



wwPDB EM Validation Summary Report ⓘ

Apr 16, 2024 – 11:04 am BST

PDB ID : 8PPK
EMDB ID : EMD-17804
Title : Bat-Hp-CoV Nsp1 and eIF1 bound to the human 40S small ribosomal subunit
Authors : Schubert, K.; Karousis, E.D.; Ban, I.; Lapointe, C.P.; Leibundgut, M.; Baeumlin, E.; Kummerant, E.; Scaiola, A.; Schoenhut, T.; Ziegelmueller, J.; Puglisi, J.D.; Muehlemann, O.; Ban, N.
Deposited on : 2023-07-07
Resolution : 2.98 Å(reported)
Based on initial models : 6ZOL, 6ZOK

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.dev92
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : **FAILED**
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : **FAILED**
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 2.98 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 40 unique types of molecules in this entry. The entry contains 79548 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 Eukaryotic translation initiation factor 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	p	85	691	438	125	126	2	0	0

- Molecule 2 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	2	1771	37855	16922	6786	12376	1771	0	0

- Molecule 3 is a protein called 40S ribosomal protein SA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	A	216	1708	1085	299	316	8	0	0

- Molecule 4 is a protein called 40S ribosomal protein S3a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	B	224	1815	1152	328	321	14	0	0

- Molecule 5 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	C	223	1741	1124	300	307	10	1	0

- Molecule 6 is a protein called 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	D	225	1752	1117	315	313	7	0	0

- Molecule 7 is a protein called 40S ribosomal protein S4, X isoform.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	E	262	2076	1324	386	358	8	0	0

- Molecule 8 is a protein called 40S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	F	192	1517	948	287	275	7	0	0

- Molecule 9 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	G	240	1945	1212	393	333	7	0	0

- Molecule 10 is a protein called 40S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	H	189	1523	972	280	270	1	0	0

- Molecule 11 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	I	205	1682	1056	331	290	5	0	0

- Molecule 12 is a protein called 40S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	J	180	1499	955	300	242	2	0	0

- Molecule 13 is a protein called 40S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	K	97	816	533	144	133	6	0	0

- Molecule 14 is a protein called 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	L	155	1267	807	237	217	6	0	0

- Molecule 15 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
15	M	123	953	598	169	177	9	0	0

- Molecule 16 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
16	N	149	1202	770	228	203	1	0	0

- Molecule 17 is a protein called 40S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
17	O	135	1010	618	198	188	6	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
O	138	IAS	ASP	modified residue	UNP P62263

- Molecule 18 is a protein called 40S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
18	P	124	1016	644	192	173	7	0	0

- Molecule 19 is a protein called 40S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
19	Q	142	1128	717	213	195	3	0	0

- Molecule 20 is a protein called 40S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
20	R	134	1082	680	201	197	4	0	0

- Molecule 21 is a protein called Small ribosomal subunit protein uS13.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
21	S	145	1200	753	242	204	1	0	0

- Molecule 22 is a protein called Small ribosomal subunit protein eS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
22	T	144	1123	704	217	199	3	0	0

- Molecule 23 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
23	U	101	803	504	153	142	4	0	0

- Molecule 24 is a protein called 40S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
24	V	83	639	395	117	122	5	0	0

- Molecule 25 is a protein called 40S ribosomal protein S15a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
25	W	129	1034	659	193	176	6	0	0

- Molecule 26 is a protein called 40S ribosomal protein S23.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
26	X	141	1099	693	219	184	3	0	0

- Molecule 27 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	Y	124	Total	C	N	O	S	0	0
			1014	641	198	170	5		

- Molecule 28 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	Z	72	Total	C	N	O	S	0	0
			574	368	104	101	1		

- Molecule 29 is a protein called 40S ribosomal protein S26.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	a	101	Total	C	N	O	S	0	0
			814	507	170	132	5		

- Molecule 30 is a protein called 40S ribosomal protein S27.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	b	83	Total	C	N	O	S	0	0
			650	408	121	114	7		

- Molecule 31 is a protein called 40S ribosomal protein S28.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	c	65	Total	C	N	O	S	0	0
			512	311	103	96	2		

- Molecule 32 is a protein called 40S ribosomal protein S29.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	d	55	Total	C	N	O	S	0	0
			458	286	94	73	5		

- Molecule 33 is a protein called Small ribosomal subunit protein eS30.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	e	59	Total	C	N	O	S	0	0
			467	290	102	74	1		

