



Full wwPDB EM Validation Report ⓘ

Mar 20, 2026 – 02:04 AM UTC

PDB ID : 7U8R / pdb_00007u8r
EMDB ID : EMD-26388
Title : Structure of porcine kidney V-ATPase with SidK, Rotary State 3
Authors : Tan, Y.Z.; Keon, K.A.
Deposited on : 2022-03-09
Resolution : 3.80 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

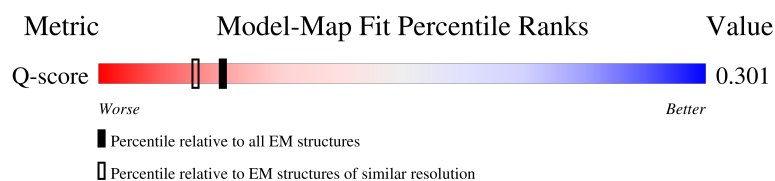
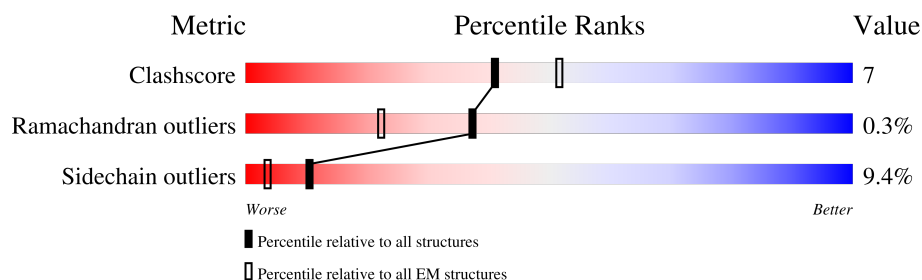
EMDB validation analysis : 0.0.1.dev132
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 3.80 Å.

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



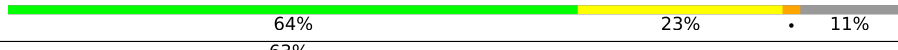
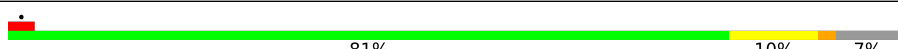
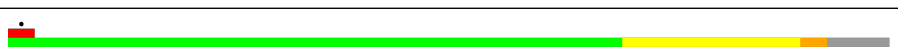
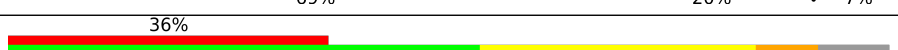
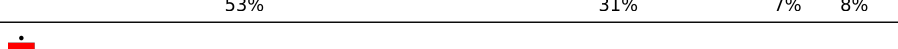
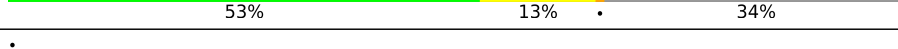
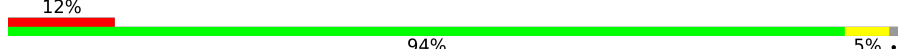
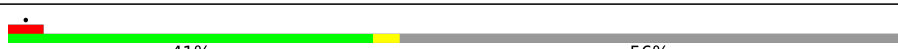
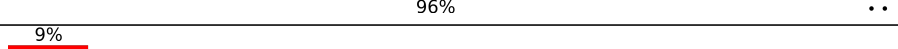
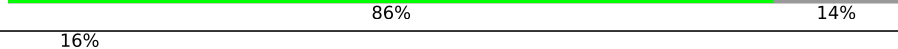
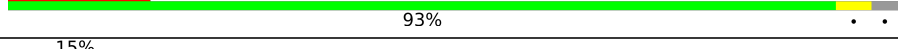
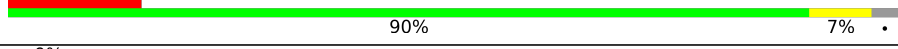
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	10198 (3.30 - 4.30)

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

Mol	Chain	Length	Quality of chain
1	A	617	
1	B	617	
1	C	617	
2	D	515	

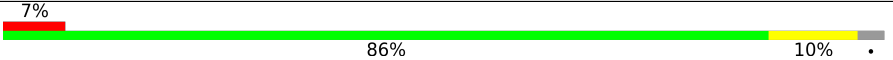
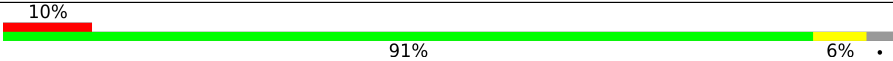
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Mol	Chain	Length	Quality of chain
2	E	515	
2	F	515	
3	G	382	
4	H	247	
5	I	226	
5	J	226	
5	K	226	
6	L	119	
7	M	118	
7	N	118	
7	O	118	
8	Q	337	
8	R	337	
8	S	337	
9	T	483	
10	a	838	
11	b	205	
12	c	469	
13	d	351	
14	e	81	
15	f	98	
16	g	155	
16	h	155	
16	i	155	
16	j	155	

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Mol	Chain	Length	Quality of chain
16	k	155	
16	l	155	
16	m	155	
16	n	155	
16	o	155	
17	p	351	

2 Entry composition

There are 18 unique types of molecules in this entry. The entry contains 62638 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 V-type proton ATPase catalytic subunit A.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	600	Total	C	N	O	S	0	0
			4661	2957	790	889	25		
1	B	587	Total	C	N	O	S	0	0
			4577	2904	776	873	24		
1	C	600	Total	C	N	O	S	0	0
			4661	2957	790	889	25		

- Molecule 2 is a protein called Vacuolar proton pump subunit B.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	D	456	Total	C	N	O	S	0	0
			3572	2266	611	674	21		
2	E	456	Total	C	N	O	S	0	0
			3572	2266	611	674	21		
2	F	458	Total	C	N	O	S	0	0
			3590	2278	615	676	21		

- Molecule 3 is a protein called V-type proton ATPase subunit C.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	G	360	Total	C	N	O	S	0	0
			2935	1880	496	549	10		

- Molecule 4 is a protein called V-type proton ATPase subunit D.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	H	213	Total	C	N	O	S	0	0
			1717	1089	309	314	5		

- Molecule 5 is a protein called V-type proton ATPase subunit E 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	I	217	Total	C	N	O	S	0	0
			1416	880	263	269	4		
5	J	218	Total	C	N	O	S	0	0
			1773	1118	317	329	9		
5	K	217	Total	C	N	O	S	0	0
			1766	1113	316	328	9		

- Molecule 6 is a protein called V-type proton ATPase subunit F.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	L	109	Total	C	N	O	S	0	0
			865	548	153	162	2		

- Molecule 7 is a protein called V-type proton ATPase subunit G.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	M	110	Total	C	N	O	S	0	0
			673	413	129	130	1		
7	N	110	Total	C	N	O	S	0	0
			906	556	172	175	3		
7	O	108	Total	C	N	O	S	0	0
			894	548	170	173	3		

- Molecule 8 is a protein called Bacterial effector protein SidK.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	Q	224	Total	C	N	O	S	0	0
			1824	1162	306	346	10		
8	R	206	Total	C	N	O	S	0	0
			1685	1073	285	319	8		
8	S	226	Total	C	N	O	S	0	0
			1836	1169	308	348	11		

- Molecule 9 is a protein called V-type proton ATPase subunit H.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	T	427	Total	C	N	O	S	0	0
			3510	2230	606	651	23		

- Molecule 10 is a protein called V-type proton ATPase subunit a.

Mol	Chain	Residues	Atoms				AltConf	Trace
10	a	750	Total	C	N	O	0	0
			3707	2207	750	750		

- Molecule 11 is a protein called V-type proton ATPase 21 kDa proteolipid subunit isoform 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
11	b	203	Total	C	N	O	0	0
			989	583	203	203		

- Molecule 12 is a protein called ATPase H⁺ transporting accessory protein 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
12	c	206	Total	C	N	O	0	0
			1016	604	206	206		

- Molecule 13 is a protein called V-type proton ATPase subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	d	350	Total	C	N	O	S	0	0
			2835	1829	462	530	14		

- Molecule 14 is a protein called V-type proton ATPase subunit.

Mol	Chain	Residues	Atoms				AltConf	Trace
14	e	80	Total	C	N	O	0	0
			394	234	80	80		

- Molecule 15 is a protein called Ribonuclease kappa.

Mol	Chain	Residues	Atoms				AltConf	Trace
15	f	84	Total	C	N	O	0	0
			412	244	84	84		

- Molecule 16 is a protein called V-type proton ATPase proteolipid subunit.

Mol	Chain	Residues	Atoms				AltConf	Trace
16	g	150	Total	C	N	O	0	0
			729	429	150	150		
16	h	150	Total	C	N	O	0	0
			729	429	150	150		
16	i	150	Total	C	N	O	0	0
			729	429	150	150		

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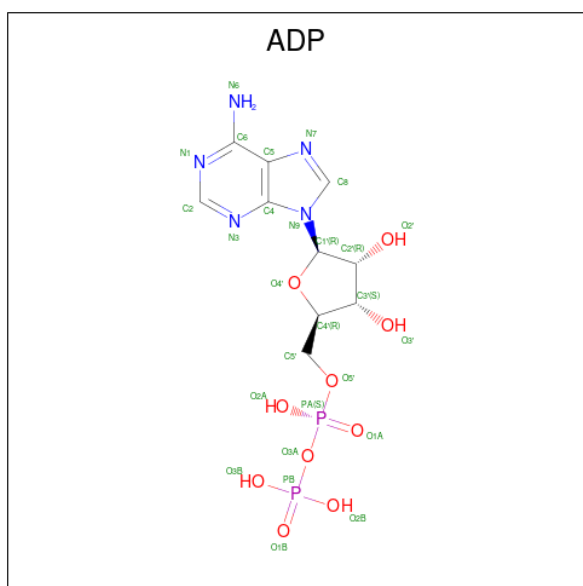
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Mol	Chain	Residues	Atoms				AltConf	Trace
16	j	150	Total	C	N	O	0	0
			729	429	150	150		
16	k	150	Total	C	N	O	0	0
			729	429	150	150		
16	l	150	Total	C	N	O	0	0
			729	429	150	150		
16	m	150	Total	C	N	O	0	0
			729	429	150	150		
16	n	150	Total	C	N	O	0	0
			729	429	150	150		
16	o	150	Total	C	N	O	0	0
			729	429	150	150		

- Molecule 17 is a protein called ATPase H(+)-transporting lysosomal accessory protein 2.

Mol	Chain	Residues	Atoms				AltConf	Trace
17	p	53	Total	C	N	O	0	0
			264	158	53	53		

- Molecule 18 is ADENOSINE-5'-DIPHOSPHATE (CCD ID: ADP) (formula: C₁₀H₁₅N₅O₁₀P₂) (labeled as "Ligand of Interest" by depositor).

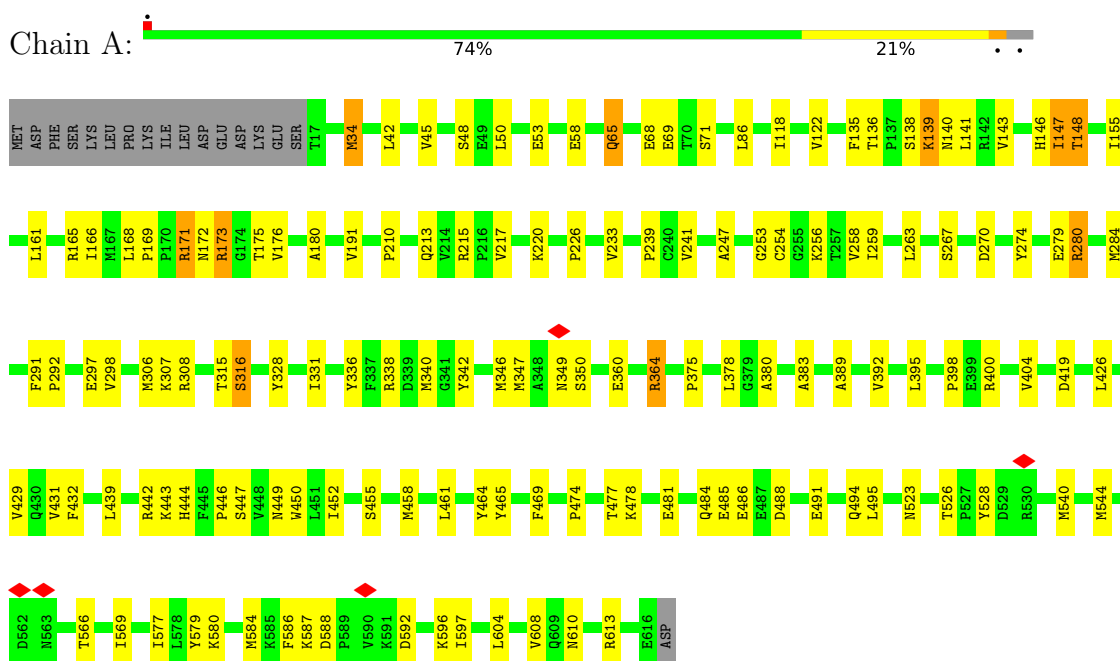


Mol	Chain	Residues	Atoms					AltConf
18	A	1	Total	C	N	O	P	0
			27	10	5	10	2	

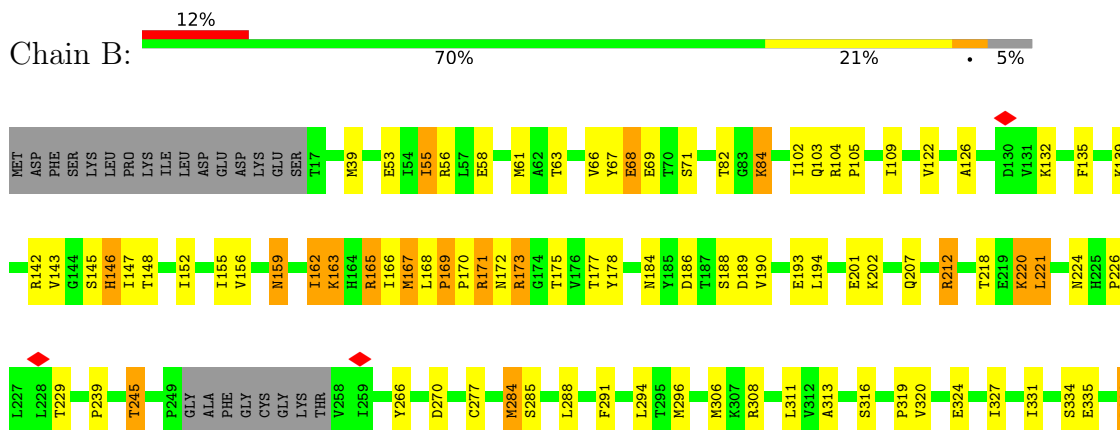
3 Residue-property plots

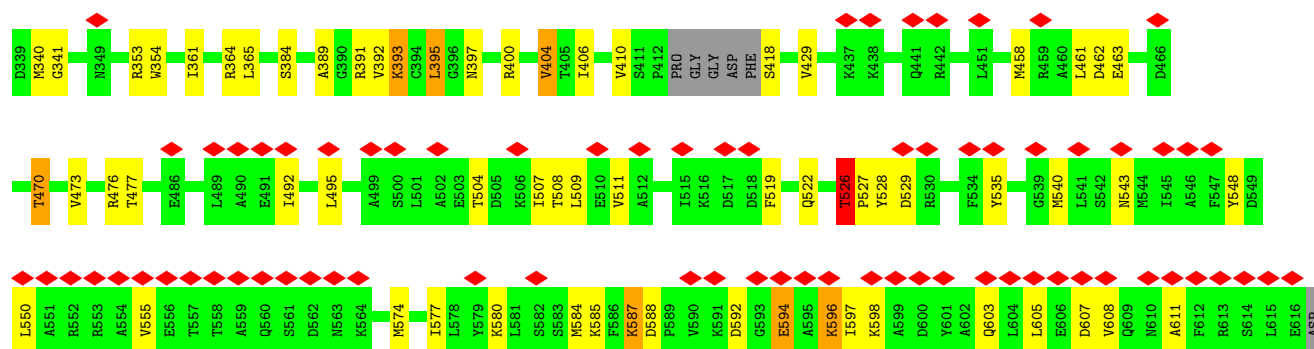
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. 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. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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: V-type proton ATPase catalytic subunit A



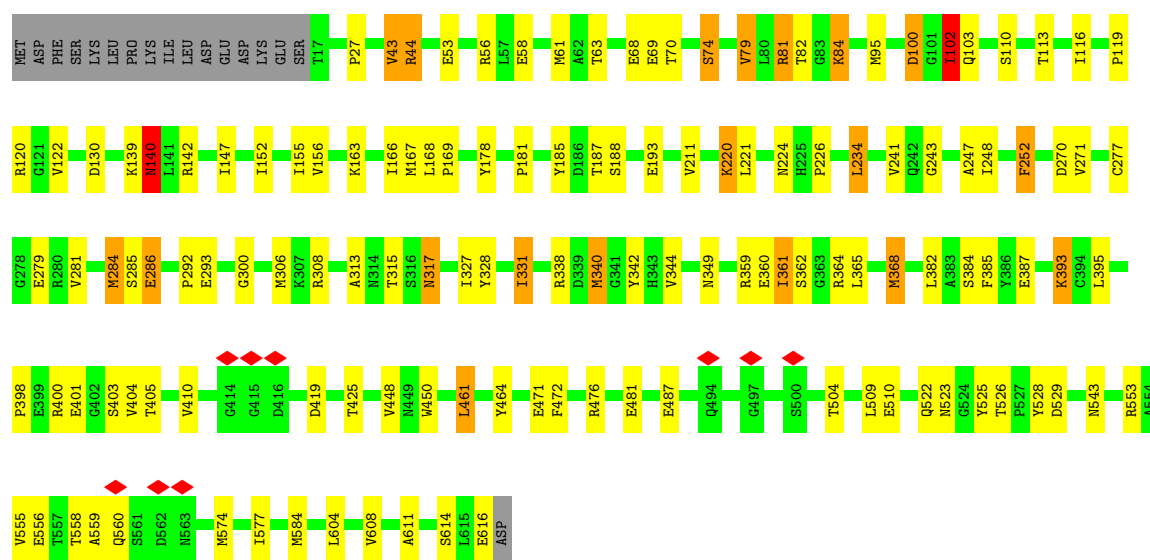
- Molecule 1: V-type proton ATPase catalytic subunit A





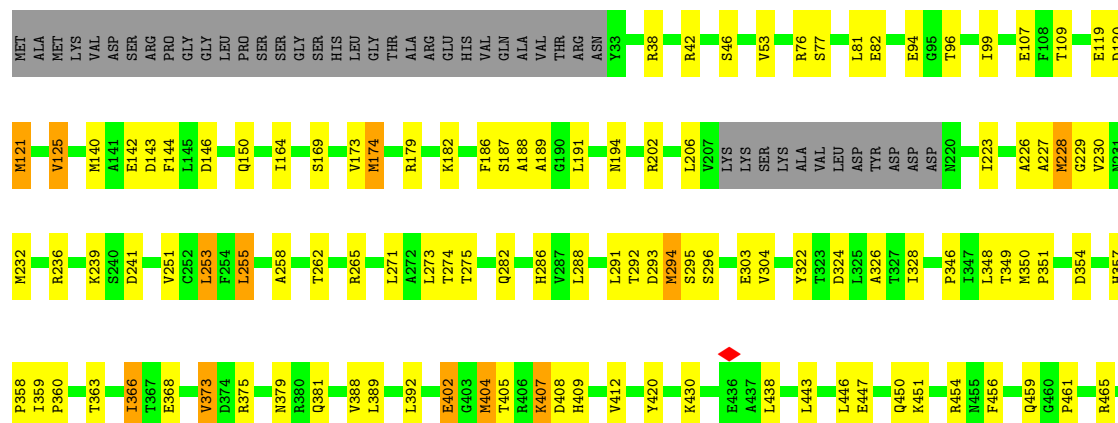
• Molecule 1: V-type proton ATPase catalytic subunit A

Chain C: 75% 18%



• Molecule 2: Vacuolar proton pump subunit B

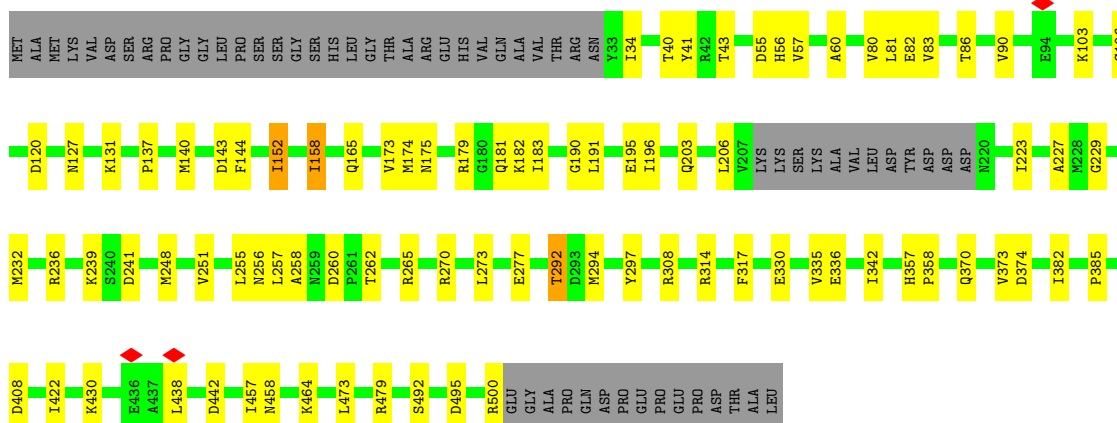
Chain D: 64% 22% 11%





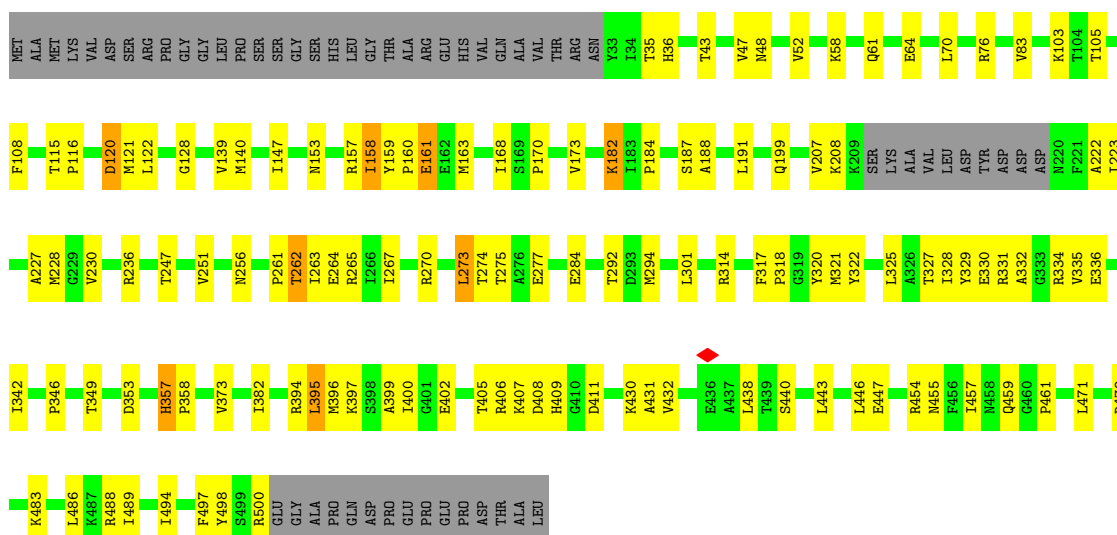
• Molecule 2: Vacuolar proton pump subunit B

