



Full wwPDB EM Validation Report ⓘ

Mar 9, 2024 – 08:54 AM EST

PDB ID : 6NME
EMDB ID : EMD-0449
Title : Structure of LbCas12a-crRNA
Authors : Chang, L.; Li, Z.; Zhang, H.
Deposited on : 2019-01-10
Resolution : 5.67 Å (reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev70
MolProbity : 4.02b-467
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

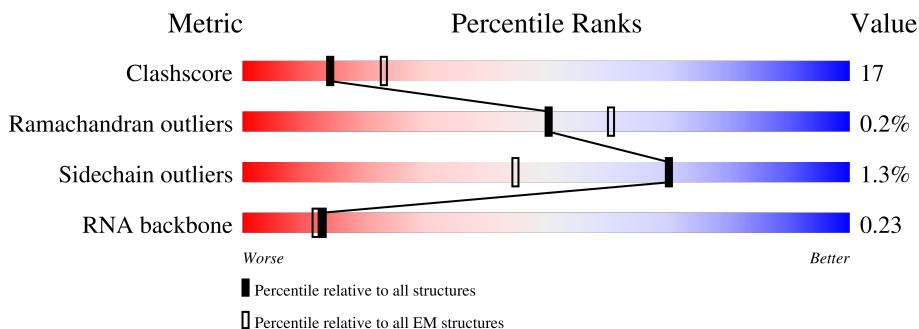
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 5.67 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	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

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	1227	<p>77% (Poor fit), 65% (0 outliers), 32% (1 outlier), .. (2+ outliers)</p>
2	G	40	<p>8% (0 outliers), 38% (1 outlier), 18% (2 outliers), 38% (not modelled)</p>

2 Entry composition [i](#)

There are 4 unique types of molecules in this entry. The entry contains 10404 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 Cpf1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	1196	9861	6356	1612	1864	29	0	0

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	1	MET	-	initiating methionine	UNP A0A182DWE3
A	112	ASN	ALA	conflict	UNP A0A182DWE3
A	113	GLU	ALA	conflict	UNP A0A182DWE3
A	131	PHE	ALA	conflict	UNP A0A182DWE3
A	132	LEU	ALA	conflict	UNP A0A182DWE3
A	264	GLN	ALA	conflict	UNP A0A182DWE3
A	269	LYS	ALA	conflict	UNP A0A182DWE3
A	357	VAL	LEU	conflict	UNP A0A182DWE3
A	1076	ARG	ALA	conflict	UNP A0A182DWE3
A	1077	ASN	ALA	conflict	UNP A0A182DWE3
A	1078	PRO	ALA	conflict	UNP A0A182DWE3
A	1085	ASP	ALA	conflict	UNP A0A182DWE3

- Molecule 2 is a RNA chain called crRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	G	25	535	240	97	173	25	0	0

- Molecule 3 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
3	A	1	Total	Mg	0
			1	1	
3	G	1	Total	Mg	0
			1	1	

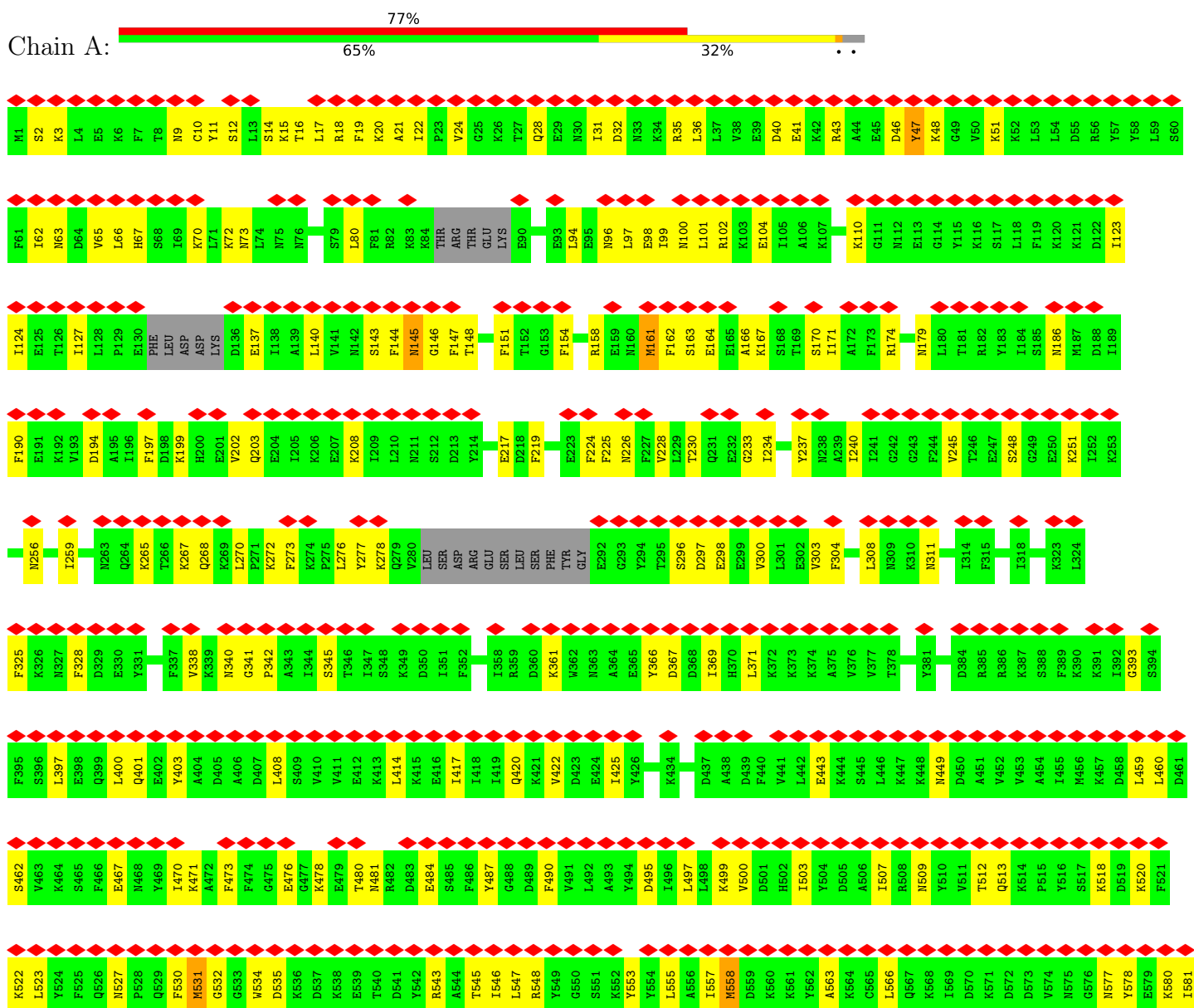
- Molecule 4 is water.

Mol	Chain	Residues	Atoms	AltConf
4	G	6	Total O 6 6	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: Cpf1



