



Full wwPDB EM Validation Report ⓘ

Mar 9, 2026 – 12:45 AM UTC

PDB ID : 7ZJD / pdb_00007zjd
EMDB ID : EMD-14745
Title : Transient receptor potential cation channel subfamily V member 2, Enhanced green fluorescent protein
Authors : Zhang, L.; Gourdon, P.; Zygmunt, P.M.
Deposited on : 2022-04-10
Resolution : 2.94 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.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB 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

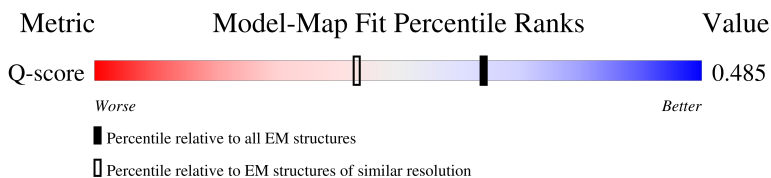
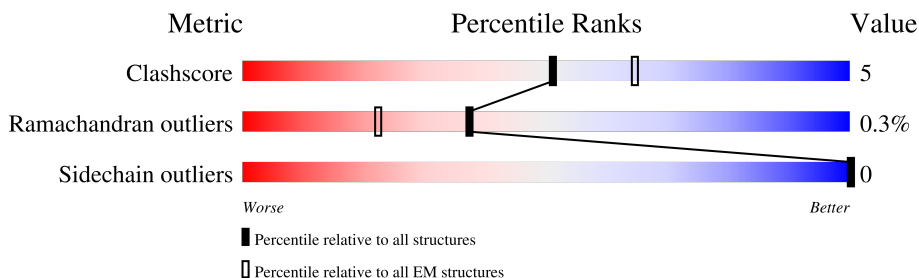
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 2.94 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	13068 (2.44 - 3.44)

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	1026	
1	B	1026	
1	C	1026	
1	D	1026	

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 19360 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 Transient receptor potential cation channel subfamily V member 2, Enhanced green fluorescent protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	597	Total	C	N	O	S	0	0
			4840	3178	808	826	28		
1	C	597	Total	C	N	O	S	0	0
			4840	3178	808	826	28		
1	B	597	Total	C	N	O	S	0	0
			4840	3178	808	826	28		
1	D	597	Total	C	N	O	S	0	0
			4840	3178	808	826	28		

There are 104 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	571	SER	ASN	conflict	UNP A0A0G2JSH6
A	572	SER	ASN	conflict	UNP A0A0G2JSH6
A	713	ALA	VAL	conflict	UNP A0A0G2JSH6
A	762	ALA	-	linker	UNP A0A0G2JSH6
A	763	ALA	-	linker	UNP A0A0G2JSH6
A	764	ALA	-	linker	UNP A0A0G2JSH6
A	765	GLY	-	linker	UNP A0A0G2JSH6
A	766	LEU	-	linker	UNP A0A0G2JSH6
A	767	VAL	-	linker	UNP A0A0G2JSH6
A	768	PRO	-	linker	UNP A0A0G2JSH6
A	769	ARG	-	linker	UNP A0A0G2JSH6
A	770	GLY	-	linker	UNP A0A0G2JSH6
A	771	SER	-	linker	UNP A0A0G2JSH6
A	772	VAL	-	linker	UNP A0A0G2JSH6
A	773	ALA	-	linker	UNP A0A0G2JSH6
A	774	ALA	-	linker	UNP A0A0G2JSH6
A	775	ALA	-	linker	UNP A0A0G2JSH6
A	981	LYS	ALA	conflict	UNP A0A7G8ZY66
A	1019	HIS	-	expression tag	UNP A0A7G8ZY66
A	1020	HIS	-	expression tag	UNP A0A7G8ZY66
A	1021	HIS	-	expression tag	UNP A0A7G8ZY66

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Chain	Residue	Modelled	Actual	Comment	Reference
A	1022	HIS	-	expression tag	UNP A0A7G8ZY66
A	1023	HIS	-	expression tag	UNP A0A7G8ZY66
A	1024	HIS	-	expression tag	UNP A0A7G8ZY66
A	1025	HIS	-	expression tag	UNP A0A7G8ZY66
A	1026	HIS	-	expression tag	UNP A0A7G8ZY66
C	571	SER	ASN	conflict	UNP A0A0G2JSH6
C	572	SER	ASN	conflict	UNP A0A0G2JSH6
C	713	ALA	VAL	conflict	UNP A0A0G2JSH6
C	762	ALA	-	linker	UNP A0A0G2JSH6
C	763	ALA	-	linker	UNP A0A0G2JSH6
C	764	ALA	-	linker	UNP A0A0G2JSH6
C	765	GLY	-	linker	UNP A0A0G2JSH6
C	766	LEU	-	linker	UNP A0A0G2JSH6
C	767	VAL	-	linker	UNP A0A0G2JSH6
C	768	PRO	-	linker	UNP A0A0G2JSH6
C	769	ARG	-	linker	UNP A0A0G2JSH6
C	770	GLY	-	linker	UNP A0A0G2JSH6
C	771	SER	-	linker	UNP A0A0G2JSH6
C	772	VAL	-	linker	UNP A0A0G2JSH6
C	773	ALA	-	linker	UNP A0A0G2JSH6
C	774	ALA	-	linker	UNP A0A0G2JSH6
C	775	ALA	-	linker	UNP A0A0G2JSH6
C	981	LYS	ALA	conflict	UNP A0A7G8ZY66
C	1019	HIS	-	expression tag	UNP A0A7G8ZY66
C	1020	HIS	-	expression tag	UNP A0A7G8ZY66
C	1021	HIS	-	expression tag	UNP A0A7G8ZY66
C	1022	HIS	-	expression tag	UNP A0A7G8ZY66
C	1023	HIS	-	expression tag	UNP A0A7G8ZY66
C	1024	HIS	-	expression tag	UNP A0A7G8ZY66
C	1025	HIS	-	expression tag	UNP A0A7G8ZY66
C	1026	HIS	-	expression tag	UNP A0A7G8ZY66
B	571	SER	ASN	conflict	UNP A0A0G2JSH6
B	572	SER	ASN	conflict	UNP A0A0G2JSH6
B	713	ALA	VAL	conflict	UNP A0A0G2JSH6
B	762	ALA	-	linker	UNP A0A0G2JSH6
B	763	ALA	-	linker	UNP A0A0G2JSH6
B	764	ALA	-	linker	UNP A0A0G2JSH6
B	765	GLY	-	linker	UNP A0A0G2JSH6
B	766	LEU	-	linker	UNP A0A0G2JSH6
B	767	VAL	-	linker	UNP A0A0G2JSH6
B	768	PRO	-	linker	UNP A0A0G2JSH6
B	769	ARG	-	linker	UNP A0A0G2JSH6

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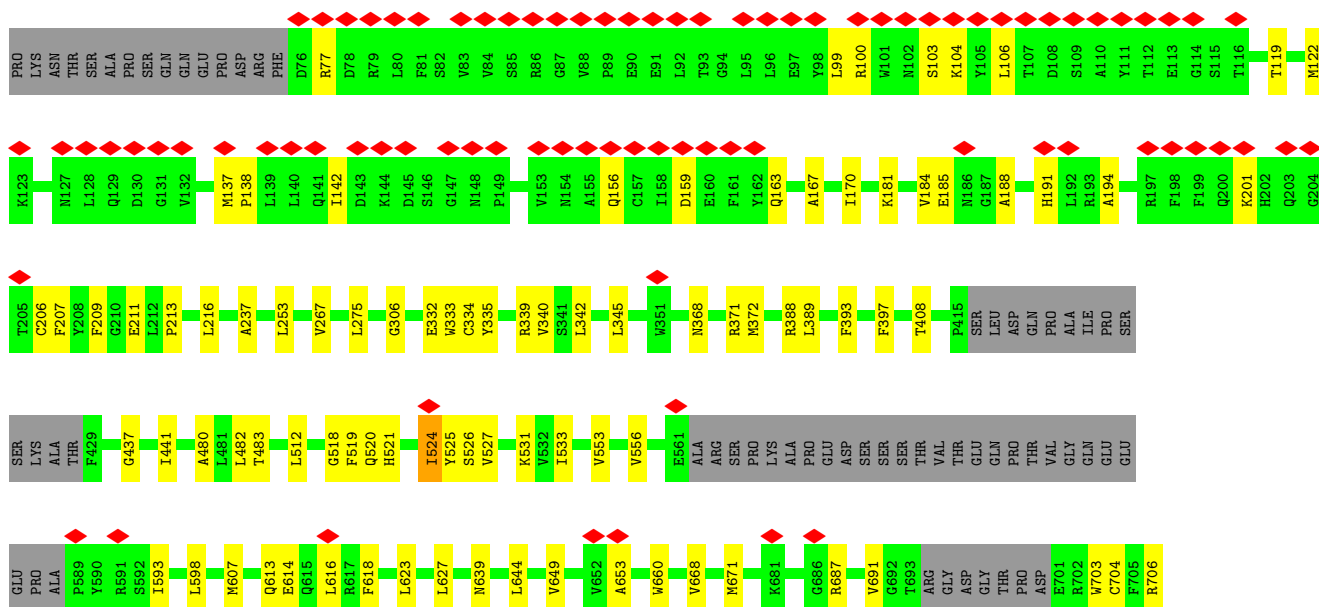
Chain	Residue	Modelled	Actual	Comment	Reference
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B	771	SER	-	linker	UNP A0A0G2JSH6
B	772	VAL	-	linker	UNP A0A0G2JSH6
B	773	ALA	-	linker	UNP A0A0G2JSH6
B	774	ALA	-	linker	UNP A0A0G2JSH6
B	775	ALA	-	linker	UNP A0A0G2JSH6
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B	1020	HIS	-	expression tag	UNP A0A7G8ZY66
B	1021	HIS	-	expression tag	UNP A0A7G8ZY66
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B	1023	HIS	-	expression tag	UNP A0A7G8ZY66
B	1024	HIS	-	expression tag	UNP A0A7G8ZY66
B	1025	HIS	-	expression tag	UNP A0A7G8ZY66
B	1026	HIS	-	expression tag	UNP A0A7G8ZY66
D	571	SER	ASN	conflict	UNP A0A0G2JSH6
D	572	SER	ASN	conflict	UNP A0A0G2JSH6
D	713	ALA	VAL	conflict	UNP A0A0G2JSH6
D	762	ALA	-	linker	UNP A0A0G2JSH6
D	763	ALA	-	linker	UNP A0A0G2JSH6
D	764	ALA	-	linker	UNP A0A0G2JSH6
D	765	GLY	-	linker	UNP A0A0G2JSH6
D	766	LEU	-	linker	UNP A0A0G2JSH6
D	767	VAL	-	linker	UNP A0A0G2JSH6
D	768	PRO	-	linker	UNP A0A0G2JSH6
D	769	ARG	-	linker	UNP A0A0G2JSH6
D	770	GLY	-	linker	UNP A0A0G2JSH6
D	771	SER	-	linker	UNP A0A0G2JSH6
D	772	VAL	-	linker	UNP A0A0G2JSH6
D	773	ALA	-	linker	UNP A0A0G2JSH6
D	774	ALA	-	linker	UNP A0A0G2JSH6
D	775	ALA	-	linker	UNP A0A0G2JSH6
D	981	LYS	ALA	conflict	UNP A0A7G8ZY66
D	1019	HIS	-	expression tag	UNP A0A7G8ZY66
D	1020	HIS	-	expression tag	UNP A0A7G8ZY66
D	1021	HIS	-	expression tag	UNP A0A7G8ZY66
D	1022	HIS	-	expression tag	UNP A0A7G8ZY66
D	1023	HIS	-	expression tag	UNP A0A7G8ZY66
D	1024	HIS	-	expression tag	UNP A0A7G8ZY66
D	1025	HIS	-	expression tag	UNP A0A7G8ZY66
D	1026	HIS	-	expression tag	UNP A0A7G8ZY66

