wwPDB EM Validation Summary Report ⓘ

Nov 7, 2022 – 05:16 AM EST

PDB ID	:	6NCL
EMDB ID	:	EMD-0436
Title	:	Near-atomic structure of icosahedrally averaged PBCV-1 capsid
Authors	:	Fang, Q.; Rossmann, M.G.
Deposited on	:	2018-12-11
Resolution	:	3.50 Å(reported)

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

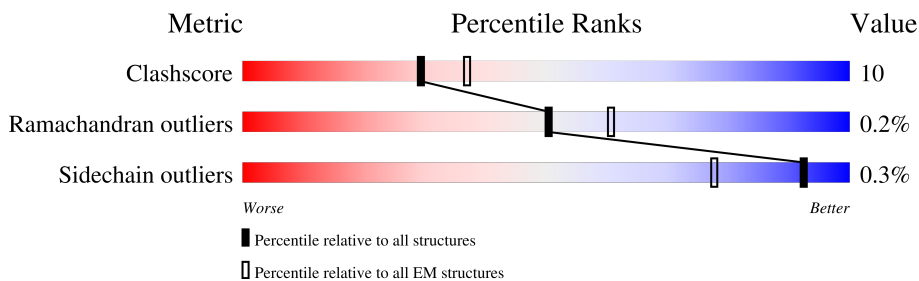|		
EMDB validation analysis	:	0.0.1.dev43
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	FAILED
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.2

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 3.50 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	Percentile Ranks	Value
Clashscore		10
Ramachandran outliers		0.2%
Sidechain outliers		0.3%

Worse   *Better*

■ Percentile relative to all structures

▯ Percentile relative to all EM structures
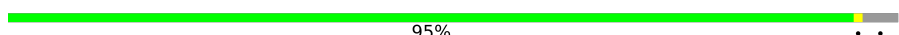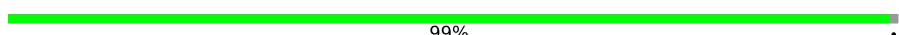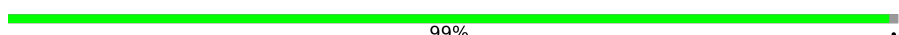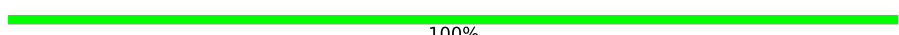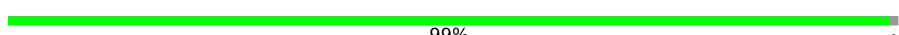
Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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 <=5%

Mol	Chain	Length	Quality of chain
1	a0	352	28% 72%
2	a1	210	47% · 49%
3	a2	289	31% · 67%
3	a3	289	26% 74%
4	a4	256	56% · 40%
5	a5	216	86% · 12%
6	a6	170	98% · ·
7	a7	151	47% · · 48%
8	a8	146	95% · ·

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Mol	Chain	Length	Quality of chain
9	a9	207	23% · 77%
9	b0	207	26% · 71%
9	b1	207	24% · 74%
9	b2	207	25% · 75%
9	b3	207	24% · 75%
9	b4	207	23% · 75%
9	b5	207	25% · 72%
9	b7	207	24% · 75%
9	b8	207	27% · 72%
9	c0	207	24% · 75%
9	c1	207	23% · 75%
9	l5	207	27% · 72%
10	b6	576	80% · 18%
11	c2	181	56% · 43%
11	c3	181	33% · 67%
11	c4	181	30% · 68%
11	c5	181	31% · 68%
12	c6	171	81% · 18%
12	c7	171	78% · 8% · 14%
12	c8	171	68% · 32%
13	c9	173	95% · ·
14	d0	437	99% ·
14	d1	437	99% ·
14	d2	437	100%
14	d3	437	99% ·

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Mol	Chain	Length	Quality of chain
14	d4	437	99%
14	d5	437	100%
14	d6	437	100%
14	d7	437	100%
14	d8	437	100%
14	d9	437	100%
14	e0	437	99%
14	e1	437	99%
14	e2	437	99%
14	e3	437	99%
14	e4	437	99%
14	e5	437	100%
14	e6	437	100%
14	e7	437	99%
14	e8	437	100%
14	e9	437	99%
14	f0	437	99%
14	f1	437	100%
14	f2	437	99%
14	f3	437	100%
14	f4	437	99%
14	f5	437	99%
14	f6	437	100%
14	f7	437	99%
14	f8	437	99%
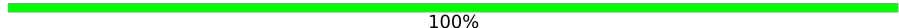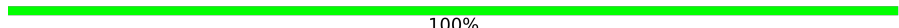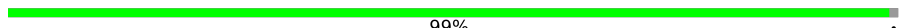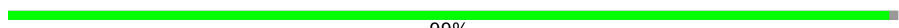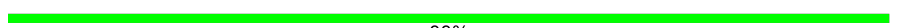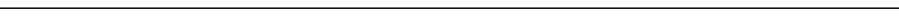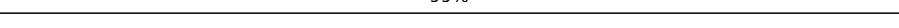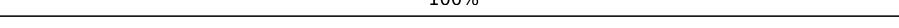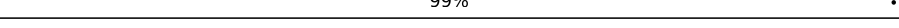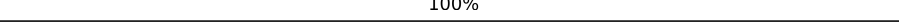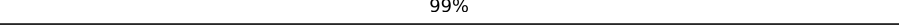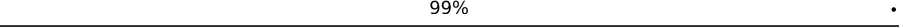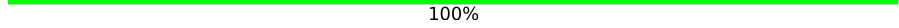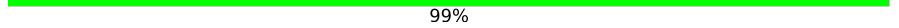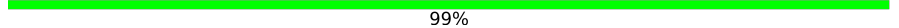
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Mol	Chain	Length	Quality of chain
14	f9	437	99%
14	g0	437	99%
14	g1	437	100%
14	g2	437	99%
14	g3	437	99%
14	g4	437	99%
14	g5	437	99%
14	g6	437	100%
14	g7	437	99%
14	g8	437	100%
14	g9	437	100%
14	h0	437	100%
14	h1	437	100%
14	h2	437	99%
14	h3	437	99%
14	h4	437	99%
14	h5	437	99%
14	h6	437	99%
14	h7	437	100%
14	h8	437	100%
14	h9	437	100%
14	i0	437	100%
14	i1	437	99%
14	i2	437	99%
14	i3	437	99%
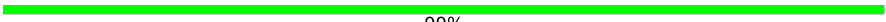
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Mol	Chain	Length	Quality of chain
14	i4	437	100%
14	i5	437	100%
14	i6	437	99%
14	i7	437	99%
14	i8	437	99%
14	i9	437	100%
14	j0	437	99%
14	j1	437	100%
14	j2	437	99%
14	j3	437	99%
14	j4	437	99%
14	j5	437	99%
14	j6	437	99%
14	j7	437	100%
14	j8	437	99%
14	j9	437	100%
14	k0	437	99%
14	k1	437	100%
14	k2	437	99%
14	k3	437	99%
14	k4	437	100%
14	k5	437	100%
14	k6	437	99%
14	k7	437	99%
14	k8	437	99%

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Mol	Chain	Length	Quality of chain
14	k9	437	100%
14	l0	437	100%
14	l1	437	99%
14	l2	437	99%
14	l3	437	100%
15	l4	98	67% 33%

2 Entry composition ⓘ

There are 15 unique types of molecules in this entry. The entry contains 305842 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 P14.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	a0	97	Total	C	N	O	S	0	0
			733	463	122	145	3		

- Molecule 2 is a protein called P9.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	a1	107	Total	C	N	O	S	0	0
			718	445	122	146	5		

- Molecule 3 is a protein called P10.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	a2	94	Total	C	N	O	S	0	0
			650	411	110	125	4		
3	a3	74	Total	C	N	O	S	0	0
			485	308	86	88	3		

- Molecule 4 is a protein called P7.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	a4	153	Total	C	N	O	S	0	0
			1088	689	192	197	10		

- Molecule 5 is a protein called P6.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	a5	189	Total	C	N	O	S	0	0
			1326	878	210	236	2		

- Molecule 6 is a protein called P1.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	a6	167	Total 1192	C 756	N 203	O 229	S 4	0	0

- Molecule 7 is a protein called P12.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	a7	78	Total 543	C 357	N 88	O 95	S 3	0	0

- Molecule 8 is a protein called P5.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	a8	142	Total 988	C 638	N 168	O 180	S 2	0	0

- Molecule 9 is a protein called P11.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	a9	47	Total 311	C 200	N 53	O 57	S 1	0	0
9	b0	59	Total 398	C 248	N 70	O 79	S 1	0	0
9	b1	54	Total 368	C 238	N 64	O 66		0	0
9	b2	51	Total 350	C 227	N 59	O 63	S 1	0	0
9	b3	51	Total 335	C 216	N 56	O 62	S 1	0	0
9	b4	52	Total 350	C 228	N 61	O 60	S 1	0	0
9	b5	57	Total 367	C 237	N 64	O 64	S 2	0	0
9	b7	52	Total 375	C 244	N 63	O 67	S 1	0	0
9	b8	57	Total 379	C 244	N 66	O 69		0	0
9	c0	51	Total 338	C 214	N 59	O 64	S 1	0	0
9	c1	51	Total 335	C 213	N 59	O 61	S 2	0	0
9	l5	58	Total 392	C 253	N 67	O 72		0	0

- Molecule 10 is a protein called P2.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	b6	475	Total 3210	C 2016	N 587	O 603	S 4	0	0

- Molecule 11 is a protein called P4.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	c2	103	Total 603	C 369	N 110	O 123	S 1	0	0
11	c3	60	Total 389	C 242	N 69	O 78		0	0
11	c4	58	Total 369	C 230	N 65	O 74		0	0
11	c5	58	Total 396	C 252	N 72	O 72		0	0

