



wwPDB EM Validation Summary Report ⓘ

Oct 12, 2024 – 11:44 pm BST

PDB ID : 7OXR
EMDB ID : EMD-13104
Title : Cryo-EM structure of yeast Sei1 with locking helix deletion
Authors : Deme, J.C.; Lea, S.M.
Deposited on : 2021-06-22
Resolution : 3.30 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev113
MolProbity : 4.02b-467
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.39

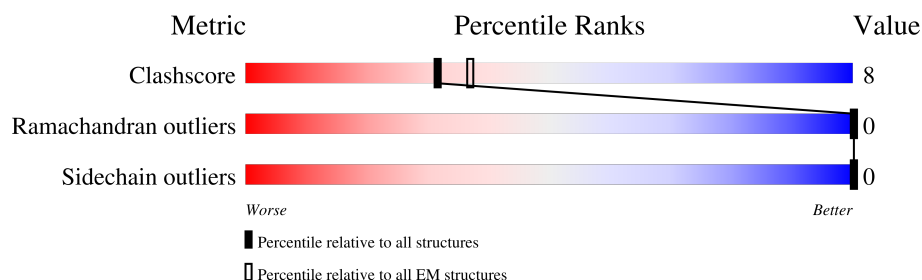
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.30 Å.

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



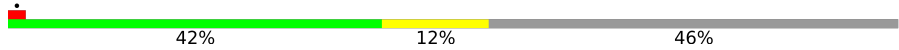
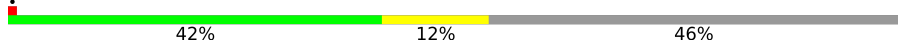
Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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

Mol	Chain	Length	Quality of chain
1	A	315	
1	B	315	
1	C	315	
1	D	315	
1	E	315	
1	F	315	
1	G	315	
1	H	315	

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Mol	Chain	Length	Quality of chain
1	I	315	 42% 12% 46%
1	J	315	 42% 12% 46%

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 13670 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 BJ4_G0032880.mRNA.1.CDS.1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	170	Total	C	N	O	S	0	0
			1367	867	227	267	6		
1	B	170	Total	C	N	O	S	0	0
			1367	867	227	267	6		
1	C	170	Total	C	N	O	S	0	0
			1367	867	227	267	6		
1	D	170	Total	C	N	O	S	0	0
			1367	867	227	267	6		
1	E	170	Total	C	N	O	S	0	0
			1367	867	227	267	6		
1	F	170	Total	C	N	O	S	0	0
			1367	867	227	267	6		
1	G	170	Total	C	N	O	S	0	0
			1367	867	227	267	6		
1	H	170	Total	C	N	O	S	0	0
			1367	867	227	267	6		
1	I	170	Total	C	N	O	S	0	0
			1367	867	227	267	6		
1	J	170	Total	C	N	O	S	0	0
			1367	867	227	267	6		

There are 490 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	231	GLY	ASN	conflict	UNP A0A6A5PUS7
A	232	GLY	PHE	conflict	UNP A0A6A5PUS7
A	233	SER	GLU	conflict	UNP A0A6A5PUS7
A	234	GLY	GLN	conflict	UNP A0A6A5PUS7
A	?	-	LEU	deletion	UNP A0A6A5PUS7
A	?	-	ARG	deletion	UNP A0A6A5PUS7
A	?	-	ASN	deletion	UNP A0A6A5PUS7
A	?	-	LEU	deletion	UNP A0A6A5PUS7
A	?	-	MET	deletion	UNP A0A6A5PUS7
A	?	-	LEU	deletion	UNP A0A6A5PUS7

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Chain	Residue	Modelled	Actual	Comment	Reference
A	?	-	ARG	deletion	UNP A0A6A5PUS7
A	236	SER	LYS	conflict	UNP A0A6A5PUS7
A	279	GLY	-	expression tag	UNP A0A6A5PUS7
A	280	ARG	-	expression tag	UNP A0A6A5PUS7
A	281	ARG	-	expression tag	UNP A0A6A5PUS7
A	282	ILE	-	expression tag	UNP A0A6A5PUS7
A	283	PRO	-	expression tag	UNP A0A6A5PUS7
A	284	GLY	-	expression tag	UNP A0A6A5PUS7
A	285	LEU	-	expression tag	UNP A0A6A5PUS7
A	286	ILE	-	expression tag	UNP A0A6A5PUS7
A	287	ASN	-	expression tag	UNP A0A6A5PUS7
A	288	GLY	-	expression tag	UNP A0A6A5PUS7
A	289	GLY	-	expression tag	UNP A0A6A5PUS7
A	290	GLY	-	expression tag	UNP A0A6A5PUS7
A	291	GLY	-	expression tag	UNP A0A6A5PUS7
A	292	GLY	-	expression tag	UNP A0A6A5PUS7
A	293	GLY	-	expression tag	UNP A0A6A5PUS7
A	294	ASP	-	expression tag	UNP A0A6A5PUS7
A	295	TYR	-	expression tag	UNP A0A6A5PUS7
A	296	LYS	-	expression tag	UNP A0A6A5PUS7
A	297	ASP	-	expression tag	UNP A0A6A5PUS7
A	298	HIS	-	expression tag	UNP A0A6A5PUS7
A	299	ASP	-	expression tag	UNP A0A6A5PUS7
A	300	GLY	-	expression tag	UNP A0A6A5PUS7
A	301	ASP	-	expression tag	UNP A0A6A5PUS7
A	302	TYR	-	expression tag	UNP A0A6A5PUS7
A	303	LYS	-	expression tag	UNP A0A6A5PUS7
A	304	ASP	-	expression tag	UNP A0A6A5PUS7
A	305	HIS	-	expression tag	UNP A0A6A5PUS7
A	306	ASP	-	expression tag	UNP A0A6A5PUS7
A	307	ILE	-	expression tag	UNP A0A6A5PUS7
A	308	ASP	-	expression tag	UNP A0A6A5PUS7
A	309	TYR	-	expression tag	UNP A0A6A5PUS7
A	310	LYS	-	expression tag	UNP A0A6A5PUS7
A	311	ASP	-	expression tag	UNP A0A6A5PUS7
A	312	ASP	-	expression tag	UNP A0A6A5PUS7
A	313	ASP	-	expression tag	UNP A0A6A5PUS7
A	314	ASP	-	expression tag	UNP A0A6A5PUS7
A	315	LYS	-	expression tag	UNP A0A6A5PUS7
B	231	GLY	ASN	conflict	UNP A0A6A5PUS7
B	232	GLY	PHE	conflict	UNP A0A6A5PUS7
B	233	SER	GLU	conflict	UNP A0A6A5PUS7

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Chain	Residue	Modelled	Actual	Comment	Reference
B	234	GLY	GLN	conflict	UNP A0A6A5PUS7
B	?	-	LEU	deletion	UNP A0A6A5PUS7
B	?	-	ARG	deletion	UNP A0A6A5PUS7
B	?	-	ASN	deletion	UNP A0A6A5PUS7
B	?	-	LEU	deletion	UNP A0A6A5PUS7
B	?	-	MET	deletion	UNP A0A6A5PUS7
B	?	-	LEU	deletion	UNP A0A6A5PUS7
B	?	-	ARG	deletion	UNP A0A6A5PUS7
B	236	SER	LYS	conflict	UNP A0A6A5PUS7
B	279	GLY	-	expression tag	UNP A0A6A5PUS7
B	280	ARG	-	expression tag	UNP A0A6A5PUS7
B	281	ARG	-	expression tag	UNP A0A6A5PUS7
B	282	ILE	-	expression tag	UNP A0A6A5PUS7
B	283	PRO	-	expression tag	UNP A0A6A5PUS7
B	284	GLY	-	expression tag	UNP A0A6A5PUS7
B	285	LEU	-	expression tag	UNP A0A6A5PUS7
B	286	ILE	-	expression tag	UNP A0A6A5PUS7
B	287	ASN	-	expression tag	UNP A0A6A5PUS7
B	288	GLY	-	expression tag	UNP A0A6A5PUS7
B	289	GLY	-	expression tag	UNP A0A6A5PUS7
B	290	GLY	-	expression tag	UNP A0A6A5PUS7
B	291	GLY	-	expression tag	UNP A0A6A5PUS7
B	292	GLY	-	expression tag	UNP A0A6A5PUS7
B	293	GLY	-	expression tag	UNP A0A6A5PUS7
B	294	ASP	-	expression tag	UNP A0A6A5PUS7
B	295	TYR	-	expression tag	UNP A0A6A5PUS7
B	296	LYS	-	expression tag	UNP A0A6A5PUS7
B	297	ASP	-	expression tag	UNP A0A6A5PUS7
B	298	HIS	-	expression tag	UNP A0A6A5PUS7
B	299	ASP	-	expression tag	UNP A0A6A5PUS7
B	300	GLY	-	expression tag	UNP A0A6A5PUS7
B	301	ASP	-	expression tag	UNP A0A6A5PUS7
B	302	TYR	-	expression tag	UNP A0A6A5PUS7
B	303	LYS	-	expression tag	UNP A0A6A5PUS7
B	304	ASP	-	expression tag	UNP A0A6A5PUS7
B	305	HIS	-	expression tag	UNP A0A6A5PUS7
B	306	ASP	-	expression tag	UNP A0A6A5PUS7
B	307	ILE	-	expression tag	UNP A0A6A5PUS7
B	308	ASP	-	expression tag	UNP A0A6A5PUS7
B	309	TYR	-	expression tag	UNP A0A6A5PUS7
B	310	LYS	-	expression tag	UNP A0A6A5PUS7
B	311	ASP	-	expression tag	UNP A0A6A5PUS7

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Chain	Residue	Modelled	Actual	Comment	Reference
B	312	ASP	-	expression tag	UNP A0A6A5PUS7
B	313	ASP	-	expression tag	UNP A0A6A5PUS7
B	314	ASP	-	expression tag	UNP A0A6A5PUS7
B	315	LYS	-	expression tag	UNP A0A6A5PUS7
C	231	GLY	ASN	conflict	UNP A0A6A5PUS7
C	232	GLY	PHE	conflict	UNP A0A6A5PUS7
C	233	SER	GLU	conflict	UNP A0A6A5PUS7
C	234	GLY	GLN	conflict	UNP A0A6A5PUS7
C	?	-	LEU	deletion	UNP A0A6A5PUS7
C	?	-	ARG	deletion	UNP A0A6A5PUS7
C	?	-	ASN	deletion	UNP A0A6A5PUS7
C	?	-	LEU	deletion	UNP A0A6A5PUS7
C	?	-	MET	deletion	UNP A0A6A5PUS7
C	?	-	LEU	deletion	UNP A0A6A5PUS7
C	?	-	ARG	deletion	UNP A0A6A5PUS7
C	236	SER	LYS	conflict	UNP A0A6A5PUS7
C	279	GLY	-	expression tag	UNP A0A6A5PUS7
C	280	ARG	-	expression tag	UNP A0A6A5PUS7
C	281	ARG	-	expression tag	UNP A0A6A5PUS7
C	282	ILE	-	expression tag	UNP A0A6A5PUS7
C	283	PRO	-	expression tag	UNP A0A6A5PUS7
C	284	GLY	-	expression tag	UNP A0A6A5PUS7
C	285	LEU	-	expression tag	UNP A0A6A5PUS7
C	286	ILE	-	expression tag	UNP A0A6A5PUS7
C	287	ASN	-	expression tag	UNP A0A6A5PUS7
C	288	GLY	-	expression tag	UNP A0A6A5PUS7
C	289	GLY	-	expression tag	UNP A0A6A5PUS7
C	290	GLY	-	expression tag	UNP A0A6A5PUS7
C	291	GLY	-	expression tag	UNP A0A6A5PUS7
C	292	GLY	-	expression tag	UNP A0A6A5PUS7
C	293	GLY	-	expression tag	UNP A0A6A5PUS7
C	294	ASP	-	expression tag	UNP A0A6A5PUS7
C	295	TYR	-	expression tag	UNP A0A6A5PUS7
C	296	LYS	-	expression tag	UNP A0A6A5PUS7
C	297	ASP	-	expression tag	UNP A0A6A5PUS7
C	298	HIS	-	expression tag	UNP A0A6A5PUS7
C	299	ASP	-	expression tag	UNP A0A6A5PUS7
C	300	GLY	-	expression tag	UNP A0A6A5PUS7
C	301	ASP	-	expression tag	UNP A0A6A5PUS7
C	302	TYR	-	expression tag	UNP A0A6A5PUS7
C	303	LYS	-	expression tag	UNP A0A6A5PUS7
C	304	ASP	-	expression tag	UNP A0A6A5PUS7