Chain E: 71% 17% 11%



• Molecule 2: Vacuolar proton pump subunit B

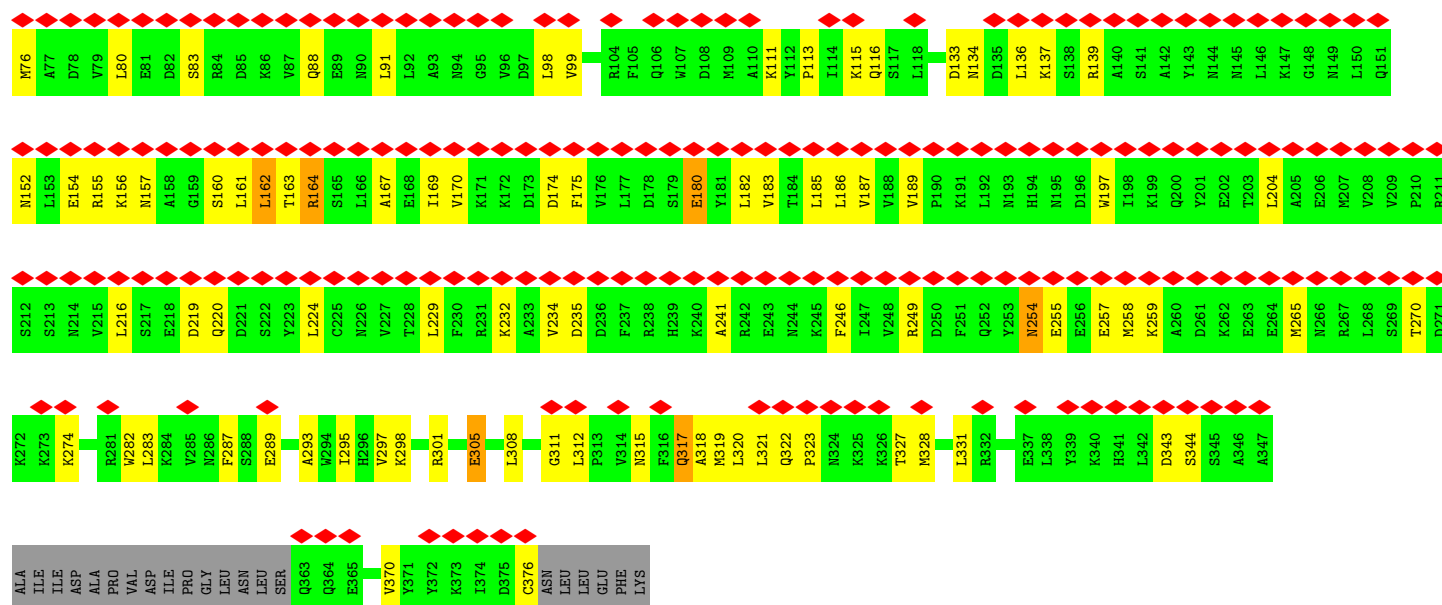
Chain F: 64% 23% 11%



• Molecule 3: V-type proton ATPase subunit C

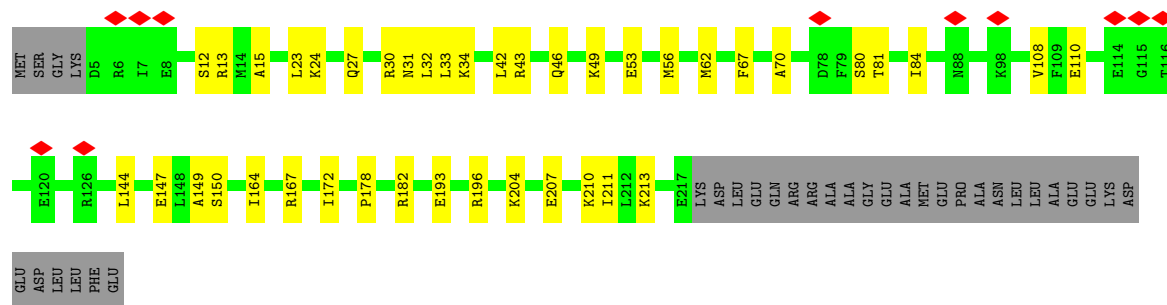
Chain G: 63% 68% 25% 6%





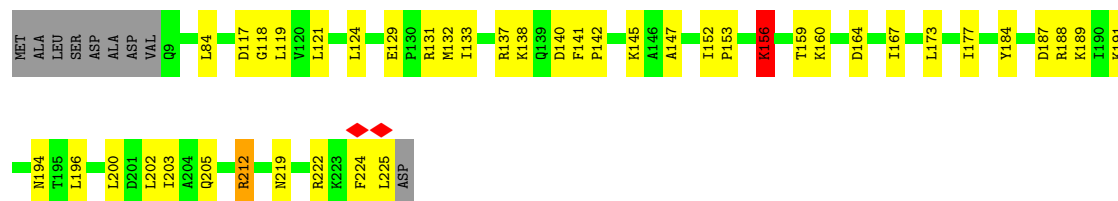
• Molecule 4: V-type proton ATPase subunit D

Chain H: 70% 17% 14%



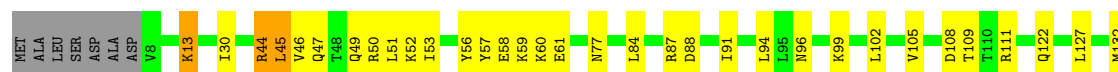
• Molecule 5: V-type proton ATPase subunit E 1

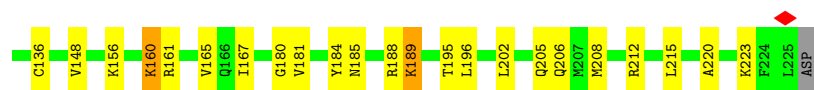
Chain I: 77% 18%



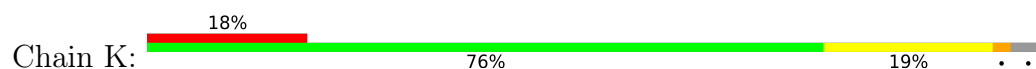
• Molecule 5: V-type proton ATPase subunit E 1

Chain J: 72% 23%

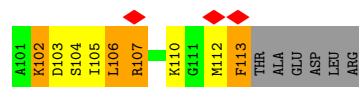




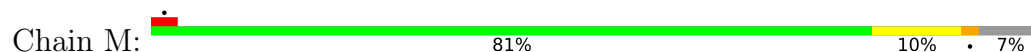
• Molecule 5: V-type proton ATPase subunit E 1



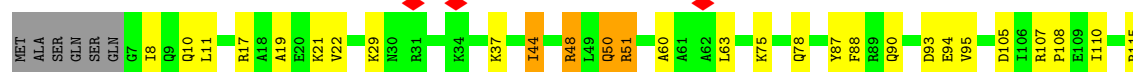
• Molecule 6: V-type proton ATPase subunit F



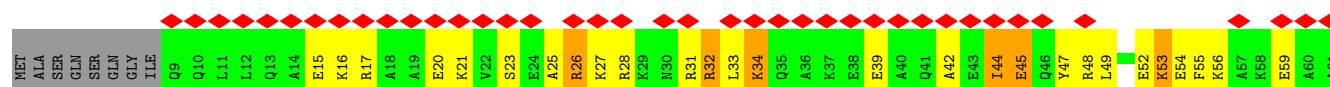
• Molecule 7: V-type proton ATPase subunit G



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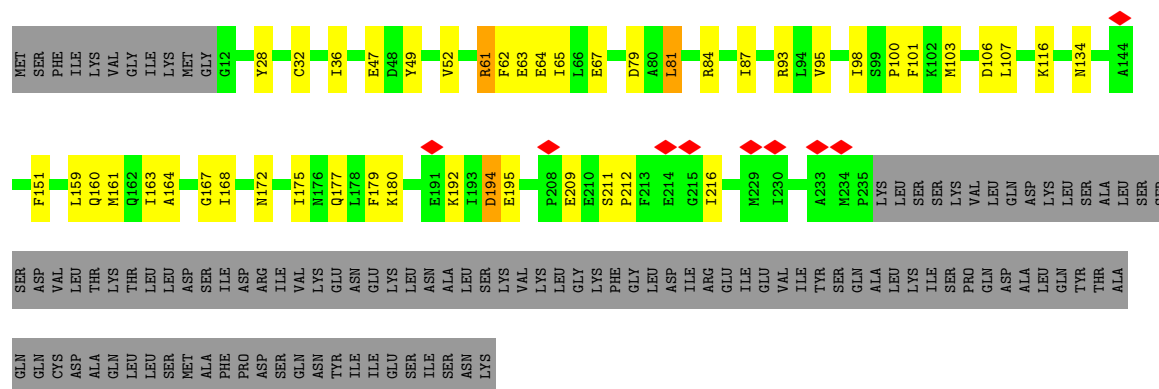


• Molecule 7: V-type proton ATPase subunit G

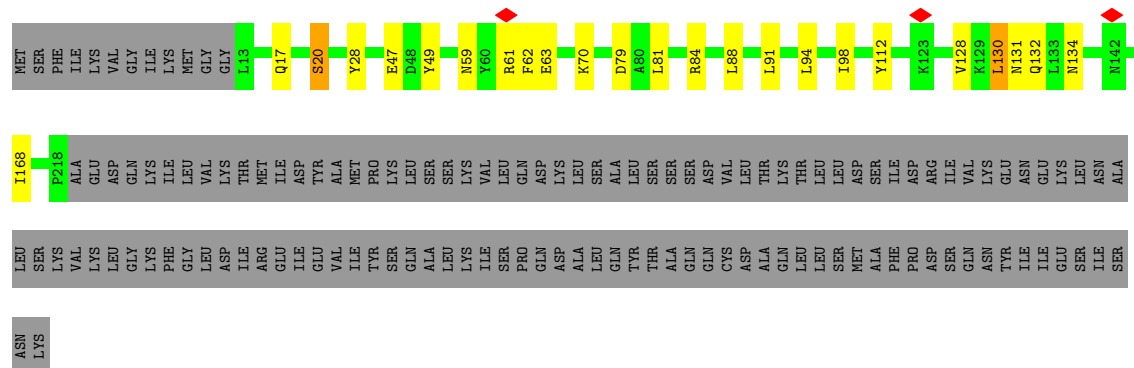




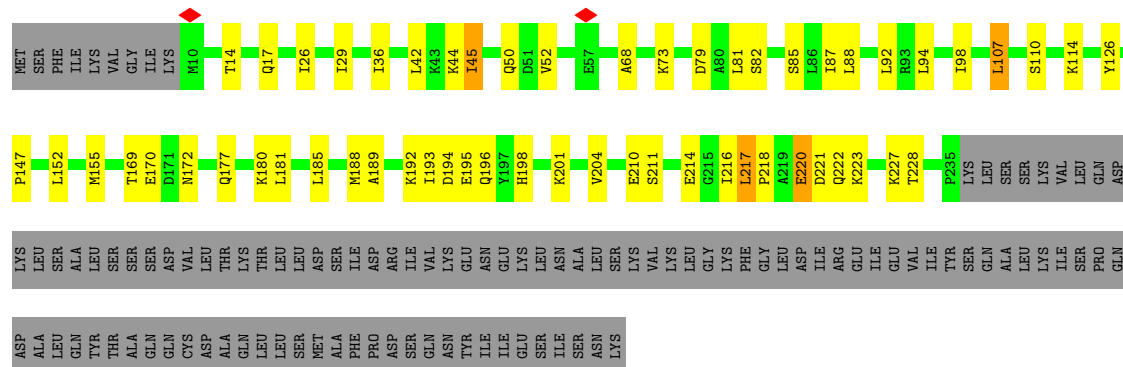
• Molecule 8: Bacterial effector protein SidK

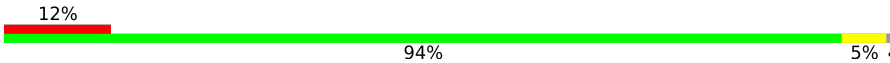


• Molecule 8: Bacterial effector protein SidK



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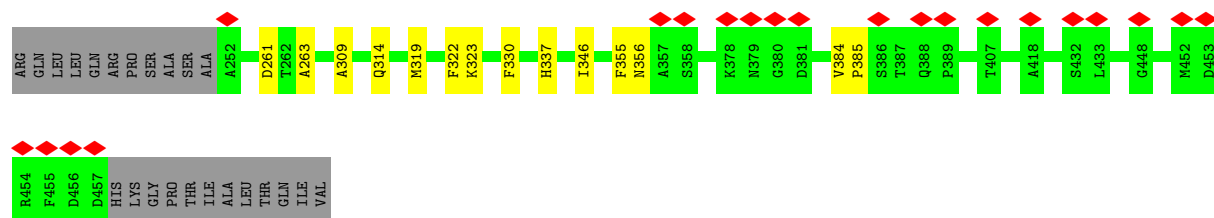
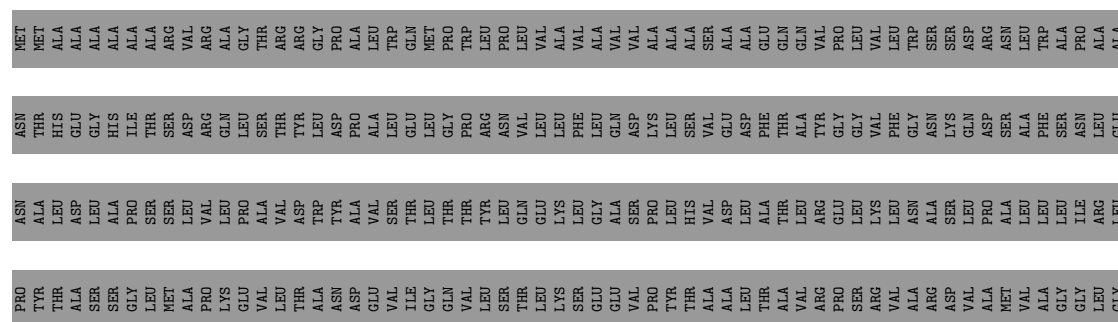


Chain b: 



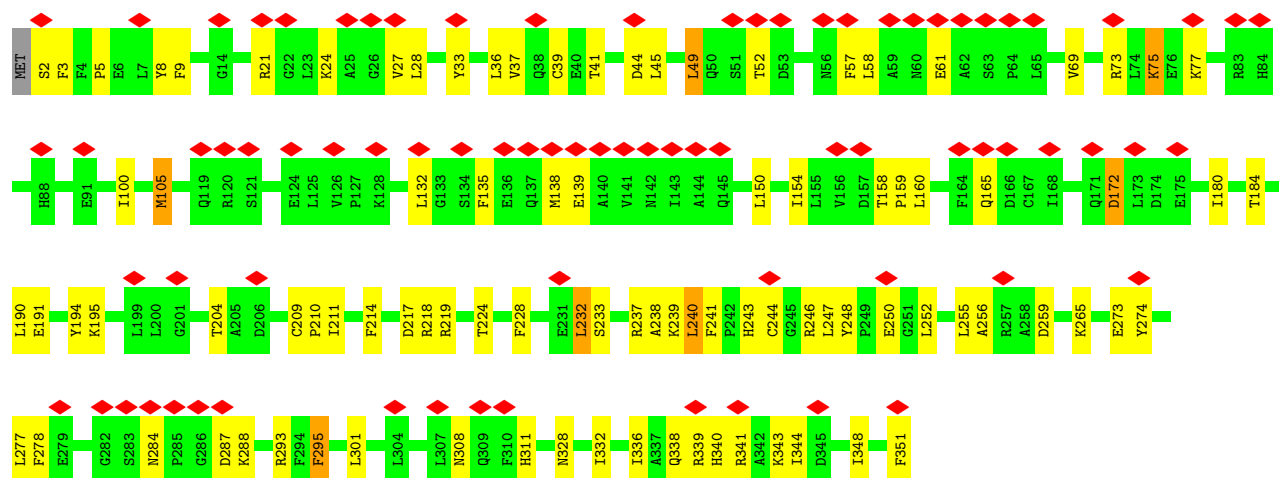
- Molecule 12: ATPase H⁺ transporting accessory protein 1

Chain c: 

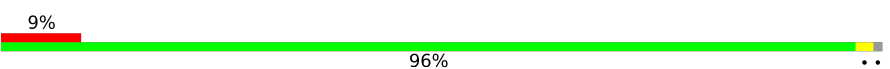


- Molecule 13: V-type proton ATPase subunit

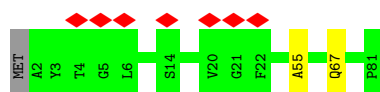
Chain d: 



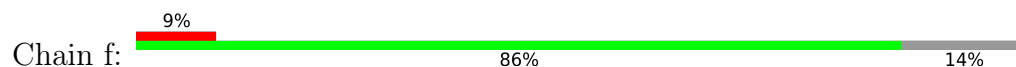
- Molecule 14: V-type proton ATPase subunit

Chain e: 

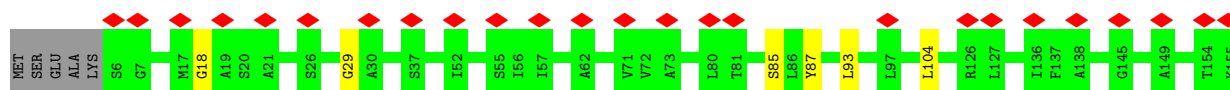
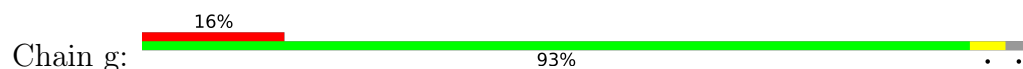




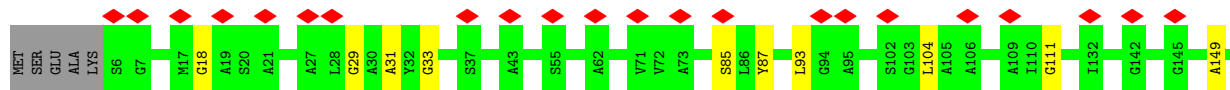
- Molecule 15: Ribonuclease kappa



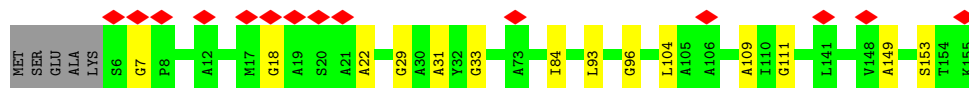
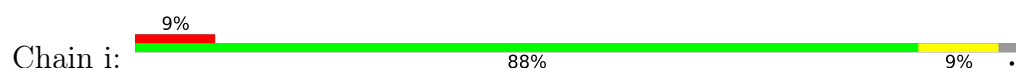
- Molecule 16: V-type proton ATPase proteolipid subunit



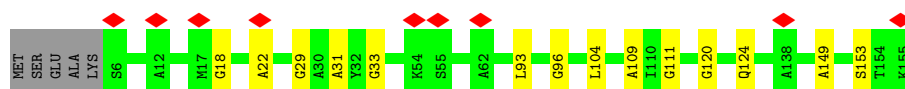
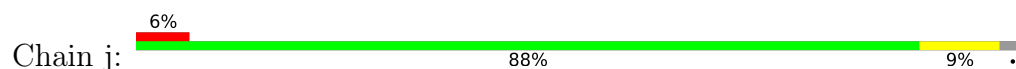
- Molecule 16: V-type proton ATPase proteolipid subunit



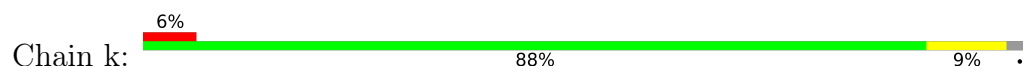
- Molecule 16: V-type proton ATPase proteolipid subunit

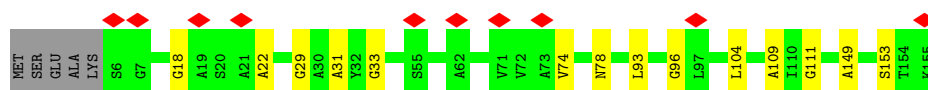


- Molecule 16: V-type proton ATPase proteolipid subunit

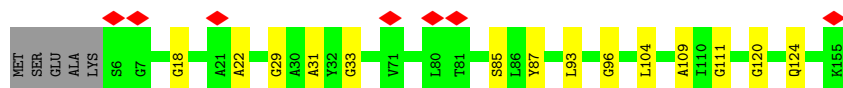
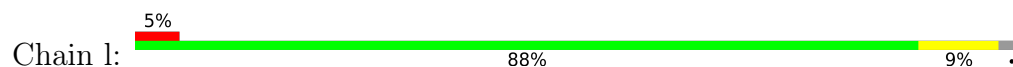


- Molecule 16: V-type proton ATPase proteolipid subunit

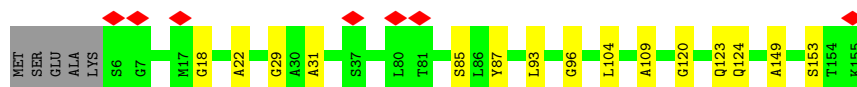
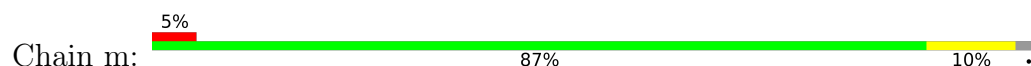




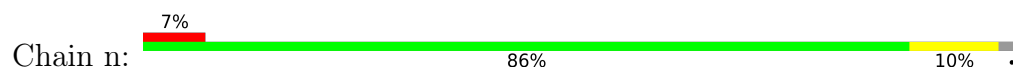
- Molecule 16: V-type proton ATPase proteolipid subunit



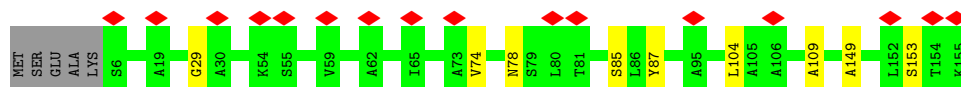
- Molecule 16: V-type proton ATPase proteolipid subunit



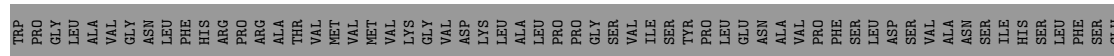
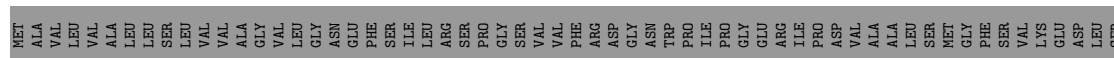
- Molecule 16: V-type proton ATPase proteolipid subunit