N582	Y583	K584	L585	P587	G588	P589	N590	K591	M592	L593	P594	K595	V596	F597	F598	K600	K601	M602	A604	Y605	Y606	N607	P608	S609	E610	D611	I612	Q613	K614	I615	Y616	K617	N618	T620	F621	K622	K623	G624	D625	M626	F627	N628	L629	M630	D631	C632	H633	K634	L635	I636	D637	F638	K640				
S642	I643	S644	R645	Y646	K648	V649	S650	D711	A652	Y653	D654	F655	N656	F657	S658	E659	T660	E661	K662	Y663	K664	D665	I666	A667	G668	F669	E670	R671	E672	V673	E674	E675	Q676	G677	Y678	V679	V680	S681	F682	E683	E684	A685	S686	K687	K688	E689	M690	D691	K692	L693	V694	E695	E696	G697	L699	Y700	M701
F702	Q703	I704	Y705	K706	D708	F709	S710	D711	A652	Y653	D654	F655	N656	F657	S658	E659	T660	E661	K662	Y663	K664	D665	I666	A667	G668	F669	E670	R671	E672	V673	E674	E675	Q676	G677	Y678	V679	V680	S681	F682	E683	E684	A685	S686	K687	K688	E689	M690	D691	K692	L693	V694	E695	E696	G697	L699	Y700	M701
S763	P764	I765	A766	K768	N769	D770	F771	K774	T777	I778	S779	L780	Y781	D782	Y783	Y784	K785	D786	K787	R788	F789	S790	E791	D792	Q793	Y794	E795	H796	G797	I798	P799	I800	A801	I802	N803	K804	C805	K807	N808	I809	F810	K811	I812	N813	T814	E815	V816	R817	V818	L819	L820	V821	K822	H823	D824		
M825	P826	I829	G830	I831	D832	R833	G834	R836	N837	L838	L839	Y840	I841	V842	D845	G846	K847	G848	N849	I850	V851	E852	Q853	L856	N857	E858	I859	F863	N864	G865	I866	R867	I868	K869	T870	D871	Y872	H873	S874	L875	D877	K878	K879	E880	K881	E882	R883	F884	E885	A886	R887	Q888	N889				
N890	T891	S892	I893	E894	N895	I896	K897	E898	L899	X900	A901	Q906	V907	V908	H909	K910	I911	C912	E913	L914	K917	Y918	D919	A920	V921	I922	A923	D926	L927	N928	S929	G930	F931	K932	N933	S934	R935	V936	K937	V938	E939	K940	Q941	V942	Y943	Q944	K945	F946	M949	L950	I951	D952	K953	L954	N955		
Y956	M957	V958	D959	K960	N963	C965	A966	T967	G968	G969	A970	L971	Y974	Q975	I976	T977	N978	K979	F980	F983	M986	S987	T988	Q989	F992	I993	A998	W999	L1000	T1001	S1002	K1003	I1004	D1005	P1006	S1007	T1008	G1009	F1010	I1011	N1012	L1013	L1014	K1015	T1016	K1017	I1018	T1019	S1020	P1021	L1022	A1023	D1023				
S1024	K1025	K1026	F1027	I1028	S1029	S1030	F1031	D1032	R1033	I1034	M1035	Y1036	Y1037	P1038	E1039	D1041	L1042	F1043	E1044	A1046	L1047	D1048	Y1049	K1050	N1051	F1052	S1053	R1054	D1056	A1057	D1058	Y1059	I1060	K1061	K1062	W1063	K1064	L1065	Y1066	S1067	Y1068	G1069	H1070	I1071	R1072	R1073	I1074	F1075	ARG	ASN	PRO	LYS	LYS	ASN	ASN	VAL	
PHB	ASP	W1086	E1087	E1088	V1089	C1090	L1091	S1093	A1094	Y1095	K1096	E1097	L1098	F1099	N1100	K1101	Y1102	G1103	I1104	N1105	Y1106	Q1107	G1109	D1110	I1111	R1112	A1113	L1114	L1115	C1116	E1117	Q1118	N1119	D1120	K1121	A1122	F1123	Y1124	S1125	F1126	F1127	M1128	A1129	L1130	M1131	L1133	M1134	L1135	Q1136	M1137	R1138	N1139	S1140	I1141	T1142	G1143	
R1144	T1145	D1146	V1147	D1148	I1151	S1152	P1153	V1154	K1155	M1156	S1157	D1158	G1159	I1160	F1161	Y1162	D1163	S1164	R1165	M1166	Y1167	E1168	A1169	Q1170	E1171	M1172	A1173	I1174	L1175	P1176	K1177	M1178	A1181	N1182	G1183	A1184	Y1185	N1186	I1187	A1188	R1189	K1190	V1191	L1192	W1193	A1194	I1195	G1196	Q1197	F1198	K1199	K1200	A1201	E1202	D1203	E1204	K1205
L1206	D1207	K1208	I1211	A1212	I1213	S1214	N1215	K1216	E1217	W1218	L1219	E1220	Y1221	G1222	Q1223	T1224	S1225	V1226	K1227																																						

• Molecule 2: crRNA



A3	A4	U5	U6	U7	C8	U9	A10	C11	U12	A13	A14	G15	U16	G17	U18	A19	G20	A21	U22	G23	G24	A25	A26	A27	U	U	A	G	U	U	G	C	U	U	U	U	U	G	G	C
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4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	78756	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING ONLY	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	35	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	0.153	Depositor
Minimum map value	-0.085	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.007	Depositor
Recommended contour level	0.0229	Depositor
Map size (\AA)	162.0, 162.0, 162.0	wwPDB
Map dimensions	120, 120, 120	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.35, 1.35, 1.35	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: MG

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	13/10066 (0.1%)	0.59	4/13518 (0.0%)
2	G	0.65	0/599	1.02	0/931
All	All	0.47	13/10665 (0.1%)	0.62	4/14449 (0.0%)

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	558	MET	CG-SD	6.05	1.96	1.81
1	A	161	MET	CG-SD	6.03	1.96	1.81
1	A	592	MET	CG-SD	6.02	1.96	1.81
1	A	531	MET	CG-SD	6.01	1.96	1.81
1	A	1131	MET	CG-SD	5.67	1.95	1.81
1	A	1134	MET	CG-SD	5.54	1.95	1.81
1	A	957	MET	CG-SD	5.44	1.95	1.81
1	A	722	MET	CG-SD	5.38	1.95	1.81
1	A	626	MET	CG-SD	5.38	1.95	1.81
1	A	1035	MET	CG-SD	5.31	1.95	1.81
1	A	1128	MET	CG-SD	5.30	1.95	1.81
1	A	949	MET	CG-SD	5.08	1.94	1.81
1	A	986	MET	CG-SD	5.06	1.94	1.81

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	592	MET	CG-SD-CE	5.82	109.52	100.20
1	A	161	MET	CG-SD-CE	5.80	109.47	100.20
1	A	558	MET	CG-SD-CE	5.76	109.41	100.20
1	A	531	MET	CG-SD-CE	5.75	109.39	100.20

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	A	9861	0	9801	332	0
2	G	535	0	268	48	0
3	A	1	0	0	0	0
3	G	1	0	0	0	0
4	G	6	0	0	0	0
All	All	10404	0	10069	350	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 17.

