



wwPDB EM Validation Summary Report ⓘ

Mar 23, 2026 – 06:04 AM UTC

PDB ID : 9CTK / pdb_00009ctk
EMDB ID : EMD-45909
Title : Modifying region of EcPKS2 - malonylCoA inhibited dataset
Authors : Schubert, H.L.; Hill, C.P.
Deposited on : 2024-07-25
Resolution : 2.92 Å(reported)
Based on initial model : .

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev132
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMD archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

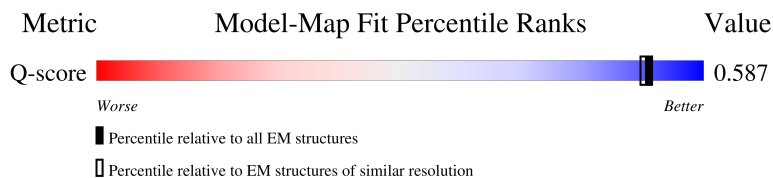
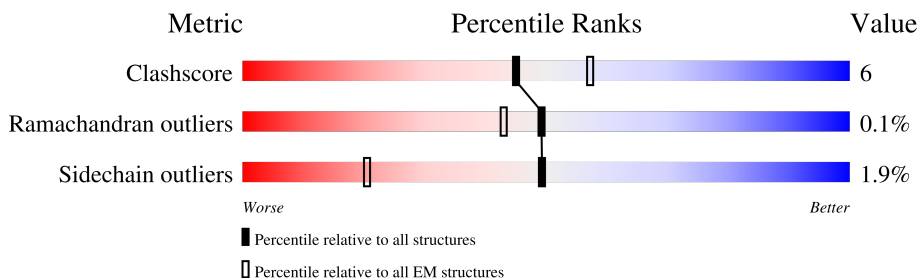
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY



The reported resolution of this entry is 2.92 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)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	13007 (2.42 - 3.42)

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	2287	 47% 9% 43%
1	B	2287	 48% 9% 43%

2 Entry composition [i](#)

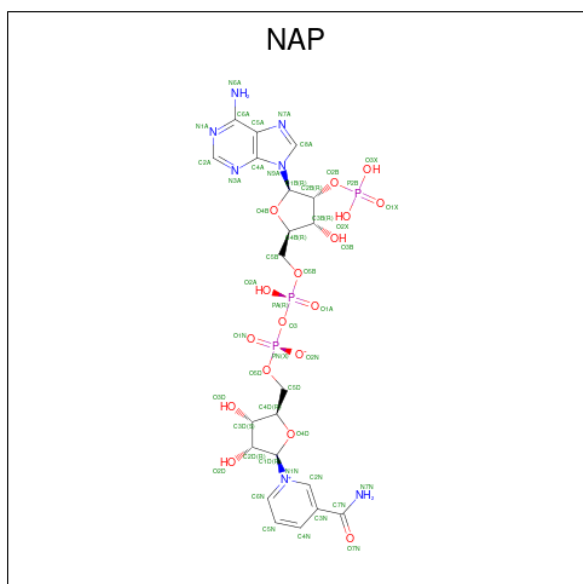
There are 3 unique types of molecules in this entry. The entry contains 41304 atoms, of which 20492 are hydrogens and 0 are deuteriums.

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 Polyketide synthase 2.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
1	A	1301	20468	6531	10221	1750	1911	55	3	0
1	B	1301	20468	6531	10221	1750	1911	55	3	0

- Molecule 2 is NADP NICOTINAMIDE-ADENINE-DINUCLEOTIDE PHOSPHATE (CCD ID: NAP) (formula: $C_{21}H_{28}N_7O_{17}P_3$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms		AltConf
3	A	110	Total 110	O 110	0
3	B	112	Total 112	O 112	0

E2125	R1939	E1687	M1471	L1290	E1185	ALA	ALA	GLY	GLY	VAL	VAL	GLY	VAL	LEU	ARG	SER	ALA	GLY	SER	ILE	TYR	ALA
K2126	R1943	V1698	L1474	V1291	N1186	GLN	GLN	LEU	GLY	VAL	VAL	GLY	VAL	VAL	GLN	GLY	ASN	THR	ILE	THR	TYR	ALA
R2131	L1970	L1701	R1475	M1292	D1187	PHE	PRO	ALA	GLY	ALA	ALA	ALA	ALA	HIS	GLU	GLY	ALA	ALA	GLY	HIS	LYS	ALA
D2134	V1971	A1706	F1478	V1295	K1188	VAL	VAL	VAL	VAL	R972	D973	G974	E975	ASN	LEU	SER	LYS	PRO	ILE	ILE	LYS	ALA
G2135	M1974	T1709	I1486	S1296	N1189	ILE	ILE	GLY	ALA	G874	G874	E975	S985	SER	VAL	LEU	PHE	LEU	VAL	ASN	ALA	ALA
L2136	M1977	I1487	I1487	D1297	N1190	ASP	ASP	GLY	GLY	ASP	GLY	E975	S985	THR	VAL	GLY	LEU	LEU	GLY	ILE	ASN	ALA
T2140	M1977	S1717	C1494	V1299	V1191	THR	THR	LEU	GLN	GLN	GLN	L1192	S985	LEU	GLY	CYS	LEU	TYR	ILE	ILE	ASN	ALA
I2146	E1980	L1718	L1497	Q1302	L1193	MET	MET	SER	SER	VAL	VAL	T993	D994	ALA	TYR	ALA	ARG	THR	ASP	THR	VAL	LYS
V2149	R1988	V1733	L1497	V1303	N1194	LEU	LEU	SER	SER	VAL	VAL	T993	D994	ALA	TYR	ALA	ARG	THR	ASP	THR	VAL	LYS
THR	L1994	P1734	E1498	M1304	E1196	SER	SER	SER	SER	VAL	VAL	L1003	L1003	ALA	ASP	GLY	THR	THR	ALA	HIS	LYS	ALA
VAL	L1995	A1760	E1499	V1303	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
ALA	T1996	S1763	Q1501	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
LEU	S1997	V1764	Q1501	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
MET	R2008	F1781	A1502	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
THR	K2009	L1783	R1503	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
GLY	E2021	D1802	I1548	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
ASN	H2039	C1806	G1554	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
T2161	K2042	S1807	P1555	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
Q2169	M2052	E1809	N1556	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
V2174	A2053	D1810	K1569	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
D2179	M2054	F1813	I1560	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
M2182	V2055	E1814	F1567	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
D2185	M2064	R1818	V1571	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
V2193	N2065	N1831	R1573	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
V2201	F2069	K1839	D1574	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
ALA	L2070	S1841	N1578	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
ALA	E2074	R1842	R1598	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
GLY	M2079	L1845	R1602	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
GLU	L2083	F1851	A1609	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
SER	S2087	K1857	S1638	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
VAL	R2088	D1879	L1658	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
ASP	V2100	Q1885	I1662	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
GLN	M2101	L1892	I1668	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
VAL	S2104	V1896	E1675	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
ARG	L2105	K1933	G1685	M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
ALA	I2106			M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
VAL	V2107			M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
GLY				M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
LYS	Q2114			M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA
VAL				M1304	E1197	ILE	ILE	LEU	LEU	VAL	VAL	L1011	L1011	ALA	GLY	GLY	THR	THR	ALA	HIS	LYS	ALA

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4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C2	Depositor
Number of particles used	258974	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	40	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2200	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	2.781	Depositor
Minimum map value	-1.815	Depositor
Average map value	0.002	Depositor
Map value standard deviation	0.061	Depositor
Recommended contour level	0.286	Depositor
Map size (Å)	339.19998, 339.19998, 339.19998	wwPDB
Map dimensions	320, 320, 320	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.06, 1.06, 1.06	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: NAP

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	0.38	3/10483 (0.0%)	0.59	10/14194 (0.1%)
1	B	0.29	3/10483 (0.0%)	0.50	7/14194 (0.0%)
All	All	0.34	6/20966 (0.0%)	0.55	17/28388 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	3
1	B	0	1
All	All	0	4

The worst 5 of 6 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	2192	TYR	C-O	-8.55	1.13	1.23
1	A	2190	ILE	C-O	-6.18	1.17	1.24
1	B	1813	PHE	C-O	-5.09	1.17	1.24
1	B	1831	ASN	C-O	-5.05	1.17	1.24
1	B	1841	SER	CA-CB	-5.05	1.46	1.53

The worst 5 of 17 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1781	PHE	CA-C-O	-7.42	112.34	120.36
1	B	1781	PHE	CA-C-O	-7.38	112.39	120.36
1	A	2192	TYR	CA-C-O	-6.73	113.45	120.99
1	A	2110	GLY	CA-C-O	-6.41	117.10	122.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1578	ASN	CA-C-O	-5.88	114.01	120.30

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1263	ARG	Sidechain
1	A	1503	ARG	Sidechain
1	A	1544	ARG	Sidechain
1	B	1503	ARG	Sidechain

5.2 Too-close contacts

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	10247	10221	10221	128	0
1	B	10247	10221	10221	129	0
2	A	48	25	25	0	0
2	B	48	25	25	3	0
3	A	110	0	0	4	0
3	B	112	0	0	4	0
All	All	20812	20492	20492	257	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.