[illegible]

- Molecule 1: Transient receptor potential cation channel subfamily V member 2, Enhanced green fluorescent protein



MET	THR	THR	SER	SER	ALA	SER	SER	PRO	PRO	ALA	ALA	ALA	ARG	ARG	LEU	GLU	THR	THR	SER	ASP	ASP	GLY	GLY	GLU	GLU	GLY	GLY	ASN	ASN	GLU	VAL	ASN	ASN	LYS	LYS	LYS	GLN	GLN	GLU	PRO	PRO	PRO	PRO	MET	MET	GLU	GLU	SER	SER	PRO	PHE	PHE	GLN	GLN	ARG	ARG	GLU	GLU	ASP	ASP	ARG	ARG	ASN	ASN	SER	SER	SER	SER	PRO	PRO	GLN	GLN	ILE	ILE	LYS	LYS	ILE	ILE	ASN	ASN	LEU	LEU	ASN	ASN	PHE	PHE	PRO	PRO	ARG	ARG	PRO	PRO
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V707	E708	K717	T718	L719	THR	LEU	LEU	SER	GLU	ASP	PRO	SER	SER	GLY	PRO	GLY	ILE	THR	GLY	ASN	LYS	LYS	ASN	PRO	THR	SER	SER	LYS	PRO	GLY	LYS	ASN	ASN	SER	SER	ALA	SER	GLU	GLU	GLU	ASP	HIS	LEU	PRO	LEU	GLN	VAL	LEU	GLN	SER	SER	PRO	ALA	ALA	ALA	GLY	LEU	VAL	PRO	PRO	ARG	GLY	SER	VAL
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ALA	ALA	VAL	SER	LYS	GLY	GLU	GLU	LEU	LEU	PHE	THR	GLY	VAL	VAL	PRO	ASP	GLY	VAL	ASN	GLY	HIS	PHE	LYS	SER	VAL	SER	GLY	GLU	GLY	GLY	GLY	ASP	ALA	ALA	THR	THR	LYS	LYS	PHE	ILE	CYS	THR	THR	GLY	LYS	LEU	PRO	VAL	PRO	TRP	PRO
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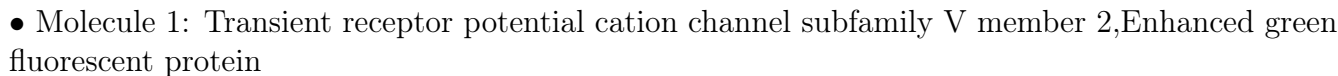
THR	LEU	VAL	THR	THR	LEU	THR	TYR	GLY	VAL	GLN	CYS	PHE	SER	ARG	TYR	PRO	ASP	HIS	MET	LYS	GLN	HIS	ASP	PHE	PHE	LYS	SER	ALA	MET	PRO	GLU	GLY	TYR	VAL	GLN	GLU	ARG	THR	THR	ILE	PHE	PHE	LYS	ASP	ASN	GLY	ASP	GLN	VAL	THR	ASP	GLY	PHE	LYS	GLU	THR
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LEU VAL ASN ASN ARG ARG GLU LEU LYS LYS GLY ILE ILE ASP PHE LYS GLU ASP ASP ASN GLN ILE LEU LEU GLY HIS LYS LEU GLU TYR TYR TYR SER SER HIS ASN VAL VAL TYR ILE ILE MET MET ALA ASP LYS GLN LYS LYS ASN ASN GLY ILE LYS VAL VAL PHE PHE LYS LYS ILE ILE ARG HIS ASN ILE LEU GLU ASP GLY SER SER VAL VAL GLN LEU

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

- Molecule 1: Transient receptor potential cation channel subfamily V member 2, Enhanced green fluorescent protein



HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	ASN	THR	LEU	THR	THR	GLU	THR	PRO	R591	G437	T205	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	THR	THR	GLY	THR	THR	GLU	THR	GLU	SS92	G437	C206	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	GLY	GLY	LEU	LEU	LEU	LEU	LEU	LEU	I593	C206	F207	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	VAL	VAL	ILE	THR	THR	THR	THR	THR	I593	F207	Y208	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	CYS	PHE	GLY	GLY	GLY	GLY	GLY	GLY	L598	Y208	Y209	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	ASP	ASP	LEU	ASP	ASP	ASP	ASP	ASP	L598	Y209	G210	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	LYS	LYS	GLY	GLY	GLY	GLY	GLY	GLY	M607	G210	E211	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	THR	THR	THR	THR	THR	THR	THR	THR	L616	E211	L212	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	Q613	L212	P213	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	Q614	L212	L216	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	E614	L216	A237	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE	Q615	A237	L139	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	Q615	L139	L140	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	Q615	L140	L141	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	Q615	L141	I142	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	THR	THR	THR	THR	THR	THR	THR	THR	Q615	I142	D143	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	Q615	D143	K144	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	ASN	ASN	ASN	ASN	ASN	ASN	ASN	ASN	Q615	K144	D145	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	Q615	D145	S146	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	Q615	S146	G147	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	Q615	G147	N148	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	Q615	N148	P149	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	Q615	P149	V153	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	THR	THR	THR	THR	THR	THR	THR	THR	Q615	V153	N154	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	Q615	N154	A155	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	ASN	ASN	ASN	ASN	ASN	ASN	ASN	ASN	Q615	A155	Q156	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	Q615	Q156	C157	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	Q615	C157	I158	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	THR	THR	THR	THR	THR	THR	THR	THR	Q615	I158	D159	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	ASP	ASP	ASP	ASP	ASP	ASP	ASP	ASP	Q615	D159	E160	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	Q615	E160	F161	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	Q615	F161	Y162	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	THR	THR	THR	THR	THR	THR	THR	THR	Q615	Y162	Q163	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	Q615	Q163	A167	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	Q615	A167	I170	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE	Q615	I170	K181	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG	Q615	K181	V184	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	THR	THR	THR	THR	THR	THR	THR	THR	Q615	V184	E185	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	Q615	E185	N186	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	Q615	N186	G187	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	Q615	G187	A188	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	Q615	A188	H191	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	THR	THR	THR	THR	THR	THR	THR	THR	Q615	H191	L192	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	ASN	ASN	ASN	ASN	ASN	ASN	ASN	ASN	Q615	L192	R193	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	Q615	R193	A194	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	THR	THR	THR	THR	THR	THR	THR	THR	Q615	A194	R197	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	Q615	R197	F198	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	Q615	F198	F199	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	THR	THR	THR	THR	THR	THR	THR	THR	Q615	F199	Q200	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	ASN	ASN	ASN	ASN	ASN	ASN	ASN	ASN	Q615	Q200	K201	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	Q615	K201	H202	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	THR	THR	THR	THR	THR	THR	THR	THR	Q615	H202	Q203	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	Q615	Q203	G204	K123
HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	HIS	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	Q615	G204	F429	K123

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	204000	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	48.4	Depositor
Minimum defocus (nm)	700	Depositor
Maximum defocus (nm)	2700	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	2.763	Depositor
Minimum map value	-1.644	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.070	Depositor
Recommended contour level	0.3	Depositor
Map size ($\text{\AA}$)	304.704, 304.704, 304.704	wwPDB
Map dimensions	360, 360, 360	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	0.8464, 0.8464, 0.8464	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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	0.12	0/4961	0.31	0/6730
1	B	0.12	0/4961	0.31	0/6730
1	C	0.12	0/4961	0.31	0/6730
1	D	0.12	0/4961	0.31	0/6730
All	All	0.12	0/19844	0.31	0/26920

There are no bond length outliers.

