



wwPDB EM Validation Summary Report ⓘ

Dec 7, 2020 – 11:32 am GMT

PDB ID : 6Q3G
EMDB ID : EMD-4459
Title : Structure of native bacteriophage P68
Authors : Dominik, H.; Karel, S.; Fuzik, T.; Plevka, P.
Deposited on : 2018-12-04
Resolution : 3.80 Å(reported)
Based on initial models : 6IAT, 6IAW, 6IAB, 6IAC

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

EMDB validation analysis : 0.0.0.dev61
MolProbity : **FAILED**
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.15.1

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 3.80 Å.

There are no overall percentile quality scores available for this entry.

MolProbity failed to run properly - the sequence quality summary graphics cannot be shown.

2 Entry composition [i](#)

There are 8 unique types of molecules in this entry. The entry contains 1074183 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 Major head protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	C1	385	3123	2013	508	594	8	0	0
1	A1	392	3178	2044	518	608	8	0	0
1	B1	385	3123	2013	508	594	8	0	0
1	D1	393	3190	2050	520	612	8	0	0
1	I1	385	3123	2013	508	594	8	0	0
1	J1	392	3178	2044	518	608	8	0	0
1	K1	385	3123	2013	508	594	8	0	0
1	L1	393	3190	2050	520	612	8	0	0
1	Q1	385	3123	2013	508	594	8	0	0
1	R1	392	3178	2044	518	608	8	0	0
1	S1	385	3123	2013	508	594	8	0	0
1	T1	393	3190	2050	520	612	8	0	0
1	X1	385	3123	2013	508	594	8	0	0
1	Y1	392	3178	2044	518	608	8	0	0
1	Z1	385	3123	2013	508	594	8	0	0
1	a1	393	3190	2050	520	612	8	0	0
1	f1	385	3123	2013	508	594	8	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	g1	392	Total	C	N	O	S	0	0
			3178	2044	518	608	8		
1	h1	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	i1	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	C3	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	A3	392	Total	C	N	O	S	0	0
			3178	2044	518	608	8		
1	B3	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	D3	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	I3	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	J3	392	Total	C	N	O	S	0	0
			3178	2044	518	608	8		
1	K3	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	L3	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	Q3	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	R3	392	Total	C	N	O	S	0	0
			3178	2044	518	608	8		
1	S3	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	T3	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	Y3	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	b3	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	C4	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	A4	392	Total	C	N	O	S	0	0
			3178	2044	518	608	8		
1	B4	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	D4	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	I4	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	J4	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	K4	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	L4	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	Q4	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	R4	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	S4	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	T4	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	X4	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	Y4	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	Z4	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	a4	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	f4	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	g4	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	h4	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	i4	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	C6	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	A6	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	B6	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	D6	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	I6	385	Total 3123	C 2013	N 508	O 594	S 8	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	J6	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	K6	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	L6	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	Q6	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	R6	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	S6	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	T6	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	Y6	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	Z6	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	a6	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	b6	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	g6	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	h6	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	i6	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	j6	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	C7	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	A7	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	B7	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	D7	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	I7	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	J7	392	Total 3178	C 2044	N 518	O 608	S 8	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	K7	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	L7	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	Q7	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	R7	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	S7	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	T7	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	Y7	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	Z7	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	a7	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	b7	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	g7	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	h7	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	i7	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	j7	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	C8	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	A8	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	B8	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	D8	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	I8	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	J8	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	K8	385	Total 3123	C 2013	N 508	O 594	S 8	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	L8	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	Q8	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	R8	392	Total	C	N	O	S	0	0
			3178	2044	518	608	8		
1	S8	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	T8	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	Y8	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	Z8	392	Total	C	N	O	S	0	0
			3178	2044	518	608	8		
1	a8	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	b8	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	g8	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	h8	392	Total	C	N	O	S	0	0
			3178	2044	518	608	8		
1	i8	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	j8	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	AD	354	Total	C	N	O	S	0	0
			2821	1810	463	541	7		
1	BD	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	CD	386	Total	C	N	O	S	0	0
			3135	2019	510	598	8		
1	DD	386	Total	C	N	O	S	0	0
			3131	2017	510	596	8		
1	KD	382	Total	C	N	O	S	0	0
			3103	1997	505	593	8		
1	LD	386	Total	C	N	O	S	0	0
			3135	2019	510	598	8		
1	DE	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	AE	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	BE	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	CE	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	FE	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	KE	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	LE	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	ME	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	NE	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	SE	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	TE	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	UE	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	VE	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	aE	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	bE	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	cE	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	dE	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	CG	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	AG	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	BG	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	DG	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	IG	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	JG	392	Total 3178	C 2044	N 518	O 608	S 8	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	KG	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	LG	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	QG	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	RG	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	SG	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	TG	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	YG	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	ZG	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	aG	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	bG	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	gG	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	hG	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	iG	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	jG	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	AJ	354	Total 2821	C 1810	N 463	O 541	S 7	0	0
1	BJ	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	CJ	386	Total 3135	C 2019	N 510	O 598	S 8	0	0
1	DJ	386	Total 3131	C 2017	N 510	O 596	S 8	0	0
1	KJ	382	Total 3103	C 1997	N 505	O 593	S 8	0	0
1	LJ	386	Total 3135	C 2019	N 510	O 598	S 8	0	0
1	AK	354	Total 2821	C 1810	N 463	O 541	S 7	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	BK	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	CK	386	Total	C	N	O	S	0	0
			3135	2019	510	598	8		
1	DK	386	Total	C	N	O	S	0	0
			3131	2017	510	596	8		
1	KK	382	Total	C	N	O	S	0	0
			3103	1997	505	593	8		
1	LK	386	Total	C	N	O	S	0	0
			3135	2019	510	598	8		
1	CL	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	AL	392	Total	C	N	O	S	0	0
			3178	2044	518	608	8		
1	BL	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	DL	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	IL	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	JL	392	Total	C	N	O	S	0	0
			3178	2044	518	608	8		
1	KL	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	LL	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	QL	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	RL	392	Total	C	N	O	S	0	0
			3178	2044	518	608	8		
1	SL	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	TL	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	YL	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	ZL	392	Total	C	N	O	S	0	0
			3178	2044	518	608	8		
1	aL	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	bL	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	gL	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	AP	354	Total	C	N	O	S	0	0
			2821	1810	463	541	7		
1	BP	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	CP	386	Total	C	N	O	S	0	0
			3135	2019	510	598	8		
1	DP	386	Total	C	N	O	S	0	0
			3131	2017	510	596	8		
1	KP	382	Total	C	N	O	S	0	0
			3103	1997	505	593	8		
1	LP	386	Total	C	N	O	S	0	0
			3135	2019	510	598	8		
1	CQ	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	AQ	392	Total	C	N	O	S	0	0
			3178	2044	518	608	8		
1	BQ	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	DQ	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	IQ	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	JQ	392	Total	C	N	O	S	0	0
			3178	2044	518	608	8		
1	KQ	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	LQ	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	QQ	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	RQ	392	Total	C	N	O	S	0	0
			3178	2044	518	608	8		
1	SQ	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	TQ	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	YQ	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	bQ	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	cQ	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	dQ	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	eQ	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	CR	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	AR	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	BR	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	DR	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	IR	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	JR	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	KR	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	LR	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	QR	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	RR	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	SR	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	TR	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	YR	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	ZR	392	Total 3178	C 2044	N 518	O 608	S 8	0	0
1	aR	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	bR	393	Total 3190	C 2050	N 520	O 612	S 8	0	0
1	gR	385	Total 3123	C 2013	N 508	O 594	S 8	0	0
1	hR	392	Total 3178	C 2044	N 518	O 608	S 8	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	iR	385	Total	C	N	O	S	0	0
			3123	2013	508	594	8		
1	jR	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	AS	393	Total	C	N	O	S	0	0
			3190	2050	520	612	8		
1	BS	386	Total	C	N	O	S	0	0
			3135	2019	510	598	8		
1	CS	386	Total	C	N	O	S	0	0
			3131	2017	510	596	8		
1	IS	354	Total	C	N	O	S	0	0
			2821	1810	463	541	7		
1	JS	382	Total	C	N	O	S	0	0
			3103	1997	505	593	8		
1	KS	386	Total	C	N	O	S	0	0
			3135	2019	510	598	8		