- Molecule 16: V-type proton ATPase proteolipid subunit



- Molecule 17: ATPase H(+)-transporting lysosomal accessory protein 2



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	22866	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	40	Depositor
Minimum defocus (nm)	100.00	Depositor
Maximum defocus (nm)	3911.445	Depositor
Magnification	Not provided	
Image detector	FEI FALCON IV (4k x 4k)	Depositor
Maximum map value	2.799	Depositor
Minimum map value	-0.389	Depositor
Average map value	0.160	Depositor
Map value standard deviation	0.254	Depositor
Recommended contour level	0.7	Depositor
Map size ($\text{\AA}$)	184.88861, 215.4487, 307.129	wwPDB
Map dimensions	121, 141, 201	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.528005, 1.528005, 1.528005	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: ADP

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	A	0.70	1/4757 (0.0%)	1.06	4/6446 (0.1%)
1	B	0.72	0/4668	1.17	10/6324 (0.2%)
1	C	0.71	0/4757	1.12	9/6446 (0.1%)
2	D	0.70	0/3644	1.09	9/4939 (0.2%)
2	E	0.64	0/3644	1.02	5/4939 (0.1%)
2	F	0.70	0/3662	1.14	7/4961 (0.1%)
3	G	0.59	0/2989	0.97	4/4038 (0.1%)
4	H	0.51	0/1735	0.96	1/2321 (0.0%)
5	I	0.54	0/1427	0.93	1/1948 (0.1%)
5	J	0.49	0/1790	0.86	0/2396
5	K	0.72	0/1783	1.26	4/2386 (0.2%)
6	L	0.70	0/879	1.22	1/1186 (0.1%)
7	M	0.59	0/678	0.93	2/933 (0.2%)
7	N	0.50	0/914	0.93	0/1218
7	O	0.78	0/902	1.27	3/1202 (0.2%)
8	Q	0.55	0/1858	1.02	2/2505 (0.1%)
8	R	0.70	0/1717	1.22	1/2315 (0.0%)
8	S	0.64	0/1870	1.11	5/2520 (0.2%)
9	T	0.57	0/3576	0.95	6/4818 (0.1%)
10	a	0.27	0/3704	0.46	1/5155 (0.0%)
11	b	0.14	0/988	0.30	0/1366
12	c	0.18	0/1015	0.45	0/1411
13	d	0.56	0/2901	1.02	4/3930 (0.1%)
14	e	0.13	0/393	0.33	0/545
15	f	0.16	0/411	0.33	0/569
16	g	0.16	0/728	0.32	0/1005
16	h	0.17	0/728	0.33	0/1005
16	i	0.16	0/728	0.38	0/1005
16	j	0.17	0/728	0.38	0/1005
16	k	0.18	0/728	0.43	0/1005
16	l	0.17	0/728	0.33	0/1005
16	m	0.18	0/728	0.31	0/1005

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
16	n	0.17	0/728	0.33	0/1005
16	o	0.15	0/728	0.35	0/1005
17	p	0.14	0/263	0.37	0/366
All	All	0.59	1/63477 (0.0%)	0.97	79/86228 (0.1%)

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	587	LYS	C-O	-7.27	1.17	1.24

All (79) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	262	THR	CB-CA-C	9.96	119.69	109.83
2	F	263	ILE	N-CA-C	-9.55	102.25	113.42
7	M	103	VAL	N-CA-C	-9.54	103.61	111.81
2	D	142	GLU	N-CA-C	-7.39	103.22	112.90
1	C	169	PRO	N-CA-CB	7.33	107.30	103.19
13	d	256	ALA	N-CA-C	-6.97	104.41	113.12
2	D	42	ARG	N-CA-C	-6.94	102.06	112.54
1	C	102	ILE	N-CA-C	-6.88	104.61	111.77
13	d	172	ASP	CA-CB-CG	6.74	119.34	112.60
9	T	220	GLU	N-CA-C	-6.69	103.60	111.03
8	S	220	GLU	N-CA-C	-6.63	105.49	113.97
1	C	461	LEU	N-CA-C	-6.62	106.41	114.75
5	K	156	LYS	N-CA-C	-6.49	104.84	112.89
7	O	44	ILE	N-CA-C	-6.49	105.42	111.45
2	D	288	LEU	O-C-N	-6.42	115.72	123.29
5	K	39	ASN	N-CA-C	-6.38	103.57	112.45
8	S	216	ILE	N-CA-C	-6.34	106.33	112.29
1	A	336	TYR	N-CA-C	-6.29	104.32	112.68
8	Q	194	ASP	CA-CB-CG	6.24	118.84	112.60
1	B	169	PRO	N-CA-CB	6.23	106.68	103.19
9	T	147	LYS	N-CA-C	-6.18	104.62	111.36
1	B	340	MET	N-CA-C	-6.15	105.77	113.28
2	D	404	MET	N-CA-C	-6.11	105.11	113.30
7	O	86	THR	CA-C-N	6.10	128.45	120.28
7	O	86	THR	C-N-CA	6.10	128.45	120.28
3	G	63	ALA	N-CA-C	-6.00	104.10	112.45
9	T	114	TYR	N-CA-C	-5.99	105.56	112.92
2	D	472	ASP	N-CA-C	-5.90	104.25	112.45
9	T	353	ASP	N-CA-C	-5.85	104.50	111.69

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	84	LYS	N-CA-C	5.85	113.48	108.22
10	a	361	PRO	N-CA-C	-5.79	103.64	110.70
2	D	274	THR	N-CA-C	-5.77	104.59	111.69
2	F	264	GLU	N-CA-C	-5.77	104.99	111.28
5	K	20	GLU	N-CA-C	-5.75	104.62	111.69
5	I	156	LYS	N-CA-C	-5.66	106.22	113.01
1	C	398	PRO	N-CA-C	-5.61	102.40	111.03
3	G	343	ASP	CA-CB-CG	5.60	118.20	112.60
2	F	274	THR	N-CA-C	-5.57	104.70	112.45
2	D	304	VAL	N-CA-C	-5.53	105.14	110.72
1	B	526	THR	CB-CA-C	5.46	117.99	109.42
3	G	40	ILE	CA-C-O	-5.46	117.10	119.94
4	H	13	ARG	N-CA-C	-5.46	105.33	111.28
1	C	340	MET	N-CA-C	-5.41	105.38	111.28
8	S	210	GLU	N-CA-C	-5.40	105.39	111.28
6	L	113	PHE	CA-CB-CG	5.39	119.19	113.80
1	B	159	ASN	CA-CB-CG	-5.39	107.21	112.60
9	T	82	THR	N-CA-C	-5.39	106.72	113.72
7	M	107	ARG	O-C-N	-5.36	119.06	121.53
1	C	464	TYR	N-CA-C	-5.36	105.34	111.07
1	B	341	GLY	CA-C-N	-5.36	115.16	122.93
1	B	341	GLY	C-N-CA	-5.36	115.16	122.93
2	E	175	ASN	CA-CB-CG	5.34	117.94	112.60
1	B	470	THR	CA-C-N	5.30	131.68	121.18
1	B	470	THR	C-N-CA	5.30	131.68	121.18
2	E	317	PHE	CA-C-O	-5.30	115.83	120.60
2	E	190	GLY	N-CA-C	-5.29	108.32	115.36
8	S	107	LEU	O-C-N	-5.28	115.17	122.46
1	B	393	LYS	N-CA-C	-5.28	101.17	109.25
1	C	140	ASN	N-CA-C	-5.28	106.78	113.43
2	E	408	ASP	CA-CB-CG	5.27	117.87	112.60
8	Q	151	PHE	CA-CB-CG	5.25	119.05	113.80
2	F	357	HIS	CB-CG-CD2	-5.19	124.45	131.20
1	B	470	THR	O-C-N	-5.15	115.74	122.59
8	R	131	ASN	N-CA-C	-5.12	105.33	112.45
1	C	285	SER	N-CA-C	-5.12	106.72	112.87
13	d	295	PHE	N-CA-C	-5.12	105.34	112.45
1	A	65	GLN	N-CA-C	-5.11	101.37	109.96
2	E	165	GLN	OE1-CD-NE2	-5.08	117.52	122.60
2	F	334	ARG	N-CA-C	-5.08	102.24	110.32
2	D	363	THR	CA-C-N	5.08	125.61	119.98
2	D	363	THR	C-N-CA	5.08	125.61	119.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	116	PRO	CB-CA-C	-5.07	107.61	111.87
1	A	586	PHE	CA-C-O	-5.06	116.23	122.36
9	T	420	HIS	CB-CG-CD2	-5.06	124.62	131.20
13	d	159	PRO	CA-N-CD	-5.05	104.93	112.00
1	A	169	PRO	CB-CA-C	-5.01	104.80	110.92
8	S	88	LEU	N-CA-C	-5.01	105.49	112.45
5	K	38	PHE	CB-CA-C	5.01	119.33	109.72
3	G	254	ASN	O-C-N	-5.00	117.75	123.40

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	A	4661	0	4653	78	0
1	B	4577	0	4577	70	0
1	C	4661	0	4653	66	0
2	D	3572	0	3555	70	0
2	E	3572	0	3555	43	0
2	F	3590	0	3581	59	0
3	G	2935	0	2970	52	0
4	H	1717	0	1822	34	0
5	I	1416	0	1167	21	0
5	J	1773	0	1855	34	0
5	K	1766	0	1846	20	0
6	L	865	0	872	17	0
7	M	673	0	476	1	0
7	N	906	0	913	22	0
7	O	894	0	899	24	0
8	Q	1824	0	1835	28	0
8	R	1685	0	1691	9	0
8	S	1836	0	1847	20	0
9	T	3510	0	3493	78	0
10	a	3707	0	1627	9	0
11	b	989	0	489	5	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
12	c	1016	0	457	7	0
13	d	2835	0	2770	59	0
14	e	394	0	167	2	0
15	f	412	0	190	0	0
16	g	729	0	388	3	0
16	h	729	0	388	6	0
16	i	729	0	388	8	0
16	j	729	0	388	8	0
16	k	729	0	388	8	0
16	l	729	0	388	9	0
16	m	729	0	388	10	0
16	n	729	0	388	9	0
16	o	729	0	388	5	0
17	p	264	0	116	0	0
18	A	27	0	12	3	0
All	All	62638	0	55580	821	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 7.