All (350) 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:A:161:MET:SD	1:A:171:ILE:HD11	1.74	1.27
1:A:765:ILE:CG2	2:G:3:A:H62	1.53	1.20
1:A:592:MET:CE	1:A:649:TRP:HZ2	1.54	1.19
1:A:558:MET:CE	1:A:566:LEU:HD22	1.79	1.13
1:A:592:MET:HE1	1:A:649:TRP:HZ2	1.17	1.09
1:A:765:ILE:HG22	2:G:3:A:H62	1.18	1.07
1:A:535:ASP:HB2	1:A:585:LEU:H	1.16	1.05
1:A:558:MET:HE3	1:A:566:LEU:HD22	1.36	1.05
1:A:592:MET:CE	1:A:649:TRP:CZ2	2.40	1.04
1:A:756:LEU:HB3	1:A:785:LYS:HB3	1.38	1.04
1:A:765:ILE:CG2	2:G:3:A:N6	2.25	0.98
1:A:145:ASN:HD22	1:A:146:GLY:N	1.61	0.97
1:A:582:ASN:O	1:A:583:TYR:CD2	2.18	0.97
1:A:765:ILE:HB	2:G:3:A:N6	1.80	0.97
1:A:145:ASN:HD22	1:A:146:GLY:H	0.96	0.96
1:A:592:MET:HE2	1:A:649:TRP:CZ2	1.99	0.95
1:A:582:ASN:O	1:A:583:TYR:HD2	1.48	0.94
1:A:47:TYR:CD1	1:A:48:LYS:HD3	2.01	0.94
1:A:161:MET:SD	1:A:171:ILE:CD1	2.56	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:583:TYR:CG	1:A:679:LYS:O	2.22	0.92
1:A:145:ASN:ND2	1:A:146:GLY:H	1.68	0.91
1:A:367:ASP:O	1:A:371:LEU:HB3	1.75	0.87
1:A:144:PHE:CE2	1:A:151:PHE:HZ	1.93	0.86
1:A:143:SER:O	1:A:147:PHE:HE2	1.58	0.86
1:A:765:ILE:CB	2:G:3:A:N6	2.39	0.86
1:A:558:MET:HE1	1:A:566:LEU:HD22	1.58	0.85
1:A:145:ASN:ND2	1:A:146:GLY:N	2.22	0.84
2:G:7:U:H2'	2:G:8:C:C6	2.13	0.84
2:G:9:U:H2'	2:G:10:A:C8	2.13	0.83
1:A:592:MET:HE1	1:A:649:TRP:CZ2	2.09	0.82
1:A:760:PRO:HG2	1:A:763:SER:HB3	1.61	0.82
1:A:535:ASP:CB	1:A:585:LEU:H	1.92	0.81
1:A:558:MET:SD	1:A:563:ALA:O	2.40	0.79
2:G:9:U:H2'	2:G:10:A:H8	1.48	0.77
1:A:9:ASN:HB3	1:A:807:LYS:H	1.49	0.76
1:A:534:TRP:CZ2	1:A:742:ALA:HB3	2.21	0.76
1:A:545:THR:HG23	1:A:581:ILE:HG22	1.67	0.76
1:A:583:TYR:CE2	1:A:681:SER:HB2	2.21	0.76
1:A:558:MET:HE1	1:A:566:LEU:CD2	2.17	0.75
1:A:47:TYR:CE1	1:A:48:LYS:HD3	2.21	0.75
1:A:558:MET:CE	1:A:566:LEU:CD2	2.64	0.74
2:G:7:U:H2'	2:G:8:C:H6	1.50	0.74
1:A:788:ARG:NH1	2:G:5:U:OP2	2.22	0.73
1:A:863:PHE:CE2	1:A:866:ILE:O	2.42	0.72
1:A:47:TYR:CE1	1:A:48:LYS:CD	2.73	0.72
1:A:144:PHE:HE2	1:A:151:PHE:HZ	1.34	0.72
1:A:531:MET:HE2	1:A:742:ALA:C	2.11	0.71
2:G:7:U:C2	2:G:8:C:C5	2.78	0.71
1:A:739:SER:HB2	1:A:799:PRO:HB2	1.71	0.71
1:A:557:ILE:HB	1:A:700:TYR:HB2	1.74	0.68
2:G:12:U:H4'	2:G:13:A:C8	2.29	0.68
1:A:583:TYR:HE2	1:A:681:SER:HB2	1.59	0.67
1:A:3:LYS:HB3	1:A:819:LEU:HD21	1.77	0.67
1:A:144:PHE:CE2	1:A:151:PHE:CZ	2.81	0.67
1:A:325:PHE:HA	1:A:328:PHE:HB2	1.75	0.67
1:A:758:VAL:HG13	1:A:783:VAL:O	1.94	0.67
1:A:534:TRP:HZ2	1:A:742:ALA:HB3	1.59	0.66
1:A:547:LEU:HD11	1:A:578:TYR:HB3	1.77	0.65
1:A:535:ASP:OD2	1:A:680:VAL:CG2	2.45	0.65
1:A:600:LYS:HA	1:A:603:MET:HB2	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:96:ASN:HA	1:A:99:ILE:HD12	1.79	0.64
1:A:143:SER:O	1:A:147:PHE:CE2	2.47	0.64
1:A:1005:ASP:HB3	1:A:1010:PHE:H	1.63	0.64
1:A:583:TYR:CD2	1:A:679:LYS:O	2.50	0.64
1:A:535:ASP:HB2	1:A:585:LEU:N	2.00	0.64
1:A:535:ASP:OD2	1:A:680:VAL:HG21	1.97	0.64
1:A:583:TYR:HD2	1:A:681:SER:H	1.45	0.64
1:A:234:ILE:HA	1:A:276:LEU:HD12	1.79	0.63
1:A:765:ILE:HB	2:G:3:A:H61	1.63	0.63
1:A:520:LYS:CE	2:G:25:A:OP1	2.47	0.63
1:A:62:ILE:O	1:A:66:LEU:HB2	1.97	0.63
1:A:20:LYS:HE2	1:A:793:GLN:HB3	1.80	0.63
1:A:583:TYR:CB	1:A:679:LYS:O	2.46	0.62
1:A:592:MET:HE2	1:A:649:TRP:CH2	2.34	0.62
1:A:765:ILE:HG21	2:G:3:A:N6	2.14	0.61
1:A:545:THR:HG23	1:A:581:ILE:CG2	2.31	0.61
1:A:872:TYR:HA	1:A:875:LEU:HD12	1.83	0.61
1:A:817:ARG:NH1	1:A:1206:LEU:O	2.33	0.61
1:A:1071:ARG:HE	1:A:1151:ILE:HD13	1.65	0.61
1:A:15:LYS:HA	2:G:23:G:C4	2.36	0.60
1:A:581:ILE:HD11	1:A:680:VAL:HG12	1.84	0.60
1:A:633:HIS:NE2	1:A:663:TYR:O	2.35	0.60
1:A:265:LYS:HZ2	1:A:267:LYS:HG3	1.67	0.59
1:A:906:GLN:HE22	2:G:20:G:H1'	1.67	0.59
1:A:577:ASN:HA	1:A:686:SER:HA	1.85	0.59
1:A:753:LYS:HE2	1:A:784:TYR:CZ	2.38	0.59
2:G:7:U:C4	2:G:8:C:N4	2.71	0.58
1:A:124:ILE:HD11	1:A:148:THR:HG22	1.84	0.58
1:A:22:ILE:HB	1:A:703:GLN:HB3	1.86	0.58
1:A:531:MET:HE2	1:A:742:ALA:O	2.04	0.58
1:A:581:ILE:HD11	1:A:680:VAL:CG1	2.33	0.58
1:A:718:ASN:ND2	2:G:6:U:O4	2.37	0.58
1:A:414:LEU:HA	1:A:417:ILE:HD12	1.86	0.58
1:A:703:GLN:NE2	1:A:704:ILE:O	2.36	0.57
1:A:952:ASP:HA	1:A:955:ASN:HD22	1.70	0.57
1:A:31:ILE:HG13	1:A:36:LEU:HB2	1.85	0.57
1:A:545:THR:CG2	1:A:581:ILE:HG22	2.35	0.57
1:A:46:ASP:OD1	1:A:144:PHE:HE1	1.87	0.57
1:A:397:LEU:HD13	1:A:400:LEU:HD12	1.87	0.56
1:A:256:ASN:O	1:A:272:LYS:NZ	2.37	0.56
1:A:1071:ARG:NH1	1:A:1133:LEU:O	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:16:THR:OG1	1:A:17:LEU:N	2.38	0.56
1:A:467:GLU:O	1:A:471:LYS:HB2	2.05	0.56
1:A:199:LYS:O	1:A:203:GLN:NE2	2.38	0.56
1:A:706:ASN:OD1	1:A:709:PHE:N	2.38	0.56
1:A:16:THR:HA	1:A:799:PRO:HA	1.88	0.56
1:A:712:LYS:O	1:A:714:HIS:ND1	2.39	0.56
1:A:259:ILE:HB	1:A:272:LYS:HZ3	1.70	0.56
1:A:460:LEU:HG	1:A:507:ILE:HD11	1.88	0.56
1:A:523:LEU:HD11	1:A:746:MET:HB2	1.86	0.56
1:A:535:ASP:O	1:A:583:TYR:O	2.23	0.56
1:A:1110:ASP:OD2	1:A:1112:ARG:NE	2.38	0.55
1:A:234:ILE:HG23	1:A:276:LEU:HB2	1.86	0.55
1:A:144:PHE:CD2	1:A:151:PHE:CZ	2.95	0.55
1:A:1189:ARG:NH2	1:A:1225:SER:OG	2.33	0.55
1:A:41:GLU:OE2	1:A:748:ARG:NH2	2.39	0.55
1:A:735:GLN:O	1:A:737:ARG:NH2	2.39	0.55
1:A:520:LYS:HE3	2:G:25:A:OP1	2.07	0.55
1:A:765:ILE:CB	2:G:3:A:H62	2.05	0.55
1:A:401:GLN:NE2	1:A:408:LEU:O	2.40	0.54
1:A:765:ILE:HG21	2:G:3:A:N7	2.22	0.54
1:A:174:ARG:NH2	1:A:278:LYS:O	2.41	0.54
1:A:693:LEU:HD23	1:A:699:LEU:HD12	1.90	0.54
1:A:732:ASN:ND2	1:A:736:ILE:O	2.40	0.54
1:A:584:LYS:O	1:A:653:TYR:OH	2.25	0.54
1:A:1071:ARG:NH1	1:A:1136:GLN:O	2.40	0.54
1:A:531:MET:HE2	1:A:742:ALA:HB3	1.89	0.54
1:A:543:ARG:HD2	1:A:558:MET:HG3	1.89	0.54
1:A:711:ASP:N	1:A:711:ASP:OD1	2.39	0.54
1:A:821:LYS:O	1:A:1199:LYS:NZ	2.37	0.54
1:A:297:ASP:N	1:A:297:ASP:OD1	2.35	0.54
1:A:759:HIS:HD2	2:G:3:A:C8	2.26	0.54
1:A:144:PHE:HE2	1:A:151:PHE:CZ	2.20	0.54
1:A:842:VAL:HG23	1:A:853:GLN:HB3	1.89	0.54
1:A:47:TYR:HE1	1:A:48:LYS:HD2	1.73	0.53
1:A:163:SER:OG	1:A:164:GLU:N	2.40	0.53
1:A:97:LEU:HA	1:A:100:ASN:HD22	1.72	0.53
1:A:338:VAL:HG12	1:A:473:PHE:HA	1.90	0.53
1:A:889:ASN:OD1	1:A:891:THR:OG1	2.25	0.53
1:A:47:TYR:CE1	1:A:48:LYS:HD2	2.42	0.53
1:A:1184:ALA:HA	1:A:1187:ILE:HD12	1.90	0.53
2:G:7:U:N3	2:G:8:C:C4	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:361:LYS:NZ	1:A:403:TYR:O	2.41	0.53
2:G:3:A:H4'	2:G:4:A:H5'	1.90	0.53
1:A:2:SER:OG	1:A:3:LYS:N	2.41	0.53
1:A:12:SER:HA	1:A:803:ASN:HB3	1.90	0.53
1:A:531:MET:HE2	1:A:742:ALA:CB	2.38	0.53
1:A:609:SER:HB3	1:A:612:ILE:HG22	1.91	0.53
1:A:845:ASP:OD2	1:A:849:ASN:ND2	2.41	0.53
1:A:863:PHE:CD1	1:A:864:ASN:N	2.77	0.53
1:A:32:ASP:O	1:A:35:ARG:NH1	2.40	0.52
1:A:417:ILE:O	1:A:420:GLN:NE2	2.42	0.52
1:A:553:TYR:HB3	1:A:704:ILE:HD12	1.90	0.52
1:A:46:ASP:OD1	1:A:144:PHE:CE1	2.63	0.52
1:A:98:GLU:HA	1:A:101:LEU:HD12	1.90	0.52
1:A:500:VAL:HA	1:A:503:ILE:HD12	1.91	0.52
1:A:225:PHE:HA	1:A:228:VAL:HG22	1.90	0.52
1:A:845:ASP:OD1	1:A:849:ASN:N	2.43	0.52
1:A:480:THR:OG1	1:A:481:ASN:N	2.40	0.52
1:A:759:HIS:HD2	2:G:3:A:N7	2.09	0.51
1:A:63:ASN:O	1:A:67:HIS:NE2	2.43	0.51
1:A:707:LYS:HG2	2:G:6:U:OP1	2.10	0.51
1:A:546:ILE:HD13	1:A:555:LEU:HD13	1.91	0.51
1:A:813:ASN:OD1	1:A:813:ASN:N	2.44	0.51
1:A:882:GLU:O	1:A:886:ALA:CB	2.58	0.51
1:A:17:LEU:N	1:A:798:ILE:O	2.43	0.51
1:A:51:LYS:NZ	2:G:27:A:H5'	2.26	0.51
1:A:366:TYR:HA	1:A:369:ILE:HD12	1.93	0.51
1:A:1046:ALA:HB2	1:A:1064:LYS:HG2	1.93	0.51
1:A:11:TYR:OH	1:A:955:ASN:OD1	2.29	0.51
1:A:20:LYS:NZ	1:A:21:ALA:O	2.43	0.50
1:A:765:ILE:HG21	2:G:3:A:C5	2.47	0.50
1:A:817:ARG:HA	1:A:820:LEU:HD12	1.93	0.50
1:A:1042:LEU:HD13	1:A:1066:TYR:HB3	1.92	0.50
2:G:12:U:O5'	2:G:12:U:H6	1.95	0.50
1:A:1004:ILE:O	1:A:1182:ASN:ND2	2.36	0.50
1:A:28:GLN:OE1	1:A:794:TYR:OH	2.30	0.50