- Molecule 2 is a protein called Arstotzka protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	E1	54	Total	C	N	O	S	0	0
			432	258	76	93	5		
2	F1	55	Total	C	N	O	S	0	0
			436	260	77	94	5		
2	G1	27	Total	C	N	O	S	0	0
			221	130	41	46	4		
2	H1	55	Total	C	N	O	S	0	0
			435	260	77	93	5		
2	M1	54	Total	C	N	O	S	0	0
			432	258	76	93	5		
2	N1	55	Total	C	N	O	S	0	0
			436	260	77	94	5		
2	O1	27	Total	C	N	O	S	0	0
			221	130	41	46	4		
2	P1	55	Total	C	N	O	S	0	0
			435	260	77	93	5		
2	U1	55	Total	C	N	O	S	0	0
			436	260	77	94	5		
2	V1	27	Total	C	N	O	S	0	0
			221	130	41	46	4		
2	W1	55	Total	C	N	O	S	0	0
			435	260	77	93	5		

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	b1	54	432	258	76	93	5	0	0
2	c1	55	436	260	77	94	5	0	0
2	d1	27	221	130	41	46	4	0	0
2	e1	55	435	260	77	93	5	0	0
2	j1	54	432	258	76	93	5	0	0
2	k1	55	436	260	77	94	5	0	0
2	l1	27	221	130	41	46	4	0	0
2	m1	55	435	260	77	93	5	0	0
2	E3	54	432	258	76	93	5	0	0
2	F3	55	436	260	77	94	5	0	0
2	G3	27	221	130	41	46	4	0	0
2	H3	55	435	260	77	93	5	0	0
2	M3	54	432	258	76	93	5	0	0
2	N3	55	436	260	77	94	5	0	0
2	O3	27	221	130	41	46	4	0	0
2	P3	55	435	260	77	93	5	0	0
2	U3	54	432	258	76	93	5	0	0
2	V3	55	436	260	77	94	5	0	0
2	W3	27	221	130	41	46	4	0	0
2	X3	55	435	260	77	93	5	0	0
2	Z3	54	432	258	76	93	5	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	a3	27	Total 221	C 130	N 41	O 46	S 4	0	0
2	c3	54	Total 432	C 258	N 76	O 93	S 5	0	0
2	d3	27	Total 221	C 130	N 41	O 46	S 4	0	0
2	E4	54	Total 432	C 258	N 76	O 93	S 5	0	0
2	F4	55	Total 436	C 260	N 77	O 94	S 5	0	0
2	G4	27	Total 221	C 130	N 41	O 46	S 4	0	0
2	H4	55	Total 435	C 260	N 77	O 93	S 5	0	0
2	M4	54	Total 432	C 258	N 76	O 93	S 5	0	0
2	N4	55	Total 436	C 260	N 77	O 94	S 5	0	0
2	O4	27	Total 221	C 130	N 41	O 46	S 4	0	0
2	P4	55	Total 435	C 260	N 77	O 93	S 5	0	0
2	U4	55	Total 436	C 260	N 77	O 94	S 5	0	0
2	V4	27	Total 221	C 130	N 41	O 46	S 4	0	0
2	W4	55	Total 435	C 260	N 77	O 93	S 5	0	0
2	b4	54	Total 432	C 258	N 76	O 93	S 5	0	0
2	c4	55	Total 436	C 260	N 77	O 94	S 5	0	0
2	d4	27	Total 221	C 130	N 41	O 46	S 4	0	0
2	e4	55	Total 435	C 260	N 77	O 93	S 5	0	0
2	j4	55	Total 436	C 260	N 77	O 94	S 5	0	0
2	k4	27	Total 221	C 130	N 41	O 46	S 4	0	0
2	l4	55	Total 435	C 260	N 77	O 93	S 5	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	E6	54	432	258	76	93	5	0	0
2	F6	55	436	260	77	94	5	0	0
2	G6	27	221	130	41	46	4	0	0
2	H6	55	435	260	77	93	5	0	0
2	M6	54	432	258	76	93	5	0	0
2	N6	55	436	260	77	94	5	0	0
2	O6	27	221	130	41	46	4	0	0
2	P6	55	435	260	77	93	5	0	0
2	U6	54	432	258	76	93	5	0	0
2	V6	55	436	260	77	94	5	0	0
2	W6	27	221	130	41	46	4	0	0
2	X6	55	435	260	77	93	5	0	0
2	c6	54	432	258	76	93	5	0	0
2	d6	55	436	260	77	94	5	0	0
2	e6	27	221	130	41	46	4	0	0
2	f6	55	435	260	77	93	5	0	0
2	k6	54	432	258	76	93	5	0	0
2	l6	55	436	260	77	94	5	0	0
2	m6	27	221	130	41	46	4	0	0
2	n6	55	435	260	77	93	5	0	0
2	E7	54	432	258	76	93	5	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	F7	55	436	260	77	94	5	0	0
2	G7	27	221	130	41	46	4	0	0
2	H7	55	435	260	77	93	5	0	0
2	M7	54	432	258	76	93	5	0	0
2	N7	55	436	260	77	94	5	0	0
2	O7	27	221	130	41	46	4	0	0
2	P7	55	435	260	77	93	5	0	0
2	U7	54	432	258	76	93	5	0	0
2	V7	55	436	260	77	94	5	0	0
2	W7	27	221	130	41	46	4	0	0
2	X7	55	435	260	77	93	5	0	0
2	c7	54	432	258	76	93	5	0	0
2	d7	55	436	260	77	94	5	0	0
2	e7	27	221	130	41	46	4	0	0
2	f7	55	435	260	77	93	5	0	0
2	k7	54	432	258	76	93	5	0	0
2	l7	55	436	260	77	94	5	0	0
2	m7	27	221	130	41	46	4	0	0
2	n7	55	435	260	77	93	5	0	0
2	E8	54	432	258	76	93	5	0	0
2	F8	55	436	260	77	94	5	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	G8	27	221	130	41	46	4	0	0
2	H8	55	435	260	77	93	5	0	0
2	M8	54	432	258	76	93	5	0	0
2	N8	55	436	260	77	94	5	0	0
2	O8	27	221	130	41	46	4	0	0
2	P8	55	435	260	77	93	5	0	0
2	U8	54	432	258	76	93	5	0	0
2	V8	55	436	260	77	94	5	0	0
2	W8	27	221	130	41	46	4	0	0
2	X8	55	435	260	77	93	5	0	0
2	c8	54	432	258	76	93	5	0	0
2	d8	55	436	260	77	94	5	0	0
2	e8	27	221	130	41	46	4	0	0
2	f8	55	435	260	77	93	5	0	0
2	k8	54	432	258	76	93	5	0	0
2	l8	55	436	260	77	94	5	0	0
2	m8	27	221	130	41	46	4	0	0
2	n8	55	435	260	77	93	5	0	0
2	ED	55	437	260	77	95	5	0	0
2	FD	55	437	260	77	95	5	0	0
2	GD	30	237	143	39	54	1	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	HD	54	433	258	76	94	5	0	0
2	MD	55	437	260	77	95	5	0	0
2	ND	55	437	260	77	95	5	0	0
2	EE	54	432	258	76	93	5	0	0
2	GE	27	221	130	41	46	4	0	0
2	HE	55	436	260	77	94	5	0	0
2	IE	27	221	130	41	46	4	0	0
2	JE	55	435	260	77	93	5	0	0
2	OE	54	432	258	76	93	5	0	0
