	-	expression tag	UNP Q13635
B	-3	ALA	-	expression tag	UNP Q13635
B	-2	SER	-	expression tag	UNP Q13635
B	-1	GLY	-	expression tag	UNP Q13635

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Chain	Residue	Modelled	Actual	Comment	Reference
B	0	ARG	-	expression tag	UNP Q13635
B	1306	LEU	-	expression tag	UNP Q13635
B	1307	GLU	-	expression tag	UNP Q13635
B	1308	GLY	-	expression tag	UNP Q13635
B	1309	SER	-	expression tag	UNP Q13635
B	1310	ASP	-	expression tag	UNP Q13635
B	1311	GLU	-	expression tag	UNP Q13635
B	1312	VAL	-	expression tag	UNP Q13635
B	1313	ASP	-	expression tag	UNP Q13635
B	1314	ALA	-	expression tag	UNP Q13635
B	1315	VAL	-	expression tag	UNP Q13635
B	1316	GLU	-	expression tag	UNP Q13635
B	1317	GLY	-	expression tag	UNP Q13635
B	1318	SER	-	expression tag	UNP Q13635
B	1319	HIS	-	expression tag	UNP Q13635
B	1320	HIS	-	expression tag	UNP Q13635
B	1321	HIS	-	expression tag	UNP Q13635
B	1322	HIS	-	expression tag	UNP Q13635
B	1323	HIS	-	expression tag	UNP Q13635
B	1324	HIS	-	expression tag	UNP Q13635
B	1325	HIS	-	expression tag	UNP Q13635
B	1326	HIS	-	expression tag	UNP Q13635
B	1327	HIS	-	expression tag	UNP Q13635
B	1328	HIS	-	expression tag	UNP Q13635
D	-20	MET	-	initiating methionine	UNP Q13635
D	-19	ALA	-	expression tag	UNP Q13635
D	-18	ASP	-	expression tag	UNP Q13635
D	-17	TYR	-	expression tag	UNP Q13635
D	-16	LYS	-	expression tag	UNP Q13635
D	-15	ASP	-	expression tag	UNP Q13635
D	-14	ASP	-	expression tag	UNP Q13635
D	-13	ASP	-	expression tag	UNP Q13635
D	-12	ASP	-	expression tag	UNP Q13635
D	-11	LYS	-	expression tag	UNP Q13635
D	-10	SER	-	expression tag	UNP Q13635
D	-9	GLY	-	expression tag	UNP Q13635
D	-8	PRO	-	expression tag	UNP Q13635
D	-7	ASP	-	expression tag	UNP Q13635
D	-6	GLU	-	expression tag	UNP Q13635
D	-5	VAL	-	expression tag	UNP Q13635
D	-4	ASP	-	expression tag	UNP Q13635
D	-3	ALA	-	expression tag	UNP Q13635

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Chain	Residue	Modelled	Actual	Comment	Reference
D	-2	SER	-	expression tag	UNP Q13635
D	-1	GLY	-	expression tag	UNP Q13635
D	0	ARG	-	expression tag	UNP Q13635
D	1306	LEU	-	expression tag	UNP Q13635
D	1307	GLU	-	expression tag	UNP Q13635
D	1308	GLY	-	expression tag	UNP Q13635
D	1309	SER	-	expression tag	UNP Q13635
D	1310	ASP	-	expression tag	UNP Q13635
D	1311	GLU	-	expression tag	UNP Q13635
D	1312	VAL	-	expression tag	UNP Q13635
D	1313	ASP	-	expression tag	UNP Q13635
D	1314	ALA	-	expression tag	UNP Q13635
D	1315	VAL	-	expression tag	UNP Q13635
D	1316	GLU	-	expression tag	UNP Q13635
D	1317	GLY	-	expression tag	UNP Q13635
D	1318	SER	-	expression tag	UNP Q13635
D	1319	HIS	-	expression tag	UNP Q13635
D	1320	HIS	-	expression tag	UNP Q13635
D	1321	HIS	-	expression tag	UNP Q13635
D	1322	HIS	-	expression tag	UNP Q13635
D	1323	HIS	-	expression tag	UNP Q13635
D	1324	HIS	-	expression tag	UNP Q13635
D	1325	HIS	-	expression tag	UNP Q13635
D	1326	HIS	-	expression tag	UNP Q13635
D	1327	HIS	-	expression tag	UNP Q13635
D	1328	HIS	-	expression tag	UNP Q13635
E	-20	MET	-	initiating methionine	UNP Q13635
E	-19	ALA	-	expression tag	UNP Q13635
E	-18	ASP	-	expression tag	UNP Q13635
E	-17	TYR	-	expression tag	UNP Q13635
E	-16	LYS	-	expression tag	UNP Q13635
E	-15	ASP	-	expression tag	UNP Q13635
E	-14	ASP	-	expression tag	UNP Q13635
E	-13	ASP	-	expression tag	UNP Q13635
E	-12	ASP	-	expression tag	UNP Q13635
E	-11	LYS	-	expression tag	UNP Q13635
E	-10	SER	-	expression tag	UNP Q13635
E	-9	GLY	-	expression tag	UNP Q13635
E	-8	PRO	-	expression tag	UNP Q13635
E	-7	ASP	-	expression tag	UNP Q13635
E	-6	GLU	-	expression tag	UNP Q13635
E	-5	VAL	-	expression tag	UNP Q13635

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Chain	Residue	Modelled	Actual	Comment	Reference
E	-4	ASP	-	expression tag	UNP Q13635
E	-3	ALA	-	expression tag	UNP Q13635
E	-2	SER	-	expression tag	UNP Q13635
E	-1	GLY	-	expression tag	UNP Q13635
E	0	ARG	-	expression tag	UNP Q13635
E	1306	LEU	-	expression tag	UNP Q13635
E	1307	GLU	-	expression tag	UNP Q13635
E	1308	GLY	-	expression tag	UNP Q13635
E	1309	SER	-	expression tag	UNP Q13635
E	1310	ASP	-	expression tag	UNP Q13635
E	1311	GLU	-	expression tag	UNP Q13635
E	1312	VAL	-	expression tag	UNP Q13635
E	1313	ASP	-	expression tag	UNP Q13635
E	1314	ALA	-	expression tag	UNP Q13635
E	1315	VAL	-	expression tag	UNP Q13635
E	1316	GLU	-	expression tag	UNP Q13635
E	1317	GLY	-	expression tag	UNP Q13635
E	1318	SER	-	expression tag	UNP Q13635
E	1319	HIS	-	expression tag	UNP Q13635
E	1320	HIS	-	expression tag	UNP Q13635
E	1321	HIS	-	expression tag	UNP Q13635
E	1322	HIS	-	expression tag	UNP Q13635
E	1323	HIS	-	expression tag	UNP Q13635
E	1324	HIS	-	expression tag	UNP Q13635
E	1325	HIS	-	expression tag	UNP Q13635
E	1326	HIS	-	expression tag	UNP Q13635
E	1327	HIS	-	expression tag	UNP Q13635
E	1328	HIS	-	expression tag	UNP Q13635

- Molecule 2 is a protein called Sonic hedgehog protein.

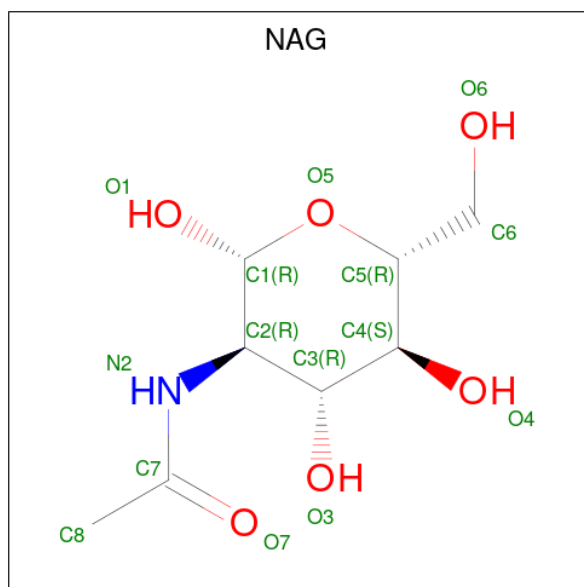
Mol	Chain	Residues	Atoms					AltConf	Trace
2	C	174	Total	C	N	O	S	0	0
			1371	853	253	259	6		
2	F	174	Total	C	N	O	S	0	0
			1371	853	253	259	6		

- Molecule 3 is an oligosaccharide called 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.



Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
3	G	2	Total	C	N	O	0	0
			28	16	2	10		
3	H	2	Total	C	N	O	0	0
			28	16	2	10		
3	I	2	Total	C	N	O	0	0
			28	16	2	10		
3	J	2	Total	C	N	O	0	0
			28	16	2	10		

- Molecule 4 is 2-acetamido-2-deoxy-beta-D-glucopyranose (three-letter code: NAG) (formula: $C_8H_{15}NO_6$).



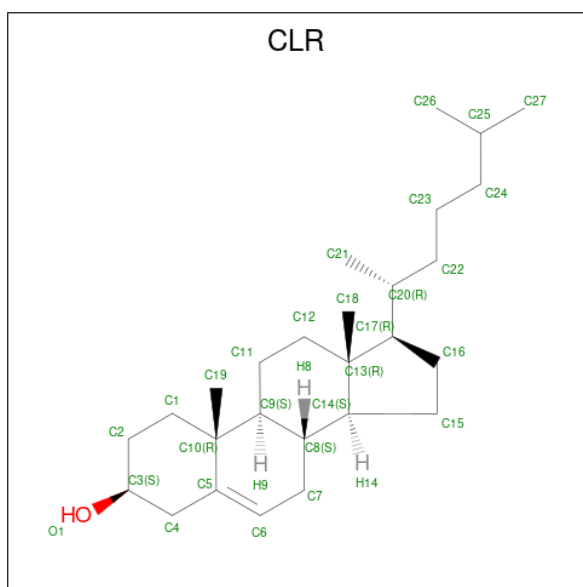
Mol	Chain	Residues	Atoms				AltConf
			Total	C	N	O	
4	A	1	Total	C	N	O	0
			14	8	1	5	
4	A	1	Total	C	N	O	0
			14	8	1	5	
4	A	1	Total	C	N	O	0
			14	8	1	5	
4	A	1	Total	C	N	O	0
			14	8	1	5	
4	A	1	Total	C	N	O	0
			14	8	1	5	

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Mol	Chain	Residues	Atoms				AltConf
			Total	C	N	O	
4	B	1	Total 14	8	1	5	0
4	B	1	Total 14	8	1	5	0
4	B	1	Total 14	8	1	5	0
4	B	1	Total 14	8	1	5	0
4	B	1	Total 14	8	1	5	0
4	D	1	Total 14	8	1	5	0
4	D	1	Total 14	8	1	5	0
4	D	1	Total 14	8	1	5	0
4	D	1	Total 14	8	1	5	0
4	D	1	Total 14	8	1	5	0
4	E	1	Total 14	8	1	5	0
4	E	1	Total 14	8	1	5	0
4	E	1	Total 14	8	1	5	0
4	E	1	Total 14	8	1	5	0
4	E	1	Total 14	8	1	5	0

- Molecule 5 is CHOLESTEROL (three-letter code: CLR) (formula: C₂₇H₄₆O).



Mol	Chain	Residues	Atoms			AltConf
5	A	1	Total	C	O	0
			28	27	1	
5	A	1	Total	C	O	0
			28	27	1	
5	A	1	Total	C	O	0
			28	27	1	
5	B	1	Total	C	O	0
			28	27	1	
5	C	1	Total	C	O	0
			28	27	1	
5	D	1	Total	C	O	0
			28	27	1	
5	D	1	Total	C	O	0
			28	27	1	
5	D	1	Total	C	O	0
			28	27	1	
5	E	1	Total	C	O	0
			28	27	1	
5	F	1	Total	C	O	0
			28	27	1	

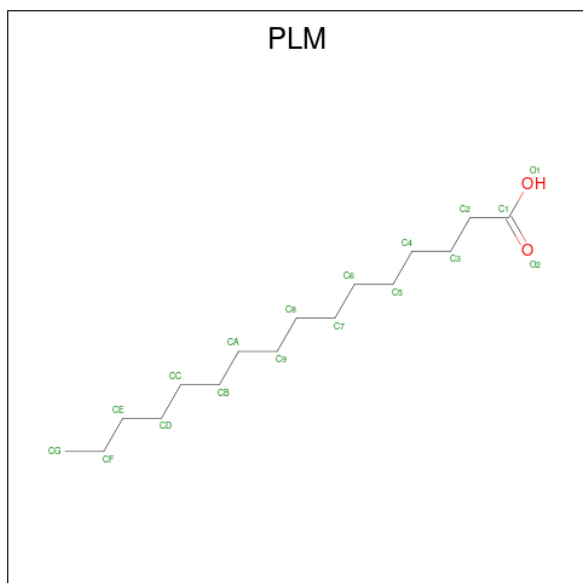
- Molecule 6 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
6	C	1	Total	Zn	0
			1	1	
6	F	1	Total	Zn	0
			1	1	