There are no bond angle outliers.

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	4840	0	4897	59	0
1	B	4840	0	4897	58	0
1	C	4840	0	4897	60	0
1	D	4840	0	4897	57	0
All	All	19360	0	19588	214	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 5.

All (214) 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:C:527:VAL:HG22	1:D:639:ASN:HD21	1.45	0.81
1:A:639:ASN:HD21	1:D:527:VAL:HG22	1.46	0.80
1:C:639:ASN:HD21	1:B:527:VAL:HG22	1.46	0.78
1:A:527:VAL:HG22	1:B:639:ASN:HD21	1.46	0.78
1:C:103:SER:HB2	1:C:106:LEU:HB2	1.66	0.77
1:D:103:SER:HB2	1:D:106:LEU:HB2	1.66	0.77
1:C:333:TRP:HZ3	1:C:335:TYR:HB2	1.51	0.76
1:B:333:TRP:HZ3	1:B:335:TYR:HB2	1.51	0.76
1:A:103:SER:HB2	1:A:106:LEU:HB2	1.66	0.76
1:D:333:TRP:HZ3	1:D:335:TYR:HB2	1.51	0.75
1:A:333:TRP:HZ3	1:A:335:TYR:HB2	1.51	0.75
1:B:103:SER:HB2	1:B:106:LEU:HB2	1.66	0.75
1:B:119:THR:HG22	1:B:122:MET:HG3	1.79	0.65
1:D:119:THR:HG22	1:D:122:MET:HG3	1.79	0.65
1:C:119:THR:HG22	1:C:122:MET:HG3	1.79	0.65
1:A:119:THR:HG22	1:A:122:MET:HG3	1.79	0.64
1:D:340:VAL:HG22	1:D:708:GLU:HG2	1.81	0.63
1:C:340:VAL:HG22	1:C:708:GLU:HG2	1.81	0.63
1:B:340:VAL:HG22	1:B:708:GLU:HG2	1.80	0.62
1:A:340:VAL:HG22	1:A:708:GLU:HG2	1.80	0.61
1:C:368:ASN:OD1	1:C:371:ARG:NH2	2.34	0.60
1:C:194:ALA:HB3	1:C:211:GLU:HB2	1.85	0.59
1:D:194:ALA:HB3	1:D:211:GLU:HB2	1.85	0.59
1:B:194:ALA:HB3	1:B:211:GLU:HB2	1.85	0.58
1:A:194:ALA:HB3	1:A:211:GLU:HB2	1.85	0.58
1:B:368:ASN:OD1	1:B:371:ARG:NH2	2.34	0.58
1:D:181:LYS:O	1:D:185:GLU:HG2	2.05	0.57
1:A:368:ASN:OD1	1:A:371:ARG:NH2	2.34	0.57
1:B:181:LYS:O	1:B:185:GLU:HG2	2.05	0.56
1:C:181:LYS:O	1:C:185:GLU:HG2	2.05	0.56
1:D:368:ASN:OD1	1:D:371:ARG:NH2	2.34	0.56
1:A:181:LYS:O	1:A:185:GLU:HG2	2.05	0.56
1:A:389:LEU:HD12	1:A:668:VAL:HG23	1.88	0.56
1:C:389:LEU:HD12	1:C:668:VAL:HG23	1.88	0.56
1:D:389:LEU:HD12	1:D:668:VAL:HG23	1.88	0.56
1:B:389:LEU:HD12	1:B:668:VAL:HG23	1.88	0.55
1:B:332:GLU:OE2	1:B:706:ARG:NH1	2.41	0.54
1:A:332:GLU:OE2	1:A:706:ARG:NH1	2.41	0.54
1:D:437:GLY:O	1:D:441:ILE:HG12	2.08	0.53
1:A:206:CYS:SG	1:A:207:PHE:N	2.82	0.53
1:C:332:GLU:OE2	1:C:706:ARG:NH1	2.41	0.53
1:D:332:GLU:OE2	1:D:706:ARG:NH1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:437:GLY:O	1:B:441:ILE:HG12	2.08	0.53
1:A:437:GLY:O	1:A:441:ILE:HG12	2.08	0.52
1:C:206:CYS:SG	1:C:207:PHE:N	2.82	0.52
1:C:437:GLY:O	1:C:441:ILE:HG12	2.08	0.52
1:C:342:LEU:HD21	1:C:691:VAL:HG21	1.92	0.52
1:C:623:LEU:O	1:C:627:LEU:HG	2.10	0.52
1:B:342:LEU:HD21	1:B:691:VAL:HG21	1.92	0.52
1:A:342:LEU:HD21	1:A:691:VAL:HG21	1.92	0.52
1:B:206:CYS:SG	1:B:207:PHE:N	2.82	0.52
1:D:342:LEU:HD21	1:D:691:VAL:HG21	1.92	0.52
1:A:159:ASP:HA	1:A:163:GLN:HG3	1.92	0.51
1:B:159:ASP:HA	1:B:163:GLN:HG3	1.92	0.51
1:B:623:LEU:O	1:B:627:LEU:HG	2.10	0.51
1:D:623:LEU:O	1:D:627:LEU:HG	2.10	0.51
1:C:616:LEU:O	1:C:618:PHE:N	2.44	0.51
1:D:524:ILE:HG22	1:D:526:SER:H	1.76	0.51
1:B:616:LEU:O	1:B:618:PHE:N	2.44	0.51
1:A:524:ILE:HG22	1:A:526:SER:H	1.76	0.51
1:A:616:LEU:O	1:A:618:PHE:N	2.44	0.51
1:C:159:ASP:HA	1:C:163:GLN:HG3	1.92	0.51
1:C:524:ILE:HG22	1:C:526:SER:H	1.76	0.51
1:A:623:LEU:O	1:A:627:LEU:HG	2.10	0.50
1:D:616:LEU:O	1:D:618:PHE:N	2.44	0.50
1:B:184:VAL:HA	1:B:188:ALA:HB3	1.94	0.50
1:A:253:LEU:HD12	1:A:267:VAL:HG23	1.94	0.50
1:C:184:VAL:HA	1:C:188:ALA:HB3	1.94	0.50
1:D:206:CYS:SG	1:D:207:PHE:N	2.82	0.50
1:C:598:LEU:HD11	1:D:623:LEU:HD21	1.93	0.50
1:B:524:ILE:HG22	1:B:526:SER:H	1.76	0.49
1:D:253:LEU:HD12	1:D:267:VAL:HG23	1.94	0.49
1:D:159:ASP:HA	1:D:163:GLN:HG3	1.92	0.49
1:A:598:LEU:HD11	1:B:623:LEU:HD21	1.94	0.49
1:A:184:VAL:HA	1:A:188:ALA:HB3	1.94	0.49
1:B:253:LEU:HD12	1:B:267:VAL:HG23	1.94	0.49
1:C:253:LEU:HD12	1:C:267:VAL:HG23	1.94	0.49
1:D:184:VAL:HA	1:D:188:ALA:HB3	1.94	0.49
1:C:623:LEU:HD21	1:B:598:LEU:HD11	1.94	0.49
1:A:613:GLN:HE21	1:D:607:MET:HE2	1.79	0.48
1:C:613:GLN:HE21	1:B:607:MET:HE2	1.79	0.48
1:D:388:ARG:HH12	1:D:687:ARG:HH12	1.61	0.48
1:A:623:LEU:HD21	1:D:598:LEU:HD11	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:345:LEU:HD12	1:B:703:TRP:HB3	1.96	0.47
1:C:607:MET:HE2	1:D:613:GLN:HE21	1.78	0.47
1:C:342:LEU:HG	1:C:704:CYS:HB3	1.97	0.47
1:A:388:ARG:HH12	1:A:687:ARG:HH12	1.61	0.47
1:C:345:LEU:HD12	1:C:703:TRP:HB3	1.96	0.47
1:A:159:ASP:OD1	1:A:163:GLN:NE2	2.31	0.47
1:C:388:ARG:HH12	1:C:687:ARG:HH12	1.61	0.46
1:B:520:GLN:HA	1:B:660:TRP:CZ2	2.51	0.46
1:D:345:LEU:HD12	1:D:703:TRP:HB3	1.96	0.46
1:D:520:GLN:HA	1:D:660:TRP:CZ2	2.51	0.46
1:C:520:GLN:HA	1:C:660:TRP:CZ2	2.51	0.46
1:A:345:LEU:HD12	1:A:703:TRP:HB3	1.96	0.46
1:A:607:MET:HE2	1:B:613:GLN:HE21	1.80	0.46
1:B:342:LEU:HG	1:B:704:CYS:HB3	1.97	0.46
1:B:388:ARG:HH12	1:B:687:ARG:HH12	1.61	0.46
1:A:342:LEU:HG	1:A:704:CYS:HB3	1.97	0.45
1:D:342:LEU:HG	1:D:704:CYS:HB3	1.97	0.45
1:A:520:GLN:HA	1:A:660:TRP:CZ2	2.51	0.45
1:C:649:VAL:HG21	1:B:649:VAL:HG12	1.99	0.45
1:B:533:ILE:HG13	1:B:644:LEU:HD12	1.99	0.45
1:D:533:ILE:HG13	1:D:644:LEU:HD12	1.99	0.45
1:A:533:ILE:HG13	1:A:644:LEU:HD12	1.99	0.45
1:C:533:ILE:HG13	1:C:644:LEU:HD12	1.99	0.45
1:A:137:MET:SD	1:A:138:PRO:HD3	2.58	0.44
1:A:649:VAL:HG12	1:B:649:VAL:HG21	1.99	0.44
1:B:137:MET:SD	1:B:138:PRO:HD3	2.58	0.44
1:D:137:MET:SD	1:D:138:PRO:HD3	2.58	0.44
1:A:122:MET:HE1	1:A:156:GLN:HE22	1.82	0.44
1:C:480:ALA:O	1:C:483:THR:HG22	2.18	0.44
1:B:191:HIS:CE1	1:B:237:ALA:HB1	2.54	0.43
1:D:122:MET:HE1	1:D:156:GLN:HE22	1.83	0.43
