WORLDWIDE wwPDB PROTEIN DATA BANK

Full wwPDB EM Validation Report ⓘ

Mar 2, 2024 – 06:26 PM EST

PDB ID	:	8SZG
EMDB ID	:	EMD-40915
Title	:	Cryo-EM structure of cinacalcet-bound human calcium-sensing receptor CaSR-Gq complex in lipid nanodiscs
Authors	:	He, F.; Wu, C.; Gao, Y.; Skiniotis, G.
Deposited on	:	2023-05-29
Resolution	:	3.60 Å(reported)

The following versions of software and data (see references ⓘ) were used in the production of this report:
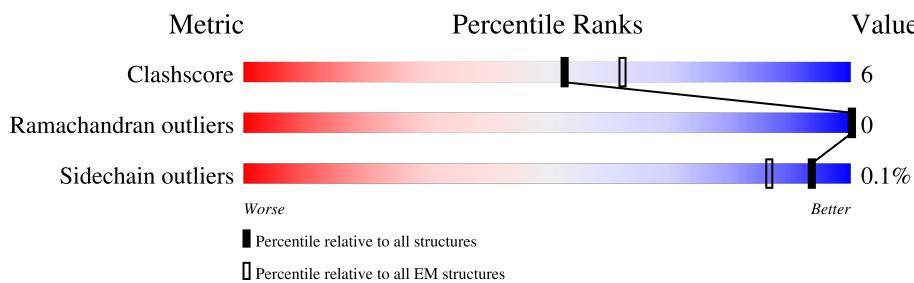
EMDB validation analysis	:	0.0.1.dev70
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance ⓘ

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY
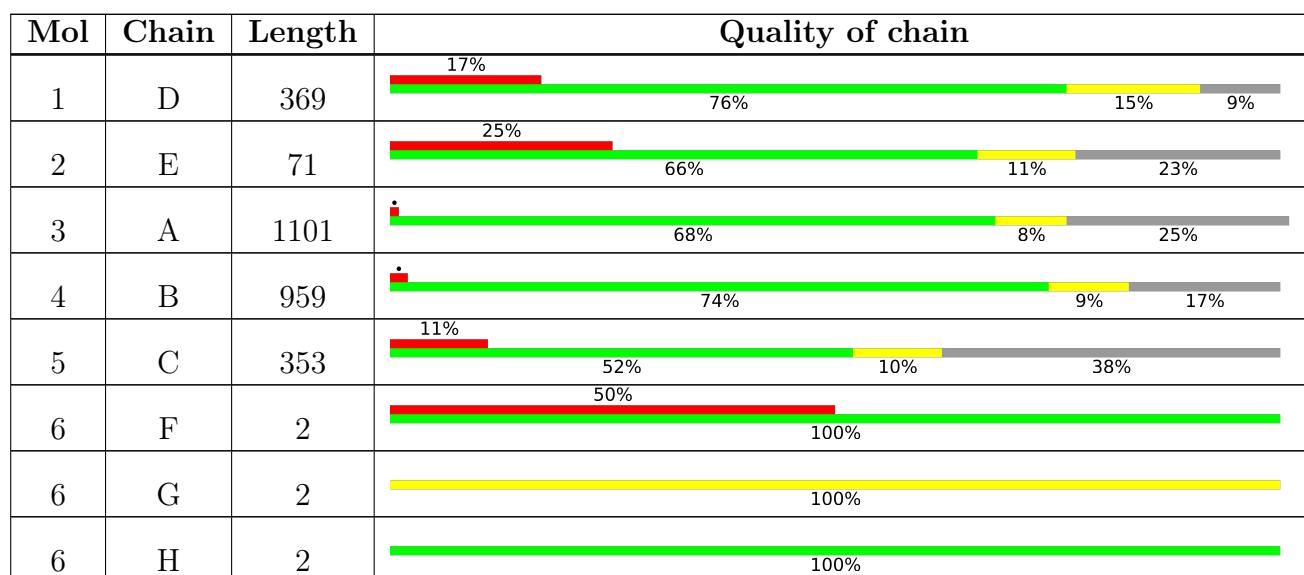
The reported resolution of this entry is 3.60 Å.

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	Percentile Ranks	Value
Clashscore		6
Ramachandran outliers		0
Sidechain outliers		0.1%

Worse   *Better*

▮ Percentile relative to all structures
▯ Percentile relative to all EM structures

Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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 <=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	D	369	17% / 76% / 15% / 9%
2	E	71	25% / 66% / 11% / 23%
3	A	1101	· / 68% / 8% / 25%
4	B	959	· / 74% / 9% / 17%
5	C	353	11% / 52% / 10% / 38%
6	F	2	50% / 100%
6	G	2	100%
6	H	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
13	PO4	B	1406	-	-	X	-
9	PCW	A	1204	X	-	-	-

2 Entry composition ⓘ

There are 15 unique types of molecules in this entry. The entry contains 17571 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 Guanine nucleotide-binding protein G(I)/G(S)/G(T) subunit beta-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	D	335	2404	1502	431	453	18	0	0

There are 30 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
D	-2	GLY	-	expression tag	UNP P62873
D	-1	SER	-	expression tag	UNP P62873
D	0	SER	-	expression tag	UNP P62873
D	1	GLY	-	expression tag	UNP P62873
D	341	GLY	-	expression tag	UNP P62873
D	342	SER	-	expression tag	UNP P62873
D	343	SER	-	expression tag	UNP P62873
D	344	GLY	-	expression tag	UNP P62873
D	345	GLY	-	expression tag	UNP P62873
D	346	GLY	-	expression tag	UNP P62873
D	347	GLY	-	expression tag	UNP P62873
D	348	SER	-	expression tag	UNP P62873
D	349	GLY	-	expression tag	UNP P62873
D	350	GLY	-	expression tag	UNP P62873
D	351	GLY	-	expression tag	UNP P62873
D	352	GLY	-	expression tag	UNP P62873
D	353	SER	-	expression tag	UNP P62873
D	354	SER	-	expression tag	UNP P62873
D	355	GLY	-	expression tag	UNP P62873
D	356	VAL	-	expression tag	UNP P62873
D	357	SER	-	expression tag	UNP P62873
D	358	GLY	-	expression tag	UNP P62873
D	359	TRP	-	expression tag	UNP P62873
D	360	ARG	-	expression tag	UNP P62873
D	361	LEU	-	expression tag	UNP P62873
D	362	PHE	-	expression tag	UNP P62873
D	363	LYS	-	expression tag	UNP P62873

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Chain	Residue	Modelled	Actual	Comment	Reference
D	364	LYS	-	expression tag	UNP P62873
D	365	ILE	-	expression tag	UNP P62873
D	366	SER	-	expression tag	UNP P62873

- Molecule 2 is a protein called Guanine nucleotide-binding protein G(I)/G(S)/G(O) subunit gamma-2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	E	55	368	231	64	70	3	0	0

- Molecule 3 is a protein called Extracellular calcium-sensing receptor.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	A	830	6520	4242	1073	1169	36	0	0

There are 225 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	9	ASP	-	expression tag	UNP P41180
A	10	TYR	-	expression tag	UNP P41180
A	11	LYS	-	expression tag	UNP P41180
A	12	ASP	-	expression tag	UNP P41180
A	13	ASP	-	expression tag	UNP P41180
A	14	ASP	-	expression tag	UNP P41180
A	15	ASP	-	expression tag	UNP P41180
A	16	LYS	-	expression tag	UNP P41180
A	17	ALA	-	expression tag	UNP P41180
A	18	ALA	-	expression tag	UNP P41180
A	895	THR	-	expression tag	UNP P41180
A	896	SER	-	expression tag	UNP P41180
A	897	THR	-	expression tag	UNP P41180
A	898	SER	-	expression tag	UNP P41180
A	899	VAL	-	expression tag	UNP P41180
A	900	THR	-	expression tag	UNP P41180
A	901	SER	-	expression tag	UNP P41180
A	902	VAL	-	expression tag	UNP P41180
A	903	ASN	-	expression tag	UNP P41180
A	904	GLN	-	expression tag	UNP P41180
A	905	ALA	-	expression tag	UNP P41180
A	906	SER	-	expression tag	UNP P41180

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Chain	Residue	Modelled	Actual	Comment	Reference
A	907	THR	-	expression tag	UNP P41180
A	908	SER	-	expression tag	UNP P41180
A	909	ARG	-	expression tag	UNP P41180
A	910	LEU	-	expression tag	UNP P41180
A	911	GLU	-	expression tag	UNP P41180
A	912	GLY	-	expression tag	UNP P41180
A	913	LEU	-	expression tag	UNP P41180
A	914	GLN	-	expression tag	UNP P41180
A	915	SER	-	expression tag	UNP P41180
A	916	GLU	-	expression tag	UNP P41180
A	917	ASN	-	expression tag	UNP P41180
A	918	HIS	-	expression tag	UNP P41180
A	919	ARG	-	expression tag	UNP P41180
A	920	LEU	-	expression tag	UNP P41180
A	921	ARG	-	expression tag	UNP P41180
A	922	MET	-	expression tag	UNP P41180
A	923	LYS	-	expression tag	UNP P41180
A	924	ILE	-	expression tag	UNP P41180
A	925	THR	-	expression tag	UNP P41180
A	926	GLU	-	expression tag	UNP P41180
A	927	LEU	-	expression tag	UNP P41180
A	928	ASP	-	expression tag	UNP P41180
A	929	LYS	-	expression tag	UNP P41180
A	930	ASP	-	expression tag	UNP P41180
A	931	LEU	-	expression tag	UNP P41180
A	932	GLU	-	expression tag	UNP P41180
A	933	GLU	-	expression tag	UNP P41180
A	934	VAL	-	expression tag	UNP P41180
A	935	THR	-	expression tag	UNP P41180
A	936	MET	-	expression tag	UNP P41180
A	937	GLN	-	expression tag	UNP P41180
A	938	LEU	-	expression tag	UNP P41180
A	939	GLN	-	expression tag	UNP P41180
A	940	ASP	-	expression tag	UNP P41180
A	941	THR	-	expression tag	UNP P41180
A	942	PRO	-	expression tag	UNP P41180
A	943	GLU	-	expression tag	UNP P41180
A	944	LYS	-	expression tag	UNP P41180
A	945	LYS	-	expression tag	UNP P41180
A	946	THR	-	expression tag	UNP P41180
A	947	ASN	-	expression tag	UNP P41180
A	948	SER	-	expression tag	UNP P41180

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Chain	Residue	Modelled	Actual	Comment	Reference
A	949	GLY	-	expression tag	UNP P41180
A	950	GLY	-	expression tag	UNP P41180
A	951	SER	-	expression tag	UNP P41180
A	952	VAL	-	expression tag	UNP P41180
A	953	PHE	-	expression tag	UNP P41180
A	954	THR	-	expression tag	UNP P41180
A	955	LEU	-	expression tag	UNP P41180
A	956	GLU	-	expression tag	UNP P41180
A	957	ASP	-	expression tag	UNP P41180
A	958	PHE	-	expression tag	UNP P41180
A	959	VAL	-	expression tag	UNP P41180
A	960	GLY	-	expression tag	UNP P41180
A	961	ASP	-	expression tag	UNP P41180
A	962	TRP	-	expression tag	UNP P41180
A	963	GLU	-	expression tag	UNP P41180
A	964	GLN	-	expression tag	UNP P41180
A	965	THR	-	expression tag	UNP P41180
A	966	ALA	-	expression tag	UNP P41180
A	967	ALA	-	expression tag	UNP P41180
A	968	TYR	-	expression tag	UNP P41180
A	969	ASN	-	expression tag	UNP P41180
A	970	LEU	-	expression tag	UNP P41180
A	971	ASP	-	expression tag	UNP P41180
A	972	GLN	-	expression tag	UNP P41180
A	973	VAL	-	expression tag	UNP P41180
A	974	LEU	-	expression tag	UNP P41180
A	975	GLU	-	expression tag	UNP P41180
A	976	GLN	-	expression tag	UNP P41180
A	977	GLY	-	expression tag	UNP P41180
A	978	GLY	-	expression tag	UNP P41180
A	979	VAL	-	expression tag	UNP P41180
A	980	SER	-	expression tag	UNP P41180
A	981	SER	-	expression tag	UNP P41180
A	982	LEU	-	expression tag	UNP P41180
A	983	LEU	-	expression tag	UNP P41180
A	984	GLN	-	expression tag	UNP P41180
A	985	ASN	-	expression tag	UNP P41180
A	986	LEU	-	expression tag	UNP P41180
A	987	ALA	-	expression tag	UNP P41180
A	988	VAL	-	expression tag	UNP P41180
A	989	SER	-	expression tag	UNP P41180
A	990	VAL	-	expression tag	UNP P41180

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Chain	Residue	Modelled	Actual	Comment	Reference
A	991	THR	-	expression tag	UNP P41180
A	992	PRO	-	expression tag	UNP P41180
A	993	ILE	-	expression tag	UNP P41180
A	994	GLN	-	expression tag	UNP P41180
A	995	ARG	-	expression tag	UNP P41180
A	996	ILE	-	expression tag	UNP P41180
A	997	VAL	-	expression tag	UNP P41180
A	998	ARG	-	expression tag	UNP P41180
A	999	SER	-	expression tag	UNP P41180
A	1000	GLY	-	expression tag	UNP P41180
A	1001	GLU	-	expression tag	UNP P41180
A	1002	ASN	-	expression tag	UNP P41180
A	1003	ALA	-	expression tag	UNP P41180
A	1004	LEU	-	expression tag	UNP P41180
A	1005	LYS	-	expression tag	UNP P41180
A	1006	ILE	-	expression tag	UNP P41180
A	1007	ASP	-	expression tag	UNP P41180
A	1008	ILE	-	expression tag	UNP P41180
A	1009	HIS	-	expression tag	UNP P41180
A	1010	VAL	-	expression tag	UNP P41180
A	1011	ILE	-	expression tag	UNP P41180
A	1012	ILE	-	expression tag	UNP P41180
A	1013	PRO	-	expression tag	UNP P41180
A	1014	TYR	-	expression tag	UNP P41180
A	1015	GLU	-	expression tag	UNP P41180
A	1016	GLY	-	expression tag	UNP P41180
A	1017	LEU	-	expression tag	UNP P41180
A	1018	SER	-	expression tag	UNP P41180
A	1019	ALA	-	expression tag	UNP P41180
A	1020	ASP	-	expression tag	UNP P41180
A	1021	GLN	-	expression tag	UNP P41180
A	1022	MET	-	expression tag	UNP P41180
A	1023	ALA	-	expression tag	UNP P41180
A	1024	GLN	-	expression tag	UNP P41180
A	1025	ILE	-	expression tag	UNP P41180
A	1026	GLU	-	expression tag	UNP P41180
A	1027	GLU	-	expression tag	UNP P41180
A	1028	VAL	-	expression tag	UNP P41180
A	1029	PHE	-	expression tag	UNP P41180
A	1030	LYS	-	expression tag	UNP P41180
A	1031	VAL	-	expression tag	UNP P41180
A	1032	VAL	-	expression tag	UNP P41180

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Chain	Residue	Modelled	Actual	Comment	Reference
A	1033	TYR	-	expression tag	UNP P41180
A	1034	PRO	-	expression tag	UNP P41180
A	1035	VAL	-	expression tag	UNP P41180
A	1036	ASP	-	expression tag	UNP P41180
A	1037	ASP	-	expression tag	UNP P41180
A	1038	HIS	-	expression tag	UNP P41180
A	1039	HIS	-	expression tag	UNP P41180
A	1040	PHE	-	expression tag	UNP P41180
A	1041	LYS	-	expression tag	UNP P41180
A	1042	VAL	-	expression tag	UNP P41180
A	1043	ILE	-	expression tag	UNP P41180
A	1044	LEU	-	expression tag	UNP P41180
A	1045	PRO	-	expression tag	UNP P41180
A	1046	TYR	-	expression tag	UNP P41180
A	1047	GLY	-	expression tag	UNP P41180
A	1048	THR	-	expression tag	UNP P41180
A	1049	LEU	-	expression tag	UNP P41180
A	1050	VAL	-	expression tag	UNP P41180
A	1051	ILE	-	expression tag	UNP P41180
A	1052	ASP	-	expression tag	UNP P41180
A	1053	GLY	-	expression tag	UNP P41180
A	1054	VAL	-	expression tag	UNP P41180
A	1055	THR	-	expression tag	UNP P41180
A	1056	PRO	-	expression tag	UNP P41180
A	1057	ASN	-	expression tag	UNP P41180
A	1058	MET	-	expression tag	UNP P41180
A	1059	LEU	-	expression tag	UNP P41180
A	1060	ASN	-	expression tag	UNP P41180
A	1061	TYR	-	expression tag	UNP P41180
A	1062	PHE	-	expression tag	UNP P41180
A	1063	GLY	-	expression tag	UNP P41180
A	1064	ARG	-	expression tag	UNP P41180
A	1065	PRO	-	expression tag	UNP P41180
A	1066	TYR	-	expression tag	UNP P41180
A	1067	GLU	-	expression tag	UNP P41180
A	1068	GLY	-	expression tag	UNP P41180
A	1069	ILE	-	expression tag	UNP P41180
A	1070	ALA	-	expression tag	UNP P41180
A	1071	VAL	-	expression tag	UNP P41180
A	1072	PHE	-	expression tag	UNP P41180
A	1073	ASP	-	expression tag	UNP P41180
A	1074	GLY	-	expression tag	UNP P41180

