WORLDWIDE

wwPDB

PROTEIN DATA BANK

Full wwPDB EM Validation Report (i)

Oct 13, 2024 – 09:05 AM EDT

PDB ID	:	6W1S
EMDB ID	:	EMD-21514
Title	:	Atomic model of the mammalian Mediator complex
Authors	:	Zhao, H.; Young, N.; Asturias, F.
Deposited on	:	2020-03-04
Resolution	:	4.02 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 (i) 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 (i)) were used in the production of this report:

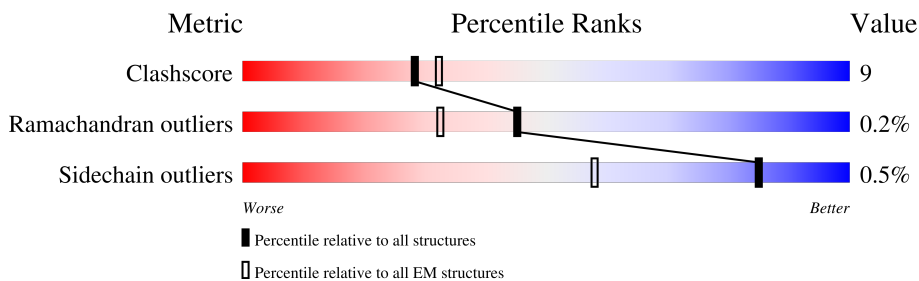|		
EMDB validation analysis	:	0.0.1.dev113
MolProbity	:	4.02b-467
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)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

1　Overall quality at a glance　ⓘ

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

The reported resolution of this entry is 4.02 Å.

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

Metric	Percentile Ranks	Value
Clashscore		9
Ramachandran outliers		0.2%
Sidechain outliers		0.5%

Worse　　　　　　　　　　　　　　　　*Better*

▮ Percentile relative to all structures

▯ Percentile relative to all EM structures

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

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=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	382	95%　　5%
2	B	100	94%　　6%
3	C	246	25% / 58%　　39%
4	D	157	11% / 98%
5	E	180	15% / 91%　　8%
6	F	76	89%　　11%
7	G	155	34% / 43%　　55%
8	H	108	94%

Continued on next page...

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Mol	Chain	Length	Quality of chain
9	I	1548	5% / 63% / 6% / 30%
10	J	167	5% / 76% / 24%
11	K	828	62% / 26% / 11%
12	L	631	74% / 9% / 17%
13	M	187	84% / 12%
14	N	243	10% / 11% / 89%
15	O	198	80% / 8% / 12%
16	P	126	11% / 82% / 17%
17	Q	131	99%
18	R	1367	69% / 25% / 5%
19	S	982	80% / 12% / 8%
20	T	202	85% / 9% / 5%
21	V	297	79% / 10% / 10%
22	W	118	97%
23	X	134	89% / 8%
24	Y	152	80% / 7% / 13%
25	Z	93	6% / 98%

2 Entry composition ⓘ

There are 25 unique types of molecules in this entry. The entry contains 47275 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 Mediator of RNA polymerase II transcription subunit 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
1	A	381	Total 1905	C 1143	N 381	O 381	0	0

- Molecule 2 is a protein called Mediator of RNA polymerase II transcription subunit 4.

Mol	Chain	Residues	Atoms				AltConf	Trace
2	B	94	Total 468	C 280	N 94	O 94	0	0

- Molecule 3 is a protein called Mediator of RNA polymerase II transcription subunit 6.

Mol	Chain	Residues	Atoms				AltConf	Trace
3	C	149	Total 744	C 446	N 149	O 149	0	0

- Molecule 4 is a protein called Mediator of RNA polymerase II transcription subunit 7.

Mol	Chain	Residues	Atoms				AltConf	Trace
4	D	157	Total 781	C 467	N 157	O 157	0	0

- Molecule 5 is a protein called Mediator of RNA polymerase II transcription subunit 8.

Mol	Chain	Residues	Atoms				AltConf	Trace
5	E	165	Total 837	C 506	N 166	O 165	0	0

- Molecule 6 is a protein called Mediator of RNA polymerase II transcription subunit 9.

Mol	Chain	Residues	Atoms				AltConf	Trace
6	F	68	Total 339	C 203	N 68	O 68	0	0

- Molecule 7 is a protein called Mediator of RNA polymerase II transcription subunit 10.

Mol	Chain	Residues	Atoms				AltConf	Trace
7	G	70	Total 350	C 210	N 70	O 70	0	0

- Molecule 8 is a protein called Mediator of RNA polymerase II transcription subunit 11.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	H	105	Total 578	C 349	N 116	O 112	S 1	0	0

- Molecule 9 is a protein called Mediator of RNA polymerase II transcription subunit 14.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	I	1077	Total 6731	C 4263	N 1245	O 1203	S 20	0	0

- Molecule 10 is a protein called Mediator of RNA polymerase II transcription subunit 15.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	J	167	Total 1171	C 748	N 217	O 200	S 6	0	0

- Molecule 11 is a protein called Mediator of RNA polymerase II transcription subunit 16.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	K	735	Total 5070	C 3274	N 909	O 864	S 23	0	0

- Molecule 12 is a protein called Mediator of RNA polymerase II transcription subunit 17.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	L	524	Total 3243	C 2041	N 608	O 591	S 3	0	0

- Molecule 13 is a protein called Mediator of RNA polymerase II transcription subunit 18.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	M	180	Total 1140	C 725	N 217	O 197	S 1	0	0

- Molecule 14 is a protein called Mediator of RNA polymerase II transcription subunit 19.

Mol	Chain	Residues	Atoms				AltConf	Trace
14	N	27	Total 135	C 81	N 27	O 27	0	0

- Molecule 15 is a protein called Mediator of RNA polymerase II transcription subunit 20.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	O	174	Total 1013	C 640	N 177	O 192	S 4	0	0

- Molecule 16 is a protein called Mediator of RNA polymerase II transcription subunit 21.

Mol	Chain	Residues	Atoms				AltConf	Trace
16	P	105	Total 523	C 313	N 105	O 105	0	0

- Molecule 17 is a protein called Mediator of RNA polymerase II transcription subunit 22.

Mol	Chain	Residues	Atoms				AltConf	Trace
17	Q	131	Total 754	C 463	N 145	O 146	0	0

- Molecule 18 is a protein called Mediator of RNA polymerase II transcription subunit 23.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	R	1295	Total 9744	C 6296	N 1680	O 1715	S 53	0	0

- Molecule 19 is a protein called Mediator of RNA polymerase II transcription subunit 24.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	S	901	Total 5875	C 3750	N 1062	O 1036	S 27	0	0

- Molecule 20 is a protein called Mediator of RNA polymerase II transcription subunit 25.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	T	192	Total 1299	C 837	N 222	O 235	S 5	0	0

- Molecule 21 is a protein called Mediator of RNA polymerase II transcription subunit 27.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	V	266	Total 1657	C 1053	N 301	O 300	S 3	0	0

- Molecule 22 is a protein called Mediator of RNA polymerase II transcription subunit 28.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	W	118	Total 773	C 486	N 145	O 140	S 2	0	0

- Molecule 23 is a protein called Mediator of RNA polymerase II transcription subunit 29.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	X	123	Total 839	C 528	N 150	O 158	S 3	0	0

- Molecule 24 is a protein called Mediator of RNA polymerase II transcription subunit 30.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	Y	132	Total 843	C 527	N 168	O 145	S 3	0	0

- Molecule 25 is a protein called Mediator of RNA polymerase II transcription subunit 31.

Mol	Chain	Residues	Atoms				AltConf	Trace
25	Z	93	Total 463	C 277	N 93	O 93	0	0

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.
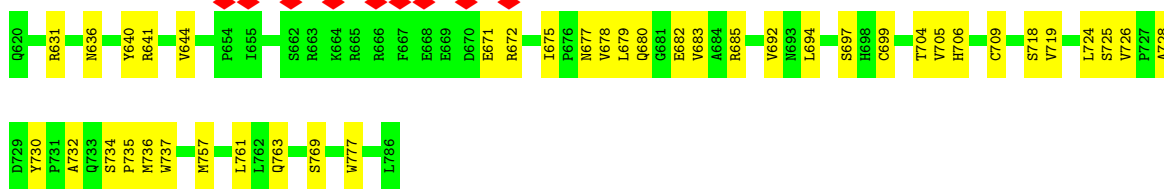
• Molecule 1: Mediator of RNA polymerase II transcription subunit 1

Chain A:
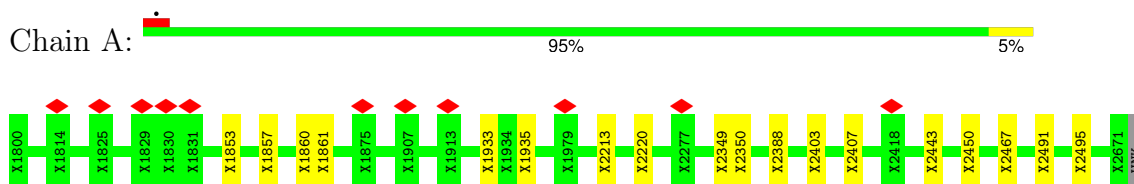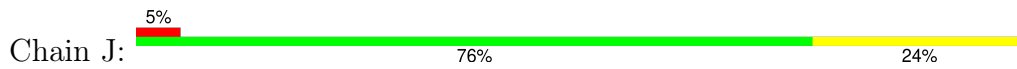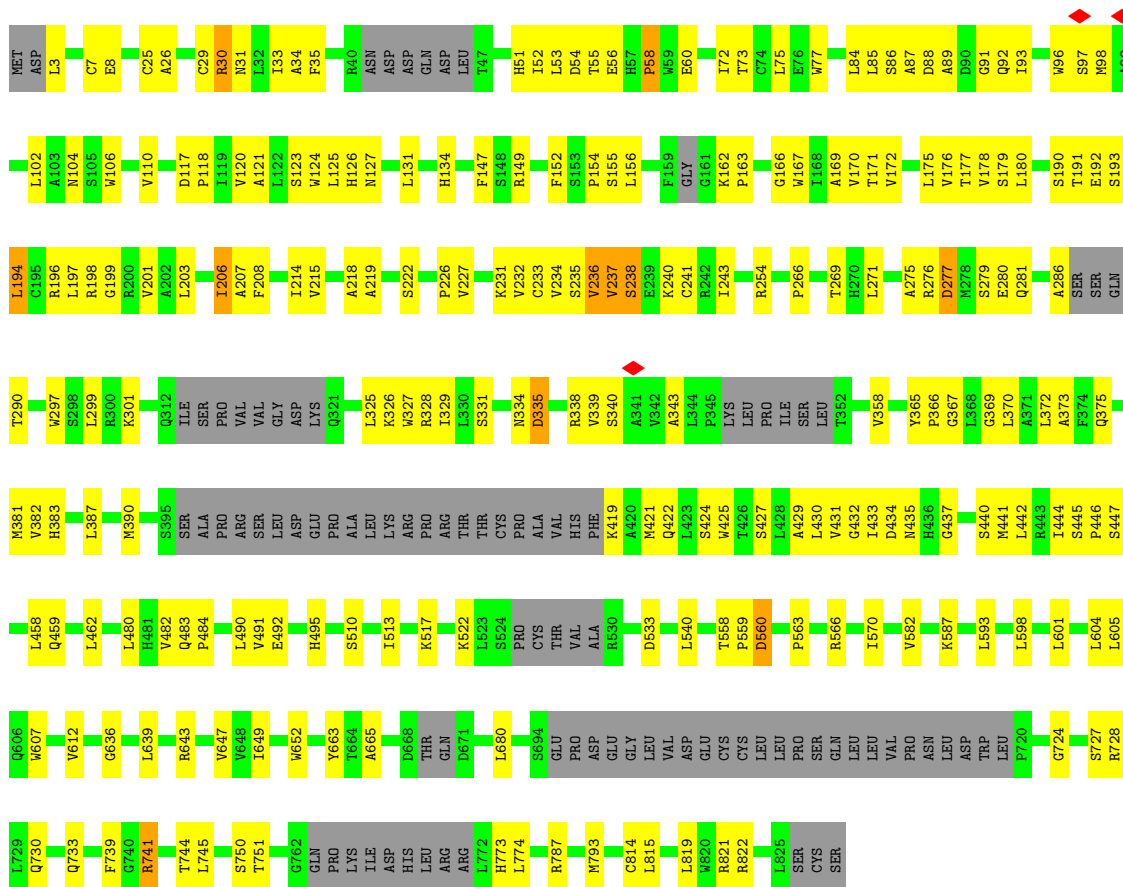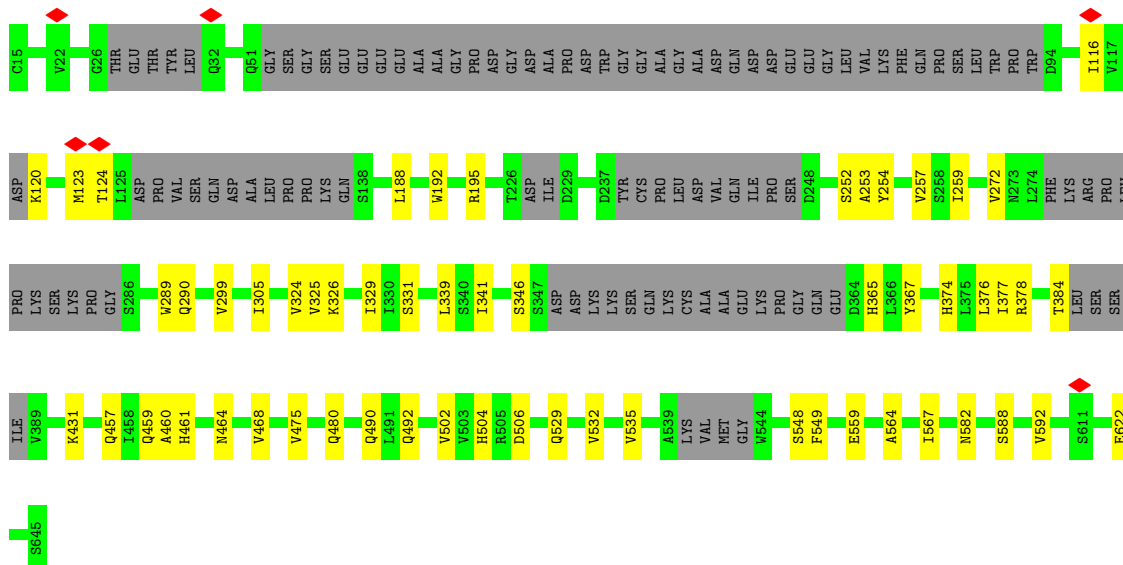
• Molecule 2: Mediator of RNA polymerase II transcription subunit 4

Chain B:
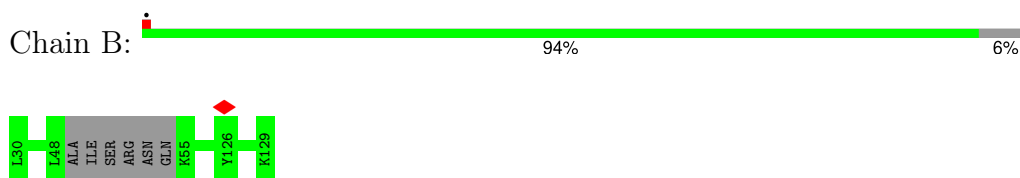
• Molecule 3: Mediator of RNA polymerase II transcription subunit 6
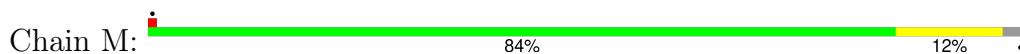
Chain C:
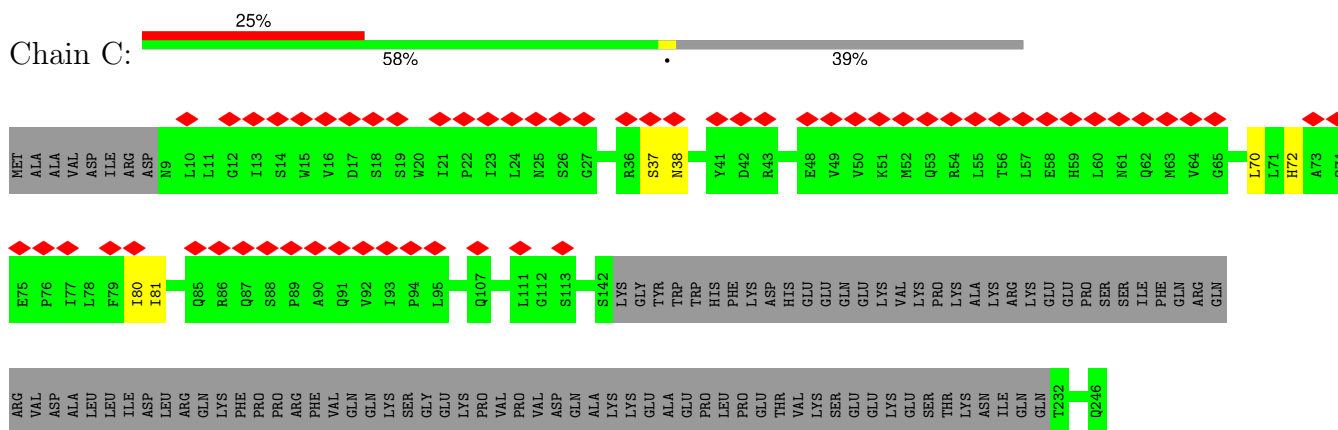
• Molecule 4: Mediator of RNA polymerase II transcription subunit 7

Chain D:
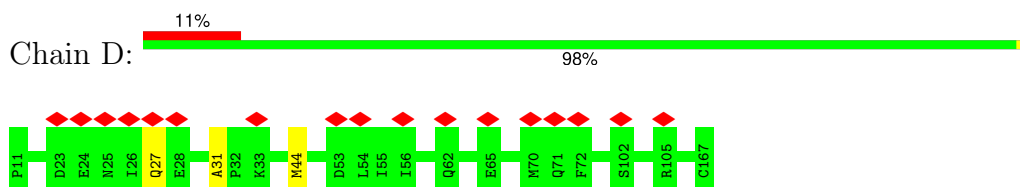
• Molecule 5: Mediator of RNA polymerase II transcription subunit 8

Chain E:
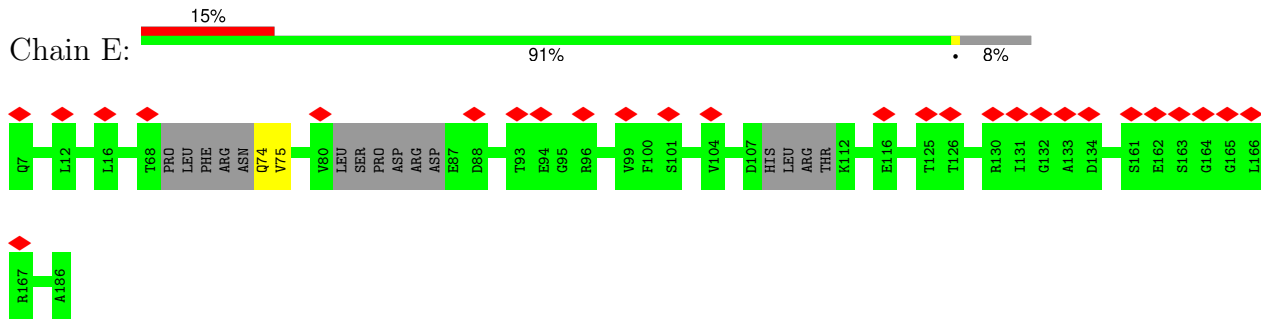
• Molecule 6: Mediator of RNA polymerase II transcription subunit 9