The worst 5 of 257 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1478:PHE:CG	1:B:1574:ASP:OD2	1.90	1.25
1:B:1478:PHE:CD2	1:B:1574:ASP:OD2	1.96	1.18
1:A:1417:PHE:HE1	1:A:1427:LEU:HD11	1.34	0.92
1:B:1262:LEU:HD23	1:B:1422:ILE:HG21	1.50	0.91
1:B:1478:PHE:CB	1:B:1574:ASP:OD2	2.23	0.86

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	1298/2287 (57%)	1252 (96%)	44 (3%)	2 (0%)	43	71
1	B	1298/2287 (57%)	1252 (96%)	45 (4%)	1 (0%)	48	76
All	All	2596/4574 (57%)	2504 (96%)	89 (3%)	3 (0%)	49	76

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	1468	ALA
1	B	1468	ALA
1	A	1193	PRO

5.3.2 Protein sidechains

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	1112/1930 (58%)	1089 (98%)	23 (2%)	47	76
1	B	1112/1930 (58%)	1091 (98%)	21 (2%)	50	78
All	All	2224/3860 (58%)	2180 (98%)	44 (2%)	49	77

5 of 44 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	1474	LEU
1	B	1808	SER
1	B	1475	ARG

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Mol	Chain	Res	Type
1	B	1602	ARG
1	B	1842[B]	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 10 such sidechains are listed below:

Mol	Chain	Res	Type
1	B	1501	GLN
1	B	1767	GLN
1	B	1877	GLN
1	A	1877	GLN
1	B	995	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

2 ligands 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	$\# Z > 2$
2	NAP	A	5001	-	50,52,52	0.71	1 (2%)	71,80,80	0.84	2 (2%)
2	NAP	B	5001	-	50,52,52	1.68	4 (8%)	71,80,80	1.01	4 (5%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	NAP	A	5001	-	-	7/35/67/67	0/5/5/5
2	NAP	B	5001	-	-	8/35/67/67	0/5/5/5

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	5001	NAP	P2B-O2B	8.24	1.74	1.59
2	B	5001	NAP	PA-O3	4.97	1.64	1.59
2	B	5001	NAP	PN-O3	4.47	1.64	1.59
2	A	5001	NAP	C2N-N1N	3.22	1.38	1.35
2	B	5001	NAP	O4D-C1D	-2.46	1.37	1.40

The worst 5 of 6 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	5001	NAP	P2B-O2B-C2B	-3.86	113.11	123.43
2	B	5001	NAP	P2B-O2B-C2B	-2.86	115.78	123.43
2	A	5001	NAP	C6N-N1N-C2N	-2.83	119.47	121.88
2	B	5001	NAP	O2N-PN-O1N	2.22	122.75	112.44
2	B	5001	NAP	O4B-C1B-N9A	2.20	112.31	108.09

There are no chirality outliers.

5 of 15 torsion outliers are listed below:

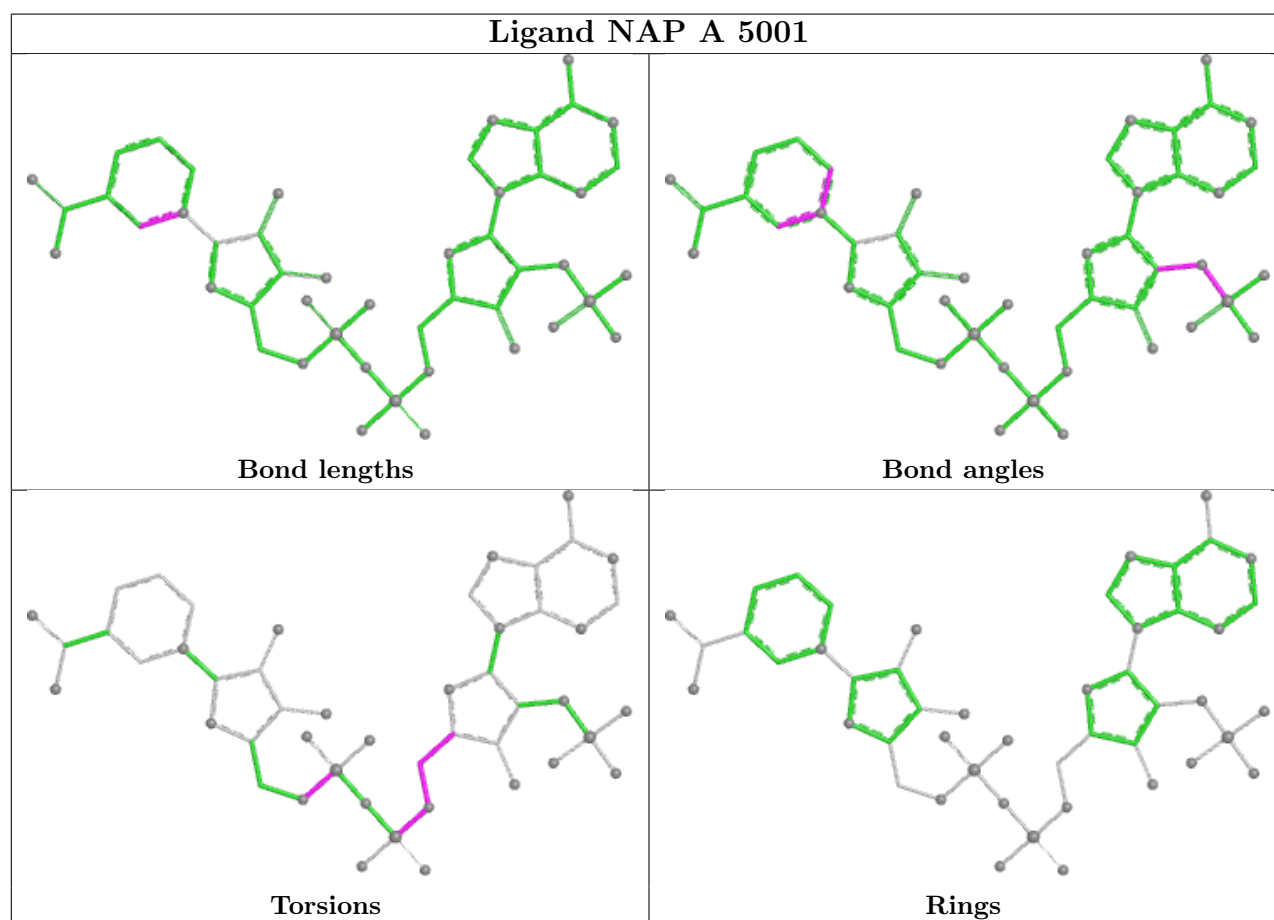
Mol	Chain	Res	Type	Atoms
2	A	5001	NAP	C5B-O5B-PA-O3
2	A	5001	NAP	C5D-O5D-PN-O3
2	A	5001	NAP	C5D-O5D-PN-O1N
2	B	5001	NAP	C5B-O5B-PA-O1A
2	B	5001	NAP	C5D-O5D-PN-O3