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Chain	Residue	Modelled	Actual	Comment	Reference
A	1075	LYS	-	expression tag	UNP P41180
A	1076	LYS	-	expression tag	UNP P41180
A	1077	ILE	-	expression tag	UNP P41180
A	1078	THR	-	expression tag	UNP P41180
A	1079	VAL	-	expression tag	UNP P41180
A	1080	THR	-	expression tag	UNP P41180
A	1081	GLY	-	expression tag	UNP P41180
A	1082	THR	-	expression tag	UNP P41180
A	1083	LEU	-	expression tag	UNP P41180
A	1084	TRP	-	expression tag	UNP P41180
A	1085	ASN	-	expression tag	UNP P41180
A	1086	GLY	-	expression tag	UNP P41180
A	1087	ASN	-	expression tag	UNP P41180
A	1088	LYS	-	expression tag	UNP P41180
A	1089	ILE	-	expression tag	UNP P41180
A	1090	ILE	-	expression tag	UNP P41180
A	1091	ASP	-	expression tag	UNP P41180
A	1092	GLU	-	expression tag	UNP P41180
A	1093	ARG	-	expression tag	UNP P41180
A	1094	LEU	-	expression tag	UNP P41180
A	1095	ILE	-	expression tag	UNP P41180
A	1096	THR	-	expression tag	UNP P41180
A	1097	PRO	-	expression tag	UNP P41180
A	1098	ASP	-	expression tag	UNP P41180
A	1099	GLY	-	expression tag	UNP P41180
A	1100	SER	-	expression tag	UNP P41180
A	1101	MET	-	expression tag	UNP P41180
A	1102	LEU	-	expression tag	UNP P41180
A	1103	PHE	-	expression tag	UNP P41180
A	1104	ARG	-	expression tag	UNP P41180
A	1105	VAL	-	expression tag	UNP P41180
A	1106	THR	-	expression tag	UNP P41180
A	1107	ILE	-	expression tag	UNP P41180
A	1108	ASN	-	expression tag	UNP P41180
A	1109	SER	-	expression tag	UNP P41180

- Molecule 4 is a protein called Extracellular calcium-sensing receptor.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	B	796	6279	4080	1026	1138	35	0	0

There are 83 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	-13	TRP	-	expression tag	UNP P41180
B	-12	SER	-	expression tag	UNP P41180
B	-11	HIS	-	expression tag	UNP P41180
B	-10	PRO	-	expression tag	UNP P41180
B	-9	GLN	-	expression tag	UNP P41180
B	-8	PHE	-	expression tag	UNP P41180
B	-7	GLU	-	expression tag	UNP P41180
B	-6	LYS	-	expression tag	UNP P41180
B	-5	GLY	-	expression tag	UNP P41180
B	-4	GLY	-	expression tag	UNP P41180
B	-3	GLY	-	expression tag	UNP P41180
B	-2	SER	-	expression tag	UNP P41180
B	-1	GLY	-	expression tag	UNP P41180
B	0	GLY	-	expression tag	UNP P41180
B	1	GLY	-	expression tag	UNP P41180
B	2	SER	-	expression tag	UNP P41180
B	3	GLY	-	expression tag	UNP P41180
B	4	GLY	-	expression tag	UNP P41180
B	5	SER	-	expression tag	UNP P41180
B	6	ALA	-	expression tag	UNP P41180
B	7	TRP	-	expression tag	UNP P41180
B	8	SER	-	expression tag	UNP P41180
B	9	HIS	-	expression tag	UNP P41180
B	10	PRO	-	expression tag	UNP P41180
B	11	GLN	-	expression tag	UNP P41180
B	12	PHE	-	expression tag	UNP P41180
B	13	GLU	-	expression tag	UNP P41180
B	14	LYS	-	expression tag	UNP P41180
B	15	GLY	-	expression tag	UNP P41180
B	16	SER	-	expression tag	UNP P41180
B	17	ALA	-	expression tag	UNP P41180
B	18	ALA	-	expression tag	UNP P41180
B	895	THR	-	expression tag	UNP P41180
B	896	GLY	-	expression tag	UNP P41180
B	897	SER	-	expression tag	UNP P41180
B	898	SER	-	expression tag	UNP P41180
B	899	THR	-	expression tag	UNP P41180
B	900	ASN	-	expression tag	UNP P41180
B	901	ASN	-	expression tag	UNP P41180
B	902	ASN	-	expression tag	UNP P41180
B	903	GLU	-	expression tag	UNP P41180
B	904	GLU	-	expression tag	UNP P41180
B	905	GLU	-	expression tag	UNP P41180

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Chain	Residue	Modelled	Actual	Comment	Reference
B	906	LYS	-	expression tag	UNP P41180
B	907	SER	-	expression tag	UNP P41180
B	908	ARG	-	expression tag	UNP P41180
B	909	LEU	-	expression tag	UNP P41180
B	910	LEU	-	expression tag	UNP P41180
B	911	GLU	-	expression tag	UNP P41180
B	912	LYS	-	expression tag	UNP P41180
B	913	GLU	-	expression tag	UNP P41180
B	914	ASN	-	expression tag	UNP P41180
B	915	ARG	-	expression tag	UNP P41180
B	916	GLU	-	expression tag	UNP P41180
B	917	LEU	-	expression tag	UNP P41180
B	918	GLU	-	expression tag	UNP P41180
B	919	LYS	-	expression tag	UNP P41180
B	920	ILE	-	expression tag	UNP P41180
B	921	ILE	-	expression tag	UNP P41180
B	922	ALA	-	expression tag	UNP P41180
B	923	GLU	-	expression tag	UNP P41180
B	924	LYS	-	expression tag	UNP P41180
B	925	GLU	-	expression tag	UNP P41180
B	926	GLU	-	expression tag	UNP P41180
B	927	ARG	-	expression tag	UNP P41180
B	928	VAL	-	expression tag	UNP P41180
B	929	SER	-	expression tag	UNP P41180
B	930	GLU	-	expression tag	UNP P41180
B	931	LEU	-	expression tag	UNP P41180
B	932	ARG	-	expression tag	UNP P41180
B	933	HIS	-	expression tag	UNP P41180
B	934	GLN	-	expression tag	UNP P41180
B	935	LEU	-	expression tag	UNP P41180
B	936	GLN	-	expression tag	UNP P41180
B	937	SER	-	expression tag	UNP P41180
B	938	ARG	-	expression tag	UNP P41180
B	939	GLN	-	expression tag	UNP P41180
B	940	GLN	-	expression tag	UNP P41180
B	941	LEU	-	expression tag	UNP P41180
B	942	LYS	-	expression tag	UNP P41180
B	943	LYS	-	expression tag	UNP P41180
B	944	THR	-	expression tag	UNP P41180
B	945	ASN	-	expression tag	UNP P41180

- Molecule 5 is a protein called Guanine nucleotide-binding protein G(q) subunit alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	C	219	Total 1640	C 1057	N 281	O 294	S 8	0	0

There are 22 discrepancies between the modelled and reference sequences:
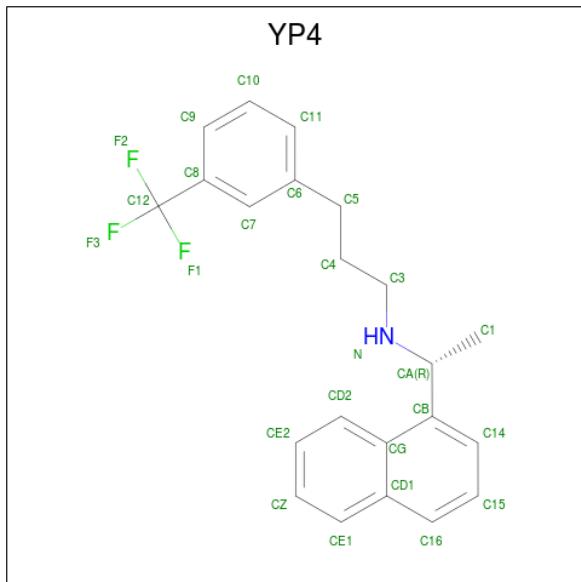
Chain	Residue	Modelled	Actual	Comment	Reference
C	7	MET	-	initiating methionine	UNP P50148
C	8	GLY	-	expression tag	UNP P50148
C	9	CYS	-	expression tag	UNP P50148
C	10	THR	-	expression tag	UNP P50148
C	11	LEU	-	expression tag	UNP P50148
C	12	SER	-	expression tag	UNP P50148
C	13	ALA	-	expression tag	UNP P50148
C	14	GLU	-	expression tag	UNP P50148
C	15	ASP	-	expression tag	UNP P50148
C	16	LYS	-	expression tag	UNP P50148
C	17	ALA	-	expression tag	UNP P50148
C	18	ALA	-	expression tag	UNP P50148
C	19	VAL	-	expression tag	UNP P50148
C	20	GLU	-	expression tag	UNP P50148
C	21	ARG	-	expression tag	UNP P50148
C	22	SER	-	expression tag	UNP P50148
C	23	LYS	-	expression tag	UNP P50148
C	24	MET	-	expression tag	UNP P50148
C	25	ILE	-	expression tag	UNP P50148
C	26	ASP	-	expression tag	UNP P50148
C	27	ARG	-	expression tag	UNP P50148
C	28	ASN	-	expression tag	UNP P50148

- Molecule 6 is an oligosaccharide called 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-a cetamido-2-deoxy-beta-D-glucopyranose.
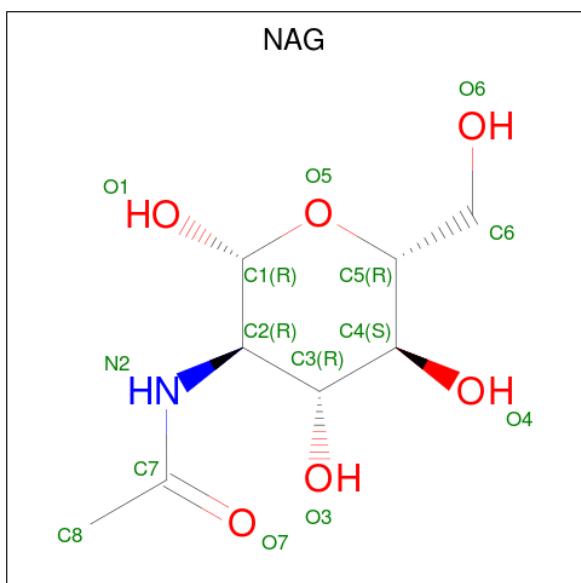
Mol	Chain	Residues	Atoms				AltConf	Trace
6	F	2	Total 28	C 16	N 2	O 10	0	0
6	G	2	Total 28	C 16	N 2	O 10	0	0
6	H	2	Total 28	C 16	N 2	O 10	0	0

- Molecule 7 is N-[(1R)-1-(naphthalen-1-yl)ethyl]-3-[3-(trifluoromethyl)phenyl]propan-1 -amine (three-letter code: YP4) (formula: $C_{22}H_{22}F_3N$) (labeled as "Ligand of Interest" by depositor).
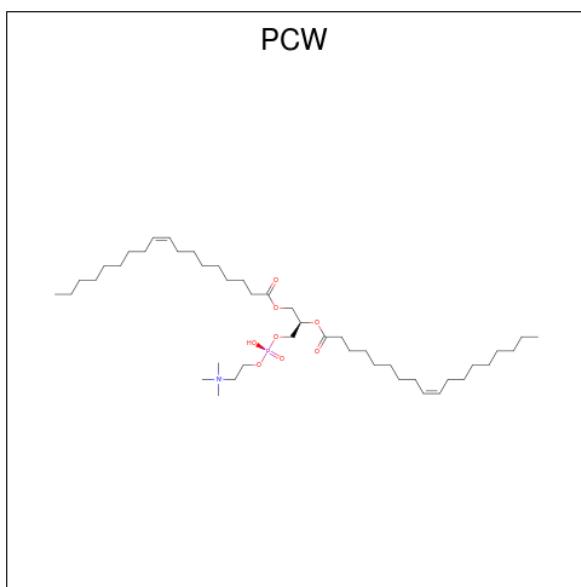
Mol	Chain	Residues	Atoms				AltConf
7	A	1	Total	C	F	N	0
			26	22	3	1	
7	B	1	Total	C	F	N	0
			26	22	3	1	

- Molecule 8 is 2-acetamido-2-deoxy-beta-D-glucopyranose (three-letter code: NAG) (formula: $C_8H_{15}NO_6$).
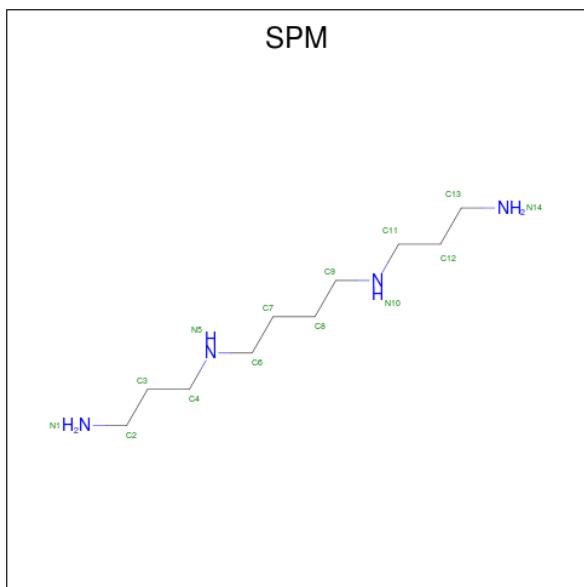
Mol	Chain	Residues	Atoms				AltConf
8	A	1	Total 14	C 8	N 1	O 5	0
8	A	1	Total 14	C 8	N 1	O 5	0
8	B	1	Total 14	C 8	N 1	O 5	0
8	B	1	Total 14	C 8	N 1	O 5	0

- Molecule 9 is 1,2-DIOLEOYL-SN-GLYCERO-3-PHOSPHOCHOLINE (three-letter code: PCW) (formula: $C_{44}H_{85}NO_8P$) (labeled as "Ligand of Interest" by depositor).

PCW

Mol	Chain	Residues	Atoms					AltConf
9	A	1	Total 54	C 44	N 1	O 8	P 1	0

- Molecule 10 is SPERMINE (three-letter code: SPM) (formula: $C_{10}H_{26}N_4$) (labeled as "Ligand of Interest" by depositor).

SPM
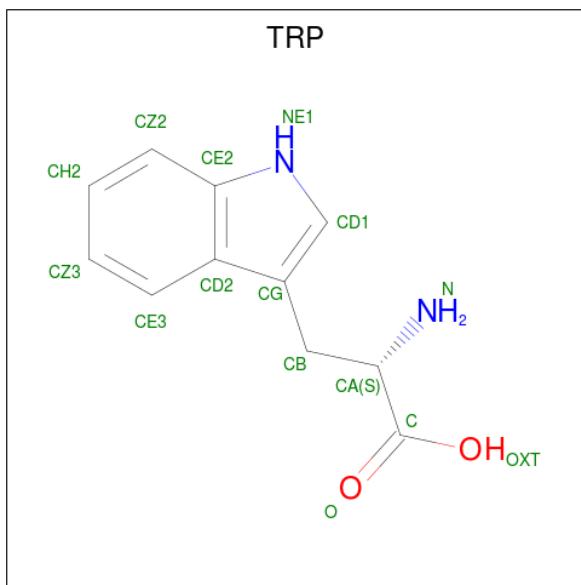
Mol	Chain	Residues	Atoms			AltConf
10	A	1	Total	C	N	0
			14	10	4	
10	A	1	Total	C	N	0
			14	10	4	
10	B	1	Total	C	N	0
			14	10	4	

- Molecule 11 is CALCIUM ION (three-letter code: CA) (formula: Ca) (labeled as "Ligand of Interest" by depositor).
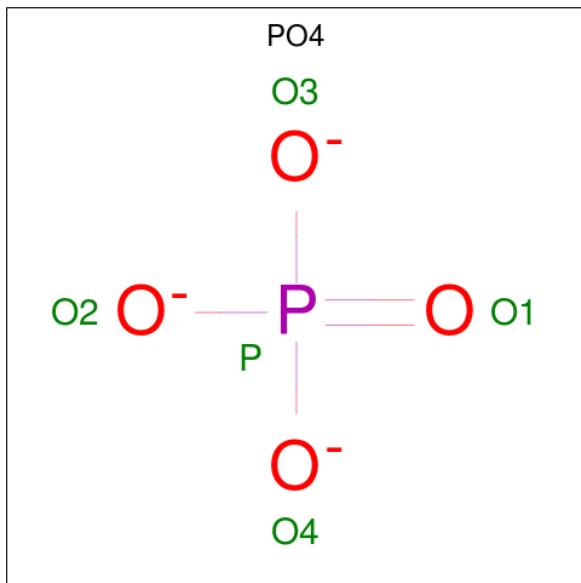
Mol	Chain	Residues	Atoms		AltConf
11	A	3	Total	Ca	0
			3	3	

- Molecule 12 is TRYPTOPHAN (three-letter code: TRP) (formula: $C_{11}H_{12}N_2O_2$) (labeled as "Ligand of Interest" by depositor).