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Chain	Residue	Modelled	Actual	Comment	Reference
C	305	HIS	-	expression tag	UNP A0A6A5PUS7
C	306	ASP	-	expression tag	UNP A0A6A5PUS7
C	307	ILE	-	expression tag	UNP A0A6A5PUS7
C	308	ASP	-	expression tag	UNP A0A6A5PUS7
C	309	TYR	-	expression tag	UNP A0A6A5PUS7
C	310	LYS	-	expression tag	UNP A0A6A5PUS7
C	311	ASP	-	expression tag	UNP A0A6A5PUS7
C	312	ASP	-	expression tag	UNP A0A6A5PUS7
C	313	ASP	-	expression tag	UNP A0A6A5PUS7
C	314	ASP	-	expression tag	UNP A0A6A5PUS7
C	315	LYS	-	expression tag	UNP A0A6A5PUS7
D	231	GLY	ASN	conflict	UNP A0A6A5PUS7
D	232	GLY	PHE	conflict	UNP A0A6A5PUS7
D	233	SER	GLU	conflict	UNP A0A6A5PUS7
D	234	GLY	GLN	conflict	UNP A0A6A5PUS7
D	?	-	LEU	deletion	UNP A0A6A5PUS7
D	?	-	ARG	deletion	UNP A0A6A5PUS7
D	?	-	ASN	deletion	UNP A0A6A5PUS7
D	?	-	LEU	deletion	UNP A0A6A5PUS7
D	?	-	MET	deletion	UNP A0A6A5PUS7
D	?	-	LEU	deletion	UNP A0A6A5PUS7
D	?	-	ARG	deletion	UNP A0A6A5PUS7
D	236	SER	LYS	conflict	UNP A0A6A5PUS7
D	279	GLY	-	expression tag	UNP A0A6A5PUS7
D	280	ARG	-	expression tag	UNP A0A6A5PUS7
D	281	ARG	-	expression tag	UNP A0A6A5PUS7
D	282	ILE	-	expression tag	UNP A0A6A5PUS7
D	283	PRO	-	expression tag	UNP A0A6A5PUS7
D	284	GLY	-	expression tag	UNP A0A6A5PUS7
D	285	LEU	-	expression tag	UNP A0A6A5PUS7
D	286	ILE	-	expression tag	UNP A0A6A5PUS7
D	287	ASN	-	expression tag	UNP A0A6A5PUS7
D	288	GLY	-	expression tag	UNP A0A6A5PUS7
D	289	GLY	-	expression tag	UNP A0A6A5PUS7
D	290	GLY	-	expression tag	UNP A0A6A5PUS7
D	291	GLY	-	expression tag	UNP A0A6A5PUS7
D	292	GLY	-	expression tag	UNP A0A6A5PUS7
D	293	GLY	-	expression tag	UNP A0A6A5PUS7
D	294	ASP	-	expression tag	UNP A0A6A5PUS7
D	295	TYR	-	expression tag	UNP A0A6A5PUS7
D	296	LYS	-	expression tag	UNP A0A6A5PUS7
D	297	ASP	-	expression tag	UNP A0A6A5PUS7

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Chain	Residue	Modelled	Actual	Comment	Reference
D	298	HIS	-	expression tag	UNP A0A6A5PUS7
D	299	ASP	-	expression tag	UNP A0A6A5PUS7
D	300	GLY	-	expression tag	UNP A0A6A5PUS7
D	301	ASP	-	expression tag	UNP A0A6A5PUS7
D	302	TYR	-	expression tag	UNP A0A6A5PUS7
D	303	LYS	-	expression tag	UNP A0A6A5PUS7
D	304	ASP	-	expression tag	UNP A0A6A5PUS7
D	305	HIS	-	expression tag	UNP A0A6A5PUS7
D	306	ASP	-	expression tag	UNP A0A6A5PUS7
D	307	ILE	-	expression tag	UNP A0A6A5PUS7
D	308	ASP	-	expression tag	UNP A0A6A5PUS7
D	309	TYR	-	expression tag	UNP A0A6A5PUS7
D	310	LYS	-	expression tag	UNP A0A6A5PUS7
D	311	ASP	-	expression tag	UNP A0A6A5PUS7
D	312	ASP	-	expression tag	UNP A0A6A5PUS7
D	313	ASP	-	expression tag	UNP A0A6A5PUS7
D	314	ASP	-	expression tag	UNP A0A6A5PUS7
D	315	LYS	-	expression tag	UNP A0A6A5PUS7
E	231	GLY	ASN	conflict	UNP A0A6A5PUS7
E	232	GLY	PHE	conflict	UNP A0A6A5PUS7
E	233	SER	GLU	conflict	UNP A0A6A5PUS7
E	234	GLY	GLN	conflict	UNP A0A6A5PUS7
E	?	-	LEU	deletion	UNP A0A6A5PUS7
E	?	-	ARG	deletion	UNP A0A6A5PUS7
E	?	-	ASN	deletion	UNP A0A6A5PUS7
E	?	-	LEU	deletion	UNP A0A6A5PUS7
E	?	-	MET	deletion	UNP A0A6A5PUS7
E	?	-	LEU	deletion	UNP A0A6A5PUS7
E	?	-	ARG	deletion	UNP A0A6A5PUS7
E	236	SER	LYS	conflict	UNP A0A6A5PUS7
E	279	GLY	-	expression tag	UNP A0A6A5PUS7
E	280	ARG	-	expression tag	UNP A0A6A5PUS7
E	281	ARG	-	expression tag	UNP A0A6A5PUS7
E	282	ILE	-	expression tag	UNP A0A6A5PUS7
E	283	PRO	-	expression tag	UNP A0A6A5PUS7
E	284	GLY	-	expression tag	UNP A0A6A5PUS7
E	285	LEU	-	expression tag	UNP A0A6A5PUS7
E	286	ILE	-	expression tag	UNP A0A6A5PUS7
E	287	ASN	-	expression tag	UNP A0A6A5PUS7
E	288	GLY	-	expression tag	UNP A0A6A5PUS7
E	289	GLY	-	expression tag	UNP A0A6A5PUS7
E	290	GLY	-	expression tag	UNP A0A6A5PUS7

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Chain	Residue	Modelled	Actual	Comment	Reference
E	291	GLY	-	expression tag	UNP A0A6A5PUS7
E	292	GLY	-	expression tag	UNP A0A6A5PUS7
E	293	GLY	-	expression tag	UNP A0A6A5PUS7
E	294	ASP	-	expression tag	UNP A0A6A5PUS7
E	295	TYR	-	expression tag	UNP A0A6A5PUS7
E	296	LYS	-	expression tag	UNP A0A6A5PUS7
E	297	ASP	-	expression tag	UNP A0A6A5PUS7
E	298	HIS	-	expression tag	UNP A0A6A5PUS7
E	299	ASP	-	expression tag	UNP A0A6A5PUS7
E	300	GLY	-	expression tag	UNP A0A6A5PUS7
E	301	ASP	-	expression tag	UNP A0A6A5PUS7
E	302	TYR	-	expression tag	UNP A0A6A5PUS7
E	303	LYS	-	expression tag	UNP A0A6A5PUS7
E	304	ASP	-	expression tag	UNP A0A6A5PUS7
E	305	HIS	-	expression tag	UNP A0A6A5PUS7
E	306	ASP	-	expression tag	UNP A0A6A5PUS7
E	307	ILE	-	expression tag	UNP A0A6A5PUS7
E	308	ASP	-	expression tag	UNP A0A6A5PUS7
E	309	TYR	-	expression tag	UNP A0A6A5PUS7
E	310	LYS	-	expression tag	UNP A0A6A5PUS7
E	311	ASP	-	expression tag	UNP A0A6A5PUS7
E	312	ASP	-	expression tag	UNP A0A6A5PUS7
E	313	ASP	-	expression tag	UNP A0A6A5PUS7
E	314	ASP	-	expression tag	UNP A0A6A5PUS7
E	315	LYS	-	expression tag	UNP A0A6A5PUS7
F	231	GLY	ASN	conflict	UNP A0A6A5PUS7
F	232	GLY	PHE	conflict	UNP A0A6A5PUS7
F	233	SER	GLU	conflict	UNP A0A6A5PUS7
F	234	GLY	GLN	conflict	UNP A0A6A5PUS7
F	?	-	LEU	deletion	UNP A0A6A5PUS7
F	?	-	ARG	deletion	UNP A0A6A5PUS7
F	?	-	ASN	deletion	UNP A0A6A5PUS7
F	?	-	LEU	deletion	UNP A0A6A5PUS7
F	?	-	MET	deletion	UNP A0A6A5PUS7
F	?	-	LEU	deletion	UNP A0A6A5PUS7
F	?	-	ARG	deletion	UNP A0A6A5PUS7
F	236	SER	LYS	conflict	UNP A0A6A5PUS7
F	279	GLY	-	expression tag	UNP A0A6A5PUS7
F	280	ARG	-	expression tag	UNP A0A6A5PUS7
F	281	ARG	-	expression tag	UNP A0A6A5PUS7
F	282	ILE	-	expression tag	UNP A0A6A5PUS7
F	283	PRO	-	expression tag	UNP A0A6A5PUS7

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Chain	Residue	Modelled	Actual	Comment	Reference
F	284	GLY	-	expression tag	UNP A0A6A5PUS7
F	285	LEU	-	expression tag	UNP A0A6A5PUS7
F	286	ILE	-	expression tag	UNP A0A6A5PUS7
F	287	ASN	-	expression tag	UNP A0A6A5PUS7
F	288	GLY	-	expression tag	UNP A0A6A5PUS7
F	289	GLY	-	expression tag	UNP A0A6A5PUS7
F	290	GLY	-	expression tag	UNP A0A6A5PUS7
F	291	GLY	-	expression tag	UNP A0A6A5PUS7
F	292	GLY	-	expression tag	UNP A0A6A5PUS7
F	293	GLY	-	expression tag	UNP A0A6A5PUS7
F	294	ASP	-	expression tag	UNP A0A6A5PUS7
F	295	TYR	-	expression tag	UNP A0A6A5PUS7
F	296	LYS	-	expression tag	UNP A0A6A5PUS7
F	297	ASP	-	expression tag	UNP A0A6A5PUS7
F	298	HIS	-	expression tag	UNP A0A6A5PUS7
F	299	ASP	-	expression tag	UNP A0A6A5PUS7
F	300	GLY	-	expression tag	UNP A0A6A5PUS7
F	301	ASP	-	expression tag	UNP A0A6A5PUS7
F	302	TYR	-	expression tag	UNP A0A6A5PUS7
F	303	LYS	-	expression tag	UNP A0A6A5PUS7
F	304	ASP	-	expression tag	UNP A0A6A5PUS7
F	305	HIS	-	expression tag	UNP A0A6A5PUS7
F	306	ASP	-	expression tag	UNP A0A6A5PUS7
F	307	ILE	-	expression tag	UNP A0A6A5PUS7
F	308	ASP	-	expression tag	UNP A0A6A5PUS7
F	309	TYR	-	expression tag	UNP A0A6A5PUS7
F	310	LYS	-	expression tag	UNP A0A6A5PUS7
F	311	ASP	-	expression tag	UNP A0A6A5PUS7
F	312	ASP	-	expression tag	UNP A0A6A5PUS7
F	313	ASP	-	expression tag	UNP A0A6A5PUS7
F	314	ASP	-	expression tag	UNP A0A6A5PUS7
F	315	LYS	-	expression tag	UNP A0A6A5PUS7
G	231	GLY	ASN	conflict	UNP A0A6A5PUS7
G	232	GLY	PHE	conflict	UNP A0A6A5PUS7
G	233	SER	GLU	conflict	UNP A0A6A5PUS7
G	234	GLY	GLN	conflict	UNP A0A6A5PUS7
G	?	-	LEU	deletion	UNP A0A6A5PUS7
G	?	-	ARG	deletion	UNP A0A6A5PUS7
G	?	-	ASN	deletion	UNP A0A6A5PUS7
G	?	-	LEU	deletion	UNP A0A6A5PUS7
G	?	-	MET	deletion	UNP A0A6A5PUS7
G	?	-	LEU	deletion	UNP A0A6A5PUS7