- Molecule 12 is a protein called P3.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	c6	141	Total 951	C 602	N 170	O 177	S 2	0	0
12	c7	147	Total 1004	C 648	N 172	O 180	S 4	0	0
12	c8	116	Total 813	C 519	N 141	O 149	S 4	0	0

- Molecule 13 is a protein called P8.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	c9	166	Total 1191	C 776	N 198	O 214	S 3	0	0

- Molecule 14 is a protein called Major capsid protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	d0	432	Total 3369	C 2142	N 570	O 649	S 8	0	0
14	d1	434	Total 3382	C 2149	N 573	O 652	S 8	0	0
14	d2	435	Total 3387	C 2152	N 574	O 653	S 8	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
14	d3	434	Total 3382	C 2149	N 573	O 652	S 8	0	0
14	d4	434	Total 3382	C 2149	N 573	O 652	S 8	0	0
14	d5	435	Total 3383	C 2150	N 574	O 651	S 8	0	0
14	d6	435	Total 3387	C 2152	N 574	O 653	S 8	0	0
14	d7	435	Total 3381	C 2149	N 571	O 653	S 8	0	0
14	d8	435	Total 3390	C 2153	N 575	O 654	S 8	0	0
14	d9	436	Total 3395	C 2156	N 576	O 655	S 8	0	0
14	e0	435	Total 3390	C 2153	N 575	O 654	S 8	0	0
14	e1	434	Total 3382	C 2149	N 573	O 652	S 8	0	0
14	e2	434	Total 3382	C 2149	N 573	O 652	S 8	0	0
14	e3	435	Total 3387	C 2152	N 574	O 653	S 8	0	0
14	e4	434	Total 3382	C 2149	N 573	O 652	S 8	0	0
14	e5	435	Total 3390	C 2153	N 575	O 654	S 8	0	0
14	e6	436	Total 3395	C 2156	N 576	O 655	S 8	0	0
14	e7	435	Total 3390	C 2153	N 575	O 654	S 8	0	0
14	e8	435	Total 3390	C 2153	N 575	O 654	S 8	0	0
14	e9	435	Total 3387	C 2152	N 574	O 653	S 8	0	0
14	f0	434	Total 3375	C 2143	N 573	O 651	S 8	0	0
14	f1	435	Total 3387	C 2152	N 574	O 653	S 8	0	0
14	f2	436	Total 3395	C 2156	N 576	O 655	S 8	0	0
14	f3	435	Total 3383	C 2147	N 575	O 653	S 8	0	0

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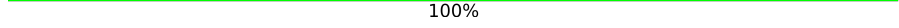| Mol	Chain	Residues	Atoms					AltConf	Trace
14	f4	434	Total 3382	C 2149	N 573	O 652	S 8	0	0
14	f5	434	Total 3376	C 2146	N 570	O 652	S 8	0	0
14	f6	435	Total 3387	C 2152	N 574	O 653	S 8	0	0
14	f7	434	Total 3372	C 2142	N 572	O 650	S 8	0	0
14	f8	433	Total 3378	C 2147	N 572	O 651	S 8	0	0
14	f9	434	Total 3379	C 2145	N 574	O 652	S 8	0	0
14	g0	435	Total 3387	C 2152	N 574	O 653	S 8	0	0
14	g1	435	Total 3387	C 2152	N 574	O 653	S 8	0	0
14	g2	434	Total 3382	C 2149	N 573	O 652	S 8	0	0
14	g3	434	Total 3382	C 2149	N 573	O 652	S 8	0	0
14	g4	435	Total 3390	C 2153	N 575	O 654	S 8	0	0
14	g5	435	Total 3387	C 2152	N 574	O 653	S 8	0	0
14	g6	435	Total 3387	C 2152	N 574	O 653	S 8	0	0
14	g7	434	Total 3376	C 2146	N 570	O 652	S 8	0	0
14	g8	436	Total 3395	C 2156	N 576	O 655	S 8	0	0
14	g9	435	Total 3390	C 2153	N 575	O 654	S 8	0	0
14	h0	435	Total 3387	C 2152	N 574	O 653	S 8	0	0
14	h1	435	Total 3387	C 2152	N 574	O 653	S 8	0	0
14	h2	434	Total 3382	C 2149	N 573	O 652	S 8	0	0
14	h3	435	Total 3390	C 2153	N 575	O 654	S 8	0	0
14	h4	434	Total 3382	C 2149	N 573	O 652	S 8	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
14	h5	434	Total 3382	C 2149	N 573	O 652	S 8	0	0
14	h6	434	Total 3382	C 2149	N 573	O 652	S 8	0	0
14	h7	436	Total 3395	C 2156	N 576	O 655	S 8	0	0
14	h8	435	Total 3387	C 2152	N 574	O 653	S 8	0	0
14	h9	435	Total 3381	C 2149	N 571	O 653	S 8	0	0
14	i0	435	Total 3390	C 2153	N 575	O 654	S 8	0	0
14	i1	434	Total 3382	C 2149	N 573	O 652	S 8	0	0
14	i2	434	Total 3382	C 2149	N 573	O 652	S 8	0	0
14	i3	434	Total 3382	C 2149	N 573	O 652	S 8	0	0
14	i4	435	Total 3384	C 2150	N 572	O 654	S 8	0	0
14	i5	436	Total 3395	C 2156	N 576	O 655	S 8	0	0
14	i6	434	Total 3382	C 2149	N 573	O 652	S 8	0	0
14	i7	434	Total 3382	C 2149	N 573	O 652	S 8	0	0
14	i8	436	Total 3388	C 2150	N 576	O 654	S 8	0	0
14	i9	435	Total 3387	C 2152	N 574	O 653	S 8	0	0
14	j0	436	Total 3392	C 2155	N 576	O 653	S 8	0	0
14	j1	435	Total 3387	C 2152	N 574	O 653	S 8	0	0
14	j2	435	Total 3387	C 2152	N 574	O 653	S 8	0	0
14	j3	435	Total 3387	C 2152	N 575	O 652	S 8	0	0
14	j4	434	Total 3382	C 2149	N 573	O 652	S 8	0	0
14	j5	434	Total 3382	C 2149	N 573	O 652	S 8	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
14	j6	434	Total	C	N	O	S	0	0
			3382	2149	573	652	8		
14	j7	436	Total	C	N	O	S	0	0
			3395	2156	576	655	8		
14	j8	435	Total	C	N	O	S	0	0
			3390	2153	575	654	8		
14	j9	435	Total	C	N	O	S	0	0
			3387	2152	574	653	8		
14	k0	434	Total	C	N	O	S	0	0
			3382	2149	573	652	8		
14	k1	435	Total	C	N	O	S	0	0
			3387	2152	574	653	8		
14	k2	435	Total	C	N	O	S	0	0
			3387	2152	574	653	8		
14	k3	434	Total	C	N	O	S	0	0
			3382	2149	573	652	8		
14	k4	436	Total	C	N	O	S	0	0
			3395	2156	576	655	8		
14	k5	436	Total	C	N	O	S	0	0
			3395	2156	576	655	8		
14	k6	435	Total	C	N	O	S	0	0
			3391	2153	575	655	8		
14	k7	435	Total	C	N	O	S	0	0
			3387	2151	574	654	8		
14	k8	435	Total	C	N	O	S	0	0
			3391	2153	575	655	8		
14	k9	435	Total	C	N	O	S	0	0
			3381	2149	571	653	8		
14	l0	435	Total	C	N	O	S	0	0
			3391	2153	575	655	8		
14	l1	435	Total	C	N	O	S	0	0
			3391	2153	575	655	8		
14	l2	434	Total	C	N	O	S	0	0
			3382	2149	573	652	8		
14	l3	436	Total	C	N	O	S	0	0
			3396	2156	576	656	8		

- Molecule 15 is a protein called P13.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	l4	66	Total	C	N	O	S	0	0
			487	313	82	90	2		

3   Residue-property plots ⓘ

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: P14

Chain a0:

- Molecule 2: P9

Chain a1:

- Molecule 3: P10

Chain a2:

• Molecule 3: P10

Chain a3:

• Molecule 4: P7

Chain a4:

• Molecule 5: P6

Chain a5:

• Molecule 6: P1

Chain a6:

• Molecule 7: P12

Chain a7:

• Molecule 8: P5

Chain a8:

95%

MET ASP SER R4 A7 P36 S139 Y144 V145 ARG

• Molecule 9: P11

Chain a9:

23% 77%

MET ASP MET HIS MET ILE VAL LYS VAL VAL ALA ILE ALA VAL PHE LEU LEU TYR LEU PHE LEU VAL LEU VAL TYR LYS LEU TRP GLU SER MET ASN LYS PRO ASN ALA SER PRO LEU LYS ILE GLN ASN PRO GLU LYS MET ASN SER ALA GLY GLY TYR ASP GLU ASP ASP ILE TYR

TYR PRO GLU THR ASP ALA GLU ASP ASP ILE TYR THR GLY GLU ASP THR ASP MET TYR ASP GLY GLU ASP ASP ILE TYR VAL GLN GLY GLY ASP ASP ILE GLU GLU ALA GLU GLU PRO ASP SER ALA ASP MET GLU GLN ASP VAL LYS VAL GLN GLN PRO MET

MET PRO LEU LEU THR PRO SER SER GLN LEU LEU PRO LYS PRO SER PRO GLU ALA ALA ASP PHE GLN PHE ALA PRO LYS ASN LEU GLN ILE ALA GLN ASN PHE LEU THR ALA THR GLN W160 F206 GLY

• Molecule 9: P11

Chain b0:

26% 71%

MET ASP MET HIS MET ILE VAL LYS VAL VAL ALA ILE ALA VAL PHE LEU LEU TYR LYS LEU TRP GLU SER MET ASN LYS PRO ASN ALA SER PRO LEU LYS ILE GLN ASN PRO GLU LYS MET ASN SER ALA GLY GLY TYR ASP GLU ASP ASP ILE TYR