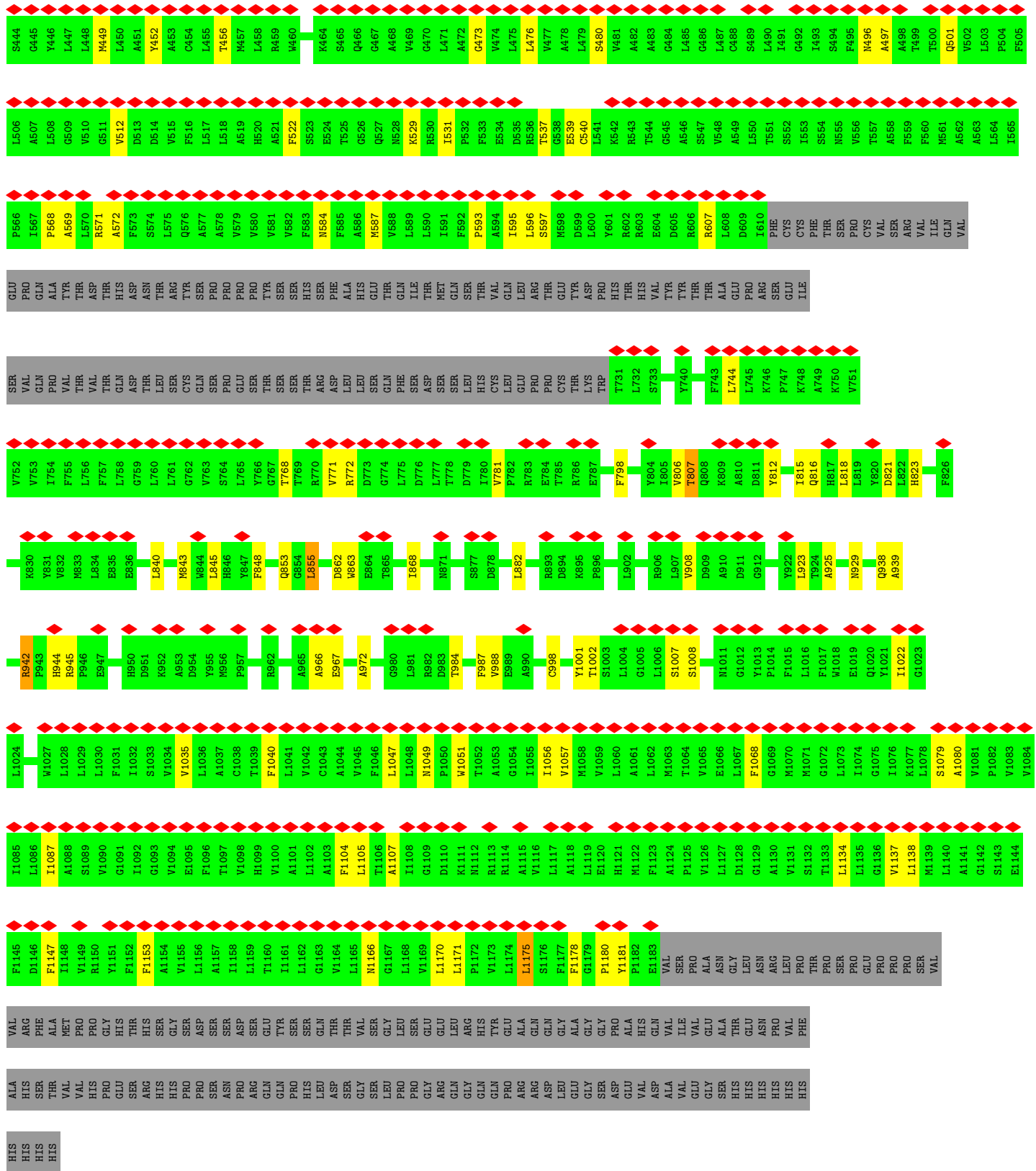
- Molecule 7 is CALCIUM ION (three-letter code: CA) (formula: Ca).

Mol	Chain	Residues	Atoms		AltConf
7	C	2	Total	Ca	0
			2	2	
7	F	2	Total	Ca	0
			2	2	

- Molecule 8 is PALMITIC ACID (three-letter code: PLM) (formula: C₁₆H₃₂O₂).

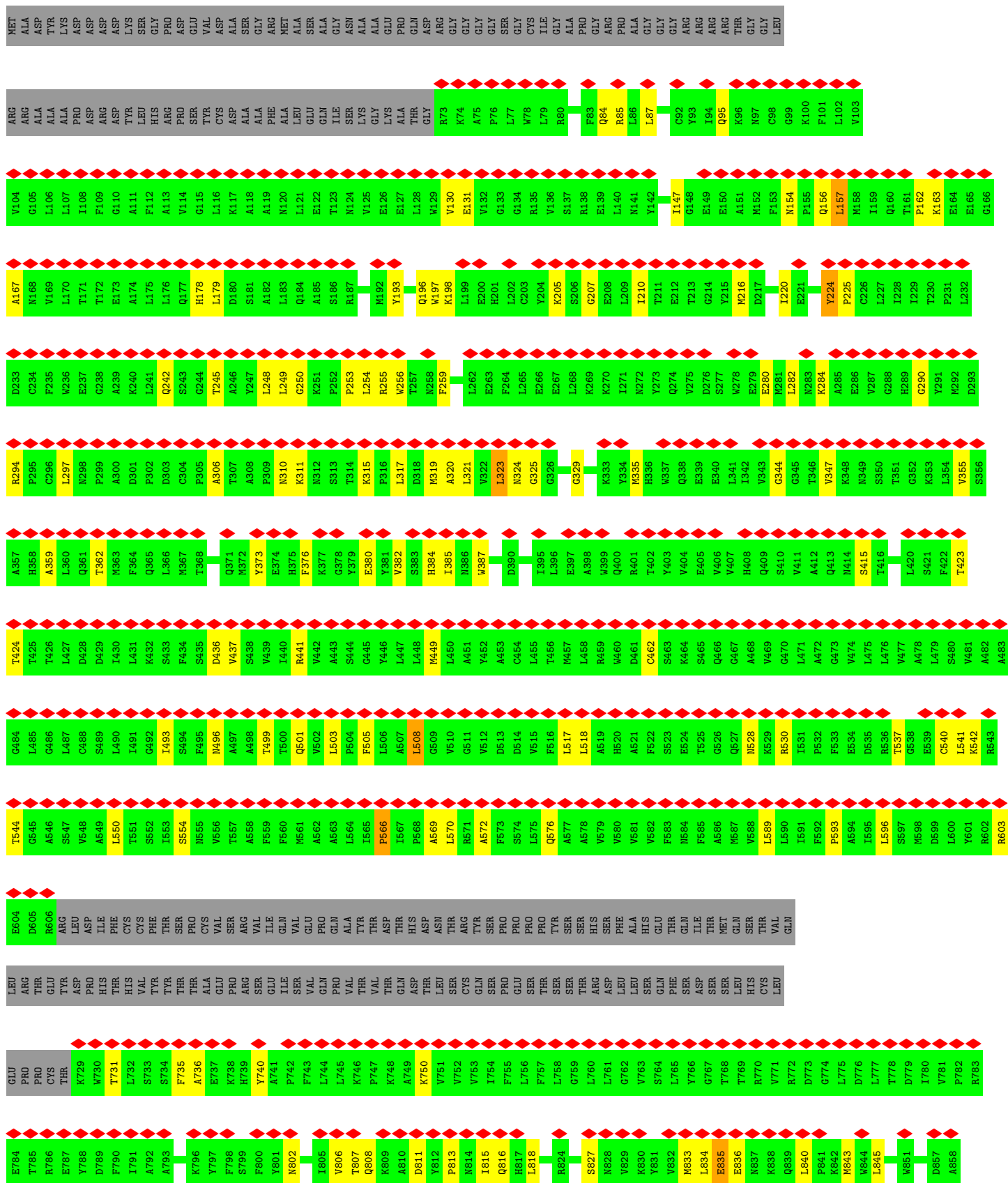


Mol	Chain	Residues	Atoms			AltConf
8	C	1	Total	C	O	0
			17	16	1	
8	F	1	Total	C	O	0
			17	16	1	



• Molecule 1: Protein patched homolog 1





F859	D860	S861	D862	W863	E864	T865	G866	K867	I868	M869	P870	N871	N872	Y873	K874	G876	S877	D878	V881	L882	A883	Y884	K885	L886	L887	V888	Q889	T890	G891	S892	R893	D894	K895	P896	I897	D898	I899	S900	Q901	L902	T903	K904	Q905	R906	L907	D909	A910	D911	G912	I913	I914	N915	P916	S917	Y920			
I921	Y922	N929	A936	Q938	A939	N940	I941	R945	P946	E947	W948	V949	H950	D951	K952	A953	D954	Y955	M956	P957	E958	T959	R960	L961	R962	I963	P964	A965	A966	E967	P968	I969	Y971	A972	Q973	F974	P975	F976	Y977	L978	N979	G980	L981	R982	D983	T984	S985	D986	F987	I991	E992	K993	V994					
T997	C998	S999	N1000	Y1001	T1002	S1003	L1004	G1005	L1006	Y1013	P1014	F1015	L1016	F1017	W1018	E1019	Q1020	Y1021	I1022	G1023	L1024	R1025	W1026	W1027	L1028	L1029	L1030	F1031	T1032	S1033	V1034	V1035	L1036	A1037	C1038	T1039	F1040	L1041	V1042	G1043	A1044	V1045	F1046	L1047	L1048	M1049	P1050	W1051	T1052	A1053	G1054	I1055	I1056	V1057	M1058	V1059	L1060	
A1061	L1062	M1063	T1064	V1065	E1066	L1067	F1068	G1069	M1070	M1071	G1072	L1073	I1074	G1075	I1076	K1077	W1078	L1079	A1080	V1081	P1082	V1083	V1084	I1085	L1086	I1087	A1088	S1089	V1090	G1091	I1092	S1093	V1094	E1095	F1096	T1097	V1098	H1099	V1100	L1101	A1102	A1103	F1104	L1105	T1106	A1107	I1108	G1109	D1110	K1111	N1112	R1113	L1114	A1115	A1118	L1119	M1120	H1121
M1122	F1123	A1124	P1125	V1126	L1127	D1128	G1129	A1130	V1131	S1132	T1133	L1134	L1135	G1136	V1137	L1138	M1139	L1140	A1141	G1142	S1143	E1144	F1145	D1146	F1147	I1148	V1149	Y1150	F1152	F1153	A1154	V1155	L1156	A1157	I1158	L1159	T1160	I1161	L1162	G1163	V1164	L1165	M1166	G1167	L1168	V1169	L1170	L1171	P1172	V1173	L1174	L1175	S1176	F1177	F1178	G1179	P1180	Y1181
P1182	E1183	V1184	S1185	ALA	ASN	GLY	LEU	LEU	ARG	PRO	THR	VAL	GLU	VAL	THR	SER	LEU	GLY	THR	VAL	ALA	ALA	PRO	PRO	GLY	THR	SER	GLY	ASN	ASP	PRO	ARG	GLN	GLY	THR	THR	VAL	SER	LEU	VAL	LEU	LEU	ARG	HIS	TYR													
GLU	ALA	GLN	GLY	ALA	GLY	GLY	PRO	GLY	ASP	GLY	GLY	GLY	THR	GLU	VAL	ALA	GLU	VAL	THR	VAL	ALA	ALA	PRO	PRO	GLY	THR	SER	GLY	ASN	ASP	PRO	ARG	GLN	GLY	THR	THR	VAL	SER	LEU	VAL	LEU	LEU	ARG	HIS	TYR													
PRO	ARG	ARG	ASP	LEU	GLY	SER	ASP	GLY	THR	VAL	GLY	GLY	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	PRO	ARG	ASP	PRO	ARG	GLN	GLY	THR	THR	VAL	SER	LEU	VAL	LEU	LEU	ARG	HIS	TYR														

● Molecule 1: Protein patched homolog 1



ARG	ARG	ALA	ALA	ALA	PRO	ASP	ASP	ASP	ASP	ASP	TYR	LEU	VAL	HIS	ARG	ALA	PRO	ASP	VAL	PHE	LEU	GLU	ILE	SER	LYS	LYS	LYS	LYS	GLY	THR	ALA	ARG	ARG	LYS	ALA	F76	L77	W78	L79	R80	A81	K82	F83	L86	L87	L90	G91	C92	Y93	K96	R97	C98	G99	K100	F101	L102
V103	V104	G105	L106	L107	I108	F109	G110	F112	A113	V114	G115	L116	K117	A118	A119	M120	L121	E122	T123	M124	V126	E126	E127	L128	W129	V130	E131	V132	G133	G134	R136	V136	S137	R138	E139	M141	Y142	T143	R144	Q145	K146	L147	G148	E149	E150	A151	M152	F153	M154	M158	K163	E164	E165	A167		
M168	V169	L170	T171	L172	E173	A174	L175	L176	Q177	Y191	M192	Y193	M194	R195	Q196	W197	E200	H201	L202	C203	K205	S206	E207	E208	L209	L210	T211	E212	G214	Y215	M216	D217	Q218	L219	T220	E221	Y224	P225	C226	L227	T228	L229	T230	T231	L232	D233	K240	L241	Q242	S243	G244	T245				
L248	L249	G250	K251	P252	R255	W256	D260	P261	L262	E263	F264	E267	L268	T271	M272	Y273	Q274	V275	D276	S277	W278	E279	E280	M281	L282	V287	G288	H289	M292	D293	R294	L297	N298	P299	A300	D301	P302	D303	C304	P305	A306	T307	A308	P309	N310	K311	N312	S313	T314	K315	P316	L317				

- Molecule 3: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose



- Molecule 3: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	25510	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	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	0.077	Depositor
Minimum map value	-0.018	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.006	Depositor
Recommended contour level	0.03	Depositor
Map size (\AA)	311.91998, 311.91998, 311.91998	wwPDB
Map dimensions	280, 280, 280	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.114, 1.114, 1.114	Depositor

5 Model quality i

5.1 Standard geometry i

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

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	0.45	0/8000	0.71	6/10883 (0.1%)
1	B	0.48	0/7897	0.70	5/10749 (0.0%)
1	D	0.45	0/8000	0.71	6/10883 (0.1%)
1	E	0.48	0/7897	0.70	5/10749 (0.0%)
2	C	0.56	1/1401 (0.1%)	0.76	3/1886 (0.2%)
2	F	0.56	1/1401 (0.1%)	0.76	4/1886 (0.2%)
All	All	0.47	2/34596 (0.0%)	0.71	29/47036 (0.1%)

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	7
1	B	0	6
1	D	0	7
1	E	0	6
2	C	0	1
2	F	0	1
All	All	0	28

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	C	98	MET	C-N	8.19	1.52	1.34
2	F	98	MET	C-N	8.16	1.52	1.34

The worst 5 of 29 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	83	ASP	O-C-N	-7.34	110.96	122.70
2	C	83	ASP	O-C-N	-7.33	110.97	122.70
1	B	297	LEU	CA-CB-CG	7.03	131.48	115.30
1	E	297	LEU	CA-CB-CG	6.99	131.39	115.30
1	A	323	LEU	CA-CB-CG	6.33	129.86	115.30

There are no chirality outliers.