Chain F:
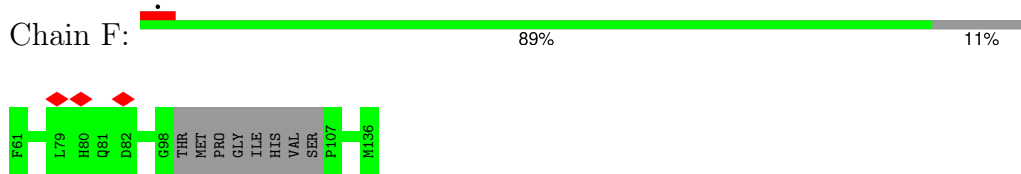
• Molecule 7: Mediator of RNA polymerase II transcription subunit 10

Chain G:
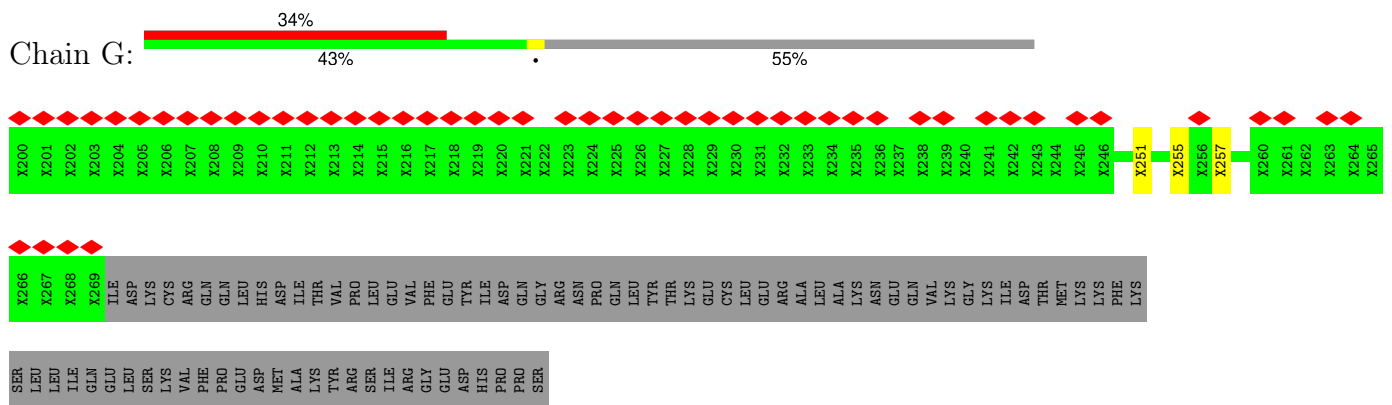
• Molecule 8: Mediator of RNA polymerase II transcription subunit 11

Chain H:
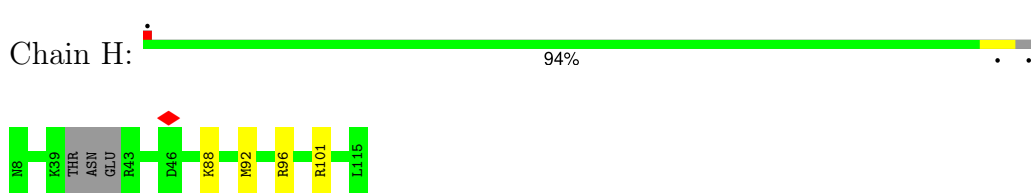
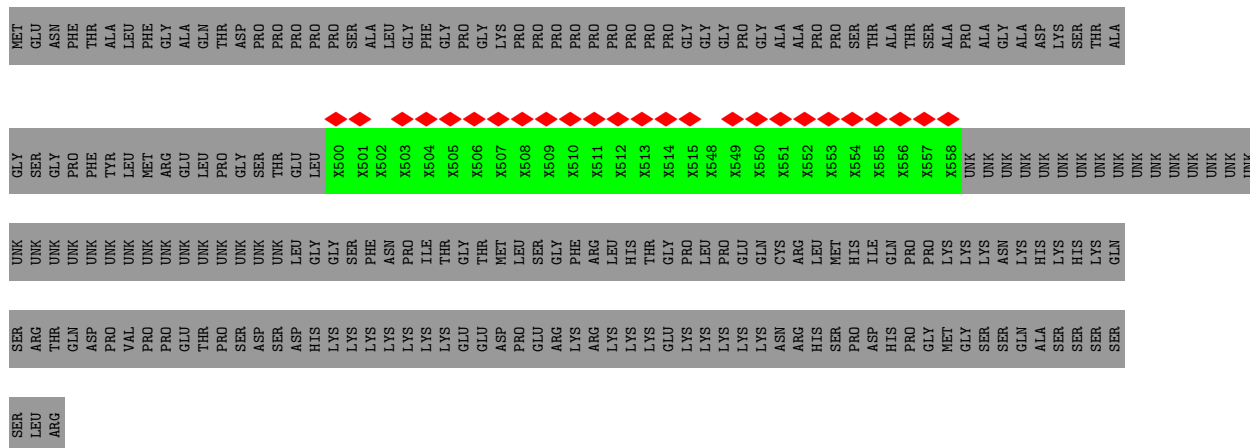• Molecule 9: Mediator of RNA polymerase II transcription subunit 14

Chain I:
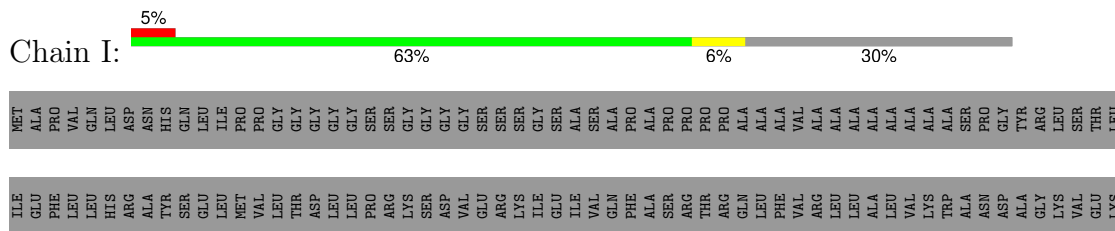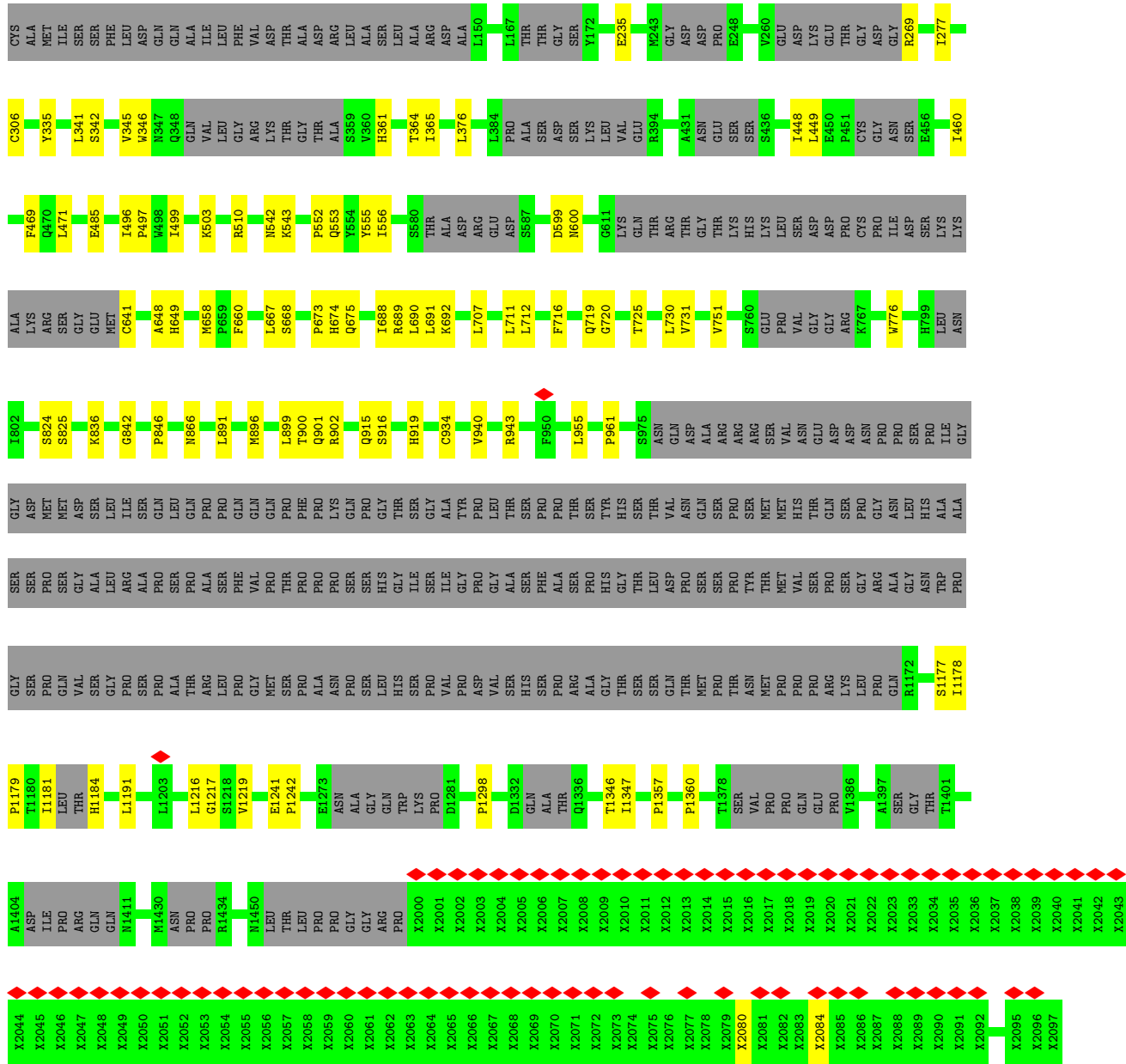
• Molecule 10: Mediator of RNA polymerase II transcription subunit 15

Chain J:

5%		
	76%	24%

• Molecule 11: Mediator of RNA polymerase II transcription subunit 16
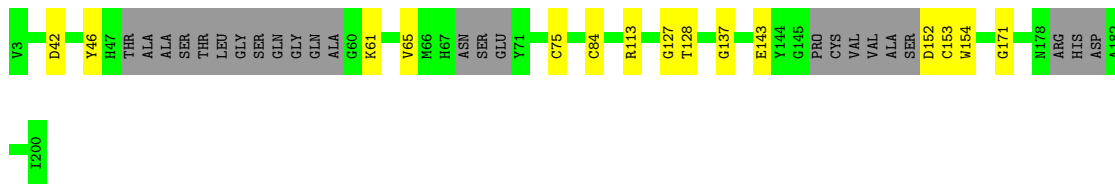
Chain K:

62%	26%	• 11%

• Molecule 12: Mediator of RNA polymerase II transcription subunit 17

Chain L:

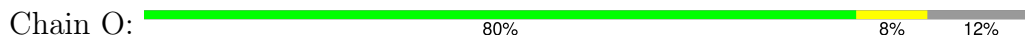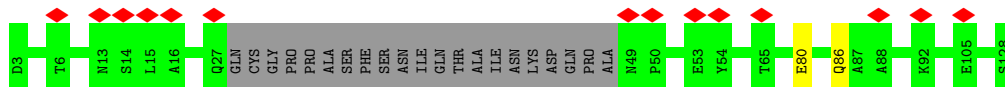• Molecule 13: Mediator of RNA polymerase II transcription subunit 18

Chain M:

N17 M18 M19 L22 E33 I36 H37 R38 T50 F51 L52 D53 H54 G62 W83 R103 A109 V130 A131 K132 G133 H134 L135 F136 R137 M141 V144 V145 Y146 G155 ASN THR ASP SER THR GLU ALA L163 S172 V173 P195 D203
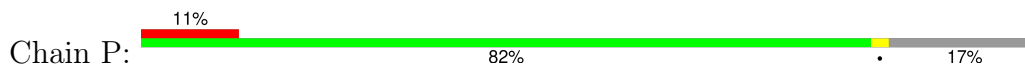
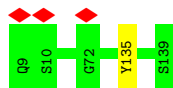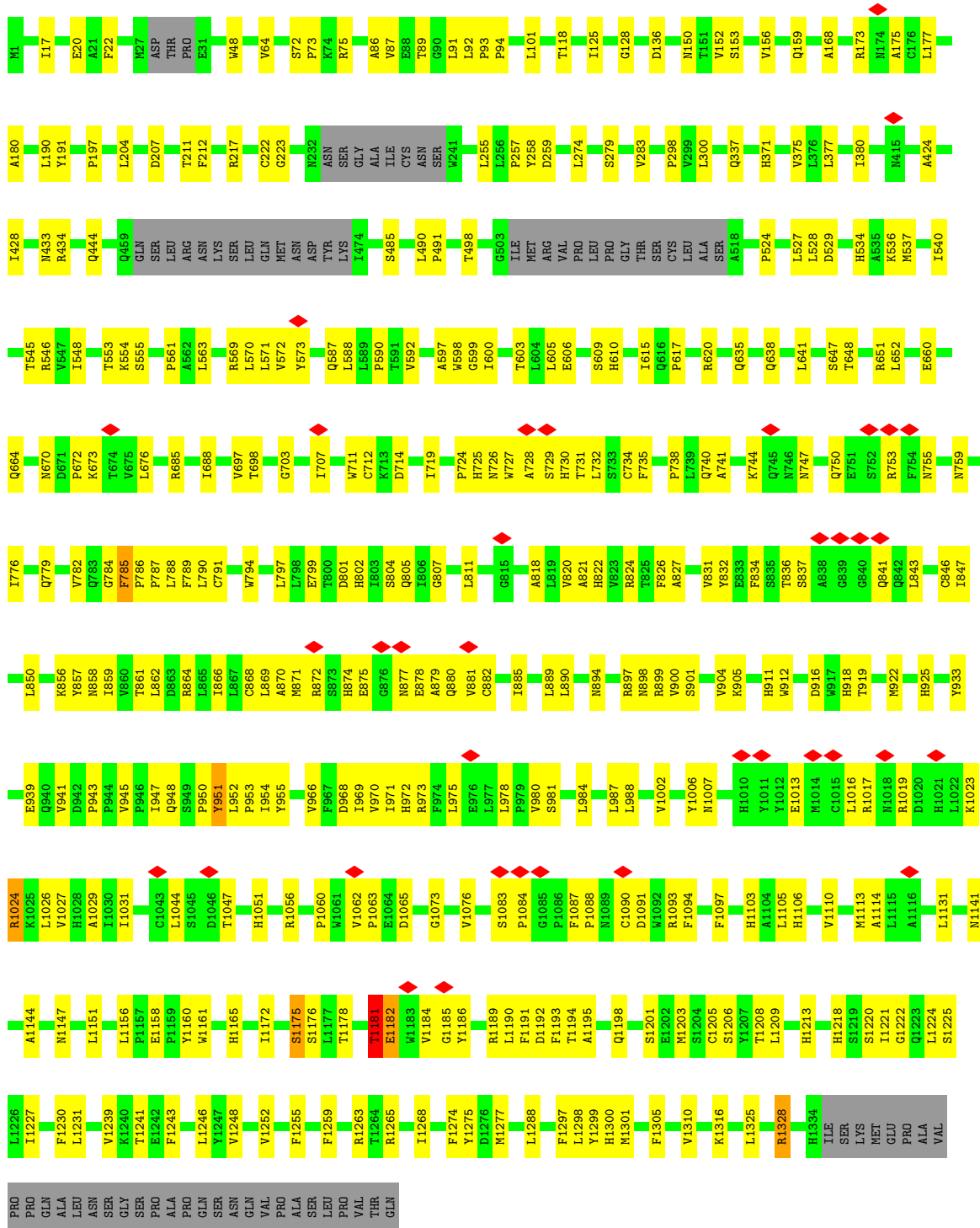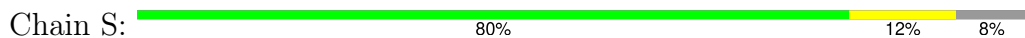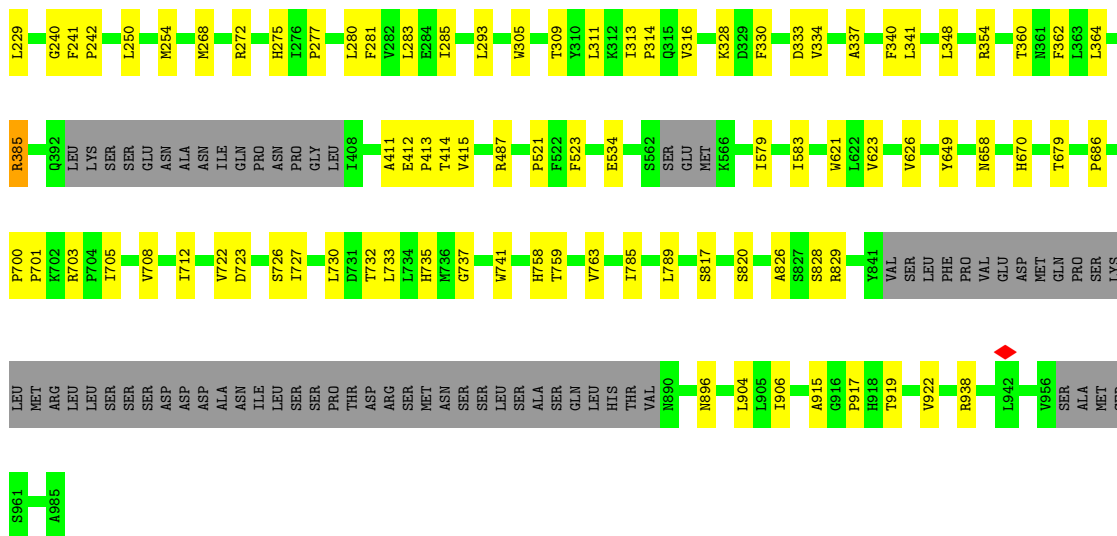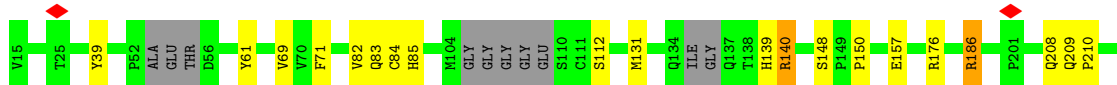• Molecule 14: Mediator of RNA polymerase II transcription subunit 19

Chain N:

10%
11% 89%

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

GLY SER GLY PRO PHE TYR LEU MET ARG GLU LEU PRO GLY SER THR GLU LEU X500 X501 X502 X503 X504 X505 X506 X507 X508 X509 X510 X511 X512 X513 X514 X515 X548 X549 X550 X551 X552 X553 X554 X555 X556 X557 X558 UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK

UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK UNK LEU GLY GLY SER PHE ASN PRO ILE THR GLY THR MET LEU SER GLY PHE ARG LEU HIS THR GLY LEU PRO GLU GLN CYS ARG LEU MET HIS ILE GLN PRO PRO LYS LYS LYS ASN LYS HIS HIS LYS GLN

SER ARG THR GLN ASP PRO VAL PRO PRO GLU THR PRO SER ASP SER ASP HIS LYS LYS LYS LYS LYS LYS LYS GLU GLU ASP PRO GLU ARG LYS ARG LYS LYS LYS GLU LYS LYS LYS LYS ASN ARG HIS SER PRO ASP HIS PRO GLY MET GLY SER SER GLN ALA SER SER SER

SER LEU ARG

• Molecule 15: Mediator of RNA polymerase II transcription subunit 20

Chain O:

80% 8% 12%

V3 D42 Y46 H47 THR ALA ALA SER THR LEU GLY SER GLN GLY GLN ALA G60 K61 V65 M66 H67 ASN SER GLU Y71 C75 C84 R113 G127 T128 G137 E143 Y144 G145 PRO CYS VAL VAL ALA SER D152 C153 W154 G171 N178 ARG HIS ASP A182
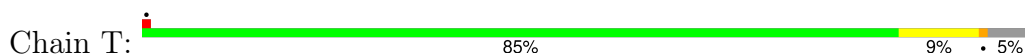
I200

• Molecule 16: Mediator of RNA polymerase II transcription subunit 21

Chain P:

11%
82% 17%

D3 T6 N13 S14 L15 A16 Q27 GLN CYS GLY PRO PRO ALA SER PHE ASN ILE GLN THR ALA ILE ASN LYS ASP GLN PRO ALA N49 P50 E53 Y54 T65 E80 Q86 A87 A88 K92 E105 S128

• Molecule 17: Mediator of RNA polymerase II transcription subunit 22

Chain Q:

99%

Q9 S10 G72 Y135 S139

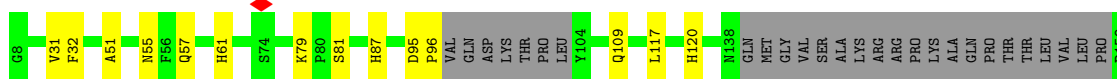• Molecule 18: Mediator of RNA polymerase II transcription subunit 23

Chain R:

69% 25% 5%

• Molecule 19: Mediator of RNA polymerase II transcription subunit 24

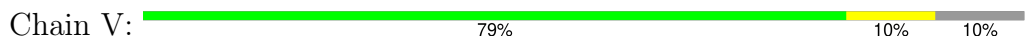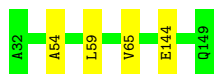L229 G240 F241 P242 L250 M254 M268 R272 H275 I276 P277 L280 F281 V282 L283 E284 I285 L293 W305 T309 Y310 L311 K312 I313 P314 Q315 V316 K328 D329 F330 D333 V334 A337 F340 L341 L348 R354 T360 N361 F362 L363 L364

R385 Q392 LEU LYS SER SER GLU ASN ALA ASN ILE GLN PRO ASN PRO GLY LEU I408 A411 E412 P413 T414 V415 R487 P521 F522 F523 E534 S562 SER GLU MET K566 I579 I583 W621 L622 V623 V626 Y649 N658 H670 T679 P686

P700 P701 K702 R703 P704 I705 V708 I712 V722 D723 S726 I727 L730 D731 T732 L733 L734 H735 M736 G737 W741 H758 T759 V763 I785 L789 S817 S820 A826 S827 S828 R829 Y841 VAL SER LEU PHE PRO VAL GLU ASP MET GLN PRO SER LYS

LEU MET ARG LEU LEU SER SER ASP ASP ASP ALA ILE ASN LEU SER SER PRO THR ASP ARG SER MET ASN SER SER LEU SER ALA SER GLN LEU HIS THR VAL N890 N896 L904 L905 I906 A915 G916 P917 H918 T919 V922 R938 L942 V956 SER ALA MET SER

S961 A985

• Molecule 20: Mediator of RNA polymerase II transcription subunit 25

Chain T:
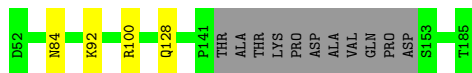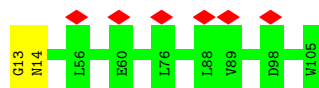
85% 9% • 5%

V15 T25 Y39 P52 ALA GLU THR D56 Y61 V69 V70 F71 V82 Q83 C84 H85 M104 GLY GLY GLY GLU S110 C111 S112 M131 Q134 ILE GLY Q137 T138 H139 R140 S148 P149 P150 E157 R176 R186 P201 Q208 Q209 P210 D216

• Molecule 21: Mediator of RNA polymerase II transcription subunit 27

Chain V:

79% 10% 10%

G8 V31 F32 A51 N55 F56 Q57 H61 S74 K79 P90 S81 H87 D95 P96 VAL GLN ASP LYS THR PRO LEU Y104 Q109 L117 H120 N138 GLN MET GLY VAL SER ALA LYS ARG ARG PRO LYS ALA GLN PRO THR THR LEU VAL LEU PRO P159

M176 S177 I178 H179 L180 V192 V197 L198 K199 V200 R205 R211 V214 K215 G216 Y217 N218 GLU SER VAL TYR T223 F277 D290 Q291 L292 P293 P294 A304

• Molecule 22: Mediator of RNA polymerase II transcription subunit 28

Chain W:

97% •

A32 A54 L59 V65 E144 Q149

• Molecule 23: Mediator of RNA polymerase II transcription subunit 29

Chain X:

89% • 8%

D52 N84 K92 R100 Q128 P141 THR ALA THR LYS PRO ASP ALA VAL GLN PRO ASP S153 T185

• Molecule 24: Mediator of RNA polymerase II transcription subunit 30

Chain Y:

80%　　　　　　7%　　13%

E27 R47 L55 Q84 I87 P110 L114 Y117 VAL ASP GLU ASP GLY SER LYS ASN ASP ASP ARG ALA GLY PRO PRO ARG PHE ALA SER GLU E138 Q151 Q155 M173 M176 R177 N178
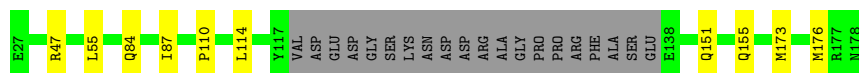
• Molecule 25: Mediator of RNA polymerase II transcription subunit 31

6%

Chain Z:

98%

G13 N14 L56 E60 L76 L88 V89 D98 W105

4 Experimental information ⓘ

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	217557	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TALOS ARCTICA	Depositor
Voltage (kV)	200	Depositor
Electron dose $(e^-/\text{Å}^2)$	22.5	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.669	Depositor
Minimum map value	-0.398	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.022	Depositor
Recommended contour level	0.1	Depositor
Map size (Å)	621.60004, 621.60004, 621.60004	wwPDB
Map dimensions	560, 560, 560	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.11, 1.11, 1.11	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$|Z|$ >5	RMSZ	#$|Z|$ >5
2	B	0.23	0/466	0.31	0/648
3	C	0.24	0/743	0.40	0/1032
4	D	0.24	0/780	0.37	0/1088
5	E	0.23	0/840	0.39	0/1170
6	F	0.22	0/337	0.33	0/468
8	H	0.23	0/580	0.35	0/798
9	I	0.25	0/6411	0.43	0/8831
10	J	0.26	0/1207	0.45	0/1668
11	K	0.25	0/5186	0.51	3/7120 (0.0%)
12	L	0.24	0/3293	0.42	0/4528
13	M	0.24	0/1163	0.43	0/1593
15	O	0.26	0/1027	0.45	0/1412
16	P	0.23	0/521	0.36	0/725
17	Q	0.23	0/758	0.35	0/1046
18	R	0.25	0/9995	0.43	0/13654
19	S	0.24	0/6000	0.41	1/8250 (0.0%)
20	T	0.26	0/1336	0.44	0/1836
21	V	0.25	0/1694	0.43	0/2338
22	W	0.25	0/785	0.37	0/1076
23	X	0.24	0/852	0.38	0/1169
24	Y	0.23	0/853	0.35	0/1167
25	Z	0.22	0/462	0.31	0/644
All	All	0.24	0/45289	0.43	4/62261 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
4	D	0	1
10	J	0	1
11	K	0	5

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Mol	Chain	#Chirality outliers	#Planarity outliers
18	R	0	4
All	All	0	11

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	S	59	LEU	CA-CB-CG	5.26	127.40	115.30
11	K	335	ASP	CB-CG-OD2	5.21	122.99	118.30
11	K	277	ASP	CB-CG-OD2	5.18	122.96	118.30
11	K	560	ASP	CB-CG-OD2	5.18	122.96	118.30

There are no chirality outliers.

All (11) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
4	D	44	MET	Peptide
10	J	734	SER	Peptide
11	K	194	LEU	Peptide
11	K	206	ILE	Peptide
11	K	235	SER	Peptide
11	K	58	PRO	Peptide
11	K	663	TYR	Peptide
18	R	1097	PHE	Peptide
18	R	1175	SER	Peptide
18	R	1181	THR	Peptide
18	R	785	PHE	Peptide

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	1905	0	460	9	0
2	B	468	0	209	0	0
3	C	744	0	325	3	0
4	D	781	0	314	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	E	837	0	402	2	0
6	F	339	0	136	0	0
7	G	350	0	74	2	0
8	H	578	0	341	3	0
9	I	6731	0	4840	62	0
10	J	1171	0	1010	27	0
11	K	5070	0	4502	251	0
12	L	3243	0	2350	47	0
13	M	1140	0	832	13	0
14	N	135	0	31	0	0
15	O	1013	0	663	10	0
16	P	523	0	259	1	0
17	Q	754	0	448	1	0
18	R	9744	0	9105	242	0
19	S	5875	0	4690	80	0
20	T	1299	0	1022	12	0
21	V	1657	0	1170	21	0
22	W	773	0	607	4	0
23	X	839	0	700	4	0
24	Y	843	0	639	8	0
25	Z	463	0	202	1	0
All	All	47275	0	35331	767	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 9.