TYR PRO GLU THR ASP ALA GLU ASP ASP ILE TYR THR GLY GLU ASP THR ASP MET TYR ASP GLY GLU ASP ASP ILE TYR VAL GLN GLY GLY ASP ASP ILE GLU GLU ALA GLU GLU PRO ASP SER ALA ASP MET GLU GLN ASP VAL LYS VAL GLN GLN PRO MET

MET PRO LEU LEU THR PRO SER SER GLN LEU LEU PRO LYS PRO SER PRO GLU ALA ALA ASP PHE GLN PHE ALA PRO K147 V188 W191 M192 D197 P198 L205 PHE GLY

• Molecule 9: P11

Chain b1:

24% 74%

MET ASP MET HIS MET ILE VAL LYS VAL VAL ALA ILE ALA VAL PHE LEU LEU TYR LYS LEU TRP GLU SER MET ASN LYS PRO ASN ALA SER PRO LEU LYS ILE GLN ASN PRO GLU LYS TYR MET ASN SER ALA GLU GLY GLY TYR ASP ALA GLU ASP ASP ILE TYR

TYR PRO GLU THR ASP ALA GLU ASP ASP ILE TYR THR GLY GLU ASP THR ASP MET TYR ASP GLY GLU ASP ASP ILE TYR VAL GLN GLY ASP ASP ILE GLU ASP GLU ALA GLU GLU PRO TYR ASP ASP SER ALA MET GLU GLN ASP VAL LYS VAL GLN GLN PRO MET

MET PRO LEU LEU THR PRO SER SER GLN LEU LEU PRO LYS PRO SER PRO GLU ALA ALA ASP PHE GLN PHE ALA PRO LYS ASN LEU GLN ILE ALA GLN N153 T158 Q159 W160 T165 M192 F206 GLY

• Molecule 9: P11

Chain b2:

25% 75%

MET ASP MET HIS MET ILE VAL LYS VAL VAL ALA ILE ALA VAL PHE LEU LEU TYR LYS LEU TRP GLU SER MET ASN LYS PRO ASN ALA SER PRO LEU LYS ILE GLN ASN PRO GLU TYR GLU TYR MET ASN SER ALA GLU GLY GLY TYR ASP ALA GLU ASP ASP ILE TYR

TYR PRO GLU THR ASP ALA GLU ASP ASP ILE TYR THR GLY GLU ASP MET TYR ASP GLY ASP ASP ASP ILE TYR VAL GLN GLY GLY ASP ASP ILE GLU GLU ALA GLU ASP GLU PRO TYR ASP ASP SER ALA MET GLU GLN ASP VAL LYS VAL GLN GLN PRO MET

MET PRO LEU LEU THR PRO SER SER GLN LEU LEU PRO LYS PRO SER PRO GLU ALA ALA ASP PHE ALA GLN PHE ALA PRO LYS ASN LEU GLN ALA GLN ASN PHE **L155** **L205** PHE GLY

• Molecule 9: P11

Chain b3: 24% · 75%

MET ASP MET HIS MET ILE VAL LYS VAL VAL ALA ILE LEU ALA VAL LEU VAL LEU PHE LEU VAL TYR LYS LEU TRP GLU SER MET ASN LYS PRO ASN ALA SER PRO LEU LYS ILE GLN ASN PRO TYR GLU LYS TYR MET ASN SER ALA GLU GLY GLY GLU TYR ASP ALA GLU ASP ASP ILE TYR

TYR PRO GLU THR ASP ALA GLU ASP ASP ILE TYR THR GLY GLU THR ASP ASP MET TYR ASP GLY GLU ASP ASP ILE TYR VAL GLN GLU GLY ASP ASP ILE GLU ASP ALA GLU ASP GLU PRO TYR ASP ASP SER ALA ASP MET GLU GLN ASP VAL PRO LYS VAL GLN GLN PRO MET

MET PRO LEU LEU THR PRO SER SER GLN LEU LEU PRO LYS PRO SER PRO GLU ALA ALA ASP PHE ALA GLN PHE ALA PRO LYS ASN LEU GLN ALA GLN ASN PHE **L155** **D197** **P198** **L205** PHE GLY

• Molecule 9: P11

Chain b4: 23% · 75%

MET ASP MET HIS MET ILE VAL LYS VAL VAL ALA ILE LEU ALA VAL LEU VAL LEU PHE LEU VAL TYR LYS LEU TRP GLU SER MET ASN LYS PRO ASN ALA SER PRO LEU LYS ILE GLN ASN PRO TYR GLU LYS TYR MET ASN SER ALA GLU GLY GLY GLU TYR ASP ALA GLU ASP ASP ILE TYR

TYR PRO GLU THR ASP ALA GLU ASP ASP ILE TYR THR GLY GLU THR ASP ASP MET TYR ASP GLY GLU ASP ASP ILE TYR VAL GLN GLU GLY ASP ASP ILE GLU ASP ALA GLU ASP GLU PRO TYR ASP ASP SER ALA ASP MET GLU GLN ASP VAL PRO LYS VAL GLN GLN PRO MET

MET PRO LEU LEU THR PRO SER SER GLN LEU LEU PRO LYS PRO SER PRO GLU ALA ALA ASP PHE ALA GLN PHE ALA PRO LYS ASN LEU GLN ALA GLN ASN PHE **L155** **T158** **V188** **W191** **P204** **L205** **F206** GLY

• Molecule 9: P11

Chain b5: 25% · 72%

MET ASP MET HIS MET ILE VAL LYS VAL VAL ALA ILE LEU ALA VAL LEU VAL TYR LYS LEU TRP GLU SER MET ASN LYS PRO ASN ALA SER PRO LEU LYS ILE GLN ASN PRO TYR GLU LYS TYR MET ASN SER ALA GLU GLY GLY GLU TYR ASP ALA GLU ASP ASP ILE TYR

TYR PRO GLU THR ASP ALA GLU ASP ASP ILE TYR THR GLY GLU THR ASP ASP MET TYR ASP GLY GLU ASP ASP ILE TYR VAL GLN GLU GLY ASP ASP ILE GLU ASP ALA GLU ASP GLU PRO TYR ASP ASP SER ALA ASP MET GLU GLN ASP VAL PRO LYS VAL GLN GLN PRO MET

MET PRO LEU LEU THR PRO SER SER GLN LEU LEU PRO LYS PRO SER PRO GLU ALA ALA ASP PHE ALA GLN PHE ALA PRO LYS ASN LEU GLN ALA GLN ASN **L149** **N174** **Y175** **S195** **V196** **P204** **L205** PHE GLY

• Molecule 9: P11

Chain b7: 24% · 75%

MET ASP MET HIS MET ILE VAL LYS VAL VAL ALA ILE LEU ALA VAL LEU PHE LEU VAL TYR LYS LEU TRP GLU SER MET ASN LYS PRO ASN ALA SER PRO LEU LYS ILE GLN ASN PRO TYR GLU LYS TYR MET ASN SER ALA GLU GLY GLY GLU TYR ASP ALA GLU ASP ASP ILE TYR

TYR PRO GLU THR ASP ALA GLU ASP ASP ILE TYR THR GLY GLU THR ASP ASP MET TYR ASP GLY GLU ASP ASP ILE TYR VAL GLN GLU GLY ASP ASP ILE GLU ASP ALA GLU ASP GLU PRO TYR ASP ASP SER ALA ASP MET GLU GLN ASP VAL PRO LYS VAL GLN GLN PRO MET

MET PRO LEU LEU THR PRO SER SER GLN LEU LEU PRO LYS PRO SER PRO GLU ALA ALA ASP PHE ALA GLN PHE ALA PRO LYS ASN LEU GLN ALA GLN ASN **F154** **V188** **W191** **L205** PHE GLY

• Molecule 9: P11

Chain b8:

27%   72%

MET ASP MET HIS MET ILE VAL LYS VAL VAL ALA ILE ALA VAL LEU PHE LEU LEU VAL LEU TYR LYS LEU TRP GLU SER MET ASN LYS PRO ASN ALA SER PRO LEU LYS ILE GLU GLN ASN PRO TYR GLU LYS TYR MET ASN SER ALA GLU GLY GLY GLU TYR ASP ALA GLU ASP ASP ILE TYR

TYR PRO GLU THR ASP ALA GLU ASP ASP ILE TYR THR GLY GLU ASP THR ASP ASP MET TYR ASP GLY GLU ASP ASP ILE TYR VAL GLN GLY GLY ASP ILE GLU ASP ALA GLU GLU ASP ASP ILE TYR ASP ASP SER ALA ASP MET GLU GLN ASP VAL PRO LYS VAL GLN GLN PRO MET

MET PRO LEU LEU THR PRO SER SER GLN LEU LEU PRO LYS PRO SER GLU ALA ALA ASP PHE ALA GLN PHE ALA PRO LYS ASN LEU GLN ALA GLN ASN **Q150** PHE **P190** **F206** GLY

• Molecule 9: P11

Chain c0:

24%   •   75%

MET ASP MET HIS MET ILE VAL LYS VAL VAL ALA ILE ALA VAL LEU PHE LEU LEU VAL LEU TYR LYS LEU TRP GLU SER MET ASN LYS PRO ASN ALA SER PRO LEU LYS ILE GLU GLN ASN PRO TYR GLU LYS TYR MET ASN SER ALA GLU GLY GLY GLU TYR ASP ALA GLU ASP ASP ILE TYR

TYR PRO GLU THR ASP ALA GLU ASP ASP ILE TYR THR GLY GLU ASP THR ASP ASP MET TYR ASP GLY GLU ASP ASP ILE TYR VAL GLN GLY GLY ASP ILE GLU ASP ALA GLU GLU ASP ASP ILE TYR ASP ASP SER ALA ASP MET GLU GLN ASP VAL PRO LYS VAL GLN GLN PRO MET

MET PRO LEU LEU THR PRO SER SER GLN LEU LEU PRO LYS PRO SER GLU ALA ALA ASP PHE ALA GLN PHE ALA PRO LYS ASN LEU GLN ALA GLN ASN PHE **L155** **D197** **P198** **L205** PHE GLY

