Full wwPDB EM Validation Report ⓘ

Nov 22, 2022 – 02:07 PM JST

PDB ID	:	7EG7
EMDB ID	:	EMD-31107
Title	:	TFIID-based core PIC on SCP promoter
Authors	:	Chen, X.; Qi, Y.; Hou, H.; Wang, X.; Wu, Z.; Li, J.; Xu, Y.
Deposited on	:	2021-03-24
Resolution	:	6.20 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:

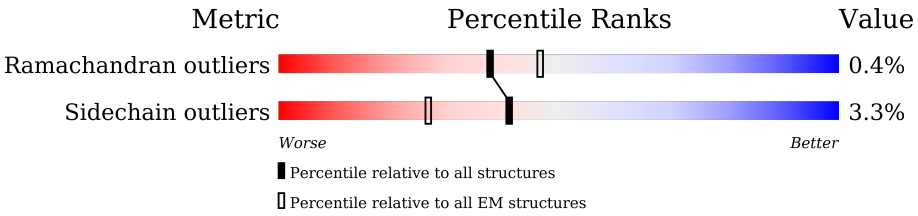
EMDB validation analysis	:	0.0.1.dev43
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.3

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 6.20 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)
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% 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	1872	12% 29% 68%
2	B	1199	10% 79% 20%
3	D	1085	13% 85%
3	d	1085	14% 15% 85%
4	E	800	6% 67% 32%
4	e	800	64% 67% 33%
5	F	677	17% 56% 40%
5	f	677	30% 58% 40%
6	G	349	17% 38% 58%

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Mol	Chain	Length	Quality of chain
7	H	310	11% 65% 33%
8	I	264	5% 45% 55%
8	i	264	46% 46% 54%
9	J	218	6% 41% 59%
9	j	218	36% 44% 56%
10	L	161	16% 42% 6% 53%
10	l	161	66% 65% 34%
11	O	109	7% 77% 11% 11%
12	P	339	49% 48%
13	Q	376	31% 68%
14	R	316	72% 6% 22%
15	S	517	24% 74%
16	T	249	8% 43% 55%
17	X	79	25% 49% 41% 10%
18	Y	79	28% 58% 32% 10%
19	c	929	10% 13% 86%
20	k	211	46% 46% 54%
21	m	124	70% 69% 30%
22	o	1970	70% 28%
23	p	1174	95%
24	q	275	93% 7%
25	r	142	18% 89% 10%
26	s	210	99%
27	t	127	62% 38%
28	v	150	99%

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Mol	Chain	Length	Quality of chain
29	w	125	91% 9%
30	x	67	96%
31	y	117	6% 100%
32	z	58	76% 24%
33	u	172	10% 98%

2 Entry composition

There are 35 unique types of molecules in this entry. The entry contains 81525 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 Transcription initiation factor TFIID subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	599	Total	C	N	O	S	0	0
			4909	3132	855	894	28		

- Molecule 2 is a protein called Transcription initiation factor TFIID subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	963	Total	C	N	O	S	0	0
			7795	5011	1315	1411	58		

- Molecule 3 is a protein called Transcription initiation factor TFIID subunit 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	D	165	Total	C	N	O	S	0	0
			1377	858	257	258	4		
3	d	158	Total	C	N	O	S	0	0
			1307	814	238	252	3		

- Molecule 4 is a protein called Transcription initiation factor TFIID subunit 5.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	E	546	Total	C	N	O	S	0	0
			4364	2766	757	820	21		
4	e	539	Total	C	N	O	S	0	0
			4327	2746	748	814	19		

- Molecule 5 is a protein called Transcription initiation factor TFIID subunit 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	F	404	Total	C	N	O	S	0	0
			3081	1954	537	572	18		
5	f	403	Total	C	N	O	S	0	0
			3081	1954	533	576	18		

- Molecule 6 is a protein called Transcription initiation factor TFIID subunit 7.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	G	145	Total	C	N	O	S	0	0
			1180	748	217	211	4		

- Molecule 7 is a protein called Transcription initiation factor TFIID subunit 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	H	209	Total	C	N	O	S	0	0
			1633	1034	283	311	5		

- Molecule 8 is a protein called Transcription initiation factor TFIID subunit 9.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	I	120	Total	C	N	O	S	0	0
			959	610	166	177	6		
8	i	121	Total	C	N	O	S	0	0
			967	615	167	178	7		

- Molecule 9 is a protein called Transcription initiation factor TFIID subunit 10.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	J	89	Total	C	N	O	S	0	0
			709	457	114	134	4		
9	j	95	Total	C	N	O	S	0	0
			759	488	124	143	4		

- Molecule 10 is a protein called Transcription initiation factor TFIID subunit 12.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	L	76	Total	C	N	O	S	0	0
			622	388	109	122	3		
10	l	107	Total	C	N	O	S	0	0
			876	547	158	166	5		

- Molecule 11 is a protein called Transcription initiation factor IIA subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	O	97	Total	C	N	O	S	0	0
			771	491	133	145	2		

- Molecule 12 is a protein called TATA-box-binding protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	P	177	Total	C	N	O	S	0	0
			1412	918	249	238	7		

- Molecule 13 is a protein called Transcription initiation factor IIA subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	Q	122	Total	C	N	O	S	0	0
			996	623	162	207	4		

- Molecule 14 is a protein called Transcription initiation factor IIB.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	R	248	Total	C	N	O	S	0	0
			1913	1200	338	358	17		

- Molecule 15 is a protein called General transcription factor IIF subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	S	134	Total	C	N	O	S	0	0
			1101	698	199	202	2		

- Molecule 16 is a protein called General transcription factor IIF subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	T	113	Total	C	N	O	S	0	0
			876	545	160	169	2		

- Molecule 17 is a DNA chain called DNA (79-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
17	X	71	Total	C	N	O	P	0	0
			1469	691	287	420	71		

- Molecule 18 is a DNA chain called DNA (79-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
18	Y	71	Total	C	N	O	P	0	0
			1442	684	255	432	71		

- Molecule 19 is a protein called Transcription initiation factor TFIID subunit 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	c	127	Total	C	N	O	S	0	0
			1011	638	174	193	6		

- Molecule 20 is a protein called Transcription initiation factor TFIID subunit 11.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	k	98	Total	C	N	O	S	0	0
			785	499	142	139	5		

- Molecule 21 is a protein called Transcription initiation factor TFIID subunit 13.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	m	87	Total	C	N	O	S	0	0
			724	456	131	131	6		

- Molecule 22 is a protein called RPB1.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	o	1427	Total	C	N	O	S	0	0
			11308	7114	2023	2099	72		

- Molecule 23 is a protein called DNA-directed RNA polymerase subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	p	1134	Total	C	N	O	S	0	0
			9062	5732	1595	1671	64		

- Molecule 24 is a protein called DNA-directed RNA polymerase II subunit RPB3.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	q	257	Total	C	N	O	S	0	0
			2059	1294	351	408	6		

- Molecule 25 is a protein called DNA-directed RNA polymerase II subunit RPB4.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	r	128	Total	C	N	O	S	0	0
			1005	632	172	197	4		

- Molecule 26 is a protein called DNA-directed RNA polymerase II subunit E.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	s	209	Total	C	N	O	S	0	0
			1720	1089	300	323	8		

- Molecule 27 is a protein called DNA-directed RNA polymerase II subunit F.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	t	79	Total	C	N	O	S	0	0
			635	406	108	116	5		

- Molecule 28 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC3.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	v	148	Total	C	N	O	S	0	0
			1186	750	194	237	5		

- Molecule 29 is a protein called DNA-directed RNA polymerase II subunit RPB9.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	w	114	Total	C	N	O	S	0	0
			927	571	166	179	11		

- Molecule 30 is a protein called RPB10.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	x	64	Total	C	N	O	S	0	0
			507	328	86	87	6		

- Molecule 31 is a protein called RNA_pol_L_2 domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	y	117	Total	C	N	O	S	0	0
			937	604	154	177	2		

- Molecule 32 is a protein called RPB12.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	z	44	Total	C	N	O	S	0	0
			372	231	72	63	6		

- Molecule 33 is a protein called DNA-directed RNA polymerase II subunit RPB7.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	u	171	Total	C	N	O	S	0	0
			1351	875	219	249	8		

- Molecule 34 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
34	R	1	Total	Zn	0
			1	1	
34	o	2	Total	Zn	0
			2	2	
34	p	1	Total	Zn	0
			1	1	
34	q	1	Total	Zn	0
			1	1	
34	w	2	Total	Zn	0
			2	2	
34	x	1	Total	Zn	0
			1	1	
34	z	1	Total	Zn	0
			1	1	

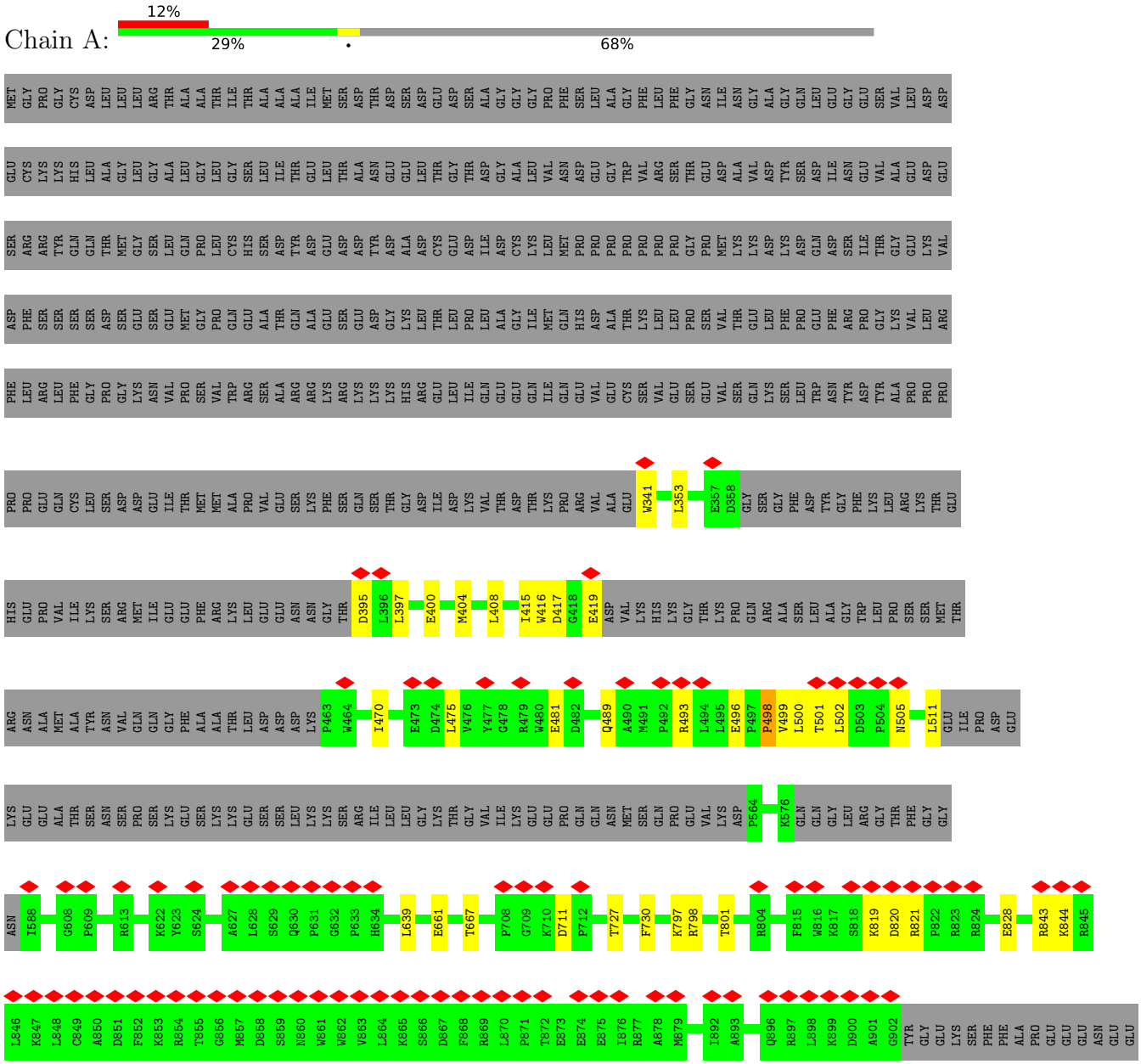
- Molecule 35 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

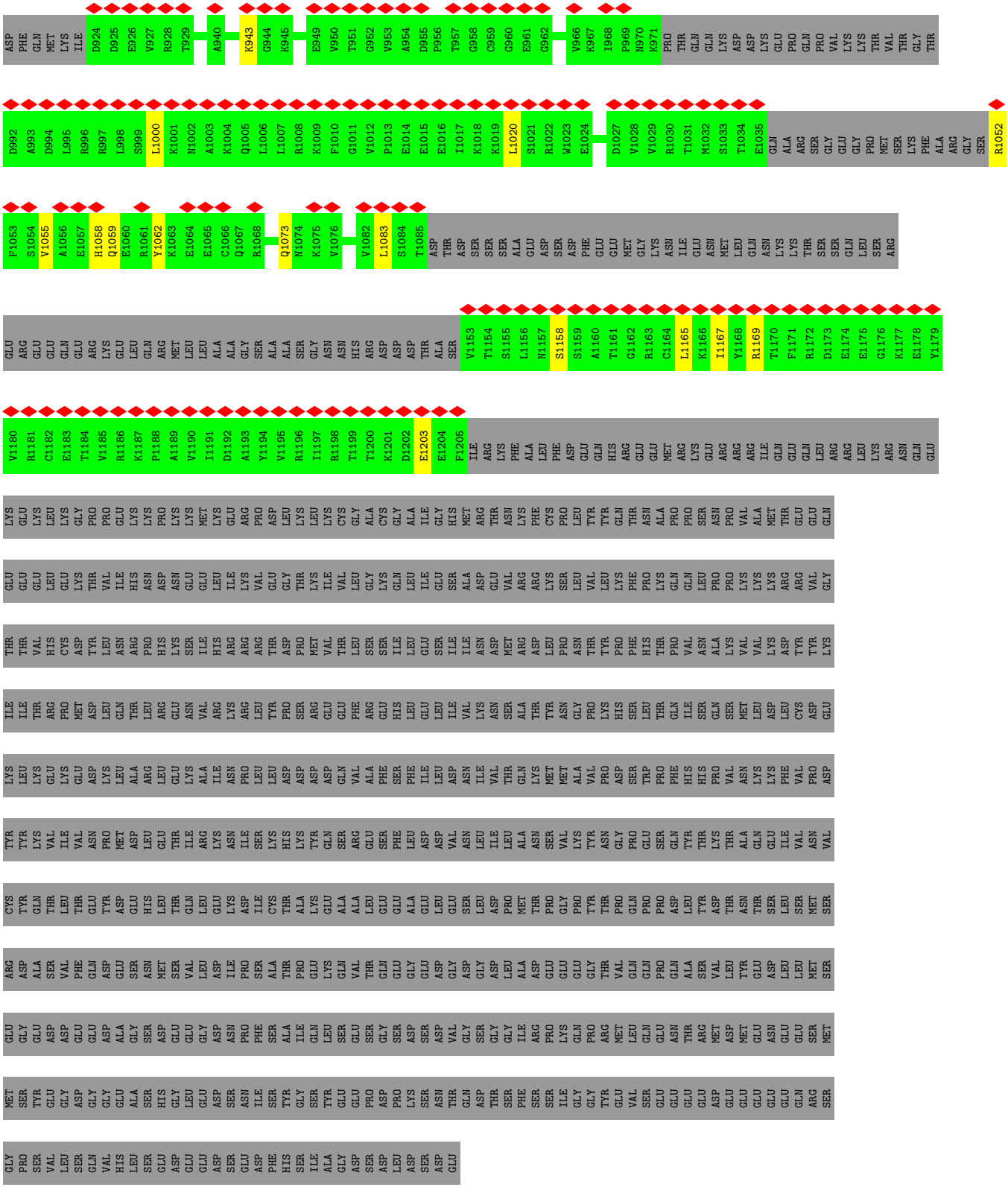
Mol	Chain	Residues	Atoms		AltConf
35	o	1	Total	Mg	0
			1	1	

3 Residue-property plots (i)

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.