All (767) 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)
11:K:446:PRO:CB	11:K:480:LEU:HD21	1.17	1.62
11:K:271:LEU:CD2	11:K:279:SER:HA	1.24	1.59
11:K:175:LEU:CD2	11:K:201:VAL:CG1	1.82	1.57
11:K:271:LEU:HD22	11:K:279:SER:CA	1.10	1.56
11:K:446:PRO:HG2	11:K:480:LEU:CD2	1.37	1.51
11:K:175:LEU:HD21	11:K:201:VAL:CG1	1.31	1.51
11:K:446:PRO:CG	11:K:480:LEU:CD2	1.87	1.51
11:K:175:LEU:CD2	11:K:201:VAL:CG2	1.88	1.46
11:K:271:LEU:CD2	11:K:279:SER:CA	1.84	1.46
11:K:102:LEU:HD12	11:K:822:ARG:N	1.27	1.45
11:K:175:LEU:HD21	11:K:201:VAL:CB	1.43	1.45
11:K:102:LEU:HD12	11:K:822:ARG:CA	1.47	1.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:102:LEU:CD1	11:K:822:ARG:N	1.83	1.41
11:K:175:LEU:HD21	11:K:201:VAL:CG2	1.48	1.39
11:K:446:PRO:CB	11:K:480:LEU:CD2	1.97	1.37
11:K:446:PRO:CA	11:K:480:LEU:HD21	1.53	1.37
11:K:102:LEU:CD1	11:K:822:ARG:H	1.39	1.35
11:K:271:LEU:CD2	11:K:280:GLU:N	1.89	1.34
11:K:271:LEU:HD23	11:K:280:GLU:N	1.44	1.31
11:K:446:PRO:CG	11:K:480:LEU:HD23	1.51	1.29
11:K:102:LEU:CD1	11:K:822:ARG:O	1.82	1.26
11:K:271:LEU:CD2	11:K:280:GLU:H	1.43	1.26
11:K:102:LEU:HD13	11:K:822:ARG:O	1.34	1.25
11:K:175:LEU:CD2	11:K:201:VAL:HG11	1.55	1.19
11:K:271:LEU:CD2	11:K:279:SER:C	2.10	1.19
11:K:446:PRO:HG2	11:K:480:LEU:CG	1.76	1.16
11:K:175:LEU:CD2	11:K:201:VAL:HG21	1.61	1.14
11:K:102:LEU:CD1	11:K:822:ARG:CA	2.23	1.12
11:K:175:LEU:HD23	11:K:201:VAL:HG21	1.12	1.12
11:K:175:LEU:CD1	11:K:201:VAL:HG13	1.83	1.08
11:K:446:PRO:HB2	11:K:480:LEU:HD21	1.12	1.08
11:K:102:LEU:HD12	11:K:822:ARG:CB	1.85	1.07
11:K:175:LEU:HD11	11:K:201:VAL:HG13	1.35	1.07
11:K:175:LEU:HD23	11:K:201:VAL:CG2	1.64	1.06
11:K:446:PRO:C	11:K:480:LEU:CD2	2.24	1.05
11:K:175:LEU:HD21	11:K:201:VAL:HG13	1.27	1.04
11:K:175:LEU:CD2	11:K:201:VAL:HG22	1.83	1.03
11:K:446:PRO:C	11:K:480:LEU:HD21	1.77	1.02
11:K:102:LEU:CD1	11:K:822:ARG:C	2.27	1.02
11:K:175:LEU:CD2	11:K:201:VAL:HG13	1.76	1.02
11:K:447:SER:N	11:K:480:LEU:HD22	1.74	1.02
11:K:175:LEU:HD22	11:K:201:VAL:HG11	1.00	1.00
11:K:446:PRO:HB2	11:K:480:LEU:CD2	1.80	0.98
15:O:75:CYS:HB2	15:O:84:CYS:HA	1.45	0.98
11:K:271:LEU:HD21	11:K:279:SER:C	1.82	0.97
11:K:271:LEU:HD21	11:K:280:GLU:N	1.79	0.96
11:K:102:LEU:HD11	11:K:822:ARG:N	1.80	0.95
11:K:271:LEU:HD21	11:K:279:SER:CA	1.95	0.95
11:K:102:LEU:HD21	11:K:821:ARG:HG3	1.46	0.95
11:K:446:PRO:CD	11:K:480:LEU:HD23	1.97	0.93
11:K:446:PRO:HG2	11:K:480:LEU:HD23	0.95	0.92
11:K:334:ASN:O	11:K:335:ASP:OD1	1.86	0.92
11:K:446:PRO:CA	11:K:480:LEU:CD2	2.34	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:75:LEU:H	11:K:84:LEU:HG	1.35	0.90
16:P:80:GLU:CB	16:P:86:GLN:CB	2.50	0.90
11:K:102:LEU:HD21	11:K:821:ARG:CG	2.03	0.89
11:K:175:LEU:CD2	11:K:201:VAL:CB	2.23	0.88
11:K:447:SER:N	11:K:480:LEU:CD2	2.37	0.88
18:R:561:PRO:O	18:R:951:TYR:OH	1.91	0.87
12:L:188:LEU:HG	12:L:195:ARG:HH22	1.37	0.86
11:K:175:LEU:CG	11:K:201:VAL:HG13	2.04	0.86
11:K:271:LEU:HD23	11:K:280:GLU:H	0.69	0.86
11:K:102:LEU:CG	11:K:822:ARG:H	1.88	0.85
11:K:446:PRO:HB2	11:K:480:LEU:CG	2.06	0.84
11:K:102:LEU:HD12	11:K:822:ARG:HB3	1.58	0.83
11:K:175:LEU:HD21	11:K:201:VAL:HG22	1.45	0.83
11:K:175:LEU:CD1	11:K:201:VAL:CG1	2.54	0.83
11:K:236:VAL:HG23	11:K:241:CYS:HA	1.61	0.83
11:K:102:LEU:HD11	11:K:822:ARG:O	1.79	0.82
9:I:1217:GLY:HA3	9:I:1298:PRO:HG2	1.59	0.82
11:K:446:PRO:C	11:K:480:LEU:HD22	1.98	0.81
11:K:102:LEU:HD12	11:K:822:ARG:H	0.99	0.81
11:K:446:PRO:CG	11:K:480:LEU:CG	2.46	0.81
12:L:257:VAL:HG12	12:L:341:ILE:HG22	1.65	0.79
11:K:92:GLN:HB2	11:K:110:VAL:HA	1.63	0.79
11:K:446:PRO:HG2	11:K:480:LEU:HG	1.63	0.79
11:K:102:LEU:CD2	11:K:821:ARG:HG3	2.12	0.77
11:K:197:LEU:CD2	19:S:701:PRO:HB3	2.14	0.77
11:K:446:PRO:CG	11:K:480:LEU:HG	2.14	0.76
11:K:338:ARG:HG3	11:K:339:VAL:HG23	1.68	0.76
19:S:313:ILE:HG13	19:S:314:PRO:HD3	1.66	0.76
11:K:236:VAL:HG13	11:K:237:VAL:H	1.51	0.75
11:K:427:SER:CB	11:K:480:LEU:HD11	2.17	0.75
18:R:731:THR:O	18:R:973:ARG:NH1	2.20	0.75
11:K:271:LEU:CD2	11:K:279:SER:CB	2.63	0.75
18:R:1073:GLY:HA2	18:R:1076:VAL:HG12	1.68	0.74
19:S:277:PRO:HG2	19:S:280:LEU:HD12	1.68	0.74
11:K:124:TRP:NE1	11:K:126:HIS:O	2.21	0.74
18:R:1002:VAL:HG23	18:R:1105:LEU:HD22	1.70	0.73
11:K:102:LEU:HD11	11:K:821:ARG:HG2	1.69	0.73
11:K:175:LEU:CG	11:K:201:VAL:CG1	2.64	0.73
18:R:866:ILE:HG13	18:R:966:VAL:HG22	1.71	0.73
18:R:1023:LYS:HA	18:R:1026:LEU:HB2	1.70	0.72
11:K:194:LEU:O	11:K:197:LEU:N	2.23	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:176:VAL:HG13	11:K:177:THR:H	1.53	0.72
18:R:953:PRO:HB2	18:R:954:ILE:HD12	1.71	0.72
18:R:433:ASN:ND2	18:R:444:GLN:O	2.24	0.70
18:R:1182:GLU:HB3	18:R:1184:VAL:H	1.56	0.70
11:K:7:CYS:SG	11:K:8:GLU:N	2.65	0.69
11:K:89:ALA:HA	11:K:92:GLN:HE22	1.56	0.69
11:K:180:LEU:HB2	11:K:190:SER:HB2	1.74	0.69
11:K:271:LEU:HD22	11:K:279:SER:CB	2.15	0.69
11:K:206:ILE:HD11	11:K:275:ALA:HA	1.74	0.69
18:R:1225:SER:HB3	18:R:1263:ARG:HH12	1.56	0.69
11:K:77:TRP:HZ2	11:K:167:TRP:HB3	1.58	0.69
9:I:668:SER:HA	9:I:673:PRO:HG3	1.75	0.68
11:K:127:ASN:OD1	11:K:152:PHE:O	2.11	0.68
18:R:856:LYS:HA	18:R:857:TYR:CD1	2.28	0.68
11:K:612:VAL:HG23	11:K:680:LEU:HD21	1.74	0.68
11:K:215:VAL:HG12	11:K:231:LYS:HG2	1.74	0.68
21:V:198:LEU:HA	21:V:216:GLY:HA2	1.75	0.68
19:S:46:LEU:HD23	19:S:79:LEU:HD11	1.75	0.67
11:K:728:ARG:NH1	11:K:730:GLN:OE1	2.26	0.67
11:K:787:ARG:HA	11:K:793:MET:HA	1.76	0.67
11:K:440:SER:OG	11:K:441:MET:SD	2.52	0.67
11:K:446:PRO:CD	11:K:480:LEU:CD2	2.67	0.67
18:R:672:PRO:HA	18:R:676:LEU:HB2	1.77	0.67
18:R:540:ILE:O	18:R:573:TYR:OH	2.12	0.66
9:I:335:TYR:HB2	9:I:341:LEU:HA	1.78	0.66
18:R:726:ASN:HD22	18:R:747:ASN:HB2	1.59	0.66
18:R:48:TRP:HE1	18:R:91:LEU:HD23	1.61	0.66
11:K:369:GLY:HA2	11:K:383:HIS:HA	1.76	0.66
11:K:598:LEU:HD22	23:X:92:LYS:HG3	1.78	0.66
18:R:620:ARG:HB2	18:R:652:LEU:HD11	1.77	0.66
1:A:2403:UNK:O	1:A:2407:UNK:N	2.29	0.66
11:K:338:ARG:HG2	11:K:375:GLN:HG2	1.79	0.65
11:K:236:VAL:O	11:K:237:VAL:HG23	1.97	0.65
10:J:678:VAL:HB	10:J:728:ALA:HB1	1.77	0.65
19:S:583:ILE:HG12	19:S:621:TRP:HZ2	1.62	0.65
11:K:175:LEU:HG	11:K:199:GLY:O	1.96	0.65
11:K:446:PRO:HB2	11:K:480:LEU:HD11	1.78	0.65
11:K:432:GLY:HA3	11:K:442:LEU:HG	1.78	0.65
11:K:175:LEU:HD11	11:K:201:VAL:CG1	2.20	0.64
21:V:57:GLN:O	21:V:61:HIS:ND1	2.30	0.64
20:T:83:GLN:O	20:T:85:HIS:ND1	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:197:LEU:HD21	19:S:701:PRO:HB3	1.78	0.64
13:M:38:ARG:HH22	13:M:195:PRO:HB2	1.61	0.64
10:J:692:VAL:HG12	10:J:709:CYS:HB3	1.79	0.63
18:R:434:ARG:NE	18:R:485:SER:OG	2.31	0.63
11:K:446:PRO:HB2	11:K:480:LEU:CD1	2.28	0.63
18:R:786:PRO:O	18:R:822:HIS:NE2	2.31	0.63
18:R:901:SER:O	18:R:905:LYS:NZ	2.31	0.63
11:K:102:LEU:CD1	11:K:822:ARG:HB3	2.28	0.63
11:K:176:VAL:HA	11:K:194:LEU:HA	1.80	0.63
18:R:1299:TYR:OH	18:R:1328:ARG:O	2.16	0.62
13:M:83:TRP:HB2	13:M:109:ALA:HB3	1.81	0.62
18:R:728:ALA:HA	18:R:744:LYS:HD3	1.79	0.62
18:R:916:ASP:OD1	18:R:919:THR:OG1	2.17	0.62
20:T:148:SER:O	20:T:150:PRO:HD3	1.99	0.62
11:K:35:PHE:HB2	11:K:51:HIS:HB2	1.81	0.62
11:K:435:ASN:ND2	11:K:437:GLY:O	2.33	0.62
18:R:970:VAL:HG13	18:R:971:ILE:HG12	1.81	0.62
11:K:55:THR:HA	11:K:58:PRO:HG3	1.81	0.62
18:R:222:CYS:SG	18:R:223:GLY:N	2.72	0.62
18:R:1016:LEU:HD11	18:R:1019:ARG:HE	1.64	0.62
13:M:19:MET:HA	13:M:103:ARG:HA	1.81	0.62
4:D:27:GLN:H	4:D:31:ALA:HB2	1.65	0.61
12:L:192:TRP:HB3	12:L:195:ARG:HH21	1.65	0.61
12:L:253:ALA:HB3	12:L:299:VAL:HG12	1.81	0.61
18:R:569:ARG:NH2	18:R:911:HIS:O	2.31	0.61
18:R:660:GLU:OE2	18:R:664:GLN:NE2	2.33	0.61
20:T:61:TYR:OH	20:T:131:MET:O	2.19	0.61
11:K:102:LEU:HD11	11:K:822:ARG:C	2.18	0.61
18:R:173:ARG:O	18:R:177:LEU:N	2.32	0.61
11:K:206:ILE:HG23	11:K:215:VAL:HG23	1.82	0.61
15:O:42:ASP:O	15:O:65:VAL:N	2.33	0.61
18:R:750:GLN:HG3	18:R:872:ARG:HB3	1.82	0.61
9:I:955:LEU:HD11	9:I:961:PRO:HB3	1.81	0.61
18:R:605:LEU:HG	18:R:648:THR:HG21	1.83	0.61
11:K:218:ALA:HA	11:K:227:VAL:HG12	1.84	0.60
18:R:64:VAL:HG21	18:R:101:LEU:HA	1.82	0.60
18:R:719:ILE:HG22	18:R:724:PRO:HG3	1.83	0.60
21:V:31:VAL:HG22	21:V:55:ASN:HB3	1.84	0.60
15:O:113:ARG:H	15:O:128:THR:HG22	1.66	0.60
9:I:667:LEU:HD11	9:I:690:LEU:HD21	1.83	0.60
12:L:325:VAL:HG12	12:L:326:LYS:H	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:96:ARG:HD3	24:Y:173:MET:HG2	1.84	0.60
19:S:13:ALA:HA	19:S:18:TRP:HE1	1.66	0.60
11:K:271:LEU:CG	11:K:279:SER:HA	2.24	0.59
18:R:685:ARG:NH2	18:R:726:ASN:OD1	2.33	0.59
11:K:88:ASP:H	11:K:118:PRO:HD2	1.67	0.59
18:R:175:ALA:O	18:R:1328:ARG:NE	2.35	0.59
18:R:797:LEU:HD21	18:R:856:LYS:HD3	1.85	0.59
11:K:226:PRO:HG3	19:S:534:GLU:HG3	1.84	0.59
18:R:1220:SER:HA	18:R:1224:LEU:HD13	1.85	0.59
9:I:345:VAL:HG11	9:I:361:HIS:CE1	2.38	0.59
19:S:385:ARG:O	19:S:385:ARG:NH1	2.31	0.59
10:J:705:VAL:HG13	10:J:725:SER:H	1.67	0.59
9:I:660:PHE:HB3	9:I:675:GLN:HE21	1.66	0.59
18:R:807:GLY:O	18:R:811:LEU:N	2.34	0.59
18:R:1147:ASN:OD1	18:R:1218:HIS:NE2	2.36	0.58
11:K:149:ARG:NH1	20:T:157:GLU:O	2.36	0.58
18:R:971:ILE:HD11	18:R:984:LEU:HD21	1.85	0.58
11:K:26:ALA:HA	11:K:422:GLN:HG2	1.85	0.58
18:R:536:LYS:HD2	18:R:572:VAL:HG21	1.84	0.58
9:I:1181:ILE:HG22	9:I:1184:HIS:HA	1.85	0.58
9:I:691:LEU:HD13	10:J:685:ARG:HH22	1.68	0.58
12:L:324:VAL:HA	12:L:329:ILE:HG22	1.84	0.58
18:R:609:SER:HB3	18:R:648:THR:HG22	1.85	0.58
18:R:878:GLU:HB3	18:R:881:VAL:HB	1.85	0.58
1:A:2388:UNK:N	1:A:2443:UNK:O	2.36	0.58
11:K:222:SER:H	11:K:266:PRO:HD3	1.67	0.58
11:K:510:SER:HA	11:K:513:ILE:HG22	1.85	0.58
19:S:732:THR:HA	19:S:735:HIS:CE1	2.39	0.58
11:K:123:SER:OG	11:K:166:GLY:O	2.16	0.58
18:R:894:ASN:HB2	18:R:897:ARG:HE	1.69	0.58
11:K:286:ALA:O	11:K:290:THR:N	2.37	0.57
11:K:441:MET:SD	11:K:441:MET:N	2.72	0.57
9:I:1178:ILE:HD12	9:I:1179:PRO:HD2	1.87	0.57
19:S:313:ILE:HA	19:S:316:VAL:HG12	1.87	0.57
19:S:333:ASP:OD1	19:S:334:VAL:N	2.38	0.57
8:H:88:LYS:NZ	8:H:92:MET:SD	2.67	0.56
10:J:763:GLN:NE2	18:R:17:ILE:O	2.37	0.56
11:K:446:PRO:CB	11:K:480:LEU:CG	2.63	0.56
12:L:116:ILE:O	12:L:120:LYS:N	2.38	0.56
10:J:682:GLU:OE1	10:J:769:SER:OG	2.23	0.56
18:R:528:LEU:HB2	18:R:912:TRP:HE1	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:708:VAL:HA	19:S:712:ILE:HB	1.87	0.56
19:S:906:ILE:HD12	19:S:922:VAL:HG13	1.88	0.56
13:M:141:MET:HA	13:M:173:VAL:HG22	1.88	0.56
18:R:571:LEU:HD22	18:R:1093:ARG:HD3	1.88	0.56
18:R:805:GLN:HG2	18:R:939:GLU:HG3	1.89	0.55
18:R:1103:HIS:O	18:R:1106:HIS:NE2	2.39	0.55
9:I:707:LEU:HD21	9:I:776:TRP:HZ2	1.71	0.55
11:K:125:LEU:HD23	11:K:126:HIS:HB3	1.88	0.55
18:R:878:GLU:O	18:R:882:CYS:N	2.30	0.55
10:J:697:SER:HA	10:J:706:HIS:NE2	2.22	0.55
19:S:828:SER:OG	19:S:829:ARG:NH2	2.39	0.55
11:K:102:LEU:CD1	11:K:822:ARG:CB	2.71	0.55
18:R:152:VAL:HG13	18:R:153:SER:H	1.72	0.55
18:R:434:ARG:CZ	18:R:485:SER:OG	2.54	0.55
10:J:737:TRP:HZ2	10:J:761:LEU:HD12	1.72	0.55
11:K:175:LEU:HD23	11:K:201:VAL:HG22	1.60	0.55
18:R:1184:VAL:O	18:R:1186:TYR:N	2.40	0.55
11:K:331:SER:OG	11:K:387:LEU:HB2	2.07	0.55
19:S:330:PHE:HA	19:S:333:ASP:OD1	2.07	0.55
11:K:72:ILE:H	11:K:87:ALA:HB2	1.72	0.55
18:R:274:LEU:O	18:R:337:GLN:NE2	2.40	0.55
7:G:255:UNK:O	7:G:257:UNK:N	2.40	0.54
11:K:54:ASP:O	11:K:58:PRO:HB3	2.07	0.54
11:K:206:ILE:HB	11:K:271:LEU:HB2	1.89	0.54
13:M:52:LEU:HD12	13:M:132:LYS:HG3	1.87	0.54
18:R:820:VAL:HB	18:R:864:ARG:HD3	1.88	0.54
18:R:1181:THR:O	18:R:1182:GLU:HB2	2.05	0.54
11:K:424:SER:HB2	11:K:429:ALA:HB3	1.88	0.54
11:K:196:ARG:HG2	19:S:679:THR:HG22	1.89	0.54
11:K:197:LEU:CD2	19:S:701:PRO:CB	2.85	0.54
19:S:348:LEU:HD13	19:S:385:ARG:HE	1.73	0.54
10:J:641:ARG:NH2	23:X:84:ASN:OD1	2.40	0.54
13:M:33:GLU:HA	13:M:36:ILE:HG22	1.90	0.54
18:R:156:VAL:HG13	18:R:159:GLN:HB3	1.89	0.54
12:L:457:GLN:HE22	12:L:480:GLN:HA	1.73	0.54
1:A:2213:UNK:N	1:A:2220:UNK:O	2.41	0.54
11:K:84:LEU:HD12	11:K:121:ALA:HB1	1.89	0.54
11:K:373:ALA:HB2	11:K:421:MET:SD	2.48	0.54
1:A:1853:UNK:O	1:A:1857:UNK:N	2.41	0.53
18:R:259:ASP:OD1	19:S:758:HIS:NE2	2.37	0.53
18:R:1024:ARG:HA	18:R:1114:ALA:HB1	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:364:LEU:HD12	19:S:414:THR:HG22	1.90	0.53
19:S:412:GLU:HG2	19:S:413:PRO:HD3	1.89	0.53
11:K:482:VAL:HG12	11:K:483:GLN:H	1.73	0.53
12:L:592:VAL:HG12	12:L:622:GLU:HA	1.89	0.53
18:R:818:ALA:O	18:R:822:HIS:ND1	2.41	0.53
18:R:868:CYS:HA	18:R:871:MET:HG3	1.88	0.53
18:R:969:ILE:HA	18:R:973:ARG:HB3	1.91	0.53
18:R:978:LEU:O	18:R:980:VAL:N	2.42	0.53
18:R:1224:LEU:HB3	18:R:1259:PHE:CE1	2.43	0.53
19:S:47:LEU:O	19:S:51:MET:CB	2.56	0.53
18:R:150:ASN:O	19:S:917:PRO:HD3	2.09	0.53
18:R:553:THR:HG23	18:R:554:LYS:H	1.74	0.53
18:R:1172:ILE:HG13	18:R:1208:THR:HG21	1.90	0.53
1:A:1933:UNK:O	1:A:1935:UNK:N	2.42	0.53
18:R:1248:VAL:HG12	18:R:1274:PHE:HE1	1.74	0.53
19:S:348:LEU:HD22	19:S:385:ARG:HH21	1.74	0.53
11:K:559:PRO:O	11:K:560:ASP:OD1	2.26	0.53
18:R:801:ASP:OD1	18:R:856:LYS:NZ	2.42	0.53
18:R:592:VAL:HA	18:R:597:ALA:HB2	1.90	0.53
18:R:729:SER:H	18:R:732:LEU:HD23	1.72	0.53
18:R:799:GLU:HB2	18:R:802:HIS:HB2	1.91	0.53
19:S:48:GLU:HB3	19:S:60:ILE:HG21	1.91	0.53
11:K:774:LEU:H	11:K:774:LEU:HD23	1.74	0.53
18:R:647:SER:OG	18:R:651:ARG:NH1	2.41	0.53
18:R:900:VAL:O	18:R:904:VAL:HG13	2.09	0.53
10:J:735:PRO:HD2	18:R:73:PRO:HG2	1.91	0.52
11:K:643:ARG:O	11:K:647:VAL:HG23	2.09	0.52
9:I:345:VAL:HG22	9:I:346:TRP:H	1.74	0.52
21:V:292:LEU:HG	21:V:294:PRO:HD3	1.91	0.52
24:Y:151:GLN:O	24:Y:155:GLN:NE2	2.42	0.52
10:J:724:LEU:H	10:J:736:MET:HB2	1.74	0.52
11:K:154:PRO:HB2	11:K:163:PRO:HB3	1.92	0.52
11:K:433:ILE:HD12	11:K:433:ILE:H	1.75	0.52
18:R:1051:HIS:HB3	18:R:1060:PRO:HG3	1.90	0.52
11:K:271:LEU:HD21	11:K:279:SER:CB	2.35	0.52
18:R:1297:PHE:O	18:R:1300:HIS:ND1	2.43	0.52
9:I:707:LEU:HD21	9:I:776:TRP:CZ2	2.45	0.52
11:K:254:ARG:HD2	11:K:329:ILE:HG21	1.92	0.52
13:M:133:GLY:HA3	13:M:146:TYR:HA	1.91	0.52
18:R:734:CYS:SG	18:R:1007:ASN:ND2	2.76	0.52
10:J:679:LEU:HD11	10:J:705:VAL:HB	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:54:HIS:HB3	13:M:130:VAL:HG23	1.92	0.52
18:R:730:HIS:CE1	18:R:879:ALA:HB1	2.45	0.52
5:E:75:VAL:N	12:L:123:MET:O	2.42	0.52
12:L:289:TRP:HD1	12:L:290:GLN:HE21	1.58	0.52
9:I:510:ARG:NH2	9:I:641:CYS:O	2.38	0.52
9:I:648:ALA:HB1	12:L:564:ALA:HB2	1.91	0.52
18:R:1175:SER:OG	18:R:1176:SER:N	2.40	0.52
9:I:915:GLN:NE2	9:I:916:SER:OG	2.43	0.51
1:A:2491:UNK:O	1:A:2495:UNK:N	2.44	0.51
12:L:384:THR:O	13:M:137:ARG:NH1	2.43	0.51
11:K:118:PRO:HA	11:K:171:THR:HA	1.91	0.51
18:R:1044:LEU:HD12	18:R:1047:THR:HB	1.91	0.51
15:O:143:GLU:N	15:O:143:GLU:OE1	2.43	0.51
15:O:152:ASP:OD1	15:O:152:ASP:N	2.43	0.51
11:K:31:ASN:HA	11:K:54:ASP:HA	1.93	0.51
11:K:52:ILE:HG12	11:K:96:TRP:HH2	1.76	0.51
11:K:102:LEU:HG	11:K:822:ARG:H	1.71	0.51
18:R:1268:ILE:HG22	18:R:1310:VAL:HG12	1.91	0.51
19:S:131:LEU:HD23	19:S:165:LEU:HA	1.92	0.51
3:C:70:LEU:HA	3:C:81:ILE:HA	1.93	0.51
18:R:688:ILE:HD13	18:R:725:HIS:NE2	2.26	0.51
18:R:711:TRP:CE3	18:R:712:CYS:HB2	2.46	0.51
18:R:750:GLN:OE1	18:R:753:ARG:NH1	2.44	0.51
11:K:175:LEU:HD12	11:K:199:GLY:HA3	1.92	0.51
18:R:635:GLN:HE21	18:R:638:GLN:NE2	2.08	0.51
11:K:191:THR:OG1	11:K:192:GLU:N	2.43	0.51
18:R:988:LEU:HD12	18:R:1029:ALA:HB1	1.92	0.51
20:T:186:ARG:CZ	20:T:209:GLN:HE22	2.24	0.51
7:G:251:UNK:O	7:G:255:UNK:N	2.43	0.51
11:K:172:VAL:HA	11:K:201:VAL:HG23	1.93	0.51
12:L:374:HIS:HA	12:L:377:ILE:HG22	1.93	0.50
19:S:250:LEU:HD12	19:S:727:ILE:HD11	1.93	0.50
9:I:649:HIS:HE1	12:L:559:GLU:HA	1.75	0.50
18:R:670:ASN:HA	18:R:673:LYS:HZ3	1.76	0.50
11:K:201:VAL:HA	11:K:219:ALA:HA	1.93	0.50
11:K:491:VAL:HG21	11:K:517:LYS:HG3	1.93	0.50
11:K:566:ARG:O	11:K:570:ILE:HG12	2.12	0.50
15:O:75:CYS:HB2	15:O:84:CYS:CA	2.30	0.50
11:K:593:LEU:HG	11:K:652:TRP:HH2	1.76	0.50
20:T:140:ARG:HH21	20:T:176:ARG:HE	1.59	0.50
10:J:675:ILE:HG12	10:J:680:GLN:HE21	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:757:MET:SD	10:J:777:TRP:HD1	2.34	0.50
11:K:77:TRP:CZ3	11:K:93:ILE:HD12	2.46	0.50
15:O:154:TRP:HH2	15:O:171:GLY:HA2	1.76	0.50
18:R:207:ASP:O	18:R:211:THR:HG23	2.12	0.50
19:S:348:LEU:HD22	19:S:385:ARG:NH2	2.27	0.50
18:R:984:LEU:HD23	18:R:984:LEU:H	1.76	0.50
11:K:96:TRP:CD2	11:K:104:ASN:HA	2.47	0.50
11:K:814:CYS:SG	11:K:815:LEU:N	2.84	0.49
12:L:367:TYR:HE2	12:L:431:LYS:HE2	1.77	0.49
20:T:139:HIS:O	20:T:139:HIS:ND1	2.45	0.49
10:J:718:SER:OG	10:J:719:VAL:N	2.44	0.49
11:K:127:ASN:OD1	11:K:152:PHE:HB3	2.12	0.49
11:K:3:LEU:HD13	11:K:444:ILE:HD12	1.92	0.49
18:R:688:ILE:HD13	18:R:725:HIS:CE1	2.48	0.49
18:R:821:ALA:HA	18:R:824:ARG:HD2	1.95	0.49
21:V:117:LEU:HD11	24:Y:55:LEU:HD13	1.94	0.49
18:R:755:ASN:O	18:R:759:ASN:ND2	2.45	0.49
9:I:901:GLN:O	9:I:902:ARG:NE	2.28	0.49
11:K:203:LEU:HA	11:K:218:ALA:HB3	1.94	0.49
18:R:1013:GLU:HA	18:R:1016:LEU:HB2	1.93	0.49
18:R:1288:LEU:HD22	18:R:1325:LEU:HD11	1.93	0.49
19:S:254:MET:HE2	19:S:727:ILE:HG23	1.94	0.49
9:I:449:LEU:HD23	9:I:503:LYS:HE2	1.94	0.49
12:L:506:ASP:OD1	12:L:506:ASP:N	2.44	0.49
11:K:131:LEU:HD22	11:K:147:PHE:HD2	1.78	0.49
11:K:299:LEU:HD22	11:K:327:TRP:CE2	2.48	0.49
18:R:180:ALA:HB3	18:R:212:PHE:HZ	1.77	0.49
18:R:703:GLY:O	18:R:1265:ARG:NH2	2.44	0.49
18:R:846:CYS:HA	18:R:850:LEU:HD13	1.94	0.49
19:S:227:SER:OG	19:S:228:MET:N	2.44	0.49
18:R:1065:ASP:OD1	18:R:1065:ASP:N	2.44	0.49
9:I:471:LEU:N	9:I:485:GLU:OE2	2.45	0.49
11:K:85:LEU:HD11	11:K:106:TRP:CZ3	2.48	0.49
11:K:178:VAL:HG12	11:K:179:SER:H	1.77	0.49
12:L:378:ARG:NH2	24:Y:176:MET:O	2.45	0.49
12:L:490:GLN:HB3	12:L:504:HIS:HA	1.94	0.49
21:V:290:ASP:OD1	21:V:290:ASP:N	2.45	0.49
11:K:301:LYS:HE2	11:K:325:LEU:HD21	1.95	0.49
18:R:615:ILE:O	18:R:620:ARG:NH1	2.46	0.49
19:S:47:LEU:O	19:S:51:MET:HB3	2.13	0.49
9:I:649:HIS:CE1	12:L:559:GLU:HA	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:365:TYR:O	11:K:367:GLY:N	2.45	0.48
19:S:737:GLY:HA3	19:S:741:TRP:HE1	1.77	0.48
9:I:688:ILE:HG23	9:I:716:PHE:HB2	1.94	0.48
10:J:631:ARG:HH21	10:J:636:ASN:HA	1.78	0.48
10:J:671:GLU:O	10:J:672:ARG:HG2	2.13	0.48
11:K:607:TRP:HB2	11:K:773:HIS:CE1	2.48	0.48
11:K:207:ALA:C	11:K:208:PHE:HD1	2.16	0.48
13:M:54:HIS:HA	13:M:130:VAL:HA	1.95	0.48
18:R:843:LEU:O	18:R:847:ILE:HG12	2.14	0.48
18:R:1178:THR:O	18:R:1181:THR:OG1	2.32	0.48
19:S:175:ARG:HB2	19:S:229:LEU:HD21	1.95	0.48
12:L:305:ILE:HD13	12:L:376:LEU:HD13	1.94	0.48
9:I:712:LEU:HB2	9:I:731:VAL:HG23	1.96	0.48
11:K:73:THR:O	11:K:86:SER:OG	2.30	0.48