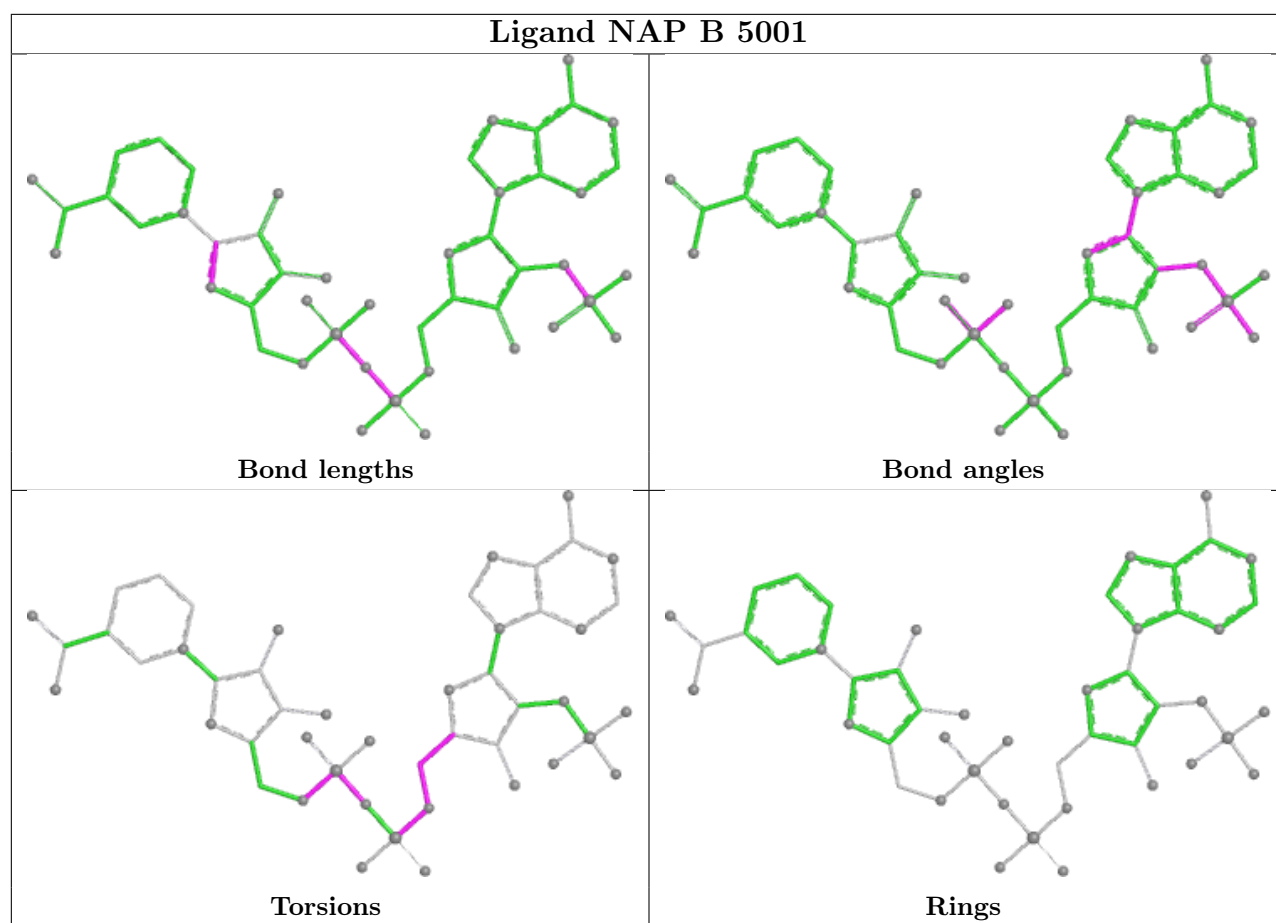
There are no ring outliers.

1 monomer is involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	B	5001	NAP	3	0

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





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

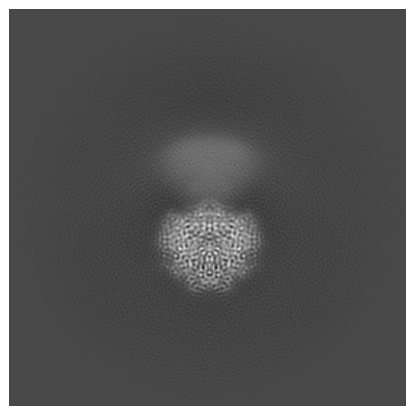
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-45909. These allow visual inspection of the internal detail of the map and identification of artifacts.

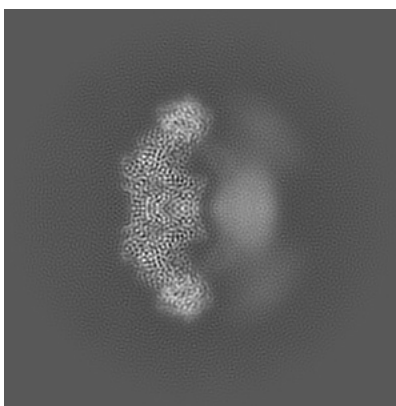
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

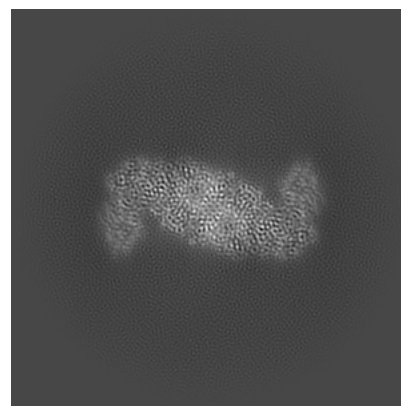
6.1.1 Primary map



X

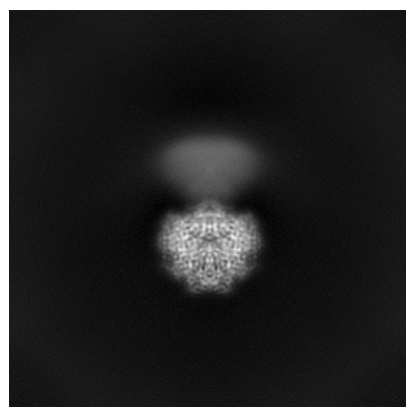


Y

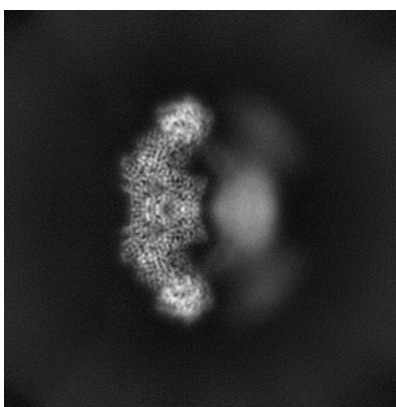


Z

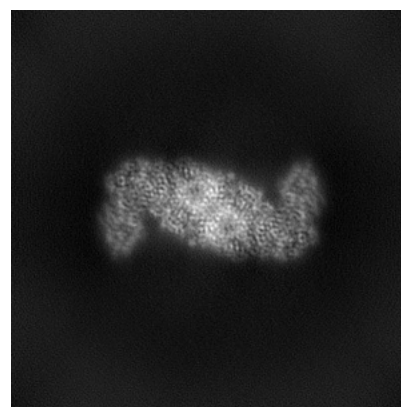
6.1.2 Raw map



X



Y

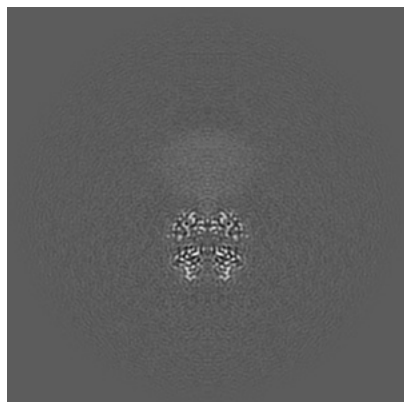


Z

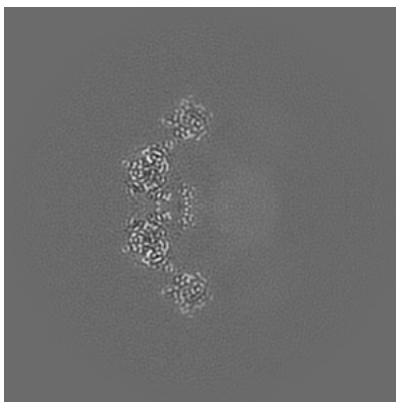
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