1:A:612:ILE:HD11	1:A:635:LEU:HA	1.92	0.50
1:A:678:TYR:OH	1:A:804:LYS:NZ	2.41	0.50
1:A:933:ASN:OD1	1:A:933:ASN:N	2.43	0.50
1:A:18:ARG:O	2:G:6:U:H1'	2.12	0.50
1:A:756:LEU:HB3	1:A:785:LYS:CB	2.27	0.50
1:A:80:LEU:HG	1:A:94:LEU:HD22	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:237:TYR:HA	1:A:240:ILE:HD12	1.94	0.50
1:A:926:ASP:OD1	1:A:928:ASN:ND2	2.41	0.50
1:A:73:ASN:ND2	1:A:104:GLU:OE1	2.45	0.49
1:A:459:LEU:O	1:A:462:SER:OG	2.27	0.49
1:A:509:ASN:HA	1:A:512:THR:HG22	1.94	0.49
1:A:863:PHE:CD1	1:A:863:PHE:C	2.86	0.49
1:A:1048:ASP:OD1	1:A:1050:LYS:NZ	2.39	0.49
1:A:718:ASN:HB3	1:A:721:THR:HG23	1.94	0.49
1:A:1037:VAL:HG22	1:A:1039:GLU:H	1.78	0.49
1:A:926:ASP:OD2	1:A:929:SER:N	2.43	0.49
1:A:179:ASN:HD21	1:A:277:TYR:H	1.61	0.49
1:A:718:ASN:O	1:A:721:THR:OG1	2.24	0.49
1:A:495:ASP:O	1:A:499:LYS:NZ	2.45	0.48
1:A:580:LYS:HB3	1:A:683:GLU:HB3	1.95	0.48
1:A:1060:ILE:HG22	1:A:1062:LYS:H	1.78	0.48
1:A:190:PHE:O	1:A:194:ASP:HB2	2.14	0.48
2:G:11:C:O2'	2:G:13:A:N6	2.46	0.48
1:A:686:SER:OG	1:A:687:LYS:N	2.44	0.48
1:A:760:PRO:HG2	1:A:763:SER:CB	2.38	0.48
1:A:304:PHE:O	1:A:308:LEU:HB2	2.14	0.48
1:A:951:ILE:O	1:A:955:ASN:ND2	2.47	0.48
1:A:97:LEU:HD13	1:A:100:ASN:HD22	1.79	0.48
1:A:110:LYS:NZ	1:A:162:PHE:O	2.28	0.48
1:A:859:ILE:HG23	1:A:910:LYS:HE3	1.96	0.48
1:A:19:PHE:HE1	1:A:706:ASN:HD22	1.61	0.47
1:A:1002:SER:OG	1:A:1003:LYS:N	2.47	0.47
1:A:531:MET:O	1:A:741:GLY:HA2	2.14	0.47
2:G:24:G:H2'	2:G:25:A:C8	2.49	0.47
1:A:265:LYS:HE3	1:A:268:GLN:HA	1.97	0.47
1:A:70:LYS:O	1:A:72:LYS:NZ	2.39	0.47
1:A:669:PHE:HA	1:A:672:GLU:HG2	1.96	0.47
1:A:769:ASN:HD21	1:A:771:ASP:HB2	1.79	0.47
1:A:954:LEU:HD13	1:A:976:ILE:HD11	1.95	0.47
2:G:8:C:H2'	2:G:9:U:C6	2.49	0.47
1:A:197:PHE:HB3	1:A:202:VAL:HG21	1.97	0.47
1:A:245:VAL:HG23	1:A:251:LYS:HZ2	1.80	0.47
1:A:583:TYR:CE1	1:A:679:LYS:HD2	2.49	0.47
1:A:900:LYS:NZ	1:A:937:LYS:O	2.37	0.47
1:A:934:SER:O	1:A:934:SER:OG	2.30	0.47
1:A:300:VAL:HA	1:A:303:VAL:HG12	1.96	0.47
1:A:476:GLU:O	1:A:478:LYS:NZ	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:965:CYS:HA	1:A:971:LEU:HB2	1.97	0.47
1:A:40:ASP:HA	1:A:43:ARG:HB2	1.95	0.47
1:A:265:LYS:HD2	1:A:267:LYS:HZ2	1.79	0.47
2:G:11:C:H2'	2:G:11:C:O2	2.15	0.47
1:A:14:SER:OG	2:G:23:G:O6	2.31	0.47
1:A:186:ASN:ND2	1:A:237:TYR:OH	2.44	0.47
1:A:1033:ARG:HD2	1:A:1035:MET:HB2	1.96	0.47
1:A:535:ASP:CB	1:A:585:LEU:N	2.71	0.46
1:A:833:ARG:NH1	1:A:938:VAL:O	2.48	0.46
1:A:595:LYS:O	1:A:599:SER:HB3	2.16	0.46
1:A:484:GLU:HA	1:A:487:TYR:HB2	1.98	0.46
1:A:765:ILE:HG21	2:G:3:A:C6	2.51	0.46
1:A:885:GLU:O	1:A:887:ARG:NH1	2.48	0.46
1:A:880:GLU:HA	1:A:883:ARG:HG2	1.97	0.46
1:A:226:ASN:N	1:A:226:ASN:OD1	2.49	0.46
1:A:248:SER:O	1:A:251:LYS:NZ	2.45	0.46
1:A:762:ASN:N	1:A:779:LEU:O	2.44	0.46
1:A:154:PHE:O	1:A:158:ARG:HB2	2.15	0.46
1:A:628:ASN:ND2	1:A:631:ASP:OD2	2.45	0.46
1:A:863:PHE:HD1	1:A:864:ASN:N	2.13	0.46
1:A:1172:ASN:OD1	1:A:1172:ASN:N	2.49	0.46
1:A:520:LYS:HB2	1:A:745:PHE:HB3	1.98	0.45
1:A:583:TYR:CD2	1:A:681:SER:N	2.82	0.45
1:A:687:LYS:NZ	1:A:691:ASP:OD2	2.43	0.45
1:A:703:GLN:HE22	1:A:705:TYR:HD1	1.64	0.45
1:A:864:ASN:N	1:A:864:ASN:HD22	2.15	0.45
1:A:1207:ASP:N	1:A:1207:ASP:OD1	2.49	0.45
1:A:826:PRO:HD2	1:A:846:GLY:HA3	1.98	0.45
1:A:397:LEU:HA	1:A:400:LEU:HD12	1.99	0.45
1:A:311:ASN:OD1	1:A:311:ASN:N	2.39	0.45
1:A:62:ILE:HA	1:A:65:VAL:HG22	1.99	0.45
1:A:759:HIS:CD2	2:G:3:A:C8	3.05	0.45
1:A:102:ARG:HH22	1:A:166:ALA:H	1.63	0.45
1:A:443:GLU:HG2	1:A:449:ASN:HD21	1.81	0.45
1:A:531:MET:CE	1:A:742:ALA:C	2.83	0.45
1:A:936:VAL:HG22	1:A:938:VAL:H	1.81	0.45
1:A:749:ALA:N	1:A:792:ASP:OD1	2.49	0.45
1:A:837:ASN:HA	1:A:857:ASN:HD21	1.82	0.45
1:A:1035:MET:HB3	1:A:1044:GLU:HB3	1.98	0.45
1:A:296:SER:OG	1:A:298:GLU:OE1	2.35	0.44
2:G:12:U:H4'	2:G:13:A:N7	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:230:THR:HG23	1:A:233:GLY:H	1.81	0.44
1:A:340:ASN:OD1	1:A:341:GLY:N	2.51	0.44
1:A:522:LYS:HA	1:A:745:PHE:HA	1.98	0.44
1:A:720:HIS:HA	1:A:723:TYR:CD2	2.52	0.44
1:A:891:THR:O	1:A:895:ASN:ND2	2.50	0.44
1:A:1140:SER:HA	1:A:1148:ASP:HA	1.99	0.44
1:A:859:ILE:N	1:A:870:THR:O	2.50	0.44
1:A:1191:VAL:O	1:A:1195:ILE:HG12	2.17	0.44
2:G:20:G:H2'	2:G:21:A:C8	2.52	0.44
1:A:161:MET:HB3	1:A:171:ILE:HG13	1.99	0.44
1:A:219:PHE:HA	1:A:224:PHE:HD2	1.82	0.44
1:A:836:ARG:NH1	1:A:1144:ARG:O	2.50	0.44
1:A:958:VAL:HG21	1:A:970:ALA:HA	1.99	0.44
1:A:467:GLU:HA	1:A:470:ILE:HG22	1.99	0.44
1:A:779:LEU:HD21	2:G:15:G:C8	2.53	0.44
1:A:1156:ASN:OD1	1:A:1159:GLY:N	2.49	0.44
1:A:520:LYS:HE2	2:G:25:A:OP1	2.17	0.44
1:A:823:ASP:OD1	1:A:824:ASP:N	2.51	0.44
1:A:1057:ALA:HA	1:A:1216:LYS:HG3	2.00	0.44
1:A:963:ASN:HD21	1:A:965:CYS:HB2	1.82	0.43
1:A:10:CYS:H	1:A:975:GLN:NE2	2.16	0.43
1:A:171:ILE:HA	1:A:174:ARG:HB3	2.00	0.43
1:A:259:ILE:HG23	1:A:270:LEU:HD12	1.99	0.43
1:A:882:GLU:O	1:A:886:ALA:HB2	2.18	0.43
1:A:518:LYS:NZ	2:G:7:U:O2'	2.46	0.43
1:A:737:ARG:HH22	1:A:803:ASN:H	1.66	0.43
1:A:1186:ASN:O	1:A:1190:LYS:HG2	2.18	0.43
1:A:859:ILE:O	1:A:870:THR:N	2.51	0.43
2:G:3:A:O2'	2:G:12:U:O4	2.26	0.43
1:A:110:LYS:HG2	1:A:162:PHE:HB3	2.01	0.43
1:A:527:ASN:HB3	1:A:530:PHE:HB2	2.01	0.43
1:A:1214:SER:OG	1:A:1217:GLU:OE1	2.28	0.43
1:A:3:LYS:HE2	1:A:919:ASP:HB3	1.99	0.43
1:A:208:LYS:HD3	1:A:208:LYS:HA	1.82	0.43
1:A:590:ASN:N	1:A:590:ASN:OD1	2.51	0.43
1:A:824:ASP:N	1:A:824:ASP:OD1	2.44	0.43
2:G:26:A:H2'	2:G:27:A:C4	2.53	0.43
1:A:265:LYS:NZ	1:A:267:LYS:O	2.48	0.43
1:A:876:LEU:HD21	1:A:937:LYS:HG2	2.01	0.43
1:A:422:VAL:HA	1:A:425:ILE:HD12	2.01	0.42
1:A:712:LYS:HG3	2:G:16:U:H3'	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:767:ASN:HB3	2:G:12:U:OP1	2.19	0.42
1:A:1073:ARG:N	1:A:1087:GLU:O	2.50	0.42
1:A:342:PRO:O	1:A:345:SER:OG	2.32	0.42
1:A:1101:LYS:HE2	1:A:1101:LYS:HB3	1.86	0.42
1:A:481:ASN:N	1:A:481:ASN:OD1	2.52	0.42
1:A:1058:ASP:OD1	1:A:1059:TYR:N	2.53	0.42
1:A:24:VAL:HB	1:A:701:MET:HG3	2.02	0.42
1:A:167:LYS:O	1:A:170:SER:OG	2.38	0.42
1:A:788:ARG:NH1	1:A:788:ARG:HG2	2.35	0.42
1:A:899:LEU:HD21	2:G:10:A:OP1	2.20	0.42
1:A:144:PHE:HD2	1:A:151:PHE:CE2	2.38	0.42
1:A:957:MET:HB2	1:A:974:TYR:HB2	2.01	0.42
1:A:582:ASN:HD22	1:A:582:ASN:HA	1.58	0.42
1:A:656:ASN:O	1:A:676:GLN:NE2	2.51	0.42
1:A:532:GLY:HA2	1:A:741:GLY:HA2	2.02	0.41
1:A:585:LEU:HD12	1:A:587:PRO:HD3	2.02	0.41
1:A:1156:ASN:N	1:A:1160:ILE:O	2.52	0.41
1:A:600:LYS:HA	1:A:603:MET:CB	2.49	0.41
1:A:1221:TYR:O	1:A:1225:SER:OG	2.34	0.41
1:A:256:ASN:HD21	1:A:273:PHE:H	1.69	0.41
1:A:756:LEU:CB	1:A:785:LYS:HB3	2.29	0.41
1:A:20:LYS:HZ1	1:A:794:TYR:H	1.67	0.41
1:A:137:GLU:HA	1:A:140:LEU:HD12	2.02	0.41
1:A:788:ARG:HG2	1:A:788:ARG:HH11	1.85	0.41
1:A:583:TYR:CD1	1:A:679:LYS:HD2	2.56	0.41
1:A:190:PHE:HZ	1:A:217:GLU:HG3	1.86	0.41
1:A:694:VAL:HG22	1:A:699:LEU:HD22	2.02	0.41
1:A:1058:ASP:OD1	1:A:1060:ILE:N	2.53	0.41
1:A:1058:ASP:HB3	1:A:1061:LYS:HG2	2.03	0.41
1:A:361:LYS:HD2	1:A:361:LYS:HA	1.82	0.41
1:A:534:TRP:HE1	1:A:742:ALA:H	1.67	0.41
1:A:833:ARG:H	1:A:833:ARG:HG2	1.50	0.41
1:A:837:ASN:HD22	1:A:840:TYR:HD2	1.69	0.41
1:A:1016:THR:HB	1:A:1135:LEU:HD21	2.02	0.41
1:A:803:ASN:ND2	1:A:975:GLN:HE22	2.19	0.41
1:A:829:ILE:HG13	1:A:841:ILE:HG23	2.03	0.41
1:A:933:ASN:O	1:A:935:ARG:N	2.54	0.41
1:A:123:ILE:HA	1:A:127:ILE:HD13	2.03	0.41
1:A:1056:ASP:N	1:A:1056:ASP:OD1	2.55	0.40
1:A:17:LEU:HB2	1:A:798:ILE:HB	2.03	0.40
1:A:3:LYS:HG2	1:A:819:LEU:HD11	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:340:ASN:N	1:A:393:GLY:O	2.52	0.40
1:A:497:LEU:HD23	1:A:497:LEU:HA	1.90	0.40
1:A:548:ARG:HG3	1:A:553:TYR:CZ	2.57	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	1186/1227 (97%)	1095 (92%)	89 (8%)	2 (0%)	47 81