• Molecule 9: P11

Chain c1:

23%   •   75%

MET ASP MET HIS MET ILE VAL LYS VAL VAL ALA ILE ALA VAL LEU PHE LEU LEU VAL LEU TYR LYS LEU TRP GLU SER MET ASN LYS PRO ASN ALA SER PRO LEU LYS ILE GLU GLN ASN PRO TYR GLU LYS TYR MET ASN SER ALA GLU GLY GLY GLU TYR ASP ALA GLU ASP ASP ILE TYR

TYR PRO GLU THR ASP ALA GLU ASP ASP ILE TYR THR GLY GLU ASP THR ASP ASP MET TYR ASP GLY GLU ASP ASP ILE TYR VAL GLN GLY GLY ASP ILE GLU ASP ALA GLU GLU ASP ASP ILE TYR ASP ASP SER ALA ASP MET GLU GLN ASP VAL PRO LYS VAL GLN GLN PRO MET

MET PRO LEU LEU THR PRO SER SER GLN LEU LEU PRO LYS PRO SER GLU ALA ALA ASP PHE ALA GLN PHE ALA PRO LYS ASN LEU GLN ALA GLN ASN PHE **L155** **M192** **M193** **D197** **P198** **L205** PHE GLY

• Molecule 9: P11

Chain l5:

27%   •   72%

MET ASP MET HIS MET ILE VAL LYS VAL VAL ALA ILE ALA VAL LEU PHE LEU LEU VAL LEU TYR LYS LEU TRP GLU SER MET ASN LYS PRO ASN ALA SER PRO LEU LYS ILE GLU GLN ASN PRO TYR GLU LYS TYR MET ASN SER ALA GLU GLY GLU TYR ASP ALA GLU ASP ASP ILE TYR

TYR PRO GLU THR ASP ALA GLU ASP ASP ILE TYR THR GLY GLU ASP THR ASP ASP MET TYR ASP GLY GLU ASP ASP ILE TYR VAL GLN GLY GLY ASP ILE GLU ASP ALA GLU GLU ASP ASP ILE TYR ASP ASP SER ALA ASP MET GLU GLN ASP VAL PRO LYS VAL GLN GLN PRO MET

MET PRO LEU LEU THR PRO SER SER GLN LEU LEU PRO LYS PRO SER **P136** **D140** **F141** **M193** SER SER VAL ASP PRO ASN ILE TYR GLN LYS PRO LEU PHE GLY

• Molecule 10: P2

Chain b6:

80%   •   18%

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

LEU ASP GLU ASP TYR ASP VAL LYS PRO THR ASP MET VAL ARG LYS TYR ARG LYS LYS ALA GLU GLU LYS ARG TRP LYS LYS ALA GLN VAL PRO LYS GLU SER G94 G112 P171 G172 D173 V182 N183 T244 L281 P298 Y299 E300 T358 T411 A568 GLN LYS ASN

LYS GLN GLN ARG LYS

• Molecule 11: P4

Chain c2:

56%   •   43%

MET PHE SER ALA F5 T70 E107 LEU ALA HIS GLY THR ARG VAL LYS TYR PRO GLY GLU SER HIS ASP GLU TRP LYS ASP ALA TRP LYS ASP PHE LEU LYS LYS ILE ALA ALA ASP GLU GLY LEU TRP LYS ILE GLU GLU VAL PRO CYS SER SER VAL SER PHE TYR GLY LEU THR

LYS ASP ASP CYS ASN CYS VAL TRP ASP GLN ASP PRO GLU THR CYS PRO LYS THR ALA LYS LEU ALA

• Molecule 11: P4

Chain c3:

33%   •   67%

MET PHE SER ALA PHE R6 T22 G65 ALA THR LYS ASP THR TYR THR SER GLY LEU PHE ASP HIS THR GLY VAL ILE LYS ILE ALA PRO ARG GLY LEU LEU GLY ASN VAL ARG ASP GLU GLY GLN SER LEU ASN LYS SER ILE CYS HIS GLU LEU ALA HIS GLY THR ARG VAL LYS

TYR PRO GLY GLU SER HIS SER ASP GLU TRP LYS ASP ALA TRP LYS ASP PHE LEU LYS LYS ILE ALA ALA ASP GLU GLY LEU TRP LYS ILE GLU GLU VAL PRO CYS SER SER VAL SER PHE TYR GLY LEU THR LYS ASP ASP CYS ASN CYS VAL TRP ASP GLN ASP PRO GLU THR CYS PRO

LYS THR ALA LYS LEU ALA

• Molecule 11: P4

Chain c4:

30%   •   68%

MET PHE SER ALA F5 R6 D7 D15 T16 H17 T22 Y62 THR LYS GLY ALA THR LYS ASP THR TYR THR SER GLY LEU PHE ASP HIS THR GLY VAL ILE LYS ILE ALA PRO ARG ASP ASP GLY LEU GLY ASN VAL ARG GLU GLN LEU ASN LYS SER ILE CYS HIS GLU

LEU ALA HIS GLY THR ARG VAL LYS TYR PRO GLY GLU SER HIS SER ASP GLU TRP LYS ASP ALA TRP LYS ASP PHE LEU LYS LYS ILE ALA ALA ASP GLU GLY LEU TRP LYS ILE GLU GLU VAL PRO CYS SER SER VAL SER PHE TYR GLY LEU THR LYS ASP ASP CYS GLU ASN CYS VAL TRP

ASP GLN ASP PRO GLU THR CYS PRO LYS THR ALA LYS LEU ALA

• Molecule 11: P4

Chain c5:

31%   •   68%

MET PHE SER ALA F5 I34 Y62 THR LYS GLY ALA THR LYS ASP THR TYR THR SER GLY LEU PHE ASP HIS THR GLY VAL ILE LYS ILE ALA PRO ARG ASP GLU GLY LEU ASN VAL ARG ASP GLU GLN LEU ASN SER LEU ASN LYS SER ILE CYS HIS GLU LEU ALA HIS GLY THR ARG

VAL LYS TYR PRO GLY GLU SER HIS SER ASP GLU TRP LYS ASP ALA TRP LYS ASP PHE LEU LYS ILE ALA ALA ASP ASP GLU GLY LEU TRP LYS ILE GLU GLU VAL PRO CYS SER SER VAL SER PHE TYR GLY LEU THR LYS ASP ASP CYS GLU ASN CYS VAL TRP ASP GLN ASP PRO GLU THR

CYS PRO LYS THR ALA LYS LEU ALA

• Molecule 12: P3

Chain c6:

81% · 18%

MET ALA MET LYS THR GLN ARG LYS GLU ASN VAL LEU PHE GLN ASN VAL LYS PRO ARG GLU ILE PRO LEU VAL ASP ASN P27 T95 T162 A167 TYR GLY ASN PRO

• Molecule 12: P3

Chain c7:

78% 8% · 14%

MET ALA MET LYS THR GLN ARG LYS GLU ASN VAL LEU PHE GLN ASN VAL LYS PRO ARG GLU ILE P22 P27 T43 I50 L53 M56 V69 V70 V71 E82 R101 A150 T154 S155 T162 L166 A167 Y168 GLY ASN PRO

• Molecule 12: P3

Chain c8:

68% 32%

MET ALA MET LYS THR GLN ARG LYS GLU ASN VAL LEU PHE GLN ASN VAL LYS PRO ARG GLU ILE PRO LEU VAL ASP ASN PRO PHE SER THR TYR TYR PRO LYS HIS VAL ILE THR GLU THR GLN THR GLN ALA LYS ASN GLN A49 Q164 GLN LEU ALA TYR GLY ASN PRO

• Molecule 13: P8

Chain c9:

95% · ·

MET GLU THR ILE G5 F140 S141 R170 ASN ALA SER

• Molecule 14: Major capsid protein

Chain d0:

99% ·

MET ALA GLY G4 N156 GLN T158 A436 ASN

• Molecule 14: Major capsid protein

Chain d1:

99% ·

MET ALA G3 A436 ASN

• Molecule 14: Major capsid protein

Chain d2:

100%

MET A2 A436 ASN

• Molecule 14: Major capsid protein

Chain d3:

99%
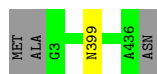
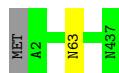• Molecule 14: Major capsid protein

Chain d4:

99%
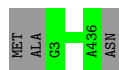
• Molecule 14: Major capsid protein

Chain d5:

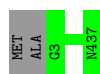100%
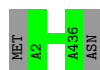
• Molecule 14: Major capsid protein

Chain d6:

100%
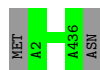
• Molecule 14: Major capsid protein

Chain d7:

100%
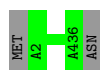
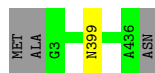• Molecule 14: Major capsid protein

Chain d8:

100%

• Molecule 14: Major capsid protein

Chain d9:

100%

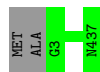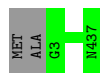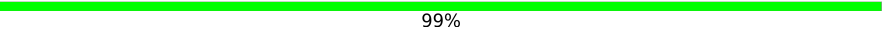• Molecule 14: Major capsid protein

Chain e0:

99%

MET ALA G3 T25 M430 N437

• Molecule 14: Major capsid protein

Chain e1:

99%

MET ALA G3 A436 ASN
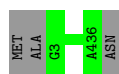
• Molecule 14: Major capsid protein

Chain e2:

99%

MET ALA G3 A436 ASN
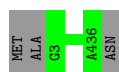
• Molecule 14: Major capsid protein

Chain e3:

99%

MET A2 H257 A436 ASN

• Molecule 14: Major capsid protein

Chain e4:

99%

MET ALA G3 A436 ASN
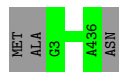
• Molecule 14: Major capsid protein

Chain e5:

100%

MET ALA G3 N437
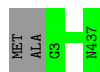
• Molecule 14: Major capsid protein