11:K:176:VAL:HG22	11:K:177:THR:HG22	1.94	0.48
11:K:370:LEU:N	11:K:382:VAL:O	2.34	0.48
18:R:1275:TYR:CE1	18:R:1298:LEU:HD11	2.48	0.48
19:S:311:LEU:O	19:S:314:PRO:HD2	2.12	0.48
9:I:825:SER:O	9:I:842:GLY:N	2.47	0.48
18:R:545:THR:HA	18:R:548:ILE:HG12	1.95	0.48
18:R:968:ASP:OD1	18:R:972:HIS:ND1	2.42	0.48
12:L:460:ALA:HA	12:L:475:VAL:HA	1.94	0.48
9:I:896:MET:HE3	23:X:128:GLN:HB3	1.94	0.48
11:K:339:VAL:HB	11:K:373:ALA:HB3	1.94	0.48
11:K:750:SER:O	11:K:751:THR:OG1	2.29	0.48
18:R:952:LEU:HB3	18:R:955:TYR:CE2	2.48	0.48
21:V:109:GLN:HE22	22:W:65:VAL:H	1.62	0.48
21:V:200:VAL:HG22	21:V:214:VAL:HG23	1.96	0.48
18:R:175:ALA:HB1	18:R:1328:ARG:HH21	1.79	0.48
18:R:753:ARG:NE	18:R:877:ASN:HB3	2.29	0.48
18:R:1193:PHE:O	18:R:1194:THR:OG1	2.27	0.48
9:I:341:LEU:N	9:I:365:ILE:O	2.39	0.47
9:I:719:GLN:HA	12:L:549:PHE:HA	1.96	0.47
11:K:540:LEU:HD21	11:K:739:PHE:HD1	1.79	0.47
18:R:524:PRO:HA	18:R:918:HIS:CE1	2.49	0.47
18:R:561:PRO:HB2	18:R:563:LEU:HD22	1.95	0.47
18:R:707:ILE:HD12	18:R:707:ILE:H	1.79	0.47
19:S:305:TRP:O	19:S:309:THR:HG23	2.14	0.47
18:R:570:LEU:HB3	18:R:573:TYR:HB2	1.95	0.47
10:J:728:ALA:HA	10:J:730:TYR:CE1	2.50	0.47
15:O:46:TYR:O	15:O:61:LYS:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:298:PRO:HG2	18:R:300:LEU:HG	1.95	0.47
11:K:421:MET:HG2	11:K:431:VAL:O	2.14	0.47
11:K:582:VAL:HG11	11:K:643:ARG:HH22	1.80	0.47
12:L:325:VAL:HG12	12:L:326:LYS:HG2	1.96	0.47
18:R:279:SER:O	18:R:283:VAL:HG23	2.14	0.47
18:R:898:ASN:OD1	18:R:899:ARG:N	2.47	0.47
18:R:984:LEU:HA	18:R:987:LEU:HB3	1.95	0.47
18:R:1106:HIS:O	18:R:1110:VAL:HG12	2.13	0.47
19:S:268:MET:O	19:S:272:ARG:HD2	2.14	0.47
11:K:25:CYS:HB2	11:K:34:ALA:HB3	1.95	0.47
11:K:54:ASP:O	11:K:56:GLU:N	2.47	0.47
18:R:714:ASP:N	18:R:714:ASP:OD1	2.48	0.47
18:R:890:LEU:HD23	18:R:890:LEU:H	1.79	0.47
21:V:197:VAL:HG21	21:V:217:TYR:HD1	1.79	0.47
18:R:730:HIS:ND1	18:R:874:HIS:O	2.37	0.47
21:V:87:HIS:O	21:V:95:ASP:CB	2.63	0.47
11:K:197:LEU:CD2	19:S:701:PRO:HA	2.44	0.47
11:K:276:ARG:O	11:K:299:LEU:HB2	2.15	0.47
12:L:254:TYR:HE1	12:L:272:VAL:HG23	1.79	0.47
18:R:834:PHE:HE1	18:R:850:LEU:HD22	1.79	0.47
18:R:858:ASN:OD1	18:R:859:ILE:N	2.48	0.47
19:S:64:LEU:O	19:S:68:ILE:HG23	2.13	0.47
19:S:65:LYS:O	19:S:68:ILE:HG12	2.14	0.47
19:S:623:VAL:O	19:S:626:VAL:HG12	2.15	0.47
9:I:1357:PRO:HD2	9:I:1360:PRO:HG3	1.97	0.47
11:K:58:PRO:O	11:K:60:GLU:N	2.48	0.47
11:K:156:LEU:HD13	11:K:234:VAL:HG12	1.97	0.47
11:K:214:ILE:HB	11:K:232:VAL:HG22	1.96	0.47
11:K:605:LEU:HD13	11:K:649:ILE:HG13	1.94	0.47
18:R:588:LEU:HD13	18:R:600:ILE:HD12	1.97	0.47
18:R:606:GLU:O	18:R:610:HIS:ND1	2.48	0.47
19:S:77:SER:HB2	19:S:123:ALA:HB1	1.97	0.47
12:L:460:ALA:O	12:L:461:HIS:ND1	2.47	0.47
18:R:255:LEU:O	18:R:257:PRO:HD3	2.14	0.47
18:R:1027:VAL:HG23	18:R:1110:VAL:HG22	1.97	0.47
3:C:72:HIS:O	3:C:80:ILE:N	2.47	0.47
9:I:934:CYS:HA	9:I:940:VAL:HA	1.98	0.47
12:L:532:VAL:HA	12:L:535:VAL:HG12	1.97	0.47
18:R:727:TRP:HB3	18:R:731:THR:HB	1.97	0.47
18:R:603:THR:HG23	18:R:951:TYR:CE2	2.50	0.46
9:I:692:LYS:HG3	10:J:678:VAL:HG22	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:943:ARG:HG3	9:I:1177:SER:H	1.79	0.46
11:K:222:SER:N	11:K:266:PRO:HD3	2.30	0.46
11:K:237:VAL:HB	11:K:240:LYS:O	2.15	0.46
18:R:498:THR:HB	18:R:561:PRO:HB3	1.98	0.46
18:R:598:TRP:NE1	18:R:950:PRO:HG3	2.30	0.46
18:R:1246:LEU:HD23	18:R:1246:LEU:HA	1.80	0.46
25:Z:13:GLY:HA2	25:Z:14:ASN:HA	1.75	0.46
9:I:496:ILE:N	9:I:497:PRO:HD2	2.29	0.46
9:I:1346:THR:HA	9:I:1360:PRO:HD2	1.95	0.46
11:K:30:ARG:HG3	11:K:819:LEU:HD21	1.98	0.46
19:S:712:ILE:HG21	19:S:730:LEU:HD21	1.96	0.46
9:I:891:LEU:HD23	9:I:1191:LEU:HD11	1.97	0.46
11:K:197:LEU:HD22	19:S:701:PRO:HA	1.97	0.46
12:L:431:LYS:NZ	12:L:468:VAL:O	2.28	0.46
18:R:546:ARG:O	18:R:546:ARG:NH1	2.48	0.46
18:R:1019:ARG:NH2	18:R:1113:MET:SD	2.85	0.46
18:R:1083:SER:OG	18:R:1084:PRO:HD3	2.15	0.46
19:S:700:PRO:HB2	19:S:703:ARG:HB2	1.97	0.46
11:K:102:LEU:CG	11:K:821:ARG:HG3	2.45	0.46
13:M:50:THR:OG1	13:M:51:PHE:N	2.49	0.46
18:R:911:HIS:ND1	18:R:1091:ASP:OD2	2.48	0.46
18:R:1239:VAL:HG11	18:R:1277:MET:HG3	1.97	0.46
12:L:188:LEU:O	12:L:192:TRP:N	2.49	0.46
12:L:325:VAL:HG12	12:L:326:LYS:N	2.29	0.46
12:L:464:ASN:ND2	21:V:205:ARG:HE	2.14	0.46
18:R:598:TRP:HE1	18:R:950:PRO:HG3	1.81	0.46
21:V:176:MET:O	21:V:178:ILE:HG23	2.16	0.46
11:K:444:ILE:HG13	11:K:445:SER:H	1.81	0.46
18:R:978:LEU:O	18:R:981:SER:N	2.35	0.46
24:Y:110:PRO:O	24:Y:114:LEU:N	2.49	0.46
9:I:542:ASN:HB3	9:I:556:ILE:HG12	1.98	0.46
9:I:553:GLN:HG3	9:I:658:MET:HG2	1.97	0.46
11:K:458:LEU:HD22	11:K:490:LEU:HB2	1.98	0.46
18:R:136:ASP:N	18:R:136:ASP:OD1	2.49	0.46
18:R:941:VAL:HG22	18:R:943:PRO:HD3	1.98	0.46
9:I:720:GLY:N	12:L:548:SER:O	2.48	0.46
12:L:252:SER:O	12:L:346:SER:OG	2.28	0.46
21:V:180:LEU:H	21:V:180:LEU:HD23	1.81	0.46
1:A:2450:UNK:O	1:A:2467:UNK:HA	2.16	0.45
9:I:552:PRO:HG2	9:I:553:GLN:HG2	1.98	0.45
10:J:680:GLN:O	10:J:683:VAL:HG12	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:750:GLN:NE2	18:R:872:ARG:O	2.49	0.45
18:R:784:GLY:O	18:R:789:PHE:HB2	2.15	0.45
18:R:824:ARG:HE	18:R:872:ARG:NH1	2.13	0.45
19:S:40:LEU:O	19:S:42:LEU:N	2.50	0.45
9:I:824:SER:HA	9:I:842:GLY:O	2.16	0.45
11:K:334:ASN:O	11:K:335:ASP:CG	2.52	0.45
11:K:446:PRO:HD2	11:K:480:LEU:HD23	1.93	0.45
18:R:528:LEU:HD13	18:R:912:TRP:HE1	1.82	0.45
11:K:446:PRO:N	11:K:480:LEU:CD2	2.79	0.45
18:R:785:PHE:HB3	18:R:788:LEU:HD13	1.99	0.45
18:R:1193:PHE:C	18:R:1195:ALA:H	2.20	0.45
18:R:1224:LEU:HB3	18:R:1259:PHE:HE1	1.81	0.45
9:I:342:SER:HA	9:I:364:THR:HA	1.98	0.45
11:K:176:VAL:HG23	11:K:193:SER:C	2.37	0.45
11:K:441:MET:O	11:K:442:LEU:HD23	2.17	0.45
11:K:604:LEU:HA	11:K:773:HIS:HE1	1.81	0.45
11:K:724:GLY:O	11:K:727:SER:OG	2.27	0.45
18:R:1165:HIS:HB3	18:R:1230:PHE:CE1	2.52	0.45
19:S:670:HIS:HD2	19:S:686:PRO:HD2	1.81	0.45
11:K:120:VAL:HB	11:K:169:ALA:HB1	1.97	0.45
18:R:91:LEU:HB3	18:R:92:LEU:HD12	1.97	0.45
18:R:1084:PRO:HA	18:R:1088:PRO:HG2	1.98	0.45
18:R:1195:ALA:O	18:R:1201:SER:OG	2.34	0.45
11:K:636:GLY:HA2	11:K:639:LEU:HD12	1.99	0.45
18:R:152:VAL:HG13	18:R:153:SER:N	2.32	0.45
19:S:723:ASP:O	19:S:726:SER:N	2.33	0.45
11:K:29:CYS:HA	11:K:425:TRP:CZ2	2.52	0.45
18:R:776:ILE:HG12	18:R:779:GLN:HB2	1.99	0.45
19:S:141:ARG:HE	19:S:155:GLU:N	2.15	0.45
19:S:283:LEU:HD13	19:S:340:PHE:CD2	2.52	0.45
21:V:79:LYS:O	21:V:81:SER:N	2.50	0.45
9:I:916:SER:OG	9:I:919:HIS:HB3	2.16	0.45
11:K:85:LEU:HD13	11:K:91:GLY:O	2.17	0.45
11:K:238:SER:O	11:K:238:SER:OG	2.33	0.45
11:K:269:THR:HA	11:K:281:GLN:HA	1.99	0.45
18:R:587:GLN:O	18:R:590:PRO:HD2	2.17	0.45
19:S:411:ALA:O	19:S:415:VAL:HG23	2.17	0.45
21:V:192:VAL:HG22	21:V:200:VAL:HB	1.99	0.45
18:R:217:ARG:HH21	18:R:258:TYR:HB3	1.82	0.45
18:R:1227:ILE:HG13	18:R:1231:LEU:HD23	1.99	0.45
5:E:74:GLN:HA	12:L:124:THR:HA	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:543:LYS:N	9:I:555:TYR:O	2.38	0.44
11:K:381:MET:O	11:K:390:MET:HB2	2.17	0.44
18:R:101:LEU:HD21	18:R:118:THR:HG23	1.98	0.44
18:R:869:LEU:HD11	18:R:885:ILE:HG13	1.98	0.44
9:I:899:LEU:HD23	9:I:900:THR:O	2.17	0.44
11:K:601:LEU:HA	11:K:605:LEU:HD12	1.99	0.44
18:R:790:LEU:HD23	18:R:822:HIS:CE1	2.53	0.44
19:S:241:PHE:CZ	19:S:275:HIS:HB3	2.53	0.44
19:S:817:SER:O	19:S:820:SER:OG	2.34	0.44
19:S:896:ASN:HA	19:S:938:ARG:HH12	1.82	0.44
11:K:558:THR:HB	11:K:559:PRO:HD2	1.99	0.44
18:R:738:PRO:HB2	18:R:741:ALA:HB3	1.99	0.44
18:R:791:CYS:SG	18:R:822:HIS:HB3	2.58	0.44
18:R:217:ARG:HD2	18:R:1192:ASP:CG	2.37	0.44
18:R:945:VAL:HG12	18:R:947:ILE:HD11	1.99	0.44
11:K:299:LEU:HD22	11:K:327:TRP:CZ2	2.53	0.44
10:J:726:VAL:HG21	10:J:732:ALA:HB3	1.99	0.44
12:L:367:TYR:CE2	12:L:431:LYS:HE2	2.53	0.44
19:S:337:ALA:O	19:S:341:LEU:N	2.50	0.44
19:S:362:PHE:HE2	19:S:385:ARG:HD2	1.81	0.44
24:Y:47:ARG:HH12	24:Y:84:GLN:HG2	1.82	0.44
11:K:72:ILE:HG23	11:K:73:THR:HG23	1.99	0.44
11:K:421:MET:HE1	11:K:430:LEU:HD13	2.00	0.44
11:K:787:ARG:N	11:K:821:ARG:O	2.51	0.44
18:R:190:LEU:HD21	18:R:197:PRO:HB3	1.99	0.44
18:R:490:LEU:HB3	18:R:491:PRO:HD3	2.00	0.44
18:R:794:TRP:CE2	18:R:826:PHE:HZ	2.36	0.44
9:I:235:GLU:HA	9:I:306:CYS:SG	2.57	0.44
11:K:96:TRP:CD1	11:K:96:TRP:N	2.84	0.44
11:K:560:ASP:OD1	11:K:587:LYS:NZ	2.51	0.44
18:R:377:LEU:HD12	18:R:424:ALA:HA	2.00	0.44
19:S:411:ALA:O	19:S:414:THR:OG1	2.25	0.44
10:J:694:LEU:HD23	10:J:694:LEU:HA	1.82	0.44
11:K:96:TRP:O	11:K:98:MET:N	2.51	0.44
11:K:198:ARG:HD3	11:K:199:GLY:H	1.83	0.44
11:K:279:SER:O	11:K:297:TRP:N	2.33	0.44
12:L:529:GLN:O	12:L:532:VAL:HG12	2.18	0.44
18:R:434:ARG:NH2	18:R:485:SER:OG	2.51	0.44
18:R:837:SER:HA	18:R:841:GLN:HE21	1.83	0.44
19:S:785:ILE:O	19:S:789:LEU:N	2.40	0.44
9:I:719:GLN:N	9:I:725:THR:O	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:191:THR:HG21	11:K:241:CYS:HB2	2.00	0.43
12:L:567:ILE:N	12:L:582:ASN:O	2.37	0.43
11:K:35:PHE:HZ	11:K:441:MET:HG3	1.83	0.43
11:K:169:ALA:O	11:K:178:VAL:N	2.50	0.43
11:K:276:ARG:O	11:K:277:ASP:OD1	2.36	0.43
18:R:537:MET:SD	18:R:537:MET:N	2.91	0.43
18:R:697:VAL:HA	18:R:698:THR:HA	1.65	0.43
18:R:1016:LEU:HD21	18:R:1019:ARG:HH21	1.83	0.43
18:R:1176:SER:O	18:R:1178:THR:N	2.51	0.43
19:S:759:THR:O	19:S:763:VAL:HG22	2.18	0.43
21:V:211:ARG:HA	21:V:211:ARG:HD2	1.76	0.43
9:I:896:MET:SD	9:I:896:MET:N	2.92	0.43
11:K:124:TRP:HB3	11:K:208:PHE:CD2	2.54	0.43
18:R:641:LEU:HD23	18:R:641:LEU:H	1.83	0.43
18:R:885:ILE:HD12	18:R:889:LEU:HD22	2.00	0.43
18:R:1023:LYS:HG2	18:R:1113:MET:HG2	1.99	0.43
19:S:826:ALA:HB3	19:S:829:ARG:HB2	2.00	0.43
11:K:117:ASP:O	11:K:172:VAL:N	2.51	0.43
11:K:237:VAL:HG12	11:K:238:SER:N	2.34	0.43
11:K:522:LYS:HE2	11:K:744:THR:HB	2.00	0.43
12:L:259:ILE:HG13	12:L:339:LEU:HA	2.01	0.43
18:R:880:GLN:HE21	18:R:881:VAL:HG23	1.84	0.43
18:R:1062:VAL:HB	18:R:1063:PRO:HD3	2.00	0.43
19:S:579:ILE:O	19:S:583:ILE:HG13	2.18	0.43
9:I:707:LEU:O	9:I:711:LEU:N	2.49	0.43
18:R:599:GLY:O	18:R:603:THR:OG1	2.36	0.43
18:R:600:ILE:HA	18:R:603:THR:OG1	2.18	0.43
19:S:132:LEU:HD23	19:S:132:LEU:HA	1.84	0.43
19:S:293:LEU:HB2	19:S:305:TRP:HB3	2.01	0.43
19:S:915:ALA:HB3	19:S:919:THR:HG23	1.99	0.43
9:I:846:PRO:HD3	22:W:54:ALA:HB1	2.00	0.43
18:R:1141:ASN:HB2	18:R:1144:ALA:HB3	1.99	0.43
18:R:1191:PHE:O	18:R:1209:LEU:HD23	2.18	0.43
18:R:1213:HIS:HA	18:R:1255:PHE:HZ	1.83	0.43
9:I:1347:ILE:H	9:I:1360:PRO:CG	2.32	0.43
10:J:706:HIS:O	10:J:706:HIS:ND1	2.52	0.43
11:K:233:CYS:O	11:K:243:ILE:HA	2.19	0.43
11:K:326:LYS:HB3	11:K:328:ARG:HE	1.83	0.43
18:R:794:TRP:CZ2	18:R:850:LEU:HG	2.53	0.43
9:I:691:LEU:HD13	10:J:685:ARG:HH12	1.83	0.43
12:L:341:ILE:HG13	12:L:341:ILE:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:459:GLN:HA	17:Q:135:TYR:HD2	1.84	0.43
18:R:72:SER:CB	18:R:75:ARG:HB3	2.49	0.43
18:R:617:PRO:HB2	18:R:660:GLU:HG2	2.01	0.43
18:R:698:THR:HG23	18:R:1006:TYR:OH	2.19	0.43
20:T:112:SER:H	20:T:150:PRO:HB2	1.84	0.43
21:V:120:HIS:ND1	22:W:59:LEU:HD21	2.34	0.43
12:L:257:VAL:HG23	12:L:365:HIS:HA	2.01	0.43
15:O:153:CYS:HA	21:V:277:PHE:CE1	2.54	0.43
18:R:1225:SER:HB3	18:R:1263:ARG:NH1	2.26	0.43
19:S:938:ARG:H	19:S:938:ARG:HG3	1.60	0.43
11:K:134:HIS:CD2	11:K:358:VAL:HG22	2.54	0.42
11:K:237:VAL:CG1	11:K:238:SER:N	2.81	0.42
18:R:371:HIS:O	18:R:375:VAL:HG13	2.19	0.42
18:R:606:GLU:OE1	18:R:606:GLU:N	2.52	0.42
9:I:460:ILE:HD11	9:I:469:PHE:HD2	1.84	0.42
11:K:85:LEU:HD21	11:K:106:TRP:CZ2	2.54	0.42
15:O:127:GLY:N	15:O:137:GLY:O	2.41	0.42
18:R:168:ALA:HA	18:R:204:LEU:HD11	2.00	0.42
18:R:786:PRO:HB2	18:R:787:PRO:HD3	2.01	0.42
8:H:101:ARG:NH2	22:W:144:GLU:HA	2.34	0.42
11:K:85:LEU:HB2	11:K:92:GLN:HA	2.00	0.42
18:R:861:THR:O	18:R:862:LEU:HG	2.20	0.42
18:R:1190:LEU:HD21	18:R:1205:CYS:SG	2.60	0.42
19:S:649:TYR:CZ	19:S:658:ASN:HA	2.55	0.42
11:K:170:VAL:HG11	11:K:203:LEU:HD21	2.01	0.42
11:K:419:LYS:N	11:K:434:ASP:HA	2.34	0.42
18:R:191:TYR:CG	18:R:191:TYR:O	2.72	0.42
18:R:933:TYR:CE1	18:R:948:GLN:HG2	2.54	0.42
18:R:975:LEU:HD11	18:R:1019:ARG:HD3	2.01	0.42
18:R:1131:LEU:H	18:R:1131:LEU:HD23	1.84	0.42
18:R:1241:THR:HG21	18:R:1243:PHE:CE1	2.55	0.42
19:S:47:LEU:O	19:S:51:MET:HB2	2.19	0.42
1:A:2349:UNK:HA	1:A:2350:UNK:HA	1.77	0.42
9:I:674:HIS:NE2	9:I:689:ARG:HB2	2.34	0.42
10:J:677:ASN:ND2	10:J:680:GLN:OE1	2.52	0.42
13:M:22:LEU:HA	13:M:172:SER:HA	2.02	0.42
18:R:377:LEU:HD22	18:R:534:HIS:HE1	1.84	0.42
18:R:831:VAL:HG11	18:R:882:CYS:SG	2.60	0.42
24:Y:84:GLN:HA	24:Y:87:ILE:HD12	2.02	0.42
1:A:1860:UNK:HA	1:A:1861:UNK:HA	1.59	0.42
11:K:744:THR:OG1	11:K:745:LEU:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:192:TRP:HB3	12:L:195:ARG:NH2	2.33	0.42
18:R:972:HIS:NE2	18:R:1007:ASN:O	2.53	0.42
19:S:81:ALA:HB1	19:S:126:SER:HB3	2.02	0.42
20:T:69:VAL:HG23	20:T:84:CYS:HB3	2.01	0.42
20:T:71:PHE:HZ	20:T:82:VAL:HG12	1.84	0.42
11:K:730:GLN:N	11:K:733:GLN:OE1	2.53	0.42
18:R:1156:LEU:HB3	18:R:1160:TYR:HB2	2.01	0.42
18:R:1158:GLU:HA	18:R:1161:TRP:CE2	2.54	0.42
18:R:1203:MET:O	18:R:1206:SER:OG	2.37	0.42
18:R:730:HIS:HE1	18:R:879:ALA:HB1	1.85	0.42
10:J:640:TYR:CD2	10:J:644:VAL:HG21	2.54	0.42
11:K:665:ALA:HB3	23:X:100:ARG:HD2	2.02	0.42
18:R:87:VAL:HG11	18:R:125:ILE:HD12	2.02	0.42
9:I:836:LYS:HA	9:I:866:ASN:HD21	1.84	0.42
18:R:1189:ARG:HH22	18:R:1198:GLN:HE22	1.68	0.42
18:R:1221:ILE:HG23	18:R:1222:GLY:H	1.85	0.42
18:R:1301:MET:O	18:R:1305:PHE:HB2	2.19	0.42
12:L:490:GLN:OE1	12:L:490:GLN:N	2.53	0.41
18:R:125:ILE:O	18:R:128:GLY:N	2.53	0.41
18:R:570:LEU:HB3	18:R:573:TYR:CB	2.49	0.41
19:S:240:GLY:O	19:S:242:PRO:HD3	2.20	0.41
11:K:492:GLU:O	11:K:495:HIS:ND1	2.53	0.41
12:L:492:GLN:HB3	12:L:502:VAL:HG23	2.02	0.41
18:R:380:ILE:HD12	18:R:428:ILE:HD11	2.01	0.41
18:R:787:PRO:HD2	18:R:788:LEU:HD12	2.03	0.41
18:R:1227:ILE:HD12	18:R:1230:PHE:HD2	1.85	0.41
11:K:127:ASN:HA	11:K:152:PHE:HB3	2.02	0.41
12:L:254:TYR:CE1	12:L:272:VAL:HG23	2.55	0.41
18:R:728:ALA:HB3	18:R:875:GLU:OE1	2.20	0.41
19:S:360:THR:O	19:S:364:LEU:HG	2.20	0.41
21:V:31:VAL:HG12	21:V:32:PHE:HD1	1.86	0.41
24:Y:55:LEU:HD23	24:Y:55:LEU:HA	1.89	0.41
9:I:277:ILE:HD12	9:I:277:ILE:HA	1.96	0.41
9:I:1216:LEU:HA	9:I:1219:VAL:HG12	2.02	0.41
18:R:93:PRO:HA	18:R:94:PRO:HD3	1.94	0.41
18:R:794:TRP:CH2	18:R:850:LEU:HG	2.56	0.41
9:I:376:LEU:HD23	9:I:376:LEU:HA	1.88	0.41
11:K:155:SER:C	11:K:156:LEU:HD23	2.40	0.41
11:K:365:TYR:HB2	11:K:366:PRO:HD2	2.02	0.41
11:K:533:ASP:OD1	11:K:533:ASP:N	2.53	0.41
18:R:555:SER:O	18:R:555:SER:OG	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:331:SER:HB3	12:L:339:LEU:HD21	2.02	0.41
12:L:582:ASN:HA	12:L:588:SER:HA	2.02	0.41
18:R:741:ALA:O	18:R:744:LYS:NZ	2.34	0.41
18:R:20:GLU:O	18:R:22:PHE:N	2.54	0.41
18:R:824:ARG:HA	18:R:868:CYS:SG	2.60	0.41
18:R:827:ALA:O	18:R:831:VAL:HG23	2.21	0.41
18:R:1087:PHE:HB2	18:R:1088:PRO:HD3	2.03	0.41
9:I:730:LEU:O	9:I:751:VAL:N	2.54	0.41
18:R:804:SER:O	18:R:805:GLN:HG3	2.20	0.41
18:R:1090:CYS:N	18:R:1091:ASP:HA	2.36	0.41
19:S:313:ILE:CG1	19:S:314:PRO:HD3	2.44	0.41
19:S:705:ILE:HD12	19:S:705:ILE:H	1.86	0.41
20:T:39:TYR:OH	20:T:208:GLN:O	2.29	0.41
21:V:95:ASP:HA	21:V:96:PRO:HD2	1.79	0.41
9:I:599:ASP:HA	9:I:600:ASN:HA	1.77	0.41
11:K:33:ILE:CB	11:K:53:LEU:HG	2.51	0.41
11:K:167:TRP:CZ2	11:K:180:LEU:HD22	2.56	0.41
11:K:176:VAL:HB	11:K:194:LEU:HD13	2.03	0.41
11:K:234:VAL:HG12	11:K:234:VAL:O	2.21	0.41
11:K:343:ALA:HB2	11:K:370:LEU:HD12	2.03	0.41
11:K:483:GLN:HB3	11:K:484:PRO:HD2	2.02	0.41
13:M:135:LEU:HD12	13:M:144:VAL:HG22	2.02	0.41
18:R:527:LEU:HD23	18:R:529:ASP:N	2.35	0.41
18:R:782:VAL:HG23	18:R:782:VAL:O	2.21	0.41
18:R:832:TYR:O	18:R:836:THR:OG1	2.33	0.41
19:S:281:PHE:O	19:S:285:ILE:HG22	2.21	0.41
19:S:328:LYS:O	19:S:330:PHE:N	2.47	0.41
19:S:708:VAL:HG13	19:S:733:LEU:HD13	2.02	0.41
19:S:904:LEU:HD12	19:S:904:LEU:HA	1.87	0.41
20:T:209:GLN:N	20:T:210:PRO:HD2	2.36	0.41
11:K:741:ARG:H	11:K:741:ARG:HD3	1.86	0.41
18:R:922:MET:HA	18:R:925:HIS:CE1	2.56	0.41
18:R:727:TRP:CD1	18:R:870:ALA:HB1	2.56	0.40
18:R:727:TRP:HD1	18:R:870:ALA:HB1	1.86	0.40
18:R:735:PHE:HE2	18:R:740:GLN:HE21	1.69	0.40
9:I:2080:UNK:O	9:I:2084:UNK:N	2.55	0.40
10:J:699:CYS:O	10:J:704:THR:HA	2.21	0.40
18:R:1243:PHE:HA	18:R:1246:LEU:HB2	2.02	0.40
19:S:46:LEU:HD12	19:S:47:LEU:N	2.36	0.40
3:C:37:SER:HA	3:C:38:ASN:HA	1.76	0.40
9:I:499:ILE:HD13	9:I:499:ILE:HA	1.97	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:340:SER:HB3	11:K:372:LEU:HB3	2.04	0.40
18:R:856:LYS:HG2	18:R:857:TYR:CD2	2.56	0.40
11:K:459:GLN:O	11:K:462:LEU:HG	2.22	0.40
18:R:86:ALA:O	18:R:89:THR:HG22	2.22	0.40
18:R:571:LEU:HD21	18:R:1094:PHE:CZ	2.57	0.40
18:R:1016:LEU:HB3	18:R:1017:ARG:HH21	1.87	0.40
9:I:448:ILE:HD12	9:I:448:ILE:HA	1.90	0.40
9:I:1241:GLU:HA	9:I:1242:PRO:HD3	1.98	0.40
11:K:162:LYS:HA	11:K:163:PRO:HD3	1.96	0.40
18:R:971:ILE:HD13	18:R:971:ILE:HA	1.89	0.40
18:R:1027:VAL:O	18:R:1031:ILE:HB	2.22	0.40
18:R:1151:LEU:HA	18:R:1151:LEU:HD23	1.86	0.40
18:R:1252:VAL:HG12	18:R:1252:VAL:O	2.22	0.40
19:S:175:ARG:H	19:S:175:ARG:HG2	1.66	0.40
19:S:362:PHE:CE2	19:S:385:ARG:HD2	2.56	0.40
19:S:521:PRO:HG2	19:S:523:PHE:CE1	2.55	0.40
21:V:51:ALA:O	21:V:55:ASN:ND2	2.54	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	
2	B	90/100 (90%)	90 (100%)	0	0	100	100
3	C	145/246 (59%)	133 (92%)	12 (8%)	0	100	100
4	D	155/157 (99%)	135 (87%)	20 (13%)	0	100	100
5	E	157/180 (87%)	137 (87%)	20 (13%)	0	100	100
6	F	64/76 (84%)	61 (95%)	3 (5%)	0	100	100
8	H	101/108 (94%)	98 (97%)	3 (3%)	0	100	100
9	I	948/1548 (61%)	793 (84%)	155 (16%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
10	J	165/167 (99%)	129 (78%)	36 (22%)	0	100	100
11	K	713/828 (86%)	560 (78%)	148 (21%)	5 (1%)	19	55
12	L	502/631 (80%)	436 (87%)	66 (13%)	0	100	100
13	M	176/187 (94%)	164 (93%)	12 (7%)	0	100	100
15	O	164/198 (83%)	140 (85%)	24 (15%)	0	100	100
16	P	101/126 (80%)	96 (95%)	5 (5%)	0	100	100
17	Q	129/131 (98%)	121 (94%)	8 (6%)	0	100	100
18	R	1285/1367 (94%)	1082 (84%)	200 (16%)	3 (0%)	44	76
19	S	889/982 (90%)	795 (89%)	92 (10%)	2 (0%)	44	76
20	T	184/202 (91%)	150 (82%)	34 (18%)	0	100	100
21	V	258/297 (87%)	219 (85%)	38 (15%)	1 (0%)	30	66
22	W	116/118 (98%)	109 (94%)	7 (6%)	0	100	100
23	X	119/134 (89%)	118 (99%)	1 (1%)	0	100	100
24	Y	128/152 (84%)	116 (91%)	12 (9%)	0	100	100
25	Z	91/93 (98%)	91 (100%)	0	0	100	100
All	All	6680/8028 (83%)	5773 (86%)	896 (13%)	11 (0%)	45	76