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Chain	Residue	Modelled	Actual	Comment	Reference
G	?	-	ARG	deletion	UNP A0A6A5PUS7
G	236	SER	LYS	conflict	UNP A0A6A5PUS7
G	279	GLY	-	expression tag	UNP A0A6A5PUS7
G	280	ARG	-	expression tag	UNP A0A6A5PUS7
G	281	ARG	-	expression tag	UNP A0A6A5PUS7
G	282	ILE	-	expression tag	UNP A0A6A5PUS7
G	283	PRO	-	expression tag	UNP A0A6A5PUS7
G	284	GLY	-	expression tag	UNP A0A6A5PUS7
G	285	LEU	-	expression tag	UNP A0A6A5PUS7
G	286	ILE	-	expression tag	UNP A0A6A5PUS7
G	287	ASN	-	expression tag	UNP A0A6A5PUS7
G	288	GLY	-	expression tag	UNP A0A6A5PUS7
G	289	GLY	-	expression tag	UNP A0A6A5PUS7
G	290	GLY	-	expression tag	UNP A0A6A5PUS7
G	291	GLY	-	expression tag	UNP A0A6A5PUS7
G	292	GLY	-	expression tag	UNP A0A6A5PUS7
G	293	GLY	-	expression tag	UNP A0A6A5PUS7
G	294	ASP	-	expression tag	UNP A0A6A5PUS7
G	295	TYR	-	expression tag	UNP A0A6A5PUS7
G	296	LYS	-	expression tag	UNP A0A6A5PUS7
G	297	ASP	-	expression tag	UNP A0A6A5PUS7
G	298	HIS	-	expression tag	UNP A0A6A5PUS7
G	299	ASP	-	expression tag	UNP A0A6A5PUS7
G	300	GLY	-	expression tag	UNP A0A6A5PUS7
G	301	ASP	-	expression tag	UNP A0A6A5PUS7
G	302	TYR	-	expression tag	UNP A0A6A5PUS7
G	303	LYS	-	expression tag	UNP A0A6A5PUS7
G	304	ASP	-	expression tag	UNP A0A6A5PUS7
G	305	HIS	-	expression tag	UNP A0A6A5PUS7
G	306	ASP	-	expression tag	UNP A0A6A5PUS7
G	307	ILE	-	expression tag	UNP A0A6A5PUS7
G	308	ASP	-	expression tag	UNP A0A6A5PUS7
G	309	TYR	-	expression tag	UNP A0A6A5PUS7
G	310	LYS	-	expression tag	UNP A0A6A5PUS7
G	311	ASP	-	expression tag	UNP A0A6A5PUS7
G	312	ASP	-	expression tag	UNP A0A6A5PUS7
G	313	ASP	-	expression tag	UNP A0A6A5PUS7
G	314	ASP	-	expression tag	UNP A0A6A5PUS7
G	315	LYS	-	expression tag	UNP A0A6A5PUS7
H	231	GLY	ASN	conflict	UNP A0A6A5PUS7
H	232	GLY	PHE	conflict	UNP A0A6A5PUS7
H	233	SER	GLU	conflict	UNP A0A6A5PUS7

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Chain	Residue	Modelled	Actual	Comment	Reference
H	234	GLY	GLN	conflict	UNP A0A6A5PUS7
H	?	-	LEU	deletion	UNP A0A6A5PUS7
H	?	-	ARG	deletion	UNP A0A6A5PUS7
H	?	-	ASN	deletion	UNP A0A6A5PUS7
H	?	-	LEU	deletion	UNP A0A6A5PUS7
H	?	-	MET	deletion	UNP A0A6A5PUS7
H	?	-	LEU	deletion	UNP A0A6A5PUS7
H	?	-	ARG	deletion	UNP A0A6A5PUS7
H	236	SER	LYS	conflict	UNP A0A6A5PUS7
H	279	GLY	-	expression tag	UNP A0A6A5PUS7
H	280	ARG	-	expression tag	UNP A0A6A5PUS7
H	281	ARG	-	expression tag	UNP A0A6A5PUS7
H	282	ILE	-	expression tag	UNP A0A6A5PUS7
H	283	PRO	-	expression tag	UNP A0A6A5PUS7
H	284	GLY	-	expression tag	UNP A0A6A5PUS7
H	285	LEU	-	expression tag	UNP A0A6A5PUS7
H	286	ILE	-	expression tag	UNP A0A6A5PUS7
H	287	ASN	-	expression tag	UNP A0A6A5PUS7
H	288	GLY	-	expression tag	UNP A0A6A5PUS7
H	289	GLY	-	expression tag	UNP A0A6A5PUS7
H	290	GLY	-	expression tag	UNP A0A6A5PUS7
H	291	GLY	-	expression tag	UNP A0A6A5PUS7
H	292	GLY	-	expression tag	UNP A0A6A5PUS7
H	293	GLY	-	expression tag	UNP A0A6A5PUS7
H	294	ASP	-	expression tag	UNP A0A6A5PUS7
H	295	TYR	-	expression tag	UNP A0A6A5PUS7
H	296	LYS	-	expression tag	UNP A0A6A5PUS7
H	297	ASP	-	expression tag	UNP A0A6A5PUS7
H	298	HIS	-	expression tag	UNP A0A6A5PUS7
H	299	ASP	-	expression tag	UNP A0A6A5PUS7
H	300	GLY	-	expression tag	UNP A0A6A5PUS7
H	301	ASP	-	expression tag	UNP A0A6A5PUS7
H	302	TYR	-	expression tag	UNP A0A6A5PUS7
H	303	LYS	-	expression tag	UNP A0A6A5PUS7
H	304	ASP	-	expression tag	UNP A0A6A5PUS7
H	305	HIS	-	expression tag	UNP A0A6A5PUS7
H	306	ASP	-	expression tag	UNP A0A6A5PUS7
H	307	ILE	-	expression tag	UNP A0A6A5PUS7
H	308	ASP	-	expression tag	UNP A0A6A5PUS7
H	309	TYR	-	expression tag	UNP A0A6A5PUS7
H	310	LYS	-	expression tag	UNP A0A6A5PUS7
H	311	ASP	-	expression tag	UNP A0A6A5PUS7

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Chain	Residue	Modelled	Actual	Comment	Reference
H	312	ASP	-	expression tag	UNP A0A6A5PUS7
H	313	ASP	-	expression tag	UNP A0A6A5PUS7
H	314	ASP	-	expression tag	UNP A0A6A5PUS7
H	315	LYS	-	expression tag	UNP A0A6A5PUS7
I	231	GLY	ASN	conflict	UNP A0A6A5PUS7
I	232	GLY	PHE	conflict	UNP A0A6A5PUS7
I	233	SER	GLU	conflict	UNP A0A6A5PUS7
I	234	GLY	GLN	conflict	UNP A0A6A5PUS7
I	?	-	LEU	deletion	UNP A0A6A5PUS7
I	?	-	ARG	deletion	UNP A0A6A5PUS7
I	?	-	ASN	deletion	UNP A0A6A5PUS7
I	?	-	LEU	deletion	UNP A0A6A5PUS7
I	?	-	MET	deletion	UNP A0A6A5PUS7
I	?	-	LEU	deletion	UNP A0A6A5PUS7
I	?	-	ARG	deletion	UNP A0A6A5PUS7
I	236	SER	LYS	conflict	UNP A0A6A5PUS7
I	279	GLY	-	expression tag	UNP A0A6A5PUS7
I	280	ARG	-	expression tag	UNP A0A6A5PUS7
I	281	ARG	-	expression tag	UNP A0A6A5PUS7
I	282	ILE	-	expression tag	UNP A0A6A5PUS7
I	283	PRO	-	expression tag	UNP A0A6A5PUS7
I	284	GLY	-	expression tag	UNP A0A6A5PUS7
I	285	LEU	-	expression tag	UNP A0A6A5PUS7
I	286	ILE	-	expression tag	UNP A0A6A5PUS7
I	287	ASN	-	expression tag	UNP A0A6A5PUS7
I	288	GLY	-	expression tag	UNP A0A6A5PUS7
I	289	GLY	-	expression tag	UNP A0A6A5PUS7
I	290	GLY	-	expression tag	UNP A0A6A5PUS7
I	291	GLY	-	expression tag	UNP A0A6A5PUS7
I	292	GLY	-	expression tag	UNP A0A6A5PUS7
I	293	GLY	-	expression tag	UNP A0A6A5PUS7
I	294	ASP	-	expression tag	UNP A0A6A5PUS7
I	295	TYR	-	expression tag	UNP A0A6A5PUS7
I	296	LYS	-	expression tag	UNP A0A6A5PUS7
I	297	ASP	-	expression tag	UNP A0A6A5PUS7
I	298	HIS	-	expression tag	UNP A0A6A5PUS7
I	299	ASP	-	expression tag	UNP A0A6A5PUS7
I	300	GLY	-	expression tag	UNP A0A6A5PUS7
I	301	ASP	-	expression tag	UNP A0A6A5PUS7
I	302	TYR	-	expression tag	UNP A0A6A5PUS7
I	303	LYS	-	expression tag	UNP A0A6A5PUS7
I	304	ASP	-	expression tag	UNP A0A6A5PUS7