Chain e6:

100%

MET A2 N63 N437

• Molecule 14: Major capsid protein

Chain e7:

99%

MET ALA G3 N399 M430 N437

• Molecule 14: Major capsid protein

Chain e8:

100%

MET ALA G3 N437

• Molecule 14: Major capsid protein

Chain e9:

99%

MET A2 H257 A436 ASN

• Molecule 14: Major capsid protein

Chain f0:

99%

MET ALA G3 N399 A436 ASN

• Molecule 14: Major capsid protein

Chain f1:

100%

MET ALA G3 N437

• Molecule 14: Major capsid protein

Chain f2:

99%

MET A2 T240 N399 N437

• Molecule 14: Major capsid protein

Chain f3:

100%

MET ALA G3 N437

• Molecule 14: Major capsid protein

Chain f4:

99%

• Molecule 14: Major capsid protein

Chain f5:

99%

• Molecule 14: Major capsid protein

Chain f6:

100%

• Molecule 14: Major capsid protein
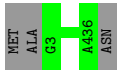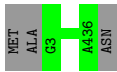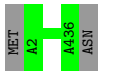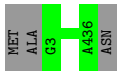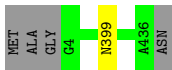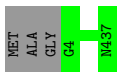
Chain f7:

99%

• Molecule 14: Major capsid protein

Chain f8:

99%

• Molecule 14: Major capsid protein

Chain f9:

99%

• Molecule 14: Major capsid protein

Chain g0:

99%
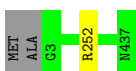
• Molecule 14: Major capsid protein

Chain g1:

100%

MET A2 — A436 ASN
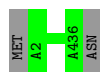
• Molecule 14: Major capsid protein

Chain g2:

99%

MET ALA G3 — H257 — A436 ASN

• Molecule 14: Major capsid protein

Chain g3:

99%

MET ALA G3 — N399 — A436 ASN

• Molecule 14: Major capsid protein

Chain g4:

99%

MET ALA G3 — L433 — N437
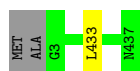
• Molecule 14: Major capsid protein

Chain g5:

99%

MET A2 — Q364 — A436 ASN

• Molecule 14: Major capsid protein

Chain g6:

100%

MET A2 — A436 ASN

• Molecule 14: Major capsid protein

Chain g7:

99%

MET ALA G3 — A436 ASN
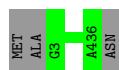
• Molecule 14: Major capsid protein

Chain g8:

100%

MET A2 N399 N437

• Molecule 14: Major capsid protein

Chain g9:

100%

MET ALA G3 N437

• Molecule 14: Major capsid protein

Chain h0:

100%

MET A2 A436 ASN

• Molecule 14: Major capsid protein

Chain h1:

100%

MET A2 A436 ASN

• Molecule 14: Major capsid protein

Chain h2:

99%

MET ALA G3 A436 ASN

• Molecule 14: Major capsid protein

Chain h3:

99%

MET ALA G3 R252 N437

• Molecule 14: Major capsid protein

Chain h4:

99%

MET ALA G3 N399 A436 ASN

• Molecule 14: Major capsid protein

Chain h5:

99%

MET ALA G3　A436 ASN

• Molecule 14: Major capsid protein

Chain h6:

99%

MET ALA G3　A436 ASN

• Molecule 14: Major capsid protein

Chain h7:

100%

MET A2　N437

• Molecule 14: Major capsid protein

Chain h8:

100%

MET A2　A436 ASN

• Molecule 14: Major capsid protein

Chain h9:

100%

MET A2　A436 ASN

• Molecule 14: Major capsid protein

Chain i0:

100%

MET ALA G3　N437

• Molecule 14: Major capsid protein

Chain i1:

99%

MET ALA G3　M430　A436 ASN

• Molecule 14: Major capsid protein

Chain i2:

99%

MET ALA G3 A436 ASN
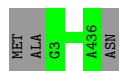
• Molecule 14: Major capsid protein

Chain i3:

99%

MET ALA G3 A436 ASN
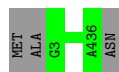
• Molecule 14: Major capsid protein

Chain i4:

100%

MET ALA G3 N437
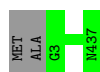
• Molecule 14: Major capsid protein

Chain i5:

100%

MET A2 N437

• Molecule 14: Major capsid protein

Chain i6:

99%

MET ALA G3 N399 A436 ASN
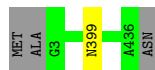
• Molecule 14: Major capsid protein

Chain i7:

99%

MET A2 N399 Y435 ALA ASN

• Molecule 14: Major capsid protein

Chain i8:

99%

MET A2 P22 Q23 N437

• Molecule 14: Major capsid protein

Chain i9:

100%

```
MET
A2
A436
ASN
```

• Molecule 14: Major capsid protein

Chain j0:

99%

```
MET
A2
H171
L433
A434
N437
```

• Molecule 14: Major capsid protein

Chain j1:

100%

```
MET
A2
A436
ASN
```

• Molecule 14: Major capsid protein

Chain j2:

99%

```
MET
A2
N399
A436
ASN
```
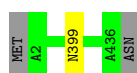
• Molecule 14: Major capsid protein

Chain j3:

99%

```
MET
ALA
G3
Y11
N399
N437
```

• Molecule 14: Major capsid protein

Chain j4:

99%

```
MET
ALA
G3
R252
A436
ASN
```

• Molecule 14: Major capsid protein

Chain j5:

99%

```
MET
ALA
G3
A436
ASN
```
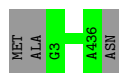
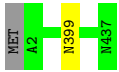• Molecule 14: Major capsid protein

Chain j6:

99%
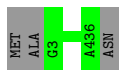
• Molecule 14: Major capsid protein

Chain j7:

100%

• Molecule 14: Major capsid protein

Chain j8:

99%
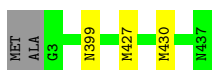
• Molecule 14: Major capsid protein

Chain j9:

100%

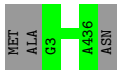• Molecule 14: Major capsid protein

Chain k0:
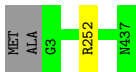
99%

• Molecule 14: Major capsid protein

Chain k1:

100%

• Molecule 14: Major capsid protein

Chain k2:

99%
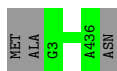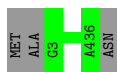
• Molecule 14: Major capsid protein

Chain k3:

99%

.

MET ALA G3 A436 ASN
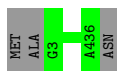
• Molecule 14: Major capsid protein

Chain k4:

100%

MET A2 N437

• Molecule 14: Major capsid protein

Chain k5:

100%

MET A2 N427 N437

• Molecule 14: Major capsid protein

Chain k6:

99%

MET ALA G3 R252 N399 N437
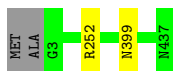
• Molecule 14: Major capsid protein

Chain k7:

99%

MET ALA G3 N399 N437
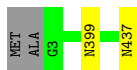
• Molecule 14: Major capsid protein

Chain k8:

99%

MET ALA G3 N437

• Molecule 14: Major capsid protein

Chain k9:

100%

MET A2 A436 ASN
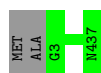
• Molecule 14: Major capsid protein

Chain l0:

100%

MET ALA G3 N437

• Molecule 14: Major capsid protein

Chain l1:

99%

MET ALA G3 N399 N437

• Molecule 14: Major capsid protein

Chain l2:

99%

MET ALA G3 N399 A436 ASN

• Molecule 14: Major capsid protein

Chain l3:

100%

MET A2 N437

• Molecule 15: P13

Chain l4:

67%   33%

MET HIS LYS ILE THR PRO PHE LEU ILE ALA ALA VAL VAL ALA VAL ILE VAL LEU ALA VAL TRP LEU PHE LYS LYS ASP ASN LYS LYS GLU THR W32 T97 ARG
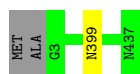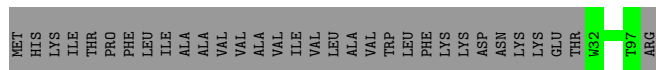
4 Experimental information ⓘ

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, I	Depositor
Number of particles used	13000	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 $(e^-/\text{Å}^2)$	24.4	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	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	a0	0.82	0/741	0.75	0/1006
2	a1	0.60	2/734 (0.3%)	0.80	0/1011
3	a2	0.48	0/667	0.79	0/920
3	a3	0.30	0/497	0.58	0/688
4	a4	0.90	2/1124 (0.2%)	0.92	0/1543
5	a5	0.38	0/1365	0.65	0/1883
6	a6	0.80	0/1220	0.88	0/1677
7	a7	0.89	1/559 (0.2%)	1.03	0/771
8	a8	0.83	0/1014	1.00	0/1402
9	a9	0.48	0/320	0.74	0/446
9	b0	0.39	0/408	0.71	0/567
9	b1	0.46	0/379	0.70	0/526
9	b2	0.46	0/360	0.68	0/500
9	b3	0.39	0/345	0.73	0/481
9	b4	0.41	0/360	0.68	0/500
9	b5	0.52	0/377	0.76	0/523
9	b7	0.42	0/386	0.66	0/533
9	b8	0.41	0/391	0.66	0/543
9	c0	0.49	0/346	0.65	0/480
9	c1	0.41	0/344	0.74	0/476
9	l5	0.42	0/404	0.69	0/559
10	b6	0.37	0/3289	0.65	0/4533
11	c2	0.44	0/608	0.74	0/838
11	c3	0.37	0/393	0.78	0/538
11	c4	0.45	0/374	0.74	0/515
11	c5	0.45	0/403	0.80	0/550
12	c6	0.41	0/972	0.66	0/1332
12	c7	0.50	0/1030	0.84	0/1417
12	c8	0.33	0/830	0.60	0/1133
13	c9	0.89	0/1218	0.90	0/1663
14	d0	0.96	0/3446	0.88	0/4697
14	d1	0.94	0/3460	0.87	0/4717
14	d2	0.97	0/3465	0.87	0/4724
14	d3	0.98	0/3460	0.89	0/4717