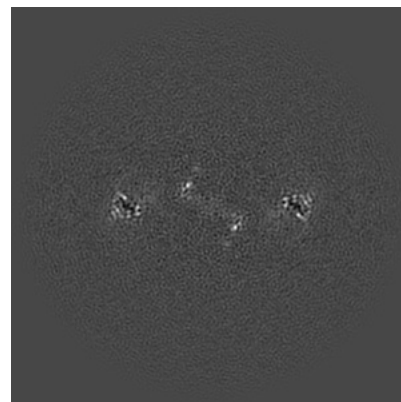
6.2.1 Primary map



X Index: 160

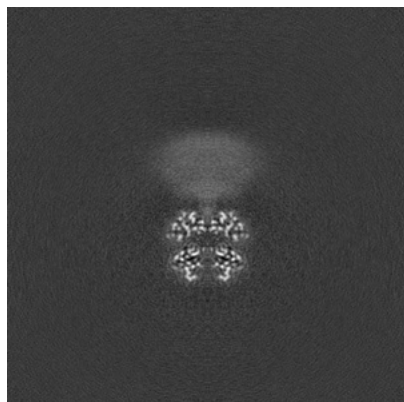


Y Index: 160

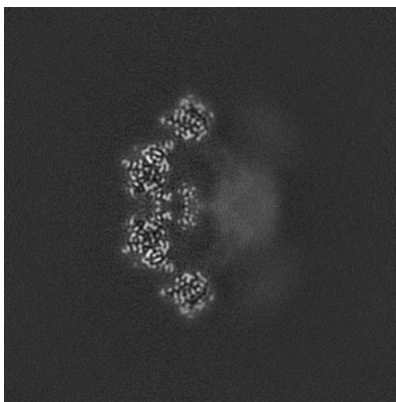


Z Index: 160

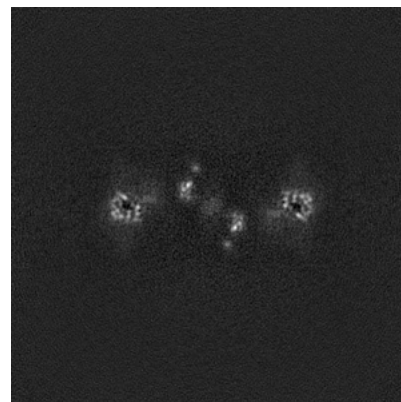
6.2.2 Raw map



X Index: 160



Y Index: 160

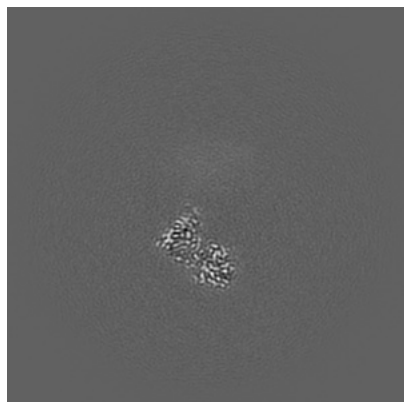


Z Index: 160

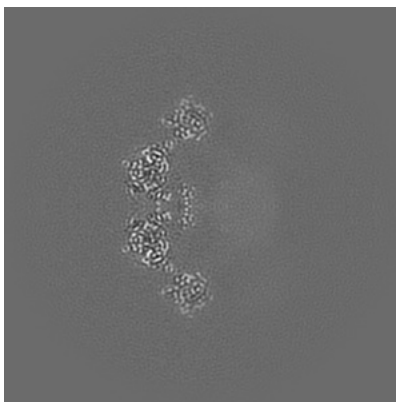
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

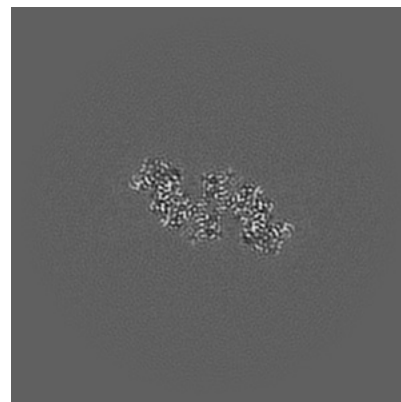
6.3.1 Primary map



X Index: 185

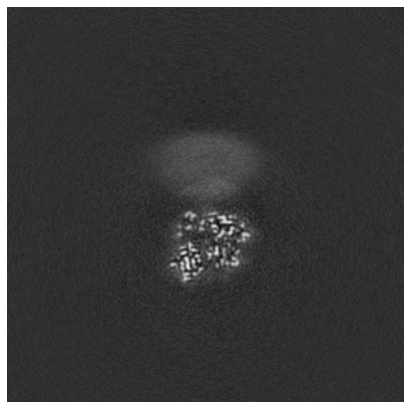


Y Index: 160

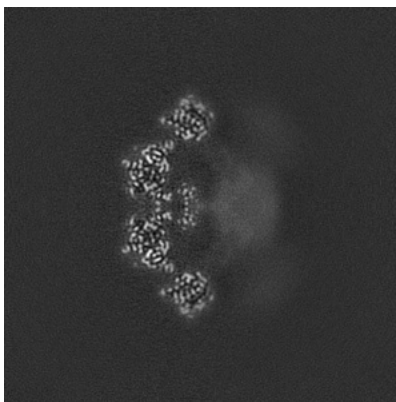


Z Index: 120

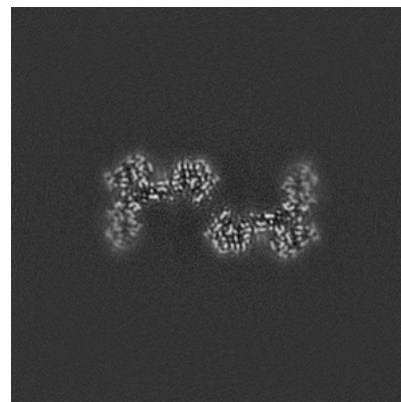
6.3.2 Raw map



X Index: 156



Y Index: 160

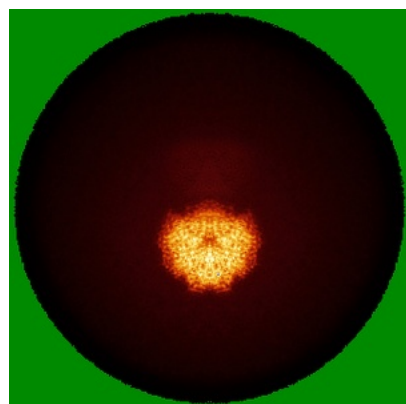


Z Index: 138

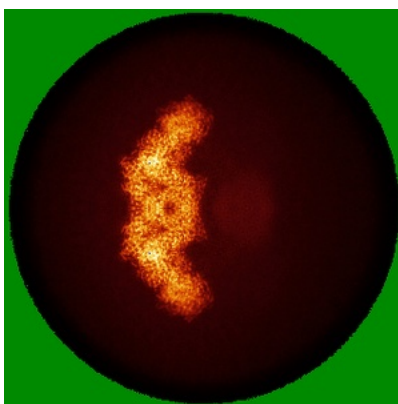
The images above show the largest variance slices of the map in three orthogonal directions.