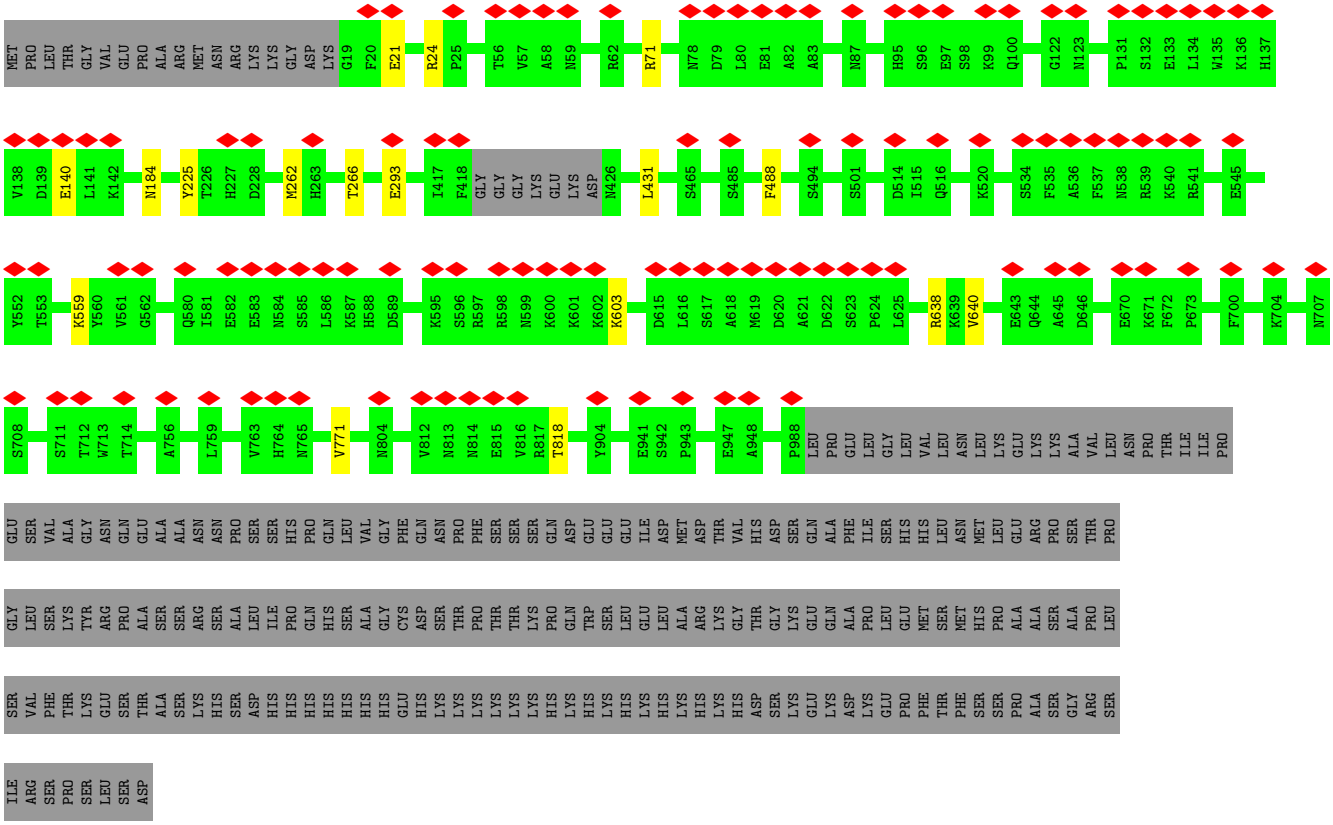
• Molecule 1: Transcription initiation factor TFIID subunit 1





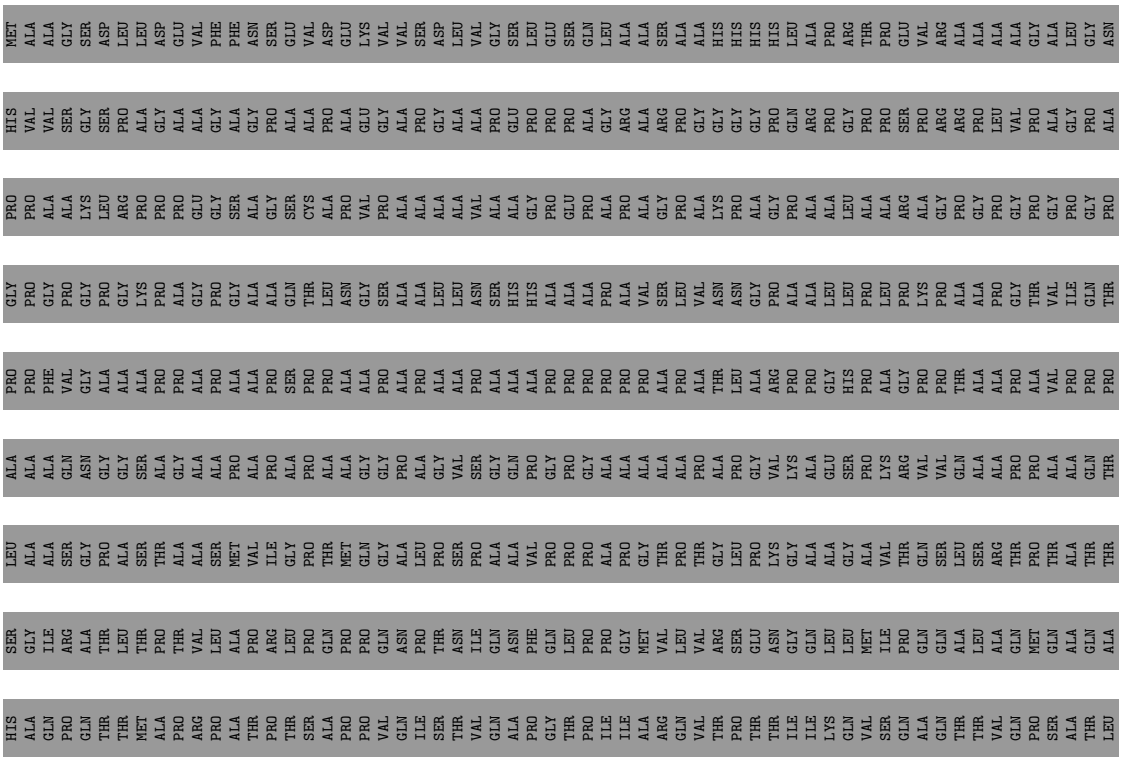
• Molecule 2: Transcription initiation factor TFIID subunit 2

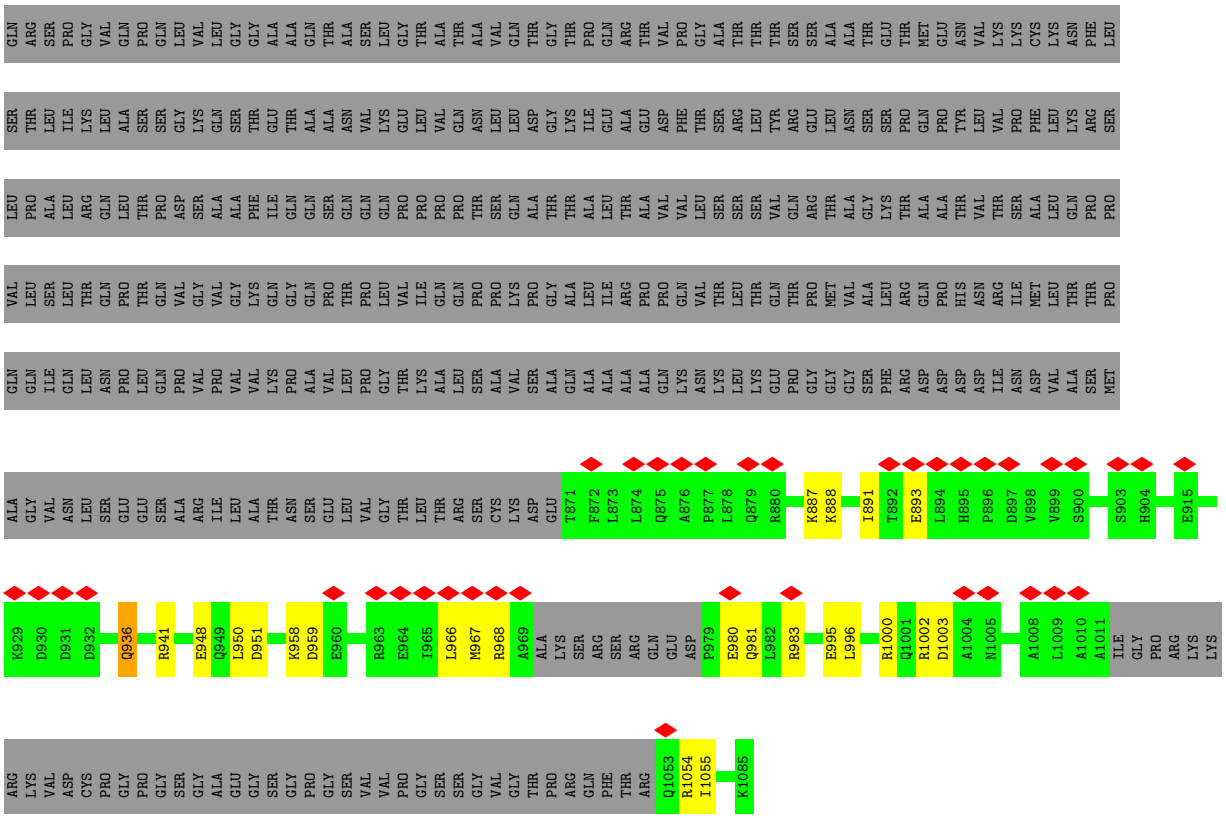
Chain B:



• Molecule 3: Transcription initiation factor TFIID subunit 4

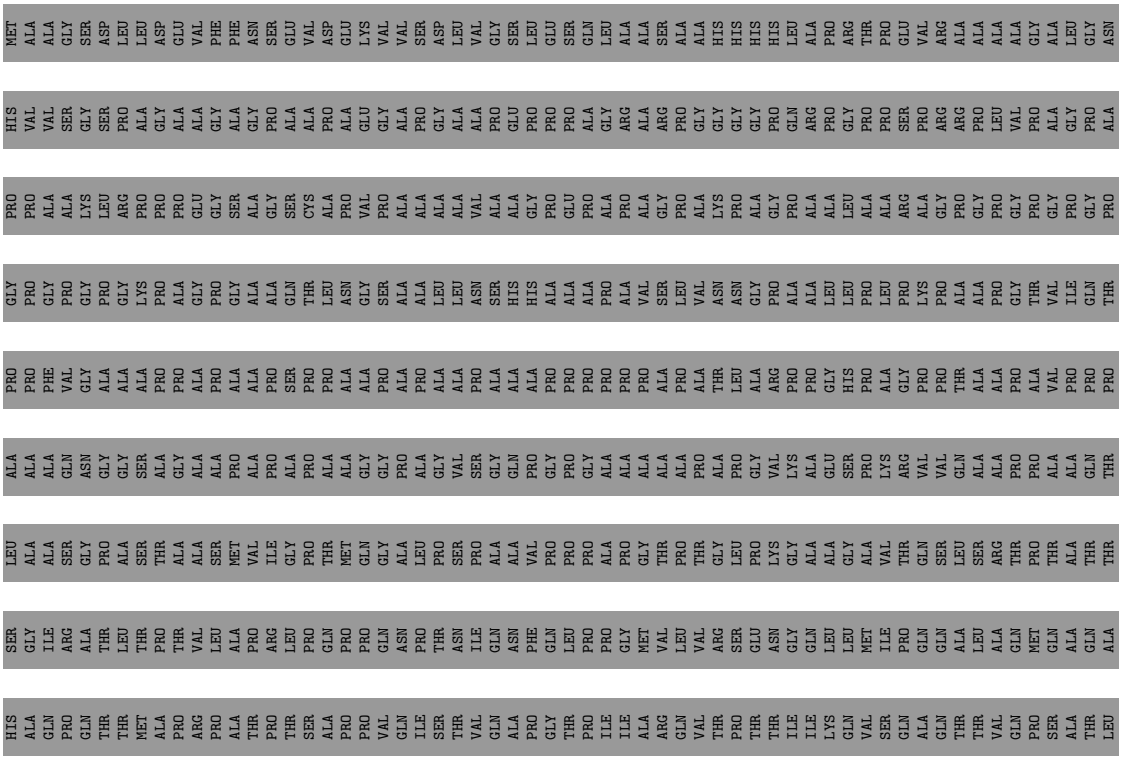
Chain D:

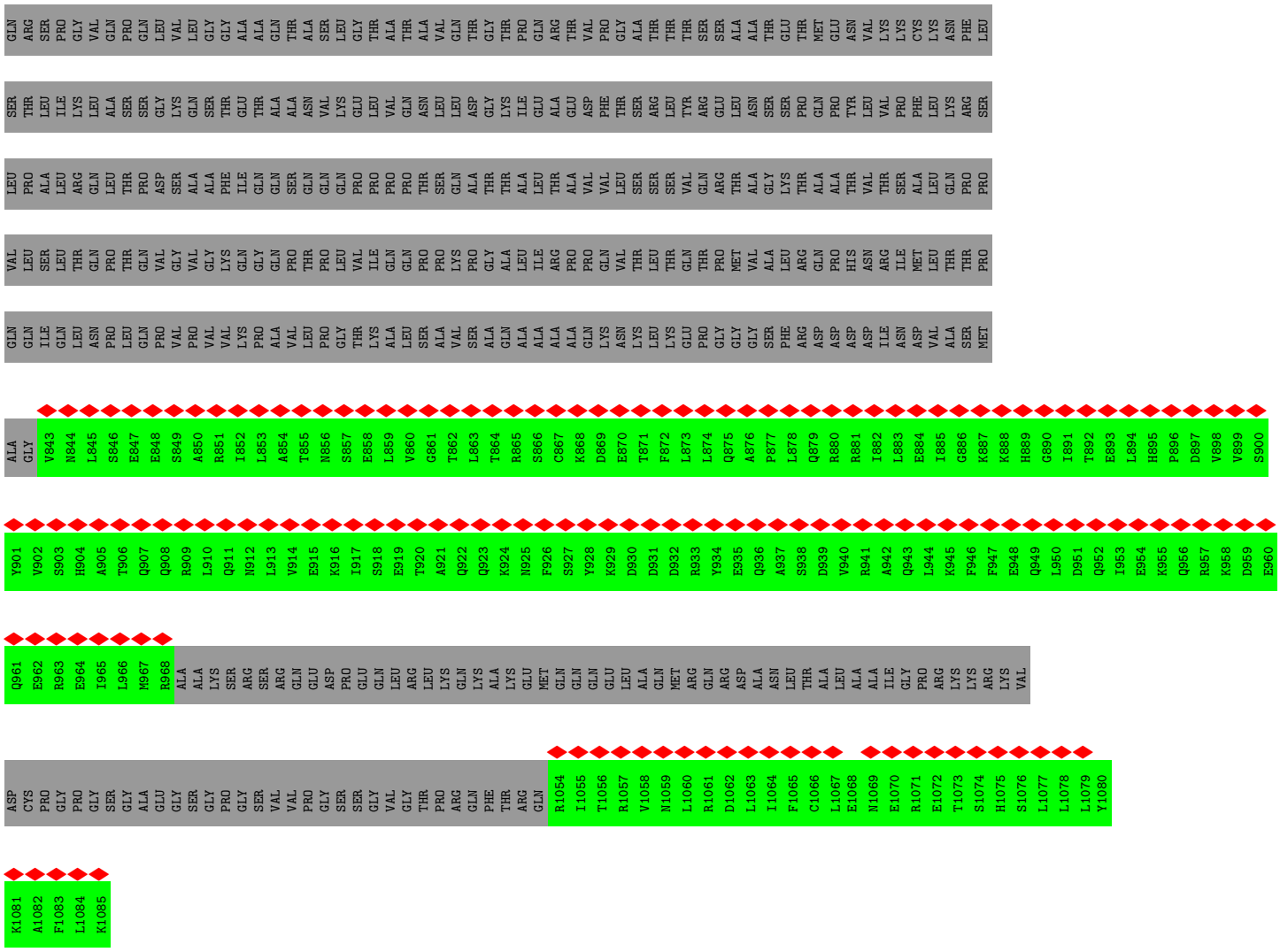




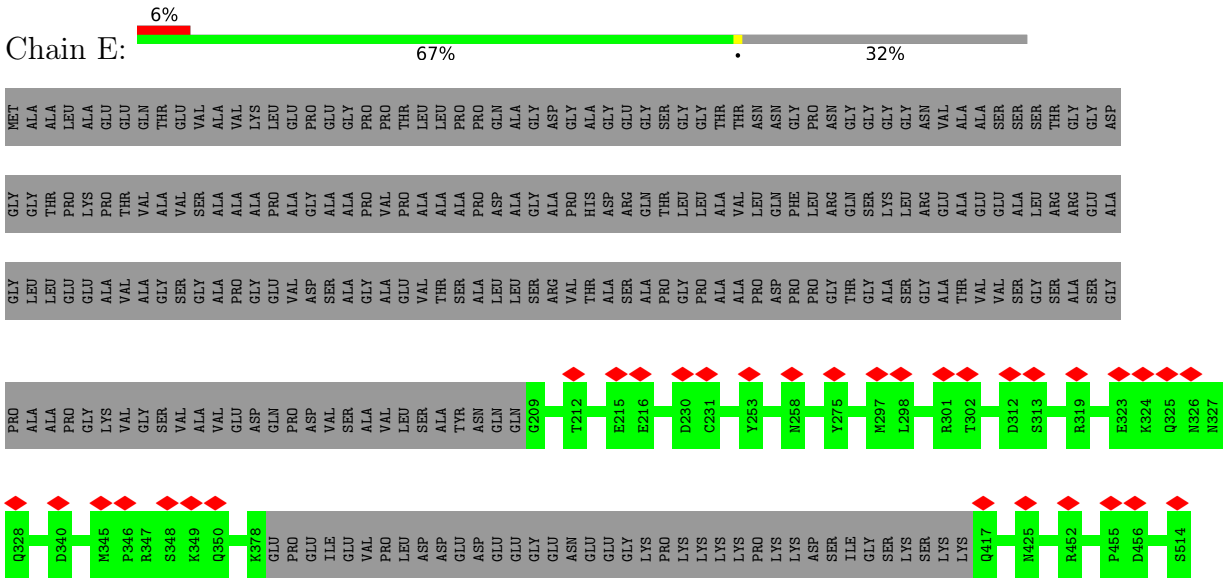
• Molecule 3: Transcription initiation factor TFIID subunit 4

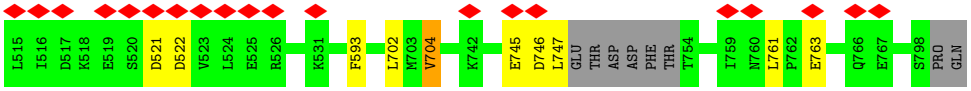
Chain d:





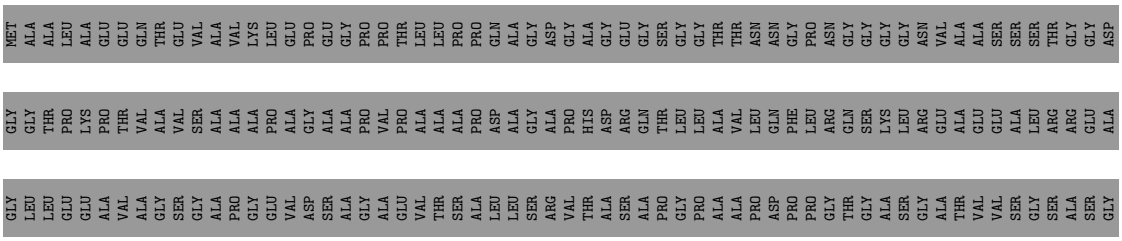
• Molecule 4: Transcription initiation factor TFIID subunit 5

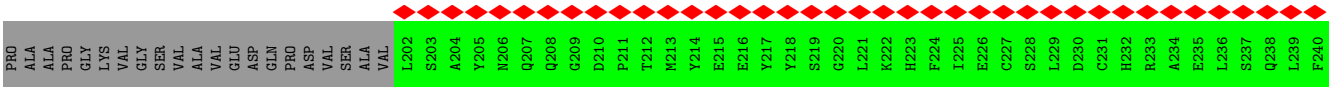


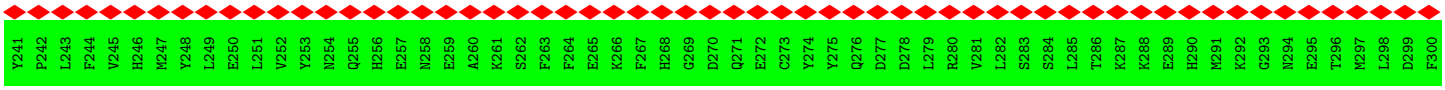


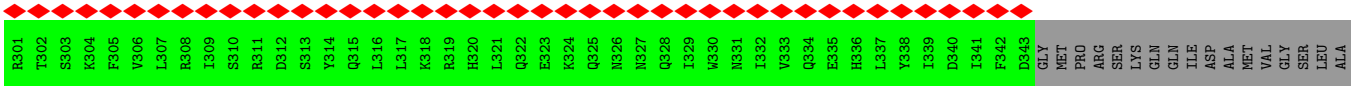
• Molecule 4: Transcription initiation factor TFIID subunit 5

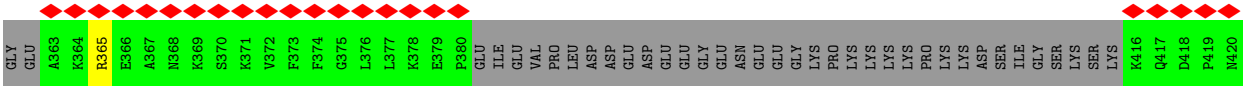
Chain e:

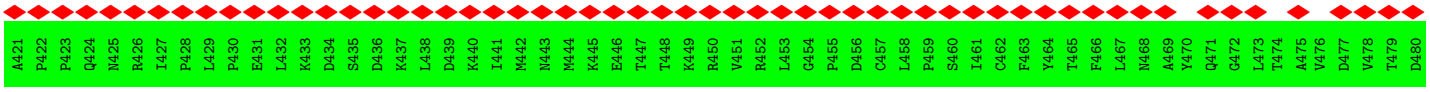


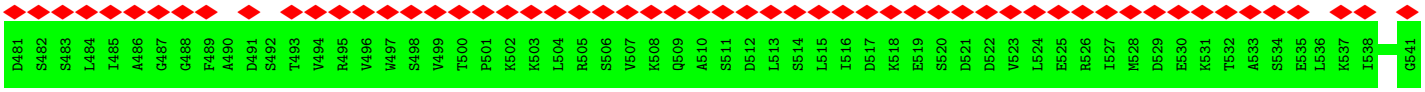


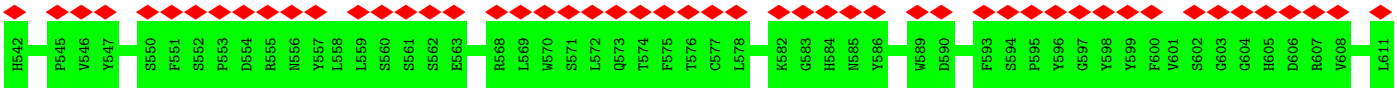


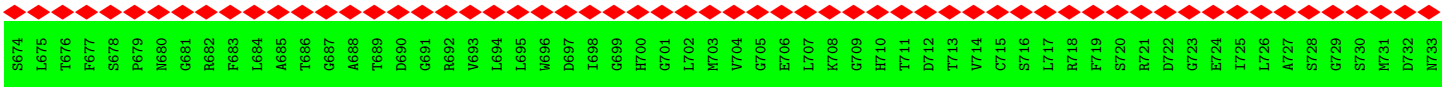


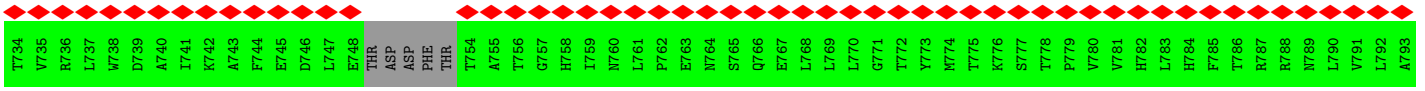


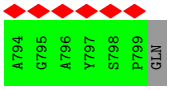






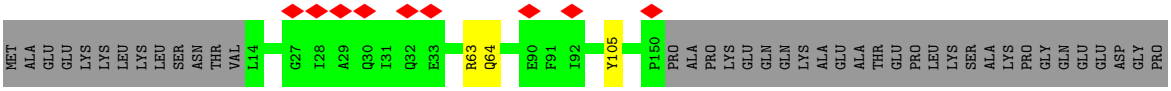


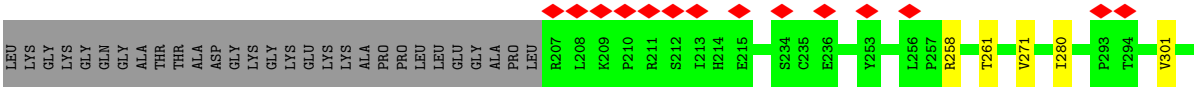


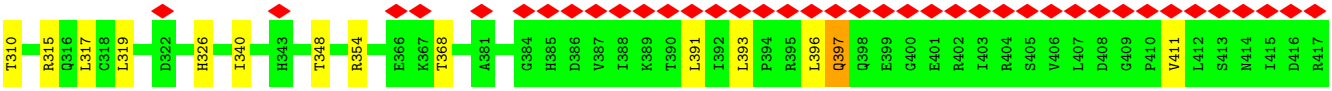


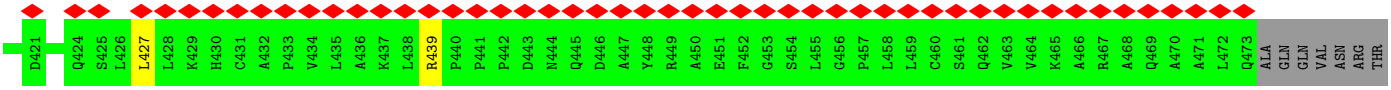
• Molecule 5: Transcription initiation factor TFIID subunit 6

Chain F:



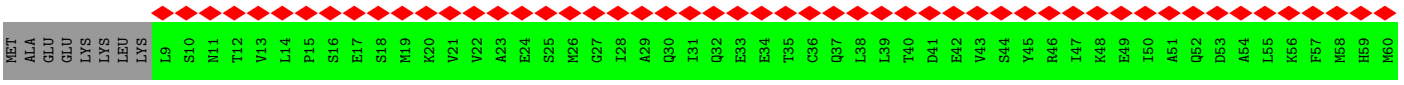


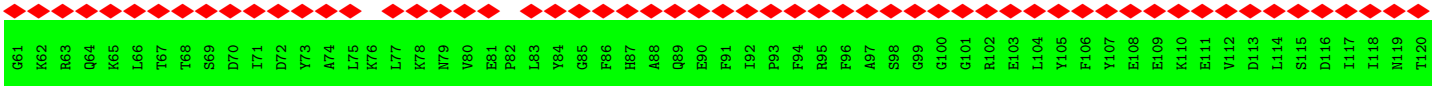


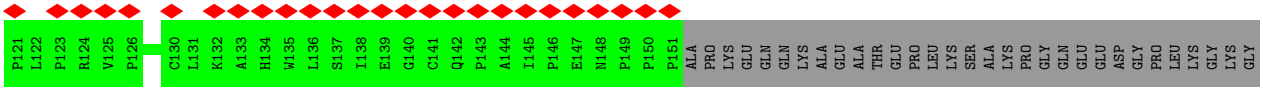


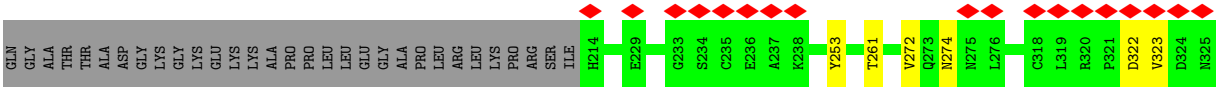
• Molecule 5: Transcription initiation factor TFIID subunit 6

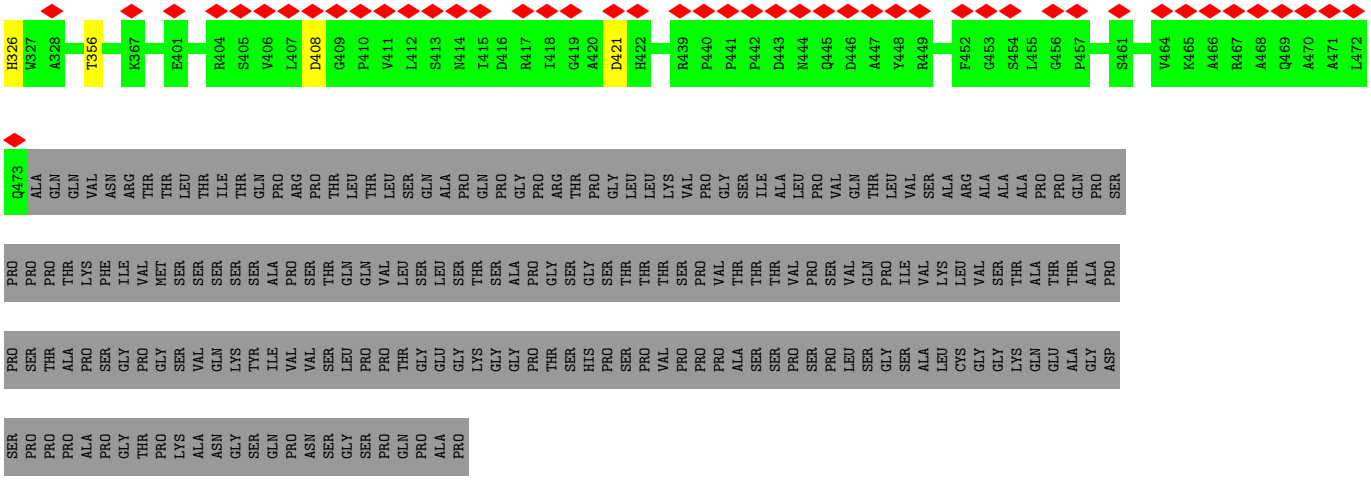
Chain f:





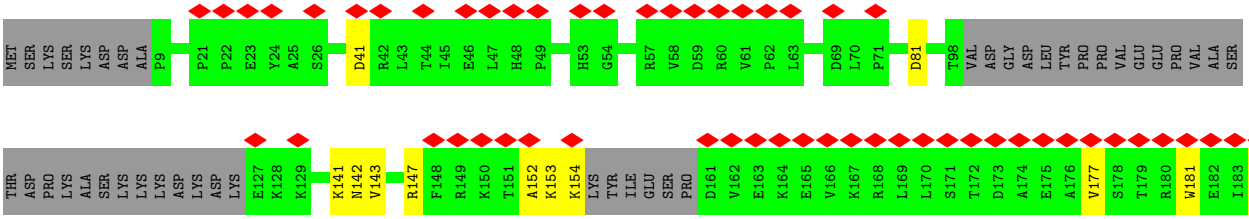






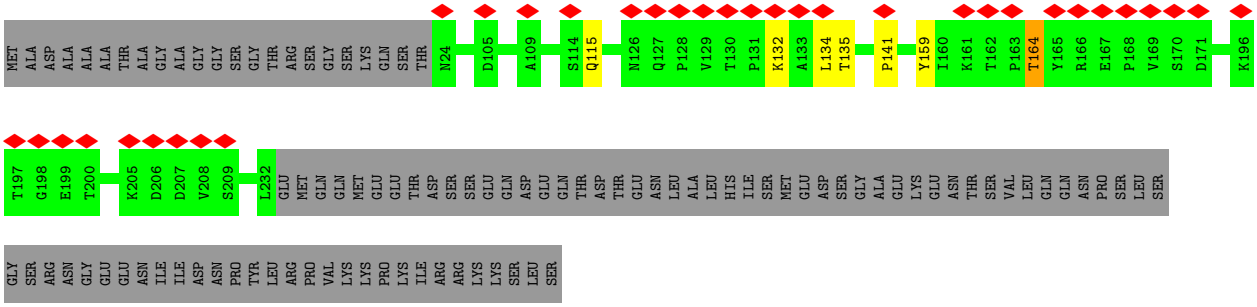
• Molecule 6: Transcription initiation factor TFIID subunit 7

Chain G:



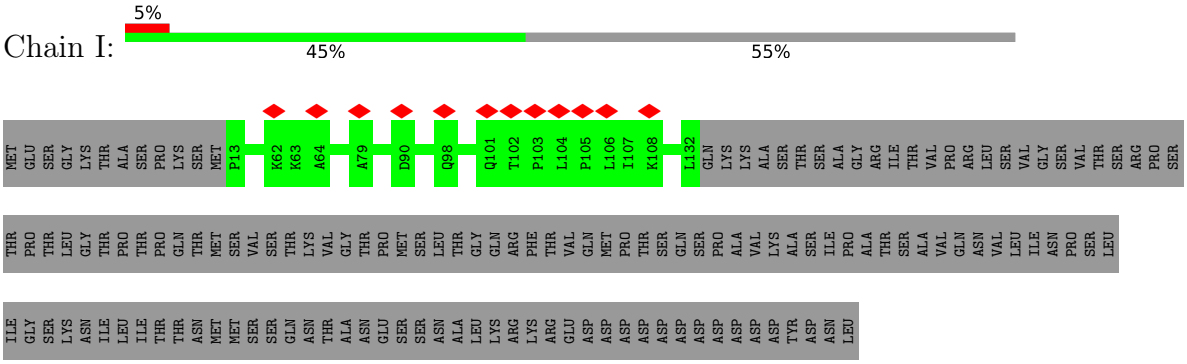
• Molecule 7: Transcription initiation factor TFIID subunit 8

Chain H:



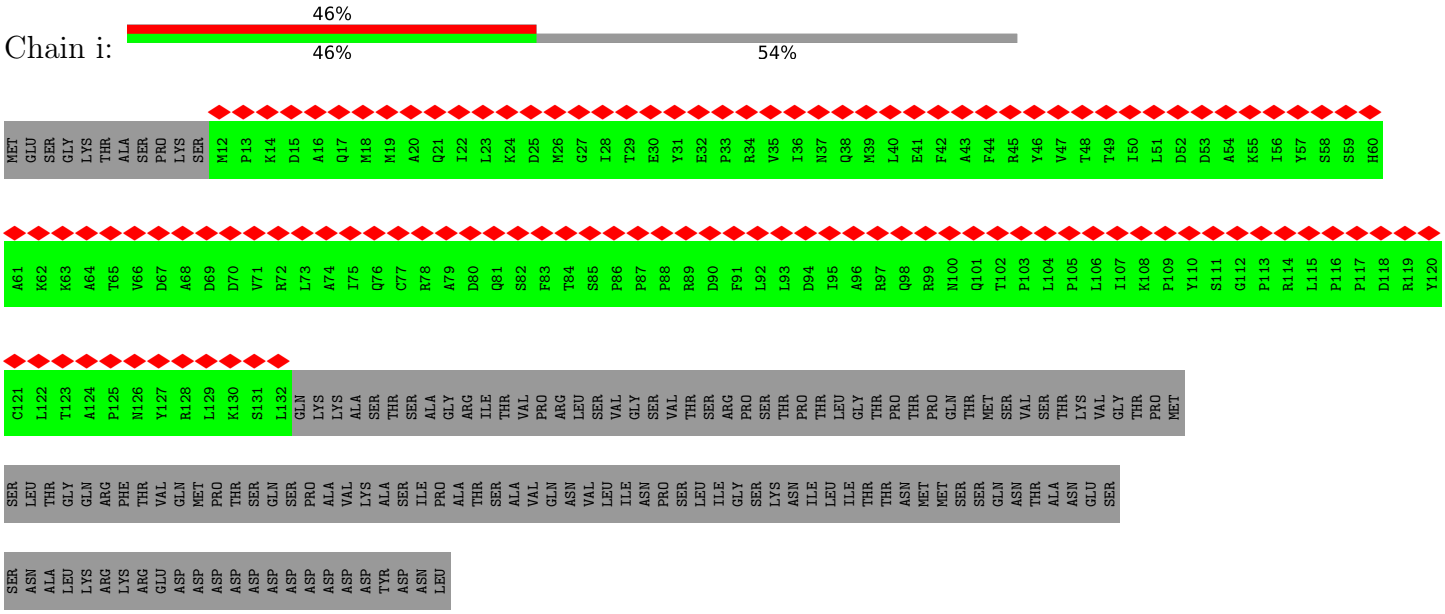
• Molecule 8: Transcription initiation factor TFIID subunit 9