2	PE	55	436	260	77	94	5	0	0
2	QE	27	221	130	41	46	4	0	0
2	RE	55	435	260	77	93	5	0	0
2	WE	54	432	258	76	93	5	0	0
2	XE	55	436	260	77	94	5	0	0
2	YE	27	221	130	41	46	4	0	0
2	ZE	55	435	260	77	93	5	0	0
2	eE	54	432	258	76	93	5	0	0
2	fE	55	436	260	77	94	5	0	0
2	gE	27	221	130	41	46	4	0	0
2	hE	55	435	260	77	93	5	0	0
2	EG	54	432	258	76	93	5	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	FG	55	436	260	77	94	5	0	0
2	GG	27	221	130	41	46	4	0	0
2	HG	55	435	260	77	93	5	0	0
2	MG	54	432	258	76	93	5	0	0
2	NG	55	436	260	77	94	5	0	0
2	OG	27	221	130	41	46	4	0	0
2	PG	55	435	260	77	93	5	0	0
2	UG	54	432	258	76	93	5	0	0
2	VG	55	436	260	77	94	5	0	0
2	WG	27	221	130	41	46	4	0	0
2	XG	55	435	260	77	93	5	0	0
2	cG	54	432	258	76	93	5	0	0
2	dG	55	436	260	77	94	5	0	0
2	eG	27	221	130	41	46	4	0	0
2	fG	55	435	260	77	93	5	0	0
2	kG	54	432	258	76	93	5	0	0
2	lG	55	436	260	77	94	5	0	0
2	mG	27	221	130	41	46	4	0	0
2	nG	55	435	260	77	93	5	0	0
2	EJ	55	437	260	77	95	5	0	0
2	FJ	55	437	260	77	95	5	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	GJ	30	237	143	39	54	1	0	0
2	HJ	54	433	258	76	94	5	0	0
2	MJ	55	437	260	77	95	5	0	0
2	NJ	55	437	260	77	95	5	0	0
2	EK	55	437	260	77	95	5	0	0
2	FK	55	437	260	77	95	5	0	0
2	GK	30	237	143	39	54	1	0	0
2	HK	54	433	258	76	94	5	0	0
2	MK	55	437	260	77	95	5	0	0
2	NK	55	437	260	77	95	5	0	0
2	EL	54	432	258	76	93	5	0	0
2	FL	55	436	260	77	94	5	0	0
2	GL	27	221	130	41	46	4	0	0
2	HL	55	435	260	77	93	5	0	0
2	ML	54	432	258	76	93	5	0	0
2	NL	55	436	260	77	94	5	0	0
2	OL	27	221	130	41	46	4	0	0
2	PL	55	435	260	77	93	5	0	0
2	UL	54	432	258	76	93	5	0	0
2	VL	55	436	260	77	94	5	0	0
2	WL	27	221	130	41	46	4	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	XL	55	435	260	77	93	5	0	0
2	cL	54	432	258	76	93	5	0	0
2	dL	55	436	260	77	94	5	0	0
2	eL	27	221	130	41	46	4	0	0
2	fL	55	435	260	77	93	5	0	0
2	hL	54	432	258	76	93	5	0	0
2	iL	27	221	130	41	46	4	0	0
2	EP	55	437	260	77	95	5	0	0
2	FP	55	437	260	77	95	5	0	0
2	GP	30	237	143	39	54	1	0	0
2	HP	54	433	258	76	94	5	0	0
2	MP	55	437	260	77	95	5	0	0
2	NP	55	437	260	77	95	5	0	0
2	EQ	54	432	258	76	93	5	0	0
2	FQ	55	436	260	77	94	5	0	0
2	GQ	27	221	130	41	46	4	0	0
2	HQ	55	435	260	77	93	5	0	0
2	MQ	54	432	258	76	93	5	0	0
2	NQ	55	436	260	77	94	5	0	0
2	OQ	27	221	130	41	46	4	0	0
2	PQ	55	435	260	77	93	5	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	UQ	54	432	258	76	93	5	0	0
2	VQ	55	436	260	77	94	5	0	0
2	WQ	27	221	130	41	46	4	0	0
2	XQ	55	435	260	77	93	5	0	0
2	ZQ	54	432	258	76	93	5	0	0
2	aQ	27	221	130	41	46	4	0	0
2	fQ	54	432	258	76	93	5	0	0
2	gQ	55	436	260	77	94	5	0	0
2	hQ	27	221	130	41	46	4	0	0
2	iQ	55	435	260	77	93	5	0	0
2	ER	54	432	258	76	93	5	0	0
2	FR	55	436	260	77	94	5	0	0
2	GR	27	221	130	41	46	4	0	0
2	HR	55	435	260	77	93	5	0	0
2	MR	54	432	258	76	93	5	0	0
2	NR	55	436	260	77	94	5	0	0
2	OR	27	221	130	41	46	4	0	0
2	PR	55	435	260	77	93	5	0	0
2	UR	54	432	258	76	93	5	0	0
2	VR	55	436	260	77	94	5	0	0
2	WR	27	221	130	41	46	4	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	XR	55	Total	C	N	O	S	0	0
			435	260	77	93	5		
2	cR	54	Total	C	N	O	S	0	0
			432	258	76	93	5		
2	dR	55	Total	C	N	O	S	0	0
			436	260	77	94	5		
2	eR	27	Total	C	N	O	S	0	0
			221	130	41	46	4		
2	fR	55	Total	C	N	O	S	0	0
			435	260	77	93	5		
2	kR	55	Total	C	N	O	S	0	0
			436	260	77	94	5		
2	lR	27	Total	C	N	O	S	0	0
			221	130	41	46	4		
2	mR	55	Total	C	N	O	S	0	0
			435	260	77	93	5		
2	DS	55	Total	C	N	O	S	0	0
			437	260	77	95	5		
2	ES	55	Total	C	N	O	S	0	0
			437	260	77	95	5		
2	FS	30	Total	C	N	O	S	0	0
			237	143	39	54	1		
2	GS	54	Total	C	N	O	S	0	0
			433	258	76	94	5		
2	LS	55	Total	C	N	O	S	0	0
			437	260	77	95	5		
2	MS	55	Total	C	N	O	S	0	0
			437	260	77	95	5		

- Molecule 3 is a protein called Portal protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	A2	301	Total	C	N	O	S	0	0
			2353	1486	398	460	9		
3	A5	301	Total	C	N	O	S	0	0
			2353	1486	398	460	9		
3	A9	301	Total	C	N	O	S	0	0
			2353	1486	398	460	9		
3	AA	301	Total	C	N	O	S	0	0
			2353	1486	398	460	9		
3	AB	301	Total	C	N	O	S	0	0
			2353	1486	398	460	9		

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Mol	Chain	Residues	Atoms					AltConf	Trace
3	AC	301	Total 2353	C 1486	N 398	O 460	S 9	0	0
3	AF	301	Total 2353	C 1486	N 398	O 460	S 9	0	0
3	AH	301	Total 2353	C 1486	N 398	O 460	S 9	0	0
3	AI	301	Total 2353	C 1486	N 398	O 460	S 9	0	0
3	AM	301	Total 2353	C 1486	N 398	O 460	S 9	0	0
3	AN	301	Total 2353	C 1486	N 398	O 460	S 9	0	0
3	AO	301	Total 2353	C 1486	N 398	O 460	S 9	0	0