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Chain	Residue	Modelled	Actual	Comment	Reference
I	305	HIS	-	expression tag	UNP A0A6A5PUS7
I	306	ASP	-	expression tag	UNP A0A6A5PUS7
I	307	ILE	-	expression tag	UNP A0A6A5PUS7
I	308	ASP	-	expression tag	UNP A0A6A5PUS7
I	309	TYR	-	expression tag	UNP A0A6A5PUS7
I	310	LYS	-	expression tag	UNP A0A6A5PUS7
I	311	ASP	-	expression tag	UNP A0A6A5PUS7
I	312	ASP	-	expression tag	UNP A0A6A5PUS7
I	313	ASP	-	expression tag	UNP A0A6A5PUS7
I	314	ASP	-	expression tag	UNP A0A6A5PUS7
I	315	LYS	-	expression tag	UNP A0A6A5PUS7
J	231	GLY	ASN	conflict	UNP A0A6A5PUS7
J	232	GLY	PHE	conflict	UNP A0A6A5PUS7
J	233	SER	GLU	conflict	UNP A0A6A5PUS7
J	234	GLY	GLN	conflict	UNP A0A6A5PUS7
J	?	-	LEU	deletion	UNP A0A6A5PUS7
J	?	-	ARG	deletion	UNP A0A6A5PUS7
J	?	-	ASN	deletion	UNP A0A6A5PUS7
J	?	-	LEU	deletion	UNP A0A6A5PUS7
J	?	-	MET	deletion	UNP A0A6A5PUS7
J	?	-	LEU	deletion	UNP A0A6A5PUS7
J	?	-	ARG	deletion	UNP A0A6A5PUS7
J	236	SER	LYS	conflict	UNP A0A6A5PUS7
J	279	GLY	-	expression tag	UNP A0A6A5PUS7
J	280	ARG	-	expression tag	UNP A0A6A5PUS7
J	281	ARG	-	expression tag	UNP A0A6A5PUS7
J	282	ILE	-	expression tag	UNP A0A6A5PUS7
J	283	PRO	-	expression tag	UNP A0A6A5PUS7
J	284	GLY	-	expression tag	UNP A0A6A5PUS7
J	285	LEU	-	expression tag	UNP A0A6A5PUS7
J	286	ILE	-	expression tag	UNP A0A6A5PUS7
J	287	ASN	-	expression tag	UNP A0A6A5PUS7
J	288	GLY	-	expression tag	UNP A0A6A5PUS7
J	289	GLY	-	expression tag	UNP A0A6A5PUS7
J	290	GLY	-	expression tag	UNP A0A6A5PUS7
J	291	GLY	-	expression tag	UNP A0A6A5PUS7
J	292	GLY	-	expression tag	UNP A0A6A5PUS7
J	293	GLY	-	expression tag	UNP A0A6A5PUS7
J	294	ASP	-	expression tag	UNP A0A6A5PUS7
J	295	TYR	-	expression tag	UNP A0A6A5PUS7
J	296	LYS	-	expression tag	UNP A0A6A5PUS7
J	297	ASP	-	expression tag	UNP A0A6A5PUS7

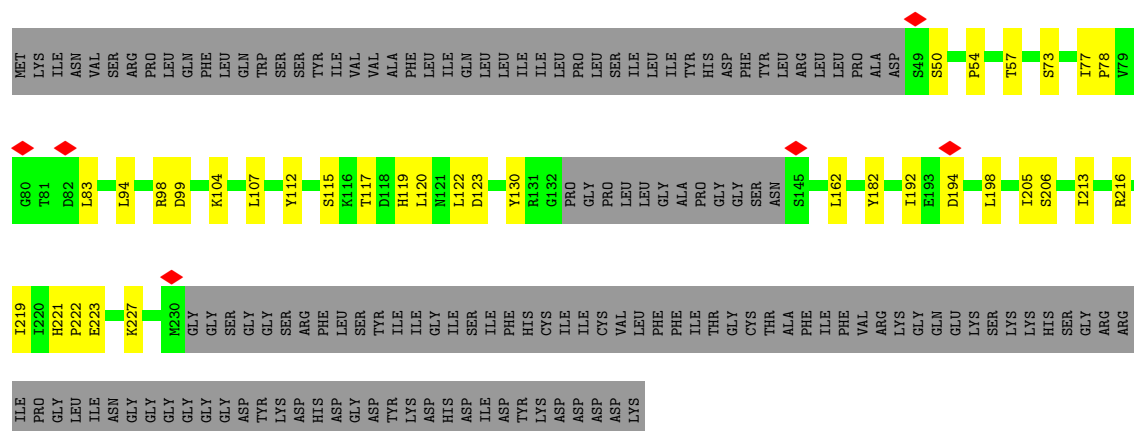
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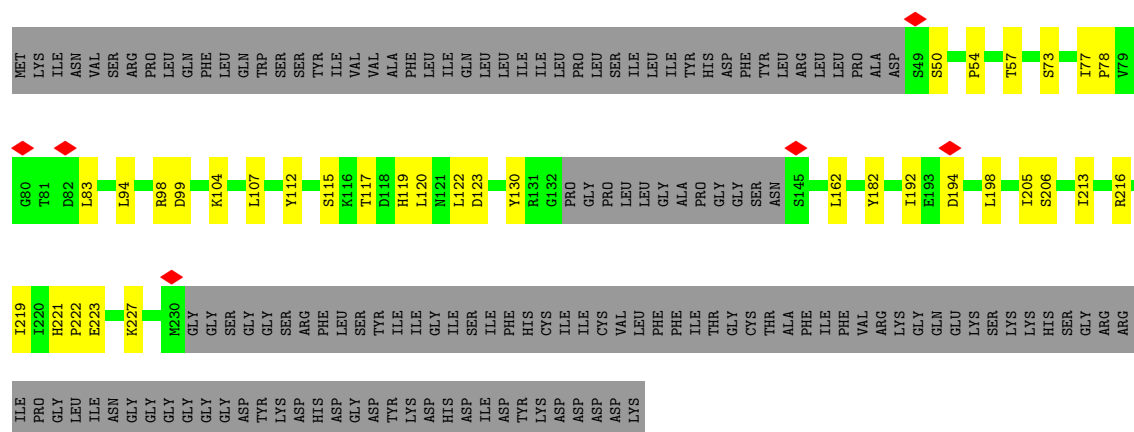
Chain	Residue	Modelled	Actual	Comment	Reference
J	298	HIS	-	expression tag	UNP A0A6A5PUS7
J	299	ASP	-	expression tag	UNP A0A6A5PUS7
J	300	GLY	-	expression tag	UNP A0A6A5PUS7
J	301	ASP	-	expression tag	UNP A0A6A5PUS7
J	302	TYR	-	expression tag	UNP A0A6A5PUS7
J	303	LYS	-	expression tag	UNP A0A6A5PUS7
J	304	ASP	-	expression tag	UNP A0A6A5PUS7
J	305	HIS	-	expression tag	UNP A0A6A5PUS7
J	306	ASP	-	expression tag	UNP A0A6A5PUS7
J	307	ILE	-	expression tag	UNP A0A6A5PUS7
J	308	ASP	-	expression tag	UNP A0A6A5PUS7
J	309	TYR	-	expression tag	UNP A0A6A5PUS7
J	310	LYS	-	expression tag	UNP A0A6A5PUS7
J	311	ASP	-	expression tag	UNP A0A6A5PUS7
J	312	ASP	-	expression tag	UNP A0A6A5PUS7
J	313	ASP	-	expression tag	UNP A0A6A5PUS7
J	314	ASP	-	expression tag	UNP A0A6A5PUS7
J	315	LYS	-	expression tag	UNP A0A6A5PUS7



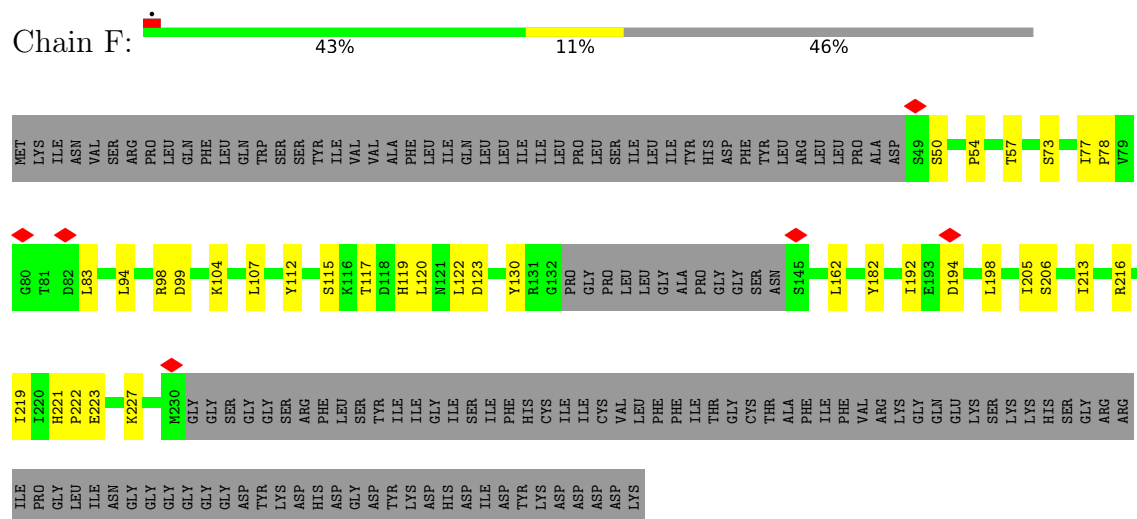
• Molecule 1: BJ4_G0032880.mRNA.1.CDS.1



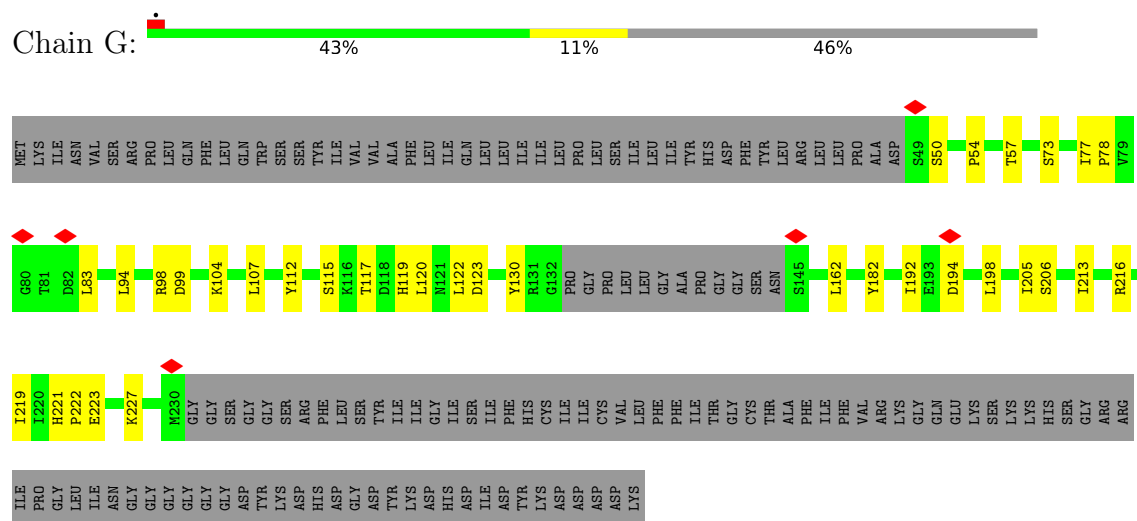
• Molecule 1: BJ4_G0032880.mRNA.1.CDS.1



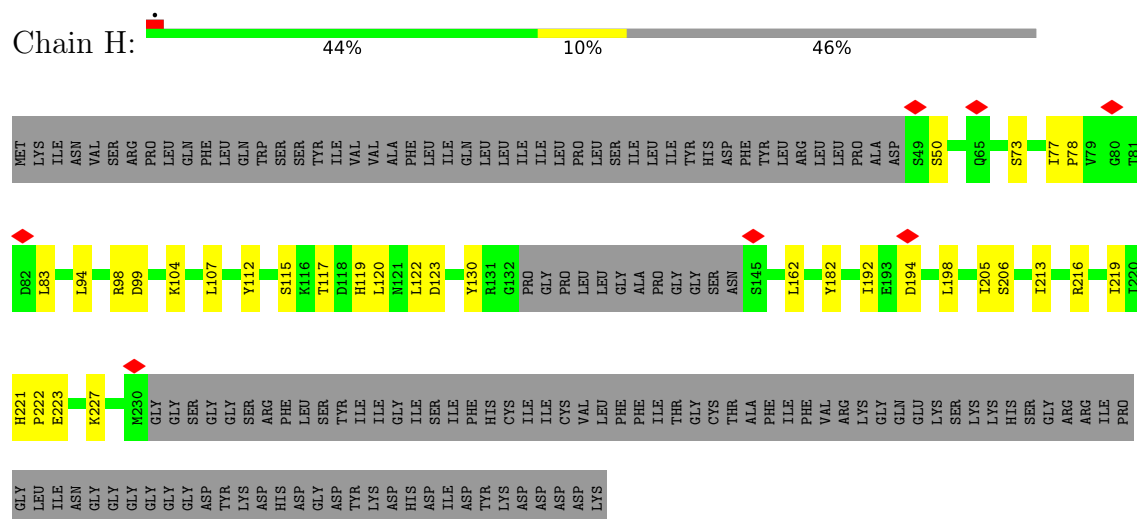
• Molecule 1: BJ4_G0032880.mRNA.1.CDS.1



- Molecule 1: BJ4 G0032880.mRNA.1.CDS.1



- Molecule 1: BJ4 G0032880.mRNA.1.CDS.1



Chain I:

Sequence logo for Chain I. The y-axis lists amino acids (GLU, LYS, SER, ASP, THR, PHE, VAL, ARG, LYS, GLN, TYR, LEU, CYS, THR, ALA, PHE, ILE, HIS, TYR, LYS, ASP, ASP, ASP, ASP, LYS). The x-axis shows positions 1 to 100. Conservation is highest at positions 1-10 (mostly LYS, SER, ASP) and positions 80-90 (mostly LYS, SER, ASP). A large red diamond is at position 1, and a large green diamond is at position 80. A large blue diamond is at position 100.