Chain I:



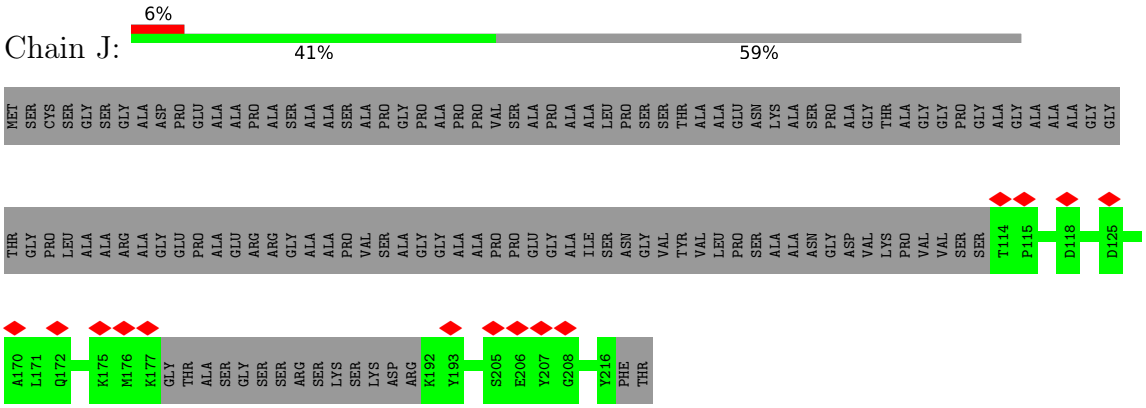
• Molecule 8: Transcription initiation factor TFIID subunit 9

Chain i:



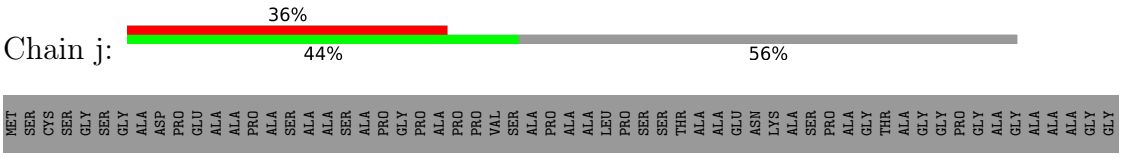
• Molecule 9: Transcription initiation factor TFIID subunit 10

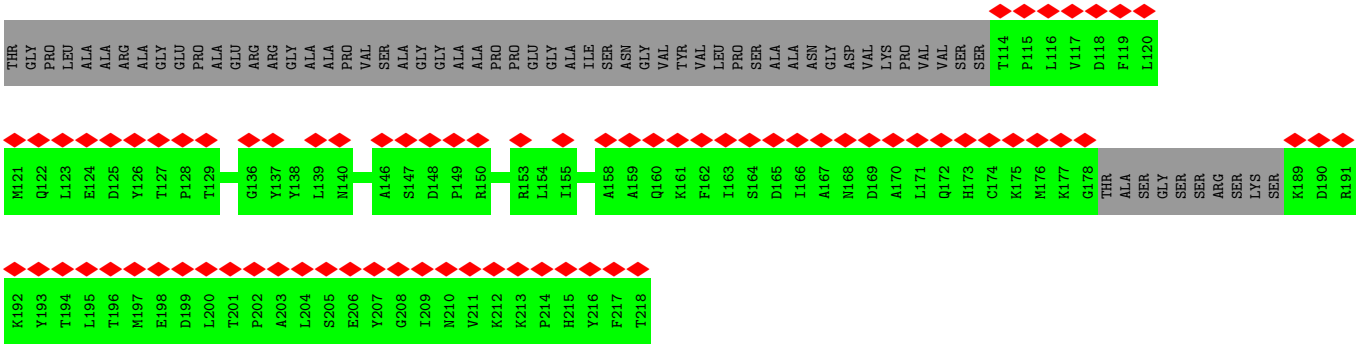
Chain J:



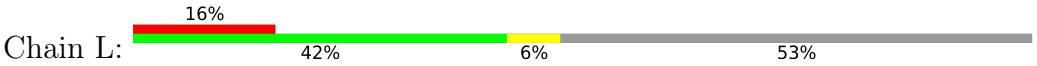
• Molecule 9: Transcription initiation factor TFIID subunit 10

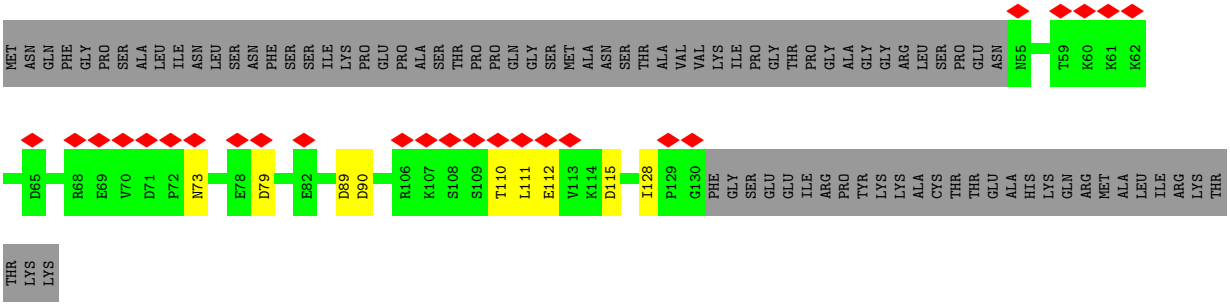
Chain j:



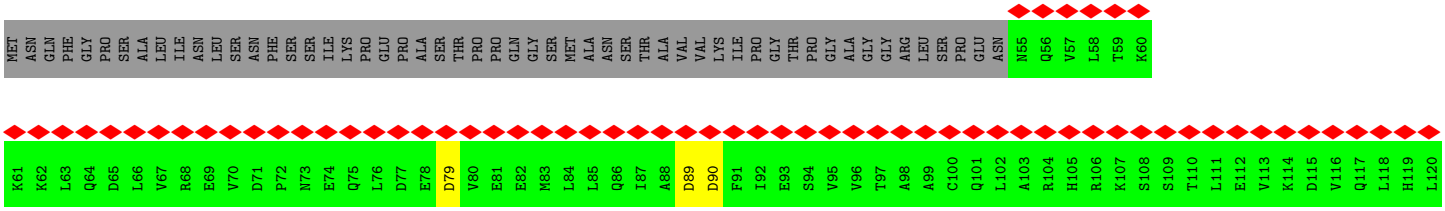


• Molecule 10: Transcription initiation factor TFIID subunit 12

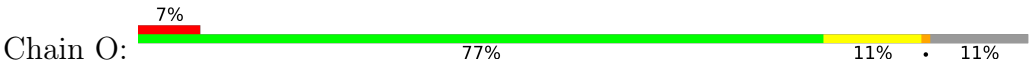


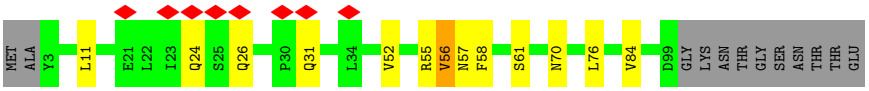


• Molecule 10: Transcription initiation factor TFIID subunit 12

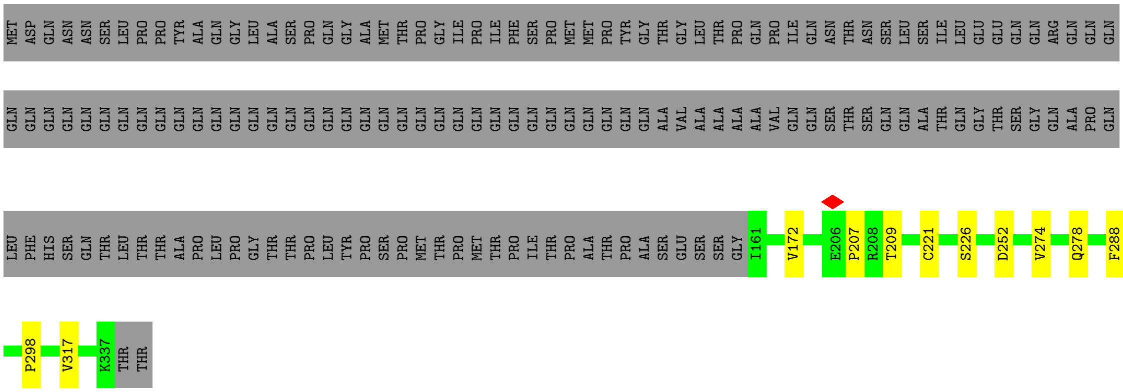


• Molecule 11: Transcription initiation factor IIA subunit 2



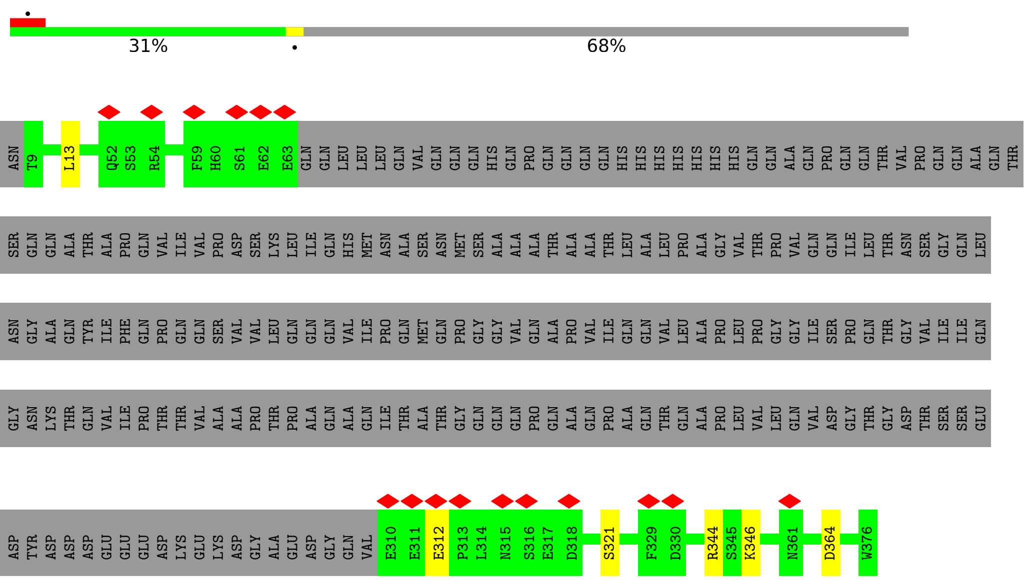


• Molecule 12: TATA-box-binding protein



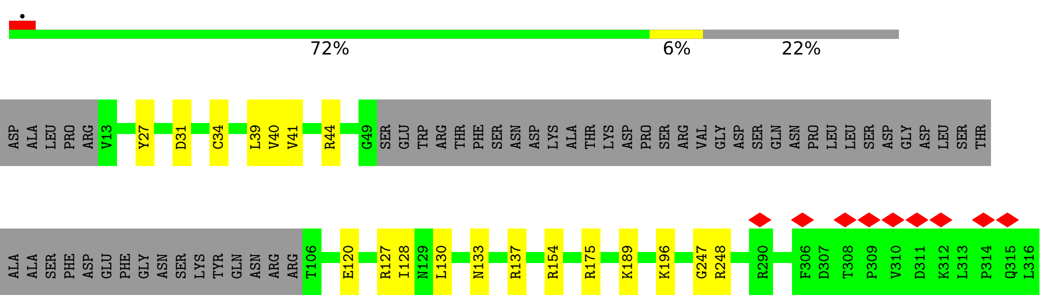
• Molecule 13: Transcription initiation factor IIA subunit 1

Chain Q:



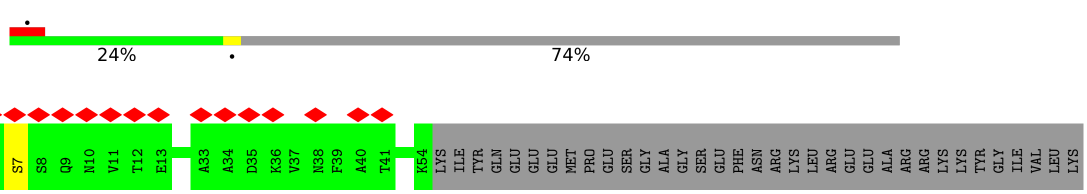
• Molecule 14: Transcription initiation factor IIB

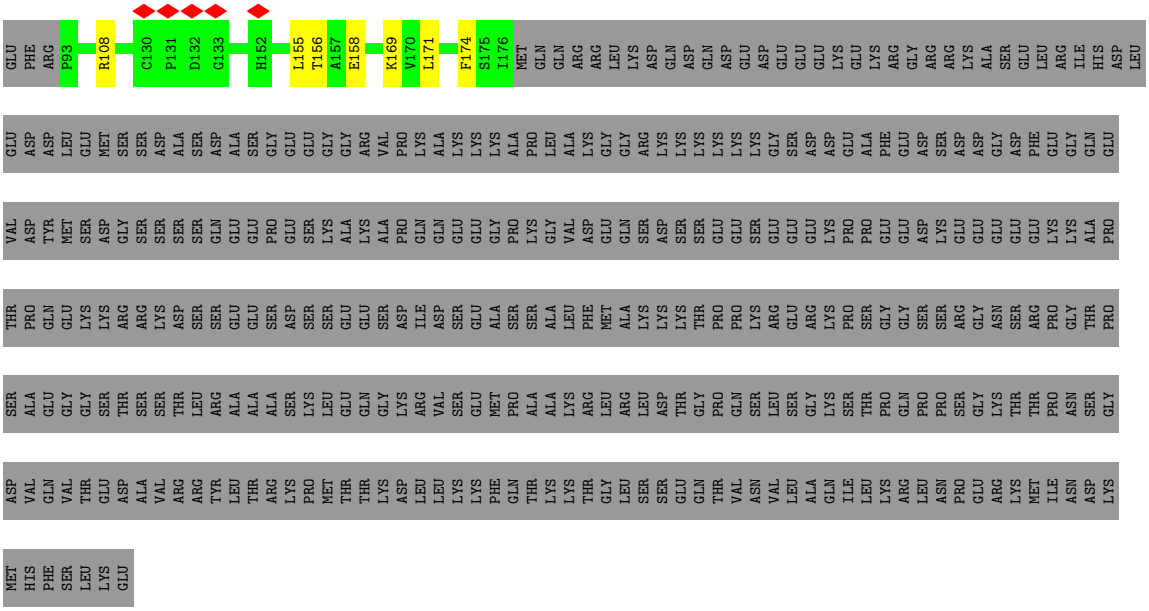
Chain R:



• Molecule 15: General transcription factor IIF subunit 1

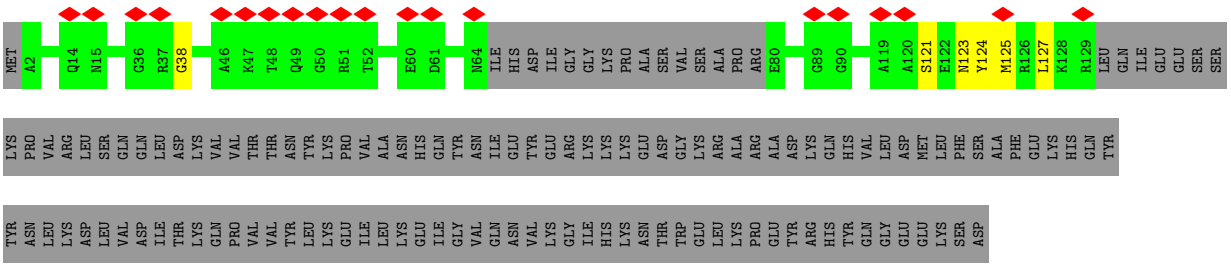
Chain S:





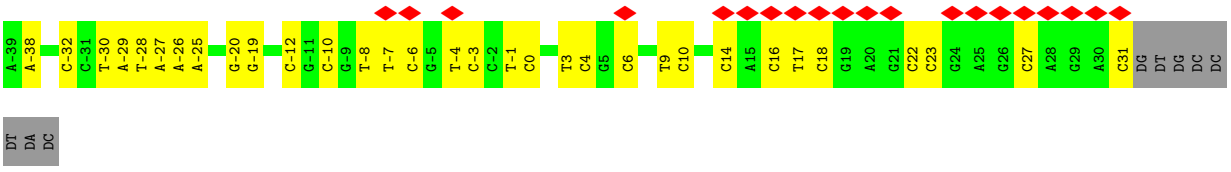
• Molecule 16: General transcription factor IIF subunit 2

Chain T:



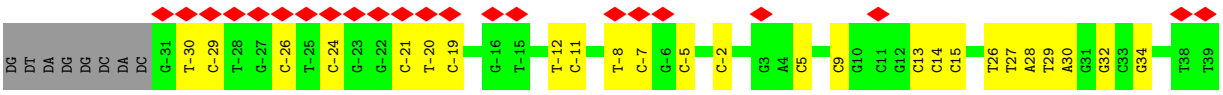
• Molecule 17: DNA (79-MER)

Chain X:



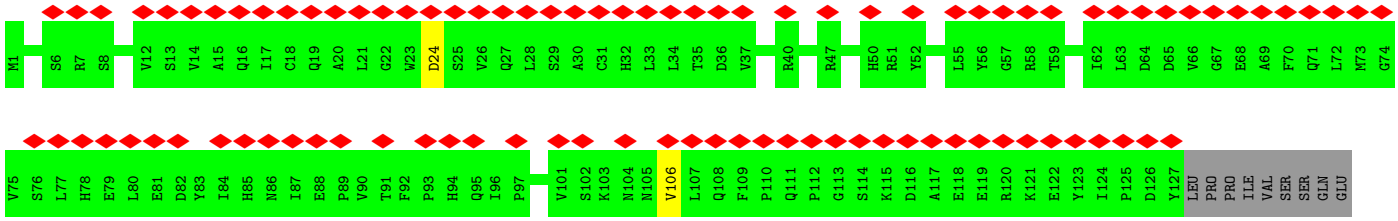
• Molecule 18: DNA (79-MER)

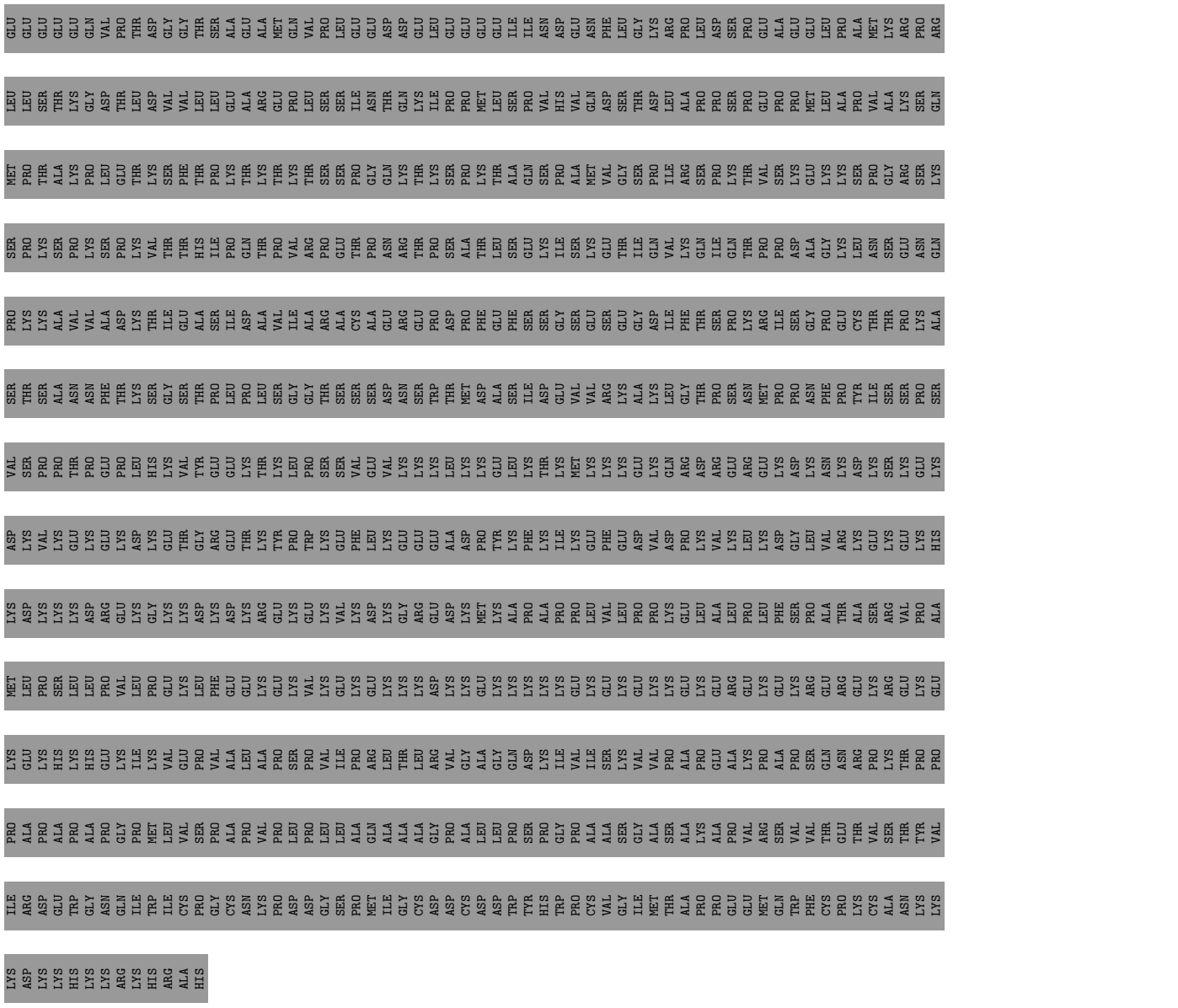
Chain Y:



• Molecule 19: Transcription initiation factor TFIID subunit 3

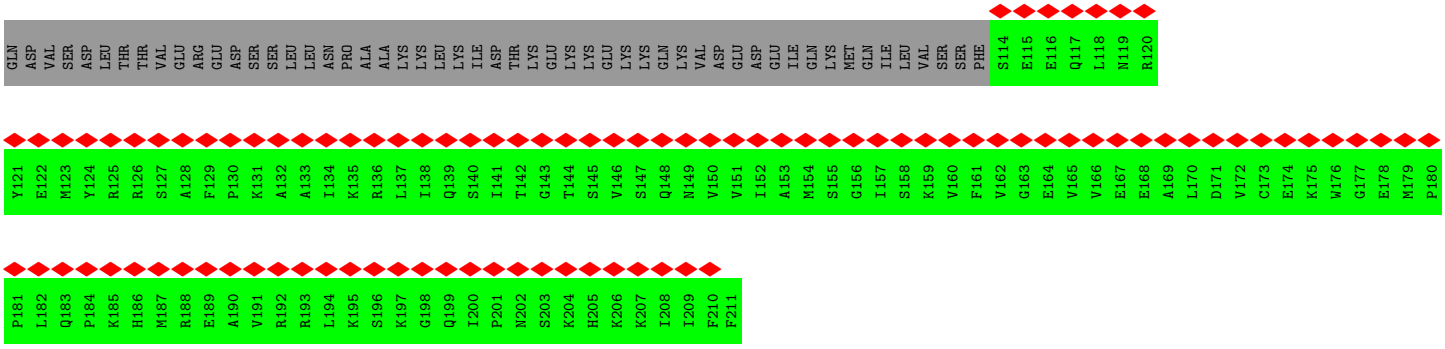
Chain c:



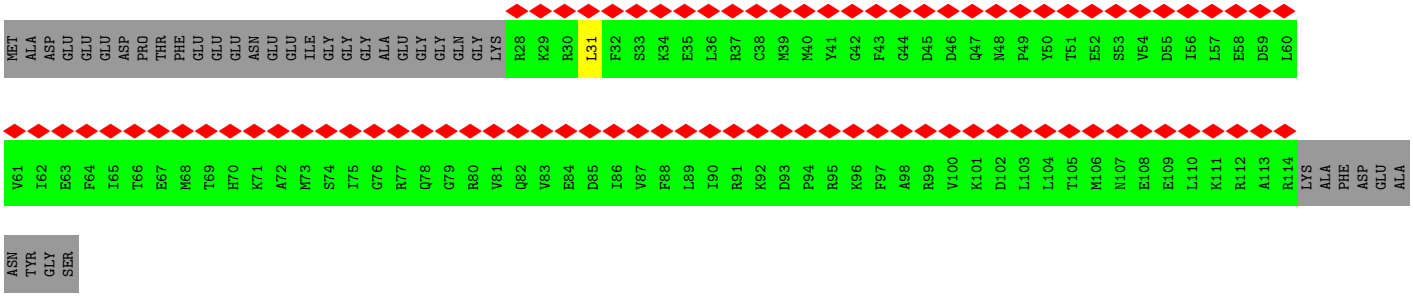


• Molecule 20: Transcription initiation factor TFIID subunit 11

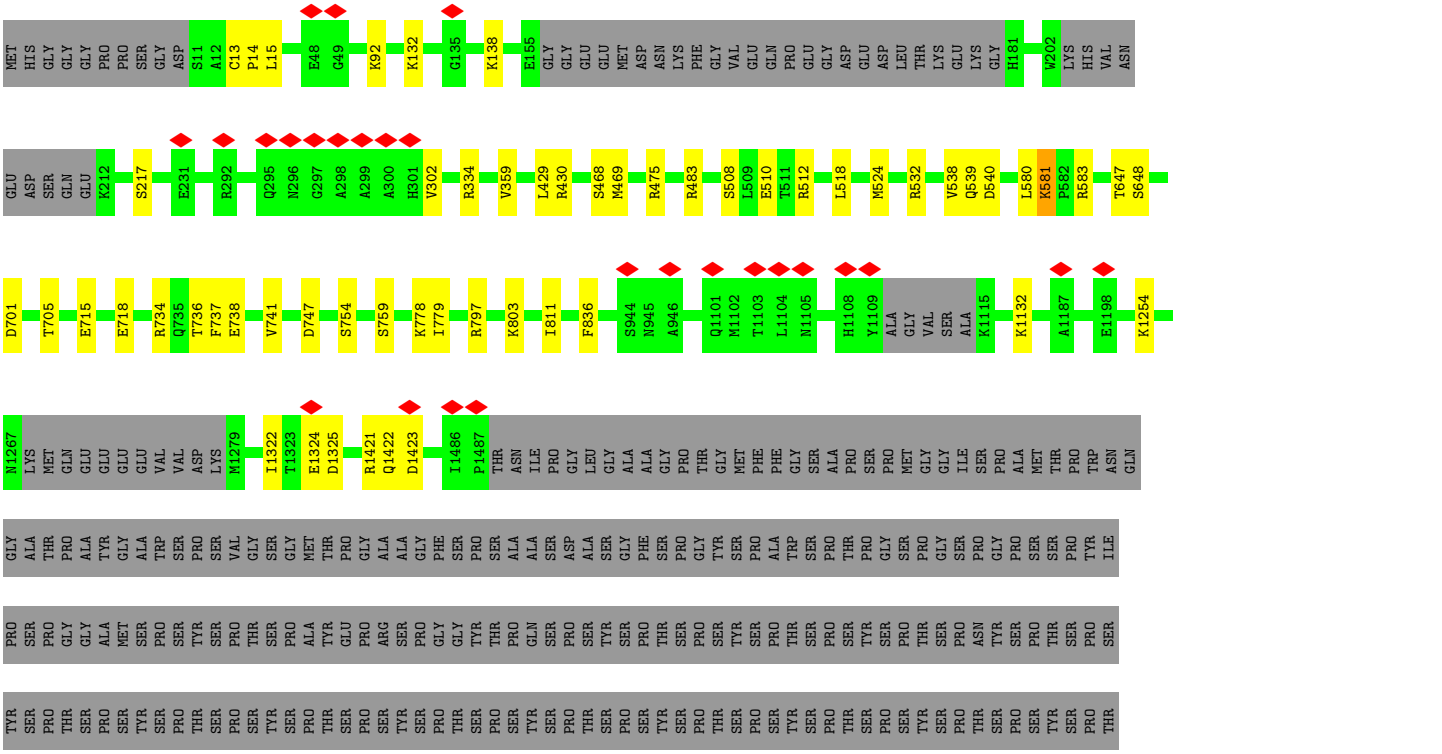
Chain k:

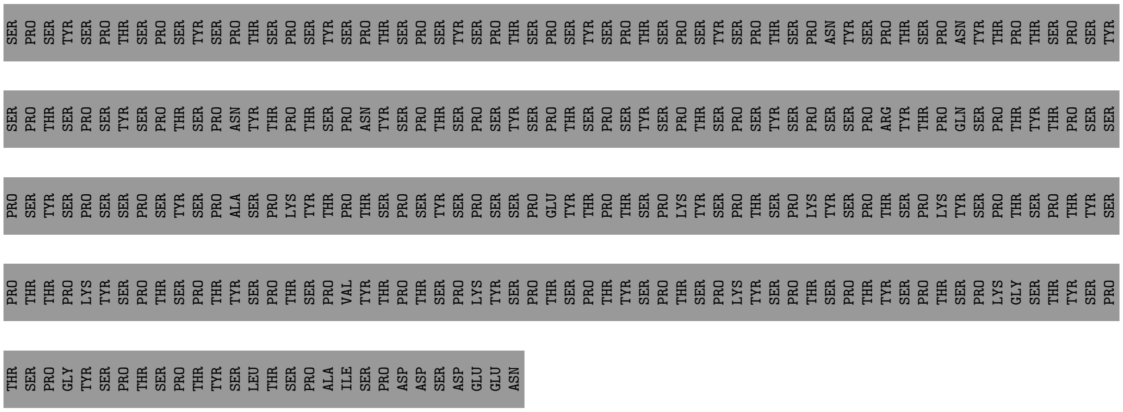


• Molecule 21: Transcription initiation factor TFIID subunit 13

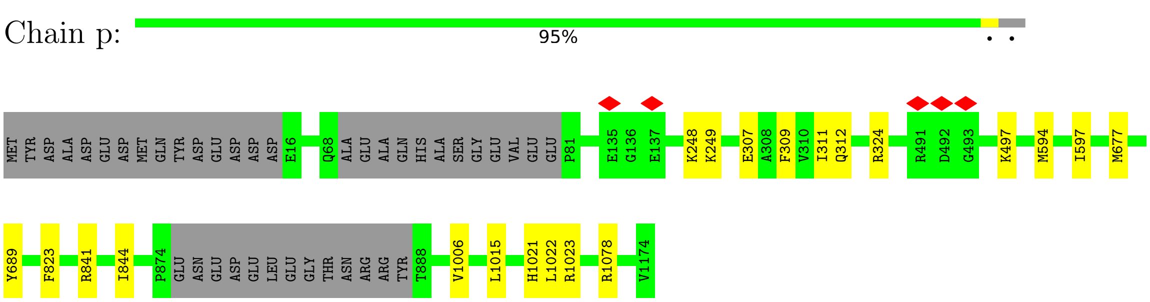


• Molecule 22: RPB1

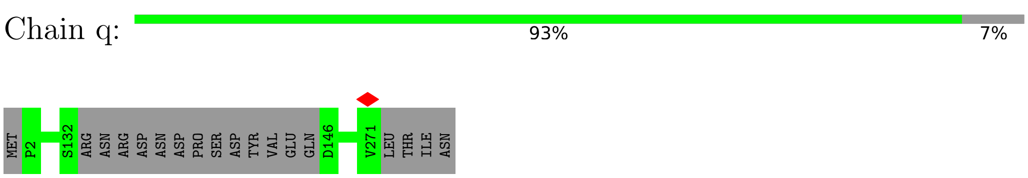




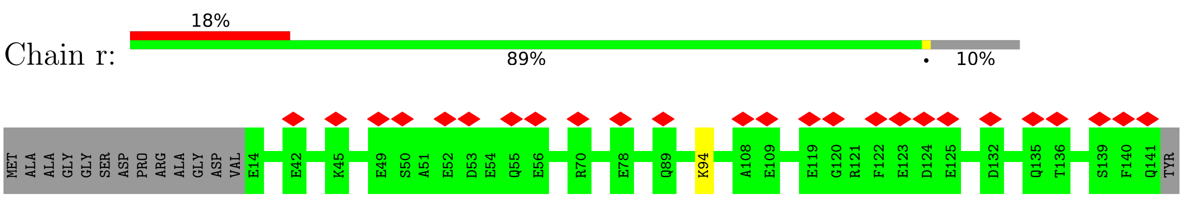
• Molecule 23: DNA-directed RNA polymerase subunit beta



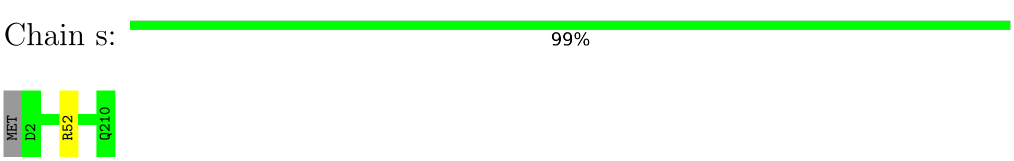
• Molecule 24: DNA-directed RNA polymerase II subunit RPB3



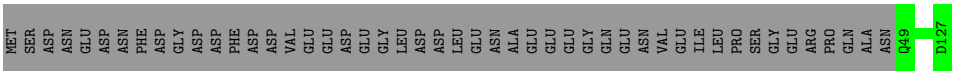
• Molecule 25: DNA-directed RNA polymerase II subunit RPB4



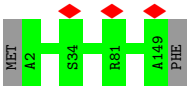
• Molecule 26: DNA-directed RNA polymerase II subunit E



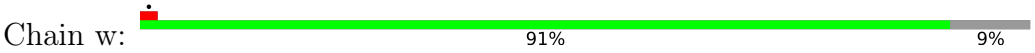
• Molecule 27: DNA-directed RNA polymerase II subunit F

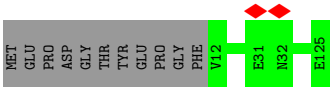


• Molecule 28: DNA-directed RNA polymerases I, II, and III subunit RPABC3

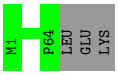


• Molecule 29: DNA-directed RNA polymerase II subunit RPB9

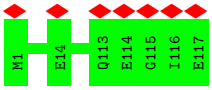




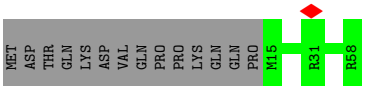
• Molecule 30: RPB10



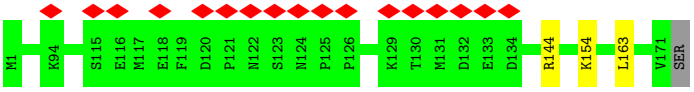
• Molecule 31: RNA_pol_L_2 domain-containing protein