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	583	TYR
1	A	934	SER

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	1078/1114 (97%)	1064 (99%)	14 (1%)	69 82

All (14) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	47	TYR
1	A	145	ASN
1	A	490	PHE
1	A	513	GLN
1	A	582	ASN
1	A	634	LYS
1	A	641	ASP
1	A	737	ARG
1	A	813	ASN
1	A	863	PHE
1	A	867	ARG
1	A	887	ARG
1	A	946	PHE
1	A	1026	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (22) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	33	ASN
1	A	73	ASN
1	A	76	ASN
1	A	91	ASN
1	A	96	ASN
1	A	145	ASN
1	A	177	ASN
1	A	179	ASN
1	A	186	ASN
1	A	420	GLN
1	A	468	ASN
1	A	575	ASN
1	A	582	ASN
1	A	613	GLN
1	A	618	ASN
1	A	656	ASN
1	A	759	HIS
1	A	803	ASN
1	A	849	ASN
1	A	864	ASN
1	A	906	GLN
1	A	1186	ASN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	G	24/40 (60%)	9 (37%)	0

All (9) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
2	G	5	U
2	G	13	A
2	G	14	A
2	G	17	G
2	G	20	G
2	G	23	G
2	G	24	G
2	G	25	A
2	G	27	A

There are no RNA pucker outliers to report.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 2 ligands modelled in this entry, 2 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

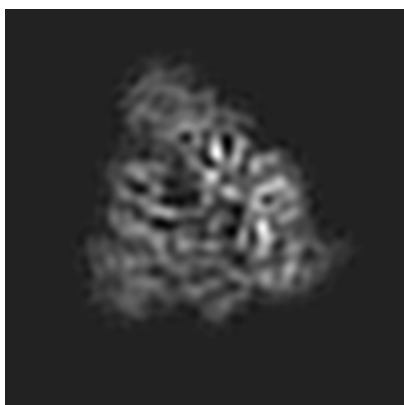
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-0449. These allow visual inspection of the internal detail of the map and identification of artifacts.