WORLDWIDE
PDB
PROTEIN DATA BANK

TRP

CZ2 NE1
CH2 CE2 H
N
CD1
CZ3
CD2 CG N
CE3 NH₂
CB
CA(S)
C
OH OXT
O

Mol	Chain	Residues	Atoms				AltConf
12	A	1	Total	C	N	O	0
			15	11	2	2	
12	B	1	Total	C	N	O	0
			15	11	2	2	

- Molecule 13 is PHOSPHATE ION (three-letter code: PO4) (formula: O₄P) (labeled as "Ligand of Interest" by depositor).

PO4

O3
O⁻

O2 O⁻ — P = O O1
P

O⁻
O4
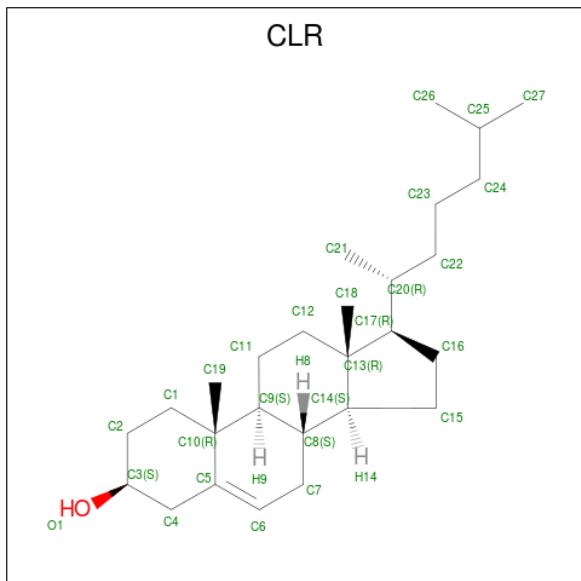
Mol	Chain	Residues	Atoms			AltConf
13	A	1	Total	O	P	0
			5	4	1	

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Mol	Chain	Residues	Atoms			AltConf
13	B	1	Total 5	O 4	P 1	0

- Molecule 14 is CHOLESTEROL (three-letter code: CLR) (formula: $C_{27}H_{46}O$) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms			AltConf
14	B	1	Total 28	C 27	O 1	0
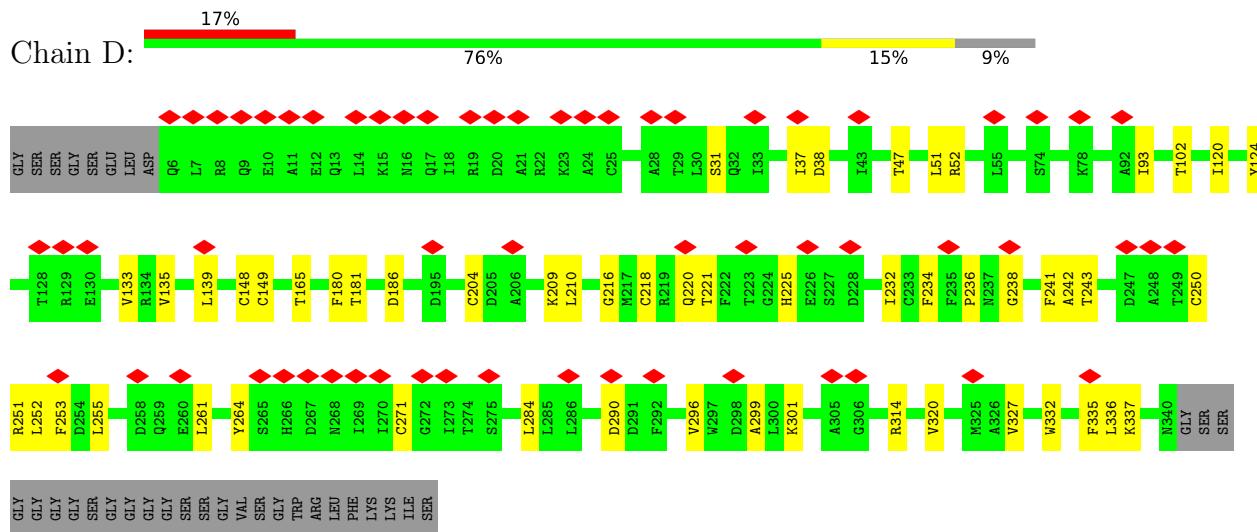
- Molecule 15 is water.

Mol	Chain	Residues	Atoms		AltConf
15	B	1	Total 1	O 1	0
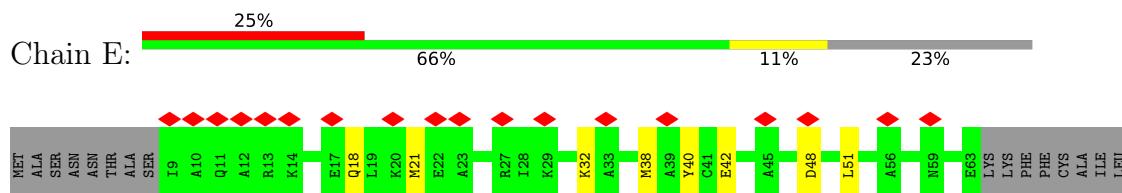
3 Residue-property plots ⓘ

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.
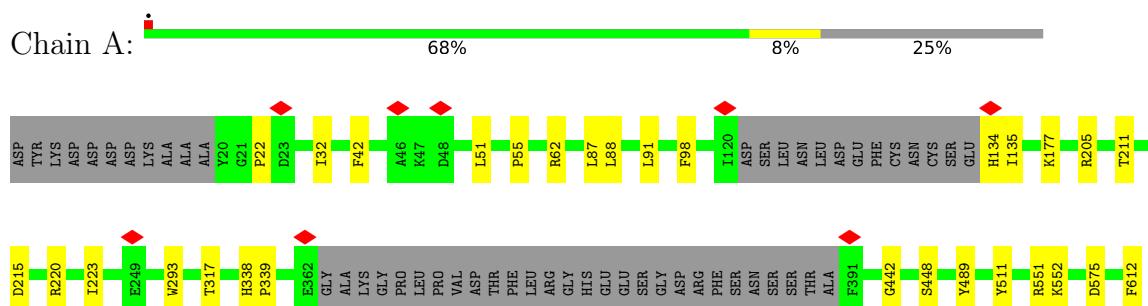
• Molecule 1: Guanine nucleotide-binding protein G(I)/G(S)/G(T) subunit beta-1
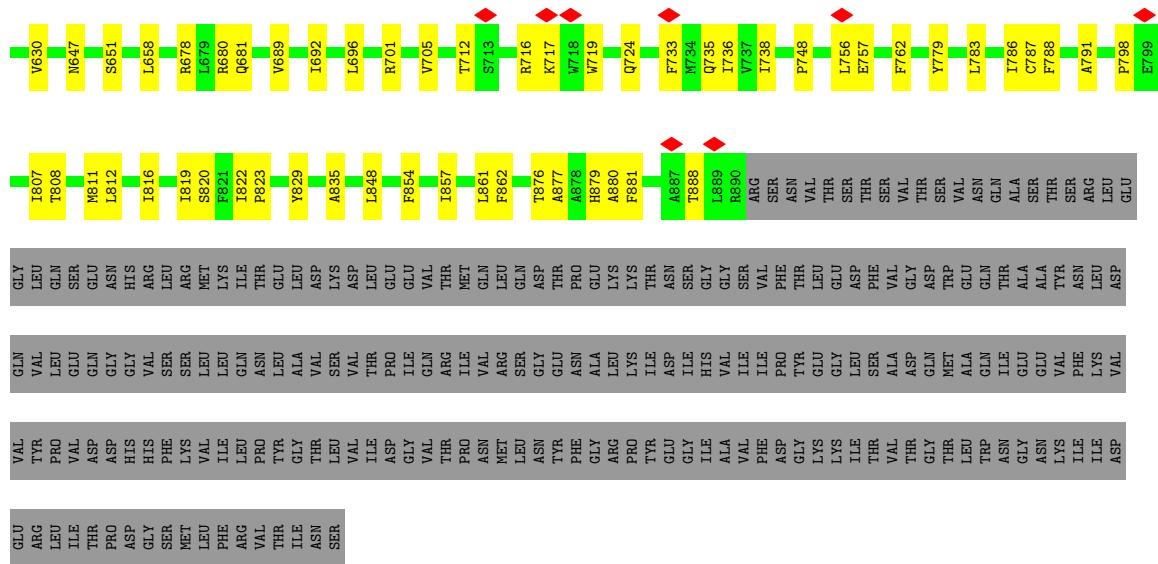
• Molecule 2: Guanine nucleotide-binding protein G(I)/G(S)/G(O) subunit gamma-2

• Molecule 3: Extracellular calcium-sensing receptor

V630 N647 S651 L658 R678 L679 R680 Q681 V689 I692 L696 R701 V705 T712 S713 R716 K717 W718 W719 Q724 F733 M734 Q735 I736 V737 I738 P748 L756 E757 F762 Y779 L783 I786 C787 F788 A791 P798 E799

I807 T808 M811 L812 I816 I819 S820 F821 I822 P823 Y829 A835 L848 F854 I857 L861 F862 T876 A877 A878 H879 A880 F881 A887 T888 L889 R890 ARG ASN VAL THR SER THR SER VAL THR SER VAL ASN GLN ALA SER THR SER ARG LEU GLU

GLY LEU GLN SER GLU ASN HIS ARG LEU ARG MET LYS ILE THR GLU LEU ASP LYS LEU GLU GLU VAL THR MET GLN LEU GLN LEU ASP THR PRO GLU LYS LYS THR ASN SER GLY GLY SER VAL PHE THR LEU LEU ASP PHE VAL GLY ASP TRP GLU GLN THR ALA ALA TYR ASN LEU ASP

GLN VAL LEU GLN GLY GLY VAL SER LEU LEU ASN LEU GLN ASN LEU ALA VAL SER VAL THR PRO ILE GLN ARG VAL ARG SER GLY GLU GLU ASN ALA LEU ILE ASP ILE HIS VAL ILE PRO TYR GLU GLY LEU SER ALA ASP GLN MET ALA GLN ILE GLU GLU VAL PHE LYS VAL

VAL TYR PRO VAL ASP ASP HIS HIS PHE LYS VAL ILE LEU LEU PRO TYR THR LEU VAL ILE ASP VAL VAL THR PRO ASN MET LEU ASN LYS TYR PHE GLY ARG ALA PRO TYR GLU GLY ILE ALA VAL PHE ASP GLY LYS LYS ILE THR VAL THR GLY LEU TRP ASN ASN GLY ILE ILE ASP

GLU ARG LEU ILE THR PRO ASP GLY SER MET LEU PHE ARG VAL THR ILE ASN SER

• Molecule 4: Extracellular calcium-sensing receptor

Chain B:

TRP SER HIS PRO GLN PHE GLU LYS GLY GLY GLY SER GLY GLY GLY SER GLY GLY SER GLY GLY SER ALA TRP SER HIS PRO GLN PHE GLU LYS GLY SER GLY ALA ALA ALA Y20 D23 I32 H41 K47 D48 R62 R66 R69 I81 L87 L91 C101 Q117 N118

K119 I120 ASP SER LEU ASN LEU ASP PHE GLU PHE CYS ASN CYS SER GLU H134 I135 I139 W208 V209 G210 T211 I212 R220 P221 G222 I223 E229 R233 D248 I259 K265 V266 L276 E282 R286 E297 I305 C358 H359 E362 GLY ALA LYS GLY

PRO LEU PRO VAL ASP THR PHE LEU ARG GLY HIS GLU GLU SER GLY ASP ARG PHE SER ASN SER THR ALA PHE R392 D398 P407 Q432 D433 I434 Y435 T436 K454 H463 T470 Q476 E499 S540 C546 T550 V566 Y573 P586 F589

N592 E593 N594 H595 I603 L606 A615 L622 L626 V630 I635 N639 K644 Y652 S664 F667 R678 C694 V697 N700 R701 V702 L703 L704 V705 F706 E707 ALA LYS ILE PRO THR SER PHE HIS ARG LYS TRP GLY LEU N722

F729 V740 I741 P748 E757 I761 A772 L773 I777 T780 F790 K793 S794 L797 K805 T808 L812 I816 I822 P823 V836 L849 F853 F854 N855 K856 I857 S865 I869 E870 E871 VAL ARG CYS SER THR ALA ALA HIS ALA

PHE LYS VAL ALA ALA ARG ALA THR LEU ARG ARG SER ASN VAL THR GLY SER SER THR ASN ASN GLU GLU GLU LYS SER ARG LEU LEU GLU LYS GLU ASN ARG GLU LEU GLU LYS ILE ILE ALA GLU LYS GLU GLU ARG VAL SER GLU LEU ARG HIS GLN LEU GLN SER ARG GLN GLN

LEU LYS LYS THR ASN

• Molecule 5: Guanine nucleotide-binding protein G(q) subunit alpha

Chain C:

• Molecule 6: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-gluc opyranose

Chain F:

• Molecule 6: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-gluc opyranose

Chain G:

• Molecule 6: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-gluc opyranose

Chain H:

4 Experimental information ⓘ

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	89192	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 $(e^-/\text{Å}^2)$	50	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	1500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	7.747	Depositor
Minimum map value	-0.495	Depositor
Average map value	0.048	Depositor
Map value standard deviation	0.126	Depositor
Recommended contour level	1.0	Depositor
Map size (Å)	416.496, 416.496, 416.496	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.8677, 0.8677, 0.8677	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: PO4, CLR, NAG, SPM, YP4, PCW, CA

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	D	0.28	0/2448	0.54	0/3338
2	E	0.24	0/373	0.42	0/510
3	A	0.33	0/6689	0.54	0/9084
4	B	0.34	0/6439	0.54	0/8741
5	C	0.34	0/1668	0.64	1/2257 (0.0%)
All	All	0.33	0/17617	0.55	1/23930 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	C	341	PHE	CB-CA-C	-10.76	88.88	110.40

There are no chirality outliers.

There are no planarity outliers.

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	D	2404	0	2238	37	0
2	E	368	0	326	6	0
3	A	6520	0	6369	75	0
4	B	6279	0	6122	56	0
5	C	1640	0	1536	31	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	F	28	0	25	0	0
6	G	28	0	25	2	0
6	H	28	0	25	0	0
7	A	26	0	0	0	0
7	B	26	0	0	1	0
8	A	28	0	26	1	0
8	B	28	0	26	0	0
9	A	54	0	84	8	0
10	A	28	0	52	0	0
10	B	14	0	26	0	0
11	A	3	0	0	0	0
12	A	15	0	9	0	0
12	B	15	0	9	0	0
13	A	5	0	0	0	0
13	B	5	0	0	2	0
14	B	28	0	46	3	0
15	B	1	0	0	0	0
All	All	17571	0	16944	193	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 6.