1:A:470:SER:O	1:A:470:SER:OG	2.36	0.43
1:B:480:ALA:O	1:B:483:THR:HG22	2.18	0.43
1:B:122:MET:HE1	1:B:156:GLN:HE22	1.83	0.43
1:B:159:ASP:OD1	1:B:163:GLN:NE2	2.31	0.43
1:D:191:HIS:CE1	1:D:237:ALA:HB1	2.54	0.43
1:A:480:ALA:O	1:A:483:THR:HG22	2.18	0.43
1:C:397:PHE:HE1	1:C:512:LEU:HD22	1.84	0.43
1:C:137:MET:SD	1:C:138:PRO:HD3	2.58	0.43
1:C:191:HIS:CE1	1:C:237:ALA:HB1	2.54	0.43
1:D:480:ALA:O	1:D:483:THR:HG22	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:138:PRO:O	1:A:142:ILE:HG13	2.19	0.43
1:A:649:VAL:HG21	1:D:649:VAL:HG12	1.99	0.43
1:B:138:PRO:O	1:B:142:ILE:HG13	2.19	0.43
1:D:138:PRO:O	1:D:142:ILE:HG13	2.19	0.43
1:A:191:HIS:CE1	1:A:237:ALA:HB1	2.54	0.43
1:A:668:VAL:HA	1:A:671:MET:HG2	2.01	0.43
1:C:122:MET:HE1	1:C:156:GLN:HE22	1.82	0.42
1:C:524:ILE:HB	1:C:527:VAL:HG23	2.01	0.42
1:D:159:ASP:OD1	1:D:163:GLN:NE2	2.31	0.42
1:D:397:PHE:HE1	1:D:512:LEU:HD22	1.84	0.42
1:D:668:VAL:HA	1:D:671:MET:HG2	2.01	0.42
1:B:397:PHE:HE1	1:B:512:LEU:HD22	1.84	0.42
1:A:527:VAL:HG12	1:A:531:LYS:HE2	2.02	0.42
1:A:167:ALA:HA	1:A:170:ILE:HD13	2.02	0.42
1:C:614:GLU:O	1:C:616:LEU:HD23	2.20	0.42
1:D:123:LYS:HA	1:D:123:LYS:HD2	1.91	0.42
1:D:167:ALA:HA	1:D:170:ILE:HD13	2.02	0.42
1:B:556:VAL:HG21	1:B:593:ILE:HD13	2.01	0.42
1:D:524:ILE:HB	1:D:527:VAL:HG23	2.01	0.42
1:C:553:VAL:HG11	1:B:408:THR:HG23	2.02	0.42
1:C:649:VAL:HG12	1:D:649:VAL:HG21	2.00	0.42
1:B:163:GLN:OE1	1:B:163:GLN:N	2.53	0.42
1:D:527:VAL:HG12	1:D:531:LYS:HE2	2.02	0.42
1:D:458:ARG:NH2	1:D:670:GLU:OE2	2.40	0.42
1:A:191:HIS:HD2	1:A:213:PRO:HG2	1.85	0.42
1:C:138:PRO:O	1:C:142:ILE:HG13	2.19	0.42
1:C:393:PHE:CE2	1:C:518:GLY:HA3	2.55	0.42
1:A:397:PHE:HE1	1:A:512:LEU:HD22	1.84	0.42
1:A:524:ILE:HB	1:A:527:VAL:HG23	2.01	0.42
1:C:77:ARG:NH2	1:C:100:ARG:HH22	2.18	0.42
1:C:408:THR:HG23	1:D:553:VAL:HG11	2.02	0.42
1:B:191:HIS:HD2	1:B:213:PRO:HG2	1.85	0.42
1:D:163:GLN:N	1:D:163:GLN:OE1	2.53	0.42
1:A:389:LEU:HD13	1:A:671:MET:HG3	2.02	0.41
1:C:482:LEU:HD23	1:C:482:LEU:HA	1.91	0.41
1:C:556:VAL:HG21	1:C:593:ILE:HD13	2.01	0.41
1:C:717:LYS:HD2	1:C:717:LYS:HA	1.88	0.41
1:B:614:GLU:O	1:B:616:LEU:HD23	2.20	0.41
1:A:163:GLN:OE1	1:A:163:GLN:N	2.53	0.41
1:A:393:PHE:CE2	1:A:518:GLY:HA3	2.55	0.41
1:C:191:HIS:HD2	1:C:213:PRO:HG2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:167:ALA:HA	1:B:170:ILE:HD13	2.02	0.41
1:B:389:LEU:HD13	1:B:671:MET:HG3	2.02	0.41
1:B:527:VAL:HG12	1:B:531:LYS:HE2	2.02	0.41
1:D:77:ARG:NH2	1:D:100:ARG:HH22	2.18	0.41
1:A:209:PHE:CD1	1:A:216:LEU:HB2	2.56	0.41
1:C:167:ALA:HA	1:C:170:ILE:HD13	2.02	0.41
1:C:668:VAL:HA	1:C:671:MET:HG2	2.01	0.41
1:D:393:PHE:CE2	1:D:518:GLY:HA3	2.55	0.41
1:A:77:ARG:NH2	1:A:100:ARG:HH22	2.18	0.41
1:A:553:VAL:HG11	1:D:408:THR:HG23	2.02	0.41
1:B:393:PHE:CE2	1:B:518:GLY:HA3	2.55	0.41
1:B:668:VAL:HA	1:B:671:MET:HG2	2.01	0.41
1:D:209:PHE:CD1	1:D:216:LEU:HB2	2.56	0.41
1:A:408:THR:HG23	1:B:553:VAL:HG11	2.02	0.41
1:D:556:VAL:HG21	1:D:593:ILE:HD13	2.01	0.41
1:A:306:GLY:HA2	1:A:372:MET:HE1	2.03	0.41
1:C:527:VAL:HG12	1:C:531:LYS:HE2	2.02	0.41
1:B:306:GLY:HA2	1:B:372:MET:HE1	2.03	0.41
1:D:191:HIS:HD2	1:D:213:PRO:HG2	1.85	0.41
1:D:614:GLU:O	1:D:616:LEU:HD23	2.20	0.41
1:A:556:VAL:HG21	1:A:593:ILE:HD13	2.01	0.41
1:C:122:MET:HG2	1:C:167:ALA:HB2	2.03	0.41
1:C:163:GLN:OE1	1:C:163:GLN:N	2.53	0.41
1:D:525:TYR:CZ	1:D:653:ALA:HB3	2.56	0.41
1:A:614:GLU:O	1:A:616:LEU:HD23	2.20	0.41
1:C:275:LEU:HD12	1:C:275:LEU:HA	1.91	0.41
1:B:470:SER:O	1:B:470:SER:OG	2.36	0.41
1:B:519:PHE:HE2	1:B:521:HIS:CE1	2.39	0.41
1:D:122:MET:HG2	1:D:167:ALA:HB2	2.03	0.41
1:C:334:CYS:HB3	1:C:339:ARG:HG2	2.02	0.41
1:C:389:LEU:HD13	1:C:671:MET:HG3	2.02	0.41
1:B:77:ARG:NH2	1:B:100:ARG:HH22	2.18	0.41
1:C:525:TYR:CZ	1:C:653:ALA:HB3	2.56	0.41
1:B:334:CYS:HB3	1:B:339:ARG:HG2	2.02	0.41
1:A:122:MET:HG2	1:A:167:ALA:HB2	2.03	0.40
1:A:334:CYS:HB3	1:A:339:ARG:HG2	2.02	0.40
1:D:334:CYS:HB3	1:D:339:ARG:HG2	2.02	0.40
1:C:209:PHE:CD1	1:C:216:LEU:HB2	2.56	0.40
1:B:458:ARG:NH2	1:B:670:GLU:OE2	2.40	0.40
1:B:524:ILE:HB	1:B:527:VAL:HG23	2.02	0.40
1:A:519:PHE:HE2	1:A:521:HIS:CE1	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:99:LEU:HD22	1:C:104:LYS:HG2	2.04	0.40
1:C:519:PHE:HE2	1:C:521:HIS:CE1	2.39	0.40
1:B:209:PHE:CD1	1:B:216:LEU:HB2	2.56	0.40
1:D:389:LEU:HD13	1:D:671:MET:HG3	2.02	0.40
1:A:123:LYS:HA	1:A:123:LYS:HD2	1.90	0.40
1:A:525:TYR:CZ	1:A:653:ALA:HB3	2.56	0.40
1:C:306:GLY:HA2	1:C:372:MET:HE1	2.03	0.40
1:B:525:TYR:CZ	1:B:653:ALA:HB3	2.56	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	589/1026 (57%)	548 (93%)	39 (7%)	2 (0%)	36	59
1	B	589/1026 (57%)	549 (93%)	38 (6%)	2 (0%)	36	59
1	C	589/1026 (57%)	548 (93%)	39 (7%)	2 (0%)	36	59
1	D	589/1026 (57%)	548 (93%)	39 (7%)	2 (0%)	36	59
All	All	2356/4104 (57%)	2193 (93%)	155 (7%)	8 (0%)	37	59

All (8) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	524	ILE
1	C	524	ILE
1	B	524	ILE
1	D	524	ILE
1	A	201	LYS
1	C	201	LYS
1	B	201	LYS

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Mol	Chain	Res	Type
1	D	201	LYS

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	522/903 (58%)	522 (100%)	0	100	100
1	B	522/903 (58%)	522 (100%)	0	100	100
1	C	522/903 (58%)	522 (100%)	0	100	100
1	D	522/903 (58%)	522 (100%)	0	100	100
All	All	2088/3612 (58%)	2088 (100%)	0	100	100

There are no protein residues with a non-rotameric sidechain to report.