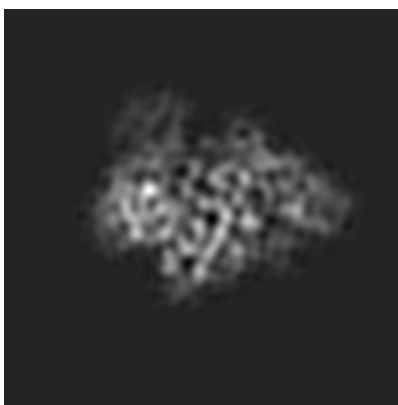
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

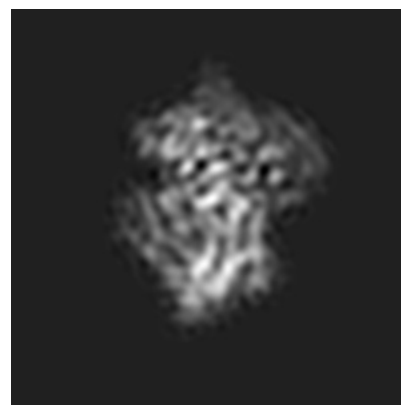
6.1.1 Primary map



X



Y

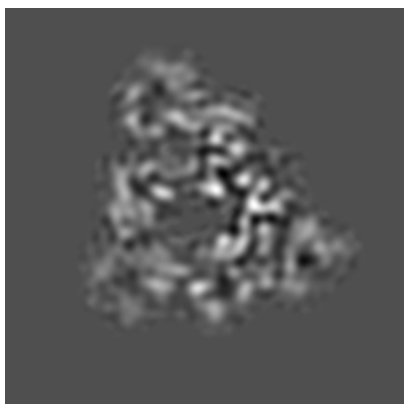


Z

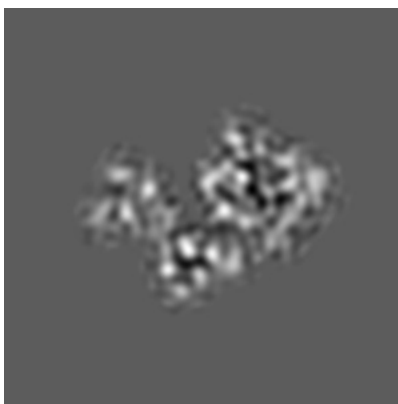
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

6.2.1 Primary map



X Index: 60



Y Index: 60

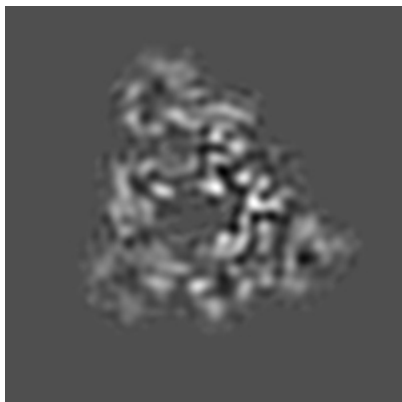


Z Index: 60

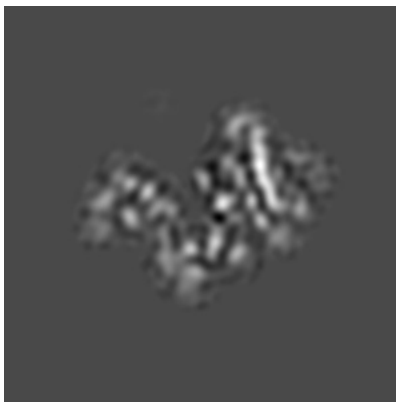
The images above show central slices of the map in three orthogonal directions.

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

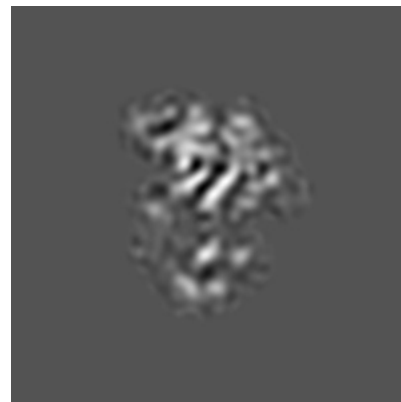
6.3.1 Primary map



X Index: 60



Y Index: 63



Z Index: 65

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

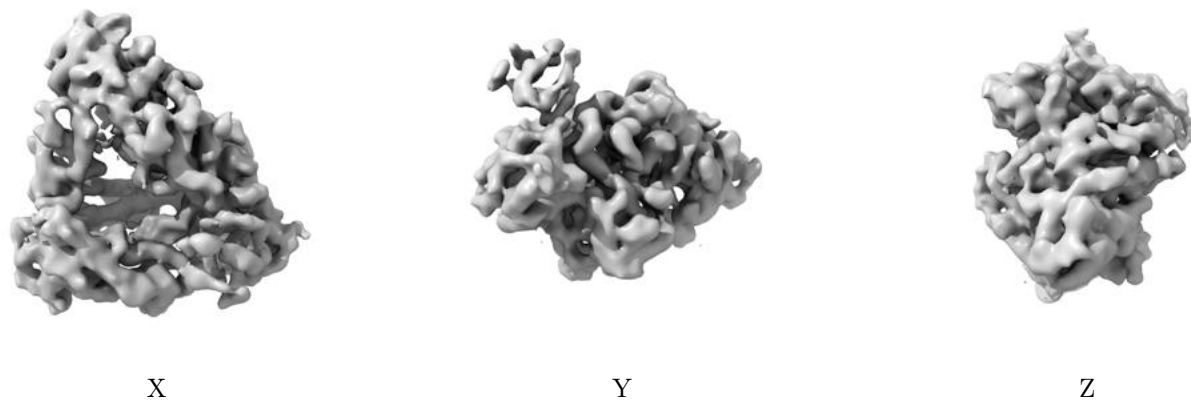


Z

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 0.0229. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

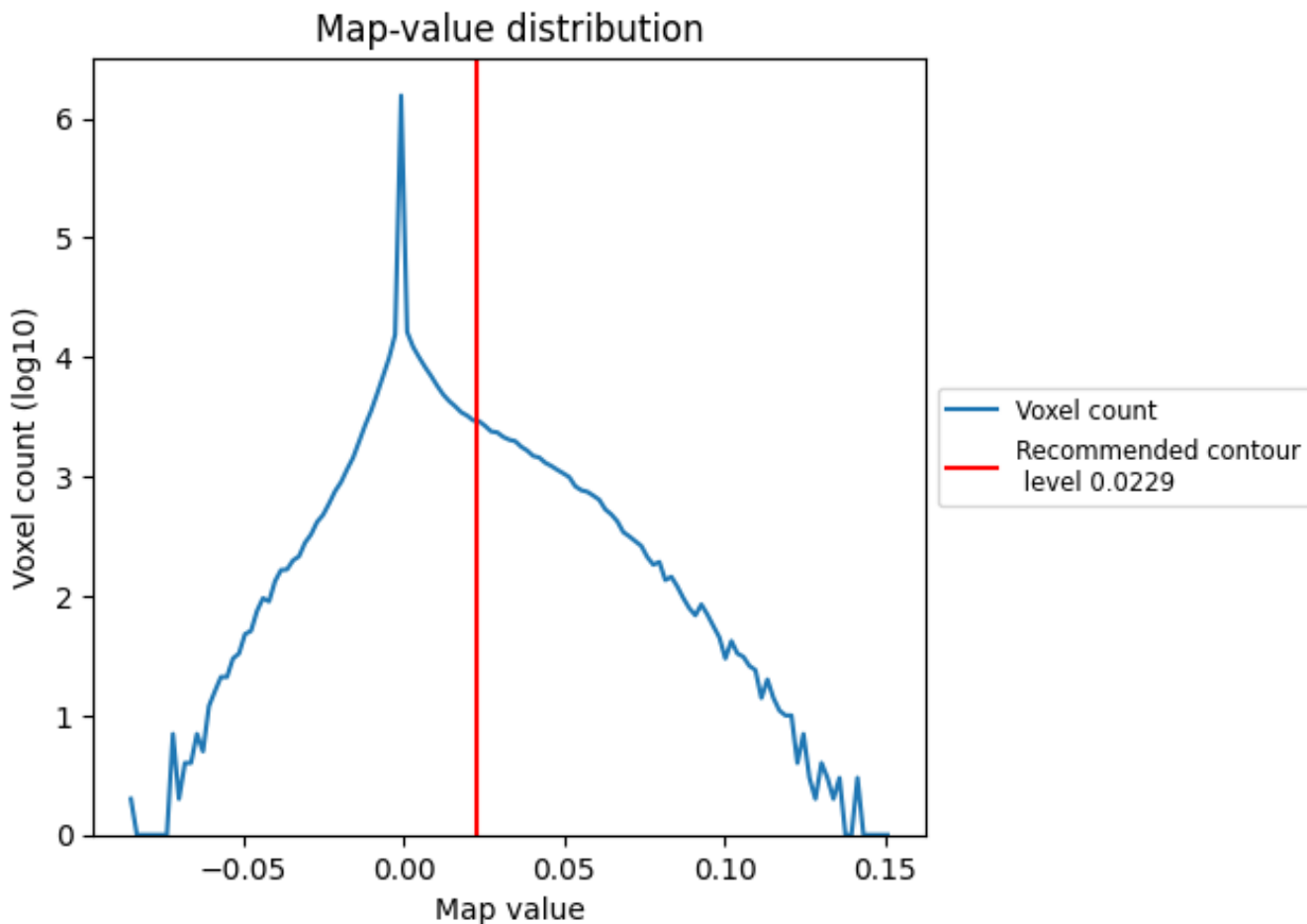
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