• Molecule 32: RPB12



• Molecule 33: DNA-directed RNA polymerase II subunit RPB7



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	72012	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 ($e^-/Å^2$)	50.0	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.034	Depositor
Minimum map value	-0.006	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.002	Depositor
Recommended contour level	0.008	Depositor
Map size (Å)	488.15997, 488.15997, 488.15997	wwPDB
Map dimensions	360, 360, 360	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.356, 1.356, 1.356	Depositor

5 Model quality

5.1 Standard geometry

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

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	0.50	0/5028	0.70	1/6785 (0.0%)
2	B	0.46	0/7992	0.60	0/10835
3	D	0.49	0/1391	0.59	0/1859
3	d	0.28	0/1321	0.49	0/1772
4	E	0.35	0/4469	0.54	0/6050
4	e	0.33	0/4433	0.55	0/6004
5	F	0.48	0/3139	0.69	0/4264
5	f	0.41	0/3140	0.63	0/4268
6	G	0.52	0/1199	0.66	0/1612
7	H	0.39	0/1673	0.59	0/2285
8	I	0.30	0/981	0.49	0/1332
8	i	0.29	0/989	0.46	0/1343
9	J	0.30	0/724	0.50	0/982
9	j	0.30	0/775	0.52	0/1049
10	L	0.34	0/630	0.63	4/852 (0.5%)
10	l	0.30	0/888	0.56	3/1194 (0.3%)
11	O	0.51	0/781	0.74	0/1061
12	P	0.61	0/1438	0.74	0/1935
13	Q	0.42	0/1013	0.64	0/1366
14	R	0.33	0/1941	0.60	1/2622 (0.0%)
15	S	0.37	0/1130	0.53	0/1528
16	T	0.26	0/887	0.54	0/1193
17	X	1.09	28/1652 (1.7%)	1.38	7/2550 (0.3%)
18	Y	1.04	20/1612 (1.2%)	1.35	11/2483 (0.4%)
19	c	0.39	0/1035	0.54	0/1406
20	k	0.30	0/799	0.47	0/1070
21	m	0.31	0/733	0.51	0/977
22	o	0.43	0/11516	0.56	0/15548
23	p	0.39	0/9243	0.51	0/12475
24	q	0.38	0/2102	0.46	0/2857
25	r	0.27	0/1019	0.47	0/1374
26	s	0.30	0/1751	0.45	0/2366

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
27	t	0.37	0/645	0.46	0/871
28	v	0.37	0/1207	0.49	0/1628
29	w	0.30	0/948	0.45	0/1284
30	x	0.42	0/516	0.45	0/696
31	y	0.36	0/956	0.44	0/1294
32	z	0.38	0/377	0.45	0/500
33	u	0.33	0/1382	0.53	0/1874
All	All	0.45	48/83455 (0.1%)	0.63	27/113444 (0.0%)

All (48) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	Y	32	DG	C1'-N9	-7.51	1.36	1.47
18	Y	34	DG	C1'-N9	-6.84	1.37	1.47
17	X	-20	DG	C1'-N9	-6.59	1.38	1.47
17	X	-12	DC	C1'-N1	6.22	1.57	1.49
17	X	-8	DT	C1'-N1	6.19	1.57	1.49
17	X	16	DC	C1'-N1	6.18	1.57	1.49
18	Y	-29	DC	C1'-N1	6.17	1.57	1.49
17	X	-1	DT	C1'-N1	6.16	1.57	1.49
18	Y	-19	DC	C1'-N1	6.15	1.57	1.49
17	X	22	DC	C1'-N1	6.09	1.57	1.49
18	Y	-7	DC	C1'-N1	6.04	1.57	1.49
17	X	-19	DG	C1'-N9	-5.97	1.38	1.47
17	X	-38	DA	C1'-N9	-5.89	1.39	1.47
17	X	-28	DT	C4'-O4'	-5.72	1.39	1.45
18	Y	-20	DT	C1'-N1	5.25	1.56	1.49
17	X	9	DT	C1'-N1	5.24	1.56	1.49
18	Y	5	DC	C1'-N1	5.23	1.56	1.49
18	Y	15	DC	C1'-N1	5.23	1.56	1.49
17	X	23	DC	C1'-N1	5.22	1.56	1.49
18	Y	-2	DC	C1'-N1	5.22	1.56	1.49
17	X	-7	DT	C1'-N1	5.21	1.56	1.49
18	Y	-11	DC	C1'-N1	5.21	1.56	1.49
17	X	17	DT	C1'-N1	5.20	1.56	1.49
18	Y	-26	DC	C1'-N1	5.20	1.56	1.49
17	X	6	DC	C1'-N1	5.19	1.55	1.49
17	X	10	DC	C1'-N1	5.19	1.55	1.49
18	Y	-8	DT	C1'-N1	5.19	1.55	1.49
18	Y	-24	DC	C1'-N1	5.18	1.55	1.49
17	X	-10	DC	C1'-N1	5.18	1.55	1.49
17	X	4	DC	C1'-N1	5.18	1.55	1.49

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Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	Y	-30	DT	C1'-N1	5.18	1.55	1.49
17	X	-6	DC	C1'-N1	5.17	1.55	1.49
18	Y	9	DC	C1'-N1	5.17	1.55	1.49
17	X	27	DC	C1'-N1	5.16	1.55	1.49
18	Y	-21	DC	C1'-N1	5.16	1.55	1.49
17	X	-32	DC	C1'-N1	5.14	1.55	1.49
17	X	31	DC	C1'-N1	5.13	1.55	1.49
17	X	-27	DA	C4'-O4'	-5.12	1.40	1.45
17	X	-3	DC	C1'-N1	5.12	1.55	1.49
17	X	3	DT	C1'-N1	5.12	1.55	1.49
17	X	14	DC	C1'-N1	5.12	1.55	1.49
18	Y	13	DC	C1'-N1	5.11	1.55	1.49
18	Y	14	DC	C1'-N1	5.11	1.55	1.49
17	X	0	DC	C1'-N1	5.10	1.55	1.49
17	X	-4	DT	C1'-N1	5.09	1.55	1.49
18	Y	-12	DT	C1'-N1	5.07	1.55	1.49
18	Y	-5	DC	C1'-N1	5.07	1.55	1.49
17	X	18	DC	C1'-N1	5.00	1.55	1.49

All (27) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
18	Y	32	DG	O4'-C1'-C2'	-11.13	97.00	105.90
17	X	-27	DA	O4'-C4'-C3'	-9.33	100.40	106.00
17	X	-26	DA	O4'-C4'-C3'	-8.89	100.66	106.00
18	Y	30	DA	O4'-C1'-C2'	-7.20	100.14	105.90
14	R	44	ARG	CB-CA-C	6.90	124.19	110.40
18	Y	27	DT	C6-C5-C7	-6.74	118.86	122.90
1	A	498	PRO	N-CA-CB	6.69	111.33	103.30
17	X	-28	DT	C4-C5-C6	6.21	121.72	118.00
17	X	-26	DA	P-O3'-C3'	6.12	127.04	119.70
17	X	-25	DA	P-O3'-C3'	5.57	126.39	119.70
17	X	-30	DT	C6-C5-C7	-5.57	119.56	122.90
18	Y	28	DA	P-O3'-C3'	5.52	126.33	119.70
18	Y	27	DT	C1'-O4'-C4'	-5.28	104.82	110.10
18	Y	26	DT	O4'-C1'-N1	-5.25	104.32	108.00
18	Y	29	DT	O4'-C4'-C3'	-5.24	102.40	104.50
10	L	89	ASP	CB-CG-OD2	5.20	122.98	118.30
10	l	90	ASP	CB-CG-OD2	5.20	122.98	118.30
10	l	79	ASP	CB-CG-OD2	5.18	122.97	118.30
10	l	89	ASP	CB-CG-OD2	5.18	122.97	118.30
18	Y	26	DT	C6-C5-C7	-5.18	119.79	122.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	L	90	ASP	CB-CG-OD2	5.18	122.96	118.30
10	L	115	ASP	CB-CG-OD2	5.16	122.94	118.30
10	L	79	ASP	CB-CG-OD2	5.15	122.94	118.30
18	Y	32	DG	O4'-C1'-N9	5.13	111.59	108.00
18	Y	26	DT	C4-C5-C6	5.05	121.03	118.00
17	X	-29	DA	C5'-C4'-C3'	-5.04	105.03	114.10
18	Y	30	DA	C1'-O4'-C4'	-5.03	105.07	110.10

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

Due to software issues we are unable to calculate clashes - this section is therefore empty.

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	581/1872 (31%)	543 (94%)	35 (6%)	3 (0%)	29 69
2	B	959/1199 (80%)	912 (95%)	47 (5%)	0	100 100
3	D	159/1085 (15%)	151 (95%)	7 (4%)	1 (1%)	25 66
3	d	154/1085 (14%)	150 (97%)	4 (3%)	0	100 100
4	E	540/800 (68%)	502 (93%)	36 (7%)	2 (0%)	34 72
4	e	531/800 (66%)	484 (91%)	47 (9%)	0	100 100
5	F	400/677 (59%)	376 (94%)	18 (4%)	6 (2%)	10 45
5	f	399/677 (59%)	377 (94%)	22 (6%)	0	100 100
6	G	139/349 (40%)	133 (96%)	5 (4%)	1 (1%)	22 63
7	H	207/310 (67%)	189 (91%)	15 (7%)	3 (1%)	11 46

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	I	118/264 (45%)	114 (97%)	4 (3%)	0	100	100
8	i	119/264 (45%)	115 (97%)	4 (3%)	0	100	100
9	J	85/218 (39%)	82 (96%)	3 (4%)	0	100	100
9	j	91/218 (42%)	89 (98%)	2 (2%)	0	100	100
10	L	74/161 (46%)	72 (97%)	2 (3%)	0	100	100
10	l	105/161 (65%)	101 (96%)	4 (4%)	0	100	100
11	O	95/109 (87%)	79 (83%)	12 (13%)	4 (4%)	3	22
12	P	175/339 (52%)	168 (96%)	5 (3%)	2 (1%)	14	52
13	Q	118/376 (31%)	106 (90%)	10 (8%)	2 (2%)	9	42
14	R	244/316 (77%)	233 (96%)	10 (4%)	1 (0%)	34	72
15	S	130/517 (25%)	126 (97%)	4 (3%)	0	100	100
16	T	109/249 (44%)	102 (94%)	4 (4%)	3 (3%)	5	30
19	c	125/929 (14%)	116 (93%)	9 (7%)	0	100	100
20	k	96/211 (46%)	91 (95%)	5 (5%)	0	100	100
21	m	85/124 (68%)	79 (93%)	6 (7%)	0	100	100
22	o	1417/1970 (72%)	1303 (92%)	110 (8%)	4 (0%)	41	76
23	p	1128/1174 (96%)	1050 (93%)	77 (7%)	1 (0%)	51	85
24	q	253/275 (92%)	226 (89%)	27 (11%)	0	100	100
25	r	126/142 (89%)	119 (94%)	7 (6%)	0	100	100
26	s	207/210 (99%)	196 (95%)	11 (5%)	0	100	100
27	t	77/127 (61%)	74 (96%)	3 (4%)	0	100	100
28	v	146/150 (97%)	132 (90%)	14 (10%)	0	100	100
29	w	112/125 (90%)	103 (92%)	9 (8%)	0	100	100
30	x	62/67 (92%)	60 (97%)	2 (3%)	0	100	100
31	y	115/117 (98%)	109 (95%)	6 (5%)	0	100	100
32	z	42/58 (72%)	38 (90%)	4 (10%)	0	100	100
33	u	169/172 (98%)	157 (93%)	11 (6%)	1 (1%)	25	66
All	All	9692/17897 (54%)	9057 (93%)	601 (6%)	34 (0%)	38	72

All (34) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	1000	LEU

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Mol	Chain	Res	Type
1	A	1158	SER
4	E	704	VAL
5	F	396	LEU
7	H	141	PRO
11	O	52	VAL
13	Q	321	SER
16	T	124	TYR
22	o	14	PRO
22	o	539	GLN
22	o	581	LYS
23	p	1021	HIS
33	u	154	LYS
1	A	498	PRO
4	E	521	ASP
5	F	397	GLN
5	F	411	VAL
6	G	152	ALA
11	O	26	GLN
16	T	121	SER
3	D	936	GLN
12	P	207	PRO
5	F	393	LEU
5	F	439	ARG
11	O	56	VAL
11	O	84	VAL
16	T	38	GLY
5	F	64	GLN
7	H	134	LEU
7	H	164	THR
22	o	469	MET
12	P	298	PRO
14	R	247	GLY
13	Q	312	GLU

5.3.2 Protein sidechains (i)

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	534/1665 (32%)	483 (90%)	51 (10%)	8 27
2	B	875/1083 (81%)	858 (98%)	17 (2%)	57 75
3	D	149/815 (18%)	125 (84%)	24 (16%)	2 13
3	d	146/815 (18%)	146 (100%)	0	100 100
4	E	478/657 (73%)	469 (98%)	9 (2%)	57 75
4	e	475/657 (72%)	473 (100%)	2 (0%)	91 94
5	F	320/574 (56%)	301 (94%)	19 (6%)	19 45
5	f	322/574 (56%)	312 (97%)	10 (3%)	40 62
6	G	133/322 (41%)	122 (92%)	11 (8%)	11 34
7	H	181/270 (67%)	176 (97%)	5 (3%)	43 65
8	I	106/235 (45%)	106 (100%)	0	100 100
8	i	107/235 (46%)	107 (100%)	0	100 100
9	J	78/154 (51%)	78 (100%)	0	100 100
9	j	83/154 (54%)	83 (100%)	0	100 100
10	L	71/141 (50%)	66 (93%)	5 (7%)	15 40
10	l	98/141 (70%)	98 (100%)	0	100 100
11	O	84/98 (86%)	74 (88%)	10 (12%)	5 20
12	P	153/293 (52%)	144 (94%)	9 (6%)	19 45
13	Q	111/324 (34%)	107 (96%)	4 (4%)	35 59
14	R	211/268 (79%)	194 (92%)	17 (8%)	11 35
15	S	117/448 (26%)	109 (93%)	8 (7%)	16 40
16	T	94/218 (43%)	91 (97%)	3 (3%)	39 61
19	c	113/833 (14%)	111 (98%)	2 (2%)	59 77
20	k	87/182 (48%)	87 (100%)	0	100 100
21	m	80/106 (76%)	79 (99%)	1 (1%)	69 82
22	o	1257/1748 (72%)	1204 (96%)	53 (4%)	30 54
23	p	993/1027 (97%)	973 (98%)	20 (2%)	55 74
24	q	234/252 (93%)	234 (100%)	0	100 100
25	r	106/126 (84%)	105 (99%)	1 (1%)	78 88
26	s	191/192 (100%)	190 (100%)	1 (0%)	88 93
27	t	69/111 (62%)	69 (100%)	0	100 100
28	v	129/131 (98%)	129 (100%)	0	100 100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
29	w	103/112 (92%)	103 (100%)	0	100	100
30	x	53/56 (95%)	53 (100%)	0	100	100
31	y	106/106 (100%)	106 (100%)	0	100	100
32	z	41/55 (74%)	41 (100%)	0	100	100
33	u	152/153 (99%)	150 (99%)	2 (1%)	69	82
All	All	8640/15331 (56%)	8356 (97%)	284 (3%)	41	61

All (284) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	341	TRP
1	A	353	LEU
1	A	395	ASP
1	A	397	LEU
1	A	400	GLU
1	A	404	MET
1	A	408	LEU
1	A	415	ILE
1	A	416	TRP
1	A	417	ASP
1	A	419	GLU
1	A	470	ILE
1	A	475	LEU
1	A	481	GLU
1	A	489	GLN
1	A	493	ARG
1	A	496	GLU
1	A	499	VAL
1	A	500	LEU
1	A	501	THR
1	A	502	LEU
1	A	505	ASN
1	A	511	LEU
1	A	639	LEU
1	A	661	GLU
1	A	667	THR
1	A	711	ASP
1	A	727	THR
1	A	730	PHE
1	A	797	LYS

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Mol	Chain	Res	Type
1	A	798	ARG
1	A	801	THR
1	A	819	LYS
1	A	820	ASP
1	A	821	ARG
1	A	828	GLU
1	A	843	ARG
1	A	844	LYS
1	A	943	LYS
1	A	1020	LEU
1	A	1052	ARG
1	A	1055	VAL
1	A	1058	HIS
1	A	1059	GLN
1	A	1062	TYR
1	A	1073	GLN
1	A	1083	LEU
1	A	1165	LEU
1	A	1167	ILE
1	A	1169	ARG
1	A	1203	GLU
2	B	21	GLU
2	B	24	ARG
2	B	71	ARG
2	B	140	GLU
2	B	184	ASN
2	B	225	TYR
2	B	262	MET
2	B	266	THR
2	B	293	GLU
2	B	431	LEU
2	B	488	PHE
2	B	559	LYS
2	B	603	LYS
2	B	638	ARG
2	B	640	VAL
2	B	771	VAL
2	B	818	THR
3	D	887	LYS
3	D	888	LYS
3	D	891	ILE
3	D	893	GLU

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Mol	Chain	Res	Type
3	D	936	GLN
3	D	941	ARG
3	D	948	GLU
3	D	950	LEU
3	D	951	ASP
3	D	958	LYS
3	D	959	ASP
3	D	966	LEU
3	D	967	MET
3	D	968	ARG
3	D	980	GLU
3	D	981	GLN
3	D	983	ARG
3	D	995	GLU
3	D	996	LEU
3	D	1000	ARG
3	D	1002	ARG
3	D	1003	ASP
3	D	1054	ARG
3	D	1055	ILE
4	E	522	ASP
4	E	593	PHE
4	E	702	LEU
4	E	704	VAL
4	E	745	GLU
4	E	746	ASP
4	E	747	LEU
4	E	761	LEU
4	E	763	GLU
5	F	63	ARG
5	F	105	TYR
5	F	258	ARG
5	F	261	THR
5	F	271	VAL
5	F	280	ILE
5	F	301	VAL
5	F	310	THR
5	F	315	ARG
5	F	317	LEU
5	F	319	LEU
5	F	326	HIS
5	F	340	ILE