All (821) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:O:45:GLU:H	7:O:45:GLU:CD	1.66	0.99
7:O:45:GLU:CD	7:O:45:GLU:N	2.21	0.97
7:O:45:GLU:N	7:O:45:GLU:OE1	2.00	0.95
4:H:149:ALA:HB2	6:L:89:LEU:HD11	1.51	0.92
1:A:291:PHE:HB2	1:A:306:MET:HE2	1.60	0.83
2:E:34:ILE:HD12	5:J:202:LEU:HG	1.62	0.81
1:B:511:VAL:HG11	1:B:548:TYR:HB2	1.64	0.79
9:T:198:VAL:HA	9:T:201:VAL:HG12	1.65	0.78
2:F:70:LEU:HD11	2:F:76:ARG:HE	1.51	0.73
5:J:49:GLN:HB2	7:N:44:ILE:HG13	1.71	0.71
2:D:179:ARG:HE	2:D:206:LEU:HD21	1.54	0.71
2:F:409:HIS:HA	2:F:471:LEU:HD21	1.72	0.71
5:K:118:GLY:HA3	7:O:106:ILE:HD13	1.71	0.71
5:I:138:LYS:O	5:I:141:PHE:HB3	1.91	0.71
2:E:227:ALA:HB3	2:E:255:LEU:HA	1.71	0.70
1:A:161:LEU:HD13	1:A:308:ARG:HB3	1.71	0.70
1:A:540:MET:HA	1:A:584:MET:HE1	1.72	0.70
1:B:66:VAL:HG12	1:B:68:GLU:H	1.57	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:b:64:GLY:HA3	11:b:149:LEU:HA	1.74	0.69
2:E:120:ASP:OD2	5:J:87:ARG:NH2	2.25	0.69
16:i:29:GLY:HA3	16:i:104:LEU:HA	1.75	0.69
8:Q:106:ASP:OD1	8:Q:107:LEU:N	2.26	0.68
2:E:34:ILE:HD11	5:J:206:GLN:HB2	1.74	0.68
8:S:218:PRO:HB2	8:S:222:GLN:HB2	1.75	0.67
1:B:296:MET:HE1	1:B:308:ARG:HD3	1.75	0.67
2:F:321:MET:O	2:F:325:LEU:HB2	1.95	0.67
9:T:434:LYS:HG2	9:T:438:MET:HE2	1.77	0.67
8:Q:93:ARG:NH2	8:Q:134:ASN:OD1	2.27	0.67
9:T:273:LEU:HB2	9:T:285:ILE:HG21	1.76	0.67
13:d:328:ASN:ND2	13:d:348:ILE:O	2.27	0.67
1:B:190:VAL:HG11	1:B:202:LYS:HD2	1.77	0.67
16:l:29:GLY:HA3	16:l:104:LEU:HA	1.74	0.67
16:k:29:GLY:HA3	16:k:104:LEU:HA	1.76	0.66
1:A:481:GLU:O	1:A:484:GLN:HG3	1.95	0.66
9:T:85:SER:O	9:T:132:ARG:NH1	2.28	0.66
3:G:167:ALA:HA	3:G:258:MET:HG3	1.77	0.66
1:A:495:LEU:O	4:H:167:ARG:NH2	2.28	0.66
16:j:29:GLY:HA3	16:j:104:LEU:HA	1.78	0.65
16:o:29:GLY:HA3	16:o:104:LEU:HA	1.78	0.65
2:E:373:VAL:HG13	2:E:385:PRO:HG2	1.79	0.65
1:A:220:LYS:NZ	1:A:389:ALA:O	2.29	0.65
2:F:227:ALA:HB1	2:F:230:VAL:HG21	1.78	0.65
2:D:189:ALA:O	2:D:375:ARG:NH1	2.31	0.64
16:h:29:GLY:HA3	16:h:104:LEU:HA	1.80	0.64
1:A:220:LYS:HD2	1:A:392:VAL:HG12	1.80	0.64
10:a:518:GLY:HA2	14:e:55:ALA:HB1	1.78	0.64
8:S:177:GLN:HA	8:S:180:LYS:HD2	1.81	0.63
1:B:220:LYS:HB3	2:F:236:ARG:HH11	1.63	0.63
1:A:431:VAL:HG13	1:A:455:SER:HB2	1.81	0.63
1:A:540:MET:HB3	1:A:544:MET:HE1	1.80	0.63
1:B:239:PRO:HD2	1:B:458:MET:HE1	1.81	0.63
9:T:254:PRO:HB3	9:T:295:LYS:HB3	1.81	0.62
2:E:257:LEU:N	2:E:260:ASP:OD2	2.31	0.62
3:G:49:ASP:OD2	10:a:227:ASP:N	2.33	0.62
9:T:415:GLY:O	9:T:458:LYS:HE3	1.99	0.62
1:A:146:HIS:HB3	8:Q:62:PHE:HD2	1.64	0.62
2:D:188:ALA:H	2:D:191:LEU:HD12	1.65	0.62
2:E:203:GLN:HB3	2:E:464:LYS:HG3	1.80	0.62
6:L:58:ARG:HB3	6:L:61:ILE:HG12	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:S:42:LEU:HB3	8:S:45:ILE:HG13	1.81	0.62
9:T:139:HIS:HD2	9:T:201:VAL:HB	1.65	0.62
13:d:49:LEU:HA	13:d:52:THR:HG22	1.80	0.62
1:C:119:PRO:HG2	1:C:122:VAL:HB	1.81	0.61
2:D:188:ALA:HB3	2:D:191:LEU:HG	1.82	0.61
7:O:81:MET:HA	7:O:84:LEU:HB2	1.82	0.61
4:H:30:ARG:HB3	4:H:172:ILE:HG21	1.83	0.61
2:F:432:VAL:HG13	4:H:32:LEU:HD12	1.83	0.61
9:T:52:ARG:NH2	9:T:64:GLU:OE2	2.34	0.61
3:G:164:ARG:HG2	3:G:169:ILE:HD11	1.81	0.61
4:H:62:MET:HE2	6:L:92:PRO:HG2	1.82	0.61
5:K:42:LYS:HD3	7:O:39:GLU:HB3	1.83	0.61
8:Q:49:TYR:HA	8:Q:84:ARG:HH11	1.65	0.61
1:B:592:ASP:HB3	1:B:596:LYS:HG2	1.81	0.61
2:D:354:ASP:HB3	2:D:357:HIS:HB2	1.83	0.60
13:d:2:SER:N	13:d:8:TYR:HH	1.98	0.60
16:j:120:GLY:O	16:j:124:GLN:N	2.26	0.60
6:L:68:GLN:HA	6:L:90:GLU:OE2	2.01	0.60
5:I:173:LEU:HB3	5:I:177:ILE:HD13	1.83	0.60
10:a:12:LEU:HA	10:a:323:VAL:O	2.01	0.60
8:S:194:ASP:OD1	8:S:195:GLU:N	2.34	0.60
2:F:262:THR:HA	2:F:265:ARG:HG3	1.84	0.60
5:J:127:LEU:HD23	5:J:132:MET:HG3	1.84	0.60
1:C:74:SER:HB3	2:F:61:GLN:HA	1.84	0.60
1:A:491:GLU:O	1:A:494:GLN:NE2	2.35	0.59
3:G:270:THR:HG22	3:G:274:LYS:HE2	1.83	0.59
9:T:37:LEU:HD21	9:T:47:CYS:HB2	1.83	0.59
12:c:322:PHE:HA	12:c:346:ILE:HA	1.84	0.59
16:n:18:GLY:HA3	16:n:93:LEU:HA	1.84	0.59
13:d:191:GLU:O	13:d:195:LYS:NZ	2.33	0.59
1:C:243:GLY:H	1:C:405:THR:CG2	2.16	0.59
4:H:30:ARG:NH2	4:H:31:ASN:OD1	2.34	0.59
2:D:430:LYS:HB3	2:D:438:LEU:HD11	1.83	0.59
9:T:425:LYS:NZ	9:T:462:HIS:O	2.35	0.59
5:J:108:ASP:OD1	5:J:109:THR:N	2.36	0.59
2:D:46:SER:HB3	2:D:53:VAL:HB	1.84	0.59
2:E:55:ASP:OD1	2:E:56:HIS:N	2.36	0.59
8:Q:61:ARG:HG2	8:Q:64:GLU:HB2	1.85	0.59
9:T:69:GLU:HG2	9:T:112:PHE:HE2	1.67	0.59
5:I:137:ARG:NH2	5:I:140:ASP:OD2	2.33	0.59
5:J:215:LEU:HG	7:N:95:VAL:HG11	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:d:191:GLU:OE2	13:d:243:HIS:N	2.36	0.59
1:A:279:GLU:HG3	1:A:284:MET:HE3	1.85	0.58
4:H:193:GLU:OE2	4:H:196:ARG:NH2	2.36	0.58
16:m:22:ALA:HB2	16:m:96:GLY:HA2	1.85	0.58
8:R:49:TYR:HA	8:R:84:ARG:HH12	1.69	0.58
9:T:269:LEU:HG	9:T:285:ILE:HG23	1.86	0.58
16:i:18:GLY:HA3	16:i:93:LEU:HA	1.85	0.58
2:E:294:MET:HA	2:E:294:MET:HE2	1.84	0.58
4:H:27:GLN:HA	4:H:30:ARG:HG3	1.84	0.58
16:m:29:GLY:HA3	16:m:104:LEU:HA	1.86	0.58
1:B:528:TYR:HB3	1:B:588:ASP:HA	1.86	0.58
2:F:273:LEU:HD22	2:F:331:ARG:HB2	1.84	0.58
5:J:94:LEU:HD22	5:J:215:LEU:HD11	1.85	0.58
13:d:5:PRO:O	13:d:9:PHE:N	2.28	0.58
2:F:163:MET:HB3	2:F:399:ALA:HB1	1.83	0.58
16:k:18:GLY:HA3	16:k:93:LEU:HA	1.85	0.57
7:N:50:GLN:HE21	7:N:51:ARG:HH11	1.51	0.57
5:I:219:ASN:OD1	5:I:222:ARG:N	2.34	0.57
1:C:306:MET:HE3	1:C:306:MET:HA	1.85	0.57
7:N:10:GLN:OE1	7:N:10:GLN:N	2.34	0.57
7:N:17:ARG:HB3	7:N:21:LYS:NZ	2.20	0.57
16:g:18:GLY:HA3	16:g:93:LEU:HA	1.85	0.57
1:C:300:GLY:HA2	8:S:189:ALA:HA	1.86	0.57
2:F:223:ILE:HB	2:F:251:VAL:HG22	1.85	0.57
8:Q:36:ILE:HG13	8:Q:95:VAL:HG21	1.87	0.57
8:Q:98:ILE:HG12	8:Q:160:GLN:HG2	1.86	0.57
1:A:458:MET:HE2	1:A:458:MET:N	2.20	0.57
1:B:335:GLU:O	1:B:338:ARG:HG3	2.04	0.57
2:D:173:VAL:HA	2:D:409:HIS:CE1	2.40	0.57
5:J:148:VAL:HG21	5:J:167:ILE:HD11	1.85	0.57
5:J:220:ALA:O	5:J:223:LYS:NZ	2.30	0.57
9:T:219:VAL:HG21	9:T:256:MET:SD	2.45	0.57
1:A:217:VAL:HG11	1:A:392:VAL:HG11	1.86	0.57
2:E:80:VAL:HG22	2:E:90:VAL:HG22	1.87	0.57
5:I:118:GLY:HA3	7:M:106:ILE:HD13	1.87	0.56
1:A:165:ARG:HB2	1:A:340:MET:HG3	1.87	0.56
1:A:488:ASP:O	1:A:491:GLU:HG3	2.06	0.56
3:G:91:LEU:HB2	3:G:287:PHE:CE2	2.40	0.56
3:G:216:LEU:HD11	3:G:224:LEU:HD23	1.88	0.56
5:J:180:GLY:HA3	5:J:195:THR:HA	1.87	0.56
12:c:355:PHE:HA	12:c:385:PRO:HA	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:43:VAL:HG22	1:C:81:ARG:HA	1.88	0.56
2:F:332:ALA:HA	2:F:342:ILE:HB	1.87	0.56
3:G:72:VAL:HG11	3:G:287:PHE:HB2	1.86	0.56
3:G:305:GLU:HB3	3:G:370:VAL:HG22	1.87	0.56
9:T:218:TRP:HE1	9:T:227:ILE:HD11	1.71	0.56
16:l:18:GLY:HA3	16:l:93:LEU:HA	1.86	0.56
2:D:402:GLU:HG2	2:D:407:LYS:HB3	1.86	0.56
4:H:31:ASN:HA	4:H:34:LYS:HE3	1.88	0.56
1:B:284:MET:HE3	1:B:288:LEU:HD11	1.86	0.56
2:D:273:LEU:HD11	2:D:291:LEU:HD11	1.87	0.56
2:F:317:PHE:HD1	2:F:321:MET:HE3	1.70	0.56
8:S:14:THR:HG23	8:S:17:GLN:H	1.70	0.56
16:l:120:GLY:O	16:l:124:GLN:N	2.39	0.56
5:K:180:GLY:HA3	5:K:195:THR:HA	1.88	0.56
1:B:284:MET:HE1	1:B:313:ALA:HB3	1.88	0.55
2:D:169:SER:N	2:D:459:GLN:OE1	2.35	0.55
2:D:223:ILE:HB	2:D:251:VAL:HG22	1.87	0.55
3:G:152:ASN:O	3:G:156:LYS:HG3	2.05	0.55
1:B:324:GLU:HA	1:B:354:TRP:CD1	2.42	0.55
5:J:53:ILE:HD11	7:N:44:ILE:HG23	1.89	0.55
1:B:504:THR:HA	1:B:507:ILE:HD12	1.88	0.55
3:G:185:LEU:HD11	3:G:234:VAL:HG22	1.87	0.55
2:D:447:GLU:O	2:D:451:LYS:HG2	2.06	0.55
2:F:47:VAL:HG13	2:F:52:VAL:HG22	1.89	0.55
2:E:82:GLU:HB2	2:E:308:ARG:HH22	1.71	0.55
5:I:137:ARG:NE	5:I:177:ILE:O	2.40	0.55
8:Q:192:LYS:HG3	8:Q:195:GLU:HB2	1.89	0.55
1:B:462:ASP:OD1	1:B:463:GLU:N	2.40	0.55
1:C:58:GLU:HG2	1:C:61:MET:HB2	1.89	0.55
2:D:227:ALA:HB3	2:D:255:LEU:HA	1.88	0.55
13:d:27:VAL:HG11	13:d:351:PHE:HD2	1.71	0.55
5:J:30:ILE:HG23	7:N:29:LYS:HE2	1.89	0.55
16:m:18:GLY:HA3	16:m:93:LEU:HA	1.88	0.55
4:H:67:PHE:HA	13:d:338:GLN:HE22	1.72	0.55
1:A:523:ASN:HB3	1:A:526:THR:HG22	1.89	0.54
2:F:173:VAL:HA	2:F:409:HIS:HE2	1.71	0.54
8:S:110:SER:O	8:S:114:LYS:HE2	2.08	0.54
2:F:486:LEU:HD12	2:F:494:ILE:HD11	1.90	0.54
2:D:187:SER:O	2:D:349:THR:HA	2.07	0.54
2:E:223:ILE:HB	2:E:251:VAL:HG22	1.89	0.54
9:T:258:GLU:OE2	9:T:302:ARG:NH1	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:a:527:THR:N	14:e:67:GLN:O	2.37	0.54
1:C:387:GLU:HG3	2:D:258:ALA:HB3	1.88	0.54
2:D:179:ARG:HD3	2:D:286:HIS:ND1	2.23	0.54
6:L:102:LYS:H	6:L:106:LEU:HD22	1.73	0.54
9:T:18:ILE:HD13	9:T:197:TYR:HE1	1.73	0.54
3:G:187:VAL:HG21	3:G:197:TRP:CZ2	2.42	0.54
7:O:75:LYS:O	7:O:78:GLN:HG3	2.08	0.54
9:T:458:LYS:HZ3	9:T:459:LEU:HB3	1.73	0.54
10:a:12:LEU:HA	10:a:324:TRP:HA	1.89	0.54
3:G:241:ALA:HB1	3:G:246:PHE:HB2	1.90	0.54
13:d:39:CYS:HB2	13:d:44:ASP:HB3	1.90	0.54
1:B:495:LEU:HD21	4:H:33:LEU:HG	1.90	0.54
1:C:317:ASN:HB3	2:F:330:GLU:HB2	1.89	0.54
9:T:273:LEU:HD12	9:T:282:THR:HG22	1.89	0.54
13:d:191:GLU:O	13:d:195:LYS:HG2	2.08	0.54
13:d:338:GLN:HB3	13:d:340:HIS:ND1	2.23	0.54
2:E:479:ARG:NH2	2:E:500:ARG:O	2.40	0.53
8:S:26:ILE:HG13	8:S:81:LEU:HD21	1.89	0.53
3:G:68:VAL:O	3:G:72:VAL:HG23	2.07	0.53
13:d:49:LEU:HD13	13:d:57:PHE:HE1	1.72	0.53
13:d:211:ILE:HG13	13:d:301:LEU:HG	1.90	0.53
1:C:328:TYR:HA	1:C:331:ILE:HG22	1.91	0.53
9:T:355:TYR:HB2	9:T:369:VAL:HG21	1.90	0.53
1:A:253:GLY:HA2	18:A:701:ADP:H5'2	1.90	0.53
1:C:220:LYS:HD3	2:D:236:ARG:HH12	1.72	0.53
2:F:158:ILE:HD11	2:F:336:GLU:HB2	1.90	0.53
9:T:325:LYS:NZ	9:T:327:ASP:OD1	2.42	0.53
16:h:33:GLY:HA2	16:h:111:GLY:HA3	1.91	0.53
16:n:120:GLY:O	16:n:124:GLN:N	2.27	0.53
16:g:29:GLY:HA3	16:g:104:LEU:HA	1.89	0.53
5:J:136:CYS:HB3	5:J:181:VAL:HG12	1.90	0.53
5:K:96:ASN:HA	5:K:99:LYS:HD2	1.91	0.53
16:n:81:THR:O	16:n:83:GLY:N	2.42	0.53
1:B:82:THR:HG22	1:B:84:LYS:H	1.74	0.52
2:F:199:GLN:HE22	2:F:459:GLN:HG2	1.74	0.52
2:E:382:ILE:HG23	2:E:458:ASN:HB2	1.90	0.52
4:H:210:LYS:HA	4:H:213:LYS:HD2	1.92	0.52
8:S:107:LEU:HD12	8:S:110:SER:HB3	1.90	0.52
9:T:199:GLN:HA	9:T:239:LEU:HD13	1.91	0.52
1:A:380:ALA:HB1	2:E:262:THR:HG21	1.90	0.52
2:D:143:ASP:OD1	2:D:144:PHE:N	2.41	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:T:379:ASN:O	9:T:383:LEU:HG	2.08	0.52
9:T:266:ILE:HG22	9:T:312:CYS:SG	2.50	0.52
10:a:90:PHE:O	10:a:92:ARG:N	2.36	0.52
16:n:31:ALA:HB1	16:o:109:ALA:HB2	1.90	0.52
1:C:27:PRO:HA	1:C:70:THR:HG21	1.90	0.52
2:F:170:PRO:HG3	2:F:457:ILE:HA	1.90	0.52
16:j:18:GLY:HA3	16:j:93:LEU:HA	1.92	0.52
2:D:408:ASP:O	2:D:412:VAL:HG23	2.10	0.52
16:m:31:ALA:HB1	16:n:109:ALA:HB2	1.92	0.52
16:o:149:ALA:O	16:o:153:SER:N	2.42	0.52
13:d:5:PRO:HB2	13:d:9:PHE:HB2	1.92	0.52
1:A:247:ALA:HB2	1:A:429:VAL:HG21	1.92	0.52
3:G:183:VAL:HG11	3:G:234:VAL:HG21	1.92	0.52
3:G:293:ALA:O	3:G:297:VAL:HG23	2.10	0.52
5:J:132:MET:HB2	5:J:165:VAL:HG22	1.91	0.52
8:S:188:MET:HB3	8:S:192:LYS:HD2	1.92	0.52
1:A:148:THR:HA	1:A:173:ARG:HB3	1.91	0.52
1:B:55:ILE:HD13	1:B:365:LEU:HD11	1.91	0.52
4:H:164:ILE:HD12	4:H:167:ARG:HE	1.75	0.52
7:N:87:TYR:HA	7:N:90:GLN:CD	2.35	0.52
8:Q:103:MET:HG3	8:Q:164:ALA:HA	1.91	0.52
1:B:473:VAL:O	1:B:477:THR:HG23	2.10	0.52
1:B:577:ILE:HA	1:B:580:LYS:HE3	1.92	0.52
16:h:18:GLY:HA3	16:h:93:LEU:HA	1.91	0.52
13:d:194:TYR:HB3	13:d:195:LYS:HZ2	1.74	0.51
13:d:194:TYR:HB3	13:d:195:LYS:NZ	2.25	0.51
1:B:220:LYS:HB3	2:F:236:ARG:NH1	2.24	0.51
1:B:334:SER:HB3	1:B:404:VAL:HG12	1.93	0.51
9:T:269:LEU:HD23	9:T:289:PHE:CE1	2.46	0.51
16:n:29:GLY:HA3	16:n:104:LEU:HA	1.92	0.51
1:A:138:SER:C	1:A:140:ASN:H	2.18	0.51
1:A:580:LYS:O	1:A:584:MET:HB2	2.10	0.51
1:C:359:ARG:HD2	2:F:314:ARG:HH21	1.75	0.51
2:F:227:ALA:HA	2:F:292:THR:HB	1.92	0.51
9:T:455:ALA:O	9:T:458:LYS:HG2	2.10	0.51
1:C:243:GLY:H	1:C:405:THR:HG23	1.76	0.51
2:D:202:ARG:NH1	2:D:461:PRO:O	2.44	0.51
3:G:83:SER:N	3:G:88:GLN:OE1	2.44	0.51
9:T:296:SER:HA	9:T:302:ARG:HD2	1.92	0.51
1:A:258:VAL:HG21	18:A:701:ADP:H2'	1.93	0.51
1:B:162:ILE:O	1:B:163:LYS:C	2.54	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:438:LEU:HD12	2:E:442:ASP:HB3	1.93	0.51
3:G:34:LEU:HB3	3:G:322:GLN:HB3	1.93	0.51
9:T:79:ASN:O	9:T:83:HIS:ND1	2.43	0.51
2:D:76:ARG:HD3	2:D:94:GLU:HB2	1.93	0.50
4:H:24:LYS:HA	4:H:24:LYS:HE2	1.93	0.50
2:D:473:LEU:O	2:D:476:LYS:HG3	2.12	0.50
8:S:198:HIS:HA	8:S:201:LYS:HE3	1.93	0.50
9:T:290:ARG:NH2	9:T:291:ASN:OD1	2.44	0.50
1:C:284:MET:C	1:C:286:GLU:N	2.69	0.50
2:F:184:PRO:HB3	2:F:346:PRO:HG2	1.94	0.50
8:Q:163:ILE:O	8:Q:167:GLY:N	2.34	0.50
1:A:147:ILE:HG12	1:A:148:THR:H	1.76	0.50
1:B:226:PRO:HB3	1:B:461:LEU:HD13	1.93	0.50
1:C:410:VAL:HG21	1:C:425:THR:HG21	1.93	0.50
4:H:24:LYS:HA	4:H:27:GLN:OE1	2.11	0.50
5:J:105:VAL:HA	5:J:111:ARG:NH2	2.27	0.50
1:A:610:ASN:OD1	1:A:613:ARG:NH1	2.34	0.50
1:C:110:SER:OG	2:F:153:ASN:ND2	2.44	0.50
1:C:317:ASN:HB2	2:F:327:THR:HA	1.92	0.50
2:E:127:ASN:OD1	2:E:131:LYS:N	2.45	0.50
13:d:341:ARG:HA	13:d:344:ILE:HG13	1.94	0.50
2:D:379:ASN:O	2:D:381:GLN:NE2	2.45	0.50
2:F:497:PHE:HA	2:F:500:ARG:HH21	1.75	0.50
6:L:53:ARG:HA	6:L:56:LEU:HD12	1.93	0.50
9:T:443:HIS:O	9:T:449:ARG:NH2	2.38	0.50
5:I:142:PRO:HA	5:I:145:LYS:NZ	2.27	0.49
6:L:10:VAL:HG21	6:L:20:PHE:HD2	1.76	0.49
1:A:375:PRO:HD2	1:A:378:LEU:HD13	1.94	0.49
2:D:186:PHE:CD1	2:D:348:LEU:HD21	2.47	0.49
2:D:446:LEU:O	2:D:450:GLN:OE1	2.30	0.49
12:c:330:PHE:O	12:c:337:HIS:HA	2.13	0.49
13:d:184:THR:HA	13:d:240:LEU:HD11	1.94	0.49
2:D:408:ASP:HB2	2:D:412:VAL:HG23	1.95	0.49
9:T:418:VAL:HG22	9:T:424:GLY:HA3	1.93	0.49
1:B:69:GLU:OE2	1:B:71:SER:N	2.46	0.49
2:D:119:GLU:OE1	5:I:219:ASN:ND2	2.43	0.49
1:B:147:ILE:HD11	1:B:194:LEU:HD21	1.93	0.49
4:H:56:MET:HE2	4:H:56:MET:N	2.27	0.49
12:c:314:GLN:H	12:c:319:MET:HA	1.77	0.49
13:d:246:ARG:NH1	13:d:273:GLU:OE2	2.46	0.49
8:S:185:LEU:HA	8:S:188:MET:HE2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Q:161:MET:HG3	8:Q:216:ILE:HG12	1.93	0.49
8:Q:195:GLU:OE1	8:Q:195:GLU:N	2.45	0.49
8:R:91:LEU:HD22	8:R:112:TYR:HB2	1.94	0.49
8:S:177:GLN:HE21	8:S:181:LEU:HD11	1.77	0.49
13:d:284:ASN:H	13:d:287:ASP:HB3	1.78	0.49
1:B:245:THR:HG22	1:B:429:VAL:HG22	1.94	0.49
6:L:112:MET:O	6:L:113:PHE:C	2.56	0.49
1:A:168:LEU:HD21	1:A:172:ASN:O	2.13	0.49
5:J:205:GLN:HA	5:J:208:MET:HG2	1.95	0.49
8:Q:87:ILE:HD13	8:Q:116:LYS:HG2	1.94	0.49
2:D:479:ARG:NH1	2:D:497:PHE:O	2.46	0.49
2:E:127:ASN:ND2	2:E:131:LYS:HB3	2.27	0.49
2:F:188:ALA:H	2:F:191:LEU:HD12	1.78	0.49
7:N:105:ASP:OD2	7:N:107:ARG:NH2	2.45	0.49
2:D:294:MET:HG2	2:D:346:PRO:HB3	1.94	0.48
2:D:450:GLN:HB3	2:D:454:ARG:NH2	2.29	0.48
4:H:80:SER:HB2	6:L:18:THR:HG21	1.94	0.48
11:b:53:GLY:HA3	11:b:138:PHE:HA	1.95	0.48
13:d:194:TYR:CD2	13:d:244:CYS:HB2	2.48	0.48
2:D:194:ASN:N	2:D:194:ASN:OD1	2.46	0.48
13:d:265:LYS:HA	13:d:278:PHE:HD2	1.77	0.48
9:T:231:LEU:HD13	9:T:243:MET:HB2	1.96	0.48
2:E:143:ASP:OD1	2:E:144:PHE:N	2.46	0.48
8:S:201:LYS:HA	8:S:204:VAL:HG22	1.95	0.48
9:T:235:CYS:HB2	9:T:239:LEU:HD23	1.95	0.48
13:d:252:LEU:HA	13:d:255:LEU:HB2	1.94	0.48
1:B:291:PHE:HA	1:B:294:LEU:HD12	1.94	0.48
2:D:389:LEU:HB2	2:D:420:TYR:HE2	1.78	0.48
3:G:152:ASN:HA	3:G:155:ARG:HG2	1.95	0.48
3:G:160:SER:O	3:G:161:LEU:C	2.55	0.48
4:H:23:LEU:HG	4:H:27:GLN:NE2	2.28	0.48
8:Q:98:ILE:HA	8:Q:160:GLN:HE21	1.79	0.48
1:B:67:TYR:O	1:B:319:PRO:HG2	2.14	0.48
2:F:301:LEU:HD22	2:F:320:TYR:HE1	1.78	0.48
3:G:133:ASP:HA	3:G:136:LEU:HD12	1.95	0.48
7:O:75:LYS:HA	7:O:78:GLN:HG3	1.95	0.48
16:k:22:ALA:HB2	16:k:96:GLY:HA2	1.96	0.48
12:c:261:ASP:C	12:c:263:ALA:H	2.21	0.48
13:d:36:LEU:HD12	13:d:45:LEU:HD22	1.95	0.48
13:d:265:LYS:HA	13:d:278:PHE:CD2	2.49	0.48
1:B:105:PRO:HD3	1:B:126:ALA:HA	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:262:THR:O	2:D:265:ARG:HB2	2.13	0.48
9:T:199:GLN:O	9:T:199:GLN:NE2	2.45	0.48
2:D:191:LEU:HD13	2:D:373:VAL:HG22	1.95	0.48
2:D:443:LEU:O	2:D:446:LEU:N	2.47	0.48
2:E:248:MET:HE1	5:J:77:ASN:HB2	1.96	0.48
9:T:346:VAL:CG2	9:T:368:PRO:HB3	2.43	0.48
13:d:308:ASN:O	13:d:311:HIS:NE2	2.45	0.48
16:l:33:GLY:HA2	16:l:111:GLY:HA3	1.96	0.48
1:B:306:MET:SD	1:B:306:MET:N	2.86	0.48
2:F:382:ILE:HG12	2:F:454:ARG:NH1	2.29	0.48
3:G:162:LEU:H	3:G:162:LEU:HG	1.43	0.48
3:G:167:ALA:HA	3:G:258:MET:CG	2.43	0.48
8:Q:159:LEU:HD21	8:Q:179:PHE:HE1	1.78	0.48
9:T:269:LEU:HD11	9:T:285:ILE:HG12	1.95	0.48
13:d:204:THR:HA	13:d:311:HIS:HB2	1.95	0.48
16:k:33:GLY:HA2	16:k:111:GLY:HA3	1.96	0.47
1:A:592:ASP:HB3	1:A:597:ILE:HD11	1.96	0.47
1:B:550:LEU:HD12	1:B:608:VAL:HG12	1.94	0.47
1:A:210:PRO:HB2	1:A:213:GLN:HB2	1.96	0.47
1:A:258:VAL:HG21	18:A:701:ADP:C8	2.49	0.47
1:B:171:ARG:HE	1:B:171:ARG:HB3	1.63	0.47
1:B:492:ILE:HG12	2:F:431:ALA:HB1	1.97	0.47
1:C:178:TYR:HB3	1:C:193:GLU:HB2	1.96	0.47
1:C:252:PHE:HB3	2:F:394:ARG:CZ	2.44	0.47
2:D:294:MET:HB2	2:D:348:LEU:HB3	1.96	0.47
5:I:184:TYR:HB3	5:I:188:ARG:HA	1.96	0.47
7:O:82:THR:HA	7:O:85:GLN:NE2	2.29	0.47
13:d:328:ASN:O	13:d:332:ILE:HG12	2.14	0.47
1:B:142:ARG:O	1:B:145:SER:OG	2.26	0.47
2:E:229:GLY:N	2:E:256:ASN:O	2.47	0.47
2:F:430:LYS:HB2	2:F:438:LEU:HD11	1.96	0.47
3:G:38:PHE:HB3	3:G:318:ALA:CB	2.44	0.47
3:G:189:VAL:HG13	3:G:246:PHE:CE1	2.49	0.47
9:T:19:ILE:HD13	9:T:136:PHE:CE2	2.49	0.47
13:d:150:LEU:HD23	13:d:150:LEU:C	2.39	0.47
5:I:156:LYS:HB2	5:I:156:LYS:HE2	1.48	0.47
13:d:105:MET:HB3	13:d:160:LEU:HD11	1.97	0.47
2:D:476:LYS:HA	2:D:479:ARG:HD2	1.97	0.47
5:K:88:ASP:HA	5:K:91:ILE:HD12	1.97	0.47
9:T:299:ARG:NH2	9:T:302:ARG:HB2	2.28	0.47
1:A:316:SER:HB2	2:D:326:ALA:CB	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:566:THR:H	1:A:569:ILE:HG22	1.79	0.47
1:B:522:GLN:HG3	1:B:529:ASP:HB3	1.97	0.47
1:C:44:ARG:HA	1:C:44:ARG:HD3	1.59	0.47
1:C:58:GLU:N	1:C:58:GLU:OE1	2.48	0.47
2:D:146:ASP:N	2:D:146:ASP:OD1	2.48	0.47
2:D:227:ALA:HB1	2:D:230:VAL:HG11	1.97	0.47
2:E:277:GLU:HA	2:E:342:ILE:HD11	1.97	0.47
2:F:120:ASP:O	2:F:121:MET:C	2.54	0.47
5:K:30:ILE:HG21	7:O:25:ALA:HB1	1.95	0.47
6:L:9:ALA:HA	6:L:35:ASN:O	2.15	0.47
6:L:10:VAL:HG23	6:L:65:LEU:HB2	1.95	0.47
13:d:224:THR:HG22	13:d:228:PHE:CZ	2.49	0.47
16:o:74:VAL:O	16:o:78:ASN:N	2.46	0.47
1:C:56:ARG:HB3	1:C:63:THR:HB	1.95	0.47
4:H:207:GLU:O	4:H:211:ILE:HG12	2.14	0.47
8:Q:28:TYR:CE1	8:Q:32:CYS:SG	3.08	0.47
9:T:421:TYR:CE2	9:T:423:ARG:HB2	2.50	0.47
2:D:164:ILE:HD11	2:D:179:ARG:HA	1.97	0.47
5:I:119:LEU:HB3	5:I:194:ASN:HB3	1.97	0.47
16:m:149:ALA:O	16:m:153:SER:N	2.46	0.47
1:A:592:ASP:OD2	1:A:596:LYS:NZ	2.38	0.47
2:D:459:GLN:HG2	2:D:465:ARG:CZ	2.44	0.47
5:J:59:LYS:HE2	5:J:59:LYS:HB2	1.61	0.47
7:O:26:ARG:HA	7:O:26:ARG:HD3	1.50	0.47
8:Q:177:GLN:HA	8:Q:180:LYS:HE3	1.96	0.47
9:T:386:LYS:HB2	9:T:386:LYS:HE2	1.52	0.47
1:A:297:GLU:OE2	1:A:298:VAL:N	2.47	0.46
1:B:473:VAL:HG13	1:B:476:ARG:HH11	1.81	0.46
1:C:284:MET:C	1:C:286:GLU:H	2.24	0.46
9:T:212:ASN:HA	9:T:215:ARG:HG2	1.96	0.46
12:c:356:ASN:N	12:c:384:VAL:O	2.37	0.46
16:i:31:ALA:HB1	16:j:109:ALA:HB2	1.97	0.46
1:A:474:PRO:O	1:A:477:THR:HB	2.15	0.46
1:A:604:LEU:O	1:A:608:VAL:HG23	2.15	0.46
1:B:159:ASN:H	1:B:162:ILE:HG22	1.79	0.46
1:C:69:GLU:HB3	1:C:120:ARG:HE	1.80	0.46
1:C:284:MET:SD	1:C:313:ALA:HB1	2.55	0.46
2:F:318:PRO:O	2:F:321:MET:HG2	2.15	0.46
6:L:107:ARG:HE	6:L:107:ARG:HB3	1.26	0.46
8:Q:98:ILE:HA	8:Q:160:GLN:NE2	2.30	0.46
9:T:208:MET:HE2	9:T:208:MET:HB2	1.75	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:398:PRO:HD2	1:A:400:ARG:NH2	2.30	0.46
2:E:191:LEU:HD13	2:E:373:VAL:HG12	1.97	0.46
3:G:38:PHE:HB3	3:G:318:ALA:HB3	1.98	0.46
3:G:113:PRO:HB2	3:G:116:GLN:HG2	1.96	0.46
6:L:112:MET:HE3	6:L:112:MET:HB3	1.81	0.46
1:C:211:VAL:CG1	1:C:328:TYR:HB3	2.45	0.46
8:S:68:ALA:HB1	8:S:73:LYS:HB2	1.98	0.46
9:T:103:GLU:HB3	9:T:107:ARG:HG3	1.97	0.46
1:A:526:THR:HG21	1:A:528:TYR:CE2	2.50	0.46
1:C:181:PRO:O	1:C:185:TYR:OH	2.28	0.46
2:F:191:LEU:HD13	2:F:373:VAL:HG12	1.98	0.46
8:Q:98:ILE:HG23	8:Q:160:GLN:HB3	1.98	0.46
9:T:258:GLU:HA	9:T:261:ARG:HD2	1.97	0.46
2:E:137:PRO:HG3	5:J:84:LEU:C	2.41	0.46
2:F:228:MET:N	2:F:228:MET:SD	2.89	0.46
4:H:42:LEU:HD12	4:H:43:ARG:N	2.31	0.46
5:J:102:LEU:HD21	5:J:196:LEU:HB3	1.96	0.46
7:O:34:LYS:HD2	7:O:34:LYS:HA	1.47	0.46
9:T:100:THR:HG23	9:T:107:ARG:HB3	1.98	0.46
11:b:68:GLY:HA2	11:b:156:GLY:HA3	1.97	0.46
2:F:160:PRO:HD2	2:F:395:LEU:HD21	1.98	0.46
2:F:408:ASP:HB3	2:F:497:PHE:CE2	2.51	0.46
5:I:222:ARG:NH2	5:I:225:LEU:HD13	2.31	0.46
9:T:141:ALA:O	9:T:145:ILE:HG23	2.16	0.46
16:h:149:ALA:O	16:h:153:SER:N	2.48	0.46
16:j:22:ALA:HB2	16:j:96:GLY:HA2	1.98	0.46
1:C:139:LYS:O	1:C:142:ARG:NH1	2.49	0.46
2:E:232:MET:HE2	2:E:232:MET:HA	1.97	0.46
7:O:79:GLU:O	7:O:82:THR:HB	2.15	0.46
8:Q:212:PRO:O	8:Q:216:ILE:HD12	2.15	0.46
1:B:389:ALA:HB2	1:B:406:ILE:HG13	1.98	0.45
4:H:80:SER:O	4:H:84:ILE:HG13	2.16	0.45
5:J:88:ASP:HA	5:J:91:ILE:HG22	1.97	0.45
7:N:87:TYR:HA	7:N:90:GLN:NE2	2.32	0.45
8:S:126:TYR:CE1	8:S:169:THR:HA	2.51	0.45
9:T:325:LYS:HD3	9:T:325:LYS:C	2.41	0.45
9:T:329:GLU:OE1	9:T:329:GLU:N	2.39	0.45
1:A:45:VAL:HB	1:A:50:LEU:HB2	1.98	0.45
1:B:288:LEU:HD23	1:B:311:LEU:HD12	1.98	0.45
1:C:95:MET:HE1	1:C:271:VAL:HG13	1.97	0.45
1:C:234:LEU:HD13	1:C:448:VAL:HG21	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:247:ALA:C	1:C:248:ILE:HD12	2.41	0.45
1:C:338:ARG:HB2	1:C:404:VAL:HG23	1.98	0.45
2:D:282:GLN:HA	5:I:224:PHE:HB3	1.98	0.45
4:H:81:THR:HA	4:H:84:ILE:HD12	1.96	0.45
5:K:127:LEU:HD22	5:K:127:LEU:HA	1.71	0.45
16:i:149:ALA:O	16:i:153:SER:N	2.46	0.45
6:L:68:GLN:HE21	6:L:102:LYS:HD2	1.82	0.45
8:Q:172:ASN:HB3	8:Q:175:ILE:HD12	1.98	0.45
9:T:75:LYS:NZ	9:T:117:ARG:HB3	2.31	0.45
16:n:149:ALA:O	16:n:153:SER:N	2.44	0.45
1:C:543:ASN:ND2	1:C:584:MET:HE1	2.31	0.45
13:d:336:ILE:O	13:d:339:ARG:NH1	2.50	0.45
1:C:472:PHE:CZ	1:C:476:ARG:HD2	2.51	0.45
2:D:174:MET:HE2	2:D:174:MET:HB2	1.88	0.45
6:L:102:LYS:HE3	6:L:102:LYS:HB3	1.57	0.45
9:T:315:LEU:HD12	9:T:316:LYS:N	2.32	0.45
13:d:41:THR:HG23	13:d:44:ASP:H	1.81	0.45
13:d:75:LYS:HA	13:d:75:LYS:HD3	1.76	0.45
1:A:478:LYS:HD2	1:A:481:GLU:OE2	2.17	0.45
3:G:174:ASP:HB3	3:G:216:LEU:HD22	1.98	0.45
9:T:428:ILE:O	9:T:432:GLY:N	2.50	0.45
1:C:395:LEU:HD23	1:C:395:LEU:HA	1.85	0.45
2:D:487:LYS:HE3	2:D:487:LYS:HB3	1.65	0.45
3:G:37:LYS:HE3	3:G:317:GLN:HE21	1.80	0.45
6:L:67:ASN:HD21	6:L:93:SER:HB2	1.82	0.45
8:Q:81:LEU:HD12	8:Q:81:LEU:HA	1.80	0.45
16:n:74:VAL:O	16:n:78:ASN:N	2.47	0.45
1:B:574:MET:HE3	1:B:611:ALA:HB3	1.98	0.45
2:F:182:LYS:HZ1	2:F:329:TYR:HB3	1.82	0.45
3:G:98:LEU:HD21	3:G:287:PHE:HE2	1.82	0.45
5:J:49:GLN:CB	7:N:44:ILE:HG13	2.46	0.45
5:K:38:PHE:HD2	7:O:32:ARG:HB3	1.82	0.45
8:Q:163:ILE:HG23	8:Q:168:ILE:HG13	1.99	0.45
9:T:350:SER:HA	9:T:369:VAL:HB	1.98	0.45
1:A:171:ARG:HE	1:A:171:ARG:HB2	1.48	0.45
1:A:494:GLN:NE2	1:A:495:LEU:HG	2.32	0.45
2:D:456:PHE:CE1	2:D:477:LEU:HD22	2.50	0.45
1:B:167:MET:HE3	1:B:167:MET:HB3	1.72	0.45
2:F:277:GLU:HA	2:F:342:ILE:HD11	1.99	0.45
4:H:67:PHE:O	4:H:70:ALA:HB3	2.17	0.45
7:N:51:ARG:HA	7:N:51:ARG:HD3	1.72	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:449:ASN:OD1	1:A:452:ILE:HG12	2.17	0.44
1:C:100:ASP:CG	1:C:102:ILE:H	2.25	0.44
1:C:342:TYR:O	1:C:344:VAL:HG23	2.17	0.44
2:D:191:LEU:HD21	2:D:375:ARG:HG2	1.99	0.44
2:D:351:PRO:HG2	2:D:357:HIS:CE1	2.52	0.44
2:D:450:GLN:O	2:D:454:ARG:HG2	2.18	0.44
2:F:120:ASP:HB2	2:F:139:VAL:CG1	2.47	0.44
2:F:318:PRO:HD2	2:F:321:MET:HE2	1.98	0.44
3:G:311:GLY:HA2	5:J:13:LYS:HE2	1.99	0.44
9:T:19:ILE:HG13	9:T:200:CYS:HB2	1.98	0.44
13:d:217:ASP:CG	13:d:247:LEU:HD23	2.42	0.44
16:n:22:ALA:HB2	16:n:96:GLY:HA2	1.99	0.44
1:B:587:LYS:HA	1:B:587:LYS:HD3	1.65	0.44
1:C:360:GLU:CD	2:F:322:TYR:HB3	2.42	0.44
2:D:366:ILE:H	2:D:366:ILE:HG13	1.48	0.44
9:T:218:TRP:HA	9:T:218:TRP:CE3	2.53	0.44
4:H:204:LYS:HD3	4:H:204:LYS:HA	1.85	0.44
5:K:42:LYS:HD3	7:O:39:GLU:CB	2.45	0.44
13:d:287:ASP:OD1	13:d:288:LYS:N	2.46	0.44
2:D:226:ALA:O	2:D:228:MET:HG2	2.18	0.44
5:J:160:LYS:HD3	5:J:160:LYS:HA	1.64	0.44
5:J:184:TYR:HB3	5:J:188:ARG:HA	1.99	0.44
9:T:52:ARG:HD2	9:T:64:GLU:HG2	1.99	0.44
5:K:137:ARG:HB3	5:K:175:GLU:HG3	2.00	0.44
9:T:49:PHE:HA	9:T:51:GLN:NE2	2.32	0.44
9:T:329:GLU:HG2	9:T:330:ASP:N	2.32	0.44
9:T:341:LYS:HA	9:T:341:LYS:HD3	1.82	0.44
16:j:149:ALA:O	16:j:153:SER:N	2.42	0.44
16:l:31:ALA:HB1	16:m:109:ALA:HB2	1.99	0.44
1:A:42:LEU:HD21	1:A:86:LEU:HD13	2.00	0.44
1:C:558:THR:C	1:C:560:GLN:H	2.25	0.44
2:E:56:HIS:HA	2:E:86:THR:HB	2.00	0.44
2:E:158:ILE:HG12	2:E:336:GLU:HG3	1.98	0.44
2:F:121:MET:HG3	2:F:275:THR:HG23	2.00	0.44
5:K:46:VAL:O	5:K:50:ARG:HB3	2.18	0.44
13:d:255:LEU:HD23	13:d:255:LEU:HA	1.81	0.44
1:A:274:TYR:CE1	1:A:284:MET:HE1	2.52	0.44
1:B:135:PHE:HA	1:B:156:VAL:HG22	1.99	0.44
1:B:148:THR:HG21	8:R:20:SER:O	2.18	0.44
1:C:281:VAL:HG21	2:F:157:ARG:NE	2.33	0.44
3:G:4:PHE:HE1	3:G:99:VAL:HG12	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:76:MET:HG2	3:G:283:LEU:HD13	1.98	0.44
3:G:175:PHE:CZ	3:G:186:LEU:HD11	2.53	0.44
4:H:67:PHE:HZ	13:d:343:LYS:HB2	1.83	0.44
2:E:152:ILE:HG21	2:E:335:VAL:HG11	2.00	0.44
2:E:430:LYS:O	2:E:430:LYS:HD3	2.18	0.44
2:F:173:VAL:HA	2:F:409:HIS:NE2	2.31	0.44
2:F:187:SER:O	2:F:349:THR:HA	2.17	0.44
3:G:111:LYS:NZ	3:G:289:GLU:OE2	2.50	0.44
4:H:178:PRO:HB2	4:H:182:ARG:HH22	1.82	0.44
5:K:35:GLU:HA	7:O:32:ARG:HG2	2.00	0.44
13:d:214:PHE:HD1	13:d:274:TYR:HE1	1.65	0.44
2:F:122:LEU:HD11	2:F:222:ALA:HB1	1.99	0.44
3:G:2:THR:N	3:G:376:CYS:HB2	2.32	0.44
7:N:8:ILE:HA	7:N:11:LEU:HD12	1.99	0.44
13:d:27:VAL:HG11	13:d:351:PHE:CD2	2.52	0.44
13:d:37:VAL:HG13	13:d:344:ILE:HG21	1.99	0.44
1:B:167:MET:HG2	1:B:207:GLN:NE2	2.33	0.43
1:C:393:LYS:HD3	1:C:393:LYS:HA	1.66	0.43
2:D:409:HIS:HA	2:D:471:LEU:HD21	2.00	0.43
2:D:479:ARG:HA	2:D:498:TYR:CE2	2.53	0.43
5:J:202:LEU:O	5:J:205:GLN:HG3	2.18	0.43
9:T:225:ASN:HA	9:T:228:MET:HG3	1.99	0.43
13:d:240:LEU:HD13	13:d:240:LEU:HA	1.52	0.43
1:B:353:ARG:HD3	1:B:353:ARG:HA	1.80	0.43
2:D:292:THR:O	2:D:293:ASP:C	2.61	0.43
2:D:450:GLN:HB3	2:D:454:ARG:CZ	2.48	0.43
2:F:64:GLU:OE2	2:F:108:PHE:HB3	2.18	0.43
2:F:440:SER:O	2:F:443:LEU:HG	2.19	0.43
3:G:113:PRO:HB3	3:G:115:LYS:HZ3	1.83	0.43
3:G:186:LEU:HD22	3:G:216:LEU:HD21	2.00	0.43
1:A:270:ASP:HB3	1:A:342:TYR:HD2	1.81	0.43
1:B:212:ARG:H	1:B:212:ARG:HG2	1.73	0.43
1:C:113:THR:HG21	1:C:119:PRO:HG3	2.00	0.43
2:D:407:LYS:H	2:D:407:LYS:HZ2	1.65	0.43
4:H:12:SER:H	4:H:15:ALA:HB3	1.83	0.43
9:T:272:ILE:O	9:T:276:SER:N	2.50	0.43
9:T:373:GLU:HA	9:T:376:TRP:HD1	1.83	0.43
10:a:491:THR:C	10:a:493:GLU:H	2.25	0.43
1:B:535:TYR:CZ	1:B:594:GLU:HA	2.53	0.43
3:G:8:SER:HB2	3:G:370:VAL:HB	1.99	0.43
3:G:154:GLU:HA	3:G:265:MET:HE1	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:T:359:LEU:H	9:T:359:LEU:HG	1.57	0.43
13:d:28:LEU:HD21	13:d:52:THR:HG21	2.01	0.43
13:d:191:GLU:OE2	13:d:244:CYS:N	2.51	0.43
1:A:465:TYR:O	1:A:469:PHE:N	2.49	0.43
1:A:478:LYS:HD2	1:A:478:LYS:HA	1.84	0.43
1:C:152:ILE:HD13	1:C:167:MET:HB3	2.01	0.43
1:C:340:MET:HB2	1:C:340:MET:HE3	1.68	0.43
1:C:604:LEU:O	1:C:608:VAL:HG23	2.18	0.43
3:G:134:ASN:O	3:G:137:LYS:HG2	2.19	0.43
7:N:93:ASP:OD1	7:N:94:GLU:N	2.51	0.43
8:S:217:LEU:HD22	8:S:217:LEU:HA	1.67	0.43
9:T:215:ARG:HG3	9:T:256:MET:HE3	2.00	0.43
9:T:337:PHE:O	9:T:341:LYS:HG2	2.18	0.43
1:B:395:LEU:HD23	1:B:395:LEU:HA	1.81	0.43
1:C:361:ILE:HD13	1:C:361:ILE:HA	1.92	0.43
2:E:262:THR:HB	2:E:265:ARG:HH11	1.84	0.43
9:T:213:GLU:H	9:T:213:GLU:HG3	1.57	0.43
9:T:290:ARG:HG2	9:T:337:PHE:CE2	2.54	0.43
9:T:373:GLU:HG2	9:T:420:HIS:CE1	2.54	0.43
11:b:96:PHE:O	11:b:99:ALA:HB3	2.18	0.43
13:d:154:ILE:HA	13:d:158:THR:HG23	2.00	0.43
1:C:522:GLN:HG3	1:C:529:ASP:HB3	2.01	0.43
3:G:139:ARG:HE	3:G:282:TRP:CD1	2.37	0.43
5:K:173:LEU:HD23	5:K:173:LEU:HA	1.85	0.43
7:N:19:ALA:HA	7:N:22:VAL:HG22	2.01	0.43
8:S:193:ILE:O	8:S:196:GLN:HG2	2.19	0.43
1:A:478:LYS:HA	1:A:481:GLU:OE2	2.18	0.43
1:C:327:ILE:HD11	1:C:385:PHE:CE2	2.53	0.43
7:O:84:LEU:HD12	7:O:84:LEU:HA	1.74	0.43
13:d:2:SER:OG	13:d:3:PHE:N	2.50	0.43
13:d:209:CYS:N	13:d:210:PRO:HD2	2.34	0.43
13:d:238:ALA:HA	13:d:241:PHE:CD2	2.54	0.43
16:l:22:ALA:HB2	16:l:96:GLY:HA2	2.01	0.43
16:m:120:GLY:O	16:m:124:GLN:N	2.37	0.43
1:A:254:CYS:SG	1:A:256:LYS:HE3	2.59	0.43
1:B:148:THR:HA	1:B:173:ARG:HB2	2.01	0.43
1:C:82:THR:C	1:C:84:LYS:H	2.26	0.43
2:E:227:ALA:HA	2:E:292:THR:HG22	2.01	0.43
3:G:180:GLU:H	3:G:180:GLU:HG2	1.33	0.43
5:I:117:ASP:HA	5:I:147:ALA:HB1	2.00	0.43
9:T:126:PHE:CZ	9:T:145:ILE:HG22	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:d:243:HIS:HD1	13:d:248:TYR:HE2	1.65	0.43
16:i:22:ALA:HB2	16:i:96:GLY:HA2	2.01	0.43
1:A:259:ILE:HD11	1:A:446:PRO:HB3	2.00	0.43
3:G:197:TRP:CZ3	3:G:204:LEU:HD11	2.53	0.43
9:T:346:VAL:HG22	9:T:368:PRO:HB3	2.01	0.43
1:C:279:GLU:HB3	1:C:349:ASN:ND2	2.34	0.42
2:E:181:GLN:NE2	2:E:183:ILE:HD11	2.34	0.42
2:E:270:ARG:HA	2:E:273:LEU:HD12	2.00	0.42
2:E:357:HIS:CG	2:E:358:PRO:HD2	2.54	0.42
4:H:108:VAL:HG13	4:H:150:SER:HB3	2.00	0.42
5:J:96:ASN:HA	5:J:99:LYS:HD2	2.00	0.42
5:J:122:GLN:HG2	7:N:108:PRO:HA	2.00	0.42
7:N:17:ARG:HB3	7:N:21:LYS:HZ3	1.82	0.42
8:Q:163:ILE:HD13	8:Q:168:ILE:HD11	2.01	0.42
1:A:241:VAL:HG12	1:A:461:LEU:HD21	2.00	0.42
1:B:178:TYR:HD2	1:B:193:GLU:HG3	1.83	0.42
1:C:211:VAL:HG12	1:C:328:TYR:HB3	2.01	0.42
2:D:357:HIS:CG	2:D:358:PRO:HD2	2.54	0.42
2:E:492:SER:O	2:E:495:ASP:HB2	2.19	0.42
5:I:196:LEU:HD23	5:I:196:LEU:HA	1.77	0.42
8:Q:100:PRO:HG2	8:Q:101:PHE:HD2	1.84	0.42
10:a:206:LEU:O	10:a:214:TYR:HA	2.19	0.42
1:B:218:THR:OG1	1:B:395:LEU:HA	2.20	0.42
13:d:21:ARG:O	13:d:24:LYS:HG3	2.18	0.42
1:A:139:LYS:HB2	1:A:139:LYS:HE2	1.72	0.42
1:A:328:TYR:HA	1:A:331:ILE:HG22	2.01	0.42
1:B:152:ILE:HD13	1:B:165:ARG:HG2	2.00	0.42
1:B:508:THR:O	1:B:509:LEU:C	2.62	0.42
1:C:43:VAL:CG1	1:C:79:VAL:HG13	2.50	0.42
1:C:526:THR:HB	1:C:528:TYR:CE1	2.55	0.42
2:E:270:ARG:NH1	2:E:297:TYR:OH	2.52	0.42
9:T:107:ARG:H	9:T:107:ARG:HG2	1.61	0.42
1:A:426:LEU:HD11	1:A:432:PHE:CG	2.55	0.42
1:A:579:TYR:HE2	2:D:484:GLU:HA	1.84	0.42
2:E:236:ARG:O	2:E:239:LYS:HG3	2.20	0.42
1:A:50:LEU:HD23	1:A:68:GLU:HB3	2.01	0.42
1:A:291:PHE:N	1:A:292:PRO:HD2	2.35	0.42
1:A:439:LEU:HB2	1:A:447:SER:HB3	2.01	0.42
1:B:146:HIS:HB2	8:R:62:PHE:CZ	2.54	0.42
1:B:170:PRO:O	1:B:171:ARG:HB3	2.18	0.42
3:G:219:ASP:OD1	3:G:220:GLN:N	2.47	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:S:170:GLU:OE2	8:S:172:ASN:HB2	2.20	0.42
9:T:75:LYS:HZ3	9:T:117:ARG:HB3	1.85	0.42
16:h:31:ALA:HB1	16:i:109:ALA:HB2	2.01	0.42
1:C:270:ASP:HB2	1:C:342:TYR:HB3	2.01	0.42
1:C:577:ILE:HG23	1:C:608:VAL:HG22	2.01	0.42
2:D:121:MET:HE3	2:D:275:THR:HG23	2.02	0.42
2:F:36:HIS:HB3	5:K:126:GLN:HE22	1.84	0.42
5:K:122:GLN:HG3	7:O:108:PRO:HA	2.01	0.42
16:k:149:ALA:O	16:k:153:SER:N	2.48	0.42
16:m:22:ALA:HB2	16:m:96:GLY:CA	2.49	0.42
1:A:383:ALA:HB1	2:E:258:ALA:HB1	2.01	0.42
1:A:442:ARG:HG3	1:A:444:HIS:HB2	2.01	0.42
1:A:577:ILE:HG23	1:A:608:VAL:HG22	2.02	0.42
1:C:292:PRO:HG2	1:C:293:GLU:OE1	2.20	0.42
16:j:31:ALA:HB1	16:k:109:ALA:HB2	2.00	0.42
1:B:143:VAL:HG13	1:B:177:THR:HA	2.02	0.42
2:D:487:LYS:H	2:D:487:LYS:HG2	1.57	0.42
3:G:328:MET:SD	3:G:331:LEU:HD12	2.60	0.42
4:H:30:ARG:HH21	4:H:34:LYS:NZ	2.18	0.42
8:Q:159:LEU:HD21	8:Q:179:PHE:CE1	2.54	0.42
13:d:190:LEU:HG	13:d:244:CYS:SG	2.59	0.42
16:l:85:SER:C	16:l:87:TYR:H	2.28	0.42
1:B:543:ASN:HB2	1:B:584:MET:HE1	2.01	0.42
1:C:95:MET:HE2	1:C:308:ARG:HA	2.02	0.42
2:D:140:MET:HB3	5:I:212:ARG:HH21	1.85	0.42
5:I:124:LEU:HA	5:I:132:MET:HE3	2.02	0.42
13:d:100:ILE:H	13:d:100:ILE:HG12	1.71	0.42
1:C:368:MET:HB2	1:C:368:MET:HE2	1.67	0.41
1:A:263:LEU:HD12	1:A:267:SER:HB3	2.01	0.41
1:A:280:ARG:H	1:A:280:ARG:HG2	1.51	0.41
1:B:132:LYS:HB3	1:B:184:ASN:HB3	2.01	0.41
1:B:519:PHE:HD2	1:B:540:MET:HG3	1.85	0.41
2:F:128:GLY:HA3	2:F:256:ASN:HD22	1.85	0.41
9:T:129:MET:HE2	9:T:129:MET:HB2	1.94	0.41
10:a:315:THR:C	10:a:317:LYS:H	2.28	0.41
2:D:228:MET:C	2:D:230:VAL:N	2.79	0.41
2:E:140:MET:HE2	5:J:212:ARG:HB2	2.02	0.41
4:H:42:LEU:O	4:H:46:GLN:OE1	2.39	0.41
7:N:44:ILE:HD13	7:N:44:ILE:HA	1.84	0.41
7:N:48:ARG:HE	7:N:48:ARG:HB3	1.75	0.41
8:Q:209:GLU:HG3	8:Q:211:SER:C	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:R:81:LEU:HD12	8:R:81:LEU:HA	1.83	0.41
8:R:88:LEU:HD12	8:R:88:LEU:HA	1.89	0.41
12:c:309:ALA:HA	12:c:323:LYS:HA	2.02	0.41
13:d:180:ILE:HD11	13:d:240:LEU:HD23	2.01	0.41
16:j:33:GLY:HA2	16:j:111:GLY:HA3	2.01	0.41
16:k:31:ALA:HB1	16:l:109:ALA:HB2	2.01	0.41
16:k:74:VAL:O	16:k:78:ASN:N	2.41	0.41
1:B:186:ASP:C	1:B:188:SER:H	2.27	0.41
1:B:580:LYS:NZ	1:B:607:ASP:OD2	2.45	0.41
2:F:357:HIS:CG	2:F:358:PRO:HD2	2.55	0.41
2:F:443:LEU:O	2:F:446:LEU:N	2.53	0.41
3:G:170:VAL:HG11	3:G:186:LEU:HD13	2.01	0.41
9:T:392:LYS:HB3	9:T:396:LYS:NZ	2.35	0.41
13:d:243:HIS:ND1	13:d:248:TYR:HE2	2.18	0.41
1:A:338:ARG:HB2	1:A:404:VAL:HG23	2.03	0.41
1:B:221:LEU:HD21	1:B:393:LYS:HB2	2.01	0.41
1:C:140:ASN:HD22	1:C:140:ASN:HA	1.61	0.41
2:D:125:VAL:HG13	2:D:253:LEU:HB2	2.02	0.41
3:G:323:PRO:HB3	3:G:331:LEU:HD11	2.02	0.41
4:H:144:LEU:HD12	4:H:147:GLU:OE2	2.20	0.41
5:J:44:ARG:HG3	5:J:45:LEU:N	2.36	0.41
11:b:127:GLY:O	11:b:129:ARG:N	2.48	0.41
1:A:443:LYS:HD2	1:A:443:LYS:HA	1.79	0.41
1:B:168:LEU:HD12	1:B:169:PRO:HD2	2.01	0.41
1:B:189:ASP:OD1	1:B:190:VAL:N	2.53	0.41
1:C:410:VAL:CG2	1:C:425:THR:HG21	2.51	0.41
2:F:168:ILE:CG2	2:F:170:PRO:HD2	2.51	0.41
3:G:157:ASN:O	3:G:164:ARG:HG3	2.21	0.41
5:K:54:MET:HB2	7:O:47:TYR:HE2	1.85	0.41
9:T:251:ALA:HB1	9:T:291:ASN:HB3	2.01	0.41
9:T:388:TYR:HB3	9:T:391:LEU:HB2	2.01	0.41
13:d:277:LEU:HD22	13:d:293:ARG:HB3	2.02	0.41
1:A:34:MET:HA	1:A:34:MET:HE2	2.02	0.41
5:K:46:VAL:HA	7:O:44:ILE:CG1	2.50	0.41
7:O:84:LEU:O	7:O:88:PHE:HB3	2.20	0.41
8:S:147:PRO:HB3	8:S:228:THR:HG21	2.03	0.41
16:i:33:GLY:HA2	16:i:111:GLY:HA3	2.03	0.41
16:m:85:SER:C	16:m:87:TYR:H	2.28	0.41
1:A:364:ARG:HA	1:A:364:ARG:HD2	1.80	0.41
1:B:526:THR:HA	1:B:527:PRO:HD3	1.97	0.41
2:D:179:ARG:NH2	2:D:286:HIS:HB3	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:76:MET:O	3:G:80:LEU:N	2.52	0.41
16:l:22:ALA:HB2	16:l:96:GLY:CA	2.51	0.41
1:A:146:HIS:HB3	8:Q:62:PHE:CD2	2.51	0.41
1:A:316:SER:HB3	2:D:322:TYR:HE1	1.85	0.41
1:A:346:MET:C	1:A:347:MET:HE2	2.46	0.41
1:A:474:PRO:O	1:A:478:LYS:N	2.37	0.41
1:C:43:VAL:HG11	1:C:79:VAL:HG13	2.02	0.41
1:C:226:PRO:HB3	1:C:461:LEU:HD21	2.03	0.41
2:D:173:VAL:HA	2:D:409:HIS:HE1	1.84	0.41
2:E:179:ARG:NH2	2:E:206:LEU:HD11	2.36	0.41
2:F:443:LEU:O	2:F:447:GLU:OE1	2.37	0.41
5:I:141:PHE:N	5:I:142:PRO:HD2	2.36	0.41
5:I:145:LYS:HG2	5:I:167:ILE:HD12	2.03	0.41
6:L:92:PRO:HG3	6:L:98:TYR:HA	2.02	0.41
7:N:60:ALA:O	7:N:63:LEU:HG	2.21	0.41
7:O:55:PHE:O	7:O:59:GLU:HG3	2.20	0.41
9:T:160:ASP:HA	9:T:164:TYR:CD2	2.56	0.41
9:T:194:SER:OG	9:T:195:SER:N	2.51	0.41
13:d:33:TYR:O	13:d:37:VAL:HG23	2.21	0.41
16:o:85:SER:C	16:o:87:TYR:H	2.29	0.41
1:A:161:LEU:HD12	1:A:307:LYS:HB2	2.03	0.41
2:E:60:ALA:HB3	2:E:83:VAL:HG13	2.03	0.41
3:G:29:ASN:OD1	3:G:327:THR:HB	2.21	0.41
5:J:215:LEU:HD23	5:J:215:LEU:HA	1.93	0.41
16:g:85:SER:C	16:g:87:TYR:H	2.29	0.41
1:B:397:ASN:HB3	8:R:28:TYR:CG	2.56	0.40
4:H:49:LYS:O	4:H:53:GLU:OE1	2.39	0.40
5:I:203:ILE:HD13	5:I:203:ILE:HA	1.88	0.40
7:O:53:LYS:HA	7:O:53:LYS:HD3	1.77	0.40
13:d:250:GLU:OE2	16:m:123:GLN:HA	2.21	0.40
1:B:146:HIS:HB2	8:R:62:PHE:CE1	2.56	0.40
1:C:611:ALA:O	1:C:614:SER:OG	2.28	0.40
2:F:294:MET:HE3	2:F:294:MET:HB3	1.79	0.40
5:K:35:GLU:HA	7:O:32:ARG:CG	2.51	0.40
9:T:422:PRO:HG2	9:T:423:ARG:NH2	2.36	0.40
16:h:85:SER:C	16:h:87:TYR:H	2.30	0.40
1:A:239:PRO:HD2	1:A:458:MET:HE1	2.03	0.40
1:C:281:VAL:HG23	1:C:315:THR:HG22	2.03	0.40
2:D:408:ASP:HB2	2:D:412:VAL:CG2	2.51	0.40
4:H:178:PRO:HB2	4:H:182:ARG:NH2	2.36	0.40
4:H:204:LYS:O	4:H:207:GLU:HG3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:J:185:ASN:OD1	5:J:189:LYS:N	2.52	0.40
5:J:215:LEU:HD22	7:N:88:PHE:CD1	2.55	0.40
8:R:94:LEU:HA	8:R:130:LEU:HD11	2.02	0.40
9:T:396:LYS:O	9:T:400:VAL:HG22	2.21	0.40
13:d:232:LEU:HD23	13:d:232:LEU:HA	1.81	0.40
16:i:7:GLY:HA3	16:i:84:ILE:O	2.20	0.40
1:A:135:PHE:CE2	1:A:180:ALA:HB3	2.57	0.40
1:A:143:VAL:HA	1:A:176:VAL:HG12	2.04	0.40
1:B:155:ILE:HG23	1:B:165:ARG:HG3	2.03	0.40
1:B:212:ARG:HE	1:B:212:ARG:HB3	1.53	0.40
2:D:350:MET:HG3	2:D:360:PRO:HG3	2.03	0.40
2:D:475:TRP:HB3	2:D:479:ARG:NH2	2.36	0.40
2:E:41:TYR:CE1	2:E:57:VAL:HG13	2.55	0.40
2:E:127:ASN:HD21	2:E:131:LYS:HB3	1.87	0.40
5:K:42:LYS:HE2	5:K:42:LYS:HB3	1.63	0.40
5:K:121:LEU:HD12	5:K:121:LEU:HA	1.89	0.40
13:d:138:MET:HG3	13:d:139:GLU:N	2.37	0.40
1:A:226:PRO:HG3	1:A:464:TYR:CE2	2.56	0.40
1:C:147:ILE:HG12	1:C:168:LEU:HD22	2.03	0.40
2:F:483:LYS:HB3	2:F:498:TYR:CE2	2.56	0.40
3:G:254:ASN:O	3:G:257:GLU:HG2	2.20	0.40
3:G:255:GLU:HG2	3:G:259:LYS:HE2	2.02	0.40
5:I:152:ILE:N	5:I:153:PRO:HD2	2.36	0.40
7:N:115:ARG:HA	7:N:115:ARG:HD3	1.85	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	598/617 (97%)	554 (93%)	41 (7%)	3 (0%)	24 57