All (11) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
11	K	563	PRO
19	S	722	VAL
18	R	1182	GLU
19	S	41	ASN
11	K	237	VAL
11	K	97	SER
18	R	1181	THR
11	K	238	SER
11	K	236	VAL
21	V	293	PRO
18	R	1185	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	
3	C	1/223 (0%)	1 (100%)	0	100	100
5	E	6/160 (4%)	6 (100%)	0	100	100
8	H	12/91 (13%)	12 (100%)	0	100	100
9	I	388/1276 (30%)	387 (100%)	1 (0%)	91	92
10	J	100/153 (65%)	100 (100%)	0	100	100
11	K	418/729 (57%)	416 (100%)	2 (0%)	86	90
12	L	181/557 (32%)	181 (100%)	0	100	100
13	M	61/165 (37%)	61 (100%)	0	100	100
15	O	44/166 (26%)	44 (100%)	0	100	100
17	Q	23/122 (19%)	23 (100%)	0	100	100
18	R	949/1231 (77%)	944 (100%)	5 (0%)	86	90
19	S	395/863 (46%)	391 (99%)	4 (1%)	73	81
20	T	94/169 (56%)	92 (98%)	2 (2%)	48	67
21	V	92/266 (35%)	92 (100%)	0	100	100
22	W	52/108 (48%)	52 (100%)	0	100	100
23	X	65/120 (54%)	65 (100%)	0	100	100
24	Y	47/140 (34%)	47 (100%)	0	100	100
All	All	2928/6539 (45%)	2914 (100%)	14 (0%)	85	90