5 of 28 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	130	VAL	Peptide
1	A	224	TYR	Peptide
1	A	317	LEU	Peptide
1	A	835	GLU	Peptide
1	A	836	GLU	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	7807	0	7828	111	0
1	B	7708	0	7664	120	0
1	D	7807	0	7828	110	0
1	E	7708	0	7664	123	0
2	C	1371	0	1329	37	0
2	F	1371	0	1329	35	0
3	G	28	0	25	0	0
3	H	28	0	25	0	0
3	I	28	0	25	0	0
3	J	28	0	25	0	0
4	A	70	0	65	0	0
4	B	70	0	65	1	0
4	D	70	0	65	1	0
4	E	70	0	65	1	0
5	A	84	0	138	35	0
5	B	28	0	46	30	0
5	C	28	0	45	19	0
5	D	84	0	138	35	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	E	28	0	46	33	0
5	F	28	0	45	19	0
6	C	1	0	0	0	0
6	F	1	0	0	0	0
7	C	2	0	0	0	0
7	F	2	0	0	0	0
8	C	17	0	31	16	0
8	F	17	0	31	16	0
All	All	34484	0	34522	615	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 9.

The worst 5 of 615 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:1147:PHE:HE2	8:C:205:PLM:CG	1.16	1.54
1:A:220:ILE:CD1	5:A:1808:CLR:C6	1.84	1.53
1:E:1147:PHE:HE2	8:F:205:PLM:CG	1.16	1.53
1:D:220:ILE:CD1	5:D:1808:CLR:C6	1.84	1.52
1:B:1147:PHE:CE2	8:C:205:PLM:CG	1.93	1.50

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	987/1349 (73%)	857 (87%)	123 (12%)	7 (1%)	19	57
1	B	984/1349 (73%)	856 (87%)	125 (13%)	3 (0%)	37	73
1	D	987/1349 (73%)	858 (87%)	122 (12%)	7 (1%)	19	57

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	E	984/1349 (73%)	856 (87%)	125 (13%)	3 (0%)	37	73
2	C	172/174 (99%)	153 (89%)	17 (10%)	2 (1%)	11	44
2	F	172/174 (99%)	153 (89%)	17 (10%)	2 (1%)	11	44
All	All	4286/5744 (75%)	3733 (87%)	529 (12%)	24 (1%)	24	60

5 of 24 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	939	ALA
2	C	188	GLU
1	E	939	ALA
2	F	188	GLU
1	A	424	THR

5.3.2 Protein sidechains [i](#)

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	832/1147 (72%)	820 (99%)	12 (1%)	62	75
1	B	808/1147 (70%)	795 (98%)	13 (2%)	58	74
1	D	832/1147 (72%)	820 (99%)	12 (1%)	62	75
1	E	808/1147 (70%)	795 (98%)	13 (2%)	58	74
2	C	142/144 (99%)	138 (97%)	4 (3%)	38	57
2	F	142/144 (99%)	138 (97%)	4 (3%)	38	57
All	All	3564/4876 (73%)	3506 (98%)	58 (2%)	58	74

5 of 58 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	C	188	GLU
2	F	50	ASN
1	D	550	LEU
2	F	34	ARG

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Mol	Chain	Res	Type
1	E	584	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 50 such sidechains are listed below:

Mol	Chain	Res	Type
1	D	496	ASN
1	E	156	GLN
2	F	107	ASN
1	D	576	GLN
1	D	929	ASN

5.3.3 RNA [i](#)

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](#)

8 monosaccharides are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
3	NAG	G	1	1,3	14,14,15	0.25	0	17,19,21	0.59	0
3	NAG	G	2	3	14,14,15	0.27	0	17,19,21	0.56	0
3	NAG	H	1	1,3	14,14,15	0.45	0	17,19,21	0.67	0
3	NAG	H	2	3	14,14,15	0.28	0	17,19,21	0.71	1 (5%)
3	NAG	I	1	1,3	14,14,15	0.26	0	17,19,21	0.58	0
3	NAG	I	2	3	14,14,15	0.27	0	17,19,21	0.55	0
3	NAG	J	1	1,3	14,14,15	0.46	0	17,19,21	0.66	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	NAG	J	2	3	14,14,15	0.26	0	17,19,21	0.71	1 (5%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	NAG	G	1	1,3	-	1/6/23/26	0/1/1/1
3	NAG	G	2	3	-	4/6/23/26	0/1/1/1
3	NAG	H	1	1,3	-	0/6/23/26	0/1/1/1
3	NAG	H	2	3	-	2/6/23/26	0/1/1/1
3	NAG	I	1	1,3	-	1/6/23/26	0/1/1/1
3	NAG	I	2	3	-	4/6/23/26	0/1/1/1
3	NAG	J	1	1,3	-	0/6/23/26	0/1/1/1
3	NAG	J	2	3	-	2/6/23/26	0/1/1/1

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	H	2	NAG	C1-O5-C5	2.57	115.62	112.19
3	J	2	NAG	C1-O5-C5	2.55	115.60	112.19

There are no chirality outliers.

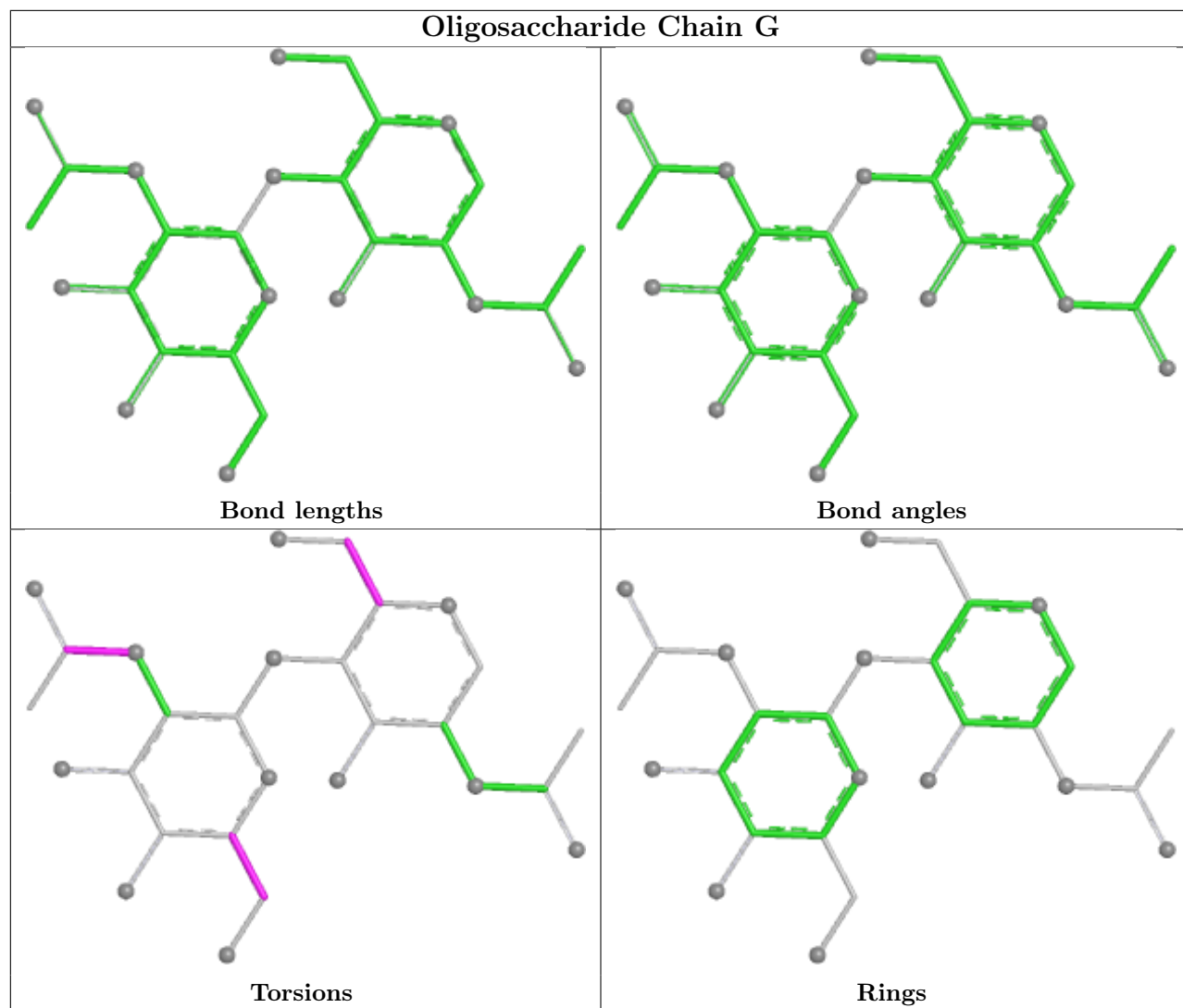
5 of 14 torsion outliers are listed below:

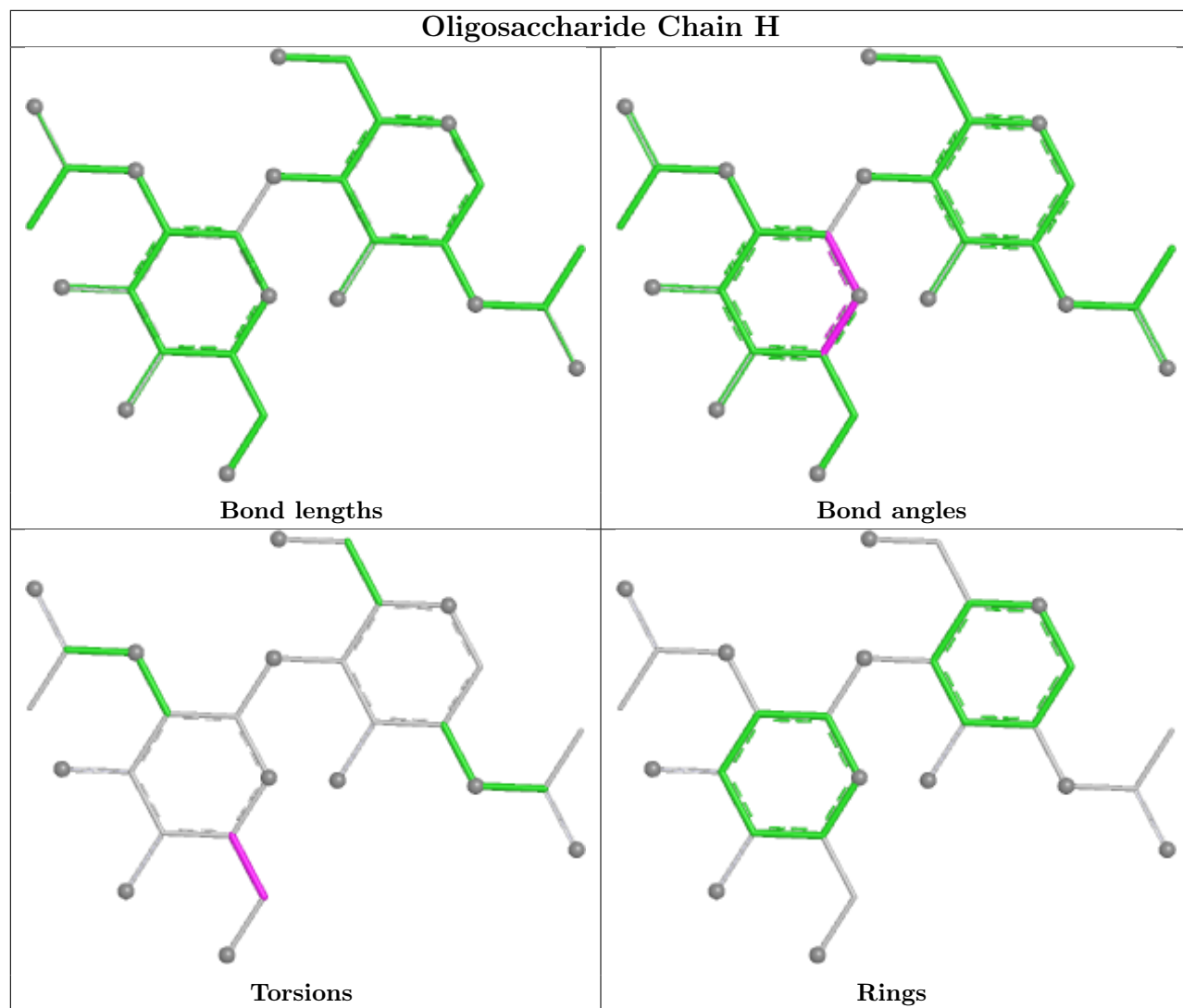
Mol	Chain	Res	Type	Atoms
3	G	2	NAG	C4-C5-C6-O6
3	I	2	NAG	C4-C5-C6-O6
3	H	2	NAG	C4-C5-C6-O6
3	J	2	NAG	C4-C5-C6-O6
3	H	2	NAG	O5-C5-C6-O6