All (193) 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)
3:A:888:THR:HB	5:C:341:PHE:CE1	1.66	1.29
3:A:888:THR:CB	5:C:341:PHE:CE1	2.60	0.80
3:A:888:THR:HB	5:C:341:PHE:HE1	1.44	0.79
3:A:658:LEU:HD11	3:A:848:LEU:HD22	1.63	0.78
1:D:234:PHE:HE2	1:D:238:GLY:HA2	1.48	0.78
3:A:791:ALA:HB2	3:A:807:ILE:HG21	1.66	0.78
4:B:780:THR:HG21	7:B:1407:YP4:CE1	2.15	0.75
1:D:209:LYS:NZ	1:D:218:CYS:SG	2.63	0.71
3:A:716:ARG:HH21	3:A:719:TRP:HB2	1.56	0.70
1:D:210:LEU:HD12	1:D:220:GLN:HB2	1.72	0.70
5:C:276:LYS:HD3	5:C:306:ARG:HH21	1.56	0.70
3:A:88:LEU:HD22	3:A:91:LEU:HD23	1.73	0.69
5:C:196:LEU:HD13	5:C:341:PHE:CE1	2.30	0.66
3:A:756:LEU:HD12	3:A:757:GLU:N	2.11	0.66
3:A:808:THR:HG21	9:A:1204:PCW:H342	1.77	0.65
4:B:706:PHE:O	4:B:707:GLU:HB2	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:229:GLU:OE1	4:B:233:ARG:NH1	2.31	0.64
1:D:250:CYS:HB2	1:D:264:TYR:HB2	1.79	0.64
1:D:47:THR:HG21	1:D:337:LYS:HD3	1.80	0.62
3:A:756:LEU:HD11	3:A:762:PHE:CE2	2.34	0.62
4:B:358:CYS:SG	4:B:359:HIS:N	2.72	0.62
4:B:702:VAL:O	4:B:705:VAL:HG12	1.99	0.62
5:C:212:GLU:O	5:C:216:TRP:NE1	2.33	0.62
1:D:225:HIS:CD2	1:D:251:ARG:HH11	2.17	0.62
4:B:69:ARG:NH2	13:B:1406:PO4:O2	2.33	0.62
5:C:196:LEU:HD21	5:C:337:ILE:HD11	1.81	0.61
1:D:225:HIS:HD2	1:D:251:ARG:HH11	1.48	0.61
3:A:696:LEU:HD11	3:A:786:ILE:HG22	1.83	0.61
3:A:134:HIS:O	3:A:135:ILE:HG13	2.01	0.61
3:A:816:ILE:HA	9:A:1204:PCW:H252	1.83	0.61
3:A:854:PHE:HA	3:A:857:ILE:HG22	1.82	0.61
4:B:630:VAL:HG13	4:B:857:ILE:HD11	1.83	0.61
1:D:93:ILE:HG12	1:D:133:VAL:HG11	1.84	0.59
3:A:293:TRP:HB2	3:A:317:THR:HG23	1.85	0.59
3:A:787:CYS:SG	3:A:807:ILE:HG23	2.42	0.59
1:D:102:THR:HG21	1:D:148:CYS:HA	1.85	0.58
3:A:647:ASN:HD22	3:A:724:GLN:NE2	2.01	0.58
4:B:626:LEU:HD22	4:B:849:LEU:HD21	1.85	0.58
3:A:32:ILE:HD12	3:A:91:LEU:HD21	1.83	0.58
5:C:191:GLU:HB3	5:C:204:VAL:HG12	1.84	0.58
3:A:647:ASN:HD22	3:A:724:GLN:HE22	1.52	0.57
1:D:37:ILE:HB	1:D:301:LYS:HD3	1.85	0.57
3:A:692:ILE:HG21	3:A:783:LEU:HB3	1.86	0.57
1:D:165:THR:HG22	1:D:181:THR:HG22	1.87	0.57
3:A:678:ARG:HG2	3:A:748:PRO:HD2	1.85	0.56
3:A:51:LEU:HD22	3:A:55:PRO:HG3	1.87	0.56
1:D:51:LEU:HB2	1:D:336:LEU:HB2	1.87	0.55
1:D:38:ASP:O	1:D:301:LYS:NZ	2.33	0.55
4:B:603:ILE:HG22	4:B:761:ILE:HB	1.88	0.55
4:B:276:LEU:HD23	4:B:305:ILE:HD13	1.88	0.55
8:A:1202:NAG:H83	8:A:1202:NAG:H3	1.88	0.55
4:B:66:ARG:NH2	13:B:1406:PO4:O1	2.33	0.55
3:A:876:THR:CG2	5:C:349:LEU:HD22	2.37	0.55
3:A:551:ARG:NH1	3:A:552:LYS:O	2.39	0.54
1:D:236:PRO:HB2	2:E:40:TYR:HE2	1.73	0.53
3:A:861:LEU:HD12	3:A:862:PHE:N	2.24	0.53
9:A:1204:PCW:H131	14:B:1401:CLR:H151	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:205:ARG:NH1	6:G:2:NAG:O6	2.41	0.53
3:A:489:TYR:HB2	3:A:511:TYR:HB3	1.89	0.53
5:C:43:LEU:HD21	5:C:226:ILE:HG13	1.91	0.53
1:D:225:HIS:HD2	1:D:251:ARG:HD2	1.73	0.53
4:B:700:ASN:ND2	4:B:794:SER:HB3	2.24	0.52
4:B:209:VAL:HG12	4:B:266:VAL:HB	1.91	0.52
1:D:209:LYS:HG2	1:D:221:THR:HG22	1.92	0.52
3:A:791:ALA:HB2	3:A:807:ILE:CG2	2.38	0.52
3:A:712:THR:HG22	5:C:356:TYR:HE1	1.75	0.51
3:A:735:GLN:HA	3:A:738:ILE:HG22	1.92	0.51
3:A:876:THR:HG21	5:C:349:LEU:HD22	1.93	0.51
1:D:234:PHE:CE2	1:D:238:GLY:HA2	2.36	0.51
3:A:211:THR:HB	3:A:223:ILE:HD11	1.92	0.51
4:B:282:GLU:HG3	4:B:286:ARG:HH12	1.75	0.51
3:A:880:ALA:HA	5:C:345:LYS:NZ	2.26	0.50
4:B:69:ARG:NH1	4:B:407:PRO:O	2.44	0.50
4:B:212:ILE:HD11	4:B:259:ILE:HD11	1.94	0.50
4:B:635:ILE:HG22	4:B:652:TYR:CE1	2.46	0.50
5:C:310:LEU:HD12	5:C:328:PHE:HZ	1.77	0.50
5:C:230:VAL:HG21	5:C:313:PHE:HE2	1.76	0.49
4:B:32:ILE:HD12	4:B:91:LEU:HD21	1.94	0.49
5:C:256:ARG:HB2	5:C:316:LEU:HD21	1.95	0.49
2:E:48:ASP:HB3	2:E:51:LEU:HB2	1.93	0.49
1:D:271:CYS:HB2	1:D:290:ASP:HB2	1.95	0.49
3:A:735:GLN:HE21	3:A:779:TYR:HB3	1.78	0.49
5:C:47:THR:HG22	5:C:254:LEU:HD23	1.94	0.49
1:D:186:ASP:O	1:D:204:CYS:N	2.46	0.48
3:A:756:LEU:HD11	3:A:762:PHE:CD2	2.48	0.48
4:B:694:CYS:O	4:B:697:VAL:HG12	2.13	0.48
5:C:197:GLN:HG2	5:C:341:PHE:HZ	1.78	0.48
5:C:44:LEU:HD13	5:C:227:MET:HE2	1.95	0.48
3:A:630:VAL:HG22	3:A:857:ILE:HD12	1.95	0.48
3:A:756:LEU:HD21	3:A:762:PHE:HD2	1.79	0.48
4:B:822:ILE:HB	4:B:823:PRO:HD3	1.95	0.48
6:G:1:NAG:H61	6:G:2:NAG:HN2	1.77	0.48
4:B:41:HIS:ND1	4:B:62:ARG:O	2.37	0.48
1:D:320:VAL:HG22	1:D:327:VAL:HG22	1.95	0.48
3:A:705:VAL:HG11	5:C:353:LEU:HD12	1.96	0.48
4:B:573:TYR:HA	4:B:595:HIS:O	2.14	0.47
1:D:284:LEU:HD13	1:D:296:VAL:HG11	1.97	0.47
3:A:712:THR:HG22	5:C:356:TYR:CE1	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:215:ASP:OD1	3:A:220:ARG:NH1	2.48	0.47
3:A:716:ARG:NH2	3:A:719:TRP:HB2	2.26	0.47
4:B:777:ILE:O	4:B:780:THR:HG22	2.15	0.47
4:B:434:ILE:HG12	4:B:463:HIS:CE1	2.50	0.47
4:B:81:ILE:HG23	4:B:87:LEU:HD23	1.97	0.47
4:B:220:ARG:HB2	4:B:221:PRO:HD3	1.95	0.47
3:A:689:VAL:HG21	3:A:735:GLN:NE2	2.31	0.46
3:A:788:PHE:CE1	3:A:811:MET:HB2	2.50	0.46
3:A:680:ARG:HG3	3:A:681:GLN:HG3	1.98	0.46
5:C:274:ASN:OD1	5:C:275:LYS:N	2.48	0.46
4:B:855:ASN:HB3	14:B:1401:CLR:H191	1.98	0.46
3:A:658:LEU:HD11	3:A:848:LEU:CD2	2.39	0.46
3:A:808:THR:HG21	9:A:1204:PCW:C34	2.45	0.46
1:D:252:LEU:HD22	1:D:261:LEU:HD12	1.97	0.46
1:D:232:ILE:HD12	1:D:243:THR:HG22	1.98	0.46
3:A:42:PHE:HB2	3:A:62:ARG:HB2	1.97	0.46
9:A:1204:PCW:H72	9:A:1204:PCW:H41	1.75	0.46
3:A:823:PRO:HG2	4:B:836:VAL:HG22	1.98	0.46
4:B:678:ARG:HG2	4:B:748:PRO:HD2	1.97	0.46
3:A:876:THR:O	3:A:877:ALA:C	2.55	0.45
1:D:314:ARG:HG2	1:D:332:TRP:CD2	2.50	0.45
3:A:733:PHE:O	3:A:736:ILE:HG22	2.17	0.45
3:A:861:LEU:HD11	3:A:862:PHE:CE2	2.51	0.45
4:B:700:ASN:HD22	4:B:797:LEU:HD22	1.80	0.45
1:D:124:TYR:HE1	1:D:135:VAL:HG22	1.81	0.45
4:B:117:GLN:NE2	4:B:135:ILE:O	2.40	0.45
1:D:124:TYR:CE1	1:D:135:VAL:HG22	2.52	0.44
3:A:647:ASN:O	3:A:651:SER:HB3	2.18	0.44
4:B:639:ASN:HA	4:B:644:LYS:HE2	1.98	0.44
3:A:812:LEU:HD23	3:A:812:LEU:HA	1.87	0.44
4:B:211:THR:HB	4:B:223:ILE:HD11	1.98	0.44
5:C:42:LEU:HD23	5:C:225:SER:HB2	2.00	0.44
3:A:808:THR:CG2	9:A:1204:PCW:H342	2.46	0.44
4:B:773:LEU:O	4:B:777:ILE:HG12	2.18	0.44
1:D:148:CYS:SG	1:D:149:CYS:N	2.90	0.44
1:D:210:LEU:HD11	1:D:255:LEU:HG	1.99	0.44
3:A:575:ASP:N	3:A:575:ASP:OD1	2.50	0.44
3:A:888:THR:HG23	5:C:338:ARG:HD3	1.99	0.44
5:C:63:HIS:O	5:C:337:ILE:HD13	2.18	0.44
4:B:41:HIS:HB2	4:B:101:CYS:SG	2.58	0.44
1:D:301:LYS:HB2	1:D:301:LYS:HE2	1.76	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:881:PHE:CD1	5:C:342:ALA:HB1	2.53	0.43
3:A:701:ARG:O	3:A:705:VAL:HG23	2.18	0.43
4:B:297:GLU:O	4:B:297:GLU:HG2	2.18	0.43
1:D:180:PHE:HE1	1:D:216:GLY:HA2	1.84	0.43
4:B:432:GLN:O	4:B:436:THR:HG22	2.18	0.43
4:B:790:PHE:O	4:B:793:LYS:HB3	2.19	0.43
3:A:816:ILE:HG23	9:A:1204:PCW:H272	2.00	0.43
1:D:120:ILE:HG13	1:D:139:LEU:O	2.19	0.43
2:E:18:GLN:O	2:E:21:MET:HG3	2.18	0.43
4:B:664:SER:O	4:B:667:PHE:HB2	2.19	0.43
4:B:849:LEU:O	4:B:853:PHE:HB2	2.19	0.43
4:B:546:CYS:HB3	4:B:550:THR:HG23	2.00	0.43
5:C:305:ALA:HB3	5:C:308:PHE:CE2	2.54	0.43
3:A:87:LEU:HD12	3:A:87:LEU:HA	1.88	0.42
1:D:31:SER:O	1:D:31:SER:OG	2.28	0.42
4:B:454:LYS:HB3	4:B:454:LYS:HE2	1.76	0.42
4:B:592:ASN:HB3	4:B:594:ASN:O	2.18	0.42
3:A:22:PRO:HG2	3:A:98:PHE:CD1	2.54	0.42
1:D:241:PHE:CE1	1:D:253:PHE:HB2	2.55	0.42
1:D:52:ARG:HG2	1:D:335:PHE:CE1	2.55	0.42
3:A:880:ALA:HA	5:C:345:LYS:HZ3	1.84	0.42
3:A:338:HIS:CD2	3:A:339:PRO:HD2	2.55	0.42
3:A:881:PHE:CE1	5:C:342:ALA:HB1	2.54	0.42
4:B:23:ASP:OD1	4:B:23:ASP:N	2.51	0.42
4:B:805:LYS:O	4:B:808:THR:HG22	2.19	0.42
3:A:787:CYS:SG	3:A:807:ILE:CG2	3.08	0.42
14:B:1401:CLR:H183	14:B:1401:CLR:H20	1.84	0.42
4:B:208:TRP:O	4:B:540:SER:OG	2.38	0.42
4:B:248:ASP:OD1	4:B:248:ASP:N	2.48	0.41
3:A:888:THR:HB	5:C:341:PHE:CD1	2.42	0.41
3:A:820:SER:HB2	9:A:1204:PCW:H281	2.02	0.41
4:B:32:ILE:HG23	4:B:139:ILE:HG13	2.02	0.41
4:B:265:LYS:HB3	4:B:265:LYS:HE3	1.93	0.41
3:A:756:LEU:HD13	3:A:829:TYR:CE1	2.55	0.41
5:C:349:LEU:O	5:C:350:GLN:C	2.59	0.41
1:D:232:ILE:HA	1:D:242:ALA:O	2.20	0.41
3:A:442:GLY:HA3	3:A:448:SER:O	2.20	0.41
3:A:612:PHE:HE2	3:A:835:ALA:HB1	1.86	0.41
2:E:38:MET:O	2:E:42:GLU:HG2	2.21	0.41
4:B:81:ILE:HG12	4:B:87:LEU:HD23	2.01	0.41
4:B:470:THR:OG1	4:B:476:GLN:OE1	2.37	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:812:LEU:O	4:B:816:ILE:HG13	2.21	0.41
4:B:606:LEU:HD12	4:B:606:LEU:HA	1.89	0.41
1:D:236:PRO:HB2	2:E:40:TYR:CE2	2.54	0.40
3:A:177:LYS:HA	3:A:177:LYS:HD3	1.84	0.40
3:A:717:LYS:HB3	3:A:717:LYS:HE2	1.80	0.40
3:A:798:PRO:HG3	3:A:879:HIS:HB2	2.03	0.40
4:B:586:PRO:HB2	4:B:589:PHE:HD2	1.86	0.40
4:B:740:VAL:O	4:B:741:ILE:C	2.58	0.40
1:D:264:TYR:OH	1:D:299:ALA:HA	2.21	0.40
2:E:32:LYS:HE3	2:E:32:LYS:HB3	1.92	0.40
3:A:854:PHE:O	3:A:857:ILE:HG22	2.22	0.40
4:B:550:THR:OG1	4:B:566:VAL:O	2.28	0.40
3:A:819:ILE:O	3:A:822:ILE:HG22	2.21	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	D	333/369 (90%)	316 (95%)	17 (5%)	0	100	100
2	E	53/71 (75%)	52 (98%)	1 (2%)	0	100	100
3	A	824/1101 (75%)	785 (95%)	39 (5%)	0	100	100
4	B	788/959 (82%)	751 (95%)	37 (5%)	0	100	100
5	C	211/353 (60%)	200 (95%)	11 (5%)	0	100	100
All	All	2209/2853 (77%)	2104 (95%)	105 (5%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	D	232/299 (78%)	232 (100%)	0	100	100
2	E	29/58 (50%)	29 (100%)	0	100	100
3	A	694/957 (72%)	694 (100%)	0	100	100
4	B	675/827 (82%)	674 (100%)	1 (0%)	93	98
5	C	157/320 (49%)	156 (99%)	1 (1%)	86	94
All	All	1787/2461 (73%)	1785 (100%)	2 (0%)	93	98

All (2) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	B	297	GLU
5	C	341	PHE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (5) such sidechains are listed below:

Mol	Chain	Res	Type
1	D	225	HIS
3	A	724	GLN
3	A	735	GLN
4	B	471	ASN
4	B	700	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

6 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	$\#|Z| > 2$
6	NAG	F	1	6,3	14,14,15	0.27	0	17,19,21	0.60	0
6	NAG	F	2	6	14,14,15	0.21	0	17,19,21	0.42	0
6	NAG	G	1	6,3	14,14,15	0.23	0	17,19,21	0.45	0
6	NAG	G	2	6	14,14,15	0.31	0	17,19,21	0.48	0
6	NAG	H	1	6,4	14,14,15	0.21	0	17,19,21	0.41	0
6	NAG	H	2	6	14,14,15	0.27	0	17,19,21	0.43	0

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
6	NAG	F	1	6,3	-	2/6/23/26	0/1/1/1
6	NAG	F	2	6	-	2/6/23/26	0/1/1/1
6	NAG	G	1	6,3	-	2/6/23/26	0/1/1/1
6	NAG	G	2	6	-	2/6/23/26	0/1/1/1
6	NAG	H	1	6,4	-	2/6/23/26	0/1/1/1
6	NAG	H	2	6	-	0/6/23/26	0/1/1/1

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (10) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
6	H	1	NAG	O5-C5-C6-O6
6	G	1	NAG	O5-C5-C6-O6
6	F	1	NAG	O5-C5-C6-O6