All (14) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
9	I	269	ARG
11	K	30	ARG
11	K	741	ARG
18	R	951	TYR
18	R	1024	ARG
18	R	1056	ARG
18	R	1316	LYS
18	R	1328	ARG
19	S	164	CYS
19	S	354	ARG
19	S	385	ARG
19	S	487	ARG

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Mol	Chain	Res	Type
20	T	140	ARG
20	T	186	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (37) such sidechains are listed below:

Mol	Chain	Res	Type
9	I	282	GLN
9	I	508	GLN
9	I	866	ASN
9	I	915	GLN
11	K	92	GLN
11	K	270	HIS
11	K	375	GLN
11	K	435	ASN
11	K	450	HIS
11	K	630	HIS
11	K	773	HIS
12	L	191	HIS
12	L	290	GLN
12	L	371	HIS
18	R	378	GLN
18	R	534	HIS
18	R	614	HIS
18	R	635	GLN
18	R	637	ASN
18	R	670	ASN
18	R	708	GLN
18	R	759	ASN
18	R	841	GLN
18	R	851	ASN
18	R	1010	HIS
18	R	1197	HIS
19	S	8	GLN
19	S	71	GLN
19	S	111	HIS
19	S	370	GLN
19	S	728	HIS
20	T	209	GLN
21	V	41	ASN
21	V	55	ASN
21	V	109	GLN
22	W	90	GLN

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Mol	Chain	Res	Type
24	Y	155	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

There are no ligands in this entry.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	A	24
9	I	2
14	N	1
7	G	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A	2468:UNK	C	2489:UNK	N	30.97
1	I	2096:UNK	C	2097:UNK	N	23.72
1	N	515:UNK	C	548:UNK	N	23.17

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A	2377:UNK	C	2388:UNK	N	22.68
1	A	2628:UNK	C	2656:UNK	N	22.03
1	A	1831:UNK	C	1840:UNK	N	19.15
1	A	2425:UNK	C	2437:UNK	N	18.48
1	A	2207:UNK	C	2209:UNK	N	18.05
1	A	2444:UNK	C	2449:UNK	N	17.90
1	A	2239:UNK	C	2255:UNK	N	15.85
1	A	2513:UNK	C	2615:UNK	N	15.14
1	A	2307:UNK	C	2315:UNK	N	13.11
1	A	1873:UNK	C	1875:UNK	N	12.78
1	A	1915:UNK	C	1923:UNK	N	10.16
1	I	2023:UNK	C	2033:UNK	N	9.21
1	A	2367:UNK	C	2370:UNK	N	8.93
1	A	1815:UNK	C	1818:UNK	N	8.88
1	A	2261:UNK	C	2273:UNK	N	8.68
1	A	1900:UNK	C	1905:UNK	N	7.68
1	A	1880:UNK	C	1885:UNK	N	7.41
1	G	236:UNK	C	237:UNK	N	7.28
1	A	1980:UNK	C	2199:UNK	N	7.27
1	A	2224:UNK	C	2226:UNK	N	6.60
1	A	2457:UNK	C	2462:UNK	N	5.92
1	A	1890:UNK	C	1893:UNK	N	5.62
1	A	2214:UNK	C	2218:UNK	N	4.14
1	A	2277:UNK	C	2301:UNK	N	4.08
1	A	2353:UNK	C	2359:UNK	N	3.52

6 Map visualisation ⓘ

This section contains visualisations of the EMDB entry EMD-21514. These allow visual inspection of the internal detail of the map and identification of artifacts.

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

6.1 Orthogonal projections ⓘ

6.1.1 Primary map

| X | Y | Z |
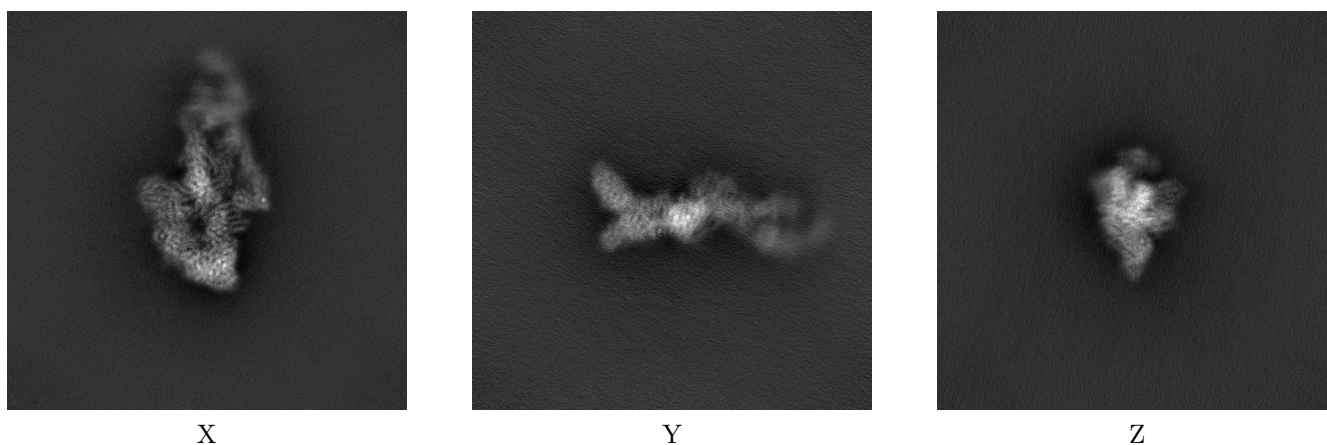
The images above show the map projected in three orthogonal directions.

6.2 Central slices ⓘ

6.2.1 Primary map

| X Index: 280 | Y Index: 280 | Z Index: 280 |
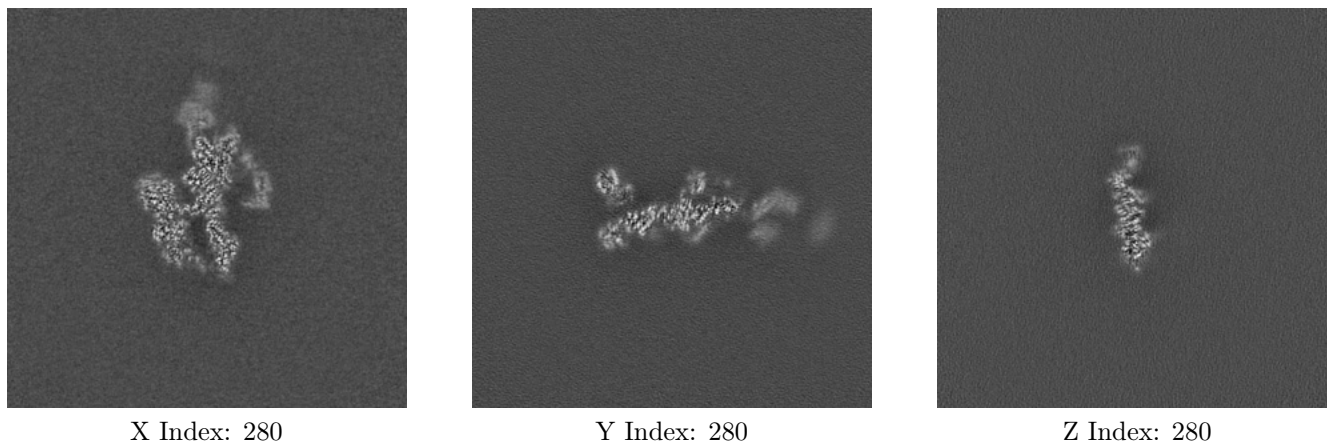
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices ⓘ
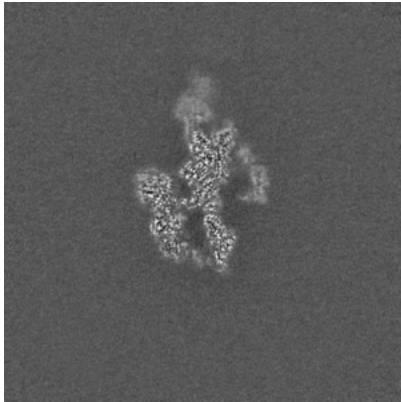
6.3.1 Primary map
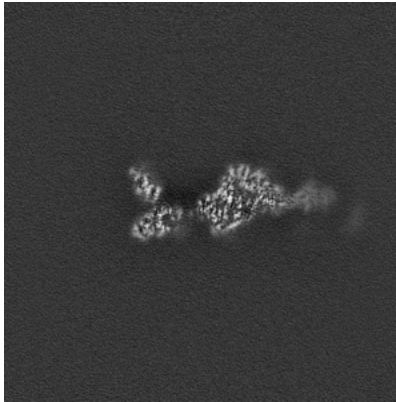
| X Index: 281 | Y Index: 268 | Z Index: 297 |
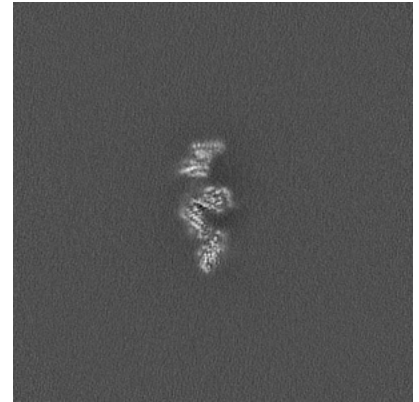
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) ⓘ

6.4.1 Primary map

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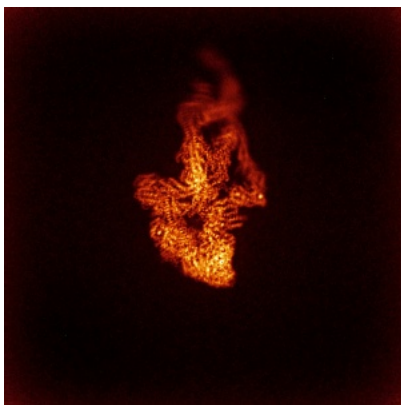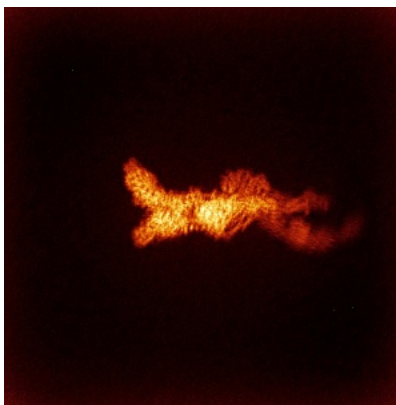
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

6.5.1 Primary map

| X | Y | Z |

The images above show the 3D surface view of the map at the recommended contour level 0.1. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

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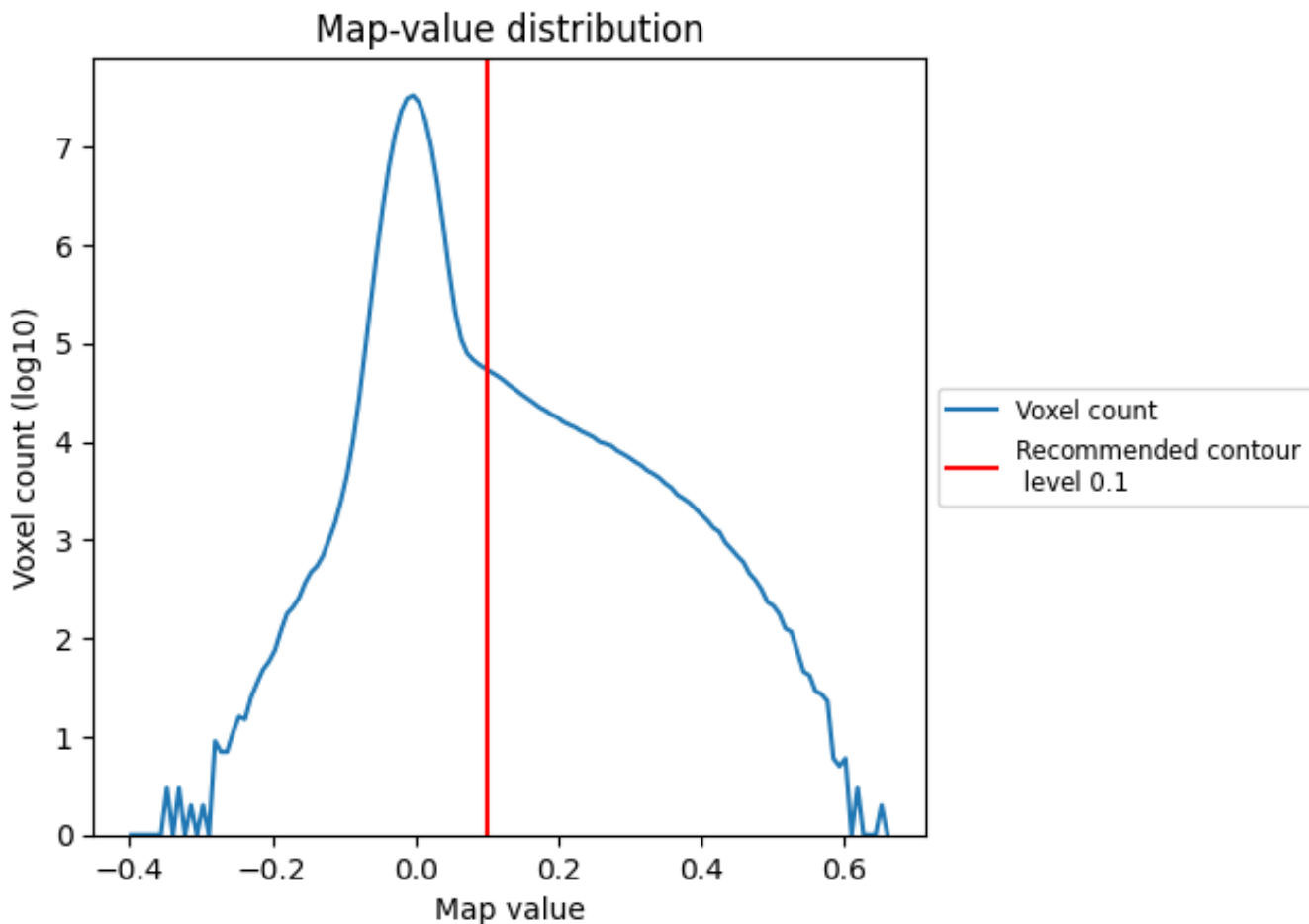
The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