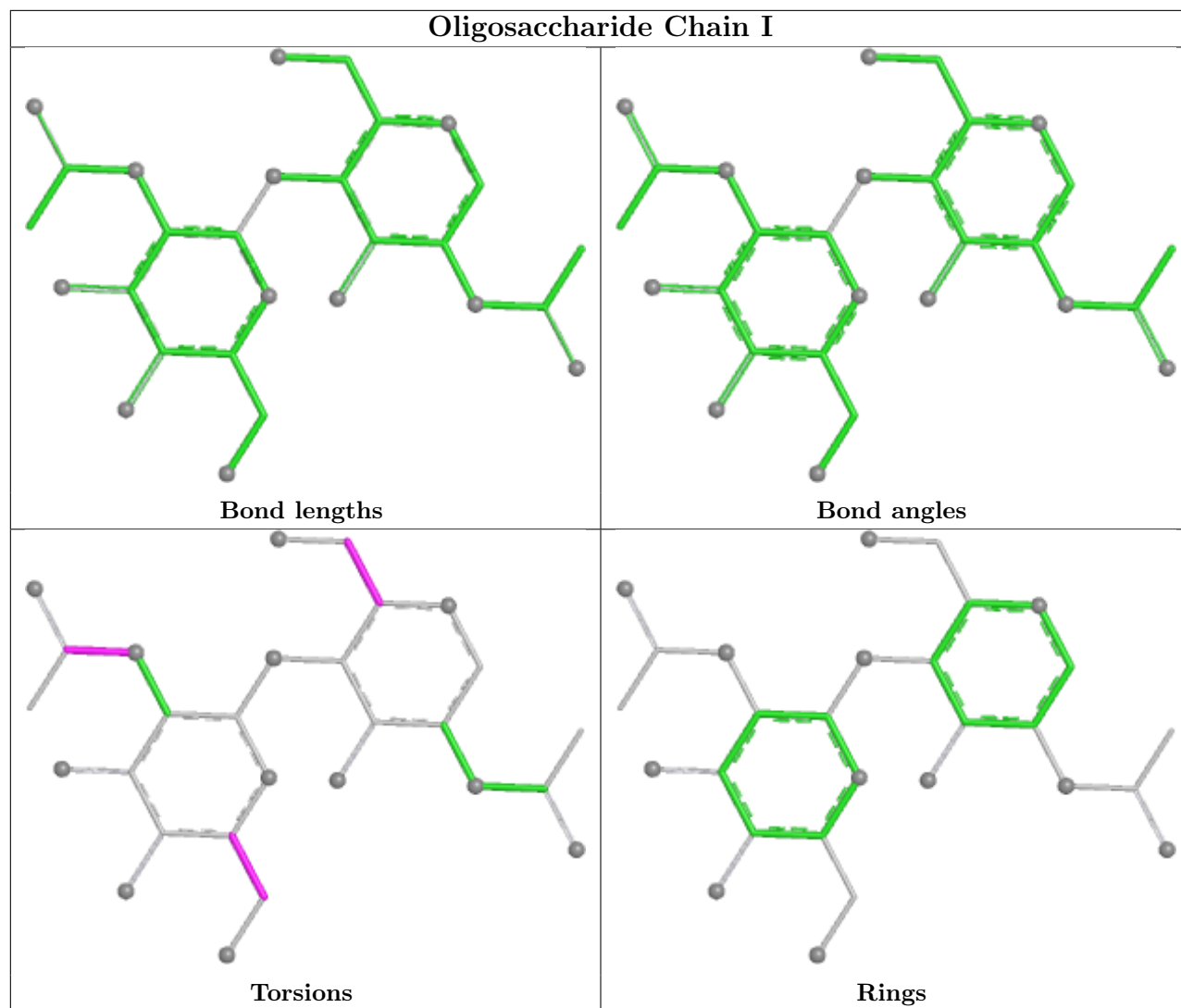
There are no ring outliers.

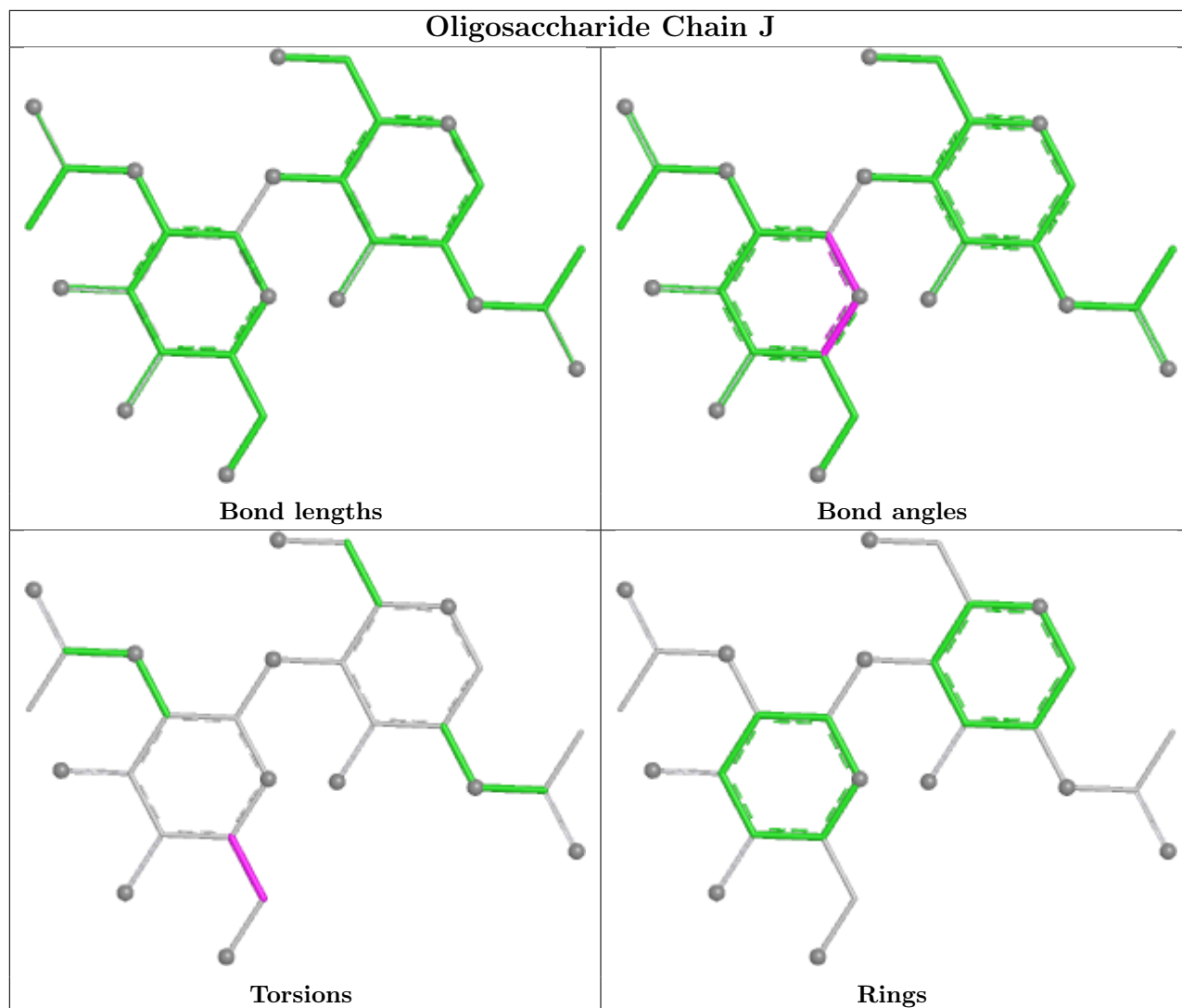
No monomer is involved in short contacts.

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for oligosaccharide.









5.6 Ligand geometry [i](#)

Of 38 ligands modelled in this entry, 6 are monoatomic - leaving 32 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z > 2$	Counts	RMSZ	# $ Z > 2$
4	NAG	E	1505	1	14,14,15	0.25	0	17,19,21	0.50	0
4	NAG	B	1502	1	14,14,15	0.55	0	17,19,21	0.39	0
4	NAG	A	1801	1	14,14,15	0.87	1 (7%)	17,19,21	2.39	4 (23%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
5	CLR	D	1809	-	31,31,31	0.73	0	48,48,48	1.56	9 (18%)
5	CLR	F	201	2	31,31,31	1.02	1 (3%)	48,48,48	1.97	8 (16%)
4	NAG	D	1802	1	14,14,15	0.24	0	17,19,21	0.57	0
8	PLM	F	205	2	15,16,17	0.32	0	14,15,17	0.66	0
4	NAG	B	1503	1	14,14,15	0.92	1 (7%)	17,19,21	1.40	3 (17%)
4	NAG	D	1803	1	14,14,15	0.78	1 (7%)	17,19,21	1.28	2 (11%)
5	CLR	A	1810	-	31,31,31	0.67	0	48,48,48	1.27	6 (12%)
4	NAG	D	1807	1	14,14,15	0.40	0	17,19,21	0.42	0
4	NAG	D	1804	1	14,14,15	0.22	0	17,19,21	0.59	0
4	NAG	E	1504	1	14,14,15	0.75	0	17,19,21	0.77	1 (5%)
4	NAG	A	1802	1	14,14,15	0.24	0	17,19,21	0.57	0
4	NAG	B	1501	1	14,14,15	0.69	1 (7%)	17,19,21	0.70	0
4	NAG	B	1504	1	14,14,15	0.75	1 (7%)	17,19,21	0.77	1 (5%)
4	NAG	B	1505	1	14,14,15	0.24	0	17,19,21	0.49	0
4	NAG	D	1801	1	14,14,15	0.88	1 (7%)	17,19,21	2.39	4 (23%)
5	CLR	D	1808	-	31,31,31	1.03	2 (6%)	48,48,48	1.67	8 (16%)
4	NAG	A	1804	1	14,14,15	0.22	0	17,19,21	0.59	0
4	NAG	E	1501	1	14,14,15	0.70	1 (7%)	17,19,21	0.70	0
5	CLR	A	1809	-	31,31,31	0.72	0	48,48,48	1.56	9 (18%)
5	CLR	B	1508	-	31,31,31	0.90	2 (6%)	48,48,48	1.58	9 (18%)
5	CLR	E	1508	-	31,31,31	0.90	2 (6%)	48,48,48	1.58	9 (18%)
4	NAG	E	1502	1	14,14,15	0.54	0	17,19,21	0.39	0
4	NAG	E	1503	1	14,14,15	0.95	1 (7%)	17,19,21	1.40	3 (17%)
5	CLR	A	1808	-	31,31,31	1.04	2 (6%)	48,48,48	1.67	8 (16%)
4	NAG	A	1803	1	14,14,15	0.79	1 (7%)	17,19,21	1.28	2 (11%)
8	PLM	C	205	2	15,16,17	0.32	0	14,15,17	0.66	0
5	CLR	D	1810	-	31,31,31	0.68	0	48,48,48	1.27	6 (12%)
4	NAG	A	1807	1	14,14,15	0.40	0	17,19,21	0.42	0
5	CLR	C	201	2	31,31,31	1.02	1 (3%)	48,48,48	1.98	9 (18%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '2' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	NAG	E	1505	1	-	4/6/23/26	0/1/1/1
4	NAG	B	1502	1	-	0/6/23/26	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	NAG	A	1801	1	-	6/6/23/26	0/1/1/1
5	CLR	D	1809	-	-	2/10/68/68	0/4/4/4
5	CLR	F	201	2	-	3/10/68/68	0/4/4/4
4	NAG	D	1802	1	-	1/6/23/26	0/1/1/1
8	PLM	F	205	2	-	7/14/14/15	-
4	NAG	B	1503	1	-	2/6/23/26	0/1/1/1
4	NAG	D	1803	1	-	4/6/23/26	0/1/1/1
5	CLR	A	1810	-	-	6/10/68/68	0/4/4/4
4	NAG	D	1807	1	-	3/6/23/26	0/1/1/1
4	NAG	D	1804	1	-	1/6/23/26	0/1/1/1
4	NAG	E	1504	1	-	4/6/23/26	0/1/1/1
4	NAG	A	1802	1	-	1/6/23/26	0/1/1/1
4	NAG	B	1501	1	-	1/6/23/26	0/1/1/1
4	NAG	B	1504	1	-	4/6/23/26	0/1/1/1
4	NAG	B	1505	1	-	4/6/23/26	0/1/1/1
4	NAG	D	1801	1	-	6/6/23/26	0/1/1/1
5	CLR	D	1808	-	-	9/10/68/68	0/4/4/4
4	NAG	A	1804	1	-	1/6/23/26	0/1/1/1
4	NAG	E	1501	1	-	1/6/23/26	0/1/1/1
5	CLR	A	1809	-	-	2/10/68/68	0/4/4/4
5	CLR	B	1508	-	-	4/10/68/68	0/4/4/4
5	CLR	E	1508	-	-	4/10/68/68	0/4/4/4
4	NAG	E	1502	1	-	0/6/23/26	0/1/1/1
4	NAG	E	1503	1	-	2/6/23/26	0/1/1/1
5	CLR	A	1808	-	-	9/10/68/68	0/4/4/4
4	NAG	A	1803	1	-	4/6/23/26	0/1/1/1
8	PLM	C	205	2	-	7/14/14/15	-
5	CLR	D	1810	-	-	6/10/68/68	0/4/4/4
4	NAG	A	1807	1	-	3/6/23/26	0/1/1/1
5	CLR	C	201	2	-	3/10/68/68	0/4/4/4

The worst 5 of 19 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	C	201	CLR	C13-C14	-2.79	1.49	1.55
5	F	201	CLR	C13-C14	-2.77	1.49	1.55
4	D	1801	NAG	C1-C2	2.65	1.56	1.52

Continued on next page...

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	1801	NAG	C1-C2	2.63	1.55	1.52
5	A	1808	CLR	C13-C14	-2.61	1.50	1.55

The worst 5 of 101 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	D	1801	NAG	C2-N2-C7	8.40	134.16	122.90
4	A	1801	NAG	C2-N2-C7	8.38	134.14	122.90
5	F	201	CLR	C13-C17-C20	-5.65	110.77	119.50
5	C	201	CLR	C13-C17-C20	-5.64	110.78	119.50
5	C	201	CLR	C13-C14-C8	-5.61	106.44	114.41

There are no chirality outliers.