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Mol	Chain	Res	Type
5	F	348	THR
5	F	354	ARG
5	F	368	THR
5	F	391	LEU
5	F	397	GLN
5	F	427	LEU
6	G	41	ASP
6	G	81	ASP
6	G	141	LYS
6	G	142	ASN
6	G	143	VAL
6	G	147	ARG
6	G	153	LYS
6	G	154	LYS
6	G	177	VAL
6	G	181	TRP
6	G	184	ILE
7	H	115	GLN
7	H	132	LYS
7	H	135	THR
7	H	159	TYR
7	H	164	THR
10	L	73	ASN
10	L	110	THR
10	L	111	LEU
10	L	112	GLU
10	L	128	ILE
11	O	11	LEU
11	O	24	GLN
11	O	31	GLN
11	O	55	ARG
11	O	56	VAL
11	O	57	ASN
11	O	58	PHE
11	O	61	SER
11	O	70	ASN
11	O	76	LEU
12	P	172	VAL
12	P	209	THR
12	P	221	CYS
12	P	226	SER
12	P	252	ASP

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Mol	Chain	Res	Type
12	P	274	VAL
12	P	278	GLN
12	P	288	PHE
12	P	317	VAL
13	Q	13	LEU
13	Q	344	ARG
13	Q	346	LYS
13	Q	364	ASP
14	R	27	TYR
14	R	31	ASP
14	R	34	CYS
14	R	39	LEU
14	R	40	VAL
14	R	41	VAL
14	R	120	GLU
14	R	127	ARG
14	R	128	ILE
14	R	130	LEU
14	R	133	ASN
14	R	137	ARG
14	R	154	ARG
14	R	175	ARG
14	R	189	LYS
14	R	196	LYS
14	R	248	ARG
15	S	7	SER
15	S	108	ARG
15	S	155	LEU
15	S	156	THR
15	S	158	GLU
15	S	169	LYS
15	S	171	LEU
15	S	174	PHE
16	T	123	ASN
16	T	125	MET
16	T	127	LEU
19	c	24	ASP
19	c	106	VAL
4	e	365	ARG
4	e	663	ARG
5	f	253	TYR
5	f	261	THR

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Mol	Chain	Res	Type
5	f	272	VAL
5	f	274	ASN
5	f	322	ASP
5	f	323	VAL
5	f	326	HIS
5	f	356	THR
5	f	408	ASP
5	f	421	ASP
21	m	31	LEU
22	o	13	CYS
22	o	15	LEU
22	o	92	LYS
22	o	132	LYS
22	o	138	LYS
22	o	217	SER
22	o	302	VAL
22	o	334	ARG
22	o	359	VAL
22	o	429	LEU
22	o	430	ARG
22	o	468	SER
22	o	475	ARG
22	o	483	ARG
22	o	508	SER
22	o	510	GLU
22	o	512	ARG
22	o	518	LEU
22	o	524	MET
22	o	532	ARG
22	o	538	VAL
22	o	540	ASP
22	o	580	LEU
22	o	581	LYS
22	o	583	ARG
22	o	647	THR
22	o	648	SER
22	o	701	ASP
22	o	705	THR
22	o	715	GLU
22	o	718	GLU
22	o	734	ARG
22	o	736	THR

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Mol	Chain	Res	Type
22	o	737	PHE
22	o	738	GLU
22	o	741	VAL
22	o	747	ASP
22	o	754	SER
22	o	759	SER
22	o	778	LYS
22	o	779	ILE
22	o	797	ARG
22	o	803	LYS
22	o	811	ILE
22	o	836	PHE
22	o	1132	LYS
22	o	1254	LYS
22	o	1322	ILE
22	o	1324	GLU
22	o	1325	ASP
22	o	1421	ARG
22	o	1422	GLN
22	o	1423	ASP
23	p	248	LYS
23	p	249	LYS
23	p	307	GLU
23	p	309	PHE
23	p	311	ILE
23	p	312	GLN
23	p	324	ARG
23	p	497	LYS
23	p	594	MET
23	p	597	ILE
23	p	677	MET
23	p	689	TYR
23	p	823	PHE
23	p	841	ARG
23	p	844	ILE
23	p	1006	VAL
23	p	1015	LEU
23	p	1022	LEU
23	p	1023	ARG
23	p	1078	ARG
25	r	94	LYS
26	s	52	ARG

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Mol	Chain	Res	Type
33	u	144	ARG
33	u	163	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (113) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	401	ASN
1	A	409	HIS
1	A	569	ASN
1	A	800	ASN
1	A	860	ASN
1	A	896	GLN
1	A	1058	HIS
2	B	30	HIS
2	B	137	HIS
2	B	176	HIS
2	B	183	GLN
2	B	184	ASN
2	B	235	HIS
2	B	348	GLN
2	B	432	HIS
2	B	439	HIS
2	B	450	GLN
2	B	509	ASN
2	B	580	GLN
2	B	644	GLN
2	B	652	GLN
2	B	745	GLN
2	B	750	GLN
2	B	813	ASN
2	B	908	GLN
2	B	916	ASN
3	D	875	GLN
3	D	936	GLN
3	D	943	GLN
3	D	956	GLN
3	D	1075	HIS
4	E	238	GLN
4	E	254	ASN
4	E	268	HIS
4	E	327	ASN
4	E	351	GLN

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Mol	Chain	Res	Type
4	E	616	HIS
4	E	640	ASN
5	F	119	ASN
5	F	221	GLN
5	F	270	ASN
5	F	273	GLN
5	F	275	ASN
6	G	48	HIS
7	H	145	HIS
8	I	21	GLN
8	I	60	HIS
8	I	98	GLN
9	J	160	GLN
9	J	173	HIS
9	J	210	ASN
10	L	105	HIS
10	L	119	HIS
11	O	13	ASN
11	O	57	ASN
12	P	189	ASN
13	Q	60	HIS
13	Q	352	HIS
13	Q	361	ASN
15	S	44	GLN
3	d	912	ASN
3	d	1069	ASN
4	e	294	ASN
4	e	320	HIS
4	e	336	HIS
4	e	616	HIS
5	f	325	ASN
8	i	60	HIS
8	i	81	GLN
10	l	73	ASN
21	m	107	ASN
22	o	123	ASN
22	o	278	HIS
22	o	289	GLN
22	o	296	ASN
22	o	330	GLN
22	o	576	GLN
22	o	620	HIS

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Mol	Chain	Res	Type
22	o	703	GLN
22	o	721	HIS
22	o	731	ASN
22	o	739	ASN
22	o	757	GLN
22	o	913	ASN
22	o	950	ASN
22	o	1005	HIS
22	o	1230	GLN
22	o	1248	ASN
22	o	1332	GLN
22	o	1397	HIS
22	o	1445	HIS
22	o	1462	GLN
23	p	111	ASN
23	p	139	GLN
23	p	254	GLN
23	p	287	HIS
23	p	370	HIS
23	p	525	ASN
23	p	570	ASN
23	p	749	HIS
23	p	777	ASN
23	p	1073	GLN
23	p	1117	HIS
23	p	1120	ASN
24	q	5	ASN
24	q	60	HIS
25	r	19	GLN
26	s	133	GLN
28	v	131	ASN
29	w	98	GLN
31	y	2	ASN
31	y	29	ASN
33	u	60	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 monosaccharides in this entry.

5.6 Ligand geometry

Of 10 ligands modelled in this entry, 10 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

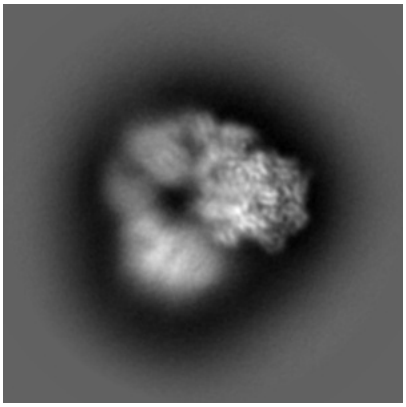
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-31107. These allow visual inspection of the internal detail of the map and identification of artifacts.

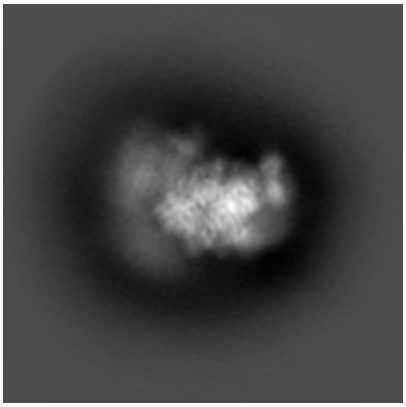
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

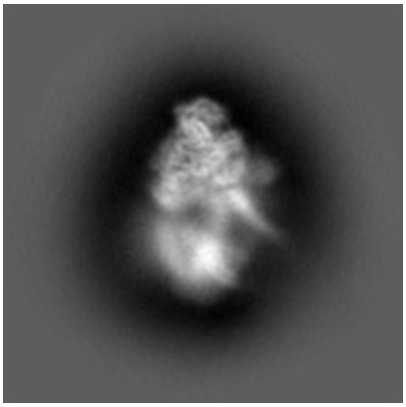
6.1.1 Primary map



X



Y

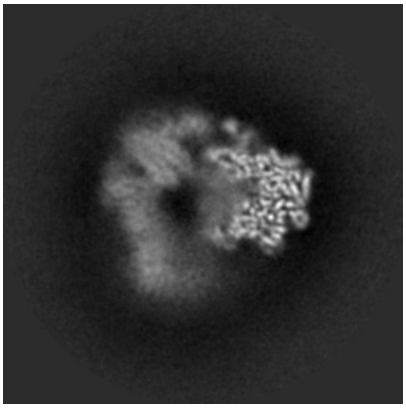


Z

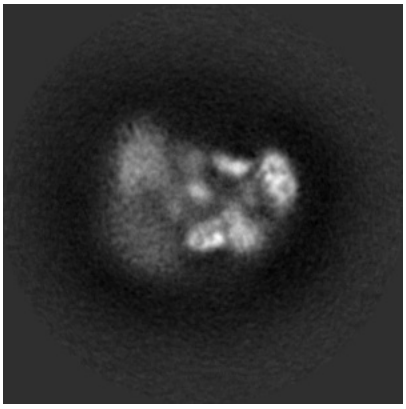
The images above show the map projected in three orthogonal directions.

6.2 Central slices

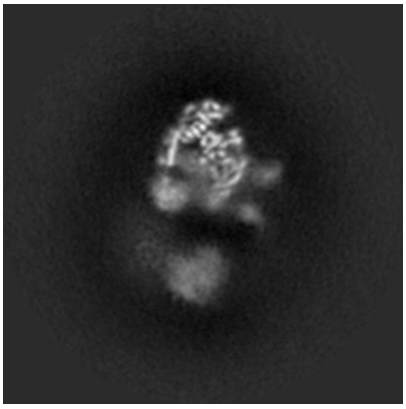
6.2.1 Primary map



X Index: 180



Y Index: 180

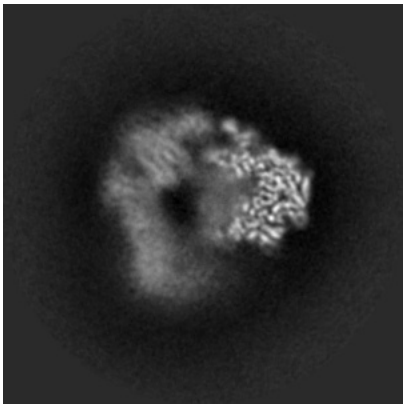


Z Index: 180

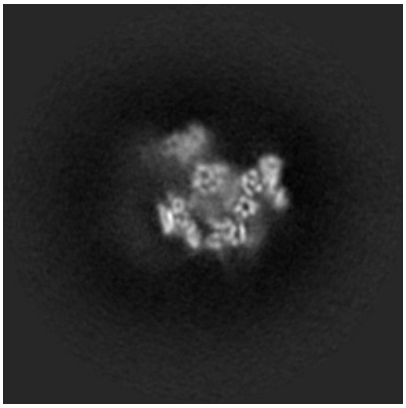
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

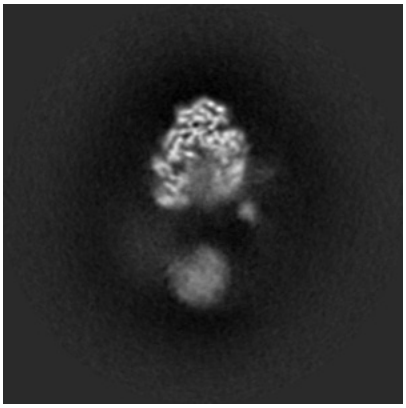
6.3.1 Primary map



X Index: 182



Y Index: 206

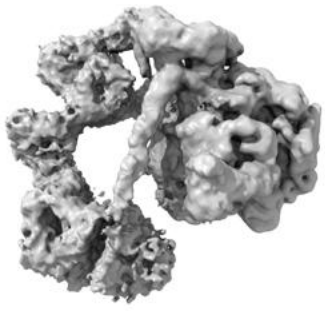


Z Index: 189

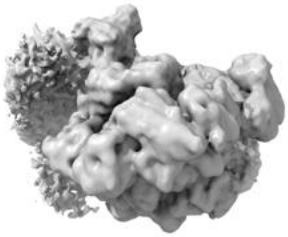
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views (i)

6.4.1 Primary map



X



Y

Z

The images above show the 3D surface view of the map at the recommended contour level 0.008. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

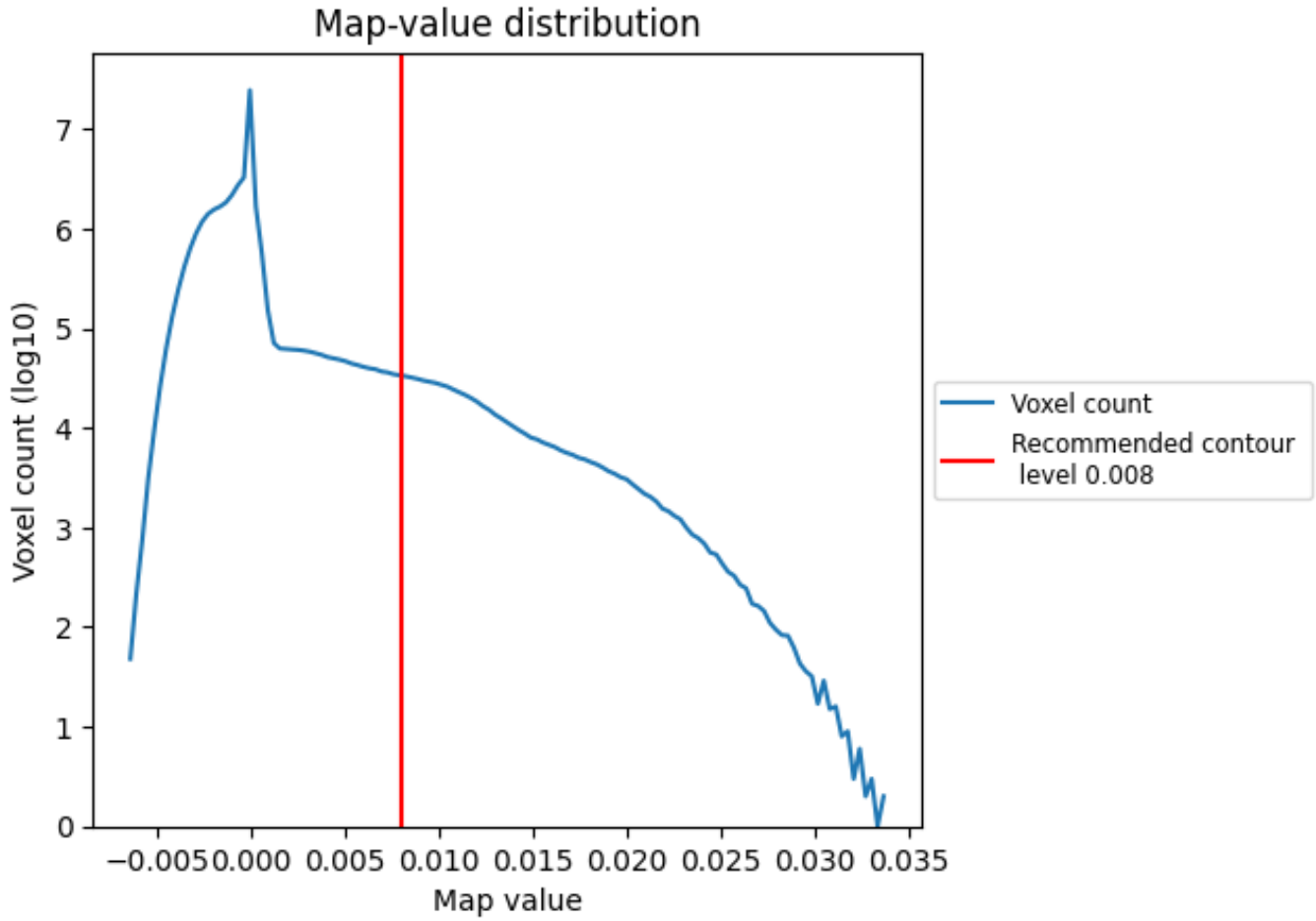
6.5 Mask visualisation (i)