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
14	d4	1.00	0/3460	0.89	0/4717
14	d5	1.02	0/3461	0.90	0/4719
14	d6	0.98	0/3465	0.89	0/4724
14	d7	0.92	0/3459	0.89	0/4717
14	d8	1.01	0/3468	0.88	0/4728
14	d9	0.99	0/3473	0.90	0/4735
14	e0	0.98	0/3468	0.89	0/4728
14	e1	0.96	0/3460	0.88	0/4717
14	e2	1.00	0/3460	0.90	0/4717
14	e3	0.95	0/3465	0.89	0/4724
14	e4	0.96	0/3460	0.88	0/4717
14	e5	0.99	0/3468	0.89	0/4728
14	e6	0.97	0/3473	0.89	0/4735
14	e7	0.98	0/3468	0.90	0/4728
14	e8	0.99	0/3468	0.90	0/4728
14	e9	1.01	0/3465	0.89	0/4724
14	f0	0.95	0/3452	0.90	0/4706
14	f1	0.99	0/3465	0.88	0/4724
14	f2	0.97	0/3473	0.88	0/4735
14	f3	1.00	0/3460	0.89	0/4717
14	f4	0.97	0/3460	0.87	0/4717
14	f5	0.98	0/3454	0.88	0/4710
14	f6	0.97	0/3465	0.90	0/4724
14	f7	0.99	0/3449	0.89	0/4702
14	f8	0.97	0/3456	0.89	0/4712
14	f9	0.99	0/3456	0.90	0/4712
14	g0	1.00	0/3465	0.91	0/4724
14	g1	0.96	0/3465	0.88	0/4724
14	g2	1.00	0/3460	0.91	0/4717
14	g3	1.00	0/3460	0.89	0/4717
14	g4	0.96	0/3468	0.87	0/4728
14	g5	0.95	0/3465	0.88	0/4724
14	g6	0.94	0/3465	0.88	0/4724
14	g7	0.98	0/3454	0.90	0/4710
14	g8	0.94	0/3473	0.87	0/4735
14	g9	1.00	0/3468	0.90	0/4728
14	h0	0.95	0/3465	0.89	0/4724
14	h1	0.94	0/3465	0.87	0/4724
14	h2	0.97	0/3460	0.88	0/4717
14	h3	0.98	0/3468	0.89	0/4728
14	h4	0.98	0/3460	0.90	0/4717
14	h5	0.94	0/3460	0.88	0/4717
14	h6	1.00	0/3460	0.89	0/4717

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
14	h7	0.96	0/3473	0.89	0/4735
14	h8	0.96	0/3465	0.88	0/4724
14	h9	0.96	0/3459	0.88	0/4717
14	i0	1.00	0/3468	0.89	0/4728
14	i1	0.98	0/3460	0.88	0/4717
14	i2	1.01	0/3460	0.89	0/4717
14	i3	0.99	0/3460	0.91	0/4717
14	i4	0.98	0/3462	0.89	0/4721
14	i5	0.98	0/3473	0.88	0/4735
14	i6	0.94	0/3460	0.89	0/4717
14	i7	0.95	0/3460	0.87	0/4717
14	i8	0.96	0/3465	0.87	0/4724
14	i9	0.97	0/3465	0.88	0/4724
14	j0	0.98	0/3470	0.89	0/4731
14	j1	0.95	0/3465	0.87	0/4724
14	j2	1.02	0/3465	0.89	0/4724
14	j3	0.98	0/3465	0.89	0/4724
14	j4	0.99	0/3460	0.89	0/4717
14	j5	1.00	0/3460	0.88	0/4717
14	j6	1.03	0/3460	0.89	0/4717
14	j7	1.00	0/3473	0.89	0/4735
14	j8	0.95	0/3468	0.88	0/4728
14	j9	0.98	0/3465	0.90	0/4724
14	k0	0.97	0/3460	0.89	0/4717
14	k1	0.97	0/3465	0.88	0/4724
14	k2	0.96	0/3465	0.90	0/4724
14	k3	1.01	0/3460	0.90	0/4717
14	k4	1.00	0/3473	0.89	0/4735
14	k5	0.97	0/3473	0.88	0/4735
14	k6	0.97	0/3469	0.89	0/4728
14	k7	0.97	0/3465	0.88	0/4723
14	k8	0.97	0/3469	0.89	0/4728
14	k9	0.99	0/3459	0.88	0/4717
14	l0	0.98	0/3469	0.88	0/4728
14	l1	1.01	0/3469	0.90	0/4728
14	l2	0.97	0/3460	0.88	0/4717
14	l3	0.99	0/3474	0.89	0/4735
15	l4	0.84	0/501	0.82	0/684
All	All	0.96	5/312913 (0.0%)	0.88	0/426903

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	a1	197	ASP	C-N	8.48	1.50	1.34
7	a7	120	CYS	CB-SG	7.78	1.95	1.82
2	a1	202	THR	C-N	7.76	1.49	1.34
4	a4	134	CYS	CB-SG	-6.38	1.71	1.82
4	a4	120	CYS	CB-SG	-5.84	1.72	1.81

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts ⓘ

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	a0	733	0	706	0	0
2	a1	718	0	588	0	0
3	a2	650	0	564	0	0
3	a3	485	0	425	0	0
4	a4	1088	0	874	0	0
5	a5	1326	0	1193	0	0
6	a6	1192	0	1133	0	0
7	a7	543	0	455	0	0
8	a8	988	0	900	0	0
9	a9	311	0	257	0	0
9	b0	398	0	325	0	0
9	b1	368	0	314	0	0
9	b2	350	0	314	0	0
9	b3	335	0	275	0	0
9	b4	350	0	299	0	0
9	b5	367	0	296	0	0
9	b7	375	0	345	0	0
9	b8	379	0	301	0	0
9	c0	338	0	292	0	0
9	c1	335	0	285	0	0
9	l5	392	0	325	0	0
10	b6	3210	0	2777	0	0
11	c2	603	0	404	0	0
11	c3	389	0	308	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
11	c4	369	0	262	0	0
11	c5	396	0	327	0	0
12	c6	951	0	834	0	0
12	c7	1004	0	875	0	0
12	c8	813	0	754	0	0
13	c9	1191	0	1134	0	0
14	d0	3369	0	3266	0	0
14	d1	3382	0	3278	0	0
14	d2	3387	0	3283	0	0
14	d3	3382	0	3278	0	0
14	d4	3382	0	3278	0	0
14	d5	3383	0	3279	0	0
14	d6	3387	0	3283	0	0
14	d7	3381	0	3272	0	0
14	d8	3390	0	3284	0	0
14	d9	3395	0	3289	0	0
14	e0	3390	0	3284	0	0
14	e1	3382	0	3278	0	0
14	e2	3382	0	3278	0	0
14	e3	3387	0	3283	0	0
14	e4	3382	0	3278	0	0
14	e5	3390	0	3284	0	0
14	e6	3395	0	3289	0	0
14	e7	3390	0	3284	0	0
14	e8	3390	0	3284	0	0
14	e9	3387	0	3283	0	0
14	f0	3375	0	3271	0	0
14	f1	3387	0	3280	0	0
14	f2	3395	0	3289	0	0
14	f3	3383	0	3277	0	0
14	f4	3382	0	3278	0	0
14	f5	3376	0	3267	0	0
14	f6	3387	0	3283	0	0
14	f7	3372	0	3267	0	0
14	f8	3378	0	3275	0	0
14	f9	3379	0	3274	0	0
14	g0	3387	0	3280	0	0
14	g1	3387	0	3283	0	0
14	g2	3382	0	3278	0	0
14	g3	3382	0	3278	0	0
14	g4	3390	0	3284	0	0
14	g5	3387	0	3283	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
14	g6	3387	0	3283	0	0
14	g7	3376	0	3267	0	0
14	g8	3395	0	3289	0	0
14	g9	3390	0	3284	0	0
14	h0	3387	0	3283	0	0
14	h1	3387	0	3283	0	0
14	h2	3382	0	3278	0	0
14	h3	3390	0	3284	0	0
14	h4	3382	0	3278	0	0
14	h5	3382	0	3278	0	0
14	h6	3382	0	3278	0	0
14	h7	3395	0	3289	0	0
14	h8	3387	0	3283	0	0
14	h9	3381	0	3272	0	0
14	i0	3390	0	3284	0	0
14	i1	3382	0	3278	0	0
14	i2	3382	0	3278	0	0
14	i3	3382	0	3278	0	0
14	i4	3384	0	3273	0	0
14	i5	3395	0	3289	0	0
14	i6	3382	0	3278	0	0
14	i7	3382	0	3278	0	0
14	i8	3388	0	3282	0	0
14	i9	3387	0	3283	0	0
14	j0	3392	0	3287	0	0
14	j1	3387	0	3283	0	0
14	j2	3387	0	3283	0	0
14	j3	3387	0	3282	0	0
14	j4	3382	0	3278	0	0
14	j5	3382	0	3278	0	0
14	j6	3382	0	3278	0	0
14	j7	3395	0	3289	0	0
14	j8	3390	0	3284	0	0
14	j9	3387	0	3283	0	0
14	k0	3382	0	3278	0	0
14	k1	3387	0	3283	0	0
14	k2	3387	0	3283	0	0
14	k3	3382	0	3278	0	0
14	k4	3395	0	3289	0	0
14	k5	3395	0	3289	0	0
14	k6	3391	0	3284	0	0
14	k7	3387	0	3278	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
14	k8	3391	0	3284	0	0
14	k9	3381	0	3272	0	0
14	l0	3391	0	3284	0	0
14	l1	3391	0	3284	0	0
14	l2	3382	0	3278	0	0
14	l3	3396	0	3289	0	0
15	l4	487	0	428	0	0
All	All	305842	0	294139	0	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 10.