- Molecule 4 is a protein called Lower collar protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	B2	220	Total 1763	C 1111	N 294	O 353	S 5	0	0
4	B5	220	Total 1763	C 1111	N 294	O 353	S 5	0	0
4	B9	220	Total 1763	C 1111	N 294	O 353	S 5	0	0
4	BA	220	Total 1763	C 1111	N 294	O 353	S 5	0	0
4	BB	220	Total 1763	C 1111	N 294	O 353	S 5	0	0
4	BC	220	Total 1763	C 1111	N 294	O 353	S 5	0	0
4	BF	220	Total 1763	C 1111	N 294	O 353	S 5	0	0
4	BH	220	Total 1763	C 1111	N 294	O 353	S 5	0	0
4	BI	220	Total 1763	C 1111	N 294	O 353	S 5	0	0
4	BM	220	Total 1763	C 1111	N 294	O 353	S 5	0	0
4	BN	220	Total 1763	C 1111	N 294	O 353	S 5	0	0
4	BO	220	Total 1763	C 1111	N 294	O 353	S 5	0	0

- Molecule 5 is a protein called Minor structural protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	D2	132	Total	C	N	O	S	0	0
			1107	718	178	208	3		
5	E2	136	Total	C	N	O	S	0	0
			1173	755	192	223	3		
5	F2	110	Total	C	N	O	S	0	0
			927	595	155	174	3		
5	C2	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	N2	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	O2	500	Total	C	N	O	S	0	0
			4012	2539	688	770	15		
5	D5	132	Total	C	N	O	S	0	0
			1107	718	178	208	3		
5	E5	136	Total	C	N	O	S	0	0
			1173	755	192	223	3		
5	F5	110	Total	C	N	O	S	0	0
			927	595	155	174	3		
5	C5	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	N5	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	O5	500	Total	C	N	O	S	0	0
			4012	2539	688	770	15		
5	D9	132	Total	C	N	O	S	0	0
			1107	718	178	208	3		
5	E9	136	Total	C	N	O	S	0	0
			1173	755	192	223	3		
5	F9	110	Total	C	N	O	S	0	0
			927	595	155	174	3		
5	C9	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	N9	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	O9	500	Total	C	N	O	S	0	0
			4012	2539	688	770	15		
5	DA	132	Total	C	N	O	S	0	0
			1107	718	178	208	3		
5	EA	136	Total	C	N	O	S	0	0
			1173	755	192	223	3		
5	FA	110	Total	C	N	O	S	0	0
			927	595	155	174	3		

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Mol	Chain	Residues	Atoms					AltConf	Trace
5	CA	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	NA	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	OA	500	Total	C	N	O	S	0	0
			4012	2539	688	770	15		
5	DB	132	Total	C	N	O	S	0	0
			1107	718	178	208	3		
5	EB	136	Total	C	N	O	S	0	0
			1173	755	192	223	3		
5	FB	110	Total	C	N	O	S	0	0
			927	595	155	174	3		
5	CB	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	NB	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	OB	500	Total	C	N	O	S	0	0
			4012	2539	688	770	15		
5	DC	132	Total	C	N	O	S	0	0
			1107	718	178	208	3		
5	EC	136	Total	C	N	O	S	0	0
			1173	755	192	223	3		
5	FC	110	Total	C	N	O	S	0	0
			927	595	155	174	3		
5	CC	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	NC	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	OC	500	Total	C	N	O	S	0	0
			4012	2539	688	770	15		
5	DF	132	Total	C	N	O	S	0	0
			1107	718	178	208	3		
5	EF	136	Total	C	N	O	S	0	0
			1173	755	192	223	3		
5	FF	110	Total	C	N	O	S	0	0
			927	595	155	174	3		
5	CF	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	NF	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	OF	500	Total	C	N	O	S	0	0
			4012	2539	688	770	15		

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Mol	Chain	Residues	Atoms					AltConf	Trace
5	DH	132	Total	C	N	O	S	0	0
			1107	718	178	208	3		
5	EH	136	Total	C	N	O	S	0	0
			1173	755	192	223	3		
5	FH	110	Total	C	N	O	S	0	0
			927	595	155	174	3		
5	CH	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	NH	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	OH	500	Total	C	N	O	S	0	0
			4012	2539	688	770	15		
5	DI	132	Total	C	N	O	S	0	0
			1107	718	178	208	3		
5	EI	136	Total	C	N	O	S	0	0
			1173	755	192	223	3		
5	FI	110	Total	C	N	O	S	0	0
			927	595	155	174	3		
5	CI	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	NI	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	OI	500	Total	C	N	O	S	0	0
			4012	2539	688	770	15		
5	DM	132	Total	C	N	O	S	0	0
			1107	718	178	208	3		
5	EM	136	Total	C	N	O	S	0	0
			1173	755	192	223	3		
5	FM	110	Total	C	N	O	S	0	0
			927	595	155	174	3		
5	CM	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	NM	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	OM	500	Total	C	N	O	S	0	0
			4012	2539	688	770	15		
5	DN	132	Total	C	N	O	S	0	0
			1107	718	178	208	3		
5	EN	136	Total	C	N	O	S	0	0
			1173	755	192	223	3		
5	FN	110	Total	C	N	O	S	0	0
			927	595	155	174	3		

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Mol	Chain	Residues	Atoms					AltConf	Trace
5	CN	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	NN	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	ON	500	Total	C	N	O	S	0	0
			4012	2539	688	770	15		
5	DO	132	Total	C	N	O	S	0	0
			1107	718	178	208	3		
5	EO	136	Total	C	N	O	S	0	0
			1173	755	192	223	3		
5	FO	110	Total	C	N	O	S	0	0
			927	595	155	174	3		
5	CO	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	NO	501	Total	C	N	O	S	0	0
			4021	2545	690	771	15		
5	OO	500	Total	C	N	O	S	0	0
			4012	2539	688	770	15		

- Molecule 6 is a protein called Tail fibre protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
6	G2	18	Total	C	N	O	0	0
			90	54	18	18		
6	H2	18	Total	C	N	O	0	0
			90	54	18	18		
6	I2	24	Total	C	N	O	0	0
			120	72	24	24		
6	J2	24	Total	C	N	O	0	0
			120	72	24	24		
6	K2	22	Total	C	N	O	0	0
			112	67	22	23		
6	L2	24	Total	C	N	O	0	0
			120	72	24	24		
6	G5	18	Total	C	N	O	0	0
			90	54	18	18		
6	H5	18	Total	C	N	O	0	0
			90	54	18	18		
6	I5	24	Total	C	N	O	0	0
			120	72	24	24		
6	J5	24	Total	C	N	O	0	0
			120	72	24	24		