- Molecule 34 is a protein called Ubiquitin-40S ribosomal protein S27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
34	f	74	610	385	117	101	7	0	0

- Molecule 35 is a protein called Receptor of activated protein C kinase 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
35	g	314	2440	1537	425	466	12	0	0

- Molecule 36 is a protein called 60S ribosomal protein L41.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
36	h	25	239	145	64	27	3	0	0

- Molecule 37 is a protein called Nsp1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
37	j	174	1363	867	239	253	4	0	0

There are 14 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
j	-13	MET	-	initiating methionine	UNP A0A088DIE1
j	-12	HIS	-	expression tag	UNP A0A088DIE1
j	-11	HIS	-	expression tag	UNP A0A088DIE1
j	-10	HIS	-	expression tag	UNP A0A088DIE1
j	-9	HIS	-	expression tag	UNP A0A088DIE1
j	-8	HIS	-	expression tag	UNP A0A088DIE1
j	-7	HIS	-	expression tag	UNP A0A088DIE1
j	-6	GLU	-	expression tag	UNP A0A088DIE1
j	-5	ASN	-	expression tag	UNP A0A088DIE1
j	-4	LEU	-	expression tag	UNP A0A088DIE1
j	-3	TYR	-	expression tag	UNP A0A088DIE1
j	-2	PHE	-	expression tag	UNP A0A088DIE1
j	-1	GLN	-	expression tag	UNP A0A088DIE1
j	0	SER	-	expression tag	UNP A0A088DIE1

- Molecule 38 is UNKNOWN ATOM OR ION (three-letter code: UNX) (formula: X).

Mol	Chain	Residues	Atoms	AltConf
38	2	108	Total X 108 108	0
38	G	1	Total X 1 1	0
38	H	1	Total X 1 1	0
38	I	1	Total X 1 1	0
38	J	1	Total X 1 1	0
38	L	1	Total X 1 1	0
38	N	1	Total X 1 1	0
38	O	2	Total X 2 2	0
38	X	1	Total X 1 1	0

- Molecule 39 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	AltConf
39	2	110	Total Mg 110 110	0
39	X	1	Total Mg 1 1	0

- Molecule 40 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	AltConf
40	a	1	Total Zn 1 1	0
40	d	1	Total Zn 1 1	0
40	f	1	Total Zn 1 1	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, Not provided	
Number of particles used	98750	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 ($e^-/\text{\AA}^2$)	60	Depositor
Minimum defocus (nm)	600	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	81000	Depositor
Image detector	GATAN K3 (6k x 4k)	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](#)