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	B	581/617 (94%)	547 (94%)	31 (5%)	3 (0%)	24	57
1	C	598/617 (97%)	554 (93%)	41 (7%)	3 (0%)	24	57
2	D	452/515 (88%)	431 (95%)	19 (4%)	2 (0%)	30	62
2	E	452/515 (88%)	430 (95%)	22 (5%)	0	100	100
2	F	454/515 (88%)	431 (95%)	17 (4%)	6 (1%)	9	38
3	G	356/382 (93%)	342 (96%)	13 (4%)	1 (0%)	36	67
4	H	211/247 (85%)	203 (96%)	8 (4%)	0	100	100
5	I	215/226 (95%)	208 (97%)	7 (3%)	0	100	100
5	J	216/226 (96%)	209 (97%)	7 (3%)	0	100	100
5	K	215/226 (95%)	212 (99%)	3 (1%)	0	100	100
6	L	107/119 (90%)	95 (89%)	12 (11%)	0	100	100
7	M	108/118 (92%)	107 (99%)	1 (1%)	0	100	100
7	N	108/118 (92%)	107 (99%)	1 (1%)	0	100	100
7	O	106/118 (90%)	102 (96%)	3 (3%)	1 (1%)	14	45
8	Q	222/337 (66%)	214 (96%)	8 (4%)	0	100	100
8	R	204/337 (60%)	195 (96%)	7 (3%)	2 (1%)	12	43
8	S	224/337 (66%)	214 (96%)	9 (4%)	1 (0%)	30	62
9	T	423/483 (88%)	399 (94%)	24 (6%)	0	100	100
10	a	744/838 (89%)	717 (96%)	25 (3%)	2 (0%)	36	67
11	b	201/205 (98%)	197 (98%)	4 (2%)	0	100	100
12	c	204/469 (44%)	184 (90%)	20 (10%)	0	100	100
13	d	348/351 (99%)	330 (95%)	17 (5%)	1 (0%)	36	67
14	e	78/81 (96%)	76 (97%)	2 (3%)	0	100	100
15	f	82/98 (84%)	82 (100%)	0	0	100	100
16	g	148/155 (96%)	147 (99%)	1 (1%)	0	100	100
16	h	148/155 (96%)	146 (99%)	2 (1%)	0	100	100
16	i	148/155 (96%)	147 (99%)	1 (1%)	0	100	100
16	j	148/155 (96%)	147 (99%)	1 (1%)	0	100	100
16	k	148/155 (96%)	145 (98%)	3 (2%)	0	100	100
16	l	148/155 (96%)	146 (99%)	2 (1%)	0	100	100
16	m	148/155 (96%)	147 (99%)	1 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
16	n	148/155 (96%)	145 (98%)	3 (2%)	0	100	100
16	o	148/155 (96%)	144 (97%)	4 (3%)	0	100	100
17	p	51/351 (14%)	49 (96%)	2 (4%)	0	100	100
All	All	8890/10458 (85%)	8503 (96%)	362 (4%)	25 (0%)	37	67