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

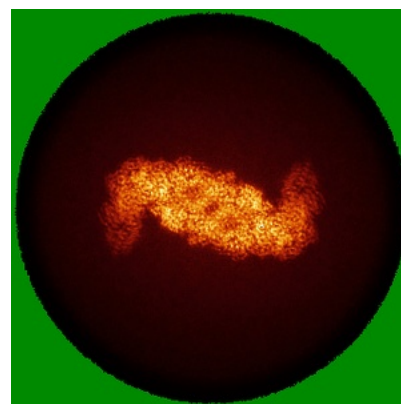
6.4.1 Primary map



X

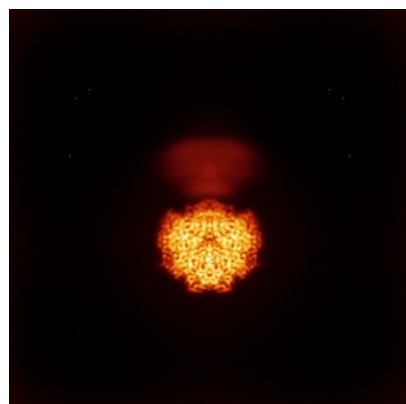


Y

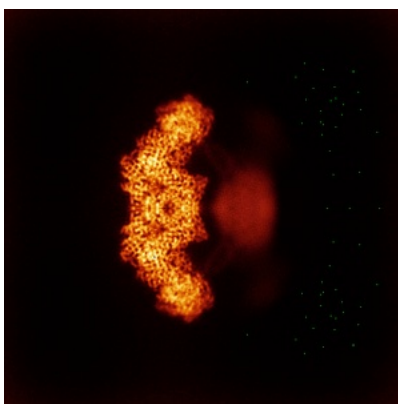


Z

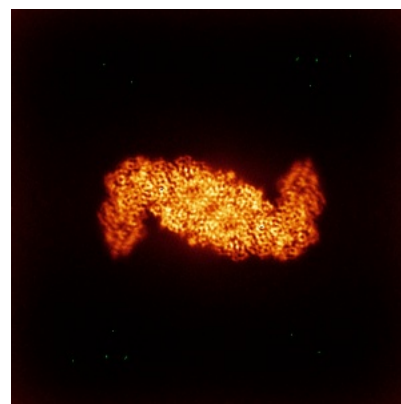
6.4.2 Raw map



X



Y

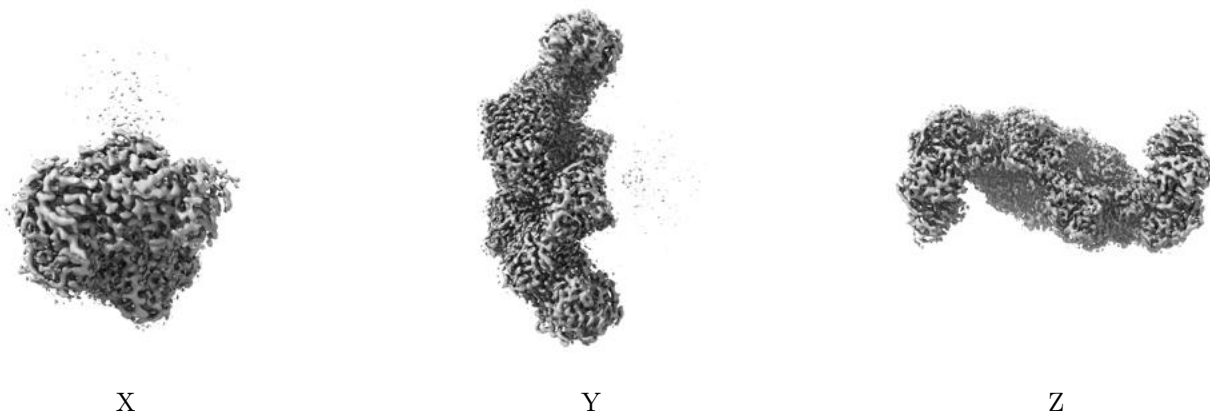


Z

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

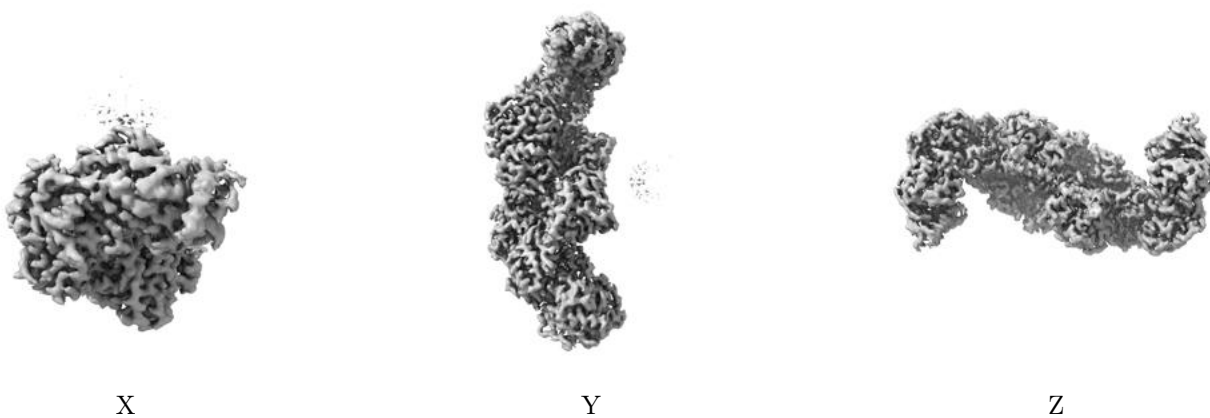
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.286. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

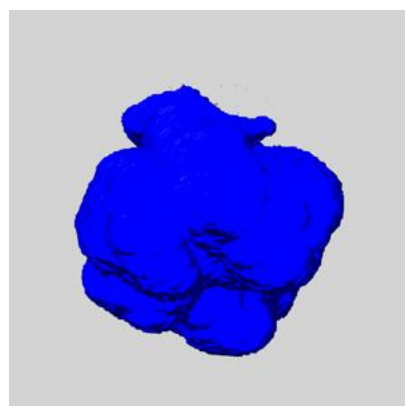
6.6 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

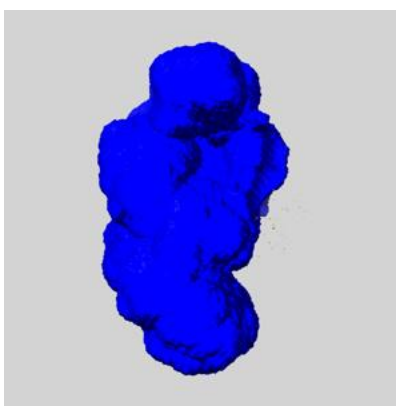
A mask typically either:

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

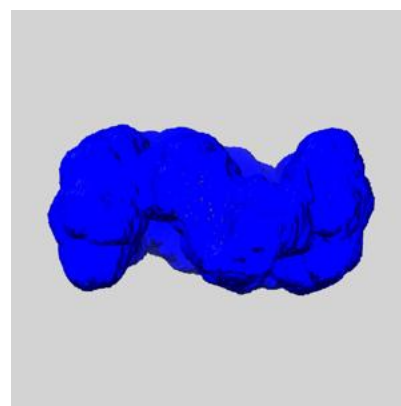
6.6.1 emd_45909_msk_1.map [i](#)