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Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
6	K5	22	Total 112	C 67	N 22	O 23	0	0
6	L5	24	Total 120	C 72	N 24	O 24	0	0
6	G9	18	Total 90	C 54	N 18	O 18	0	0
6	H9	18	Total 90	C 54	N 18	O 18	0	0
6	I9	24	Total 120	C 72	N 24	O 24	0	0
6	J9	24	Total 120	C 72	N 24	O 24	0	0
6	K9	22	Total 112	C 67	N 22	O 23	0	0
6	L9	24	Total 120	C 72	N 24	O 24	0	0
6	GA	18	Total 90	C 54	N 18	O 18	0	0
6	HA	18	Total 90	C 54	N 18	O 18	0	0
6	IA	24	Total 120	C 72	N 24	O 24	0	0
6	JA	24	Total 120	C 72	N 24	O 24	0	0
6	KA	22	Total 112	C 67	N 22	O 23	0	0
6	LA	24	Total 120	C 72	N 24	O 24	0	0
6	GB	18	Total 90	C 54	N 18	O 18	0	0
6	HB	18	Total 90	C 54	N 18	O 18	0	0
6	IB	24	Total 120	C 72	N 24	O 24	0	0
6	JB	24	Total 120	C 72	N 24	O 24	0	0
6	KB	22	Total 112	C 67	N 22	O 23	0	0
6	LB	24	Total 120	C 72	N 24	O 24	0	0
6	GC	18	Total 90	C 54	N 18	O 18	0	0

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Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
6	HC	18	90	54	18	18	0	0
6	IC	24	120	72	24	24	0	0
6	JC	24	120	72	24	24	0	0
6	KC	22	112	67	22	23	0	0
6	LC	24	120	72	24	24	0	0
6	GF	18	90	54	18	18	0	0
6	HF	18	90	54	18	18	0	0
6	IF	24	120	72	24	24	0	0
6	JF	24	120	72	24	24	0	0
6	KF	22	112	67	22	23	0	0
6	LF	24	120	72	24	24	0	0
6	GH	18	90	54	18	18	0	0
6	HH	18	90	54	18	18	0	0
6	IH	24	120	72	24	24	0	0
6	JH	24	120	72	24	24	0	0
6	KH	22	112	67	22	23	0	0
6	LH	24	120	72	24	24	0	0
6	GI	18	90	54	18	18	0	0
6	HI	18	90	54	18	18	0	0
6	II	24	120	72	24	24	0	0
6	JI	24	120	72	24	24	0	0

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Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
6	KI	22	112	67	22	23	0	0
6	LI	24	120	72	24	24	0	0
6	GM	18	90	54	18	18	0	0
6	HM	18	90	54	18	18	0	0
6	IM	24	120	72	24	24	0	0
6	JM	24	120	72	24	24	0	0
6	KM	22	112	67	22	23	0	0
6	LM	24	120	72	24	24	0	0
6	GN	18	90	54	18	18	0	0
6	HN	18	90	54	18	18	0	0
6	IN	24	120	72	24	24	0	0
6	JN	24	120	72	24	24	0	0
6	KN	22	112	67	22	23	0	0
6	LN	24	120	72	24	24	0	0
6	GO	18	90	54	18	18	0	0
6	HO	18	90	54	18	18	0	0
6	IO	24	120	72	24	24	0	0
6	JO	24	120	72	24	24	0	0
6	KO	22	112	67	22	23	0	0
6	LO	24	120	72	24	24	0	0

- Molecule 7 is a protein called Head fiber protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
7	ID	55	Total 275	C 165	N 55	O 55	0	0
7	OD	55	Total 275	C 165	N 55	O 55	0	0
7	SD	55	Total 275	C 165	N 55	O 55	0	0
7	IJ	55	Total 275	C 165	N 55	O 55	0	0
7	OJ	55	Total 275	C 165	N 55	O 55	0	0
7	SJ	55	Total 275	C 165	N 55	O 55	0	0
7	IK	55	Total 275	C 165	N 55	O 55	0	0
7	OK	55	Total 275	C 165	N 55	O 55	0	0
7	SK	55	Total 275	C 165	N 55	O 55	0	0
7	IP	55	Total 275	C 165	N 55	O 55	0	0
7	OP	55	Total 275	C 165	N 55	O 55	0	0
7	SP	55	Total 275	C 165	N 55	O 55	0	0
7	HS	55	Total 275	C 165	N 55	O 55	0	0
7	NS	55	Total 275	C 165	N 55	O 55	0	0
7	SS	55	Total 275	C 165	N 55	O 55	0	0

- Molecule 8 is a protein called Inner core protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
8	PD	17	Total 85	C 51	N 17	O 17	0	0
8	QD	16	Total 79	C 47	N 16	O 16	0	0
8	RD	12	Total 54	C 30	N 12	O 12	0	0
8	PJ	17	Total 85	C 51	N 17	O 17	0	0
8	QJ	16	Total 79	C 47	N 16	O 16	0	0

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Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
8	RJ	12	Total 54	C 30	N 12	O 12	0	0
8	PK	17	Total 85	C 51	N 17	O 17	0	0
8	QK	16	Total 79	C 47	N 16	O 16	0	0
8	RK	12	Total 54	C 30	N 12	O 12	0	0
8	PP	17	Total 85	C 51	N 17	O 17	0	0
8	QP	16	Total 79	C 47	N 16	O 16	0	0
8	RP	12	Total 54	C 30	N 12	O 12	0	0
8	PS	17	Total 85	C 51	N 17	O 17	0	0
8	QS	16	Total 79	C 47	N 16	O 16	0	0
8	RS	12	Total 54	C 30	N 12	O 12	0	0

MolProbity failed to run properly - this section is therefore empty.

3 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	33612	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 ($e^-/\text{\AA}^2$)	21	Depositor
Minimum defocus (nm)	1.0	Depositor
Maximum defocus (nm)	3.0	Depositor
Magnification	75000	Depositor
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.415	Depositor
Minimum map value	-0.194	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.009	Depositor
Recommended contour level	0.025	Depositor
Map size (Å)	1063.0, 1063.0, 1063.0	wwPDB
Map dimensions	1000, 1000, 1000	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.063, 1.063, 1.063	Depositor

4 Model quality [i](#)

4.1 Standard geometry [i](#)

MolProbity failed to run properly - this section is therefore empty.

4.2 Too-close contacts [i](#)

MolProbity failed to run properly - this section is therefore empty.

4.3 Torsion angles [i](#)

4.3.1 Protein backbone [i](#)

MolProbity failed to run properly - this section is therefore empty.

4.3.2 Protein sidechains [i](#)

MolProbity failed to run properly - this section is therefore empty.

4.3.3 RNA [i](#)

MolProbity failed to run properly - this section is therefore empty.

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

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

4.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

4.6 Ligand geometry [i](#)

There are no ligands in this entry.

4.7 Other polymers [i](#)

There are no such residues in this entry.

4.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	J4	1
1	Y4	1
1	R7	1
1	A6	1
1	BE	1
1	JG	1
1	cQ	1
1	JQ	1
1	RG	1
1	Y1	1
1	h7	1
1	ZG	1
1	JL	1
1	RQ	1
1	J6	1
1	ZR	1
1	J8	1
1	hG	1
1	h8	1
1	Z7	1
1	ZL	1
1	J3	1
1	Z8	1
1	JR	1
1	AR	1
1	g4	1
1	R8	1
1	RR	1
1	J7	1
1	A1	1
1	R1	1
1	AG	1
1	A4	1
1	R4	1
1	RL	1
1	AL	1
1	g1	1
1	AQ	1
1	LE	1
1	hR	1

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Mol	Chain	Number of breaks
1	R6	1
1	bE	1
1	A7	1
1	TE	1
1	A8	1
1	h6	1
1	J1	1
1	A3	1
1	R3	1
1	Z6	1

The worst 5 of 50 chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	R1	20:SER	C	21:ALA	N	3.93
1	Y1	20:SER	C	21:ALA	N	3.93
1	g1	20:SER	C	21:ALA	N	3.93
1	J6	20:SER	C	21:ALA	N	3.93
1	R6	20:SER	C	21:ALA	N	3.93

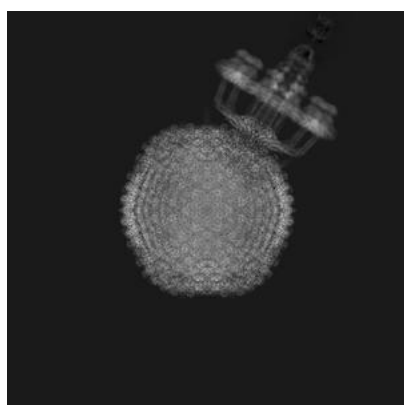
5 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-4459. These allow visual inspection of the internal detail of the map and identification of artifacts.