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (32) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	203	GLN
1	A	234	HIS
1	A	438	HIS
1	A	487	GLN
1	A	613	GLN
1	A	639	ASN
1	A	651	HIS
1	A	711	ASN
1	C	234	HIS
1	C	293	HIS
1	C	438	HIS
1	C	487	GLN
1	C	613	GLN
1	C	639	ASN
1	C	651	HIS
1	C	711	ASN
1	B	234	HIS

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Mol	Chain	Res	Type
1	B	293	HIS
1	B	438	HIS
1	B	487	GLN
1	B	613	GLN
1	B	639	ASN
1	B	651	HIS
1	B	711	ASN
1	D	165	HIS
1	D	234	HIS
1	D	438	HIS
1	D	487	GLN
1	D	613	GLN
1	D	639	ASN
1	D	651	HIS
1	D	711	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

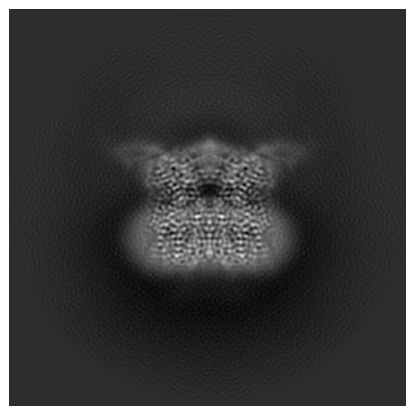
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-14745. These allow visual inspection of the internal detail of the map and identification of artifacts.

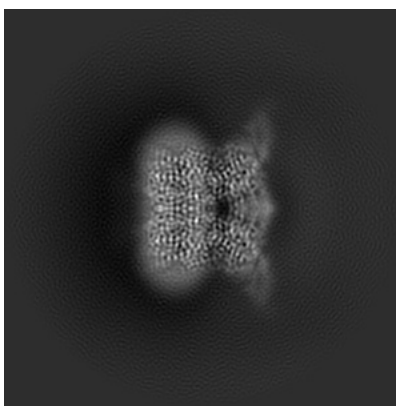
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

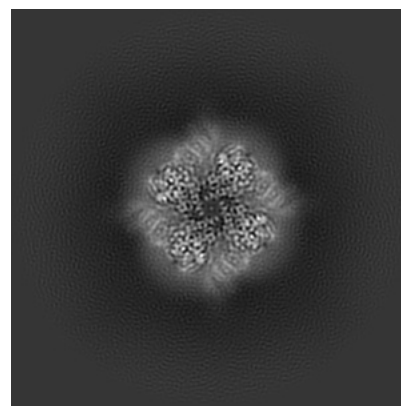
6.1.1 Primary map



X

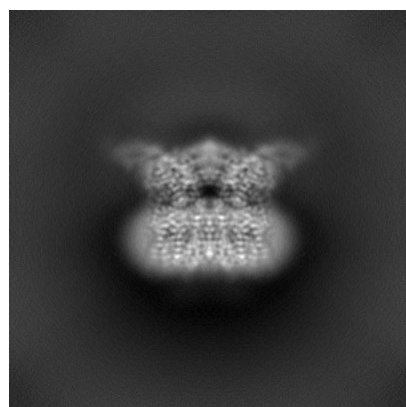


Y

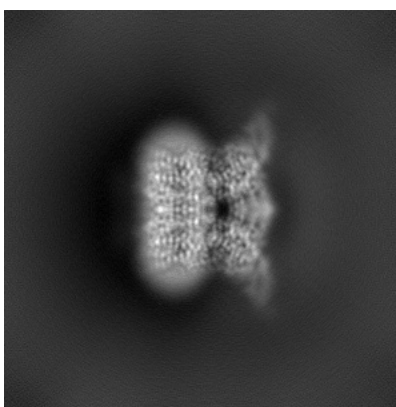


Z

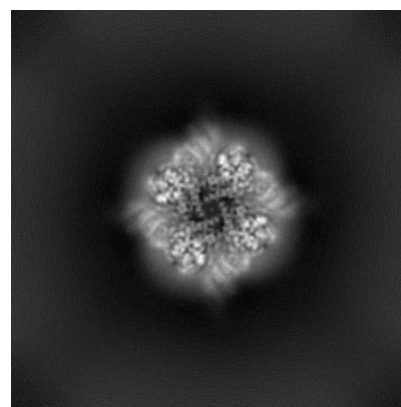
6.1.2 Raw map



X



Y

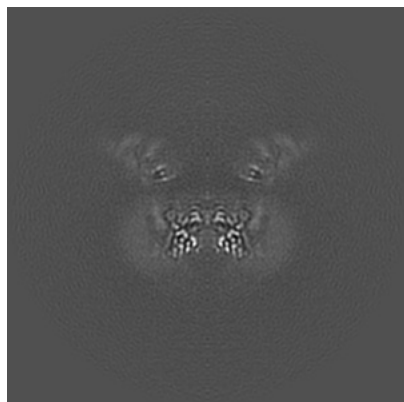


Z

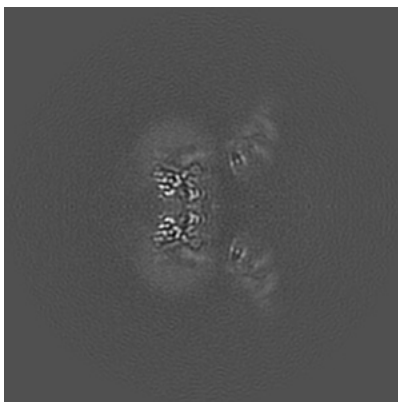
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

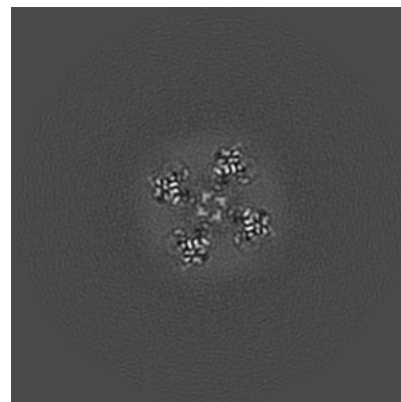
6.2.1 Primary map



X Index: 180

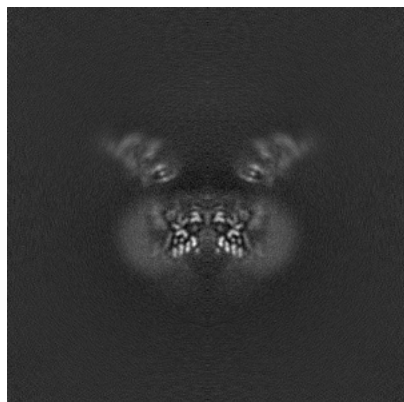


Y Index: 180

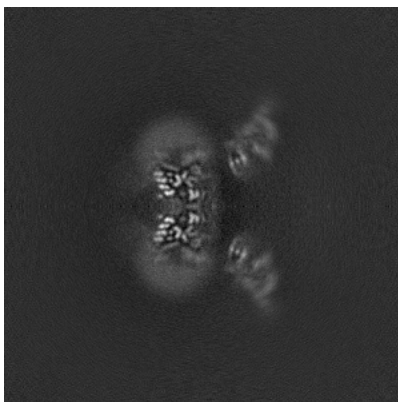


Z Index: 180

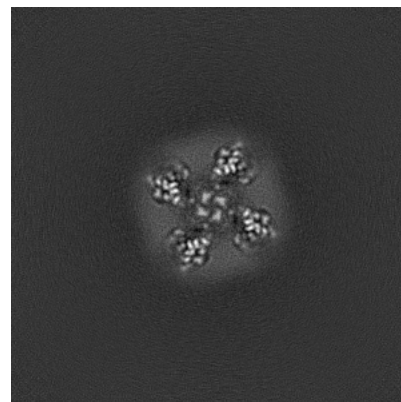
6.2.2 Raw map



X Index: 180



Y Index: 180

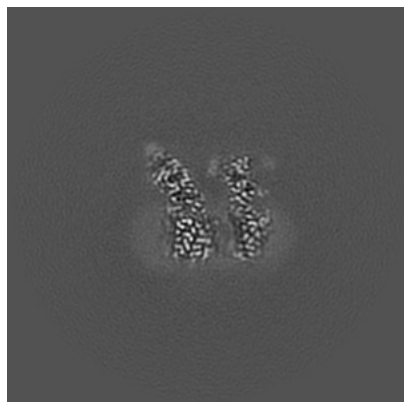


Z Index: 180

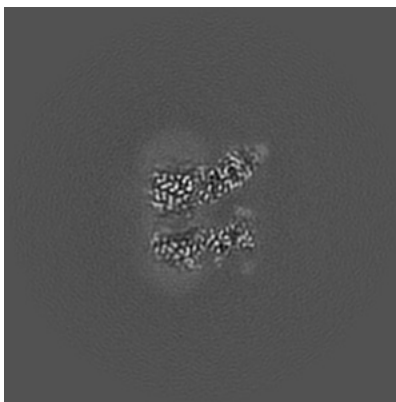
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