92 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z > 2$	Counts	RMSZ	# $ Z > 2$
2	PSU	2	1244	2	18,21,22	1.36	2 (11%)	22,30,33	1.83	3 (13%)
2	OMU	2	1442	2,39	19,22,23	1.23	2 (10%)	26,31,34	1.70	4 (15%)
2	MA6	2	1850	2	18,26,27	1.09	1 (5%)	19,38,41	1.94	3 (15%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	PSU	2	105	2	18,21,22	1.36	2 (11%)	22,30,33	1.90	3 (13%)
2	PSU	2	1177	2	18,21,22	1.36	2 (11%)	22,30,33	1.87	3 (13%)
2	PSU	2	572	2	18,21,22	1.36	2 (11%)	22,30,33	1.93	3 (13%)
2	OMU	2	1326	2,39	19,22,23	1.19	2 (10%)	26,31,34	1.72	5 (19%)
2	OMG	2	509	2,39	18,26,27	0.95	1 (5%)	19,38,41	1.09	2 (10%)
2	A2M	2	99	2,39	18,25,26	1.05	1 (5%)	18,36,39	1.20	2 (11%)
2	B8N	2	1248	2	24,29,30	1.29	3 (12%)	29,42,45	1.26	3 (10%)
2	PSU	2	1445	2	18,21,22	1.35	2 (11%)	22,30,33	1.91	3 (13%)
2	OMU	2	116	2	19,22,23	1.21	3 (15%)	26,31,34	1.70	4 (15%)
2	6MZ	2	1832	2,39	18,25,26	0.91	1 (5%)	16,36,39	1.76	3 (18%)
2	OMG	2	1328	2	18,26,27	0.93	1 (5%)	19,38,41	1.07	2 (10%)
2	OMU	2	627	2	19,22,23	1.20	2 (10%)	26,31,34	1.67	5 (19%)
2	PSU	2	1367	2	18,21,22	1.35	2 (11%)	22,30,33	1.91	3 (13%)
2	PSU	2	119	2	18,21,22	1.36	2 (11%)	22,30,33	1.90	3 (13%)
24	AME	V	1	24	9,10,11	0.47	0	9,11,13	0.88	1 (11%)
2	OMC	2	174	2,39	19,22,23	0.82	0	26,31,34	0.79	0
2	PSU	2	814	2	18,21,22	1.37	2 (11%)	22,30,33	1.89	3 (13%)
2	A2M	2	159	2	18,25,26	1.07	1 (5%)	18,36,39	1.18	2 (11%)
26	HY3	X	62	26	6,8,9	2.16	1 (16%)	5,10,12	1.16	1 (20%)
2	PSU	2	686	2	18,21,22	1.33	2 (11%)	22,30,33	1.93	4 (18%)
2	OMC	2	1703	2	19,22,23	0.83	0	26,31,34	0.89	1 (3%)
2	PSU	2	1625	2	18,21,22	1.36	2 (11%)	22,30,33	1.89	3 (13%)
2	PSU	2	651	2	18,21,22	1.36	2 (11%)	22,30,33	1.92	4 (18%)
2	A2M	2	468	2	18,25,26	1.02	1 (5%)	18,36,39	1.27	2 (11%)
2	G7M	2	1639	2	20,26,27	2.96	7 (35%)	17,39,42	1.00	1 (5%)
2	PSU	2	649	2	18,21,22	1.34	2 (11%)	22,30,33	1.90	4 (18%)
2	PSU	2	815	2	18,21,22	1.35	2 (11%)	22,30,33	1.90	3 (13%)
2	PSU	2	1692	2	18,21,22	1.36	2 (11%)	22,30,33	1.90	3 (13%)
2	A2M	2	590	2	18,25,26	1.02	1 (5%)	18,36,39	1.20	2 (11%)
2	PSU	2	36	2	18,21,22	1.37	2 (11%)	22,30,33	1.95	3 (13%)
22	NMM	T	67	22	9,11,12	0.59	0	6,12,14	0.55	0
2	A2M	2	166	2	18,25,26	1.02	1 (5%)	18,36,39	1.26	2 (11%)
2	PSU	2	109	2	18,21,22	1.36	2 (11%)	22,30,33	1.91	3 (13%)
2	PSU	2	93	2	18,21,22	1.38	2 (11%)	22,30,33	1.95	3 (13%)
2	PSU	2	1081	2	18,21,22	1.38	3 (16%)	22,30,33	1.88	3 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	PSU	2	863	2	18,21,22	1.36	2 (11%)	22,30,33	1.88	3 (13%)
2	PSU	2	1347	2	18,21,22	1.35	2 (11%)	22,30,33	1.89	3 (13%)
2	PSU	2	1643	2,39	18,21,22	1.37	2 (11%)	22,30,33	1.87	3 (13%)
2	PSU	2	1045	2	18,21,22	1.33	2 (11%)	22,30,33	1.89	3 (13%)
2	PSU	2	406	2	18,21,22	1.36	2 (11%)	22,30,33	1.91	3 (13%)
2	PSU	2	34	2	18,21,22	1.37	2 (11%)	22,30,33	1.95	3 (13%)
2	PSU	2	1238	2	18,21,22	1.35	2 (11%)	22,30,33	1.86	3 (13%)
2	OMU	2	1288	2	19,22,23	1.22	3 (15%)	26,31,34	1.69	4 (15%)
2	OMU	2	172	2	19,22,23	1.21	2 (10%)	26,31,34	1.73	5 (19%)
2	PSU	2	609	2	18,21,22	1.36	2 (11%)	22,30,33	1.87	3 (13%)
2	PSU	2	866	2	18,21,22	1.34	2 (11%)	22,30,33	1.93	4 (18%)
2	OMG	2	1447	2	18,26,27	0.94	1 (5%)	19,38,41	1.07	2 (10%)
2	MA6	2	1851	2	18,26,27	1.09	2 (11%)	19,38,41	1.97	3 (15%)
2	OMG	2	644	2	18,26,27	0.95	1 (5%)	19,38,41	1.10	2 (10%)
2	OMG	2	1490	2,39	18,26,27	0.94	1 (5%)	19,38,41	1.08	2 (10%)
2	OMG	2	683	2	18,26,27	0.93	1 (5%)	19,38,41	1.07	2 (10%)
2	A2M	2	1031	2	18,25,26	0.98	1 (5%)	18,36,39	1.24	2 (11%)
2	OMG	2	601	2	18,26,27	0.91	1 (5%)	19,38,41	1.09	2 (10%)
2	OMC	2	517	2	19,22,23	0.82	0	26,31,34	0.82	0
2	A2M	2	1383	2	18,25,26	1.04	1 (5%)	18,36,39	1.28	2 (11%)
2	PSU	2	822	2	18,21,22	1.37	2 (11%)	22,30,33	1.94	4 (18%)
2	4AC	2	1337	2	21,24,25	1.10	2 (9%)	29,34,37	1.02	2 (6%)
2	OMU	2	799	2	19,22,23	1.21	3 (15%)	26,31,34	1.72	5 (19%)
2	PSU	2	1232	2	18,21,22	1.34	2 (11%)	22,30,33	1.92	4 (18%)
2	PSU	2	1174	2	18,21,22	1.35	2 (11%)	22,30,33	1.89	3 (13%)
2	PSU	2	681	2	18,21,22	1.36	2 (11%)	22,30,33	1.92	3 (13%)
2	OMU	2	354	2	19,22,23	1.22	3 (15%)	26,31,34	1.72	5 (19%)
2	OMU	2	1804	2	19,22,23	1.21	3 (15%)	26,31,34	1.71	4 (15%)
2	PSU	2	1136	2	18,21,22	1.34	2 (11%)	22,30,33	1.91	3 (13%)
2	OMU	2	121	2	19,22,23	1.21	3 (15%)	26,31,34	1.69	5 (19%)
2	A2M	2	512	2	18,25,26	1.00	1 (5%)	18,36,39	1.20	2 (11%)
2	OMU	2	428	2	19,22,23	1.19	3 (15%)	26,31,34	1.71	5 (19%)
2	A2M	2	484	2	18,25,26	0.99	1 (5%)	18,36,39	1.23	2 (11%)
2	OMG	2	436	2	18,26,27	0.93	1 (5%)	19,38,41	1.10	2 (10%)
2	PSU	2	218	2	18,21,22	1.36	2 (11%)	22,30,33	1.88	3 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	PSU	2	966	2	18,21,22	1.35	2 (11%)	22,30,33	1.88	3 (13%)
2	PSU	2	1046	2	18,21,22	1.36	2 (11%)	22,30,33	1.86	3 (13%)
2	OMC	2	1272	2	19,22,23	0.83	0	26,31,34	0.89	1 (3%)
17	IAS	O	138	17	6,7,8	0.97	0	6,8,10	1.32	1 (16%)
2	PSU	2	1004	2	18,21,22	1.35	2 (11%)	22,30,33	1.89	3 (13%)
2	PSU	2	296	2	18,21,22	1.36	2 (11%)	22,30,33	1.90	3 (13%)
2	OMC	2	797	2	19,22,23	0.82	0	26,31,34	0.87	1 (3%)
2	A2M	2	668	2,39	18,25,26	0.96	1 (5%)	18,36,39	1.35	2 (11%)
2	A2M	2	1678	2	18,25,26	1.01	1 (5%)	18,36,39	1.26	2 (11%)
2	PSU	2	801	2	18,21,22	1.36	2 (11%)	22,30,33	1.91	3 (13%)
2	4AC	2	1842	2	21,24,25	1.11	2 (9%)	29,34,37	1.23	3 (10%)
2	PSU	2	210	2	18,21,22	1.35	2 (11%)	22,30,33	1.87	3 (13%)
2	A2M	2	27	2,39	18,25,26	1.04	1 (5%)	18,36,39	1.15	2 (11%)
3	SAC	A	2	3	7,8,9	0.52	0	8,9,11	0.86	1 (12%)
21	SAC	S	2	21	7,8,9	0.53	0	8,9,11	0.91	1 (12%)
2	PSU	2	1056	2	18,21,22	1.35	2 (11%)	22,30,33	1.88	3 (13%)
2	A2M	2	576	2	18,25,26	0.98	1 (5%)	18,36,39	1.22	2 (11%)
2	OMC	2	1391	2	19,22,23	0.81	0	26,31,34	0.83	0
2	OMC	2	462	2	19,22,23	0.81	0	26,31,34	0.81	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	PSU	2	1244	2	-	0/7/25/26	0/2/2/2
2	OMU	2	1442	2,39	-	0/9/27/28	0/2/2/2
2	MA6	2	1850	2	-	0/7/29/30	0/3/3/3
2	PSU	2	105	2	-	0/7/25/26	0/2/2/2
2	PSU	2	1177	2	-	0/7/25/26	0/2/2/2
2	PSU	2	572	2	-	0/7/25/26	0/2/2/2
2	OMU	2	1326	2,39	-	0/9/27/28	0/2/2/2
2	OMG	2	509	2,39	-	3/5/27/28	0/3/3/3
2	A2M	2	99	2,39	-	2/5/27/28	0/3/3/3
2	B8N	2	1248	2	-	4/16/34/35	0/2/2/2
2	PSU	2	1445	2	-	0/7/25/26	0/2/2/2
2	OMU	2	116	2	-	1/9/27/28	0/2/2/2