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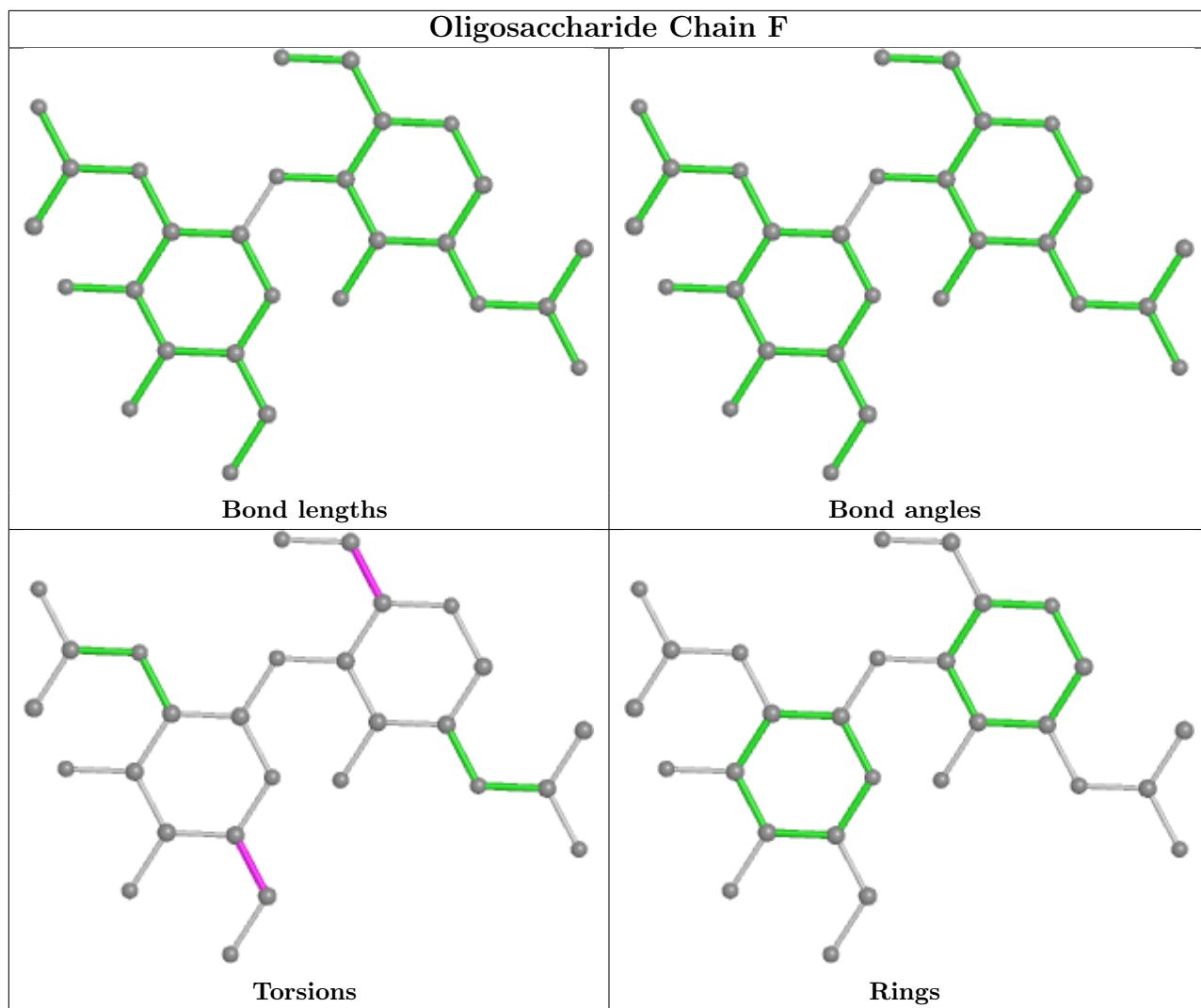
Mol	Chain	Res	Type	Atoms
6	H	1	NAG	C4-C5-C6-O6
6	G	1	NAG	C4-C5-C6-O6
6	F	1	NAG	C4-C5-C6-O6
6	F	2	NAG	O5-C5-C6-O6
6	F	2	NAG	C4-C5-C6-O6
6	G	2	NAG	O5-C5-C6-O6
6	G	2	NAG	C4-C5-C6-O6
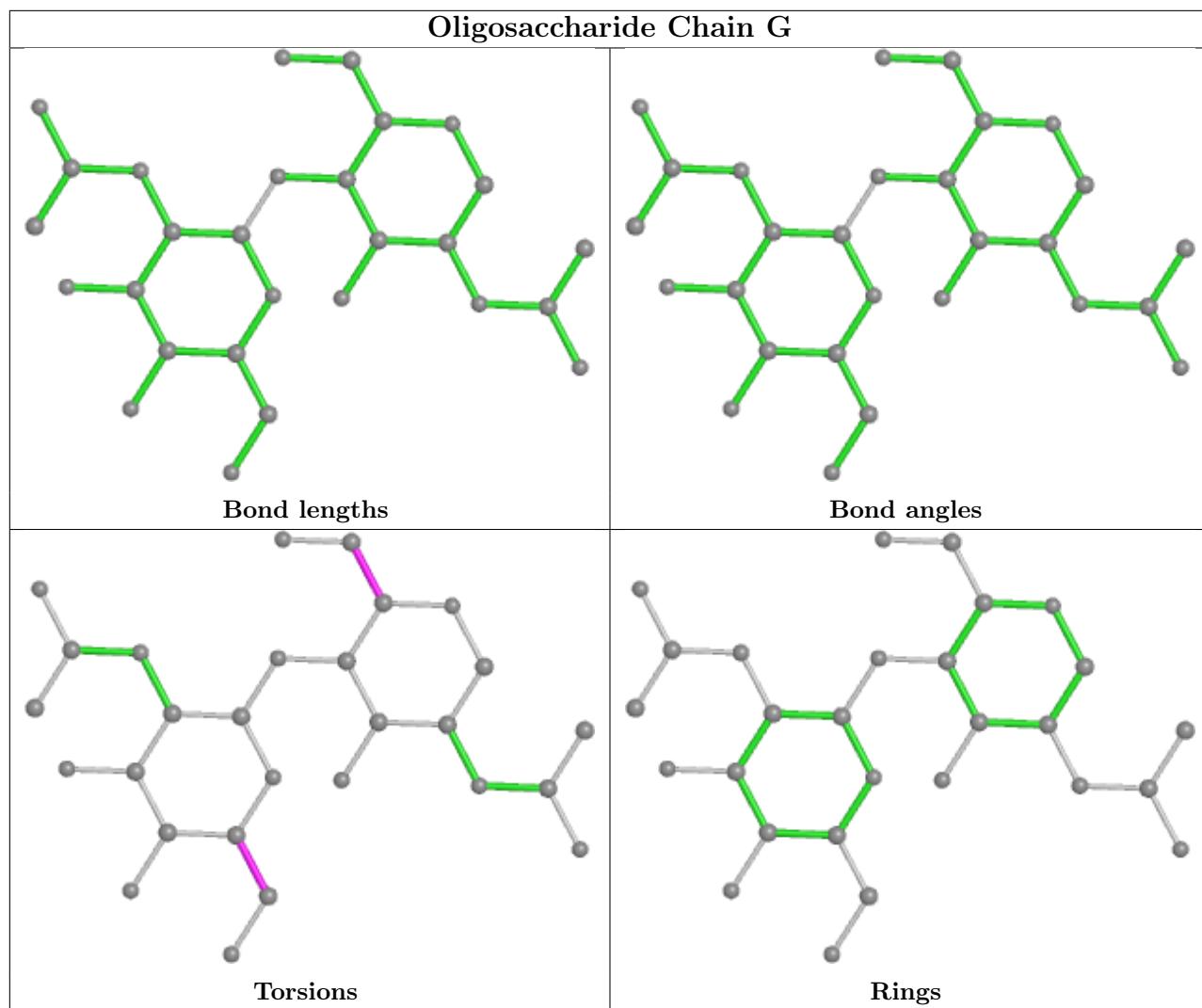
There are no ring outliers.
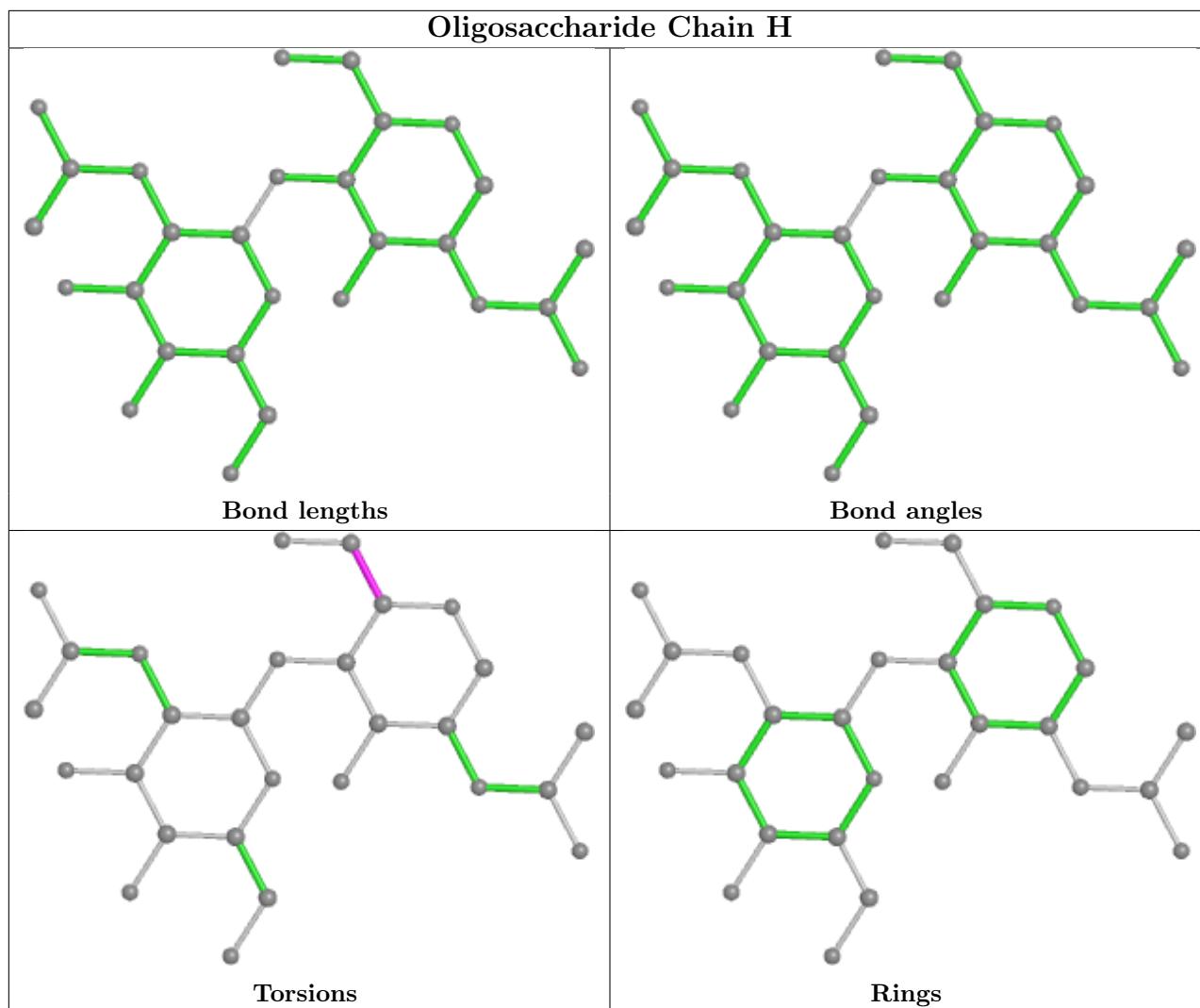
2 monomers are involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
6	G	1	NAG	1	0
6	G	2	NAG	2	0

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

Oligosaccharide Chain F

Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain G

Bond lengths

Bond angles

Torsions

Rings

Oligosaccharide Chain H

Bond lengths | Bond angles | Torsions | Rings

5.6 Ligand geometry ⓘ

Of 18 ligands modelled in this entry, 3 are monoatomic - leaving 15 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	#$|Z| > 2$
12	TRP	A	1208	-	14,16,16	0.88	1 (7%)	16,22,22	1.14	2 (12%)
13	PO4	A	1209	-	4,4,4	1.00	0	6,6,6	0.44	0
13	PO4	B	1406	-	4,4,4	0.99	0	6,6,6	0.39	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	#|Z| > 2	Counts	RMSZ	#|Z| > 2
9	PCW	A	1204	-	53,53,53	1.51	7 (13%)	59,61,61	0.98	3 (5%)
10	SPM	A	1205	-	13,13,13	0.35	0	12,12,12	0.96	0
8	NAG	A	1203	3	14,14,15	0.19	0	17,19,21	0.44	0
8	NAG	A	1202	3	14,14,15	0.42	0	17,19,21	1.25	1 (5%)
8	NAG	B	1403	4	14,14,15	0.22	0	17,19,21	0.49	0
7	YP4	A	1201	-	28,28,28	1.05	1 (3%)	38,39,39	0.98	1 (2%)
10	SPM	A	1210	-	13,13,13	0.47	0	12,12,12	0.56	0
10	SPM	B	1404	-	13,13,13	0.35	0	12,12,12	0.95	0
12	TRP	B	1405	-	14,16,16	0.88	1 (7%)	16,22,22	1.13	2 (12%)
14	CLR	B	1401	-	31,31,31	0.56	0	48,48,48	1.09	4 (8%)
7	YP4	B	1407	-	28,28,28	1.11	1 (3%)	38,39,39	1.07	1 (2%)
8	NAG	B	1402	4	14,14,15	0.22	0	17,19,21	0.60	0

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
12	TRP	A	1208	-	-	0/7/8/8	0/2/2/2
9	PCW	A	1204	-	1/1/5/9	30/57/57/57	-
10	SPM	A	1205	-	-	0/11/11/11	-
8	NAG	A	1203	3	-	2/6/23/26	0/1/1/1
8	NAG	A	1202	3	-	3/6/23/26	0/1/1/1
8	NAG	B	1403	4	-	2/6/23/26	0/1/1/1
7	YP4	A	1201	-	-	7/17/17/17	0/3/3/3
10	SPM	A	1210	-	-	2/11/11/11	-
10	SPM	B	1404	-	-	2/11/11/11	-
12	TRP	B	1405	-	-	2/7/8/8	0/2/2/2
14	CLR	B	1401	-	-	6/10/68/68	0/4/4/4
7	YP4	B	1407	-	-	9/17/17/17	0/3/3/3
8	NAG	B	1402	4	-	3/6/23/26	0/1/1/1

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	A	1204	PCW	O2-C31	5.28	1.49	1.34
7	B	1407	YP4	CG-CD1	-4.12	1.35	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	A	1204	PCW	C32-C31	3.37	1.60	1.50
7	A	1201	YP4	CG-CD1	-3.35	1.36	1.43
9	A	1204	PCW	O3-C11	3.02	1.42	1.33
9	A	1204	PCW	C1-C2	2.72	1.59	1.50
9	A	1204	PCW	C3-C2	2.38	1.58	1.50
9	A	1204	PCW	C17-C18	2.38	1.61	1.52
9	A	1204	PCW	P-O3P	2.28	1.68	1.59
12	A	1208	TRP	OXT-C	-2.19	1.23	1.30
12	B	1405	TRP	OXT-C	-2.18	1.23	1.30

All (14) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	A	1202	NAG	C2-N2-C7	4.29	129.01	122.90
9	A	1204	PCW	O2-C31-C32	4.09	120.33	111.50
9	A	1204	PCW	C18-C19-C20	3.63	152.56	124.73
14	B	1401	CLR	C13-C17-C20	-3.60	113.85	119.49
7	A	1201	YP4	CD2-CG-CB	-2.72	120.24	123.40
12	A	1208	TRP	OXT-C-O	-2.67	118.02	124.09
7	B	1407	YP4	CD2-CG-CB	-2.61	120.36	123.40
12	B	1405	TRP	OXT-C-O	-2.58	118.24	124.09
9	A	1204	PCW	O3-C11-C12	2.53	119.83	111.91
14	B	1401	CLR	C11-C12-C13	-2.31	108.81	112.78
14	B	1401	CLR	C19-C10-C9	-2.28	108.96	111.68
12	A	1208	TRP	OXT-C-CA	2.18	120.82	113.38
14	B	1401	CLR	C10-C9-C8	-2.16	109.50	112.73
12	B	1405	TRP	OXT-C-CA	2.14	120.69	113.38

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
9	A	1204	PCW	C2

All (68) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
7	A	1201	YP4	C1-CA-N-C3
7	A	1201	YP4	CB-CA-N-C3
9	A	1204	PCW	O4P-C4-C5-N
9	A	1204	PCW	C32-C31-O2-C2
9	A	1204	PCW	O31-C31-O2-C2
9	A	1204	PCW	C4-O4P-P-O1P

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Mol	Chain	Res	Type	Atoms
9	A	1204	PCW	C4-O4P-P-O2P
14	B	1401	CLR	C13-C17-C20-C22
14	B	1401	CLR	C13-C17-C20-C21
8	B	1403	NAG	O5-C5-C6-O6
8	A	1203	NAG	O5-C5-C6-O6
14	B	1401	CLR	C17-C20-C22-C23
9	A	1204	PCW	C12-C11-O3-C3
9	A	1204	PCW	O11-C11-O3-C3
8	A	1202	NAG	C8-C7-N2-C2
8	A	1202	NAG	O7-C7-N2-C2
8	B	1403	NAG	C4-C5-C6-O6
9	A	1204	PCW	C11-C12-C13-C14
9	A	1204	PCW	C31-C32-C33-C34
9	A	1204	PCW	C16-C17-C18-C19
14	B	1401	CLR	C21-C20-C22-C23
9	A	1204	PCW	C4-O4P-P-O3P
8	A	1203	NAG	C4-C5-C6-O6
9	A	1204	PCW	C23-C24-C25-C26
9	A	1204	PCW	C35-C36-C37-C38
14	B	1401	CLR	C16-C17-C20-C21
9	A	1204	PCW	C43-C44-C45-C46
9	A	1204	PCW	C32-C33-C34-C35
9	A	1204	PCW	C44-C45-C46-C47
9	A	1204	PCW	C34-C35-C36-C37
14	B	1401	CLR	C16-C17-C20-C22
9	A	1204	PCW	C20-C21-C22-C23
7	A	1201	YP4	C3-C4-C5-C6
9	A	1204	PCW	C12-C13-C14-C15
9	A	1204	PCW	C36-C37-C38-C39
12	B	1405	TRP	N-CA-CB-CG
9	A	1204	PCW	C39-C40-C41-C42
10	A	1210	SPM	C6-C7-C8-C9
9	A	1204	PCW	O3P-C1-C2-O2
9	A	1204	PCW	C33-C34-C35-C36
10	B	1404	SPM	N5-C6-C7-C8
9	A	1204	PCW	C42-C43-C44-C45
7	B	1407	YP4	CB-CA-N-C3
7	B	1407	YP4	N-C3-C4-C5
8	B	1402	NAG	C4-C5-C6-O6
7	A	1201	YP4	C4-C3-N-CA
12	B	1405	TRP	C-CA-CB-CG
9	A	1204	PCW	C37-C38-C39-C40