5 of 114 torsion outliers are listed below:

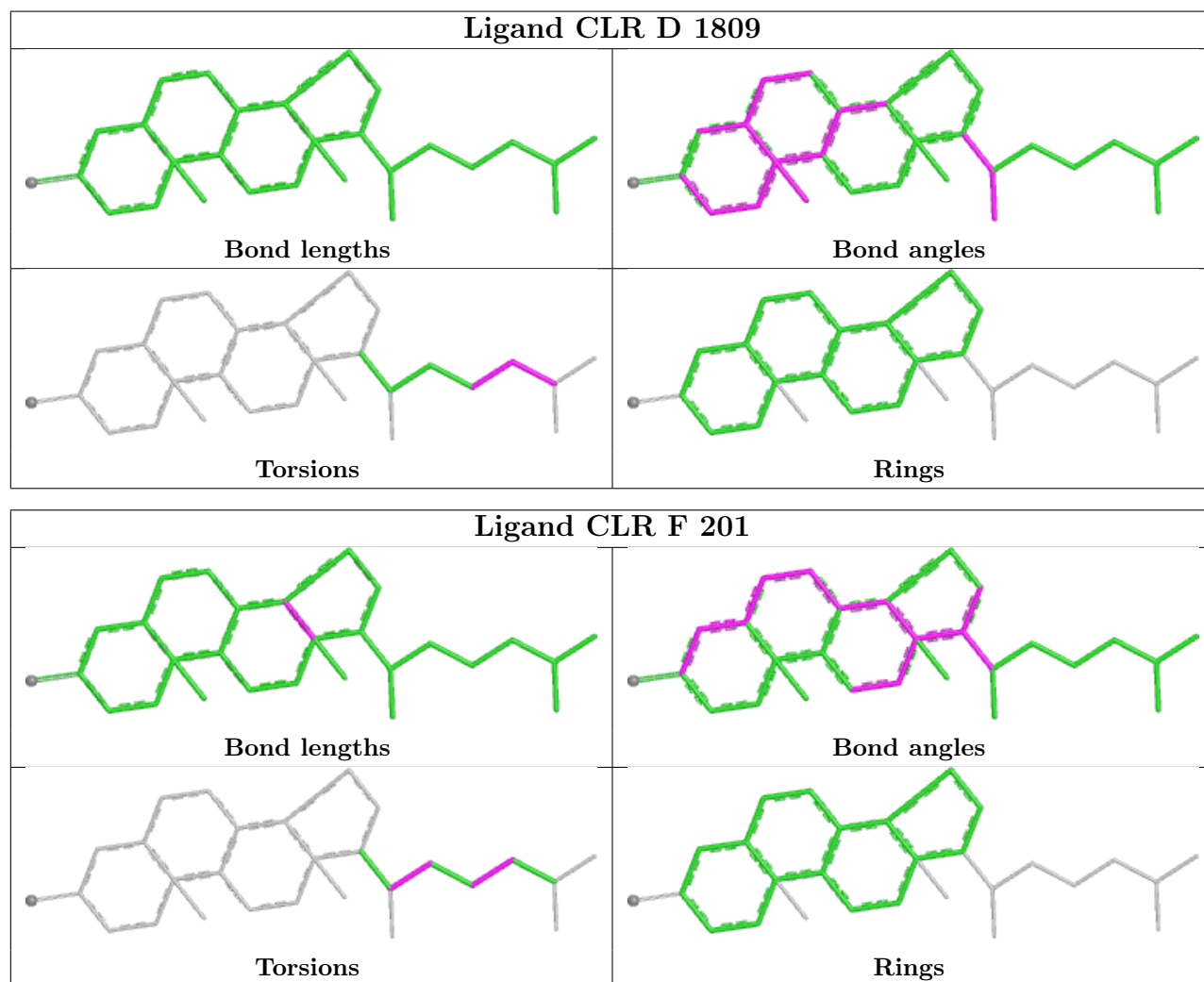
Mol	Chain	Res	Type	Atoms
5	C	201	CLR	C17-C20-C22-C23
5	F	201	CLR	C17-C20-C22-C23
5	A	1810	CLR	C13-C17-C20-C21
5	D	1810	CLR	C13-C17-C20-C21
5	C	201	CLR	C22-C23-C24-C25

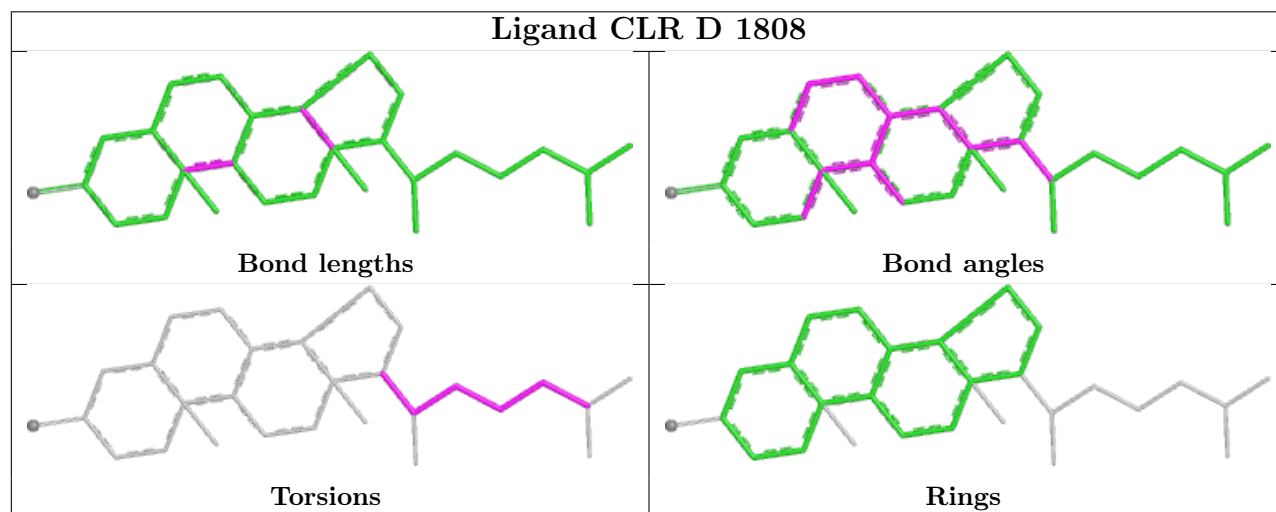
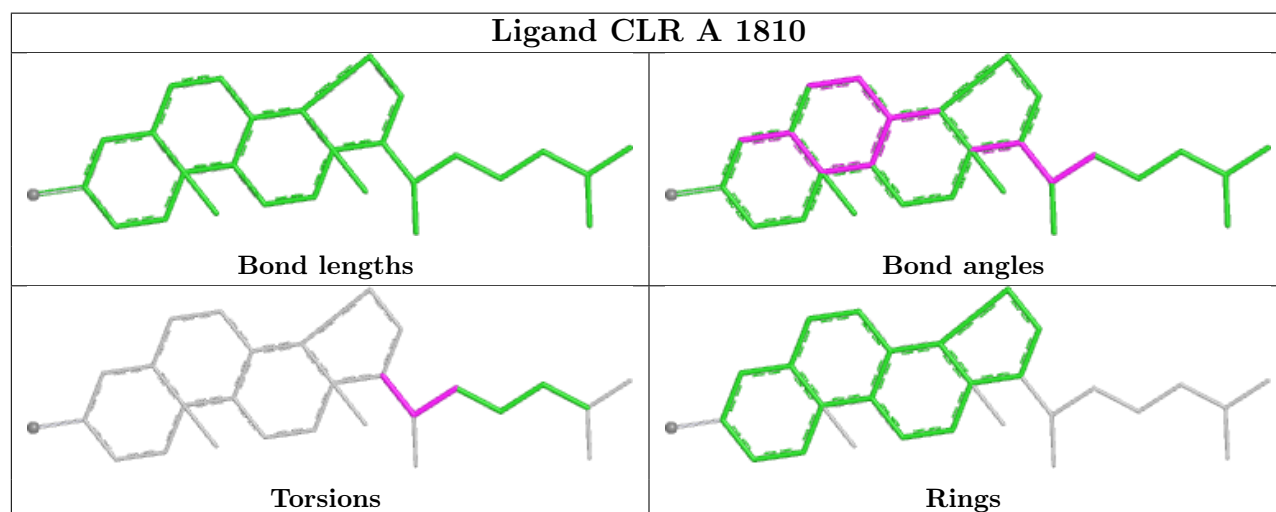
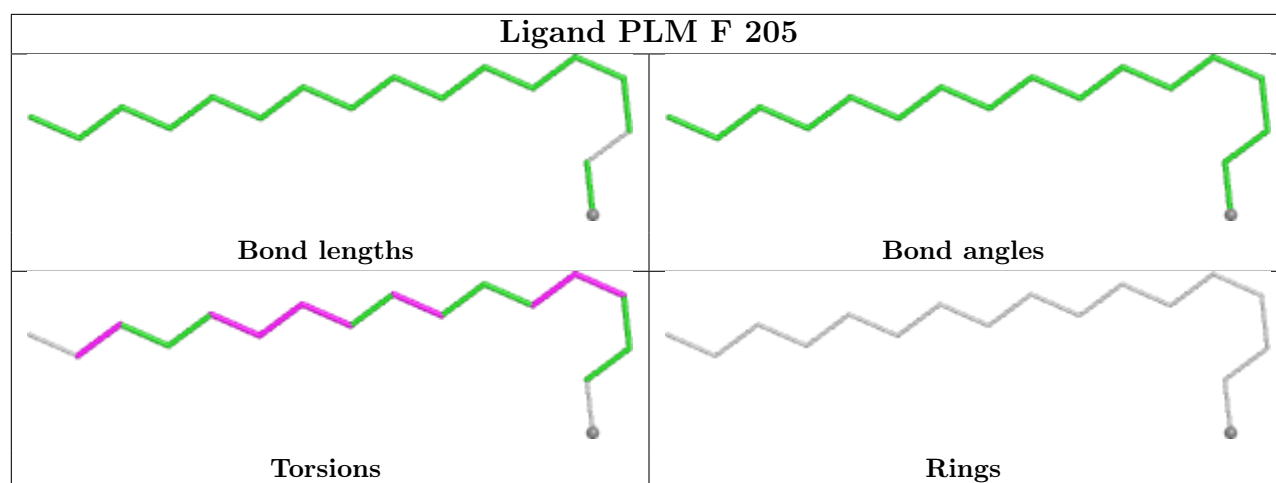
There are no ring outliers.

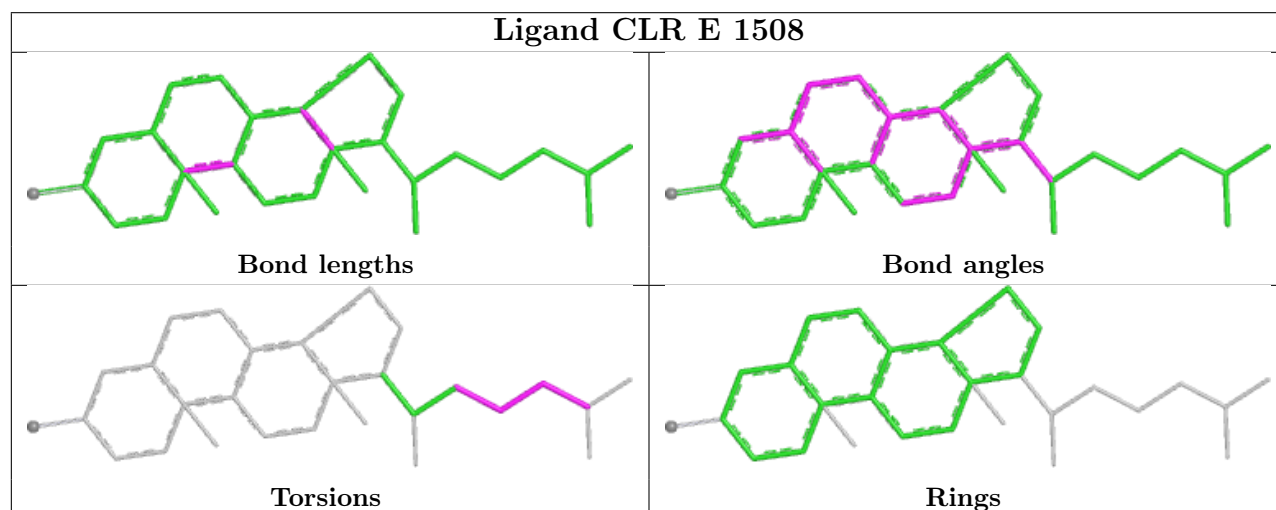
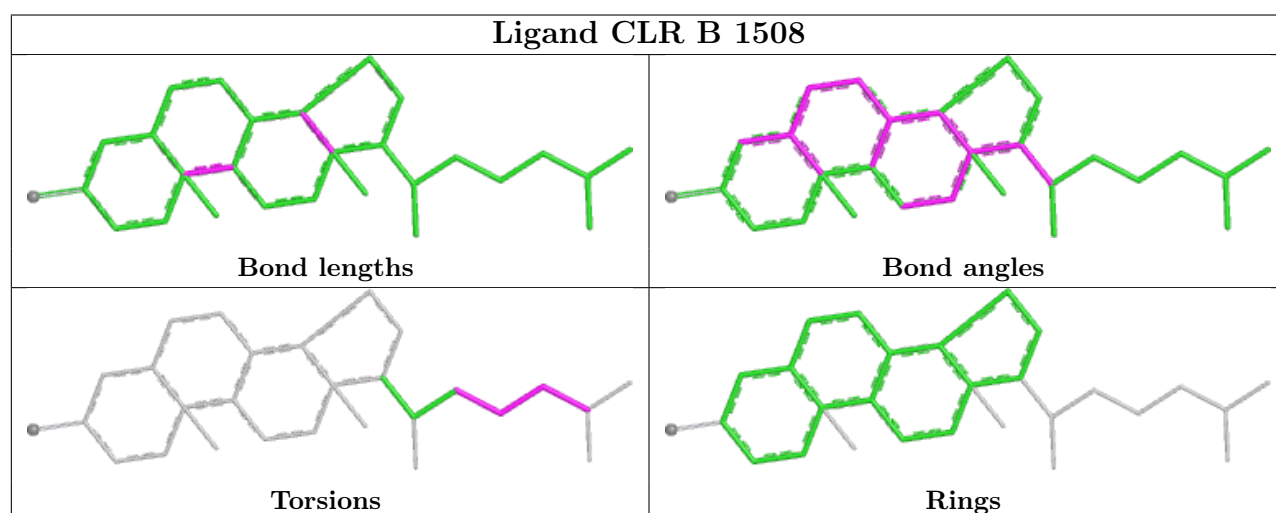
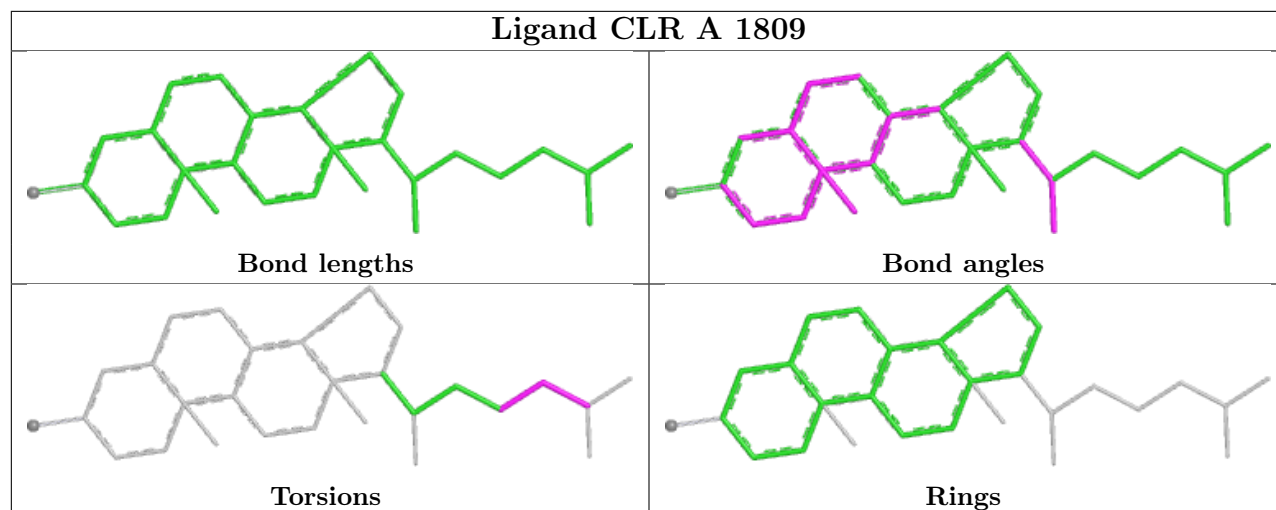
15 monomers are involved in 206 short contacts:

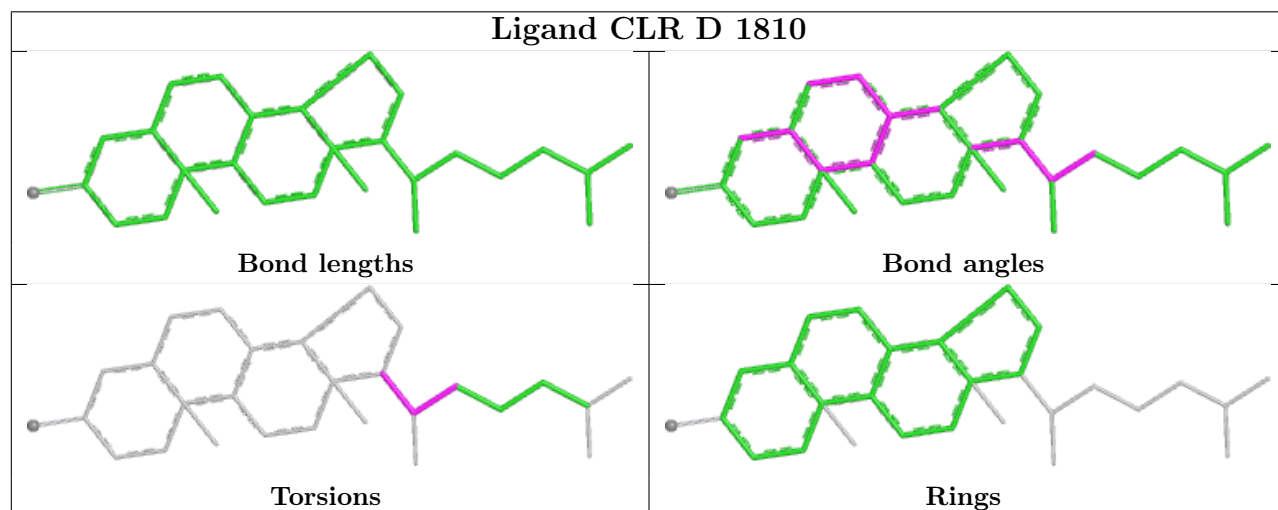
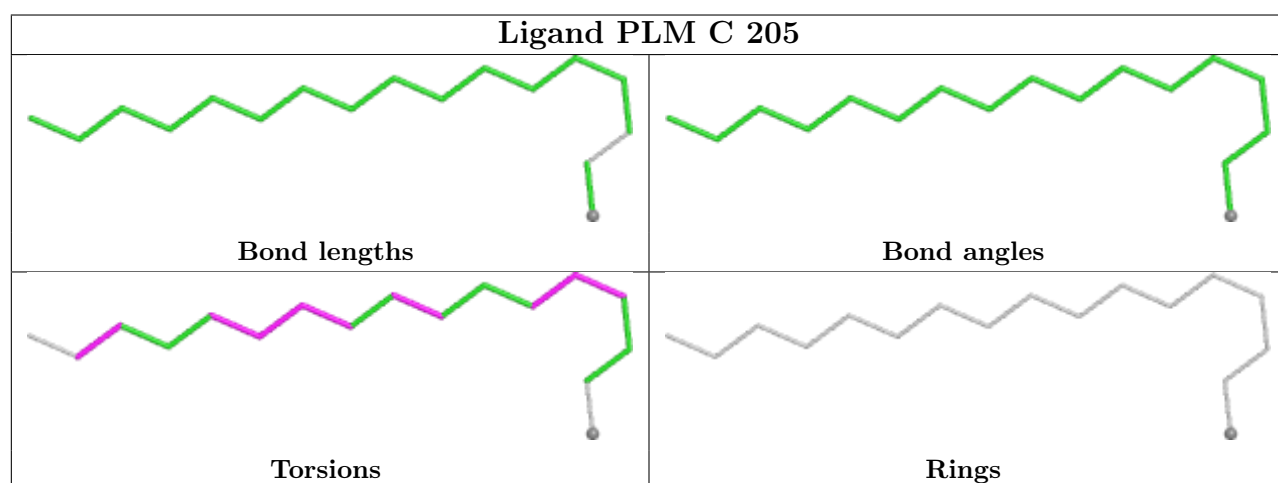
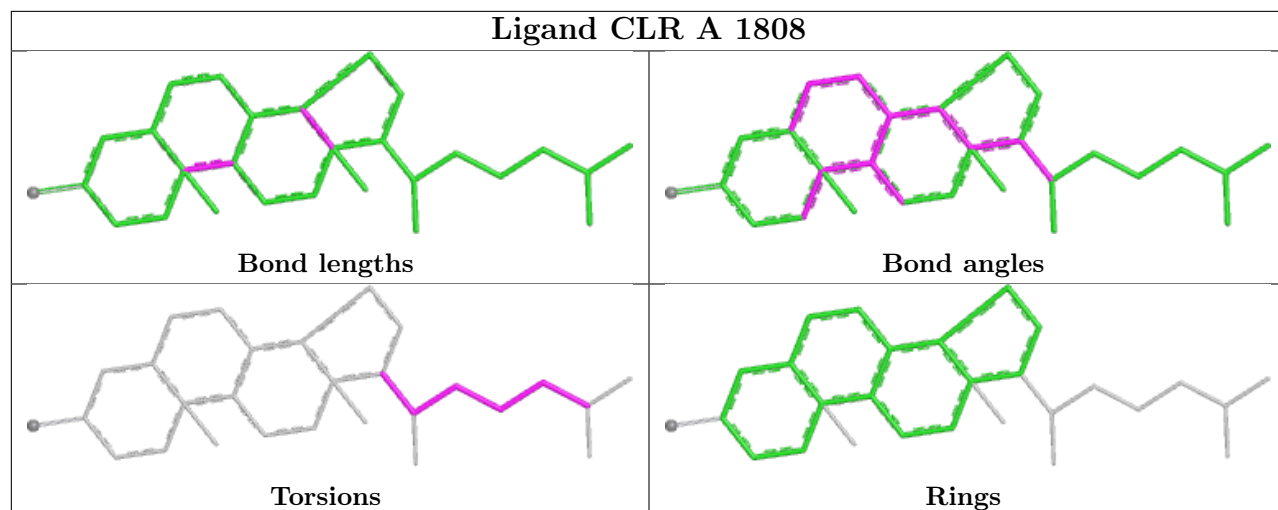
Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	D	1809	CLR	2	0
5	F	201	CLR	19	0
8	F	205	PLM	16	0
5	A	1810	CLR	3	0
4	D	1804	NAG	1	0
4	B	1501	NAG	1	0
5	D	1808	CLR	30	0
4	E	1501	NAG	1	0
5	A	1809	CLR	1	0
5	B	1508	CLR	30	0
5	E	1508	CLR	33	0
5	A	1808	CLR	31	0
8	C	205	PLM	16	0
5	D	1810	CLR	3	0
5	C	201	CLR	19	0

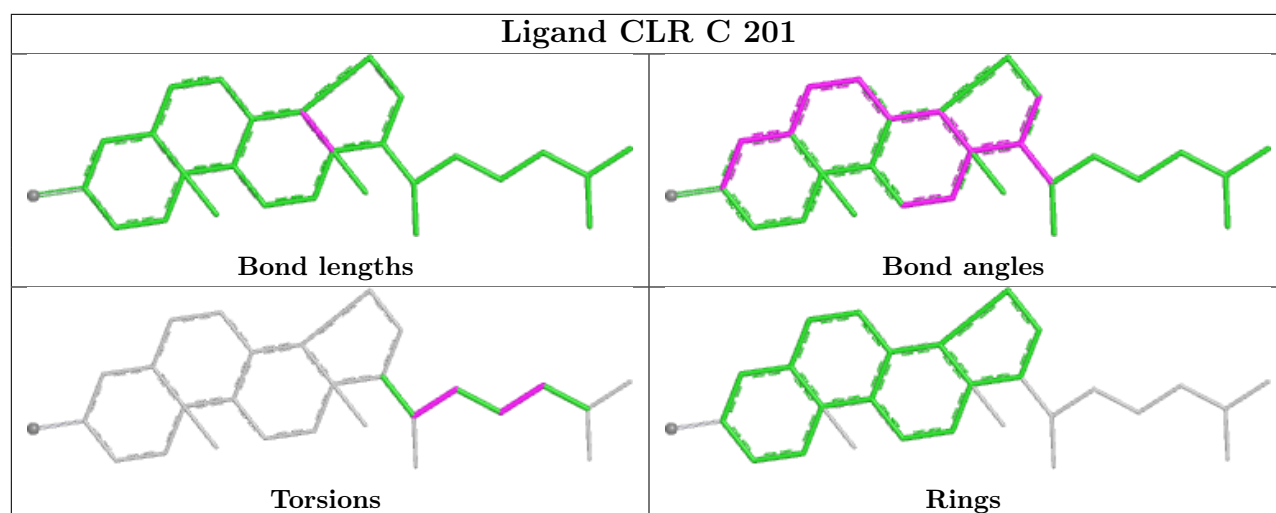
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.











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.

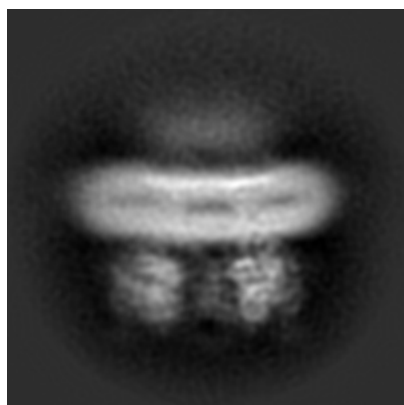
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-0358. These allow visual inspection of the internal detail of the map and identification of artifacts.