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

7 Map analysis

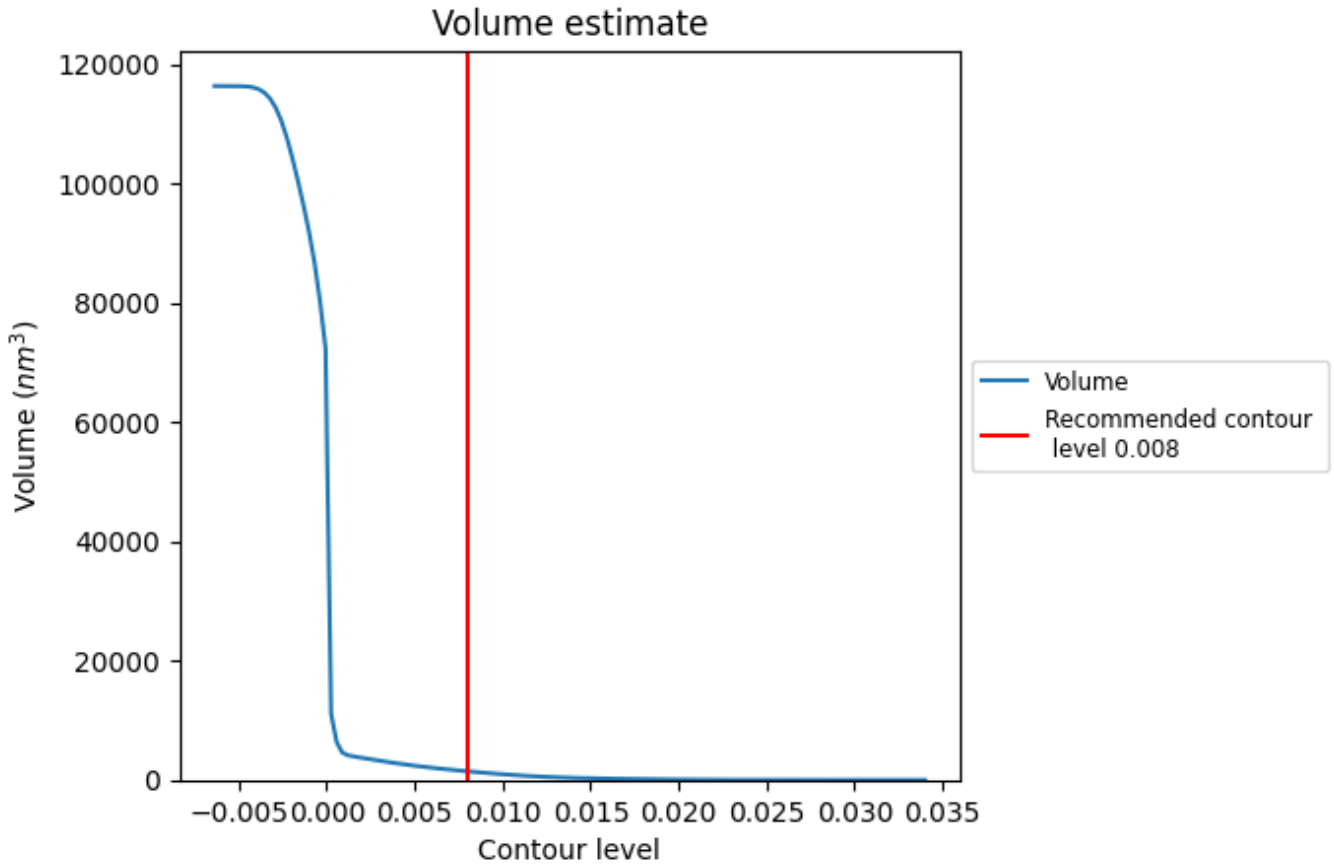
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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.

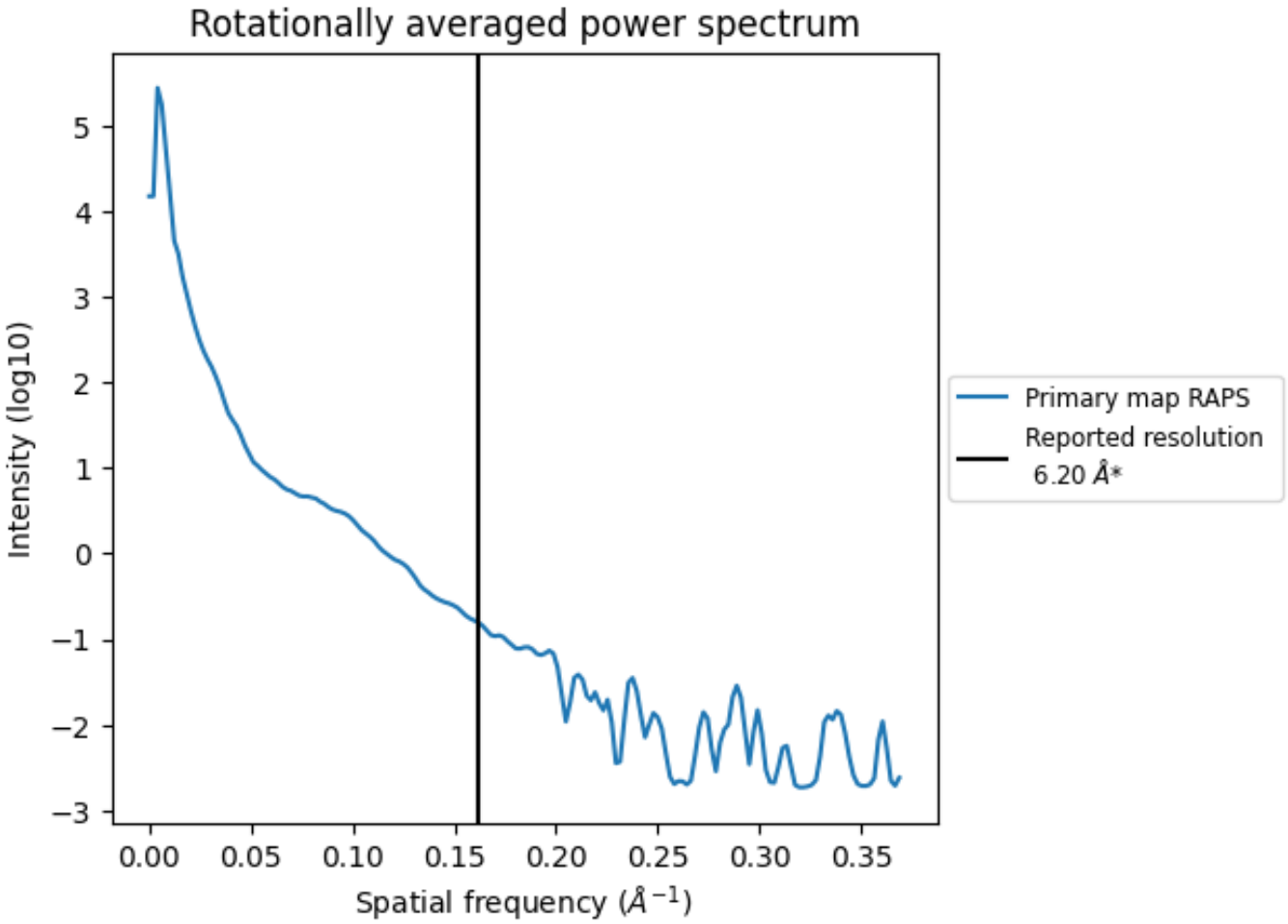
7.2 Volume estimate



The volume at the recommended contour level is 1445 nm^3; this corresponds to an approximate mass of 1305 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)



*Reported resolution corresponds to spatial frequency of 0.161 Å^{-1}

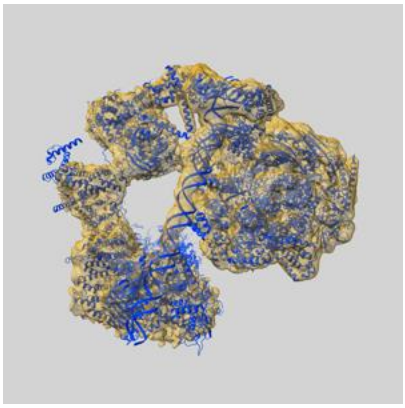
8 Fourier-Shell correlation

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

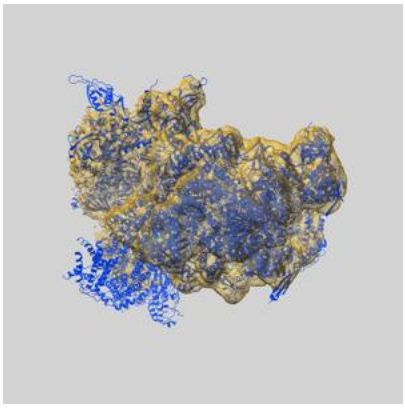
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-31107 and PDB model 7EG7. Per-residue inclusion information can be found in section 3 on page 11.

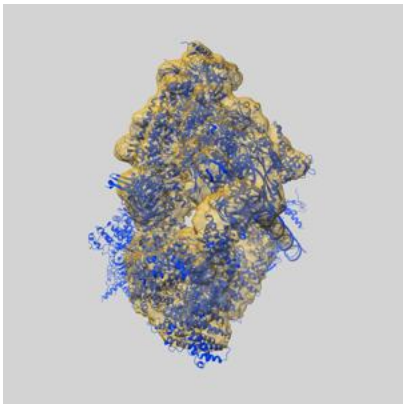
9.1 Map-model overlay



X



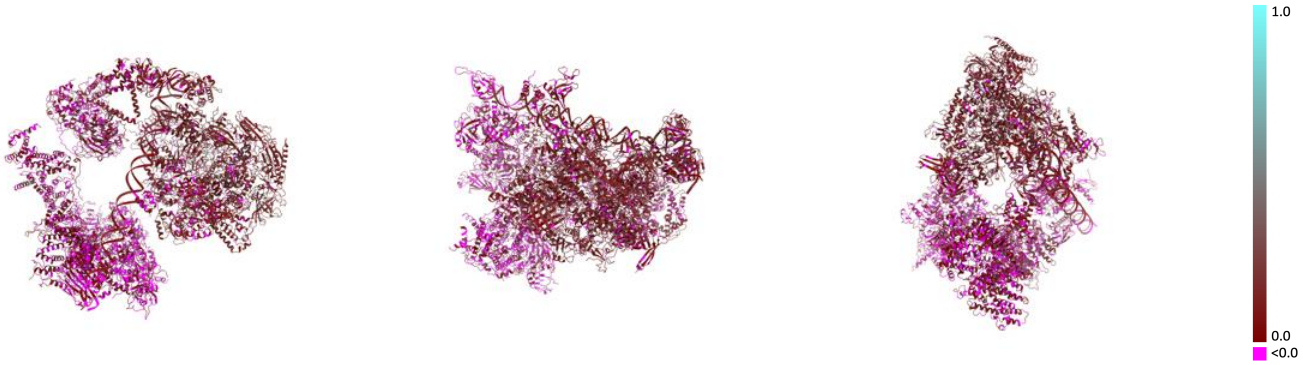
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.008 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.

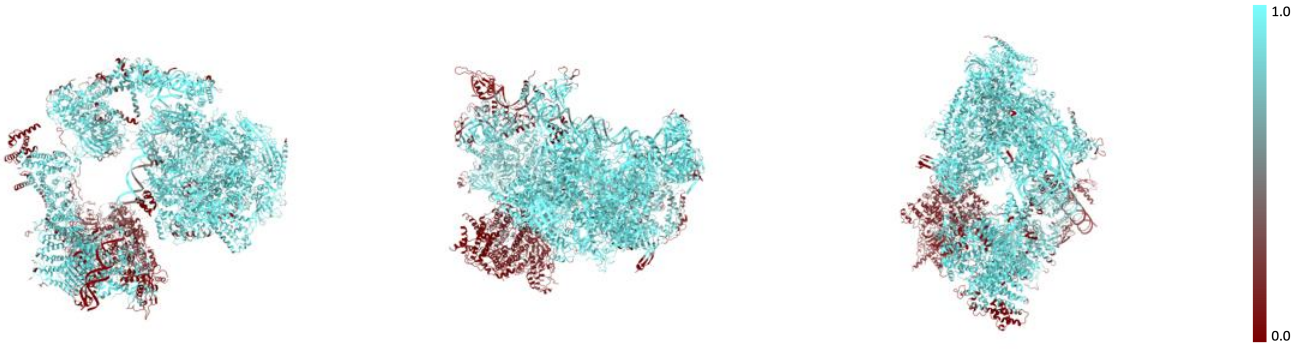
9.2 Q-score mapped to coordinate model (i)



X Y Z

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.

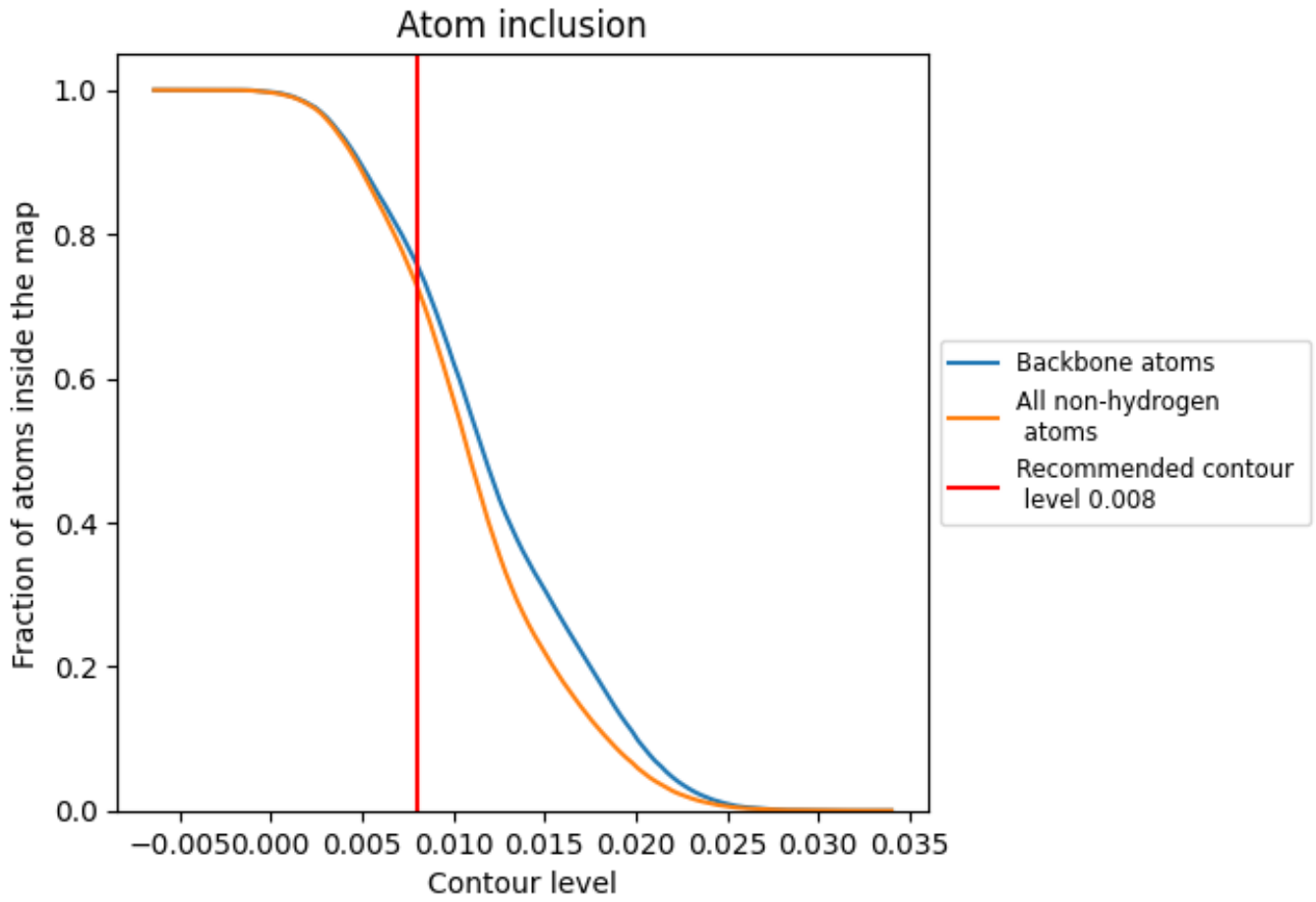
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

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 (0.008).

9.4 Atom inclusion (i)



At the recommended contour level, 76% of all backbone atoms, 73% 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 (0.008) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7290	0.0920
A	0.5887	0.0280
B	0.8517	0.0460
D	0.6932	0.0990
E	0.8654	0.0630
F	0.7072	0.0540
G	0.5643	0.0300
H	0.8190	0.0590
I	0.8567	0.0830
J	0.8092	0.0350
L	0.6225	0.0530
O	0.8626	0.1070
P	0.9536	0.1200
Q	0.8391	0.0920
R	0.9129	0.1560
S	0.8361	0.1030
T	0.7780	0.0750
X	0.6378	0.1080
Y	0.5985	0.1090
c	0.2222	0.0200
d	0.0165	0.0020
e	0.0498	0.0130
f	0.5078	0.0280
i	0.0042	0.0090
j	0.1450	0.0020
k	0.0169	-0.0090
l	0.0000	-0.0020
m	0.0000	0.0330
o	0.9424	0.1540
p	0.9533	0.1540
q	0.9356	0.1750
r	0.7545	0.0880
s	0.9613	0.1650
t	0.9821	0.1850
u	0.8521	0.1080

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Continued from previous page...

Chain	Atom inclusion	Q-score
v	0.9249	0.1720
w	0.9317	0.1570
x	0.9657	0.1700
y	0.8881	0.1760
z	0.9691	0.1810