Chain J:

42% 12% 46%

100

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 9

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C10	Depositor
Number of particles used	260532	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 ($e^-/\text{\AA}^2$)	59.1	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.259	Depositor
Minimum map value	-0.136	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.005	Depositor
Recommended contour level	0.035	Depositor
Map size (Å)	359.424, 359.424, 359.424	wwPDB
Map dimensions	432, 432, 432	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.832, 0.832, 0.832	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	0.25	0/1390	0.48	0/1881
1	B	0.25	0/1390	0.48	0/1881
1	C	0.25	0/1390	0.48	0/1881
1	D	0.25	0/1390	0.48	0/1881
1	E	0.25	0/1390	0.48	0/1881
1	F	0.25	0/1390	0.48	0/1881
1	G	0.25	0/1390	0.49	0/1881
1	H	0.25	0/1390	0.48	0/1881
1	I	0.25	0/1390	0.48	0/1881
1	J	0.25	0/1390	0.48	0/1881
All	All	0.25	0/13900	0.48	0/18810

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	1367	0	1368	25	0
1	B	1367	0	1368	24	0
1	C	1367	0	1368	22	0
1	D	1367	0	1368	23	0
1	E	1367	0	1368	22	0
1	F	1367	0	1368	23	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	G	1367	0	1368	22	0
1	H	1367	0	1368	22	0
1	I	1367	0	1368	37	0
1	J	1367	0	1368	37	0
All	All	13670	0	13680	231	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 8.

The worst 5 of 231 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:I:182:TYR:OH	1:J:121:ASN:ND2	2.00	0.94
1:I:182:TYR:CD2	1:J:122:LEU:HD12	2.16	0.80
1:I:77:ILE:HD11	1:I:83:LEU:HD23	1.70	0.74
1:I:178:ARG:HD2	1:J:186:TRP:CZ2	2.23	0.73
1:J:77:ILE:HD11	1:J:83:LEU:HD23	1.70	0.73

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	166/315 (53%)	162 (98%)	4 (2%)	0	100	100
1	B	166/315 (53%)	162 (98%)	4 (2%)	0	100	100
1	C	166/315 (53%)	162 (98%)	4 (2%)	0	100	100
1	D	166/315 (53%)	162 (98%)	4 (2%)	0	100	100
1	E	166/315 (53%)	162 (98%)	4 (2%)	0	100	100
1	F	166/315 (53%)	162 (98%)	4 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	G	166/315 (53%)	162 (98%)	4 (2%)	0	100	100
1	H	166/315 (53%)	162 (98%)	4 (2%)	0	100	100
1	I	166/315 (53%)	162 (98%)	4 (2%)	0	100	100
1	J	166/315 (53%)	162 (98%)	4 (2%)	0	100	100
All	All	1660/3150 (53%)	1620 (98%)	40 (2%)	0	100	100

There are no Ramachandran outliers to report.

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	161/282 (57%)	161 (100%)	0	100	100
1	B	161/282 (57%)	161 (100%)	0	100	100
1	C	161/282 (57%)	161 (100%)	0	100	100
1	D	161/282 (57%)	161 (100%)	0	100	100
1	E	161/282 (57%)	161 (100%)	0	100	100
1	F	161/282 (57%)	161 (100%)	0	100	100
1	G	161/282 (57%)	161 (100%)	0	100	100
1	H	161/282 (57%)	161 (100%)	0	100	100
1	I	161/282 (57%)	161 (100%)	0	100	100
1	J	161/282 (57%)	161 (100%)	0	100	100
All	All	1610/2820 (57%)	1610 (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 (5) such sidechains are listed below:

Mol	Chain	Res	Type
1	C	121	ASN

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Mol	Chain	Res	Type
1	G	121	ASN
1	I	114	GLN
1	I	121	ASN
1	J	121	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.

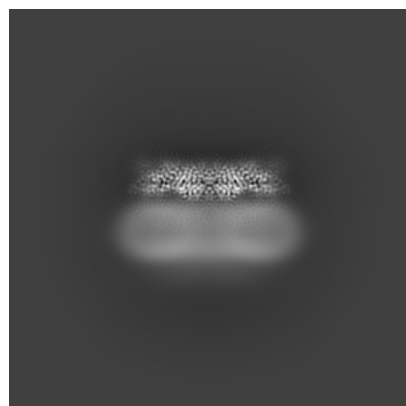
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-13104. 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](#)

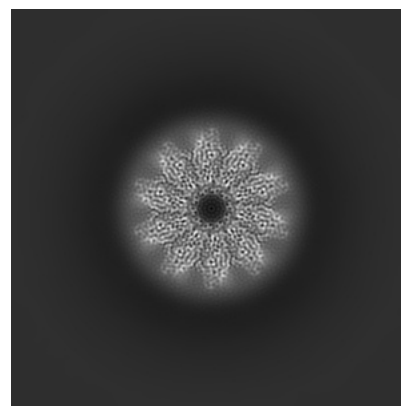
6.1.1 Primary map



X

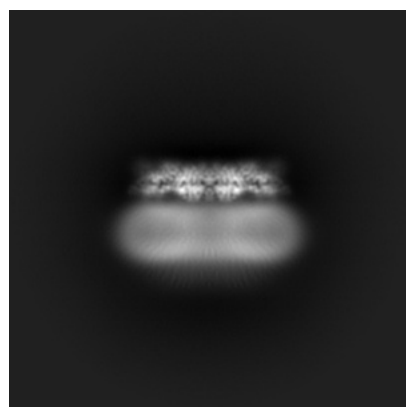


Y

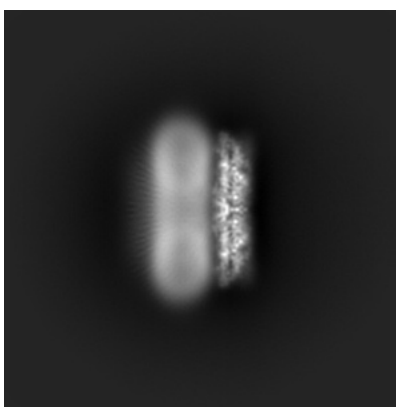


Z

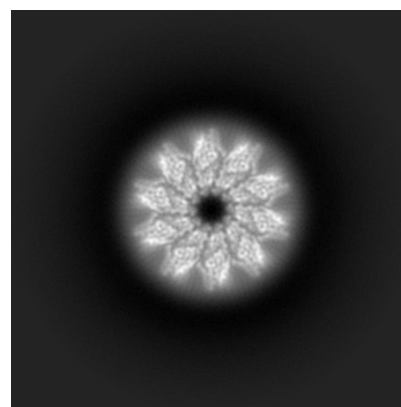
6.1.2 Raw map



X



Y

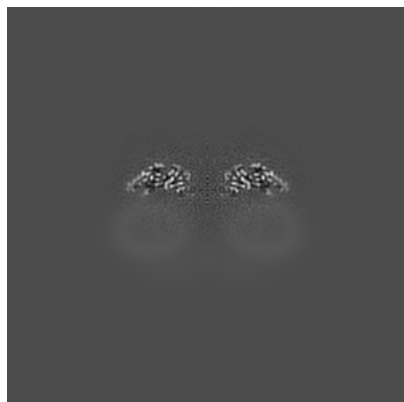


Z

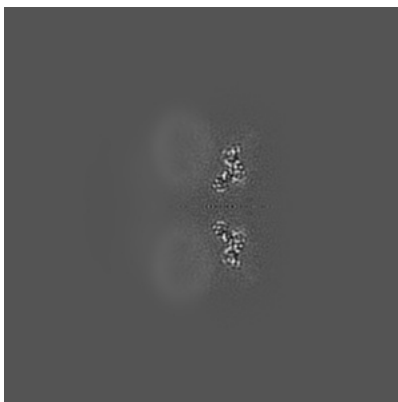
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

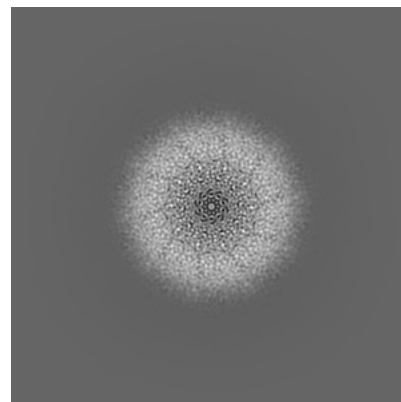
6.2.1 Primary map



X Index: 216

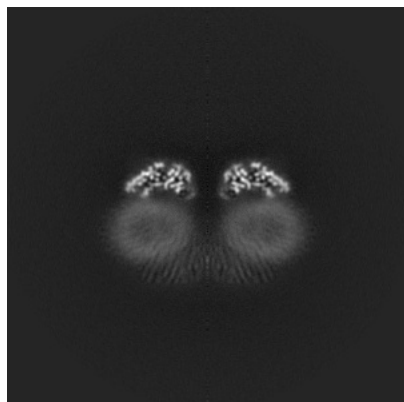


Y Index: 216

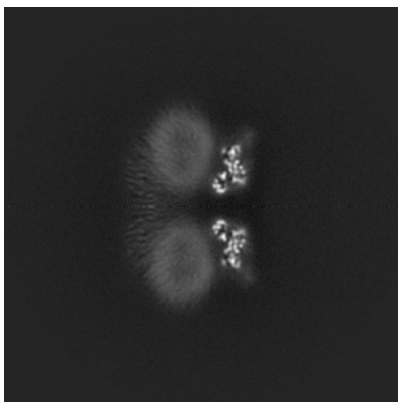


Z Index: 216

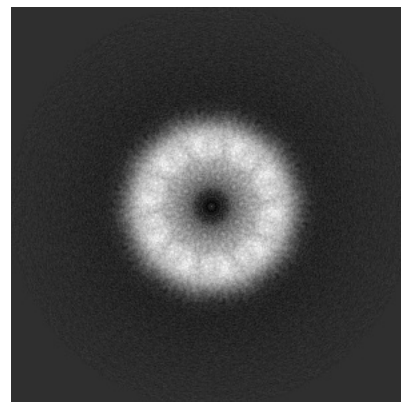
6.2.2 Raw map



X Index: 216



Y Index: 216



Z Index: 216

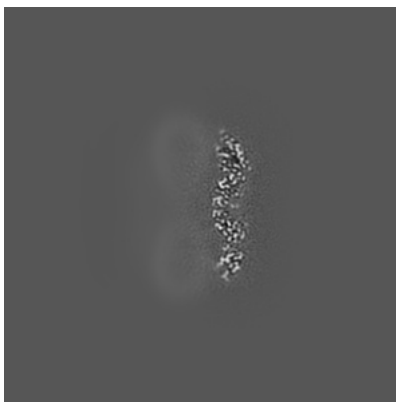
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