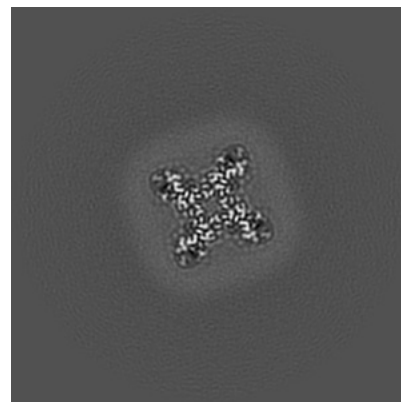
6.3.1 Primary map



X Index: 209

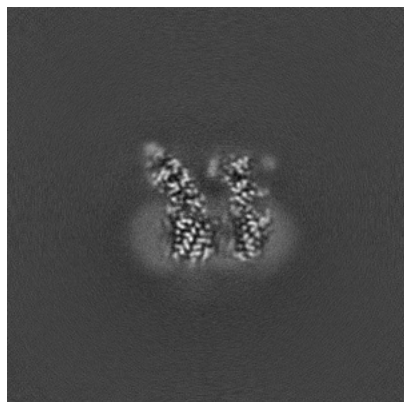


Y Index: 209

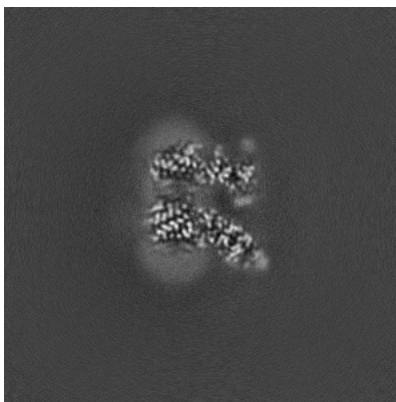


Z Index: 150

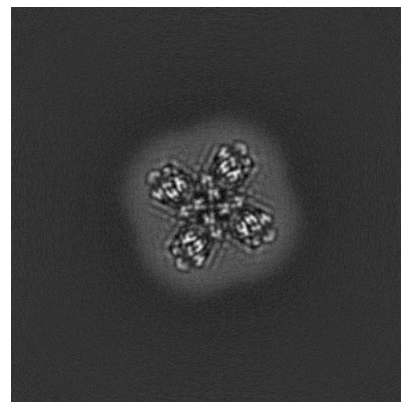
6.3.2 Raw map



X Index: 209



Y Index: 151

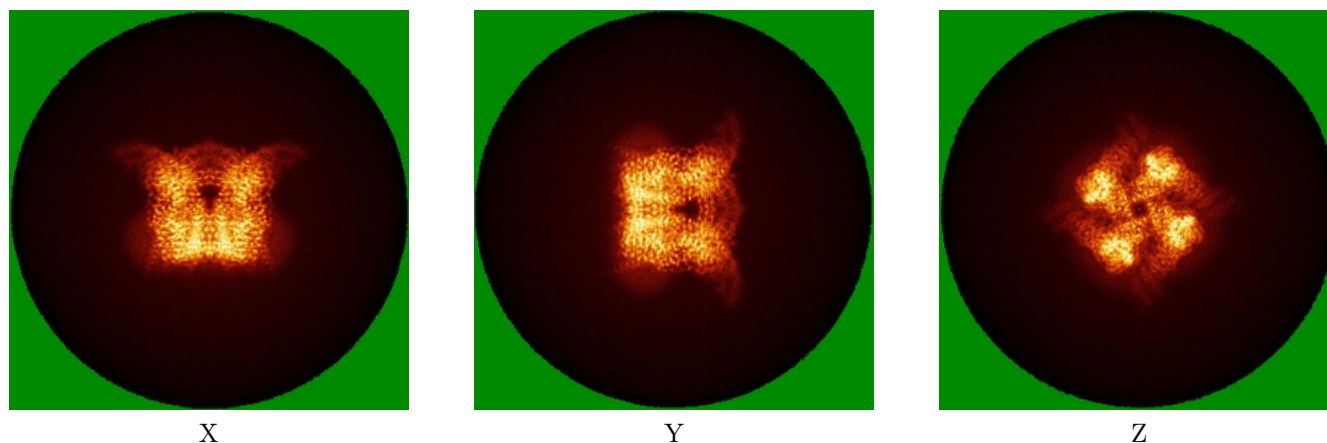


Z Index: 167

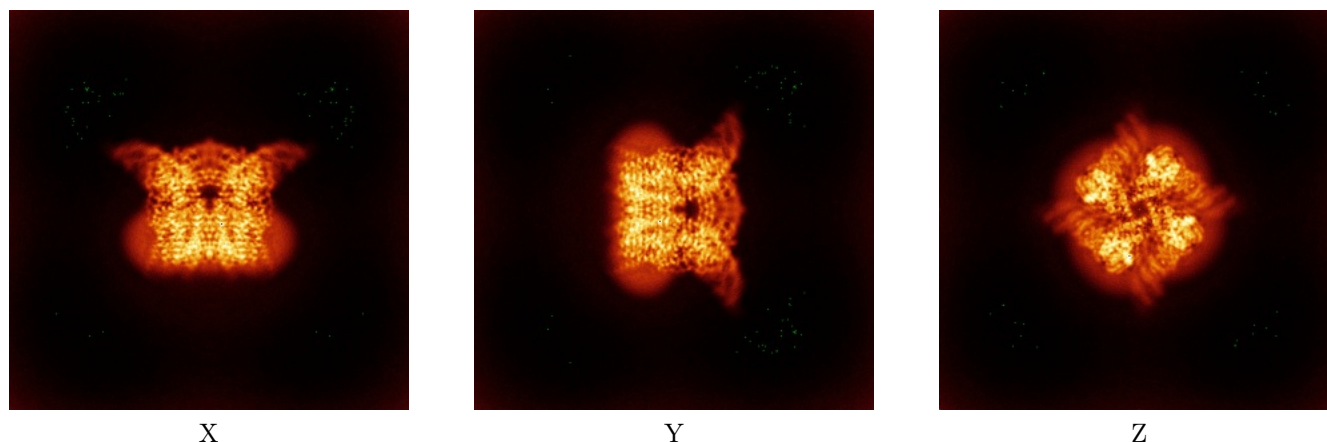
The images above show the largest variance slices of the map in three orthogonal directions.

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

6.4.1 Primary map



6.4.2 Raw map



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](#)

This section was not generated.

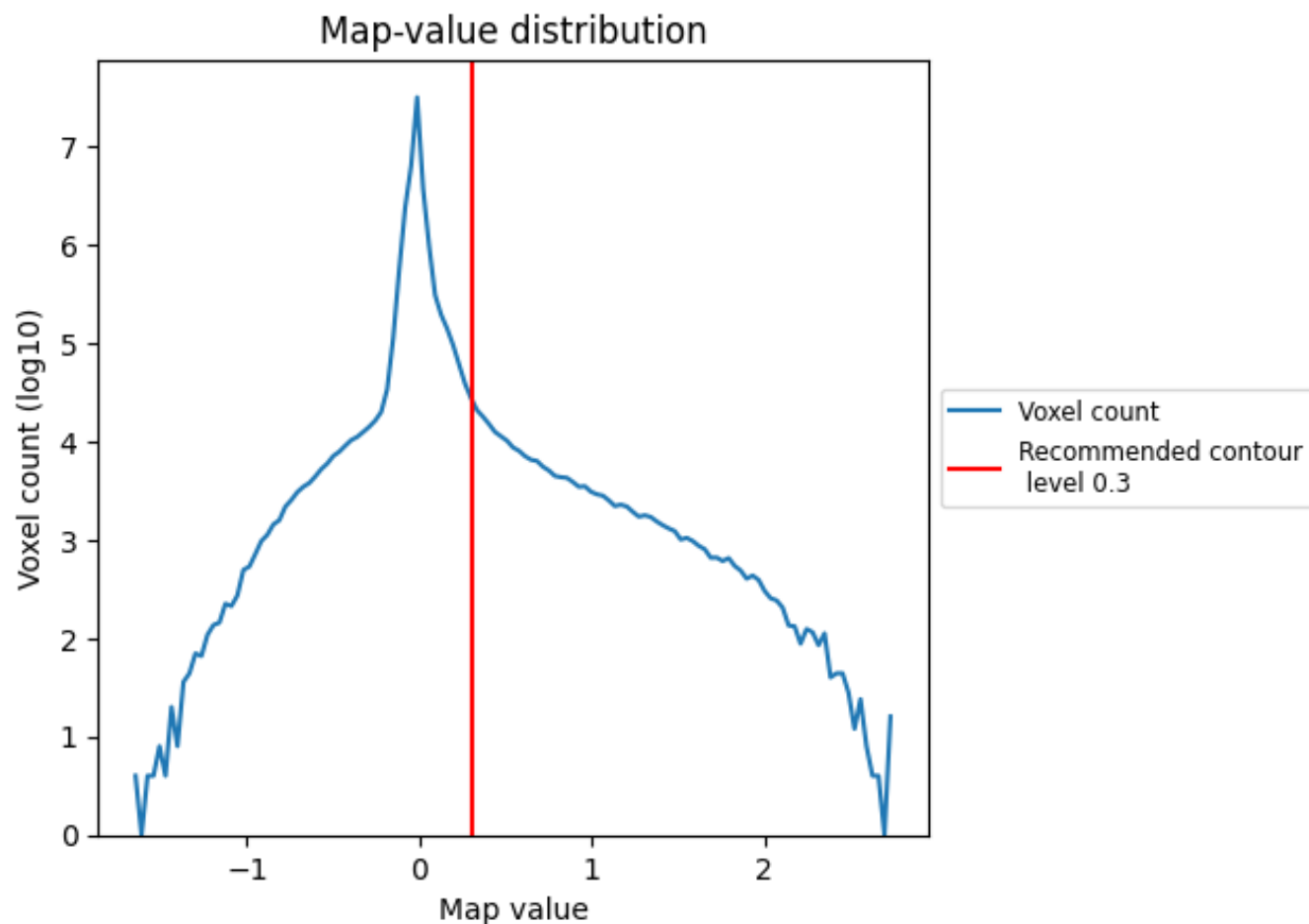
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