X



Y

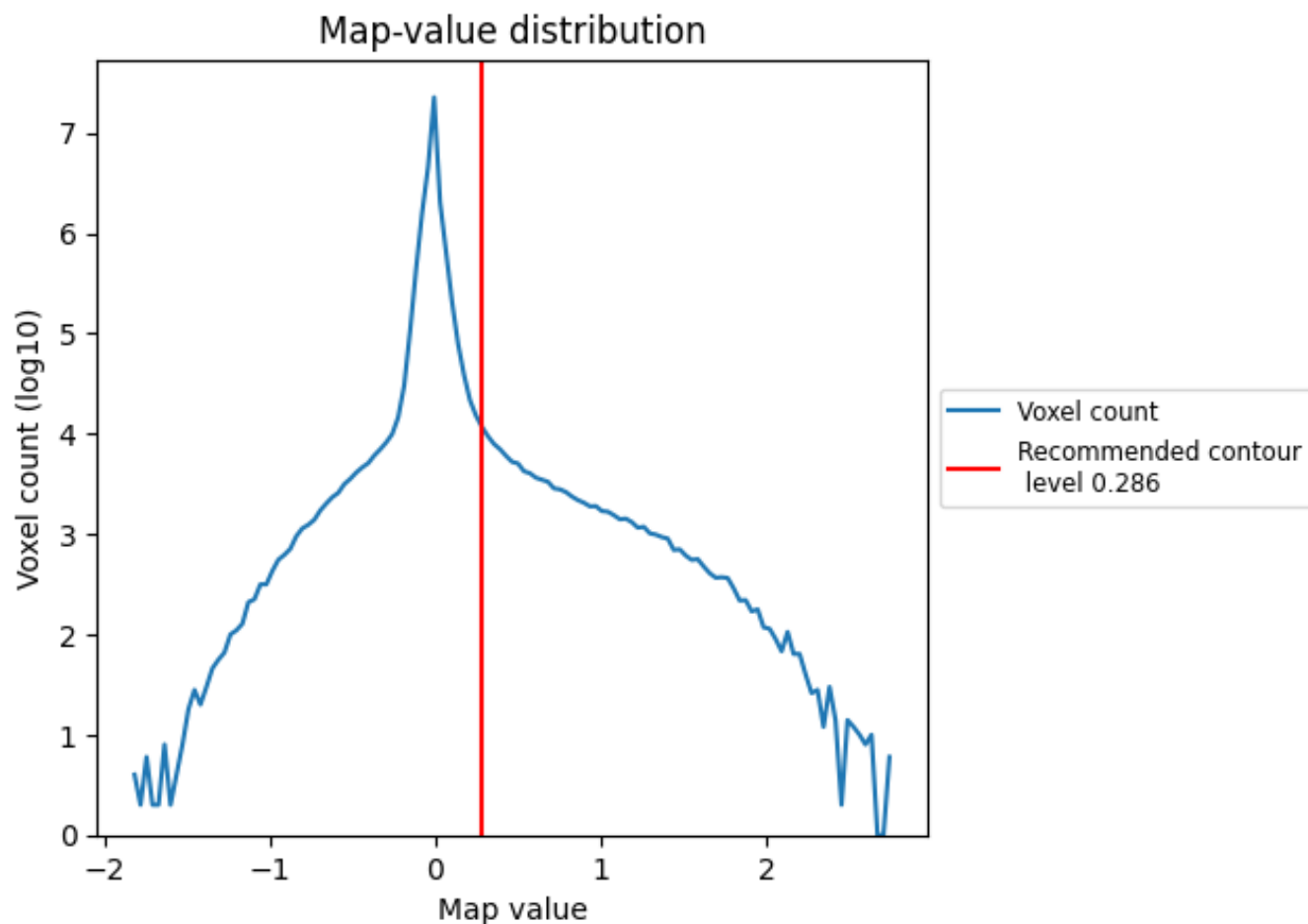


Z

7 Map analysis [i](#)

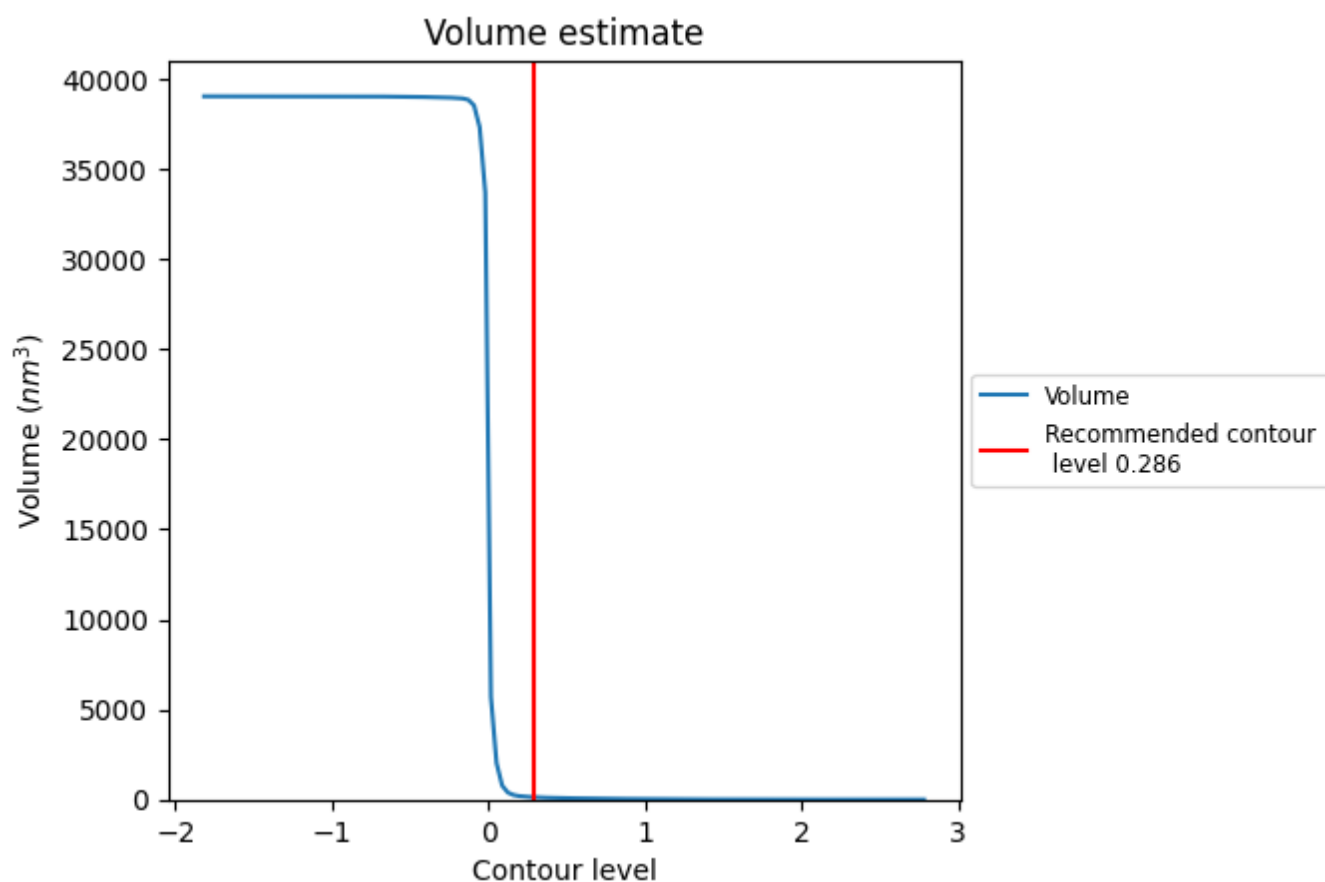
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