All (25) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	315	THR
1	A	450	TRP
1	B	470	THR
10	a	90	PHE
10	a	361	PRO
8	S	98	ILE
1	B	139	LYS
1	B	266	TYR
2	F	161	GLU
7	O	42	ALA
1	C	252	PHE
1	C	559	ALA
2	D	405	THR
2	F	35	THR
2	F	208	LYS
2	F	353	ASP
2	F	461	PRO
2	F	479	ARG
3	G	344	SER
1	C	277	CYS
13	d	135	PHE
1	A	588	ASP
8	R	98	ILE
8	R	168	ILE
2	D	229	GLY

5.3.2 Protein sidechains ⓘ

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

The Analysed column shows the number of residues for which the sidechain conformation was

analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	508/525 (97%)	476 (94%)	32 (6%)	16	42
1	B	501/525 (95%)	441 (88%)	60 (12%)	5	21
1	C	508/525 (97%)	454 (89%)	54 (11%)	6	26
2	D	390/438 (89%)	351 (90%)	39 (10%)	7	28
2	E	390/438 (89%)	369 (95%)	21 (5%)	20	45
2	F	392/438 (90%)	357 (91%)	35 (9%)	9	32
3	G	325/344 (94%)	301 (93%)	24 (7%)	13	38
4	H	184/211 (87%)	183 (100%)	1 (0%)	81	81
5	I	96/197 (49%)	80 (83%)	16 (17%)	2	13
5	J	191/197 (97%)	174 (91%)	17 (9%)	9	32
5	K	190/197 (96%)	165 (87%)	25 (13%)	4	19
6	L	93/100 (93%)	79 (85%)	14 (15%)	3	16
7	M	33/101 (33%)	20 (61%)	13 (39%)	0	0
7	N	95/101 (94%)	87 (92%)	8 (8%)	10	34
7	O	94/101 (93%)	65 (69%)	29 (31%)	0	1
8	Q	203/305 (67%)	194 (96%)	9 (4%)	25	49
8	R	188/305 (62%)	176 (94%)	12 (6%)	16	42
8	S	204/305 (67%)	183 (90%)	21 (10%)	7	27
9	T	385/429 (90%)	338 (88%)	47 (12%)	5	21
13	d	305/306 (100%)	285 (93%)	20 (7%)	15	41
All	All	5275/6088 (87%)	4778 (91%)	497 (9%)	10	30

All (497) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	34	MET
1	A	48	SER
1	A	53	GLU
1	A	58	GLU
1	A	65	GLN
1	A	69	GLU
1	A	71	SER
1	A	118	ILE
1	A	122	VAL

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Mol	Chain	Res	Type
1	A	136	THR
1	A	139	LYS
1	A	141	LEU
1	A	147	ILE
1	A	148	THR
1	A	155	ILE
1	A	166	ILE
1	A	171	ARG
1	A	173	ARG
1	A	175	THR
1	A	191	VAL
1	A	215	ARG
1	A	233	VAL
1	A	280	ARG
1	A	316	SER
1	A	349	ASN
1	A	350	SER
1	A	360	GLU
1	A	364	ARG
1	A	395	LEU
1	A	419	ASP
1	A	485	GLU
1	A	486	GLU
1	B	39	MET
1	B	53	GLU
1	B	55	ILE
1	B	56	ARG
1	B	58	GLU
1	B	61	MET
1	B	63	THR
1	B	68	GLU
1	B	84	LYS
1	B	102	ILE
1	B	103	GLN
1	B	104	ARG
1	B	109	ILE
1	B	122	VAL
1	B	146	HIS
1	B	162	ILE
1	B	163	LYS
1	B	165	ARG
1	B	166	ILE

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Mol	Chain	Res	Type
1	B	167	MET
1	B	171	ARG
1	B	172	ASN
1	B	173	ARG
1	B	175	THR
1	B	201	GLU
1	B	212	ARG
1	B	220	LYS
1	B	221	LEU
1	B	224	ASN
1	B	229	THR
1	B	245	THR
1	B	270	ASP
1	B	277	CYS
1	B	284	MET
1	B	285	SER
1	B	316	SER
1	B	320	VAL
1	B	327	ILE
1	B	331	ILE
1	B	338	ARG
1	B	361	ILE
1	B	364	ARG
1	B	384	SER
1	B	391	ARG
1	B	392	VAL
1	B	395	LEU
1	B	400	ARG
1	B	404	VAL
1	B	410	VAL
1	B	418	SER
1	B	526	THR
1	B	555	VAL
1	B	585	LYS
1	B	587	LYS
1	B	594	GLU
1	B	596	LYS
1	B	597	ILE
1	B	598	LYS
1	B	603	GLN
1	B	605	LEU
1	C	43	VAL

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Mol	Chain	Res	Type
1	C	44	ARG
1	C	53	GLU
1	C	68	GLU
1	C	74	SER
1	C	79	VAL
1	C	81	ARG
1	C	100	ASP
1	C	102	ILE
1	C	103	GLN
1	C	116	ILE
1	C	130	ASP
1	C	140	ASN
1	C	155	ILE
1	C	156	VAL
1	C	163	LYS
1	C	166	ILE
1	C	187	THR
1	C	188	SER
1	C	220	LYS
1	C	221	LEU
1	C	224	ASN
1	C	234	LEU
1	C	241	VAL
1	C	284	MET
1	C	286	GLU
1	C	317	ASN
1	C	331	ILE
1	C	361	ILE
1	C	362	SER
1	C	364	ARG
1	C	365	LEU
1	C	368	MET
1	C	382	LEU
1	C	384	SER
1	C	393	LYS
1	C	400	ARG
1	C	401	GLU
1	C	403	SER
1	C	419	ASP
1	C	450	TRP
1	C	471	GLU
1	C	481	GLU

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Mol	Chain	Res	Type
1	C	487	GLU
1	C	504	THR
1	C	509	LEU
1	C	510	GLU
1	C	523	ASN
1	C	525	TYR
1	C	553	ARG
1	C	555	VAL
1	C	556	GLU
1	C	574	MET
1	C	616	GLU
2	D	38	ARG
2	D	77	SER
2	D	81	LEU
2	D	82	GLU
2	D	96	THR
2	D	99	ILE
2	D	107	GLU
2	D	109	THR
2	D	120	ASP
2	D	121	MET
2	D	125	VAL
2	D	150	GLN
2	D	174	MET
2	D	182	LYS
2	D	228	MET
2	D	232	MET
2	D	239	LYS
2	D	241	ASP
2	D	253	LEU
2	D	255	LEU
2	D	271	LEU
2	D	294	MET
2	D	295	SER
2	D	296	SER
2	D	303	GLU
2	D	324	ASP
2	D	328	ILE
2	D	359	ILE
2	D	366	ILE
2	D	368	GLU
2	D	373	VAL

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Mol	Chain	Res	Type
2	D	388	VAL
2	D	392	LEU
2	D	402	GLU
2	D	404	MET
2	D	407	LYS
2	D	487	LYS
2	D	488	ARG
2	D	489	ILE
2	E	40	THR
2	E	43	THR
2	E	81	LEU
2	E	103	LYS
2	E	106	CYS
2	E	152	ILE
2	E	158	ILE
2	E	173	VAL
2	E	174	MET
2	E	182	LYS
2	E	195	GLU
2	E	196	ILE
2	E	241	ASP
2	E	292	THR
2	E	314	ARG
2	E	330	GLU
2	E	370	GLN
2	E	374	ASP
2	E	422	ILE
2	E	457	ILE
2	E	473	LEU
2	F	43	THR
2	F	48	ASN
2	F	58	LYS
2	F	83	VAL
2	F	103	LYS
2	F	105	THR
2	F	115	THR
2	F	120	ASP
2	F	140	MET
2	F	147	ILE
2	F	158	ILE
2	F	159	TYR
2	F	161	GLU

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Mol	Chain	Res	Type
2	F	182	LYS
2	F	207	VAL
2	F	247	THR
2	F	261	PRO
2	F	267	ILE
2	F	270	ARG
2	F	273	LEU
2	F	284	GLU
2	F	328	ILE
2	F	335	VAL
2	F	395	LEU
2	F	396	MET
2	F	397	LYS
2	F	400	ILE
2	F	402	GLU
2	F	405	THR
2	F	406	ARG
2	F	407	LYS
2	F	411	ASP
2	F	455	ASN
2	F	488	ARG
2	F	489	ILE
3	G	6	LEU
3	G	37	LYS
3	G	45	VAL
3	G	57	GLU
3	G	162	LEU
3	G	163	THR
3	G	164	ARG
3	G	180	GLU
3	G	182	LEU
3	G	229	LEU
3	G	232	LYS
3	G	235	ASP
3	G	249	ARG
3	G	295	ILE
3	G	298	LYS
3	G	301	ARG
3	G	305	GLU
3	G	308	LEU
3	G	312	LEU
3	G	315	ASN

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Mol	Chain	Res	Type
3	G	317	GLN
3	G	319	MET
3	G	320	LEU
3	G	321	LEU
4	H	110	GLU
5	I	84	LEU
5	I	121	LEU
5	I	129	GLU
5	I	131	ARG
5	I	133	ILE
5	I	156	LYS
5	I	159	THR
5	I	160	LYS
5	I	164	ASP
5	I	187	ASP
5	I	189	LYS
5	I	191	LYS
5	I	200	LEU
5	I	202	LEU
5	I	205	GLN
5	I	212	ARG
5	J	13	LYS
5	J	44	ARG
5	J	45	LEU
5	J	46	VAL
5	J	47	GLN
5	J	50	ARG
5	J	51	LEU
5	J	52	LYS
5	J	56	TYR
5	J	57	TYR
5	J	58	GLU
5	J	60	LYS
5	J	61	GLU
5	J	156	LYS
5	J	160	LYS
5	J	161	ARG
5	J	189	LYS
5	K	28	GLU
5	K	42	LYS
5	K	50	ARG
5	K	51	LEU

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Mol	Chain	Res	Type
5	K	52	LYS
5	K	53	ILE
5	K	55	GLU
5	K	61	GLU
5	K	76	MET
5	K	78	GLN
5	K	82	LYS
5	K	84	LEU
5	K	87	ARG
5	K	124	LEU
5	K	127	LEU
5	K	128	LEU
5	K	129	GLU
5	K	131	ARG
5	K	138	LYS
5	K	139	GLN
5	K	161	ARG
5	K	166	GLN
5	K	170	GLU
5	K	185	ASN
5	K	187	ASP
6	L	44	THR
6	L	49	GLU
6	L	75	ARG
6	L	78	LEU
6	L	82	GLN
6	L	94	LYS
6	L	99	ASP
6	L	102	LYS
6	L	103	ASP
6	L	104	SER
6	L	105	ILE
6	L	106	LEU
6	L	107	ARG
6	L	110	LYS
7	M	84	LEU
7	M	86	THR
7	M	90	GLN
7	M	99	LEU
7	M	102	PHE
7	M	103	VAL
7	M	105	ASP