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Mol	Chain	Res	Type	Atoms
9	A	1204	PCW	C1-O3P-P-O4P
9	A	1204	PCW	C1-C2-C3-O3
8	B	1402	NAG	C3-C2-N2-C7
7	A	1201	YP4	C4-C5-C6-C7
7	A	1201	YP4	C4-C5-C6-C11
8	B	1402	NAG	O5-C5-C6-O6
9	A	1204	PCW	C22-C23-C24-C25
7	B	1407	YP4	C4-C5-C6-C11
9	A	1204	PCW	O3P-C1-C2-C3
7	A	1201	YP4	N-C3-C4-C5
7	B	1407	YP4	C1-CA-CB-CG
7	B	1407	YP4	C1-CA-CB-C14
7	B	1407	YP4	C1-CA-N-C3
7	B	1407	YP4	N-CA-CB-CG
7	B	1407	YP4	N-CA-CB-C14
7	B	1407	YP4	C4-C5-C6-C7
9	A	1204	PCW	C40-C41-C42-C43
8	A	1202	NAG	C3-C2-N2-C7
10	A	1210	SPM	C8-C9-N10-C11
10	B	1404	SPM	C7-C6-N5-C4
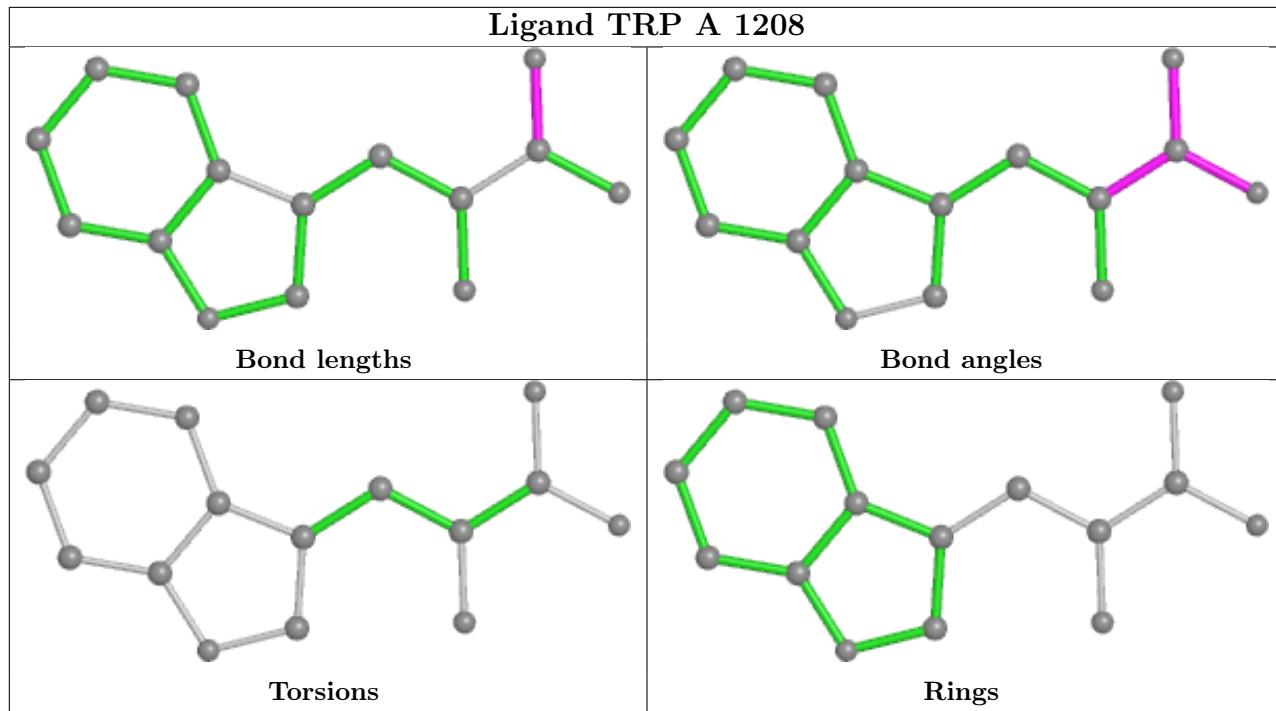
There are no ring outliers.
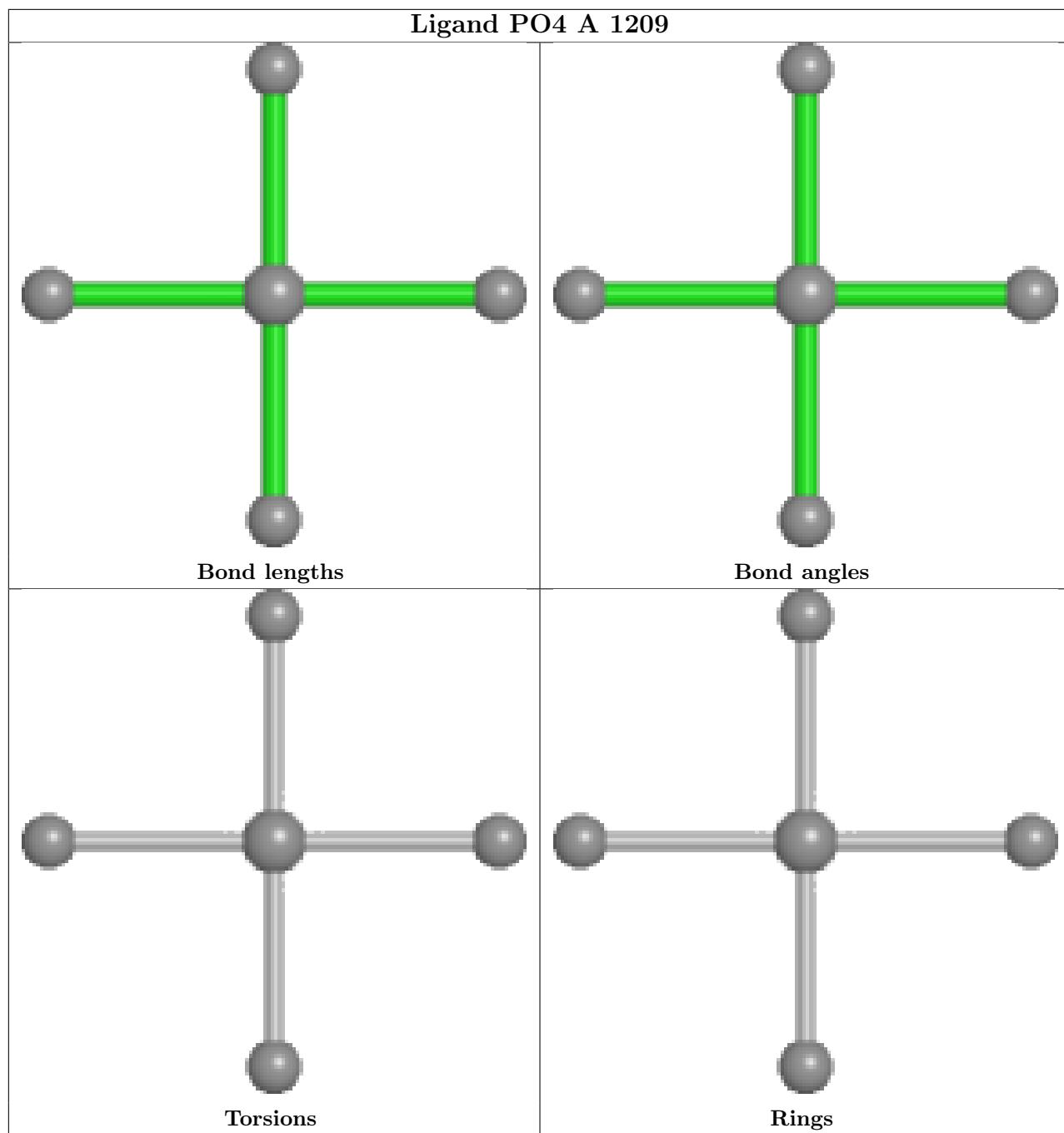
5 monomers are involved in 14 short contacts:
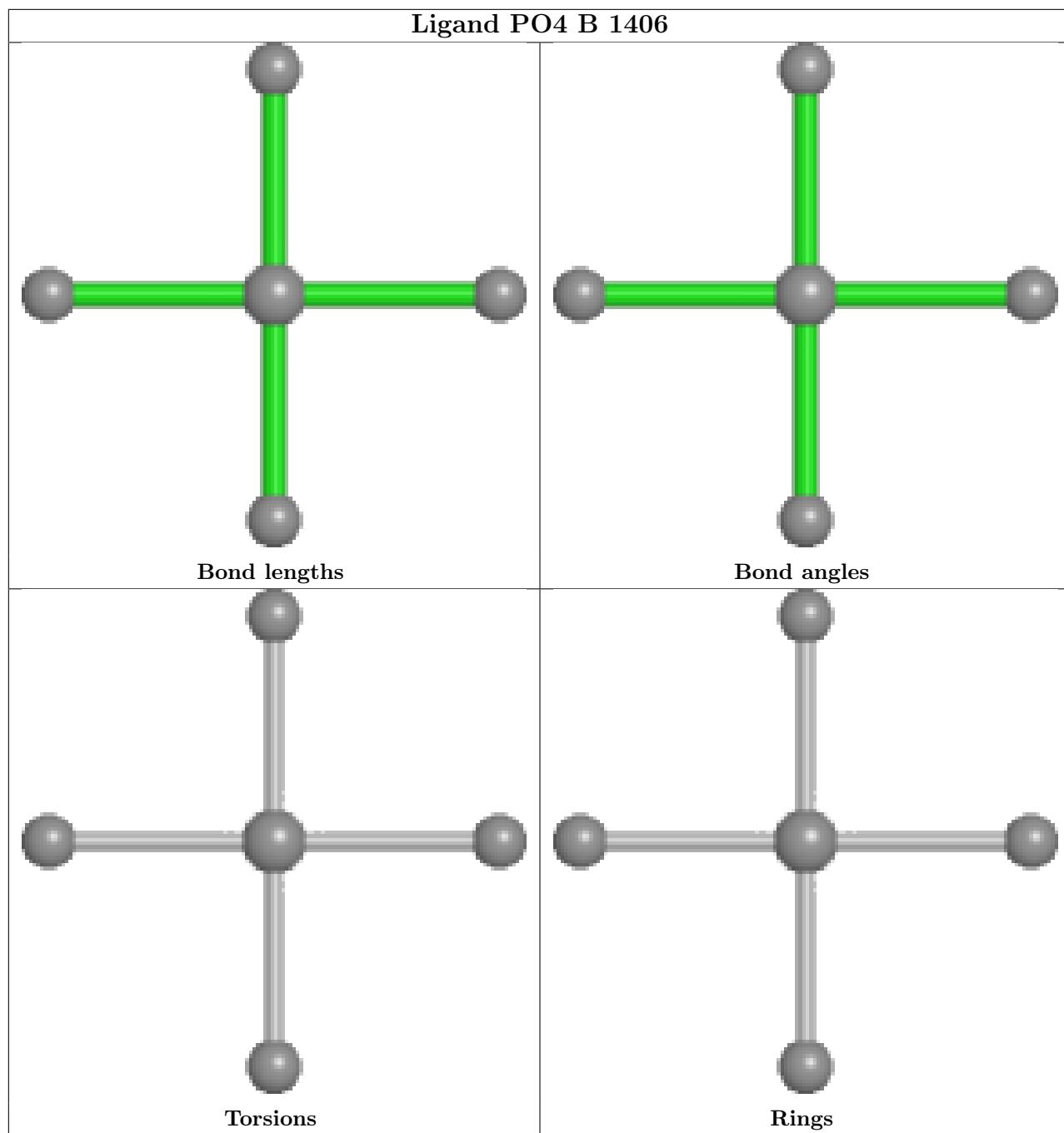
Mol	Chain	Res	Type	Clashes	Symm-Clashes
13	B	1406	PO4	2	0
9	A	1204	PCW	8	0
8	A	1202	NAG	1	0
14	B	1401	CLR	3	0
7	B	1407	YP4	1	0
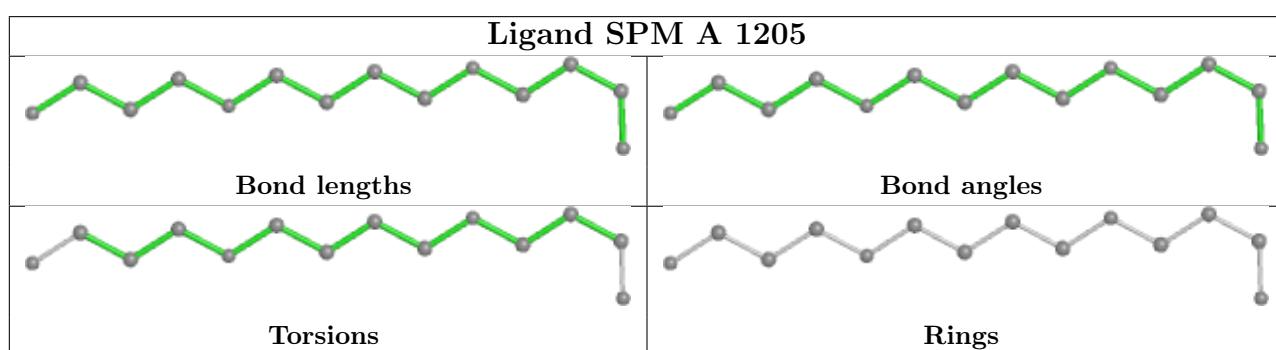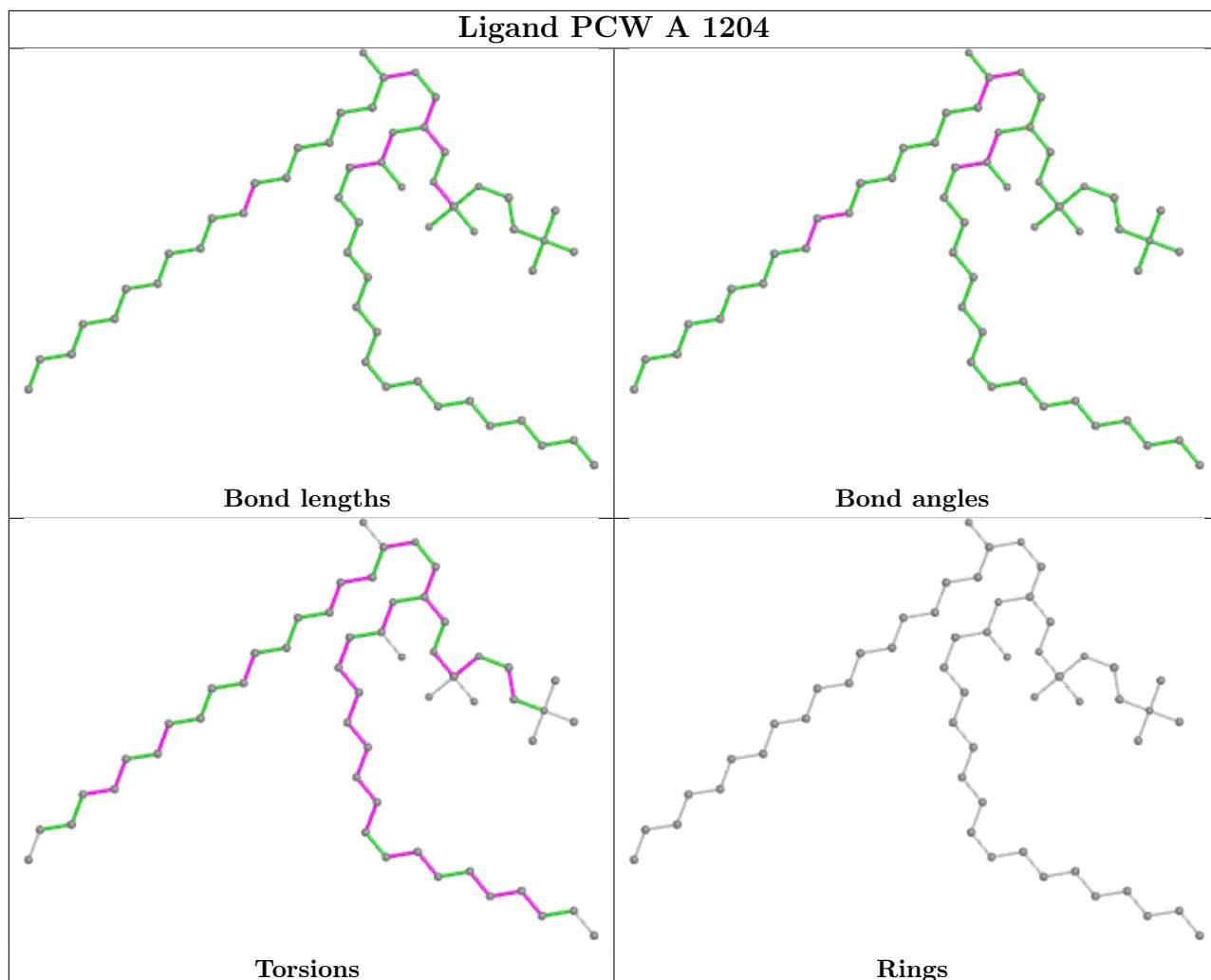
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 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
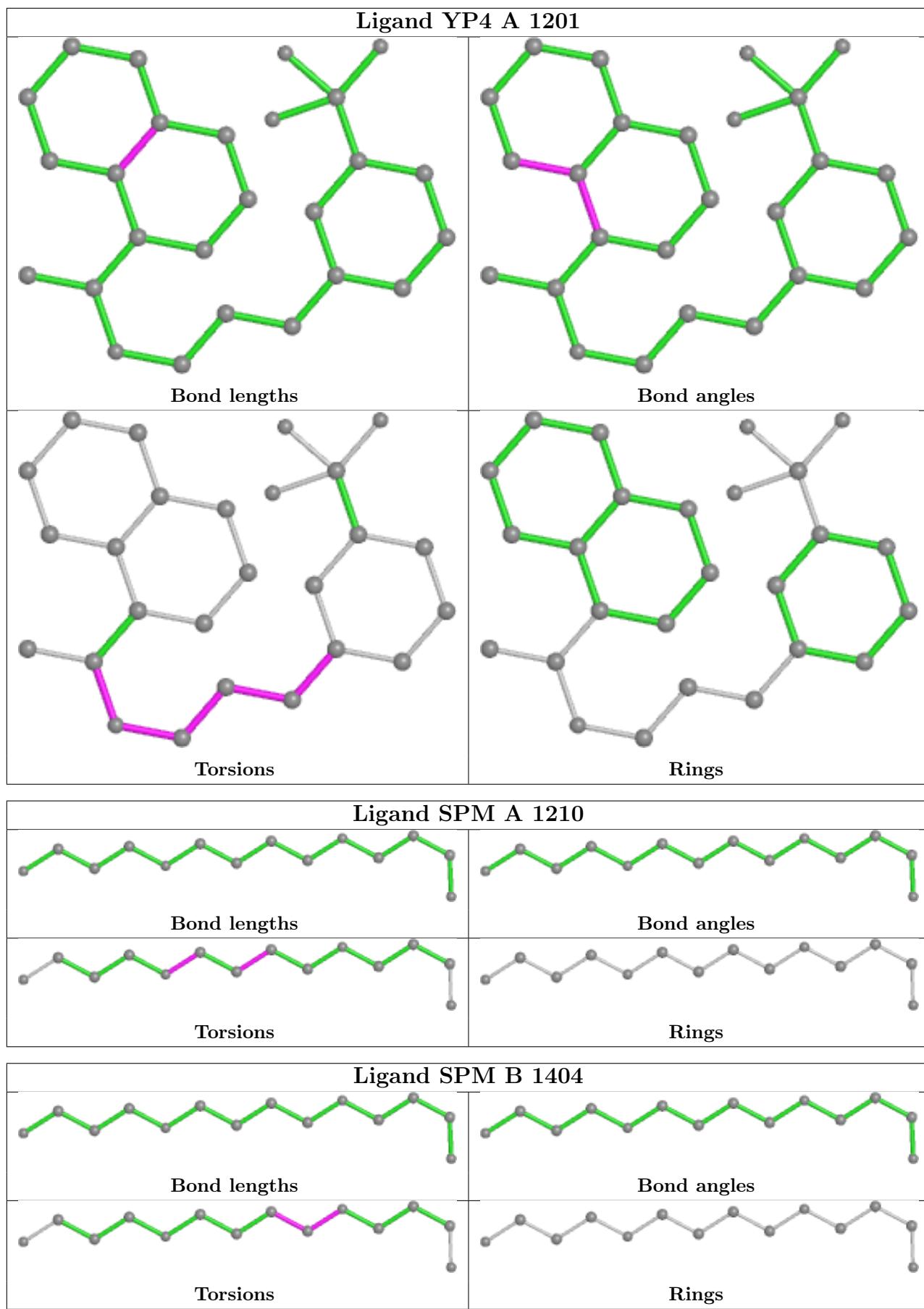
equivalents in the CSD to analyse the geometry.