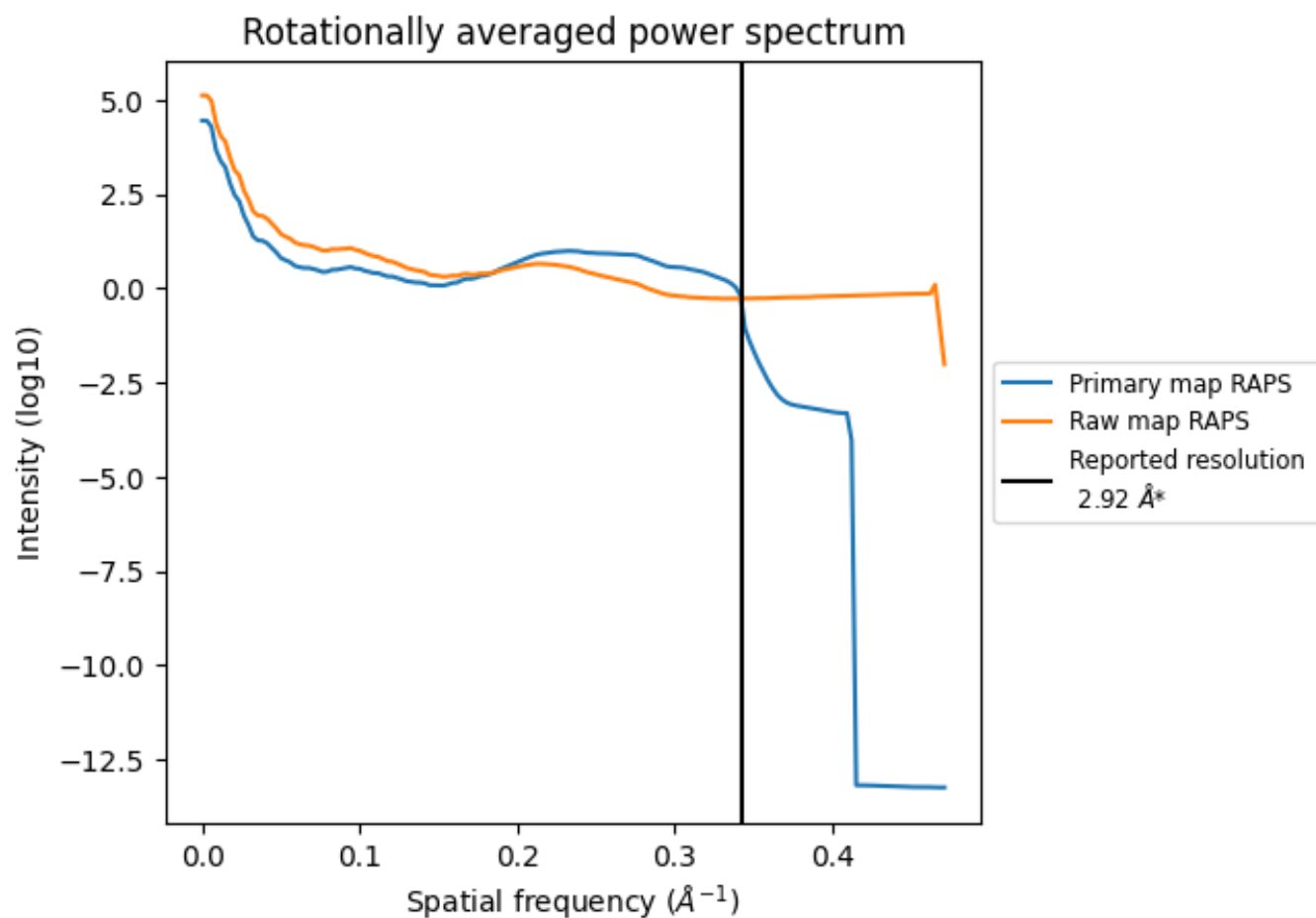
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 133 nm³; this corresponds to an approximate mass of 120 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum ⓘ

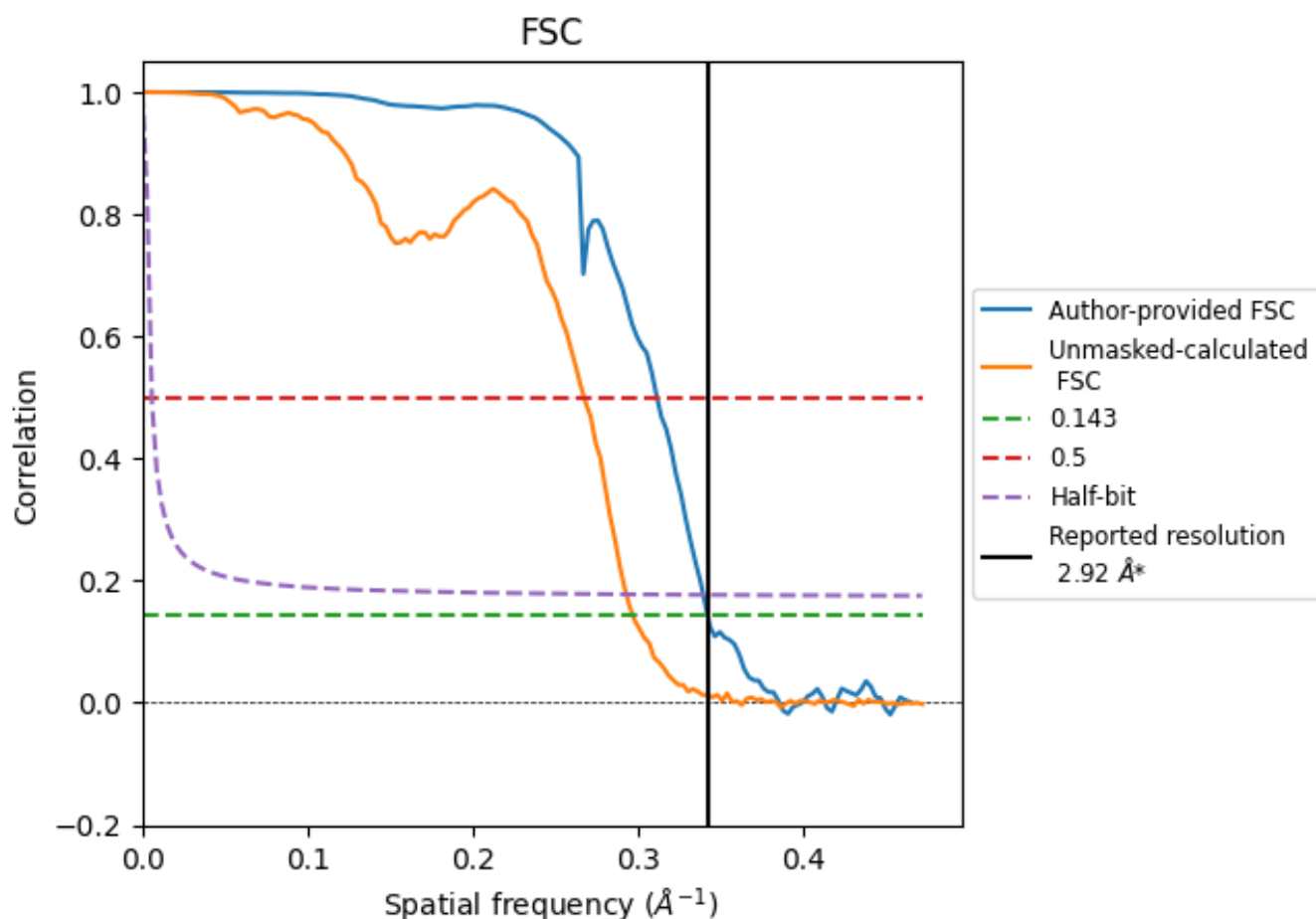


*Reported resolution corresponds to spatial frequency of 0.342 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.342 \AA^{-1}

8.2 Resolution estimates [i](#)

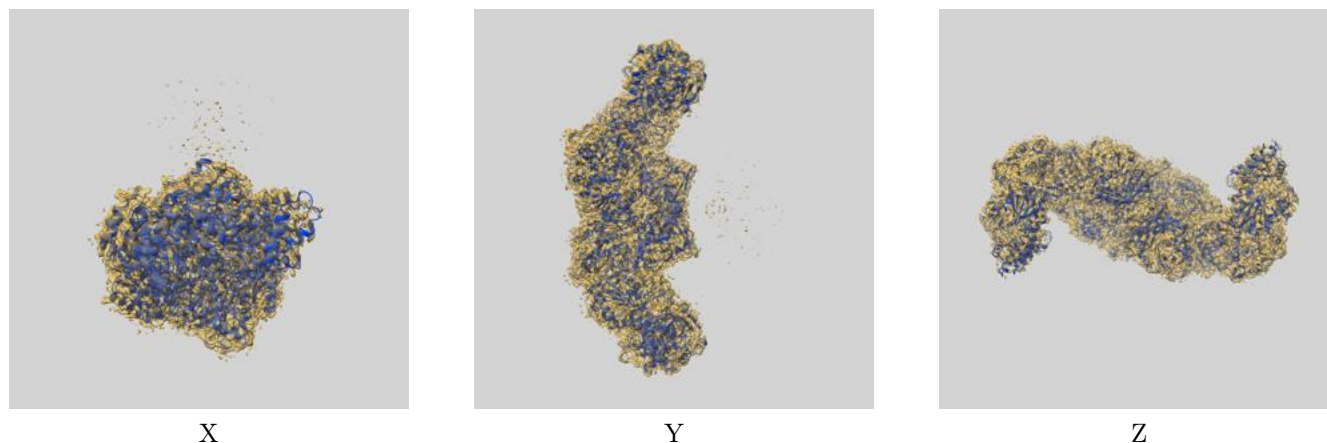
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.92	-	-
Author-provided FSC curve	2.92	3.21	2.95
Unmasked-calculated*	3.37	3.74	3.42