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Mol	Chain	Res	Type
7	M	106	ILE
7	M	109	GLU
7	M	110	ILE
7	M	112	GLU
7	M	115	ARG
7	M	116	ILE
7	N	37	LYS
7	N	44	ILE
7	N	48	ARG
7	N	50	GLN
7	N	51	ARG
7	N	75	LYS
7	N	78	GLN
7	N	110	ILE
7	O	15	GLU
7	O	16	LYS
7	O	17	ARG
7	O	20	GLU
7	O	21	LYS
7	O	23	SER
7	O	26	ARG
7	O	27	LYS
7	O	28	ARG
7	O	31	ARG
7	O	32	ARG
7	O	33	LEU
7	O	34	LYS
7	O	45	GLU
7	O	48	ARG
7	O	49	LEU
7	O	52	GLU
7	O	53	LYS
7	O	54	GLU
7	O	56	LYS
7	O	84	LEU
7	O	89	ARG
7	O	91	ASN
7	O	93	ASP
7	O	95	VAL
7	O	106	ILE
7	O	109	GLU
7	O	110	ILE

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Mol	Chain	Res	Type
7	O	115	ARG
8	Q	47	GLU
8	Q	52	VAL
8	Q	61	ARG
8	Q	63	GLU
8	Q	65	ILE
8	Q	67	GLU
8	Q	79	ASP
8	Q	81	LEU
8	Q	194	ASP
8	R	17	GLN
8	R	20	SER
8	R	47	GLU
8	R	59	ASN
8	R	61	ARG
8	R	63	GLU
8	R	70	LYS
8	R	79	ASP
8	R	128	VAL
8	R	130	LEU
8	R	132	GLN
8	R	134	ASN
8	S	29	ILE
8	S	36	ILE
8	S	44	LYS
8	S	45	ILE
8	S	50	GLN
8	S	52	VAL
8	S	79	ASP
8	S	82	SER
8	S	85	SER
8	S	87	ILE
8	S	92	LEU
8	S	94	LEU
8	S	152	LEU
8	S	155	MET
8	S	211	SER
8	S	214	GLU
8	S	217	LEU
8	S	220	GLU
8	S	221	ASP
8	S	223	LYS

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Mol	Chain	Res	Type
8	S	227	LYS
9	T	25	GLU
9	T	56	LYS
9	T	81	MET
9	T	100	THR
9	T	101	LEU
9	T	103	GLU
9	T	105	HIS
9	T	106	GLN
9	T	107	ARG
9	T	108	VAL
9	T	109	SER
9	T	110	ILE
9	T	117	ARG
9	T	144	ILE
9	T	145	ILE
9	T	147	LYS
9	T	154	GLU
9	T	200	CYS
9	T	206	GLN
9	T	207	LEU
9	T	208	MET
9	T	211	VAL
9	T	213	GLU
9	T	215	ARG
9	T	216	PHE
9	T	218	TRP
9	T	219	VAL
9	T	220	GLU
9	T	252	PHE
9	T	253	SER
9	T	256	MET
9	T	346	VAL
9	T	353	ASP
9	T	357	SER
9	T	359	LEU
9	T	360	LYS
9	T	363	ARG
9	T	364	LEU
9	T	365	GLU
9	T	369	VAL
9	T	371	LYS

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Mol	Chain	Res	Type
9	T	374	LYS
9	T	377	ARG
9	T	381	VAL
9	T	386	LYS
9	T	389	GLU
9	T	392	LYS
13	d	49	LEU
13	d	58	LEU
13	d	61	GLU
13	d	69	VAL
13	d	73	ARG
13	d	75	LYS
13	d	77	LYS
13	d	105	MET
13	d	132	LEU
13	d	165	GLN
13	d	172	ASP
13	d	218	ARG
13	d	219	ARG
13	d	232	LEU
13	d	233	SER
13	d	237	ARG
13	d	239	LYS
13	d	240	LEU
13	d	259	ASP
13	d	295	PHE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (64) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	172	ASN
1	A	184	ASN
1	B	164	HIS
1	B	225	HIS
1	B	314	ASN
1	B	397	ASN
1	B	560	GLN
1	B	603	GLN
1	C	140	ASN
1	C	242	GLN
1	C	317	ASN
1	C	343	HIS

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Mol	Chain	Res	Type
1	C	430	GLN
1	C	523	ASN
1	C	603	GLN
2	D	56	HIS
2	D	61	GLN
2	D	409	HIS
2	E	61	GLN
2	E	91	GLN
2	E	199	GLN
2	E	245	ASN
2	E	357	HIS
2	E	376	GLN
2	F	75	GLN
2	F	199	GLN
2	F	378	HIS
2	F	450	GLN
2	F	491	GLN
5	J	49	GLN
5	K	21	GLN
5	K	47	GLN
5	K	77	ASN
5	K	96	ASN
5	K	126	GLN
6	L	82	GLN
7	N	9	GLN
7	N	50	GLN
7	N	66	HIS
7	N	91	ASN
7	O	10	GLN
7	O	50	GLN
7	O	91	ASN
7	O	98	ASN
8	R	41	ASN
8	R	127	HIS
8	R	134	ASN
8	R	135	GLN
8	R	162	GLN
8	R	165	GLN
8	S	21	GLN
8	S	41	ASN
8	S	132	GLN
8	S	149	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
8	S	177	GLN
9	T	32	ASN
9	T	206	GLN
9	T	447	GLN
9	T	451	ASN
9	T	463	ASN
13	d	87	ASN
13	d	119	GLN
13	d	297	HIS
13	d	338	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

1 ligand is 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	$\# Z > 2$
18	ADP	A	701	-	28,29,29	0.46	0	43,45,45	0.51	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
18	ADP	A	701	-	-	5/16/32/32	0/3/3/3

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (5) torsion outliers are listed below:

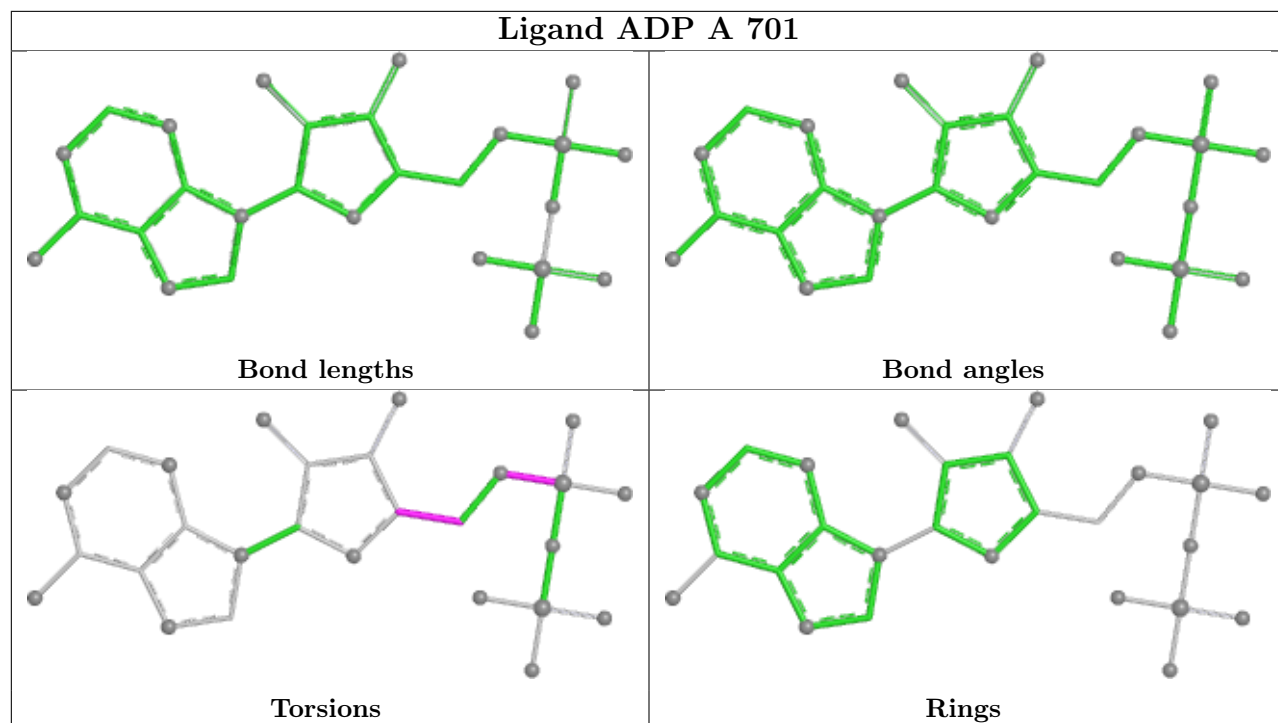
Mol	Chain	Res	Type	Atoms
18	A	701	ADP	C5'-O5'-PA-O1A
18	A	701	ADP	C5'-O5'-PA-O2A
18	A	701	ADP	C5'-O5'-PA-O3A
18	A	701	ADP	O4'-C4'-C5'-O5'
18	A	701	ADP	C3'-C4'-C5'-O5'

There are no ring outliers.

1 monomer is involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
18	A	701	ADP	3	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

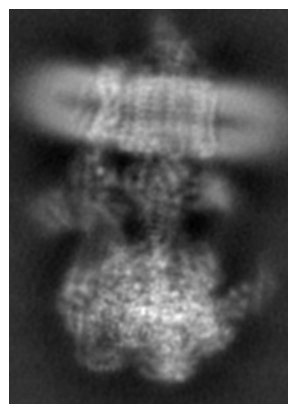
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-26388. These allow visual inspection of the internal detail of the map and identification of artifacts.

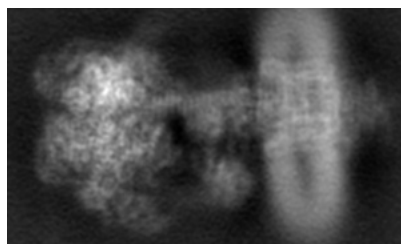
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

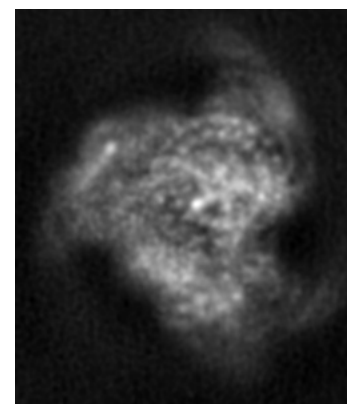
6.1.1 Primary map



X

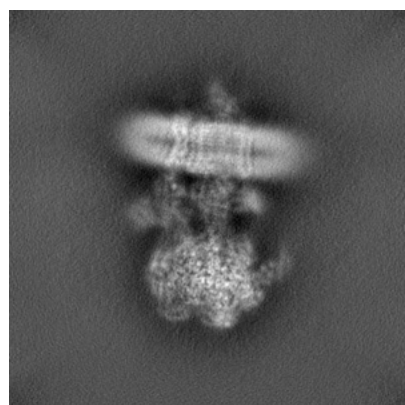


Y

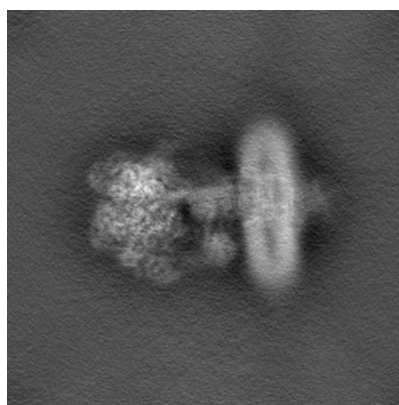


Z

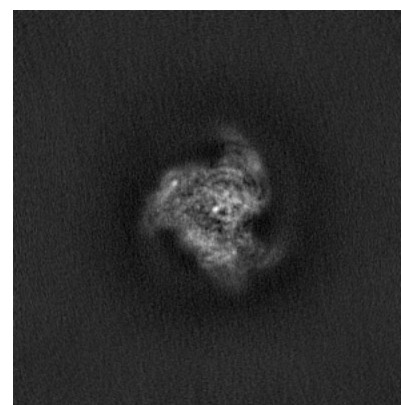
6.1.2 Raw map



X



Y



Z

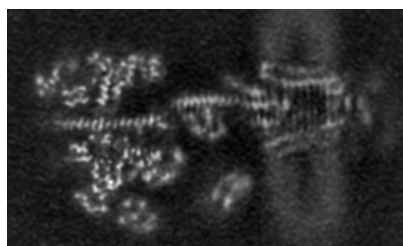
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

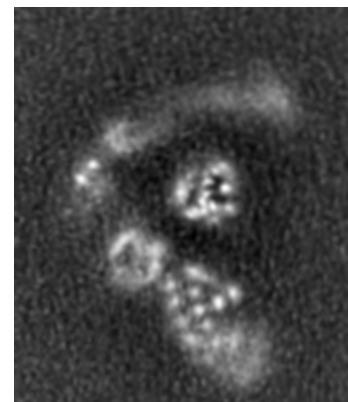
6.2.1 Primary map



X Index: 60

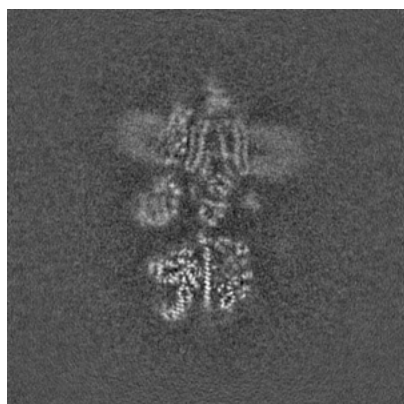


Y Index: 70

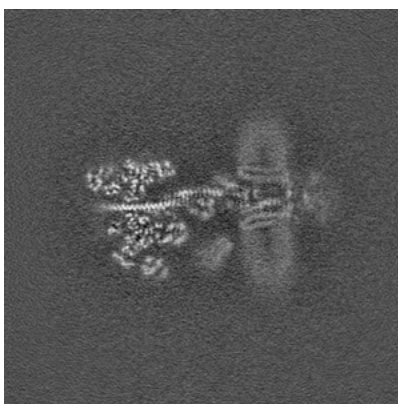


Z Index: 100

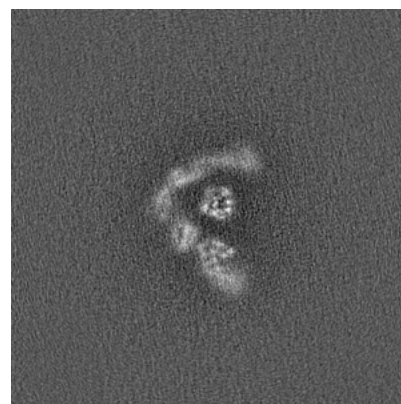
6.2.2 Raw map



X Index: 150



Y Index: 150

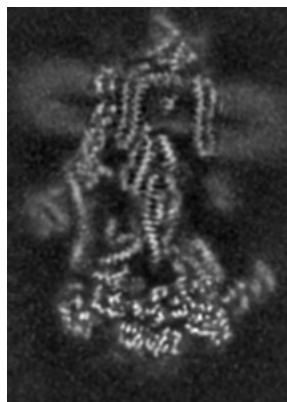


Z Index: 150

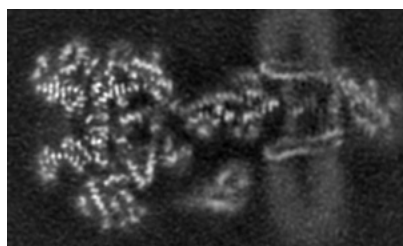
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

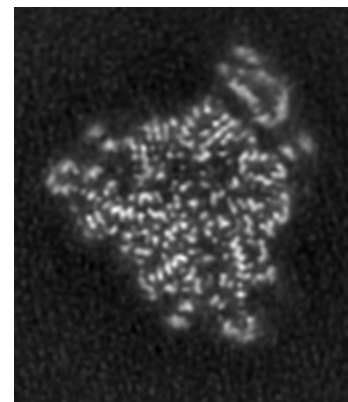
6.3.1 Primary map



X Index: 73

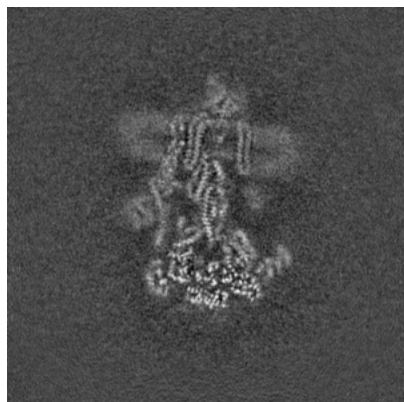


Y Index: 78

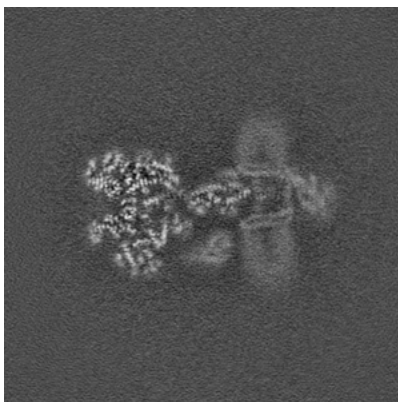


Z Index: 50

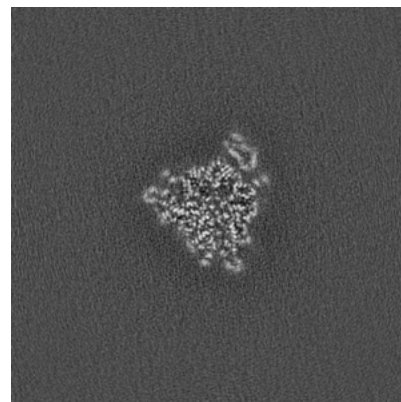
6.3.2 Raw map



X Index: 161



Y Index: 156

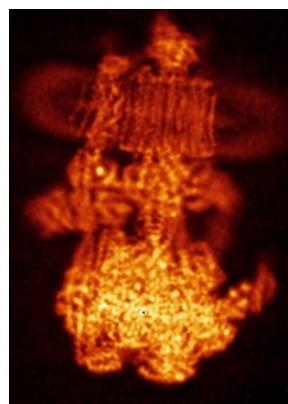


Z Index: 98

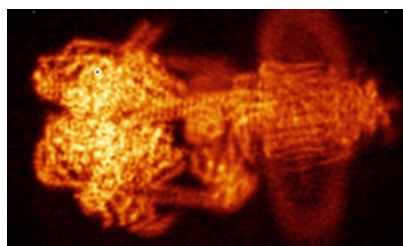
The images above show the largest variance slices of the map in three orthogonal directions.

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

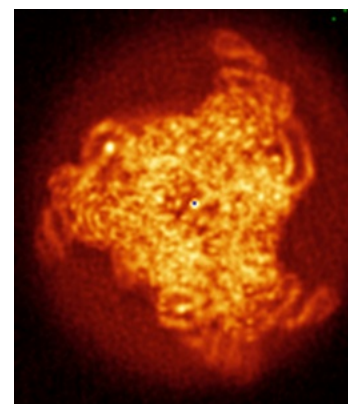
6.4.1 Primary map



X

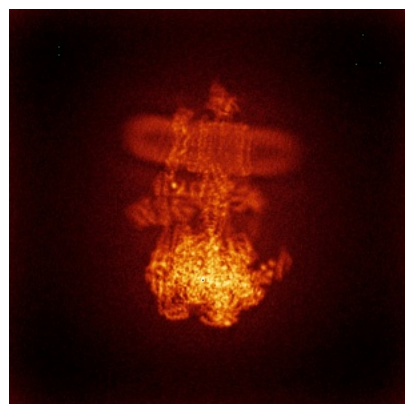


Y

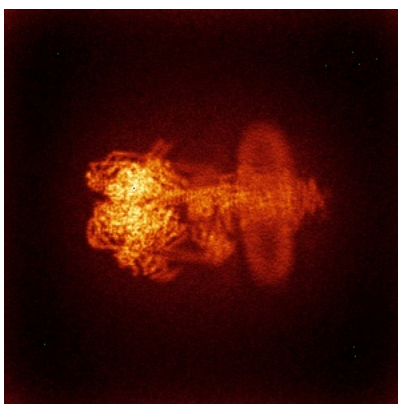


Z

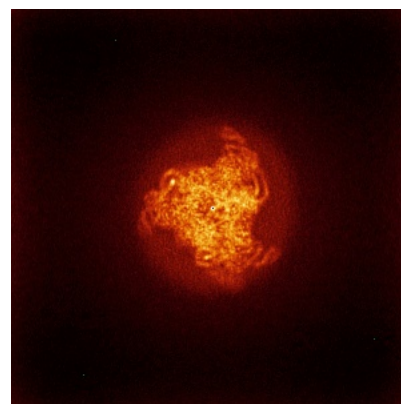
6.4.2 Raw map



X



Y

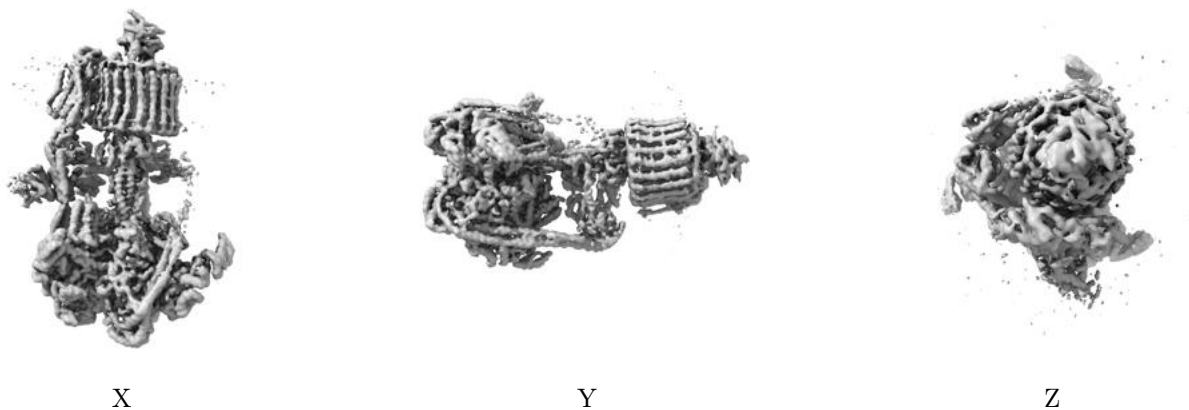


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

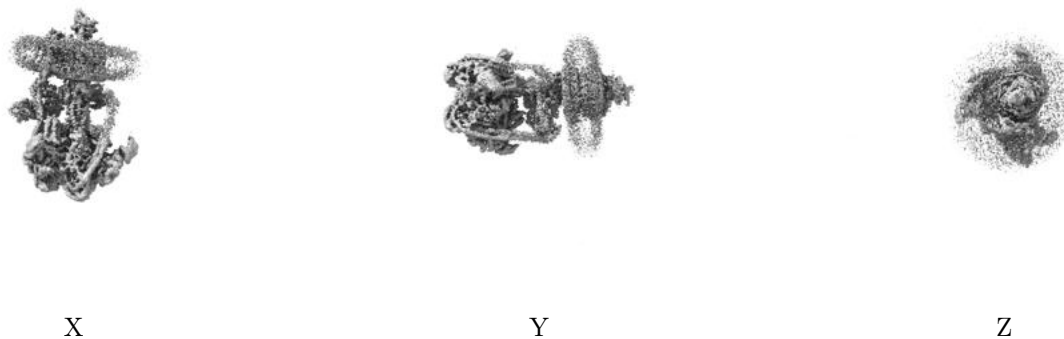
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.7. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