Ligand TRP A 1208

Bond lengths

Bond angles

Torsions

Rings

Ligand PO4 A 1209

Bond lengths

Bond angles

Torsions

Rings

Ligand PO4 B 1406

Bond lengths

Bond angles

Torsions

Rings

Ligand PCW A 1204

Bond lengths

Bond angles

Torsions

Rings

Ligand SPM A 1205

Bond lengths

Bond angles

Torsions

Rings

Ligand YP4 A 1201

Bond lengths

Bond angles

Torsions

Rings

Ligand SPM A 1210

Bond lengths

Bond angles

Torsions

Rings

Ligand SPM B 1404

Bond lengths

Bond angles

Torsions

Rings

Ligand TRP B 1405

Bond lengths

Bond angles

Torsions

Rings

Ligand CLR B 1401

Bond lengths

Bond angles

Torsions

Rings

Ligand YP4 B 1407

Bond lengths

Bond angles

Torsions

Rings

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.
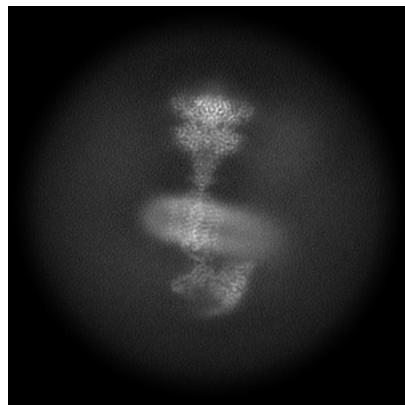
6 Map visualisation ⓘ

This section contains visualisations of the EMDB entry EMD-40915. These allow visual inspection of the internal detail of the map and identification of artifacts.
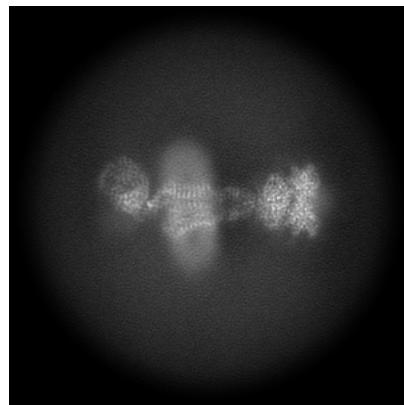
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections ⓘ
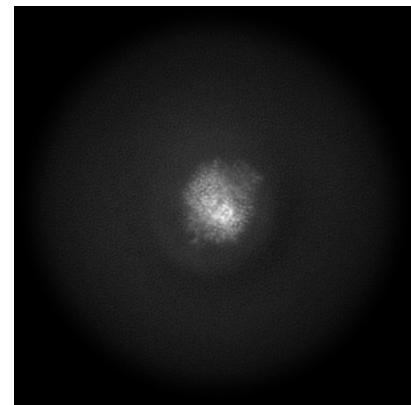
6.1.1 Primary map

| X | Y | Z |
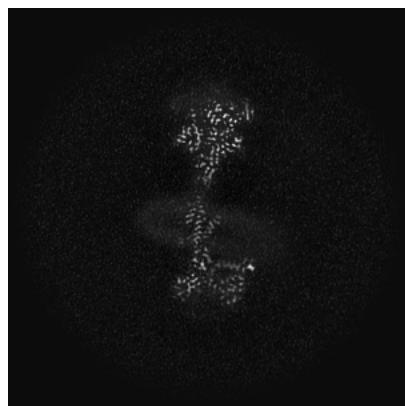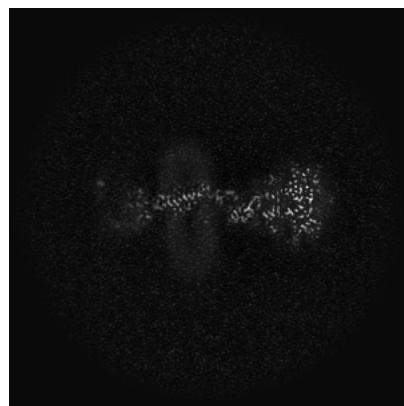
The images above show the map projected in three orthogonal directions.

6.2 Central slices ⓘ
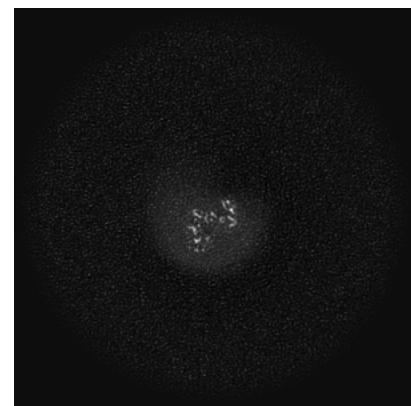
6.2.1 Primary map

| X Index: 240 | Y Index: 240 | Z Index: 240 |
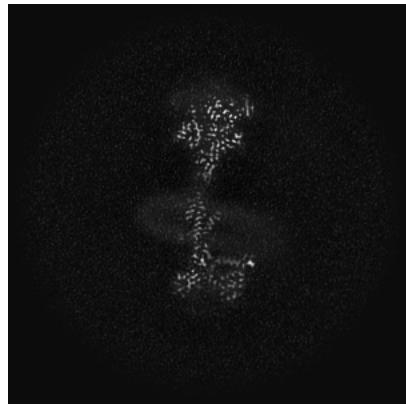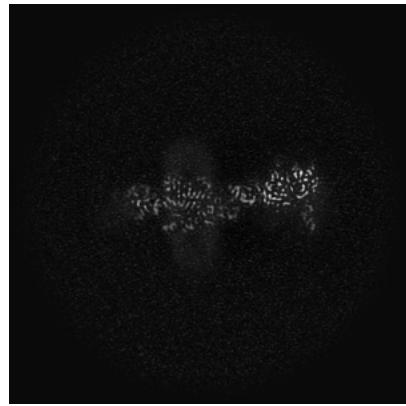
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices ⓘ
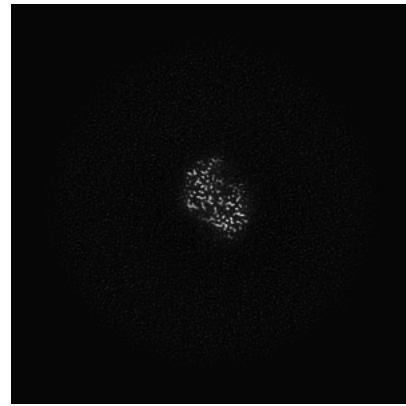
6.3.1 Primary map

| X Index: 240 | Y Index: 226 | Z Index: 350 |
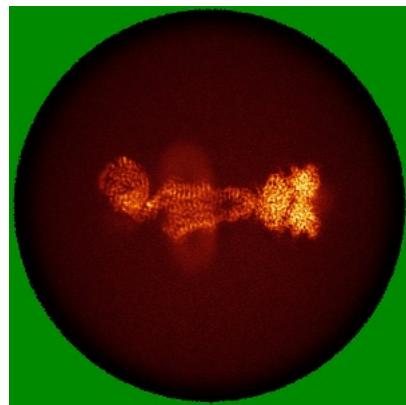
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) ⓘ
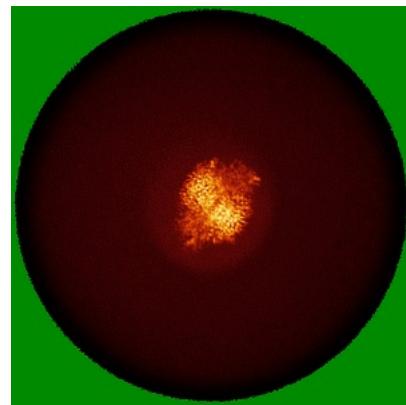
6.4.1 Primary map

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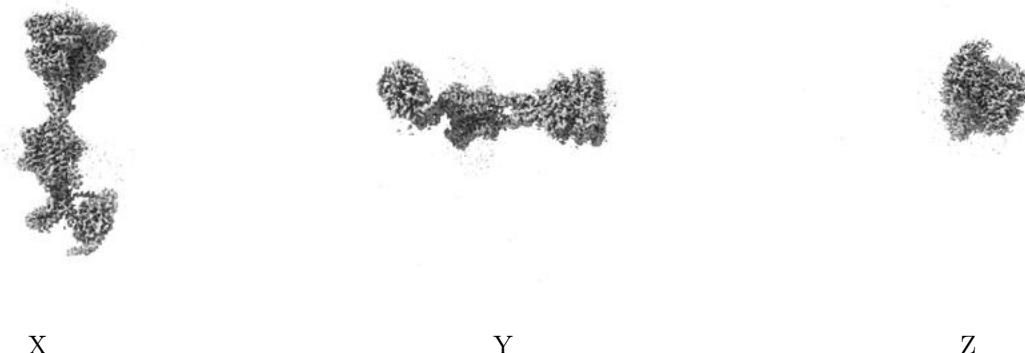
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views ⓘ

6.5.1 Primary map

X   Y   Z

The images above show the 3D surface view of the map at the recommended contour level 1.0.
These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.
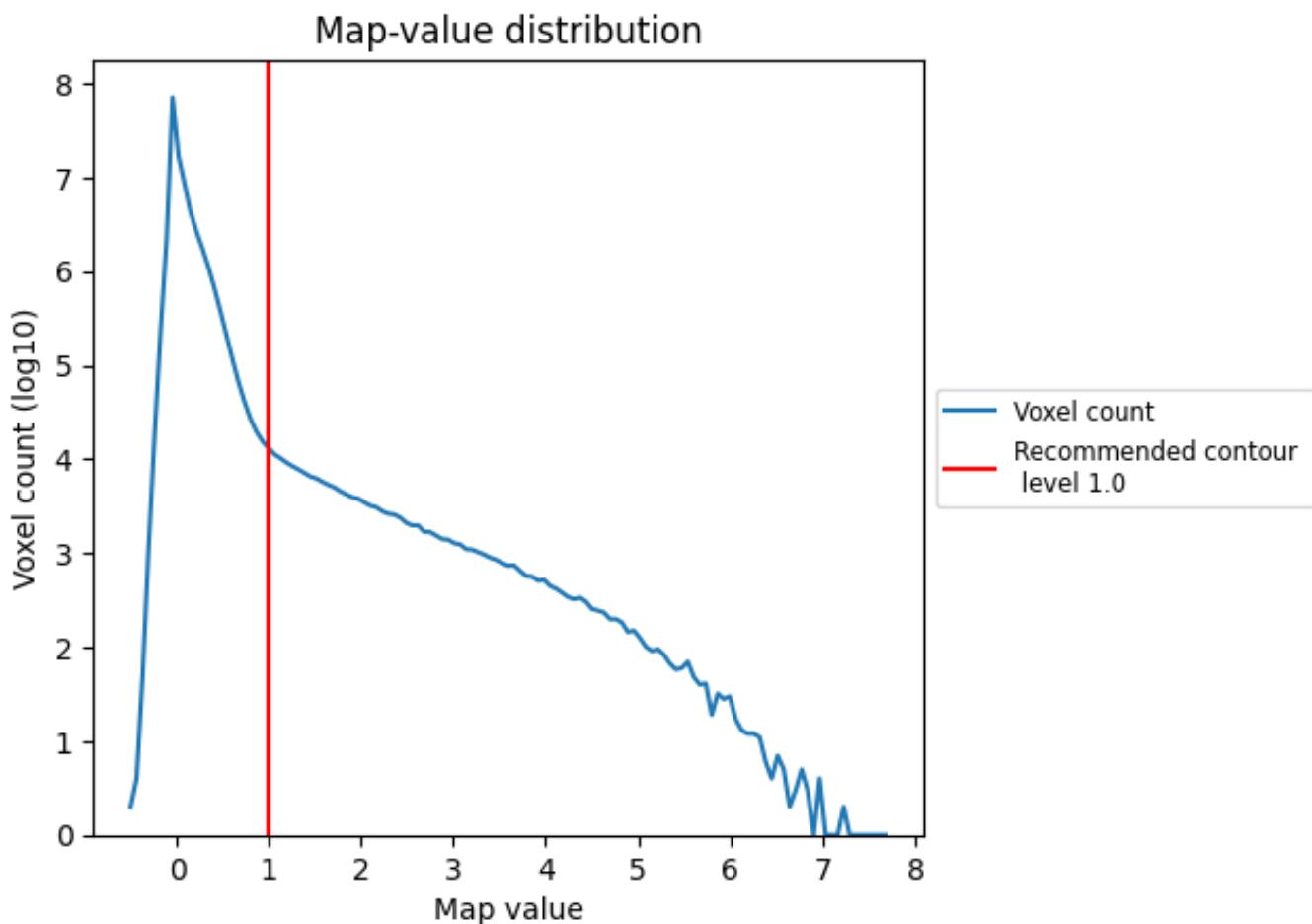
6.6 Mask visualisation ⓘ