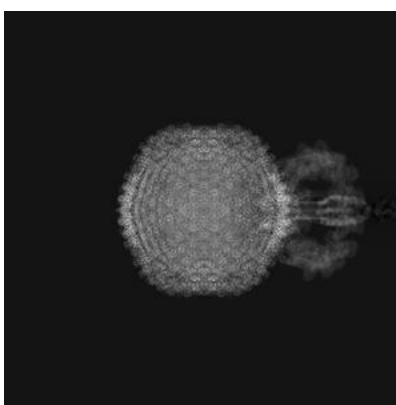
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

5.1 Orthogonal projections [i](#)

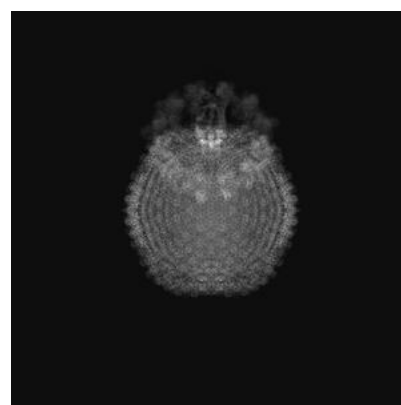
5.1.1 Primary map



X



Y

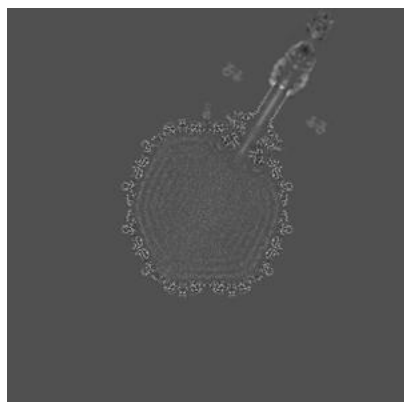


Z

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

5.2 Central slices [i](#)

5.2.1 Primary map



X Index: 500



Y Index: 500

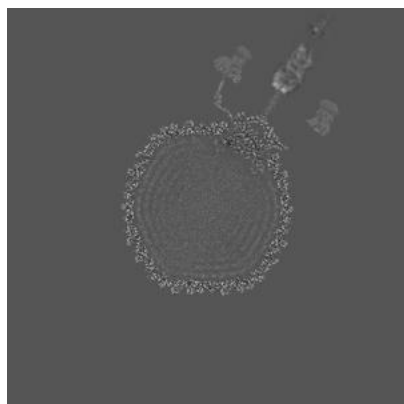


Z Index: 500

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

5.3 Largest variance slices [i](#)

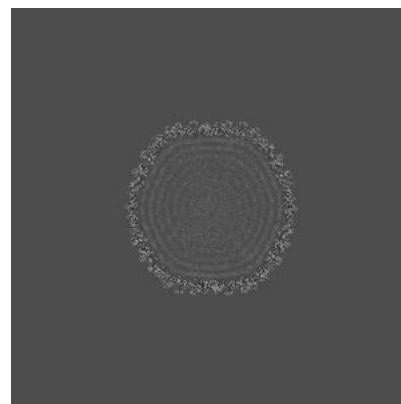
5.3.1 Primary map



X Index: 476



Y Index: 474

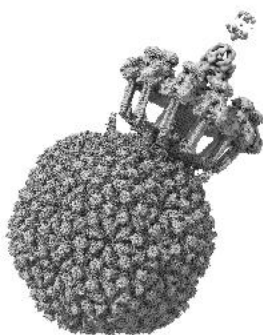


Z Index: 474

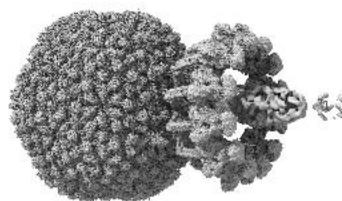
The images above show the largest variance slices of the map in three orthogonal directions.

5.4 Orthogonal surface views [i](#)

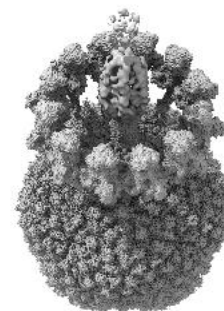
5.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.025. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