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	6MZ	2	1832	2,39	-	0/5/27/28	0/3/3/3
2	OMG	2	1328	2	-	0/5/27/28	0/3/3/3
2	OMU	2	627	2	-	1/9/27/28	0/2/2/2
2	PSU	2	1367	2	-	0/7/25/26	0/2/2/2
2	PSU	2	119	2	-	0/7/25/26	0/2/2/2
24	AME	V	1	24	-	2/9/10/12	-
2	OMC	2	174	2,39	-	0/9/27/28	0/2/2/2
2	PSU	2	814	2	-	0/7/25/26	0/2/2/2
2	A2M	2	159	2	-	0/5/27/28	0/3/3/3
26	HY3	X	62	26	-	1/1/12/14	0/1/1/1
2	PSU	2	686	2	-	0/7/25/26	0/2/2/2
2	OMC	2	1703	2	-	1/9/27/28	0/2/2/2
2	PSU	2	1625	2	-	0/7/25/26	0/2/2/2
2	PSU	2	651	2	-	0/7/25/26	0/2/2/2
2	A2M	2	468	2	-	0/5/27/28	0/3/3/3
2	G7M	2	1639	2	-	0/3/25/26	0/3/3/3
2	PSU	2	649	2	-	0/7/25/26	0/2/2/2
2	PSU	2	815	2	-	0/7/25/26	0/2/2/2
2	PSU	2	1692	2	-	0/7/25/26	0/2/2/2
2	A2M	2	590	2	-	0/5/27/28	0/3/3/3
2	PSU	2	36	2	-	0/7/25/26	0/2/2/2
22	NMM	T	67	22	-	0/9/11/13	-
2	A2M	2	166	2	-	0/5/27/28	0/3/3/3
2	PSU	2	109	2	-	0/7/25/26	0/2/2/2
2	PSU	2	93	2	-	0/7/25/26	0/2/2/2
2	PSU	2	1081	2	-	1/7/25/26	0/2/2/2
2	PSU	2	863	2	-	0/7/25/26	0/2/2/2
2	PSU	2	1347	2	-	0/7/25/26	0/2/2/2
2	PSU	2	1643	2,39	-	0/7/25/26	0/2/2/2
2	PSU	2	1045	2	-	0/7/25/26	0/2/2/2
2	PSU	2	406	2	-	0/7/25/26	0/2/2/2
2	PSU	2	34	2	-	0/7/25/26	0/2/2/2
2	PSU	2	1238	2	-	0/7/25/26	0/2/2/2
2	OMU	2	1288	2	-	0/9/27/28	0/2/2/2
2	OMU	2	172	2	-	0/9/27/28	0/2/2/2
2	PSU	2	609	2	-	0/7/25/26	0/2/2/2
2	PSU	2	866	2	-	0/7/25/26	0/2/2/2
2	OMG	2	1447	2	-	2/5/27/28	0/3/3/3
2	MA6	2	1851	2	-	1/7/29/30	0/3/3/3
2	OMG	2	644	2	-	3/5/27/28	0/3/3/3
2	OMG	2	1490	2,39	-	0/5/27/28	0/3/3/3
2	OMG	2	683	2	-	1/5/27/28	0/3/3/3