There are no clashes within the asymmetric unit.

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	a0	95/352 (27%)	93 (98%)	2 (2%)	0	100	100
2	a1	105/210 (50%)	85 (81%)	17 (16%)	3 (3%)	4	31
3	a2	92/289 (32%)	76 (83%)	14 (15%)	2 (2%)	6	37
3	a3	72/289 (25%)	60 (83%)	12 (17%)	0	100	100
4	a4	149/256 (58%)	130 (87%)	14 (9%)	5 (3%)	3	28
5	a5	187/216 (87%)	162 (87%)	24 (13%)	1 (0%)	29	68
6	a6	165/170 (97%)	155 (94%)	9 (6%)	1 (1%)	25	64
7	a7	76/151 (50%)	65 (86%)	7 (9%)	4 (5%)	2	17
8	a8	140/146 (96%)	126 (90%)	12 (9%)	2 (1%)	11	46
9	a9	45/207 (22%)	34 (76%)	11 (24%)	0	100	100
9	b0	57/207 (28%)	45 (79%)	10 (18%)	2 (4%)	3	27

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
9	b1	52/207 (25%)	43 (83%)	8 (15%)	1 (2%)	8	40
9	b2	49/207 (24%)	39 (80%)	10 (20%)	0	100	100
9	b3	49/207 (24%)	38 (78%)	9 (18%)	2 (4%)	3	23
9	b4	50/207 (24%)	40 (80%)	9 (18%)	1 (2%)	7	39
9	b5	55/207 (27%)	36 (66%)	16 (29%)	3 (6%)	2	17
9	b7	50/207 (24%)	45 (90%)	5 (10%)	0	100	100
9	b8	55/207 (27%)	47 (86%)	8 (14%)	0	100	100
9	c0	49/207 (24%)	41 (84%)	6 (12%)	2 (4%)	3	23
9	c1	49/207 (24%)	38 (78%)	7 (14%)	4 (8%)	1	9
9	l5	56/207 (27%)	42 (75%)	13 (23%)	1 (2%)	8	41
10	b6	473/576 (82%)	392 (83%)	77 (16%)	4 (1%)	19	58
11	c2	101/181 (56%)	76 (75%)	25 (25%)	0	100	100
11	c3	58/181 (32%)	40 (69%)	17 (29%)	1 (2%)	9	42
11	c4	56/181 (31%)	46 (82%)	8 (14%)	2 (4%)	3	26
11	c5	56/181 (31%)	42 (75%)	13 (23%)	1 (2%)	8	41
12	c6	139/171 (81%)	114 (82%)	24 (17%)	1 (1%)	22	61
12	c7	145/171 (85%)	111 (77%)	27 (19%)	7 (5%)	2	20
12	c8	114/171 (67%)	100 (88%)	14 (12%)	0	100	100
13	c9	164/173 (95%)	160 (98%)	2 (1%)	2 (1%)	13	50
14	d0	428/437 (98%)	419 (98%)	9 (2%)	0	100	100
14	d1	432/437 (99%)	422 (98%)	10 (2%)	0	100	100
14	d2	433/437 (99%)	425 (98%)	8 (2%)	0	100	100
14	d3	432/437 (99%)	424 (98%)	7 (2%)	1 (0%)	47	81
14	d4	432/437 (99%)	422 (98%)	10 (2%)	0	100	100
14	d5	433/437 (99%)	425 (98%)	8 (2%)	0	100	100
14	d6	433/437 (99%)	427 (99%)	6 (1%)	0	100	100
14	d7	433/437 (99%)	423 (98%)	10 (2%)	0	100	100
14	d8	433/437 (99%)	424 (98%)	9 (2%)	0	100	100
14	d9	434/437 (99%)	422 (97%)	12 (3%)	0	100	100
14	e0	433/437 (99%)	424 (98%)	8 (2%)	1 (0%)	47	81
14	e1	432/437 (99%)	424 (98%)	8 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	e2	432/437 (99%)	419 (97%)	13 (3%)	0	100	100
14	e3	433/437 (99%)	426 (98%)	6 (1%)	1 (0%)	47	81
14	e4	432/437 (99%)	425 (98%)	7 (2%)	0	100	100
14	e5	433/437 (99%)	428 (99%)	5 (1%)	0	100	100
14	e6	434/437 (99%)	424 (98%)	10 (2%)	0	100	100
14	e7	433/437 (99%)	423 (98%)	10 (2%)	0	100	100
14	e8	433/437 (99%)	424 (98%)	9 (2%)	0	100	100
14	e9	433/437 (99%)	423 (98%)	9 (2%)	1 (0%)	47	81
14	f0	432/437 (99%)	424 (98%)	8 (2%)	0	100	100
14	f1	433/437 (99%)	426 (98%)	7 (2%)	0	100	100
14	f2	434/437 (99%)	426 (98%)	7 (2%)	1 (0%)	47	81
14	f3	433/437 (99%)	426 (98%)	7 (2%)	0	100	100
14	f4	432/437 (99%)	425 (98%)	7 (2%)	0	100	100
14	f5	432/437 (99%)	423 (98%)	9 (2%)	0	100	100
14	f6	433/437 (99%)	423 (98%)	10 (2%)	0	100	100
14	f7	432/437 (99%)	420 (97%)	12 (3%)	0	100	100
14	f8	431/437 (99%)	421 (98%)	10 (2%)	0	100	100
14	f9	432/437 (99%)	419 (97%)	13 (3%)	0	100	100
14	g0	433/437 (99%)	423 (98%)	10 (2%)	0	100	100
14	g1	433/437 (99%)	424 (98%)	9 (2%)	0	100	100
14	g2	432/437 (99%)	423 (98%)	8 (2%)	1 (0%)	47	81
14	g3	432/437 (99%)	421 (98%)	11 (2%)	0	100	100
14	g4	433/437 (99%)	423 (98%)	10 (2%)	0	100	100
14	g5	433/437 (99%)	426 (98%)	6 (1%)	1 (0%)	47	81
14	g6	433/437 (99%)	426 (98%)	7 (2%)	0	100	100
14	g7	432/437 (99%)	422 (98%)	10 (2%)	0	100	100
14	g8	434/437 (99%)	427 (98%)	7 (2%)	0	100	100
14	g9	433/437 (99%)	427 (99%)	6 (1%)	0	100	100
14	h0	433/437 (99%)	429 (99%)	4 (1%)	0	100	100
14	h1	433/437 (99%)	426 (98%)	7 (2%)	0	100	100
14	h2	432/437 (99%)	425 (98%)	7 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	h3	433/437 (99%)	423 (98%)	10 (2%)	0	100	100
14	h4	432/437 (99%)	424 (98%)	8 (2%)	0	100	100
14	h5	432/437 (99%)	425 (98%)	7 (2%)	0	100	100
14	h6	432/437 (99%)	424 (98%)	8 (2%)	0	100	100
14	h7	434/437 (99%)	427 (98%)	7 (2%)	0	100	100
14	h8	433/437 (99%)	423 (98%)	10 (2%)	0	100	100
14	h9	433/437 (99%)	426 (98%)	7 (2%)	0	100	100
14	i0	433/437 (99%)	424 (98%)	9 (2%)	0	100	100
14	i1	432/437 (99%)	425 (98%)	7 (2%)	0	100	100
14	i2	432/437 (99%)	424 (98%)	8 (2%)	0	100	100
14	i3	432/437 (99%)	425 (98%)	7 (2%)	0	100	100
14	i4	433/437 (99%)	427 (99%)	6 (1%)	0	100	100
14	i5	434/437 (99%)	428 (99%)	6 (1%)	0	100	100
14	i6	432/437 (99%)	423 (98%)	9 (2%)	0	100	100
14	i7	432/437 (99%)	425 (98%)	7 (2%)	0	100	100
14	i8	434/437 (99%)	421 (97%)	11 (2%)	2 (0%)	29	68
14	i9	433/437 (99%)	425 (98%)	8 (2%)	0	100	100
14	j0	434/437 (99%)	426 (98%)	7 (2%)	1 (0%)	47	81
14	j1	433/437 (99%)	425 (98%)	8 (2%)	0	100	100
14	j2	433/437 (99%)	425 (98%)	8 (2%)	0	100	100
14	j3	433/437 (99%)	421 (97%)	12 (3%)	0	100	100
14	j4	432/437 (99%)	422 (98%)	10 (2%)	0	100	100
14	j5	432/437 (99%)	423 (98%)	9 (2%)	0	100	100
14	j6	432/437 (99%)	423 (98%)	9 (2%)	0	100	100
14	j7	434/437 (99%)	423 (98%)	11 (2%)	0	100	100
14	j8	433/437 (99%)	425 (98%)	8 (2%)	0	100	100
14	j9	433/437 (99%)	424 (98%)	9 (2%)	0	100	100
14	k0	432/437 (99%)	426 (99%)	5 (1%)	1 (0%)	47	81
14	k1	433/437 (99%)	427 (99%)	6 (1%)	0	100	100
14	k2	433/437 (99%)	424 (98%)	8 (2%)	1 (0%)	47	81
14	k3	432/437 (99%)	422 (98%)	10 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	k4	434/437 (99%)	426 (98%)	8 (2%)	0	100	100
14	k5	434/437 (99%)	425 (98%)	9 (2%)	0	100	100
14	k6	433/437 (99%)	426 (98%)	7 (2%)	0	100	100
14	k7	433/437 (99%)	424 (98%)	9 (2%)	0	100	100
14	k8	433/437 (99%)	425 (98%)	8 (2%)	0	100	100
14	k9	433/437 (99%)	424 (98%)	9 (2%)	0	100	100
14	l0	433/437 (99%)	424 (98%)	9 (2%)	0	100	100
14	l1	433/437 (99%)	423 (98%)	10 (2%)	0	100	100
14	l2	432/437 (99%)	423 (98%)	9 (2%)	0	100	100
14	l3	434/437 (99%)	426 (98%)	8 (2%)	0	100	100
15	l4	64/98 (65%)	63 (98%)	1 (2%)	0	100	100
All	All	39415/43355 (91%)	38213 (97%)	1138 (3%)	64 (0%)	50	81