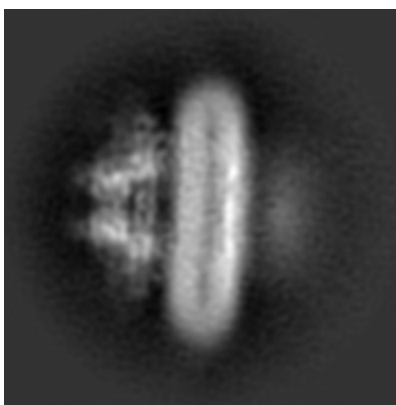
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

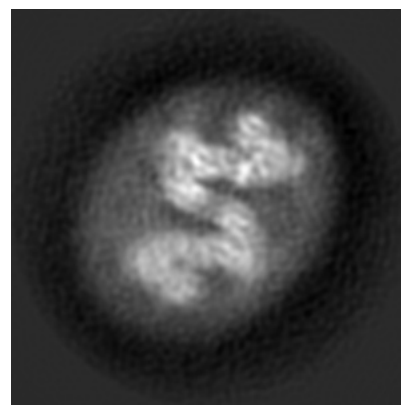
6.1.1 Primary map



X



Y

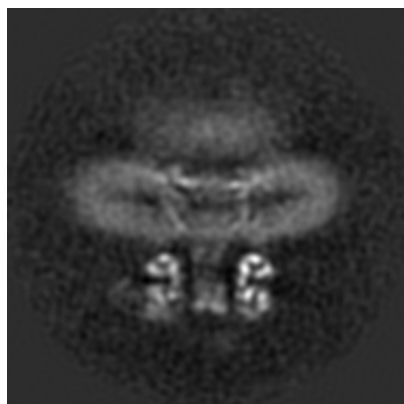


Z

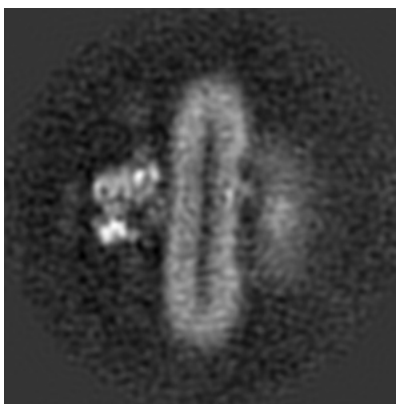
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

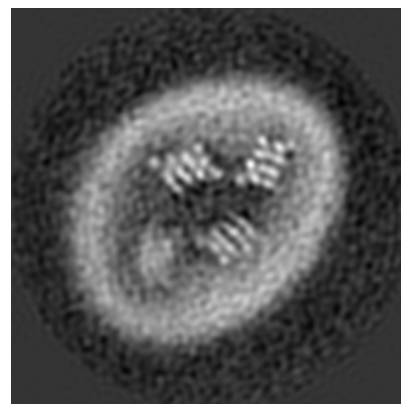
6.2.1 Primary map



X Index: 140



Y Index: 140

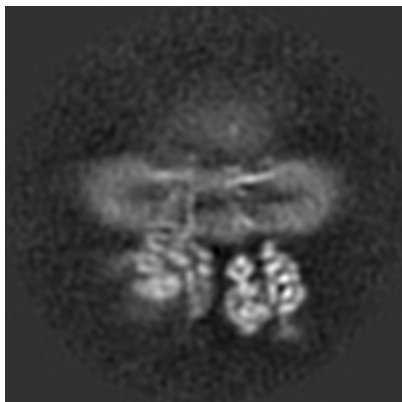


Z Index: 140

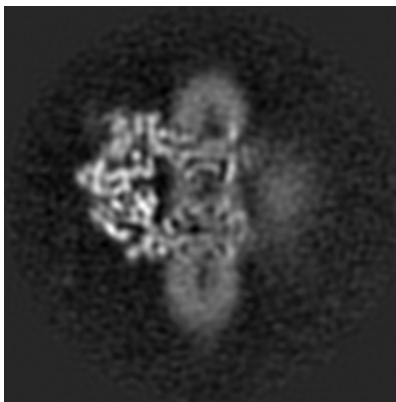
The images above show central slices of the map in three orthogonal directions.

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

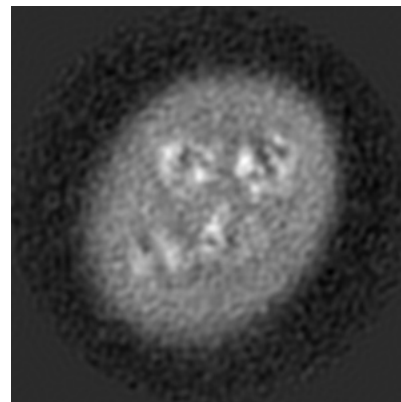
6.3.1 Primary map



X Index: 163



Y Index: 167

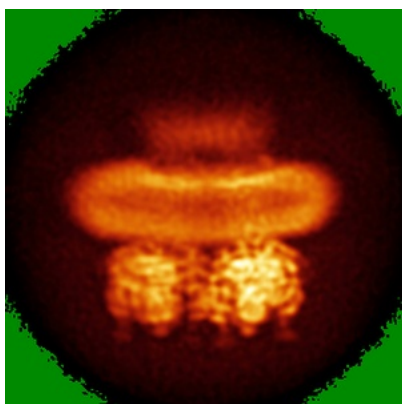


Z Index: 158

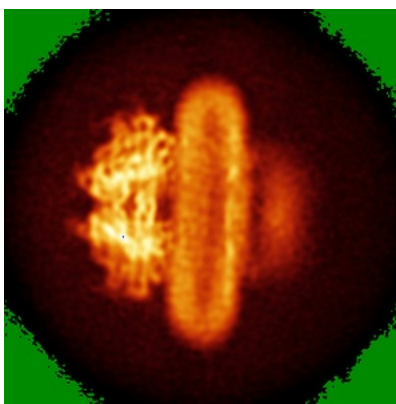
The images above show the largest variance slices of the map in three orthogonal directions.

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

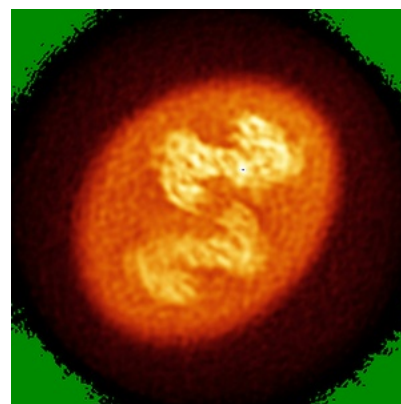
6.4.1 Primary map



X



Y

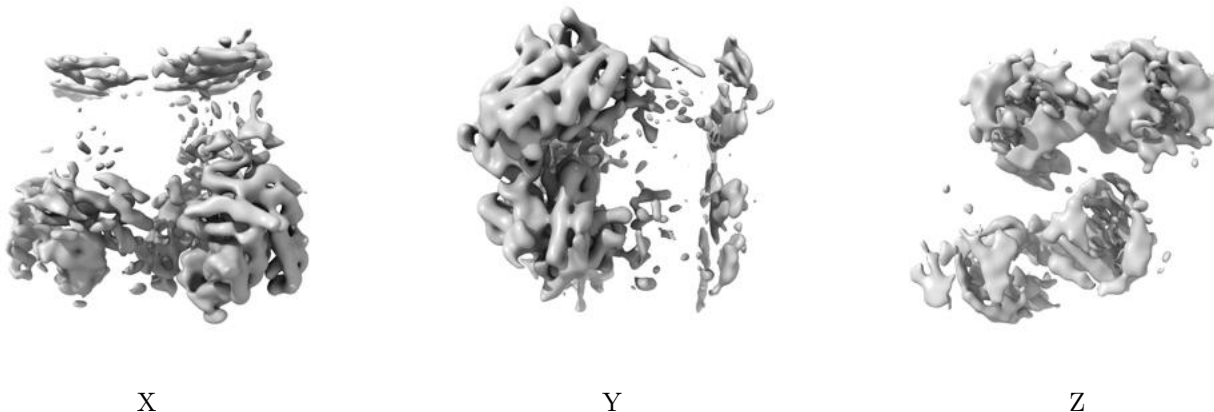


Z

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

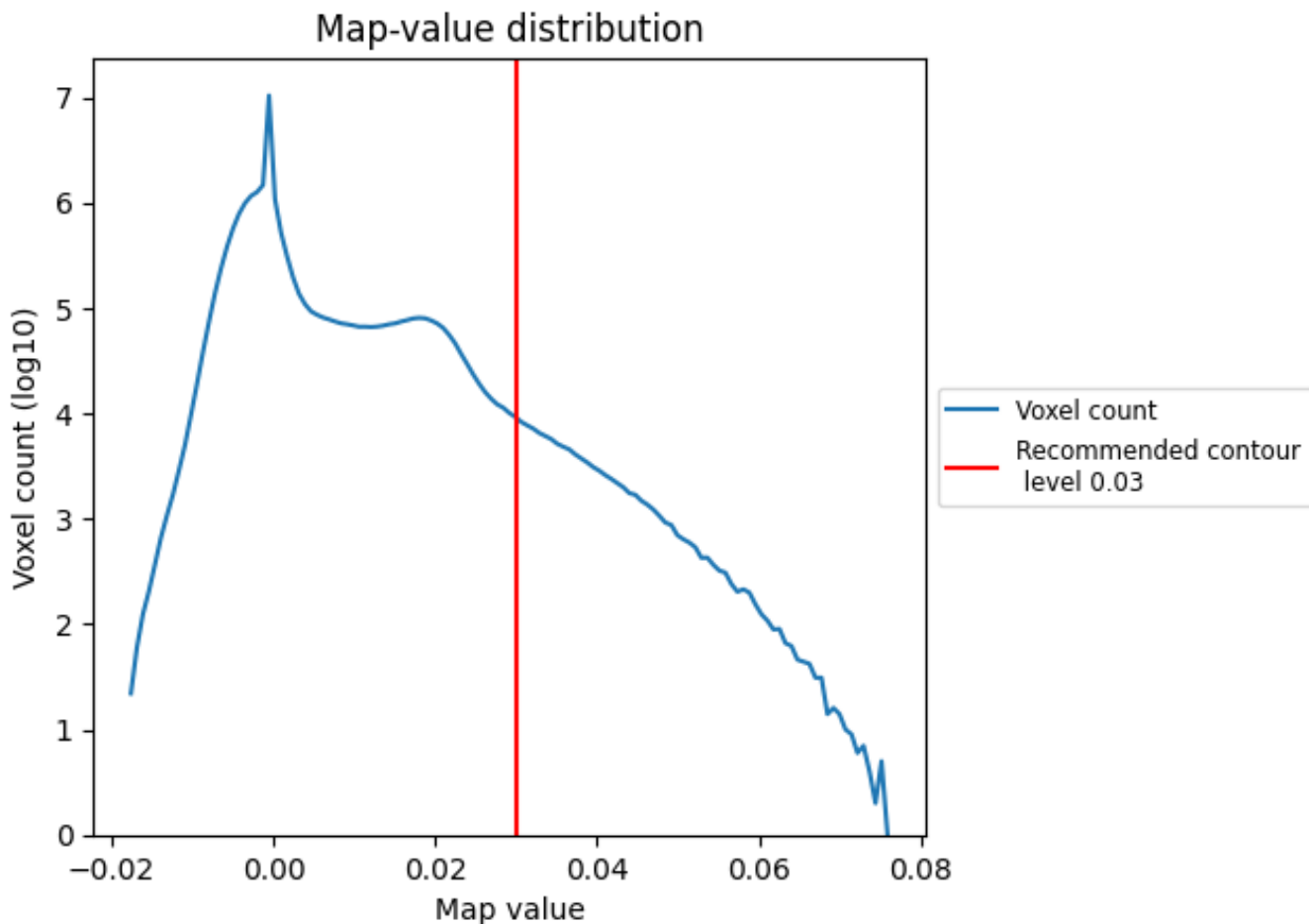
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

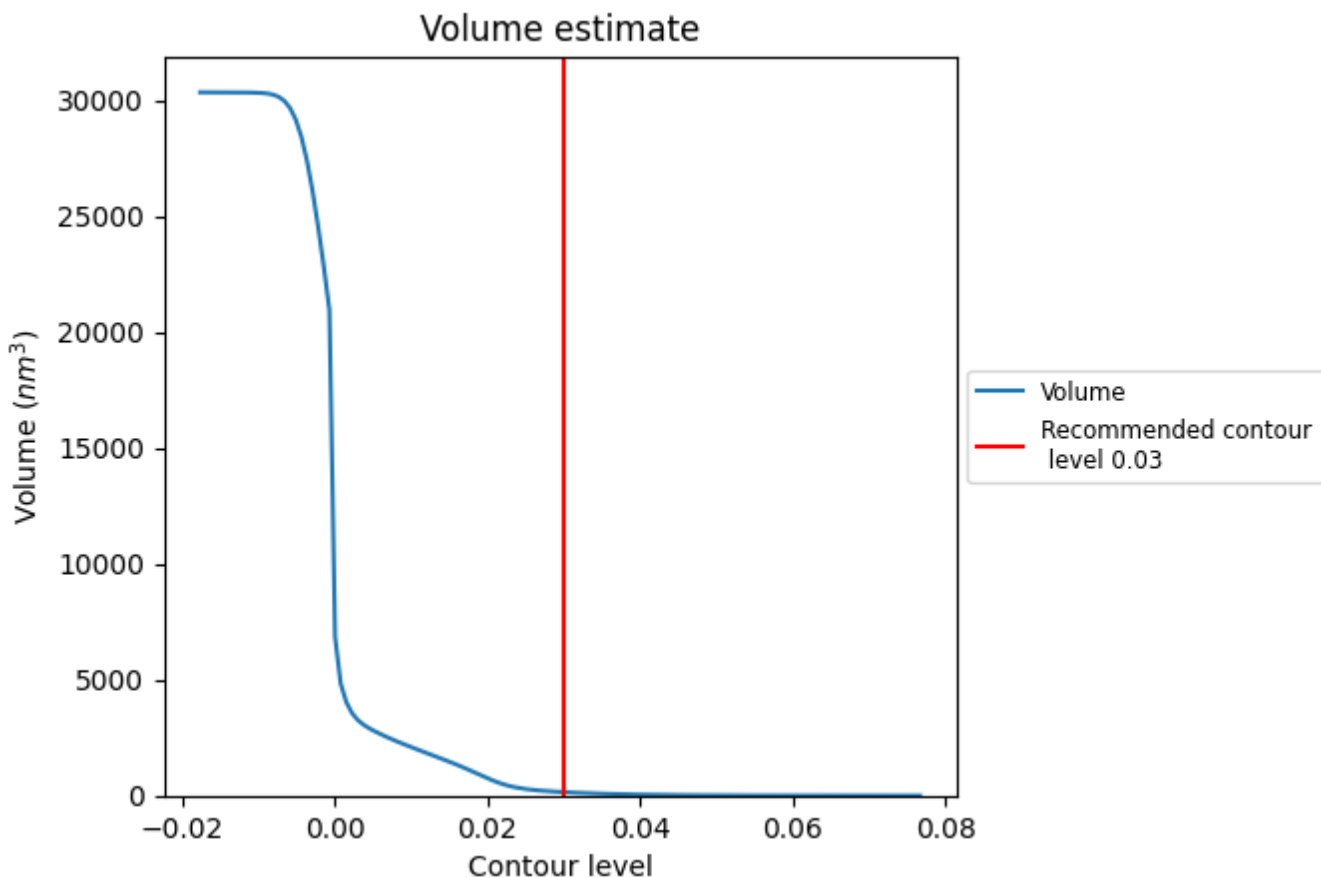
This section contains the results of statistical analysis of the map.