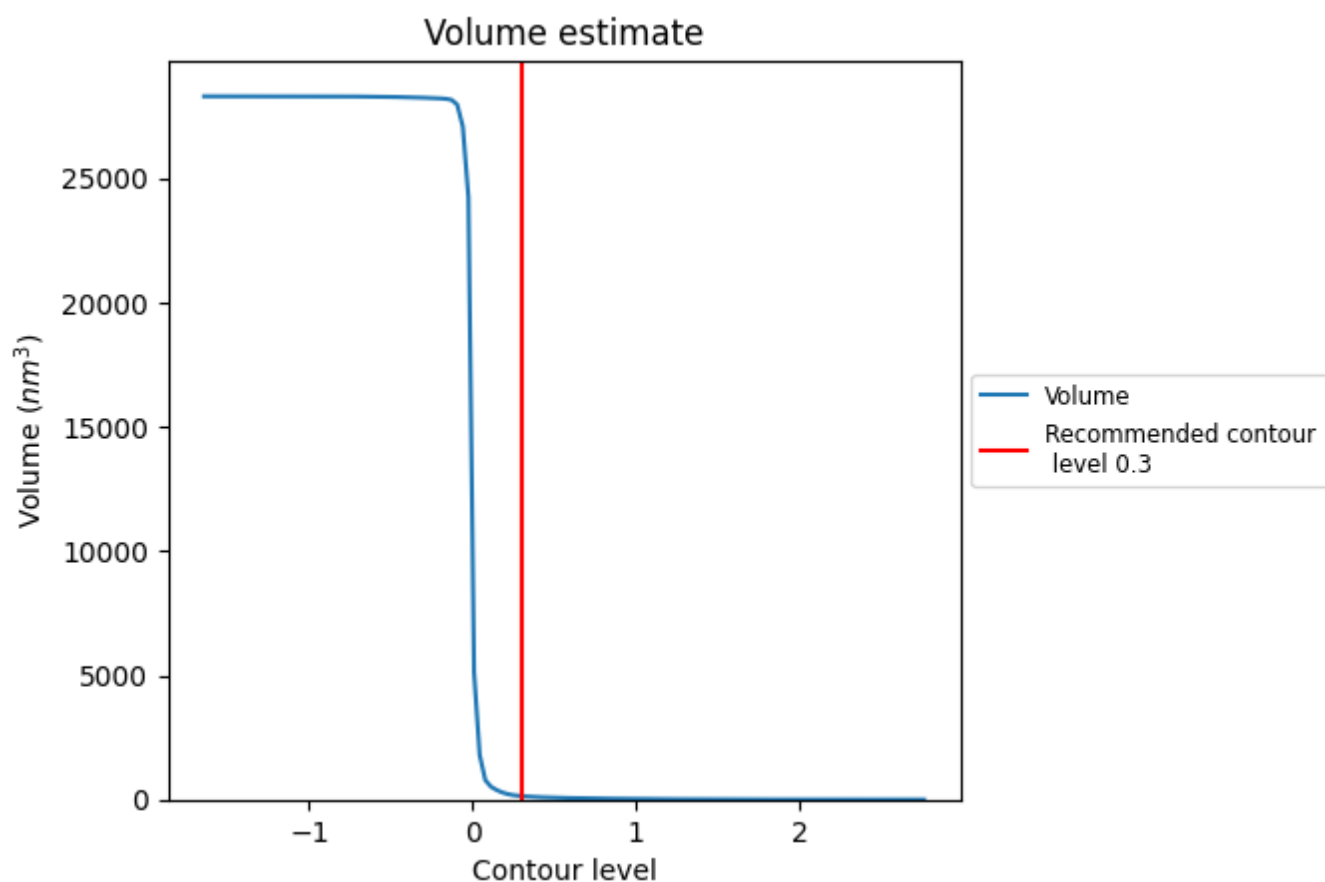
This section contains the results of statistical analysis of the map.

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.

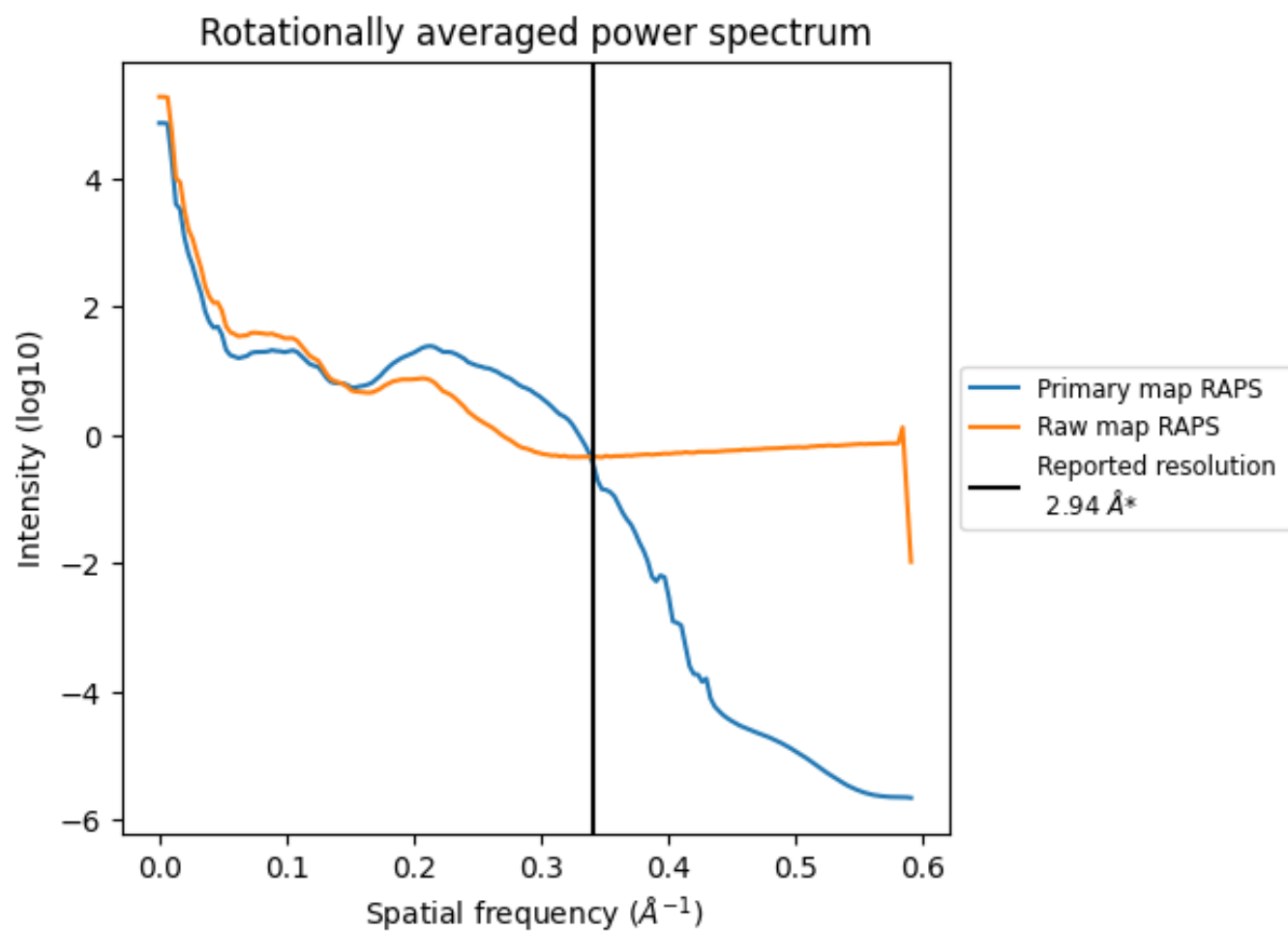
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 139 nm³; this corresponds to an approximate mass of 125 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 ⓘ