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	A2M	2	1031	2	-	0/5/27/28	0/3/3/3
2	OMG	2	601	2	-	0/5/27/28	0/3/3/3
2	OMC	2	517	2	-	0/9/27/28	0/2/2/2
2	A2M	2	1383	2	-	0/5/27/28	0/3/3/3
2	PSU	2	822	2	-	2/7/25/26	0/2/2/2
2	4AC	2	1337	2	-	2/11/29/30	0/2/2/2
2	OMU	2	799	2	-	2/9/27/28	0/2/2/2
2	PSU	2	1232	2	-	0/7/25/26	0/2/2/2
2	PSU	2	1174	2	-	0/7/25/26	0/2/2/2
2	PSU	2	681	2	-	0/7/25/26	0/2/2/2
2	OMU	2	354	2	-	1/9/27/28	0/2/2/2
2	OMU	2	1804	2	-	0/9/27/28	0/2/2/2
2	PSU	2	1136	2	-	0/7/25/26	0/2/2/2
2	OMU	2	121	2	-	0/9/27/28	0/2/2/2
2	A2M	2	512	2	-	3/5/27/28	0/3/3/3
2	OMU	2	428	2	-	4/9/27/28	0/2/2/2
2	A2M	2	484	2	-	2/5/27/28	0/3/3/3
2	OMG	2	436	2	-	0/5/27/28	0/3/3/3
2	PSU	2	218	2	-	0/7/25/26	0/2/2/2
2	PSU	2	966	2	-	0/7/25/26	0/2/2/2
2	PSU	2	1046	2	-	0/7/25/26	0/2/2/2
2	OMC	2	1272	2	-	1/9/27/28	0/2/2/2
17	IAS	O	138	17	-	1/7/7/8	-
2	PSU	2	1004	2	-	0/7/25/26	0/2/2/2
2	PSU	2	296	2	-	0/7/25/26	0/2/2/2
2	OMC	2	797	2	-	1/9/27/28	0/2/2/2
2	A2M	2	668	2,39	-	3/5/27/28	0/3/3/3
2	A2M	2	1678	2	-	0/5/27/28	0/3/3/3
2	PSU	2	801	2	-	1/7/25/26	0/2/2/2
2	4AC	2	1842	2	-	2/11/29/30	0/2/2/2
2	PSU	2	210	2	-	0/7/25/26	0/2/2/2
2	A2M	2	27	2,39	-	0/5/27/28	0/3/3/3
3	SAC	A	2	3	-	1/7/8/10	-
21	SAC	S	2	21	-	0/7/8/10	-
2	PSU	2	1056	2	-	0/7/25/26	0/2/2/2
2	A2M	2	576	2	-	3/5/27/28	0/3/3/3
2	OMC	2	1391	2	-	1/9/27/28	0/2/2/2
2	OMC	2	462	2	-	0/9/27/28	0/2/2/2