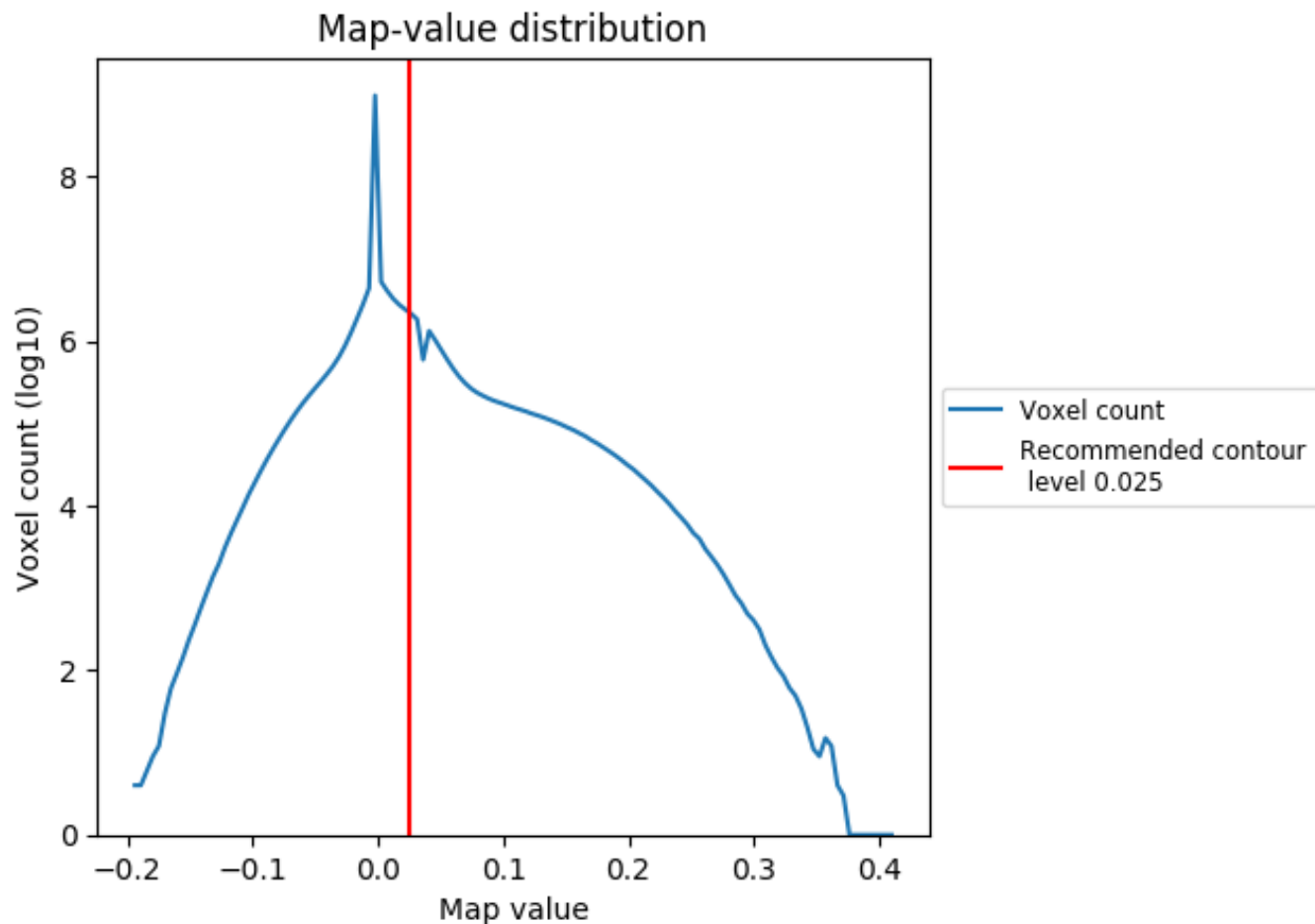
5.5 Mask visualisation

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

6 Map analysis [i](#)

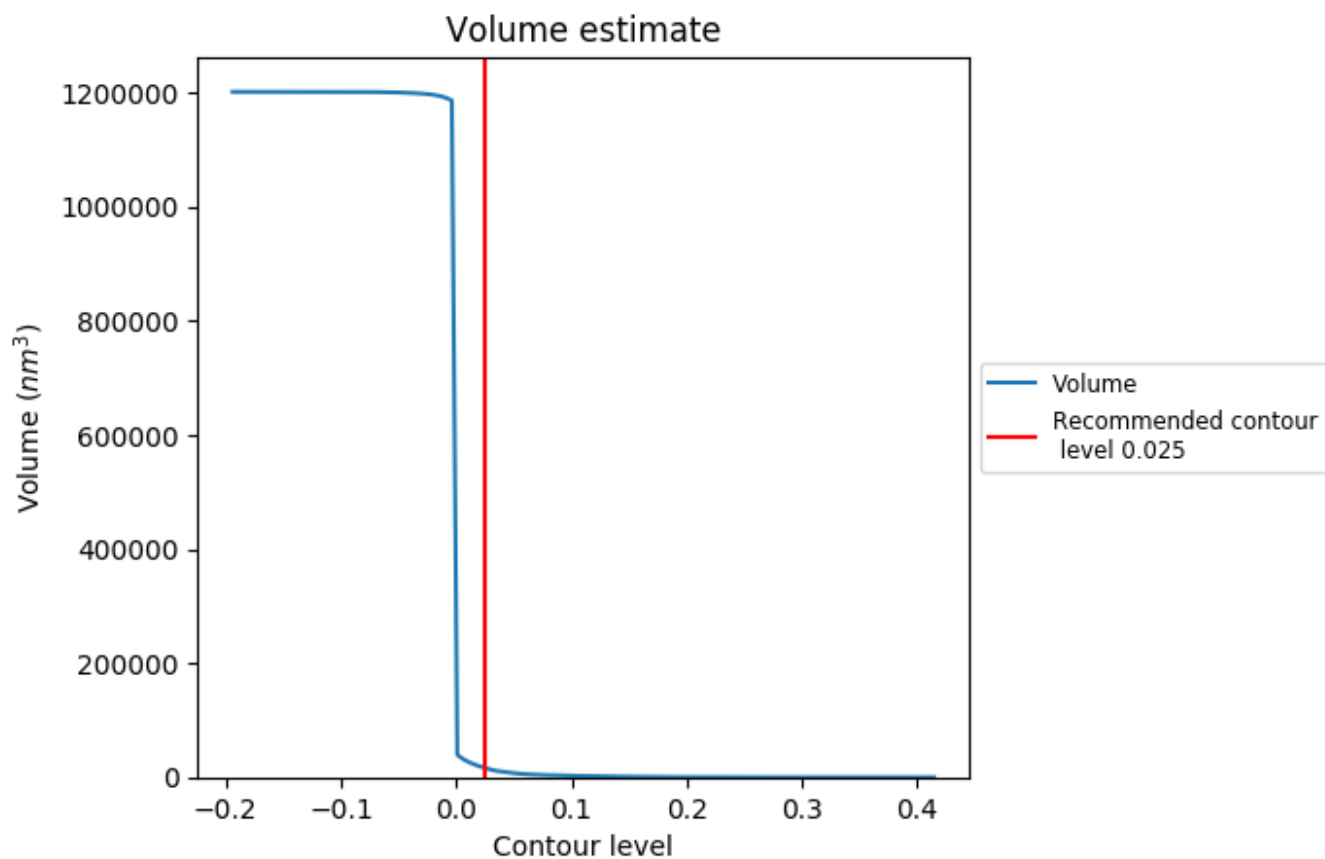
This section contains the results of statistical analysis of the map.

6.1 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.

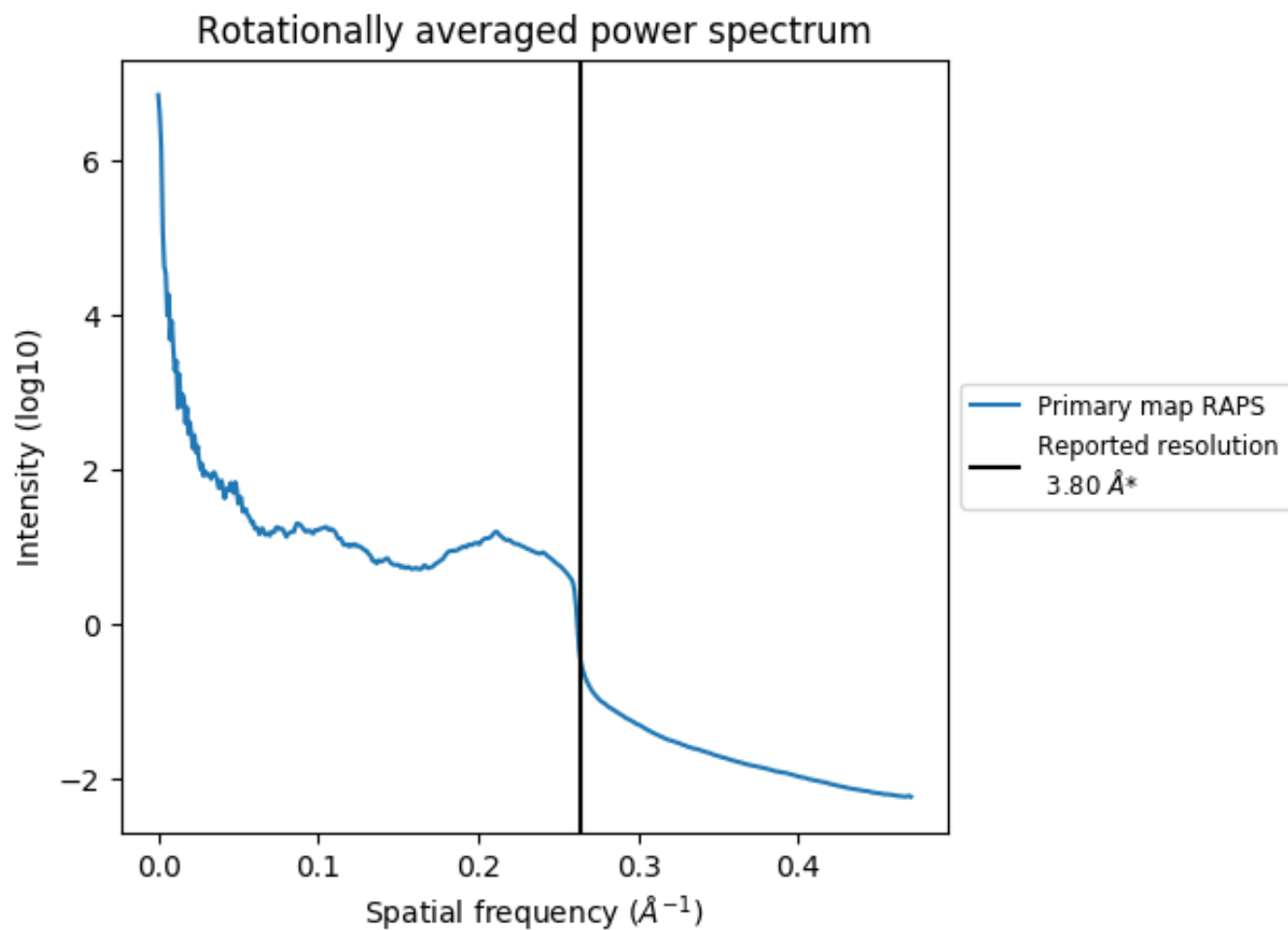
6.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 16235 nm³; this corresponds to an approximate mass of 14666 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.