5 of 64 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	a1	203	PRO
3	a2	283	ASN
4	a4	199	TRP
9	b0	198	PRO
9	b1	192	MET

5.3.2   Protein sidechains   ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	a0	78/309 (25%)	78 (100%)	0	100	100
2	a1	64/179 (36%)	60 (94%)	4 (6%)	18	51
3	a2	60/249 (24%)	57 (95%)	3 (5%)	24	58
3	a3	42/249 (17%)	42 (100%)	0	100	100
4	a4	92/222 (41%)	89 (97%)	3 (3%)	38	68

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
5	a5	119/188 (63%)	117 (98%)	2 (2%)	60	82
6	a6	124/145 (86%)	124 (100%)	0	100	100
7	a7	45/139 (32%)	42 (93%)	3 (7%)	16	48
8	a8	87/125 (70%)	85 (98%)	2 (2%)	50	77
9	a9	25/181 (14%)	25 (100%)	0	100	100
9	b0	34/181 (19%)	31 (91%)	3 (9%)	10	38
9	b1	30/181 (17%)	27 (90%)	3 (10%)	7	32
9	b2	31/181 (17%)	31 (100%)	0	100	100
9	b3	26/181 (14%)	26 (100%)	0	100	100
9	b4	26/181 (14%)	23 (88%)	3 (12%)	5	26
9	b5	25/181 (14%)	23 (92%)	2 (8%)	12	41
9	b7	35/181 (19%)	33 (94%)	2 (6%)	20	53
9	b8	28/181 (16%)	27 (96%)	1 (4%)	35	66
9	c0	29/181 (16%)	29 (100%)	0	100	100
9	c1	27/181 (15%)	27 (100%)	0	100	100
9	l5	29/181 (16%)	28 (97%)	1 (3%)	37	68
10	b6	264/479 (55%)	256 (97%)	8 (3%)	41	71
11	c2	32/161 (20%)	31 (97%)	1 (3%)	40	70
11	c3	29/161 (18%)	29 (100%)	0	100	100
11	c4	24/161 (15%)	22 (92%)	2 (8%)	11	40
11	c5	31/161 (19%)	31 (100%)	0	100	100
12	c6	78/144 (54%)	77 (99%)	1 (1%)	69	86
12	c7	81/144 (56%)	73 (90%)	8 (10%)	8	33
12	c8	73/144 (51%)	73 (100%)	0	100	100
13	c9	114/148 (77%)	114 (100%)	0	100	100
14	d0	355/358 (99%)	355 (100%)	0	100	100
14	d1	356/358 (99%)	356 (100%)	0	100	100
14	d2	356/358 (99%)	356 (100%)	0	100	100
14	d3	356/358 (99%)	356 (100%)	0	100	100
14	d4	356/358 (99%)	356 (100%)	0	100	100
14	d5	355/358 (99%)	355 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
14	d6	356/358 (99%)	356 (100%)	0	100	100
14	d7	355/358 (99%)	355 (100%)	0	100	100
14	d8	357/358 (100%)	357 (100%)	0	100	100
14	d9	357/358 (100%)	357 (100%)	0	100	100
14	e0	357/358 (100%)	356 (100%)	1 (0%)	92	97
14	e1	356/358 (99%)	356 (100%)	0	100	100
14	e2	356/358 (99%)	356 (100%)	0	100	100
14	e3	356/358 (99%)	356 (100%)	0	100	100
14	e4	356/358 (99%)	356 (100%)	0	100	100
14	e5	357/358 (100%)	357 (100%)	0	100	100
14	e6	357/358 (100%)	356 (100%)	1 (0%)	92	97
14	e7	357/358 (100%)	355 (99%)	2 (1%)	86	94
14	e8	357/358 (100%)	357 (100%)	0	100	100
14	e9	356/358 (99%)	356 (100%)	0	100	100
14	f0	355/358 (99%)	354 (100%)	1 (0%)	92	97
14	f1	356/358 (99%)	356 (100%)	0	100	100
14	f2	357/358 (100%)	356 (100%)	1 (0%)	92	97
14	f3	356/358 (99%)	356 (100%)	0	100	100
14	f4	356/358 (99%)	356 (100%)	0	100	100
14	f5	355/358 (99%)	355 (100%)	0	100	100
14	f6	356/358 (99%)	356 (100%)	0	100	100
14	f7	354/358 (99%)	354 (100%)	0	100	100
14	f8	356/358 (99%)	355 (100%)	1 (0%)	92	97
14	f9	356/358 (99%)	356 (100%)	0	100	100
14	g0	356/358 (99%)	355 (100%)	1 (0%)	92	97
14	g1	356/358 (99%)	356 (100%)	0	100	100
14	g2	356/358 (99%)	356 (100%)	0	100	100
14	g3	356/358 (99%)	355 (100%)	1 (0%)	92	97
14	g4	357/358 (100%)	356 (100%)	1 (0%)	92	97
14	g5	356/358 (99%)	356 (100%)	0	100	100
14	g6	356/358 (99%)	356 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
14	g7	355/358 (99%)	355 (100%)	0	100	100
14	g8	357/358 (100%)	356 (100%)	1 (0%)	92	97
14	g9	357/358 (100%)	357 (100%)	0	100	100
14	h0	356/358 (99%)	356 (100%)	0	100	100
14	h1	356/358 (99%)	356 (100%)	0	100	100
14	h2	356/358 (99%)	356 (100%)	0	100	100
14	h3	357/358 (100%)	356 (100%)	1 (0%)	92	97
14	h4	356/358 (99%)	355 (100%)	1 (0%)	92	97
14	h5	356/358 (99%)	356 (100%)	0	100	100
14	h6	356/358 (99%)	356 (100%)	0	100	100
14	h7	357/358 (100%)	357 (100%)	0	100	100
14	h8	356/358 (99%)	356 (100%)	0	100	100
14	h9	355/358 (99%)	355 (100%)	0	100	100
14	i0	357/358 (100%)	357 (100%)	0	100	100
14	i1	356/358 (99%)	355 (100%)	1 (0%)	92	97
14	i2	356/358 (99%)	356 (100%)	0	100	100
14	i3	356/358 (99%)	356 (100%)	0	100	100
14	i4	356/358 (99%)	356 (100%)	0	100	100
14	i5	357/358 (100%)	357 (100%)	0	100	100
14	i6	356/358 (99%)	355 (100%)	1 (0%)	92	97
14	i7	356/358 (99%)	354 (99%)	2 (1%)	86	94
14	i8	356/358 (99%)	356 (100%)	0	100	100
14	i9	356/358 (99%)	356 (100%)	0	100	100
14	j0	356/358 (99%)	354 (99%)	2 (1%)	86	94
14	j1	356/358 (99%)	356 (100%)	0	100	100
14	j2	356/358 (99%)	355 (100%)	1 (0%)	92	97
14	j3	356/358 (99%)	354 (99%)	2 (1%)	86	94
14	j4	356/358 (99%)	355 (100%)	1 (0%)	92	97
14	j5	356/358 (99%)	356 (100%)	0	100	100
14	j6	356/358 (99%)	356 (100%)	0	100	100
14	j7	357/358 (100%)	356 (100%)	1 (0%)	92	97

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
14	j8	357/358 (100%)	354 (99%)	3 (1%)	81	91
14	j9	356/358 (99%)	356 (100%)	0	100	100
14	k0	356/358 (99%)	356 (100%)	0	100	100
14	k1	356/358 (99%)	356 (100%)	0	100	100
14	k2	356/358 (99%)	356 (100%)	0	100	100
14	k3	356/358 (99%)	356 (100%)	0	100	100
14	k4	357/358 (100%)	357 (100%)	0	100	100
14	k5	357/358 (100%)	356 (100%)	1 (0%)	92	97
14	k6	357/358 (100%)	355 (99%)	2 (1%)	86	94
14	k7	356/358 (99%)	354 (99%)	2 (1%)	86	94
14	k8	357/358 (100%)	356 (100%)	1 (0%)	92	97
14	k9	355/358 (99%)	355 (100%)	0	100	100
14	l0	357/358 (100%)	357 (100%)	0	100	100
14	l1	357/358 (100%)	356 (100%)	1 (0%)	92	97
14	l2	356/358 (99%)	355 (100%)	1 (0%)	92	97
14	l3	357/358 (100%)	357 (100%)	0	100	100
15	l4	42/79 (53%)	42 (100%)	0	100	100
All	All	31742/35831 (89%)	31655 (100%)	87 (0%)	92	97

5 of 87 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
14	f8	399	ASN
14	j3	11	TYR
14	g3	399	ASN
14	i6	399	ASN
14	j8	399	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 46 such sidechains are listed below:

Mol	Chain	Res	Type
14	e3	257	HIS
14	f5	14	GLN
14	e6	63	ASN
14	f0	376	ASN

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Mol	Chain	Res	Type
14	g1	63	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

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

5.5 Carbohydrates ⓘ

There are no monosaccharides in this entry.

5.6 Ligand geometry ⓘ

There are no ligands in this entry.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6 Map visualisation ⓘ

This section contains visualisations of the EMDB entry EMD-0436. 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.

6.1 Orthogonal projections ⓘ

This section was not generated.

6.2 Central slices ⓘ

This section was not generated.

6.3 Largest variance slices ⓘ

This section was not generated.

6.4 Orthogonal surface views ⓘ

This section was not generated.

6.5 Mask visualisation ⓘ

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

7 Map analysis ⓘ

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

7.1 Map-value distribution ⓘ

This section was not generated.

7.2 Volume estimate versus contour level ⓘ

This section was not generated.

7.3 Rotationally averaged power spectrum ⓘ

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

8 Fourier-Shell correlation ⓘ

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

9   Map-model fit ⓘ

This section was not generated.