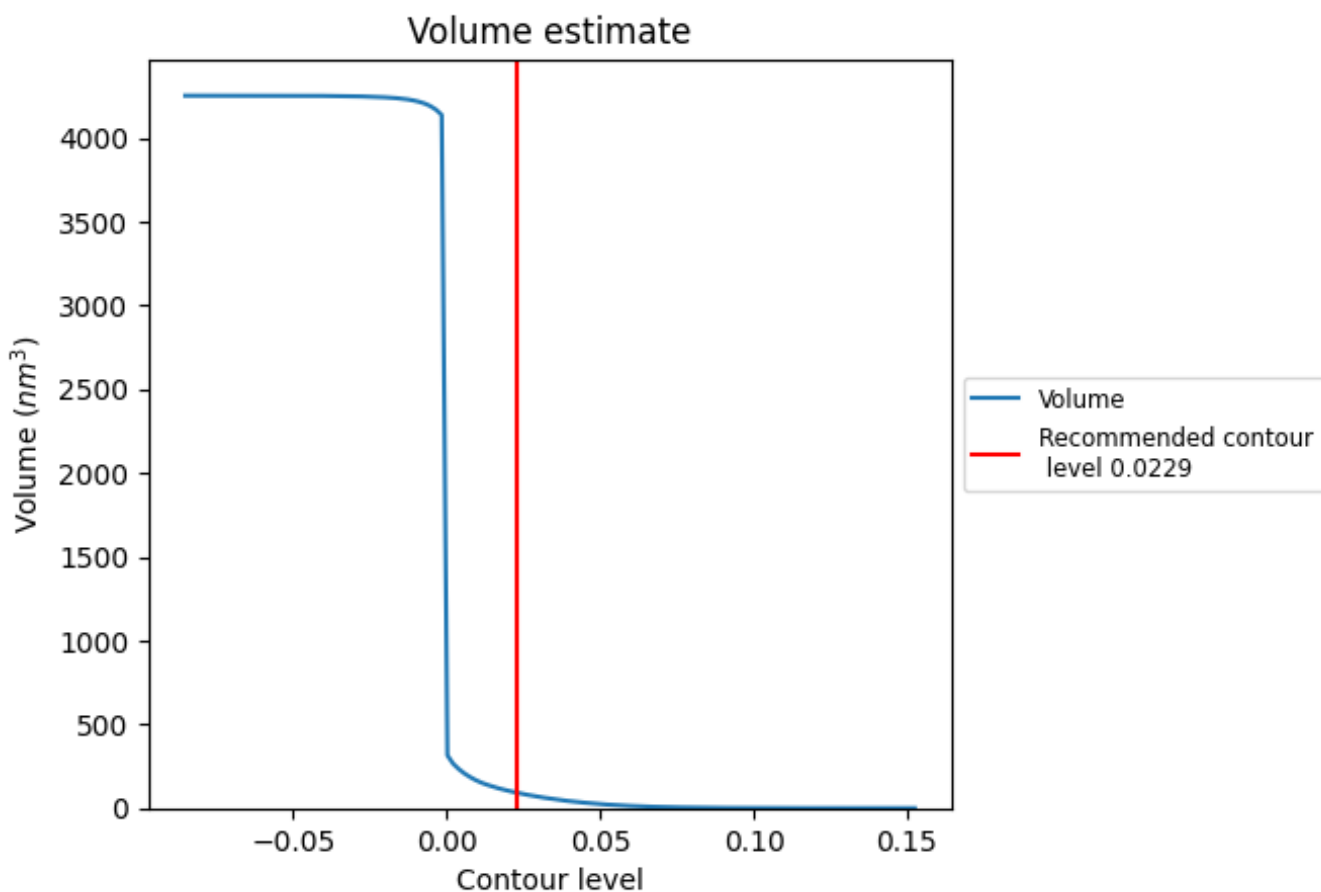
This section contains the results of statistical analysis of the map.

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.

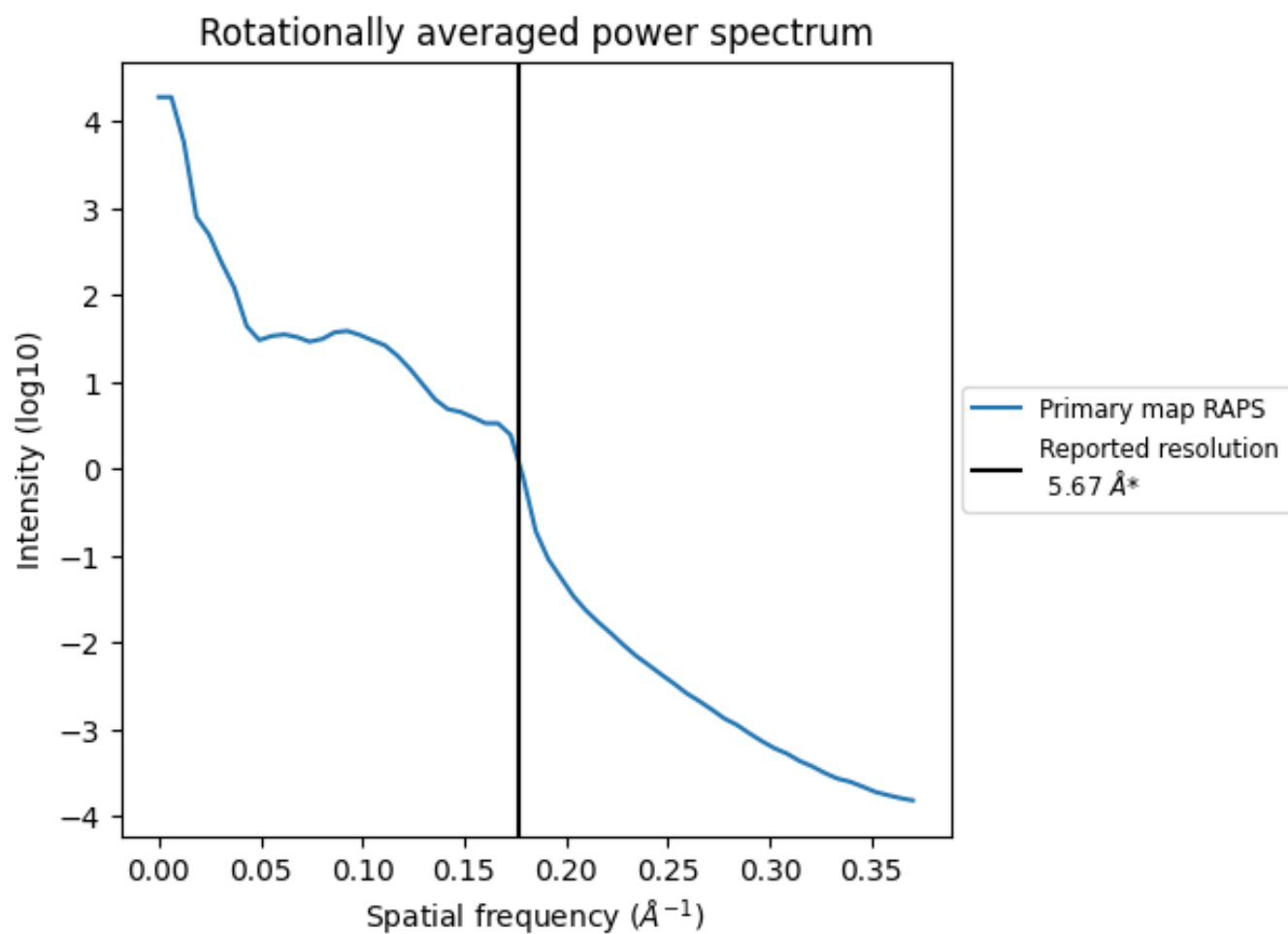
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 92 nm³; this corresponds to an approximate mass of 83 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 0.176\AA^{-1}