The worst 5 of 150 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	2	1639	G7M	C5-C4	7.37	1.53	1.39
2	2	1639	G7M	O6-C6	7.18	1.37	1.23
26	X	62	HY3	C3-CA	-4.94	1.50	1.55
2	2	1639	G7M	C2-N2	4.43	1.44	1.34
2	2	1639	G7M	C2-N1	3.80	1.47	1.37

The worst 5 of 245 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	2	822	PSU	N1-C2-N3	6.21	122.16	115.13
2	2	36	PSU	N1-C2-N3	6.13	122.07	115.13
2	2	34	PSU	N1-C2-N3	6.13	122.07	115.13
2	2	93	PSU	N1-C2-N3	6.11	122.05	115.13
2	2	572	PSU	N1-C2-N3	6.11	122.05	115.13

There are no chirality outliers.

5 of 53 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	2	428	OMU	C2'-C1'-N1-C2
2	2	428	OMU	C2'-C1'-N1-C6
2	2	644	OMG	O4'-C4'-C5'-O5'
2	2	644	OMG	C3'-C4'-C5'-O5'
2	2	668	A2M	C1'-C2'-O2'-CM'

There are no ring outliers.

No monomer is involved in short contacts.

4.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

4.6 Ligand geometry [i](#)

Of 231 ligands modelled in this entry, 117 are unknown and 114 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

4.7 Other polymers [i](#)

There are no such residues in this entry.

4.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

5 Map visualisation

This section contains visualisations of the EMDB entry EMD-17804. 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.

5.1 Orthogonal projections

This section was not generated.

5.2 Central slices

This section was not generated.

5.3 Largest variance slices

This section was not generated.

5.4 Orthogonal standard-deviation projections (False-color)

This section was not generated.

5.5 Orthogonal surface views

This section was not generated.

5.6 Mask visualisation

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

6 Map analysis

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

6.1 Map-value distribution

This section was not generated.

6.2 Volume estimate versus contour level

This section was not generated.

6.3 Rotationally averaged power spectrum

This section was not generated. The rotationally averaged power spectrum had issues being displayed.

7 Fourier-Shell correlation

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

8 Map-model fit

This section was not generated.