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

7 Map analysis ⓘ
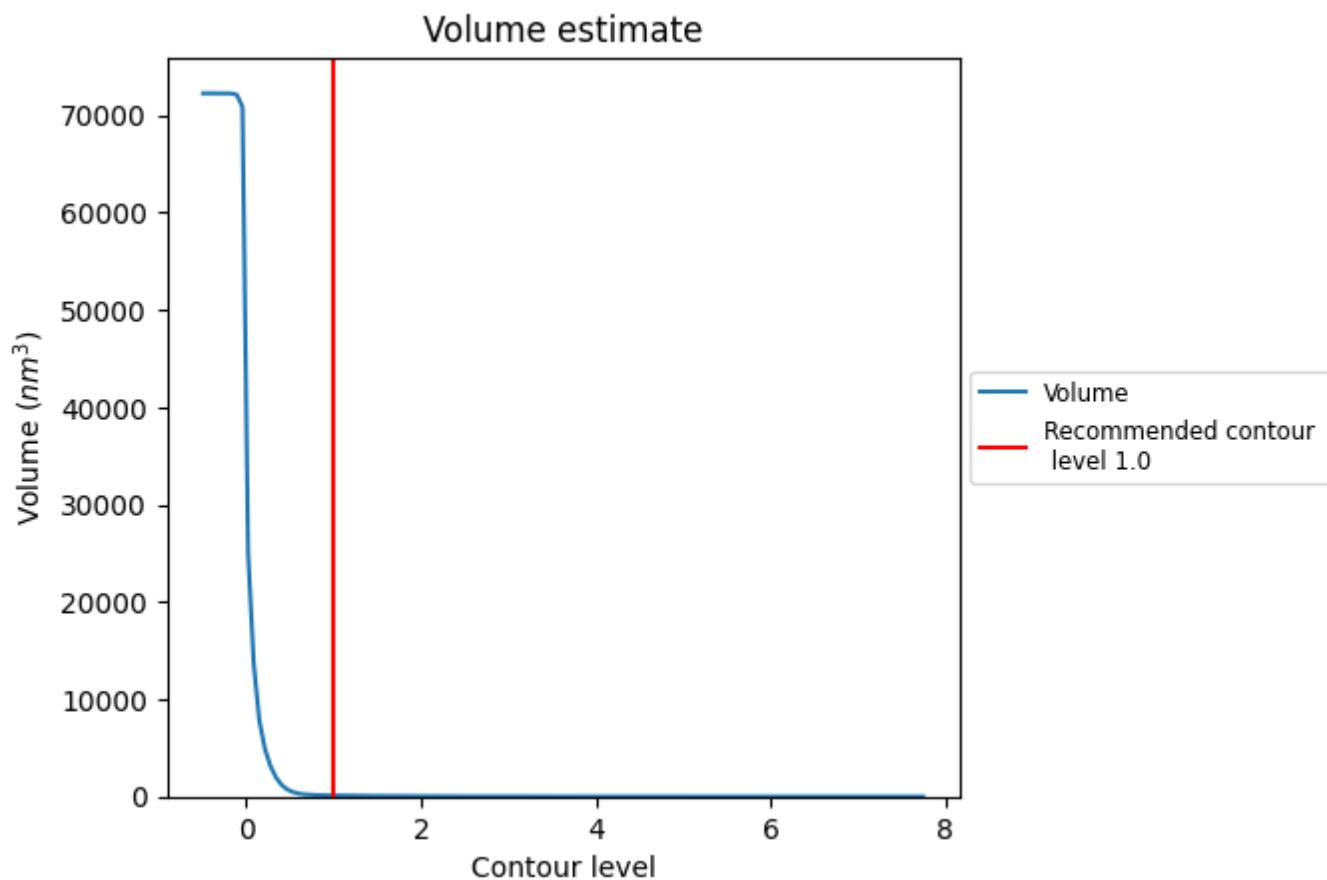
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution ⓘ

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.
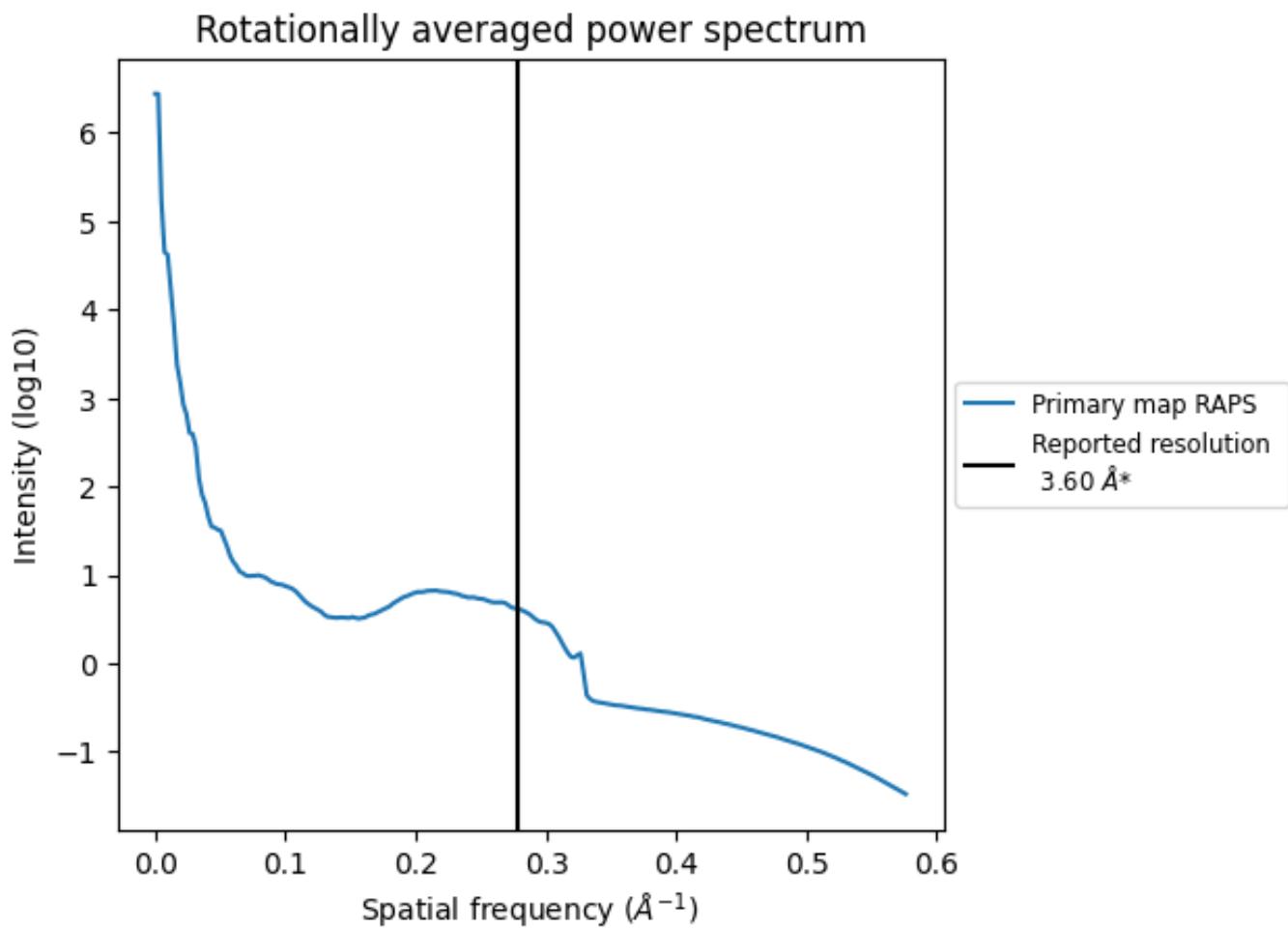
7.2 Volume estimate ⓘ

The volume at the recommended contour level is 108 nm^3; this corresponds to an approximate mass of 98 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 0.278 Å^{-1}
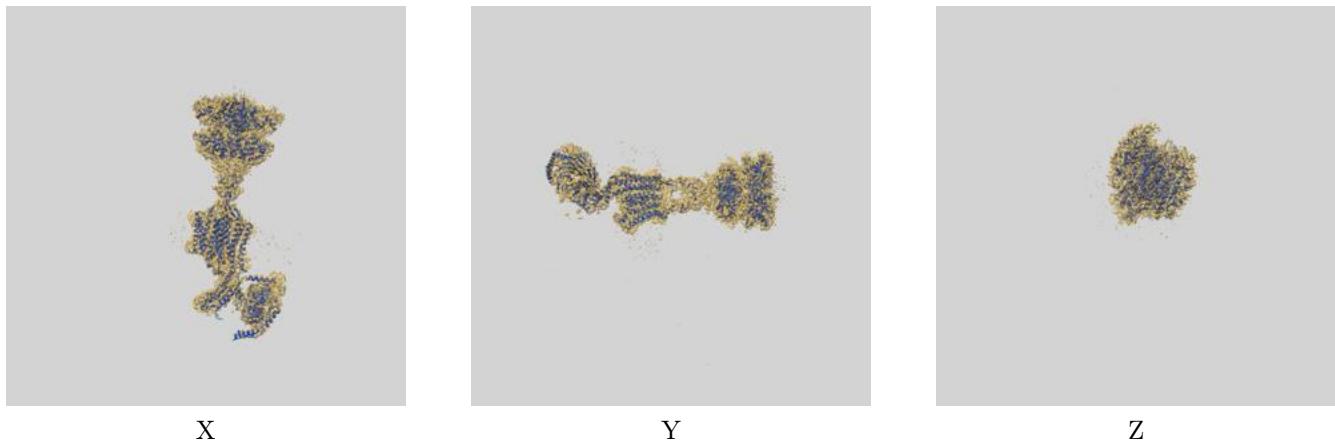
8 Fourier-Shell correlation ⓘ

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

9 Map-model fit (i)
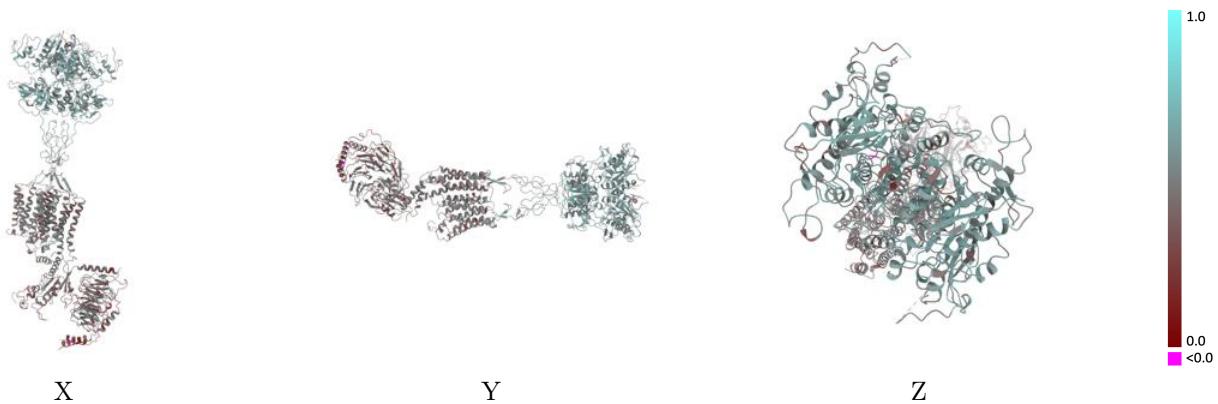
This section contains information regarding the fit between EMDB map EMD-40915 and PDB model 8SZG. Per-residue inclusion information can be found in section 3 on page 19.

9.1 Map-model overlay (i)

X	Y	Z
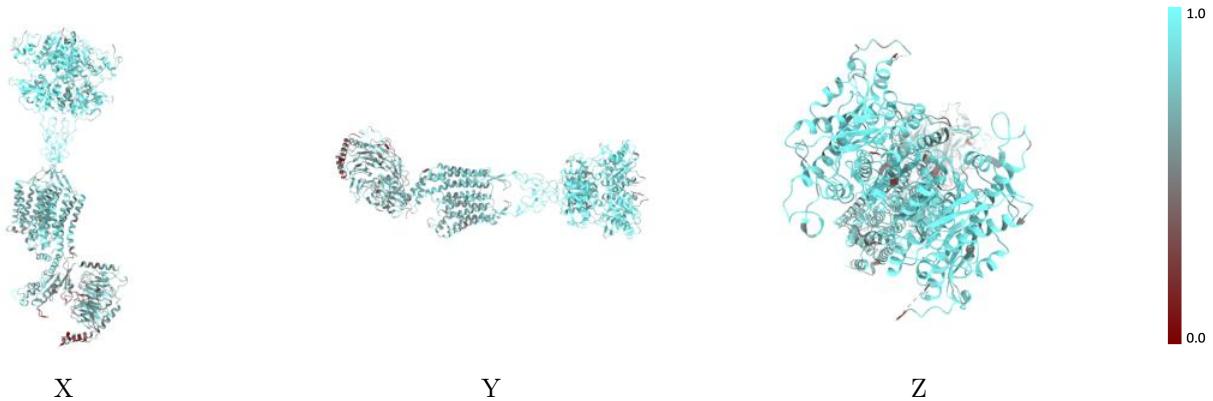
The images above show the 3D surface view of the map at the recommended contour level 1.0 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2　Q-score mapped to coordinate model ⓘ

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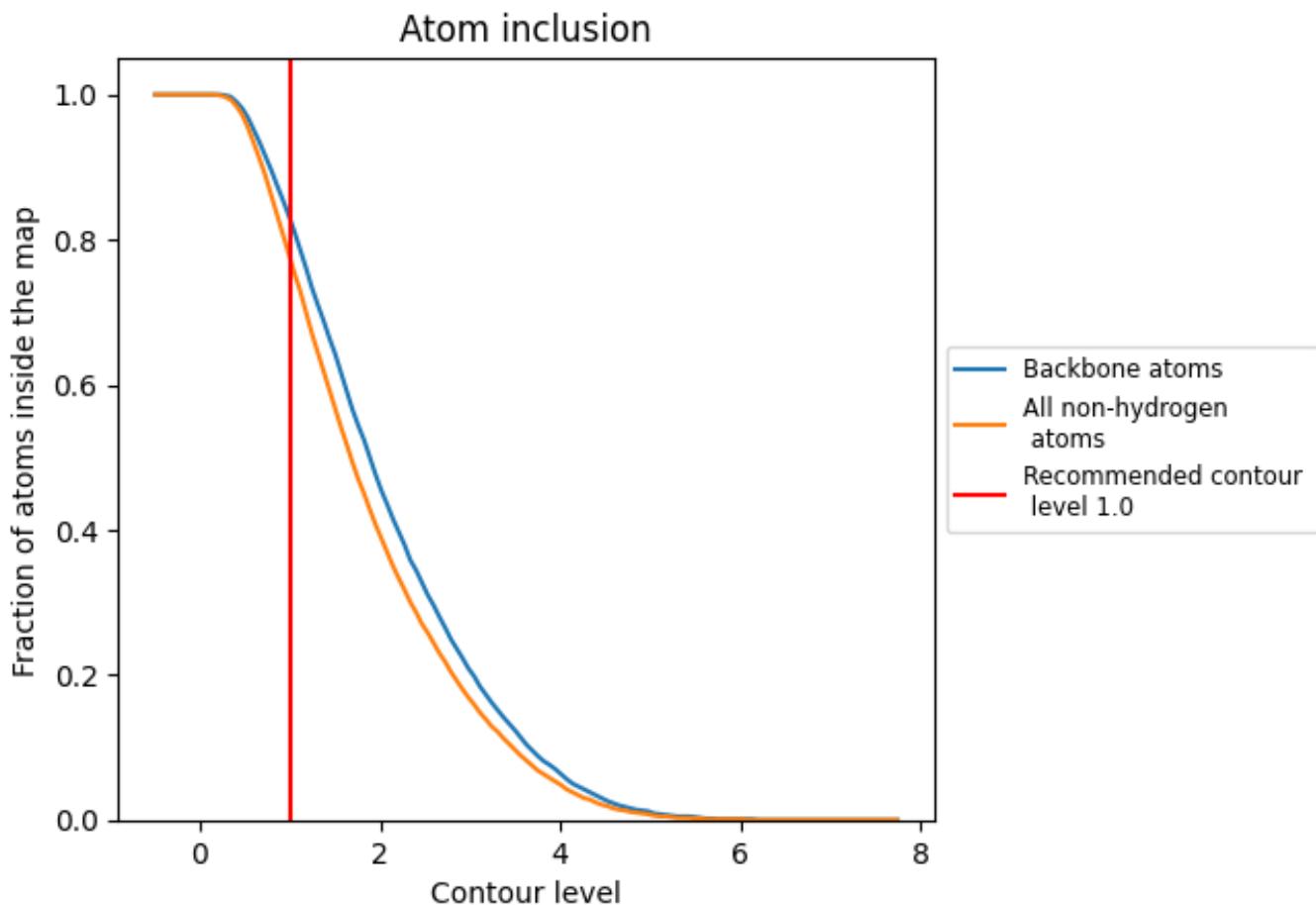
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

X　　　　　　　　　　　Y　　　　　　　　　　　Z

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 (1.0).

9.4 Atom inclusion ⓘ

At the recommended contour level, 83% of all backbone atoms, 78% 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 (1.0) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7750	0.4910
A	0.8350	0.5250
B	0.8200	0.5160
C	0.6240	0.4060
D	0.6360	0.4070
E	0.5480	0.3710
F	0.5000	0.4580
G	0.8570	0.5050
H	0.8930	0.5500

1.0

0.0
<0.0