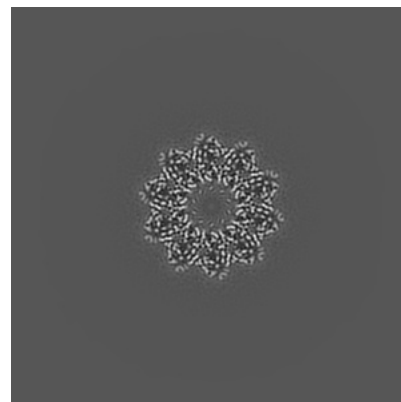
6.3.1 Primary map



X Index: 248

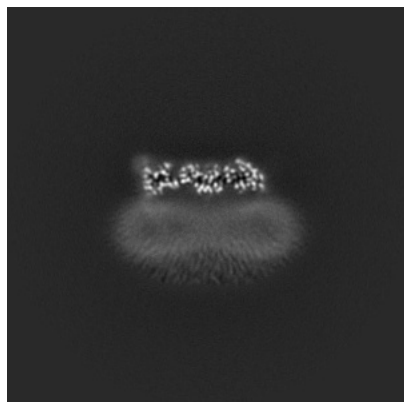


Y Index: 237

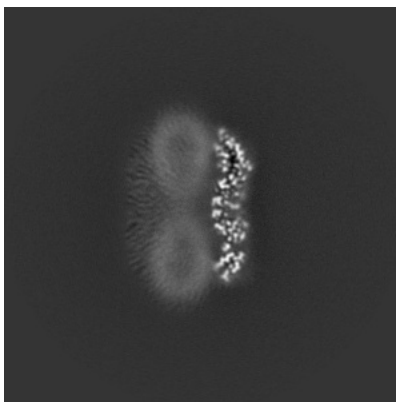


Z Index: 248

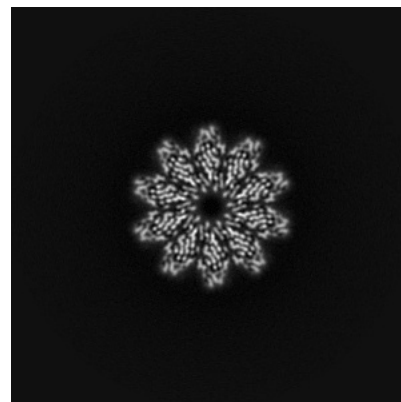
6.3.2 Raw map



X Index: 184



Y Index: 237



Z Index: 239

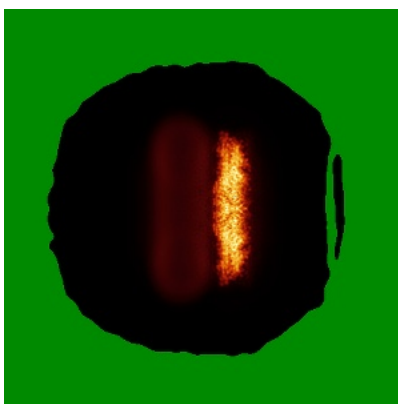
The images above show the largest variance slices of the map in three orthogonal directions.

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

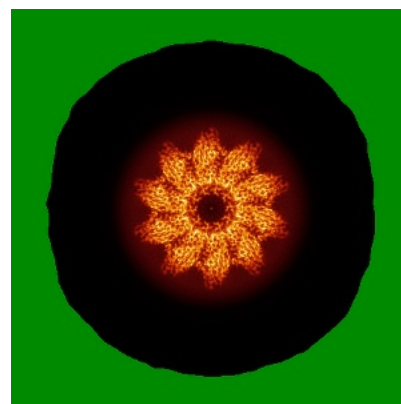
6.4.1 Primary map



X

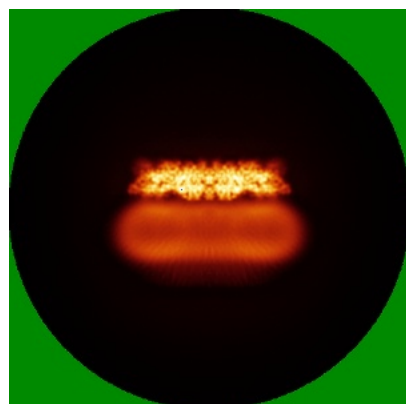


Y

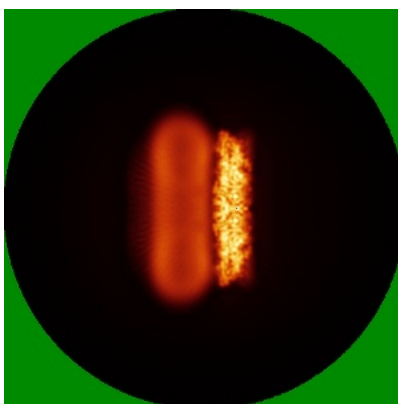


Z

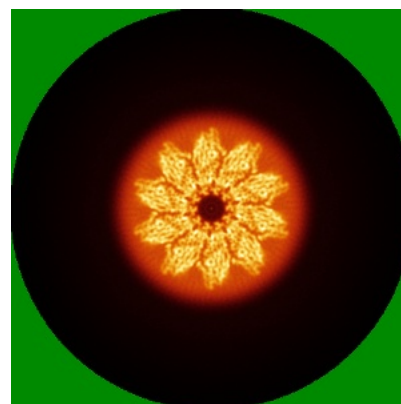
6.4.2 Raw map



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.

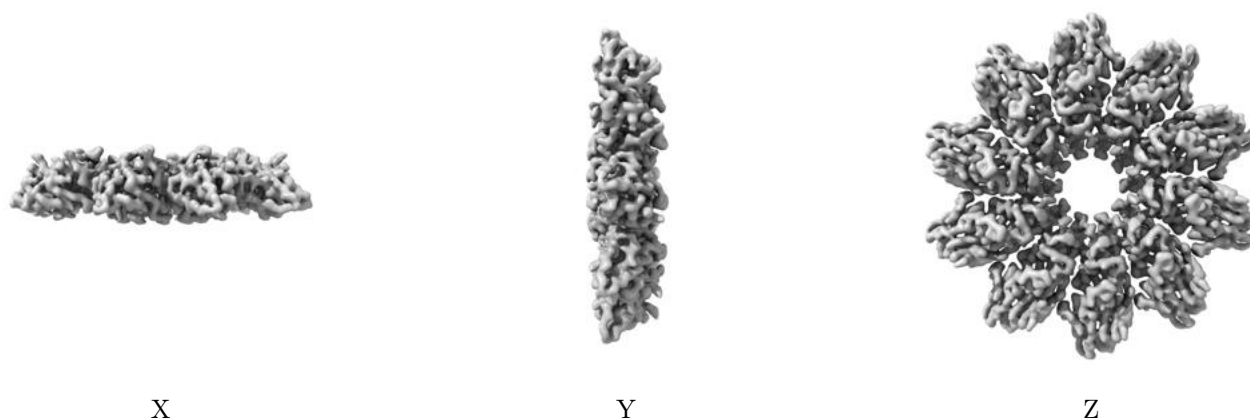
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.035. 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.

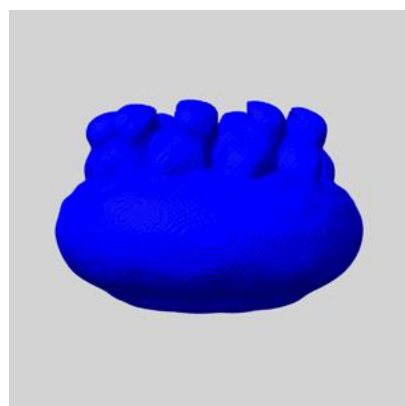
6.6 Mask visualisation [i](#)

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

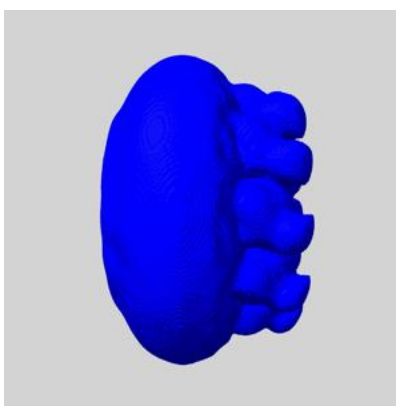
A mask typically either:

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

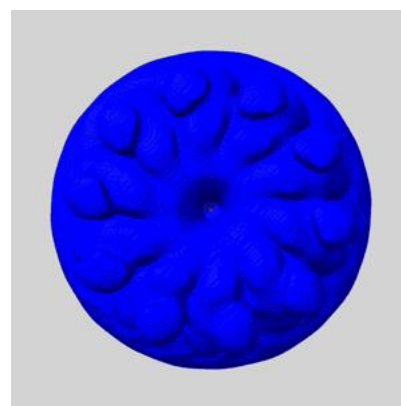
6.6.1 emd_13104_msk_1.map [i](#)