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.

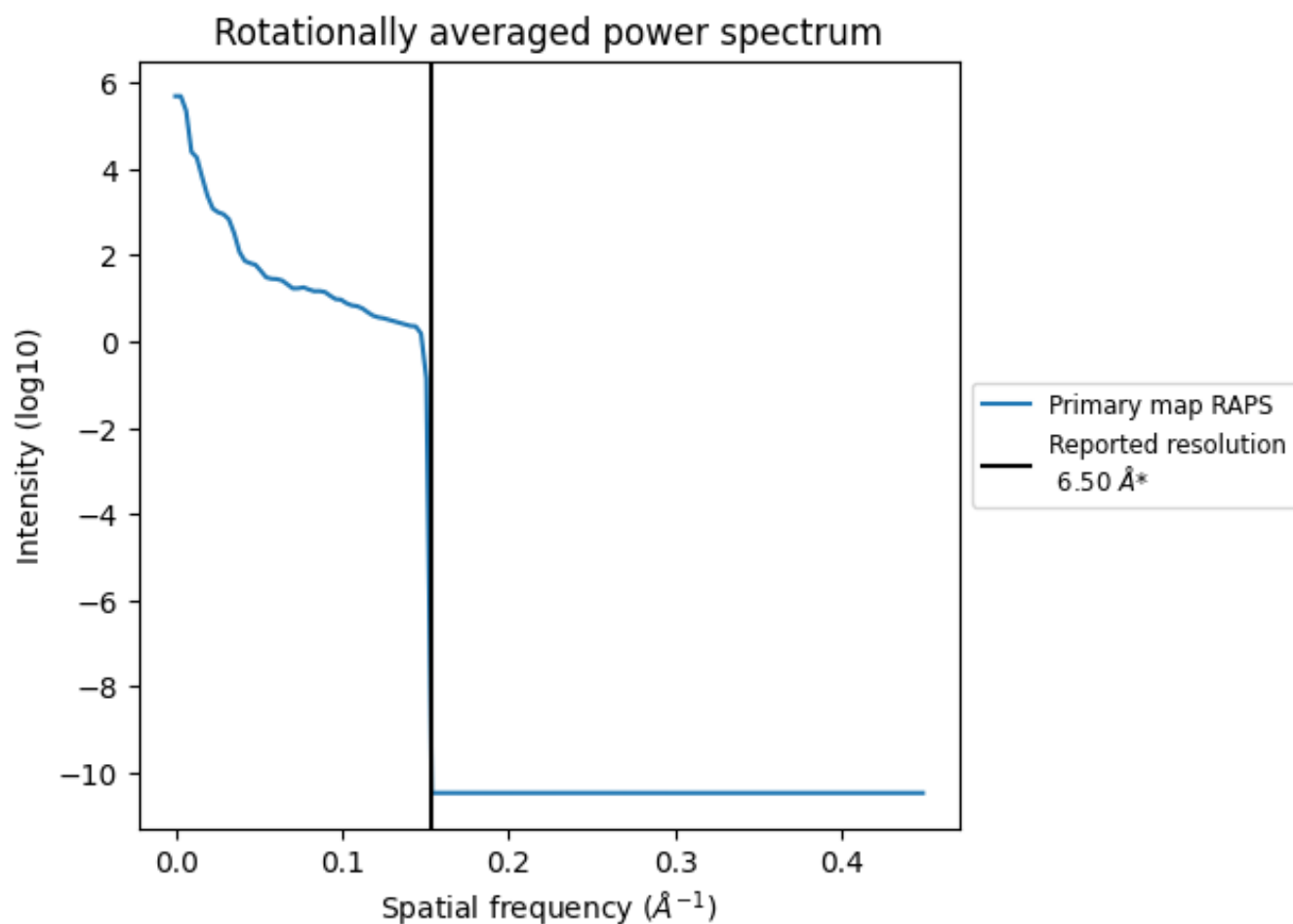
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 148 nm³; this corresponds to an approximate mass of 134 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 [i](#)



*Reported resolution corresponds to spatial frequency of 0.154 Å⁻¹

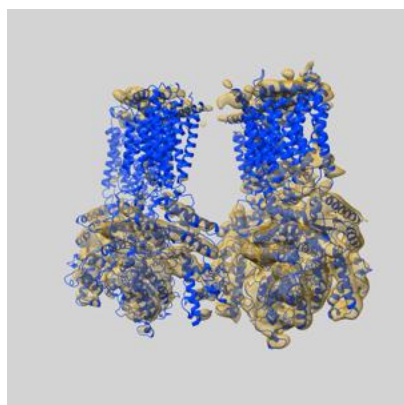
8 Fourier-Shell correlation

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

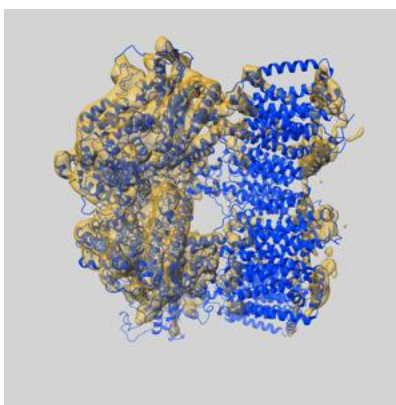
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-0358 and PDB model 6N7K. Per-residue inclusion information can be found in section 3 on page 13.

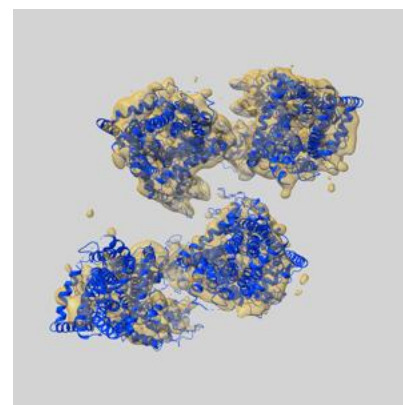
9.1 Map-model overlay [i](#)



X



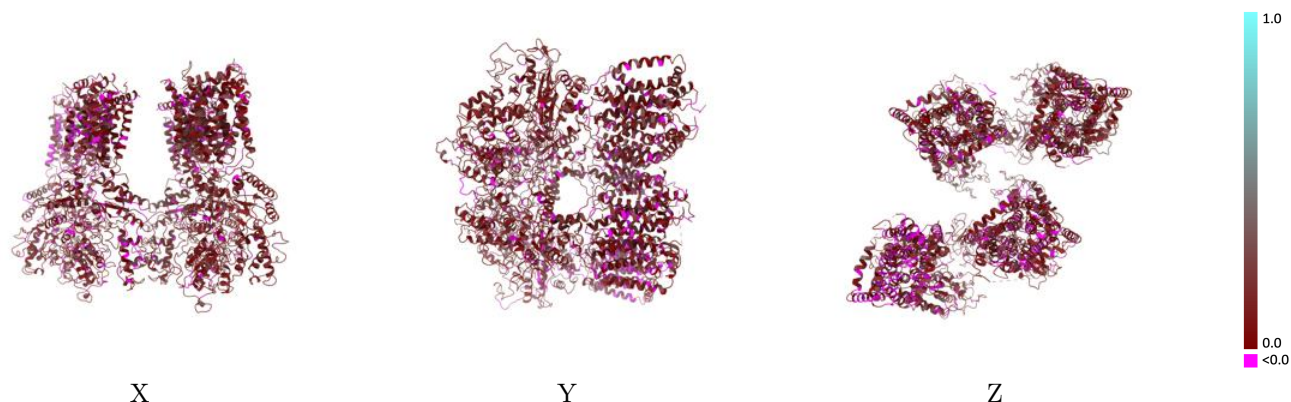
Y



Z

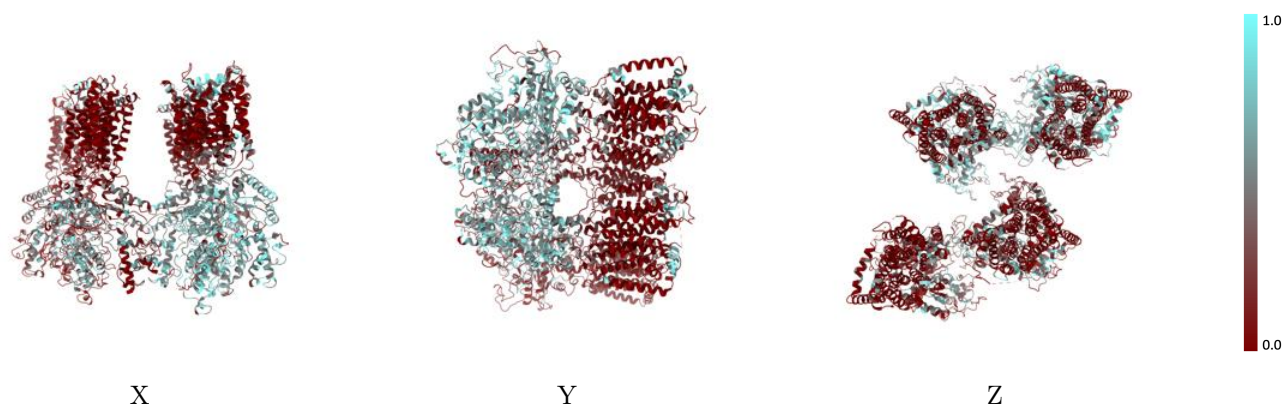
The images above show the 3D surface view of the map at the recommended contour level 0.03 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



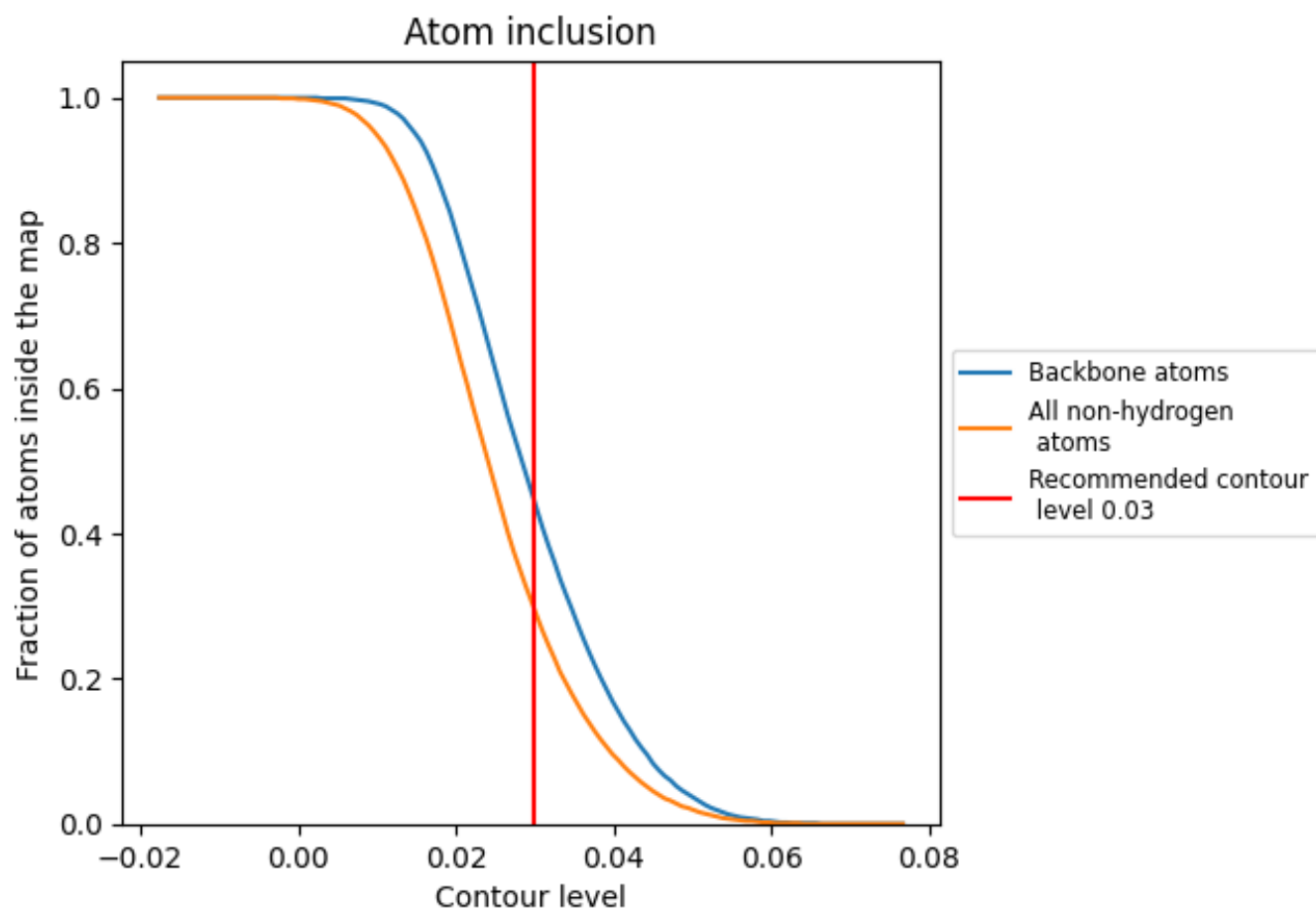
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.03).

9.4 Atom inclusion [i](#)



At the recommended contour level, 44% of all backbone atoms, 29% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary [i](#)

The table lists the average atom inclusion at the recommended contour level (0.03) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.2930	0.1320
A	0.3890	0.1540
B	0.3820	0.1470
C	0.5960	0.1560
D	0.1440	0.1000
E	0.2040	0.1230
F	0.3200	0.1380
G	0.0000	0.1940
H	0.0000	0.2760
I	0.0000	0.1120
J	0.0000	0.0750