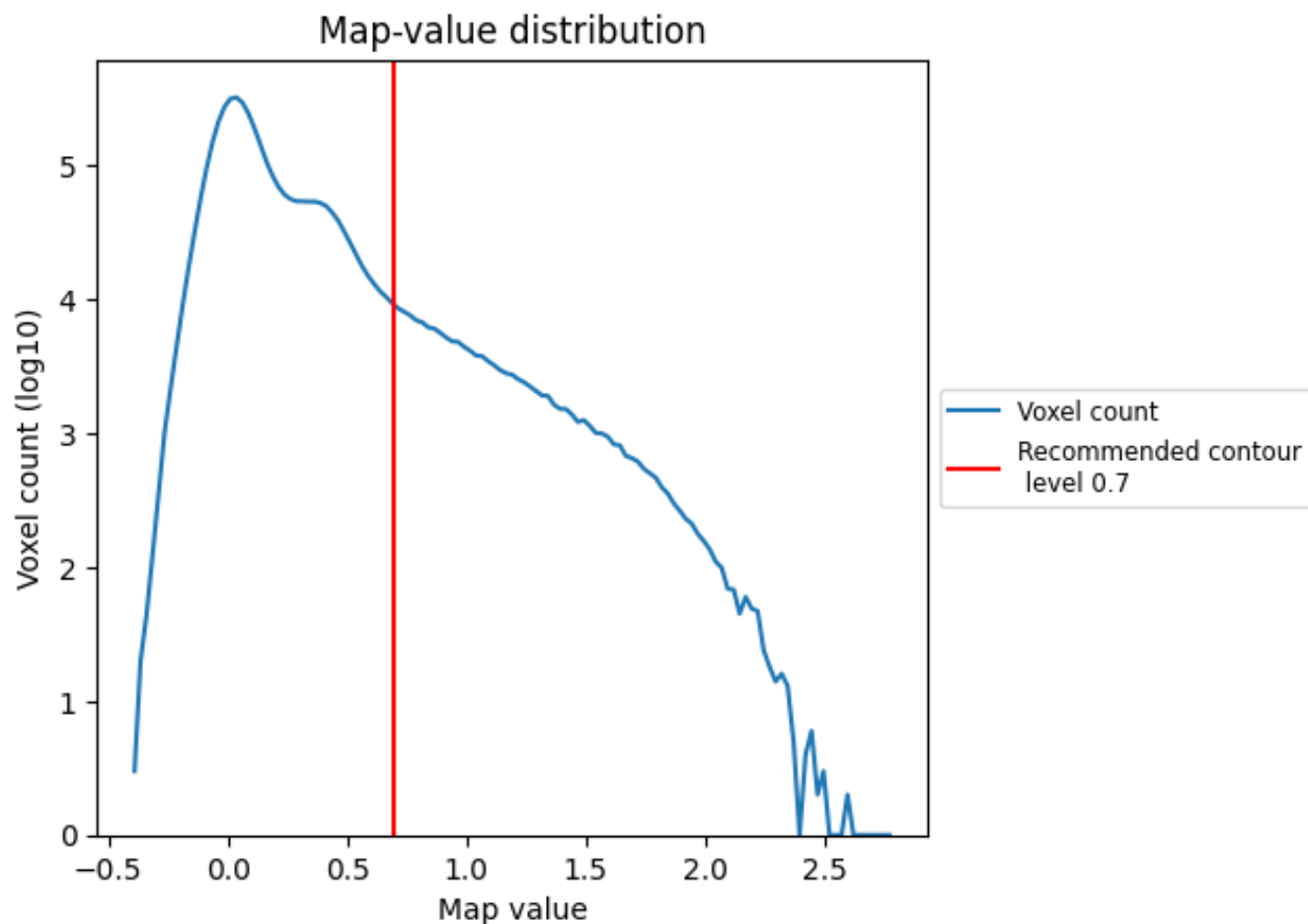
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

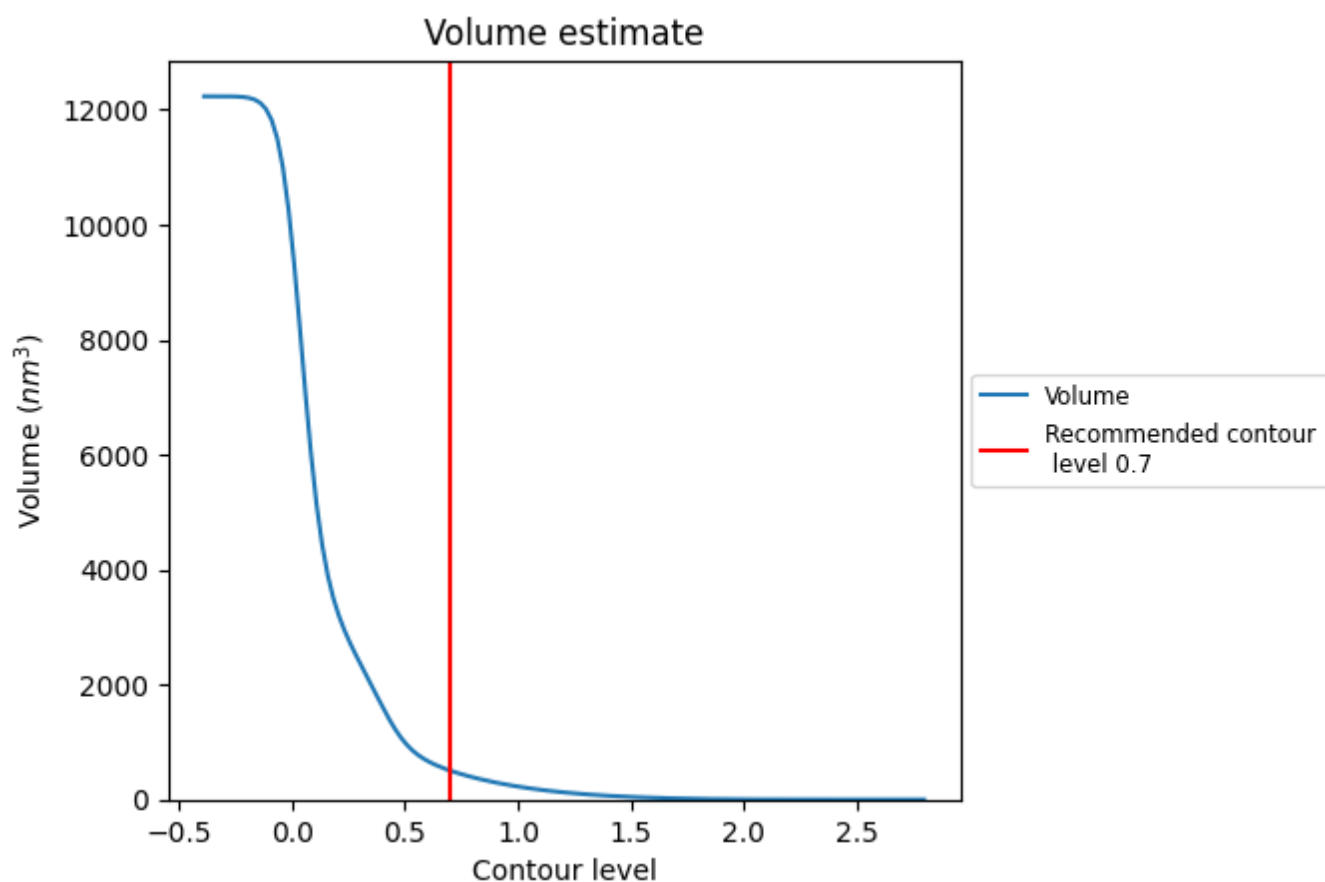
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

7.2 Volume estimate [i](#)



The volume at the recommended contour level is 504 nm³; this corresponds to an approximate mass of 456 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

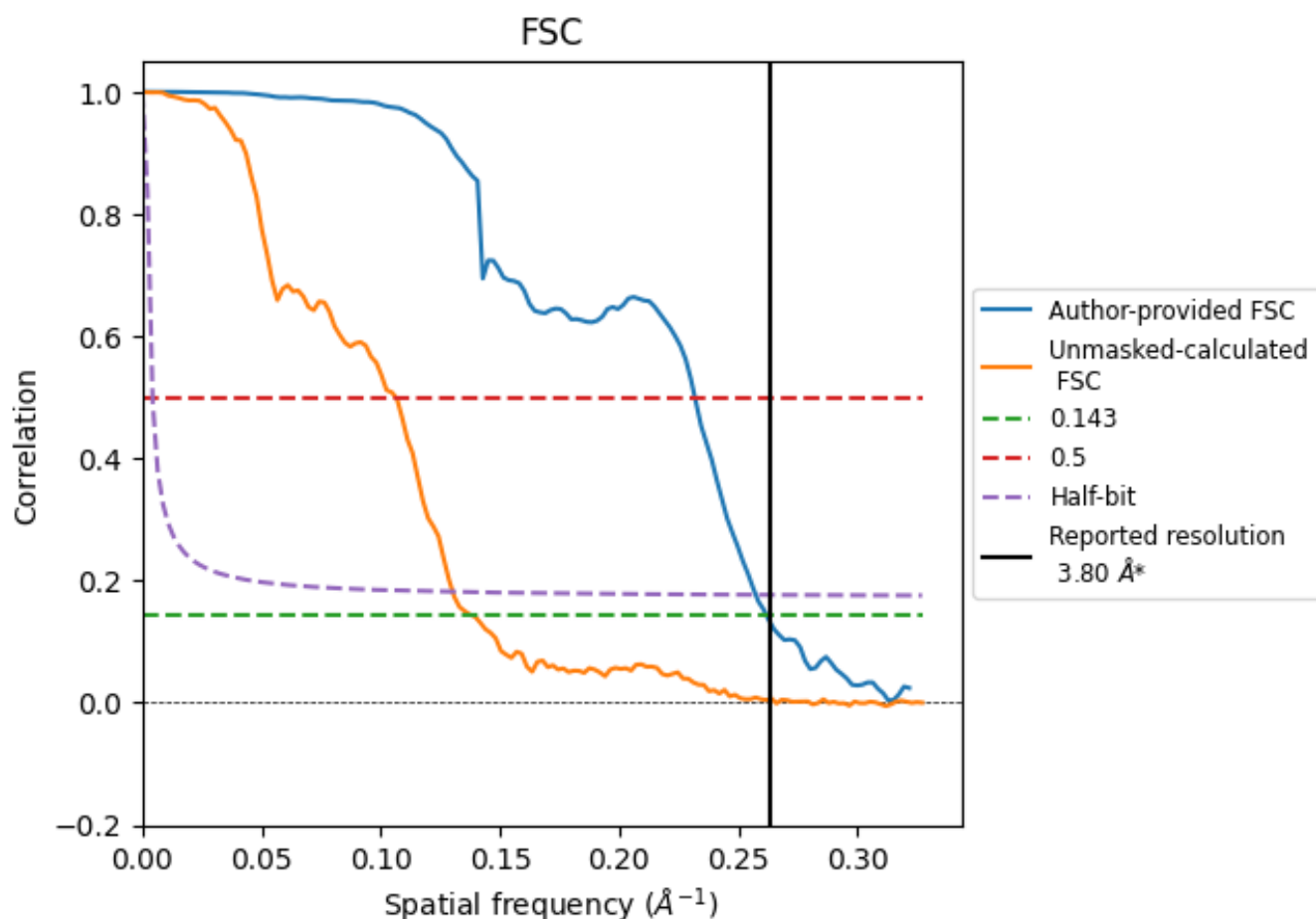
7.3 Rotationally averaged power spectrum [i](#)

This section was not generated. The rotationally averaged power spectrum is only generated for cubic maps.

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.263 Å⁻¹

8.2 Resolution estimates [i](#)

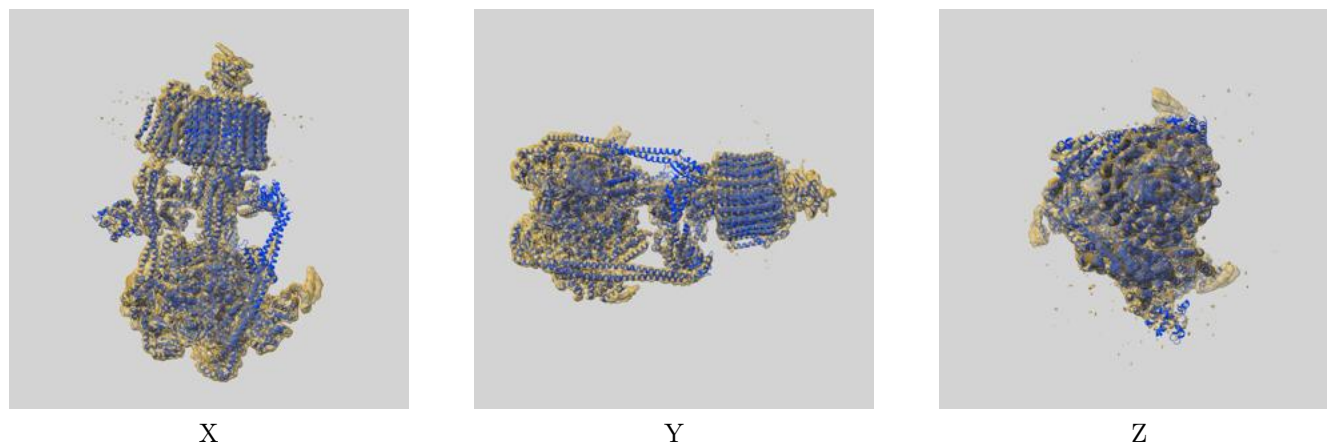
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.80	-	-
Author-provided FSC curve	3.82	4.31	3.89
Unmasked-calculated*	7.24	9.41	7.67

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 7.24 differs from the reported value 3.8 by more than 10 %

9 Map-model fit [i](#)

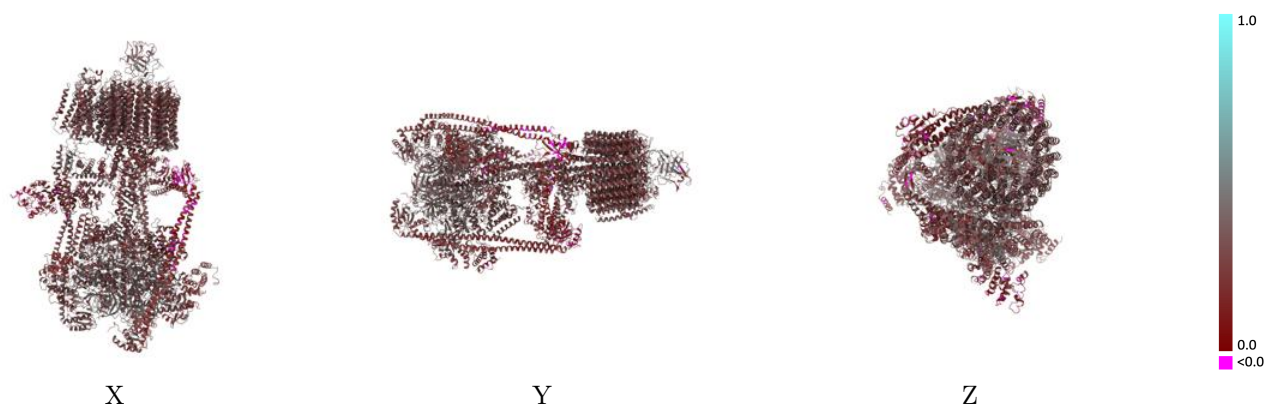
This section contains information regarding the fit between EMDB map EMD-26388 and PDB model 7U8R. Per-residue inclusion information can be found in section [3](#) on page [9](#).

9.1 Map-model overlay [i](#)



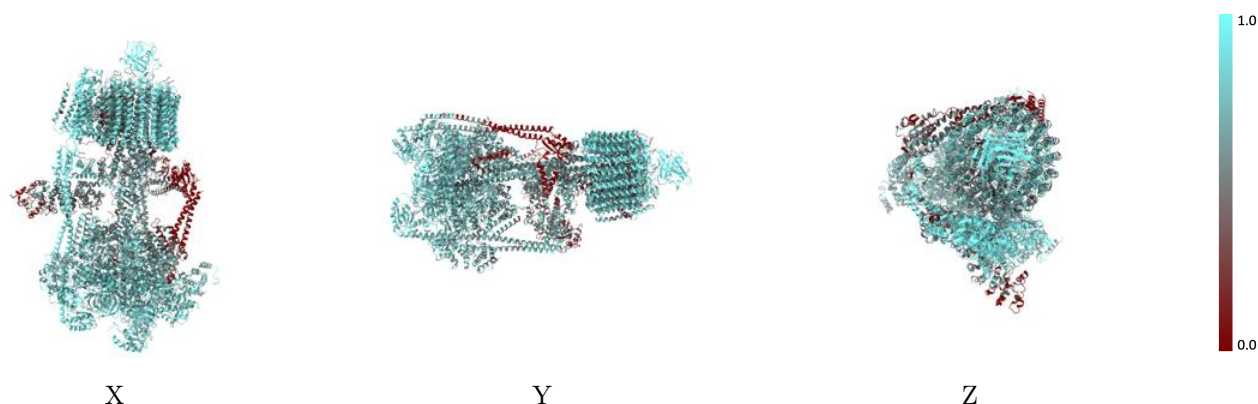
The images above show the 3D surface view of the map at the recommended contour level 0.7 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



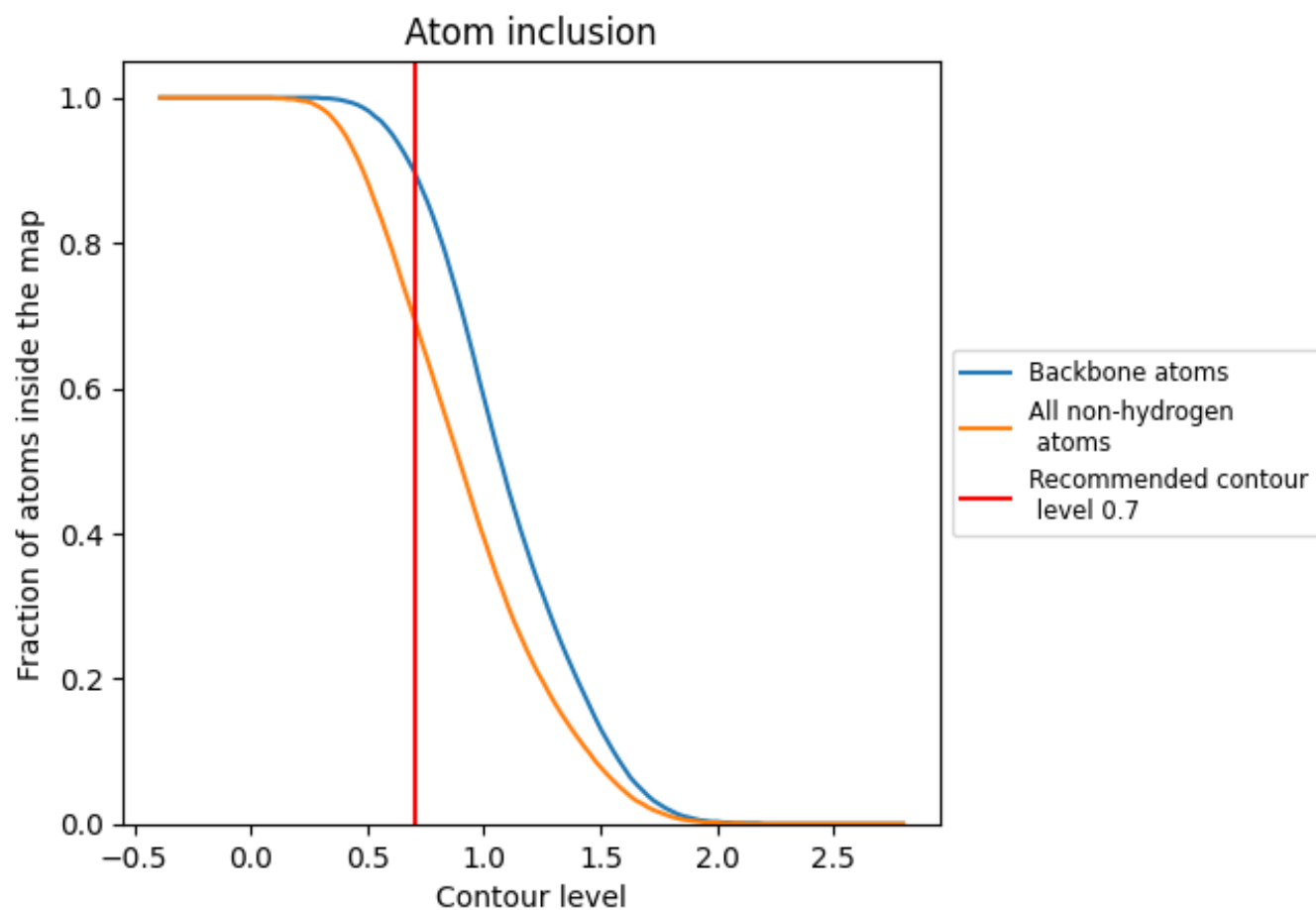
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.7).

9.4 Atom inclusion ⓘ



At the recommended contour level, 90% of all backbone atoms, 70% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.7) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.6970	 0.3010
A	 0.7720	 0.3550
B	 0.7030	 0.3240
C	 0.7570	 0.3440
D	 0.7740	 0.3630
E	 0.7880	 0.3670
F	 0.7810	 0.3570
G	 0.2490	 0.1410
H	 0.6690	 0.3070
I	 0.8500	 0.3250
J	 0.7430	 0.2780
K	 0.6150	 0.2530
L	 0.5840	 0.2890
M	 0.8310	 0.2890
N	 0.6950	 0.2400
O	 0.4580	 0.2210
Q	 0.6780	 0.2700
R	 0.7320	 0.2620
S	 0.7210	 0.2660
T	 0.4410	 0.1660
a	 0.8340	 0.3220
b	 0.7510	 0.3320
c	 0.8460	 0.3620
d	 0.5250	 0.2740
e	 0.8200	 0.3300
f	 0.7720	 0.2870
g	 0.7010	 0.3140
h	 0.6840	 0.2910
i	 0.7310	 0.2910
j	 0.7750	 0.2980
k	 0.7910	 0.3020
l	 0.8200	 0.3040
m	 0.7970	 0.3020
n	 0.7590	 0.2990
o	 0.7350	 0.3190
p	 0.6820	 0.3460