X



Y

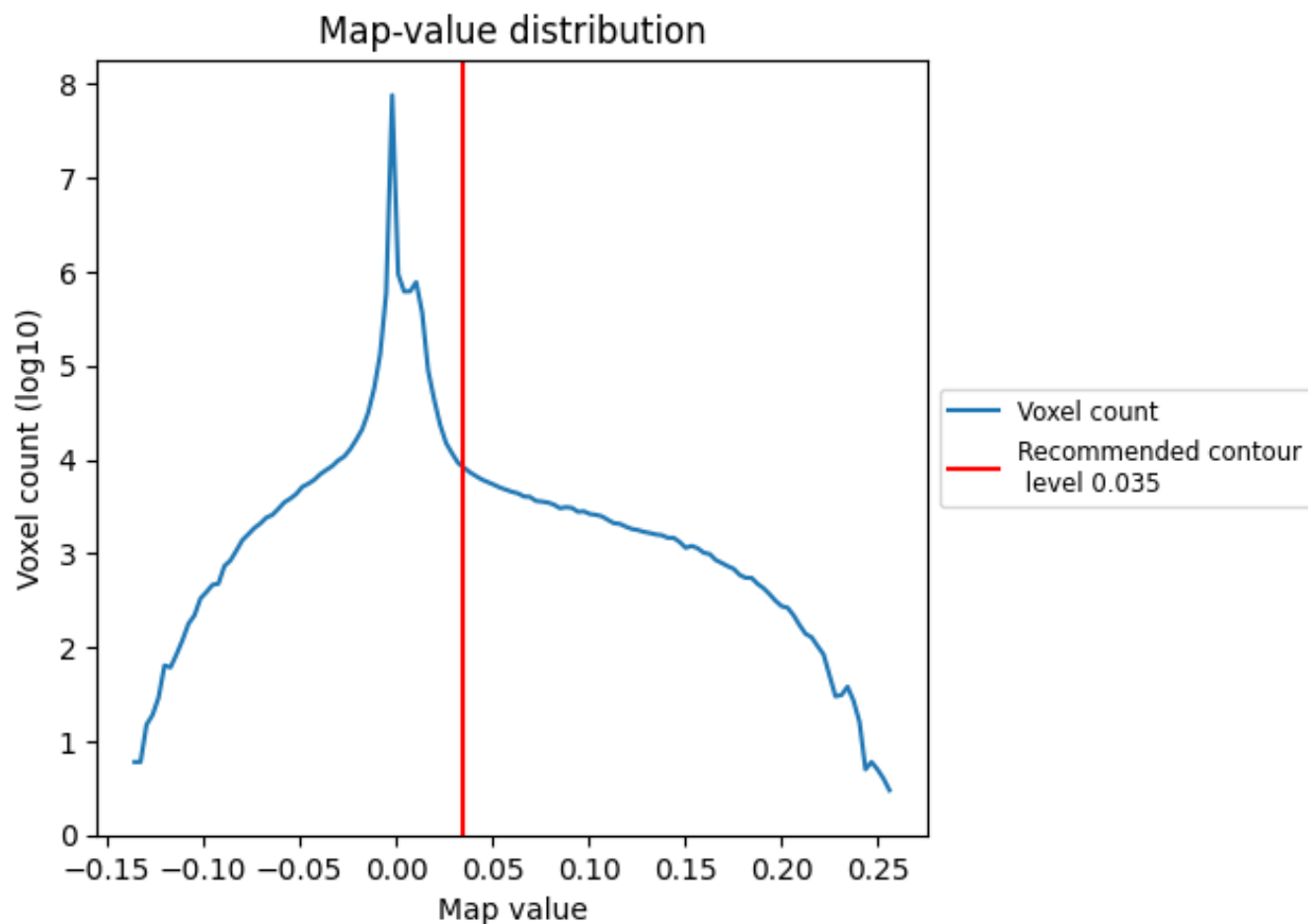


Z

7 Map analysis [i](#)

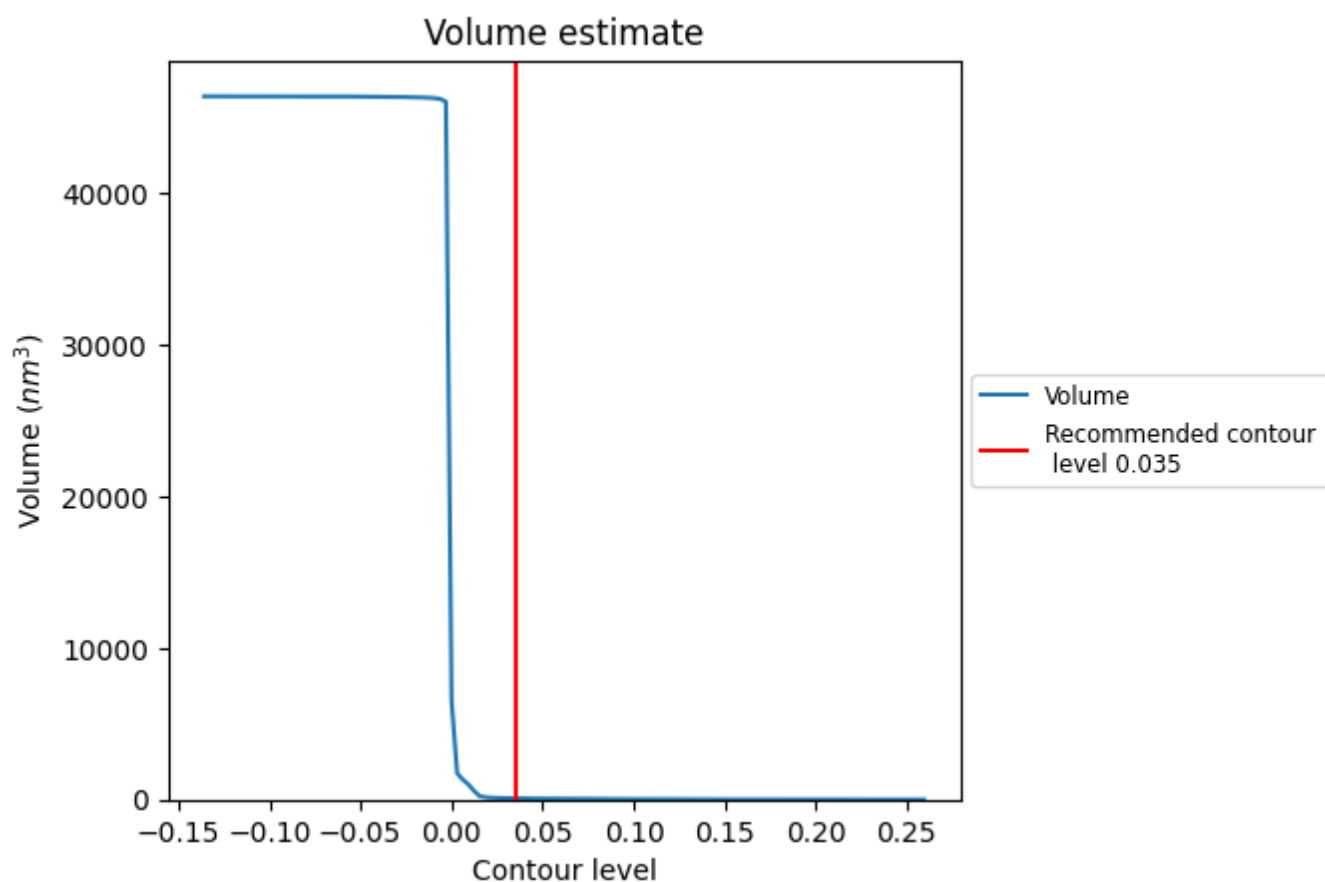
This section contains the results of statistical analysis of the map.

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.

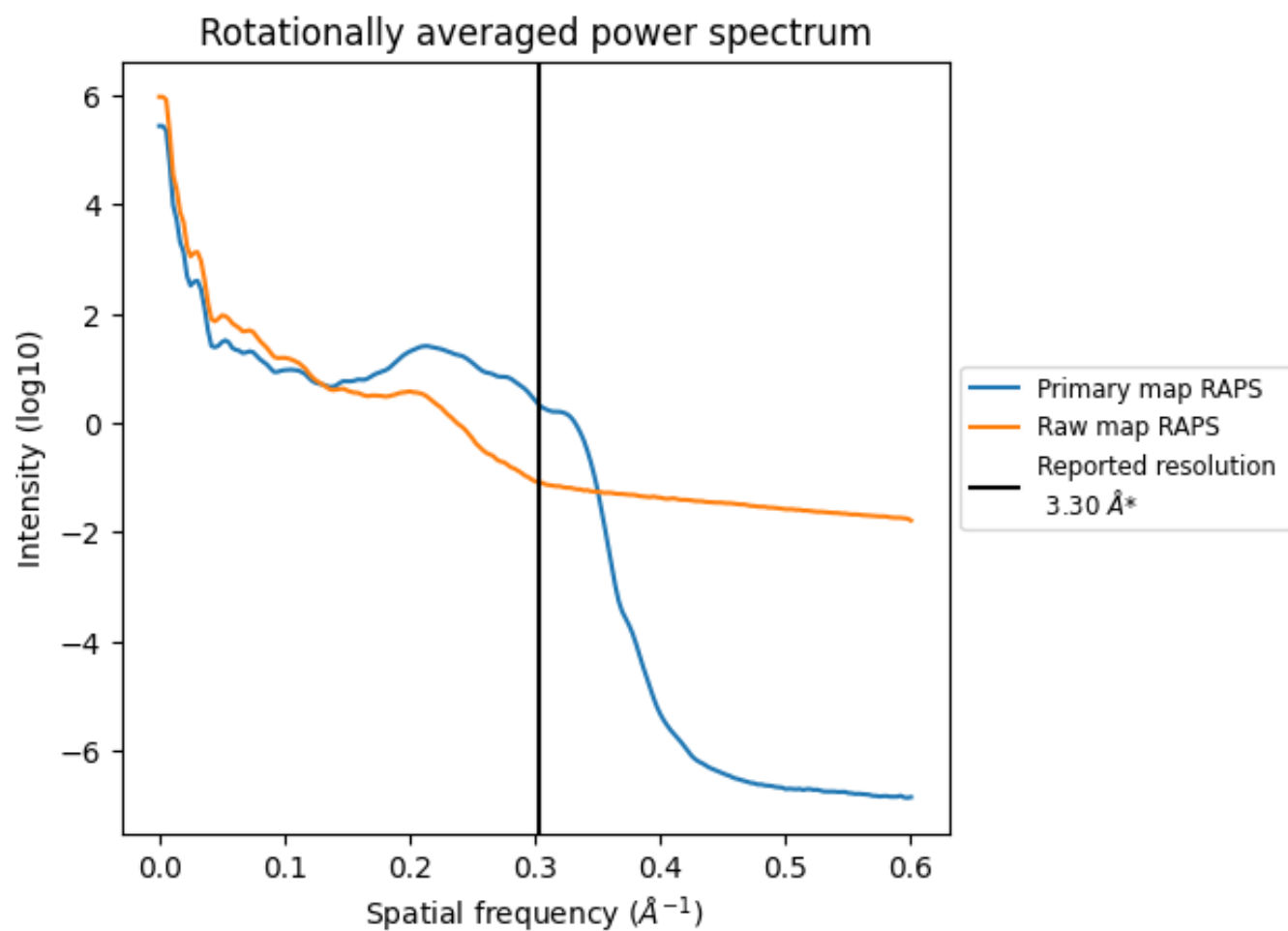
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 80 nm^3 ; this corresponds to an approximate mass of 73 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 ⓘ