7.2 Volume estimate ⓘ
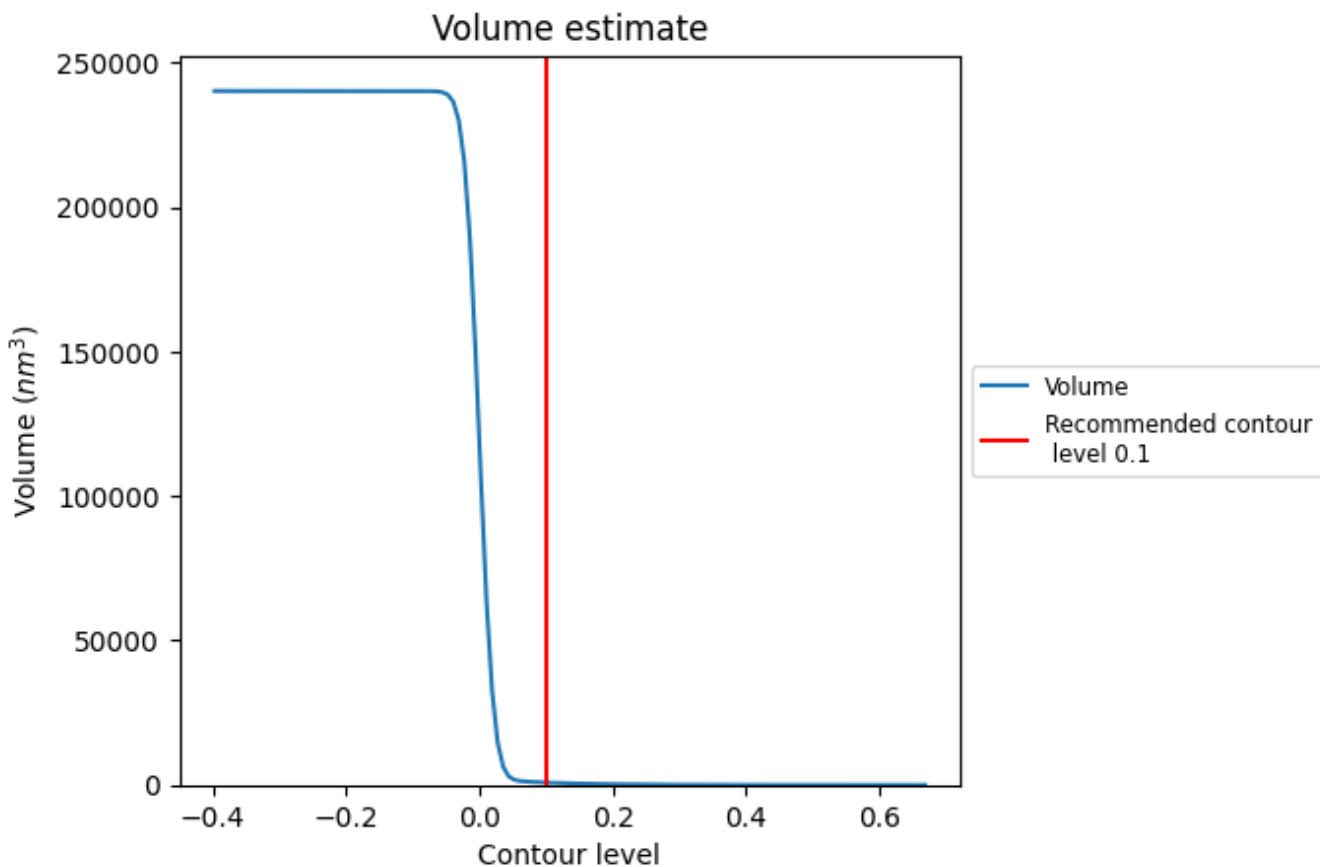
The volume at the recommended contour level is 824 nm^3; this corresponds to an approximate mass of 744 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ
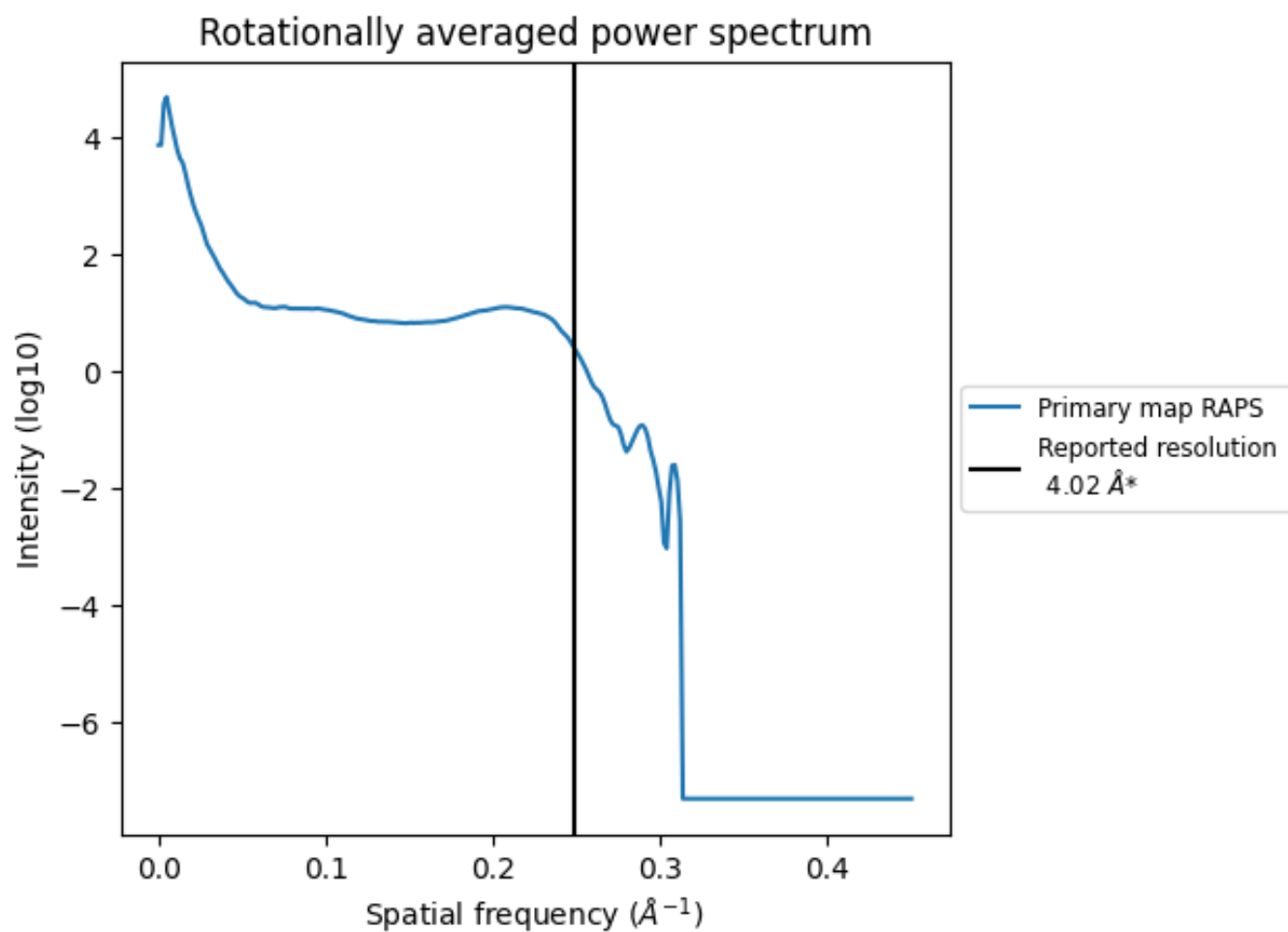
*Reported resolution corresponds to spatial frequency of 0.249 Å^{-1}

8 Fourier-Shell correlation ⓘ

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 ⓘ
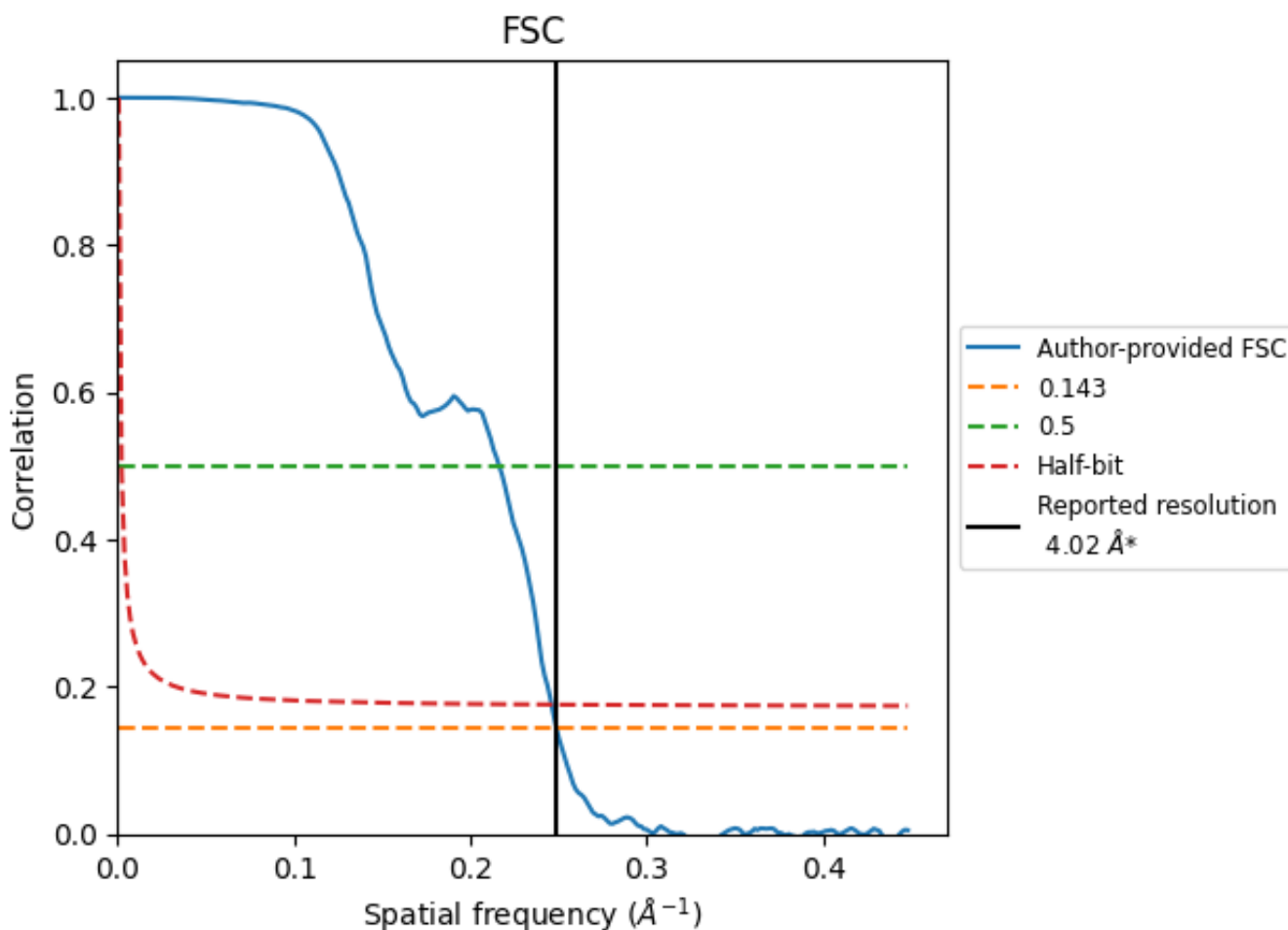
*Reported resolution corresponds to spatial frequency of 0.249 Å^{-1}

8.2 Resolution estimates (i)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.02	-	-
Author-provided FSC curve	4.02	4.62	4.06
Unmasked-calculated*	-	-	-

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

9 Map-model fit ⓘ

This section contains information regarding the fit between EMDB map EMD-21514 and PDB model 6W1S. Per-residue inclusion information can be found in section 3 on page 8.

9.1 Map-model overlay ⓘ

X	Y	Z
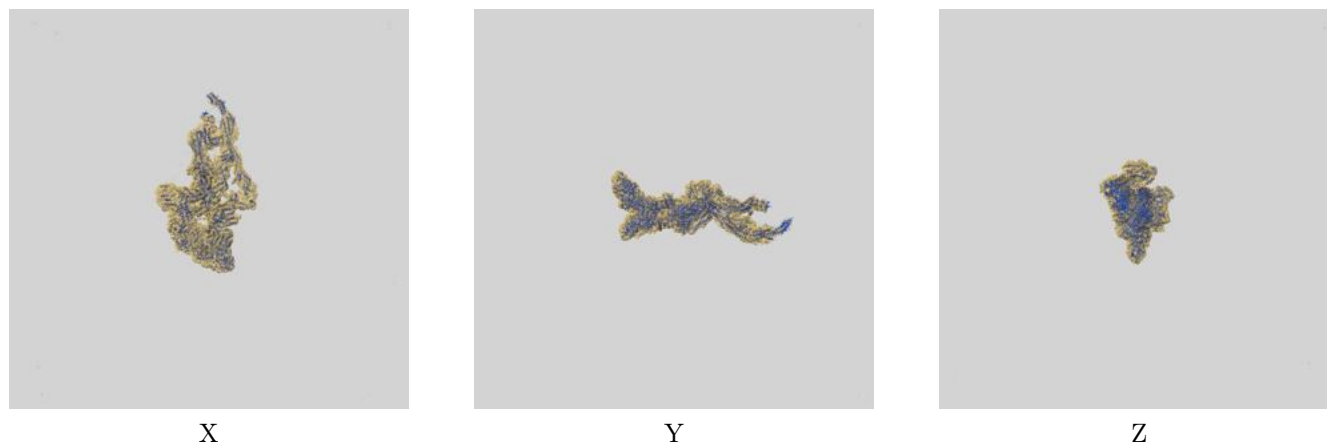
The images above show the 3D surface view of the map at the recommended contour level 0.1 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2　Q-score mapped to coordinate model ⓘ
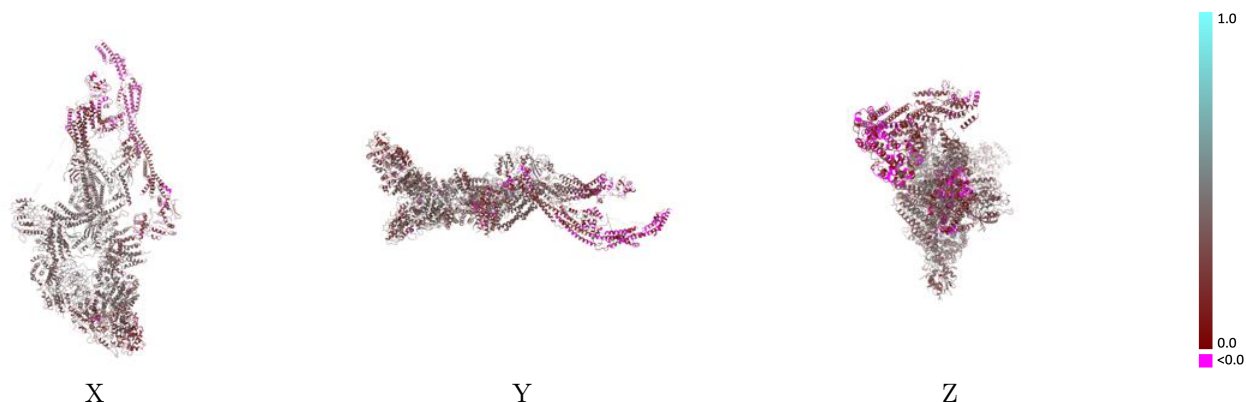
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 ⓘ
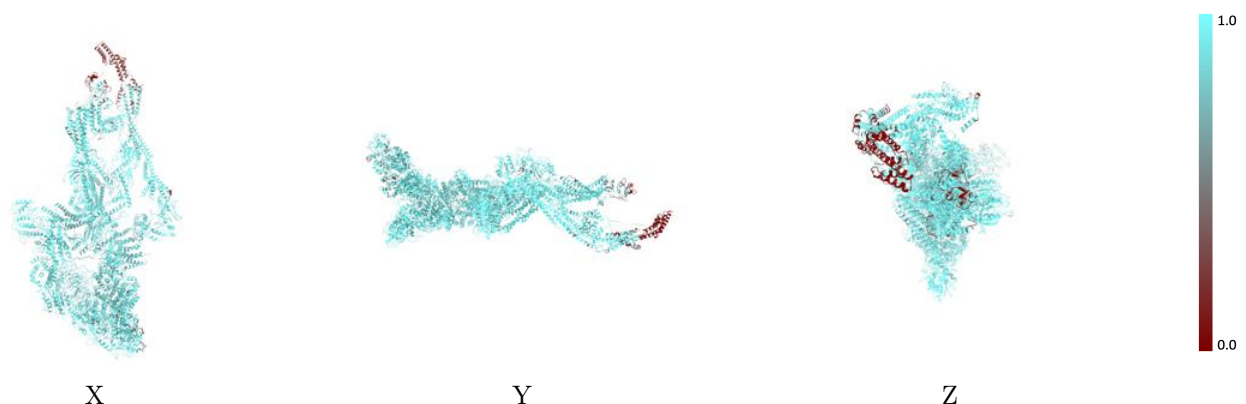
The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.1).

9.4　Atom inclusion (i)
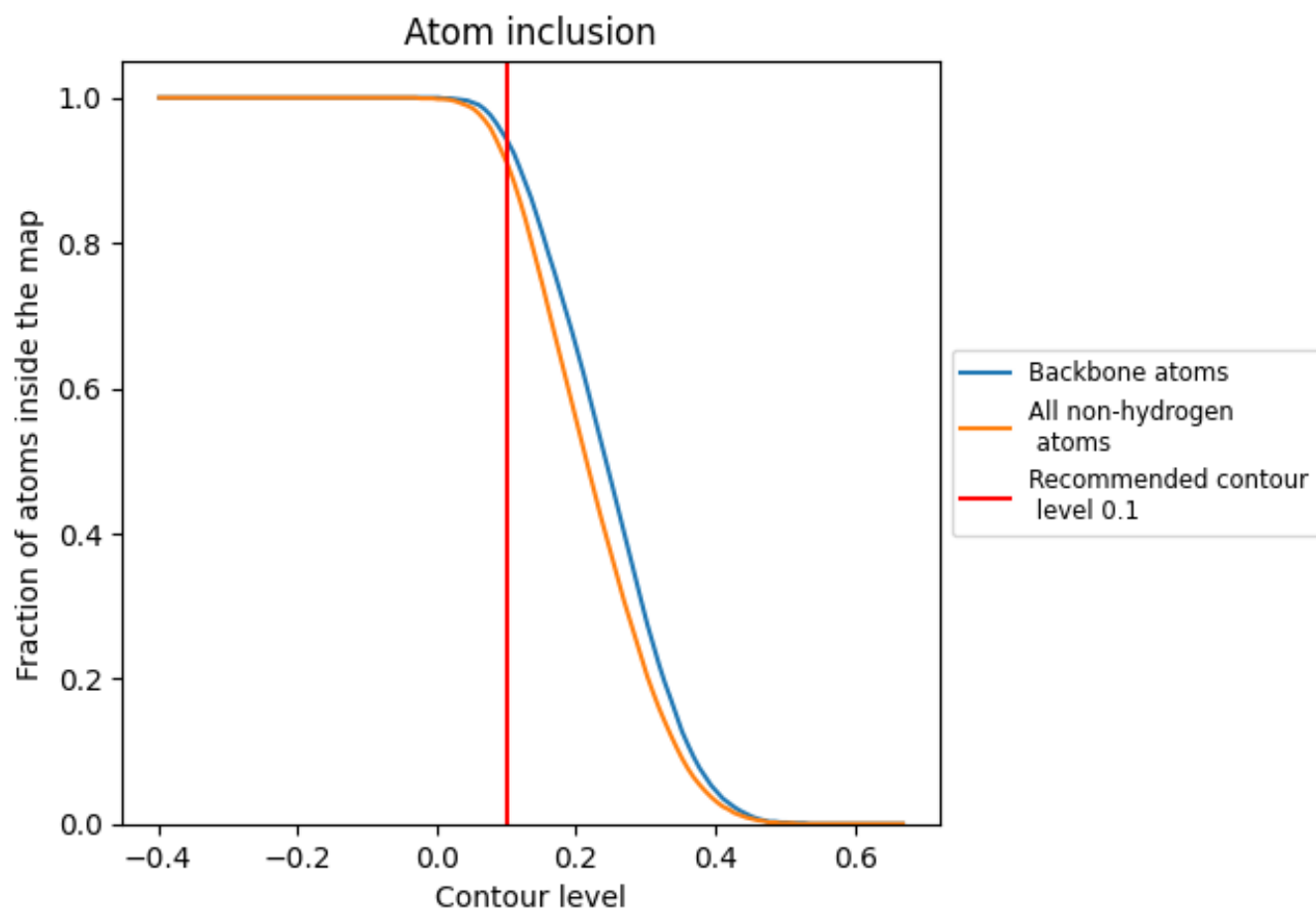
At the recommended contour level, 94% of all backbone atoms, 91% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.1) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9120	0.3210
A	0.9300	0.2030
B	0.9660	0.2110
C	0.5940	0.1670
D	0.8570	0.1280
E	0.8250	0.1820
F	0.9440	0.2180
G	0.3060	0.0530
H	0.9650	0.3020
I	0.9020	0.3480
J	0.8890	0.3520
K	0.9390	0.3650
L	0.9400	0.3670
M	0.9660	0.3710
N	0.0960	0.0320
O	0.9840	0.3760
P	0.8160	0.0910
Q	0.9570	0.2970
R	0.9040	0.3100
S	0.9480	0.3540
T	0.8900	0.3580
V	0.9760	0.4070
W	0.9490	0.3680
X	0.9650	0.3750
Y	0.9580	0.3410
Z	0.9290	0.1410

1.0

0.0
<0.0