6.3 Rotationally averaged power spectrum [\(i\)](#)



*Reported resolution corresponds to spatial frequency of 0.263 \AA^{-1}

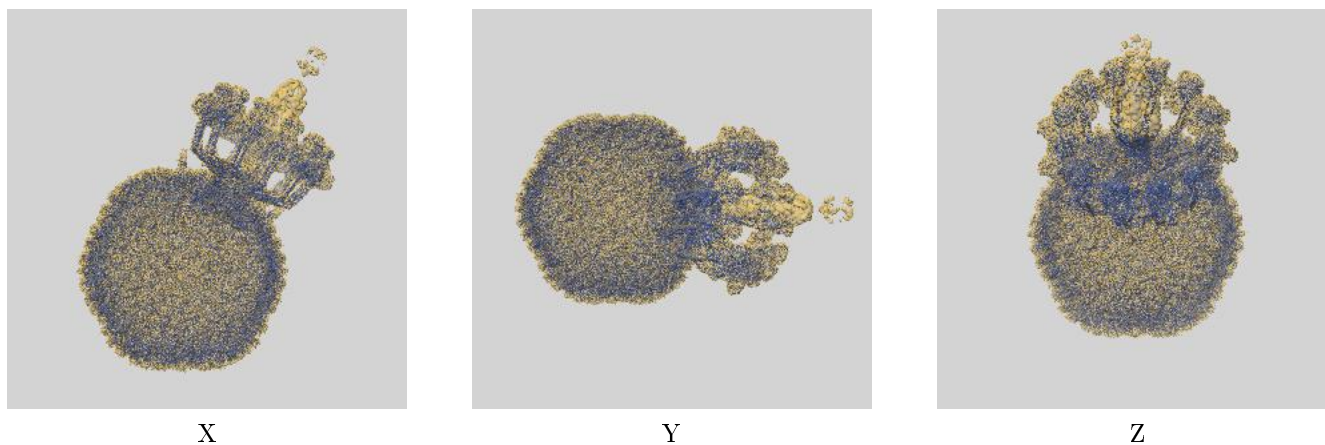
7 Fourier-Shell correlation

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

8 Map-model fit [i](#)

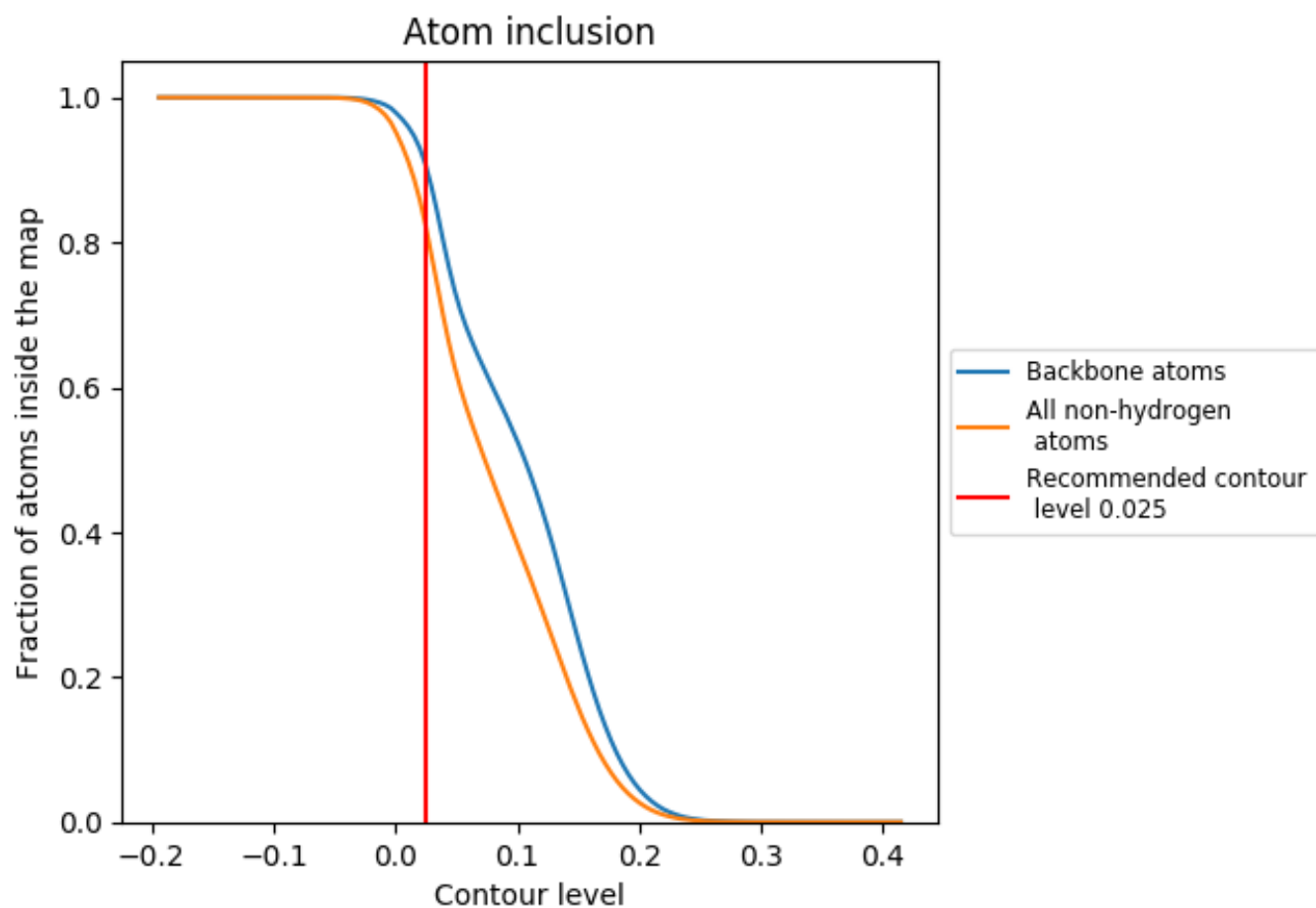
This section contains information regarding the fit between EMDB map EMD-4459 and PDB model 6Q3G. Per-residue inclusion information can be found in section ?? on page ??.

8.1 Map-model overlay [i](#)



The images above show the 3D surface view of the map at the recommended contour level 0.025 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.

8.2 Atom inclusion [i](#)



At the recommended contour level, 91% of all backbone atoms, 82% of all non-hydrogen atoms, are inside the map.