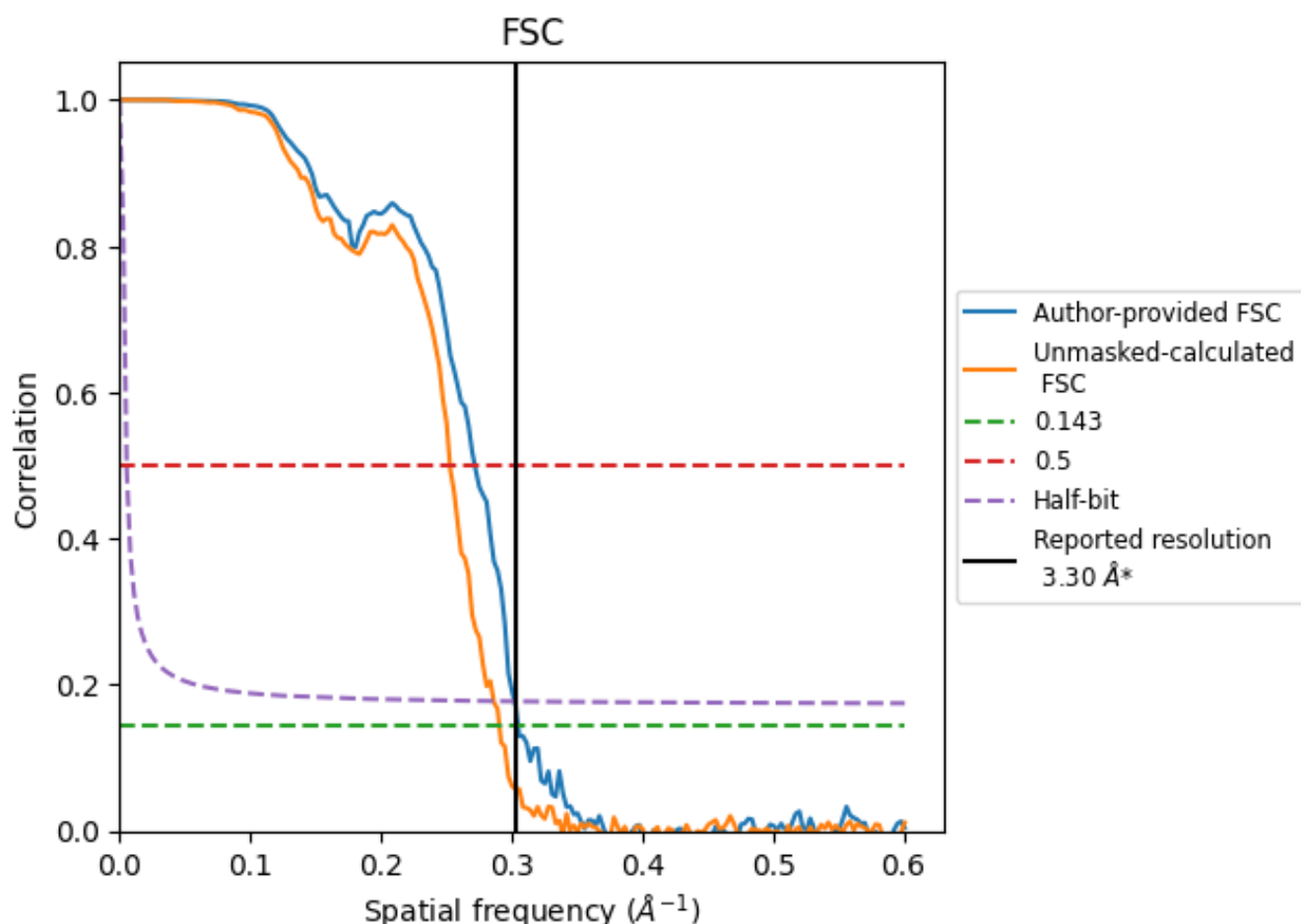


*Reported resolution corresponds to spatial frequency of 0.303 Å⁻¹

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 0.303 \AA^{-1}

8.2 Resolution estimates [i](#)

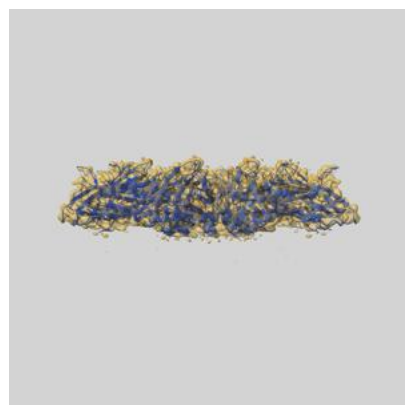
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.30	-	-
Author-provided FSC curve	3.28	3.68	3.31
Unmasked-calculated*	3.44	3.95	3.49

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

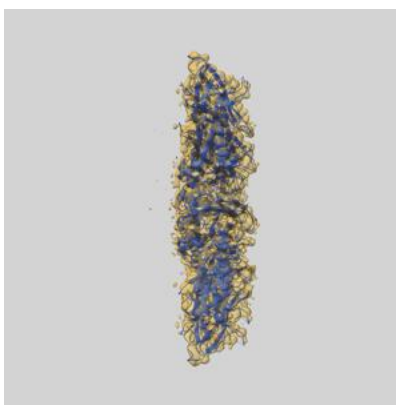
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-13104 and PDB model 7OXR. Per-residue inclusion information can be found in [section 3](#) on [page 17](#).

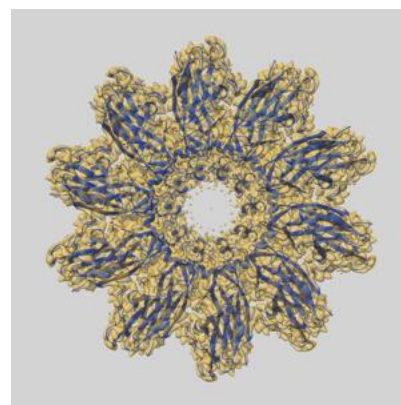
9.1 Map-model overlay [i](#)



X



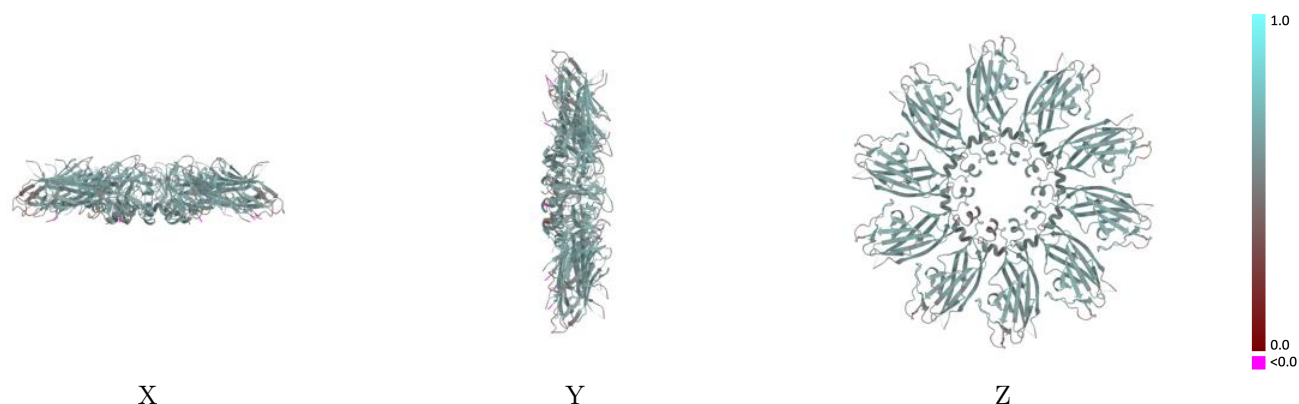
Y



Z

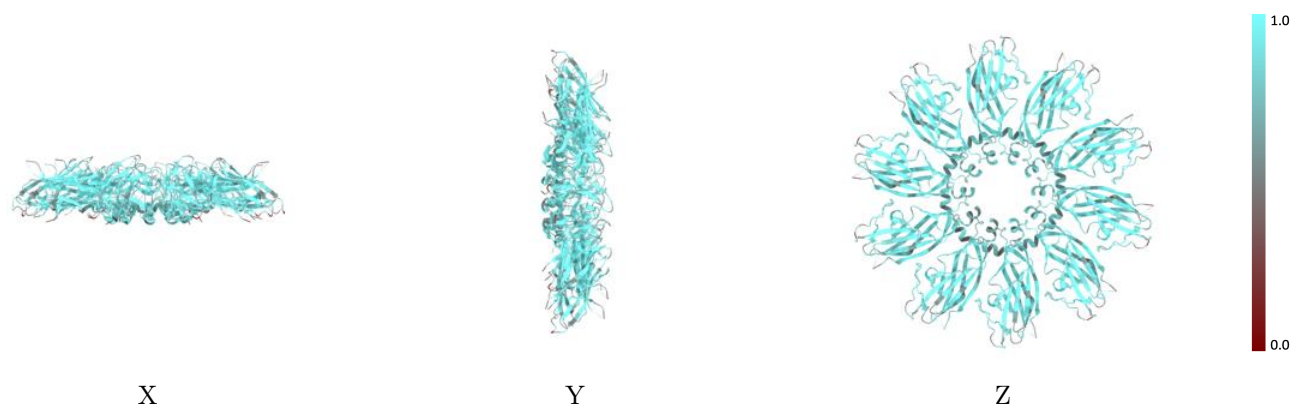
The images above show the 3D surface view of the map at the recommended contour level 0.035 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



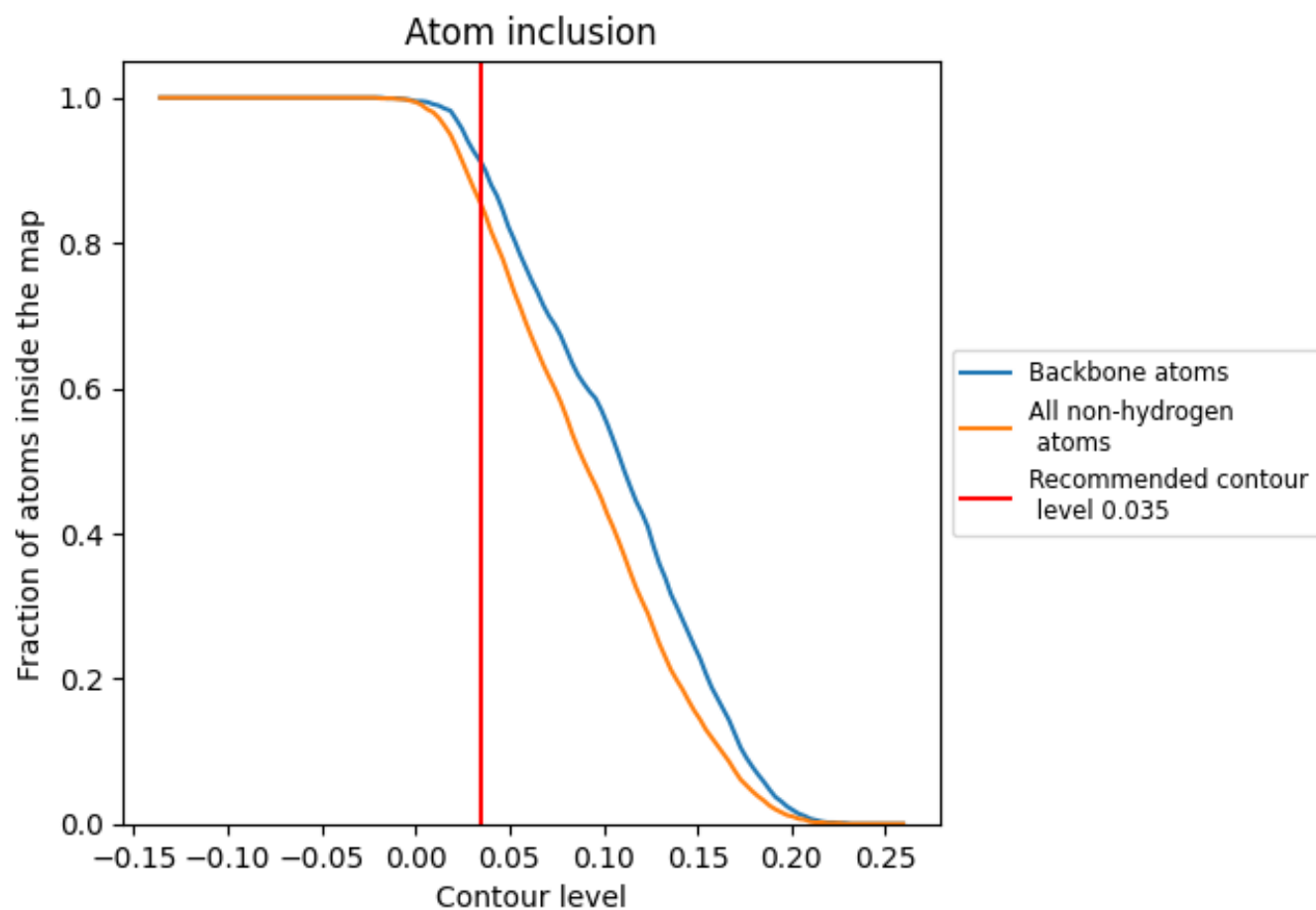
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.035).

9.4 Atom inclusion [i](#)



At the recommended contour level, 91% of all backbone atoms, 85% 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 (0.035) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	<div><div></div></div> 0.8520	<div><div></div></div> 0.5610
A	<div><div></div></div> 0.8320	<div><div></div></div> 0.5410
B	<div><div></div></div> 0.8550	<div><div></div></div> 0.5660
C	<div><div></div></div> 0.8570	<div><div></div></div> 0.5630
D	<div><div></div></div> 0.8600	<div><div></div></div> 0.5660
E	<div><div></div></div> 0.8560	<div><div></div></div> 0.5650
F	<div><div></div></div> 0.8600	<div><div></div></div> 0.5670
G	<div><div></div></div> 0.8540	<div><div></div></div> 0.5650
H	<div><div></div></div> 0.8580	<div><div></div></div> 0.5660
I	<div><div></div></div> 0.8580	<div><div></div></div> 0.5650
J	<div><div></div></div> 0.8300	<div><div></div></div> 0.5410

1.0

0.0

<0.0