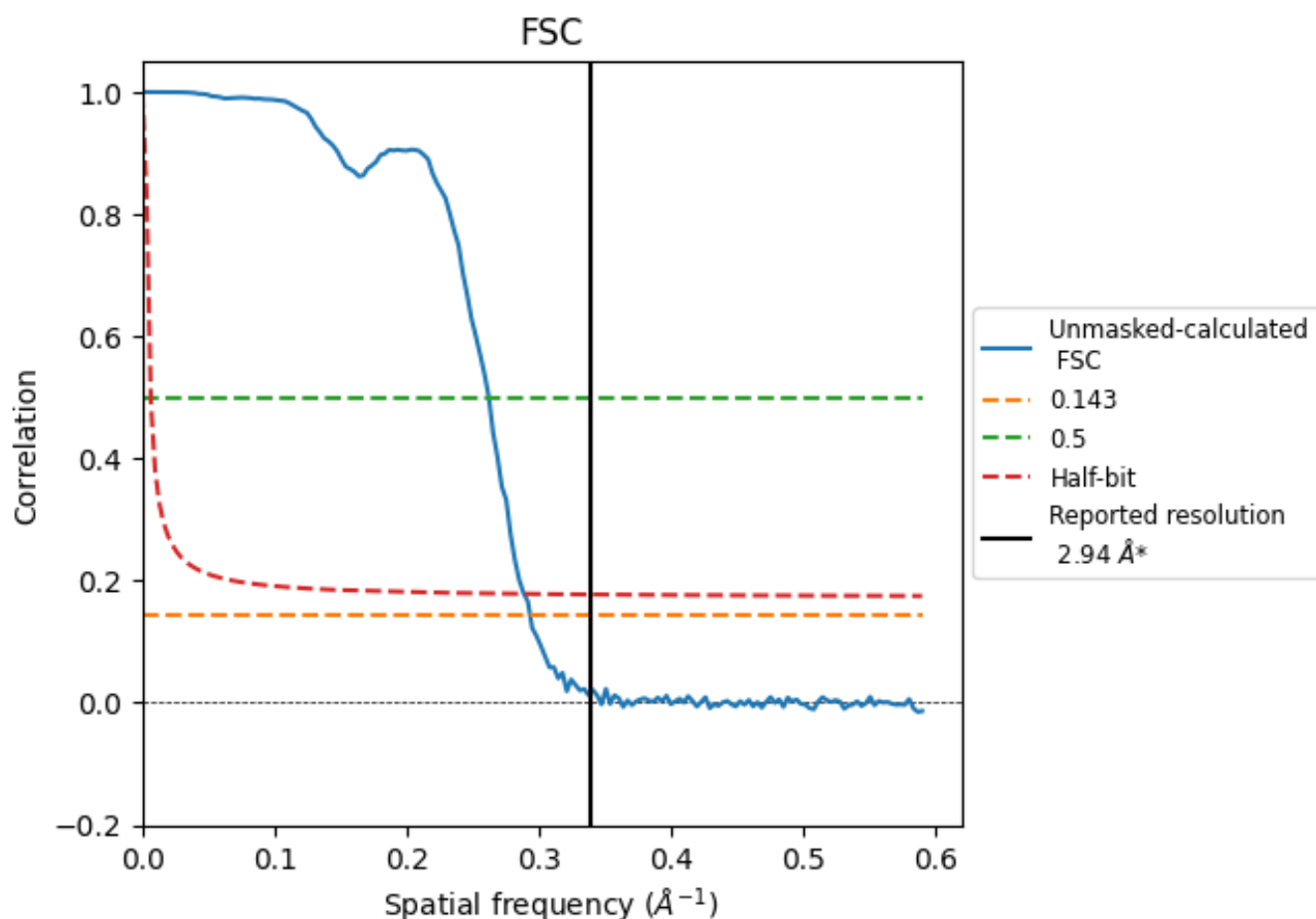


*Reported resolution corresponds to spatial frequency of $0.340 \text{ \AA}^{-1}$

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 0.340 Å⁻¹

8.2 Resolution estimates [i](#)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.94	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.40	3.81	3.46

*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 3.40 differs from the reported value 2.94 by more than 10 %

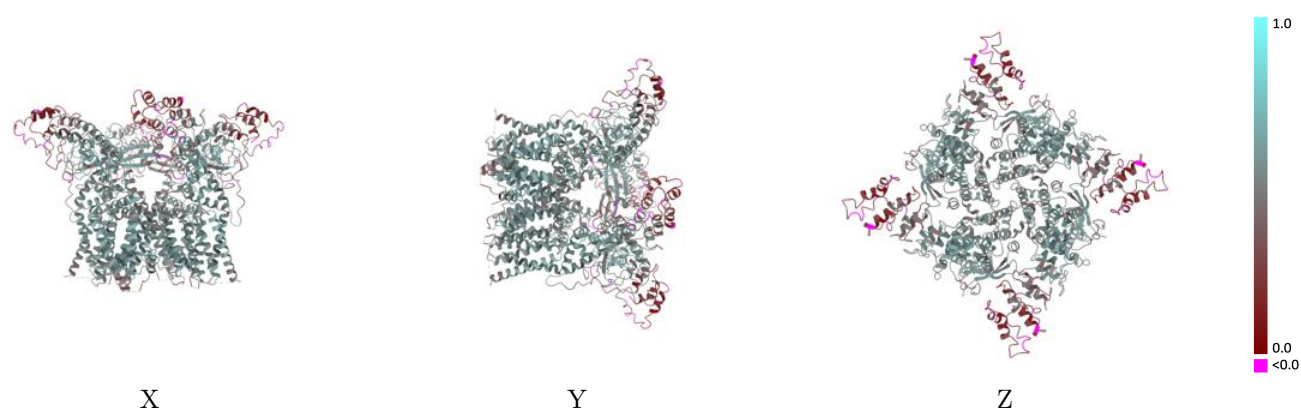
9 Map-model fit [i](#)

This section contains information regarding the fit between EMD map EMD-14745 and PDB model 7ZJD. Per-residue inclusion information can be found in section 3 on page 6.

9.1 Map-model overlay [i](#)

This section was not generated.

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

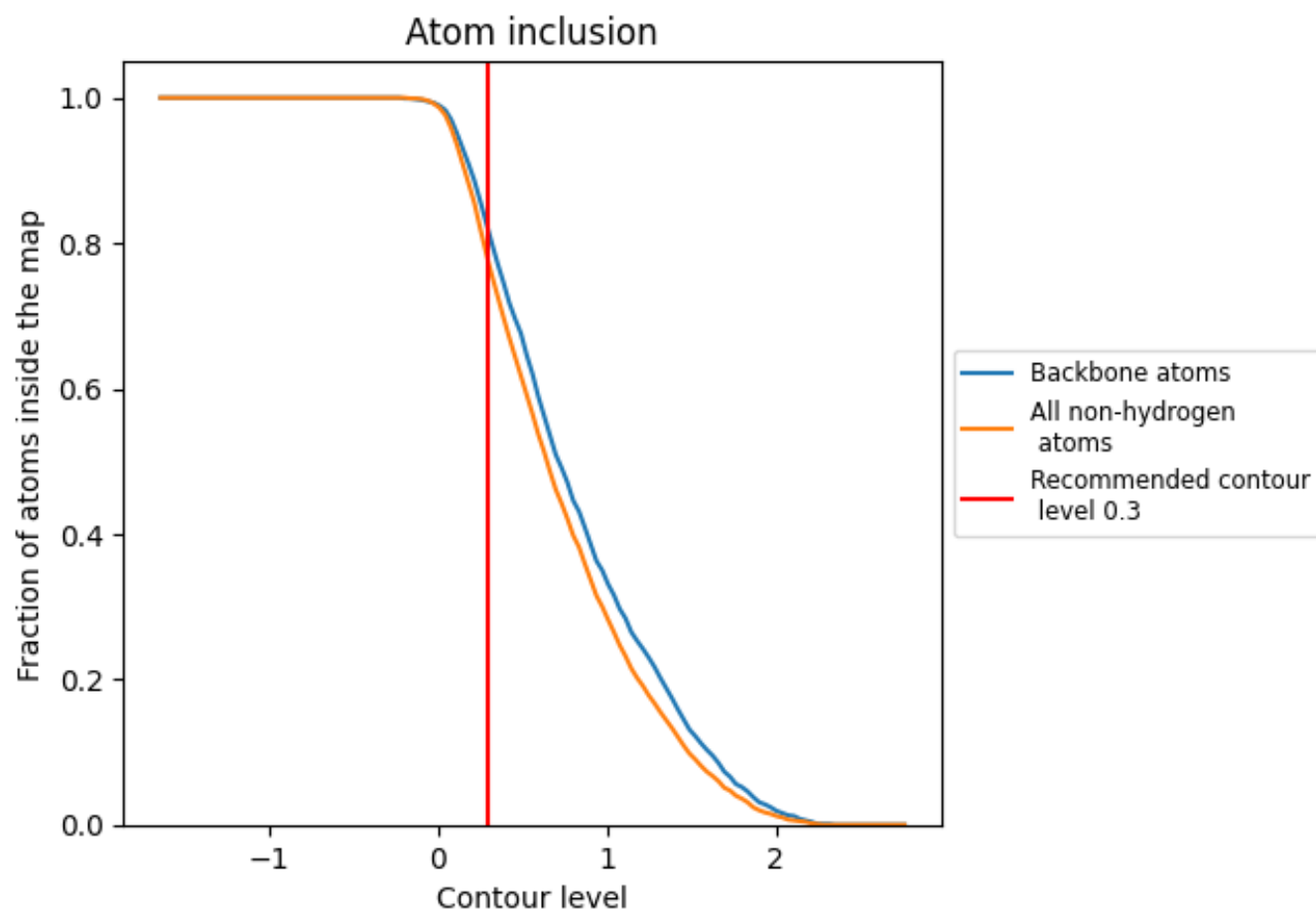


The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

This section was not generated.

9.4 Atom inclusion ⓘ



At the recommended contour level, 82% of all backbone atoms, 77% 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 (0.3) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7720	0.4850
A	0.7720	0.4850
B	0.7730	0.4850
C	0.7730	0.4850
D	0.7720	0.4850