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.37 differs from the reported value 2.92 by more than 10 %

9 Map-model fit [i](#)

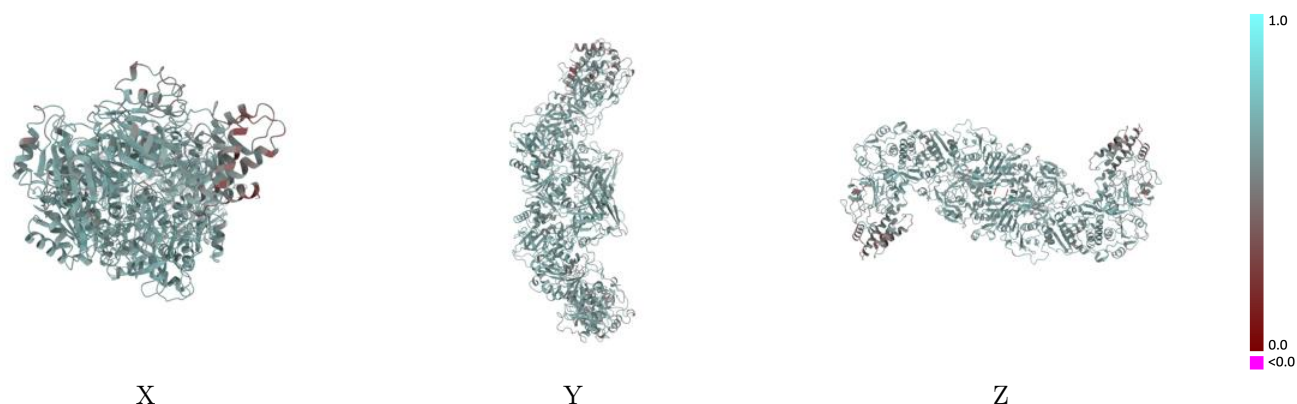
This section contains information regarding the fit between EMDB map EMD-45909 and PDB model 9CTK. Per-residue inclusion information can be found in [section 3](#) on [page 5](#).

9.1 Map-model overlay [i](#)



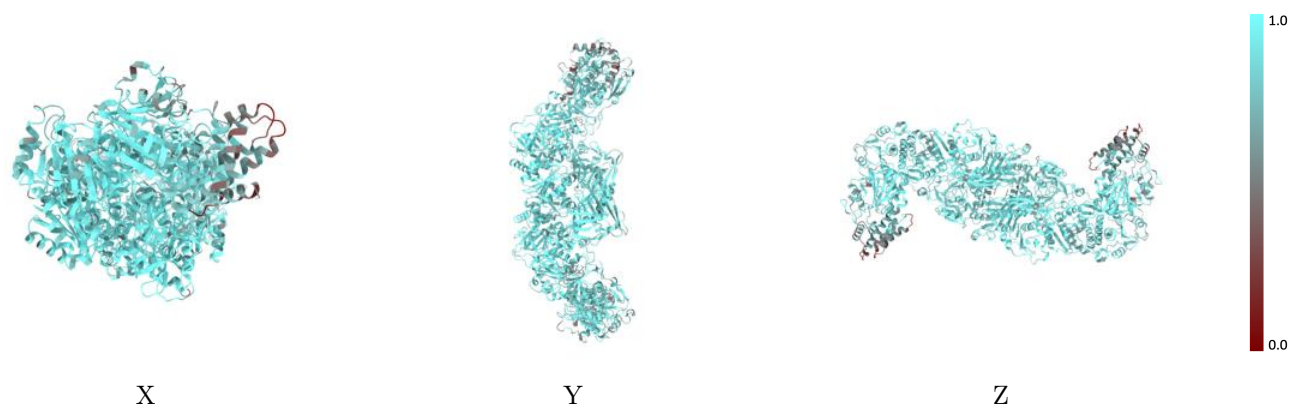
The images above show the 3D surface view of the map at the recommended contour level 0.286 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



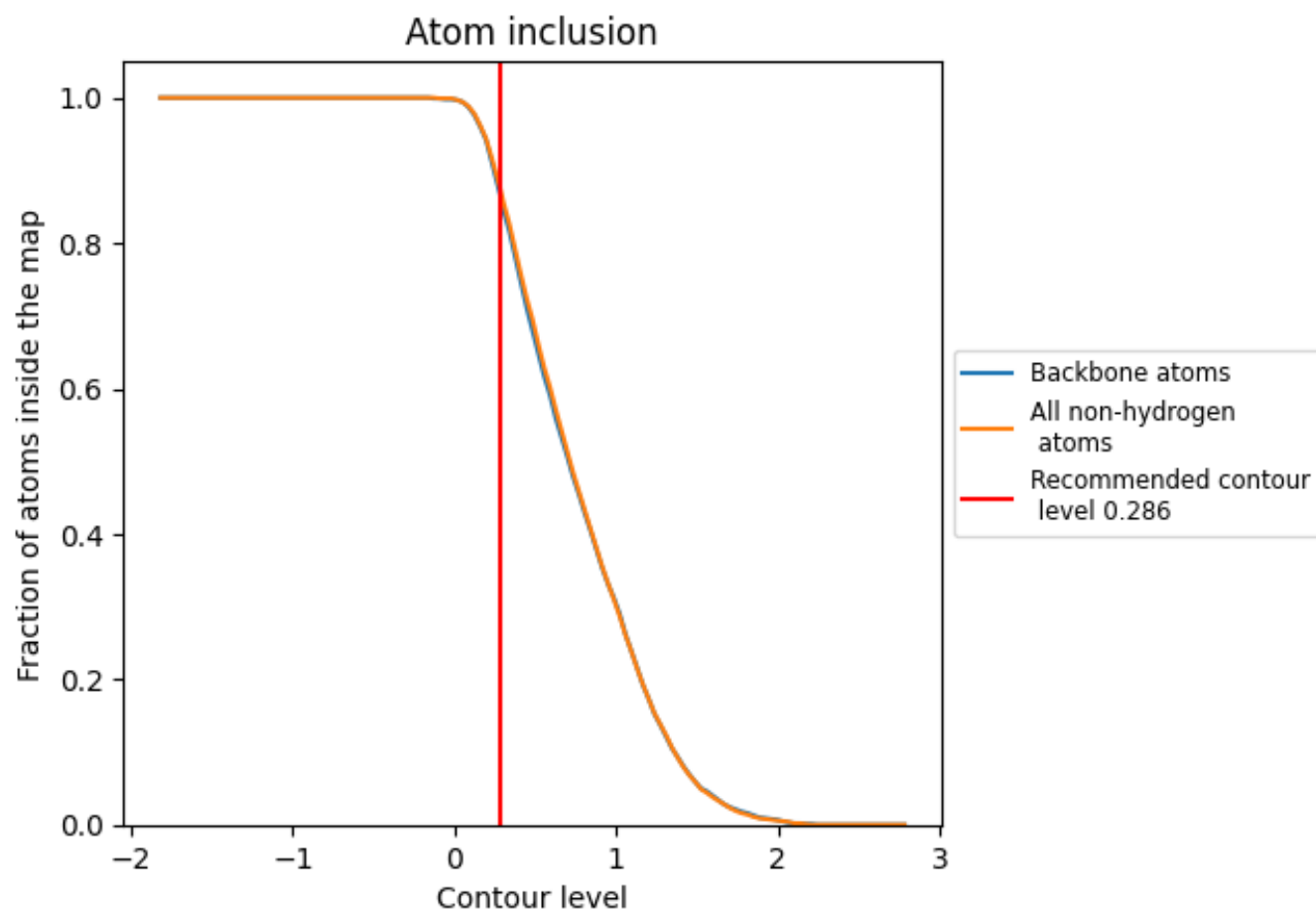
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.286).

9.4 Atom inclusion [i](#)



At the recommended contour level, 86% of all backbone atoms, 87% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.286) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	<div></div> 0.8730	<div></div> 0.5870
A	<div></div> 0.8750	<div></div> 0.5870
B	<div></div> 0.8750	<div></div> 0.5860