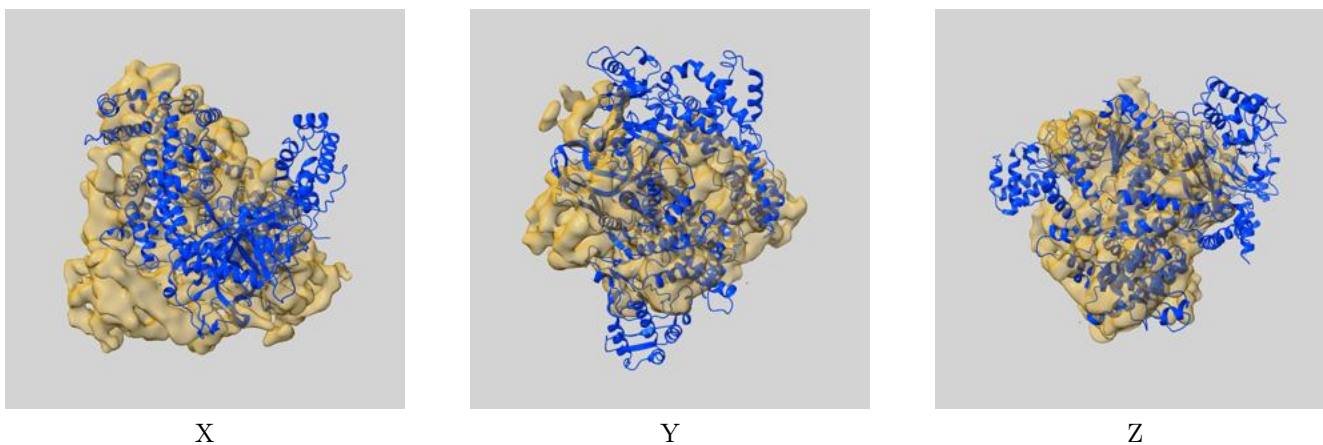
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

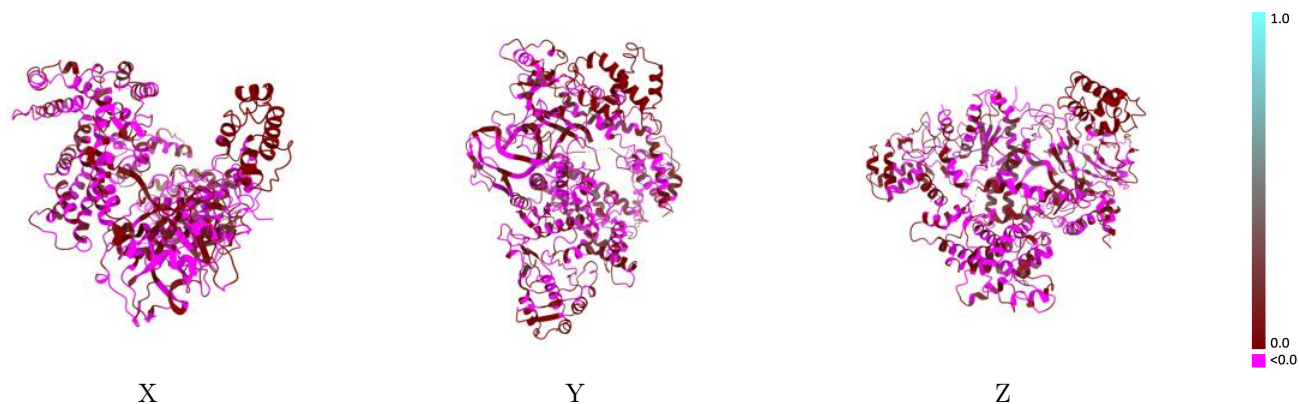
This section contains information regarding the fit between EMDB map EMD-0449 and PDB model 6NME. Per-residue inclusion information can be found in section [3](#) on page [5](#).

9.1 Map-model overlay [i](#)



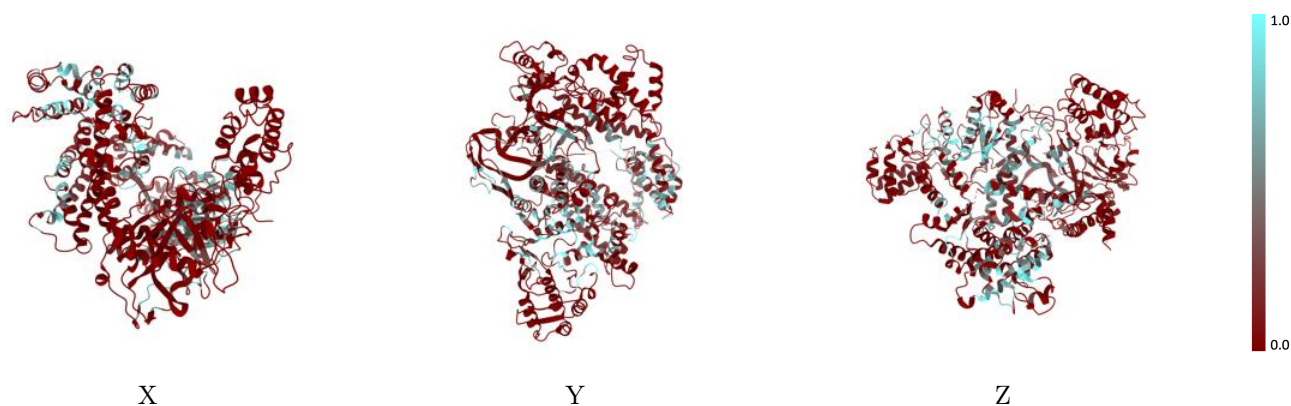
The images above show the 3D surface view of the map at the recommended contour level 0.0229 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



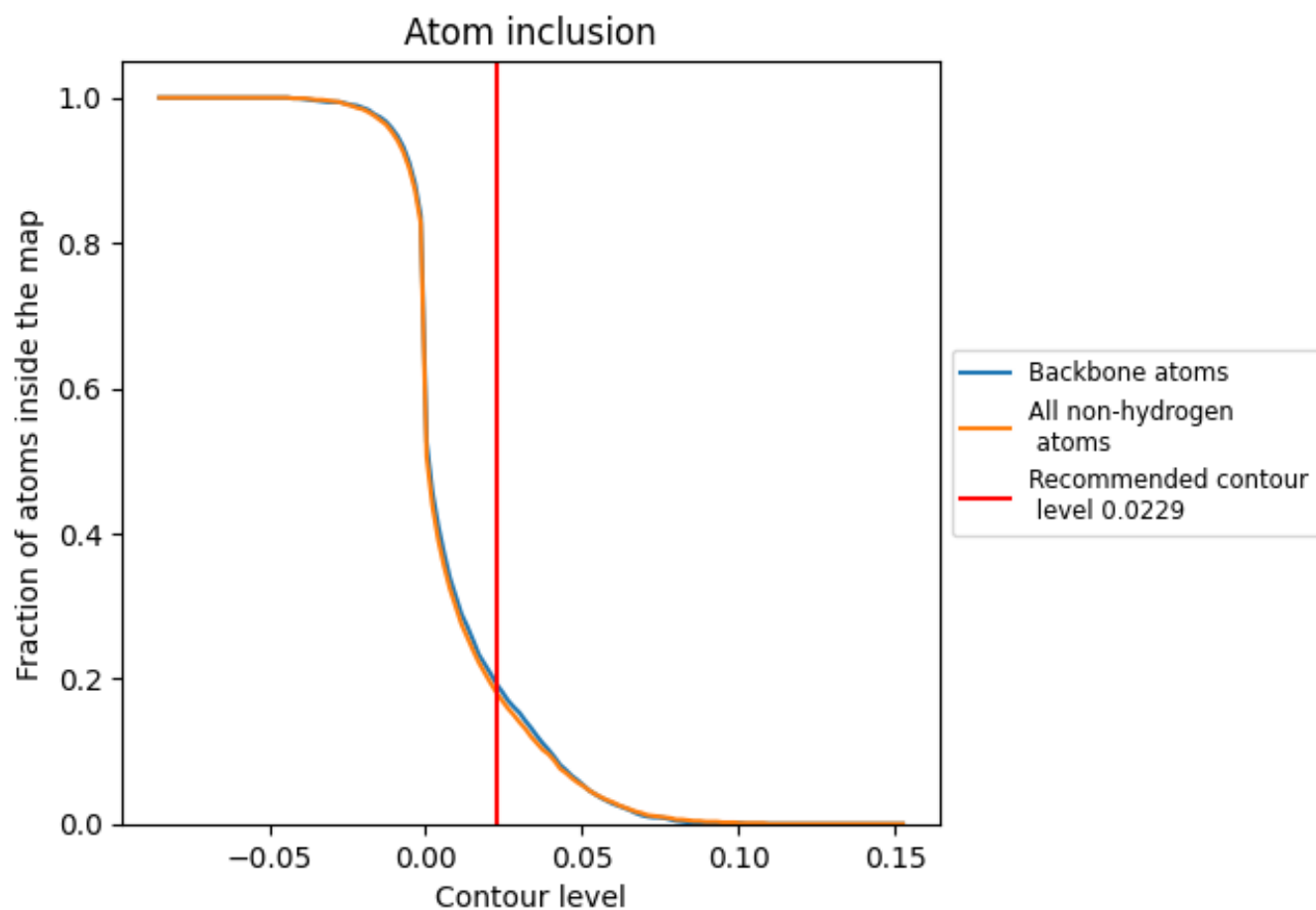
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.0229).

9.4 Atom inclusion [i](#)



At the recommended contour level, 19% of all backbone atoms, 18% 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 (0.0229) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.1790	0.0010
A	0.1820	-0.0000
G	0.1270	0.0220

