



Full wwPDB EM Validation Report ⓘ

Nov 22, 2022 – 04:00 PM JST

PDB ID : 7ENC
EMDB ID : EMD-31207
Title : TFIID-based PIC-Mediator holo-complex in fully-assembled state (hPIC-MED)
Authors : Chen, X.; Qi, Y.; Wang, X.; Wu, Z.; Yin, X.; Li, J.; Liu, W.; Xu, Y.
Deposited on : 2021-04-16
Resolution : 4.13 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
Mogul : 1.8.5 (274361), CSD as541be (2020)
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

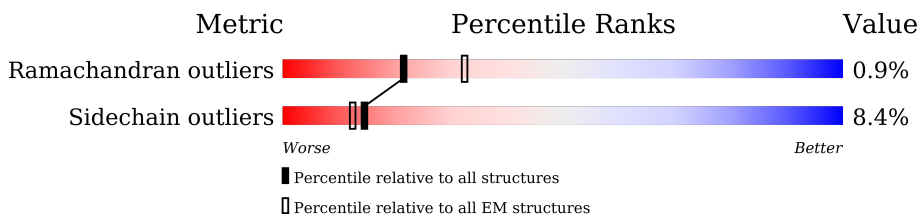
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 4.13 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.
















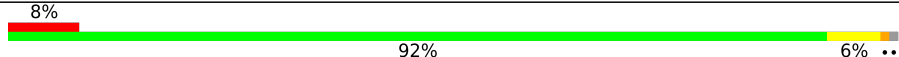
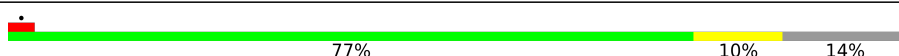

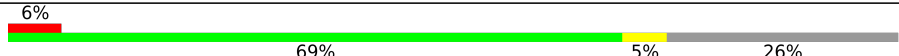
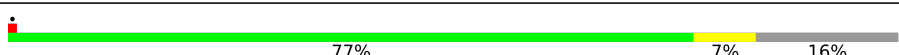
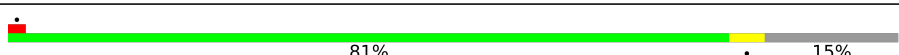
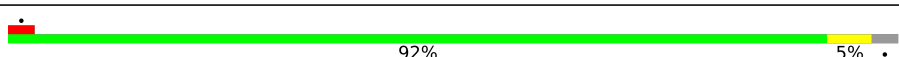
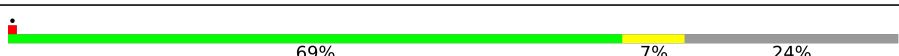

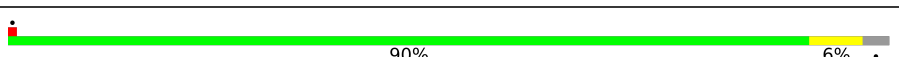

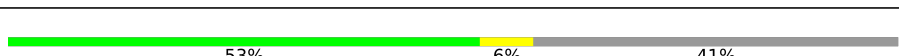
Metric	Whole archive (#Entries)	EM structures (#Entries)
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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 $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	a	1581	
2	m	131	
3	d	270	
4	f	246	
5	g	233	
6	h	268	
7	r	208	
8	t	212	
9	j	135	


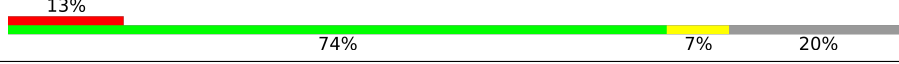
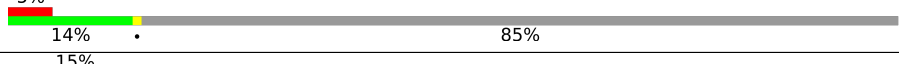


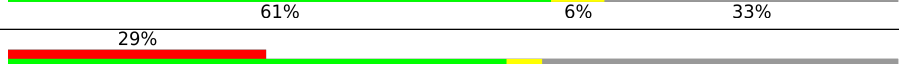
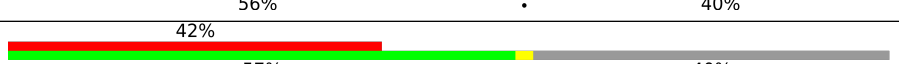
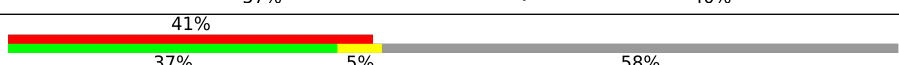
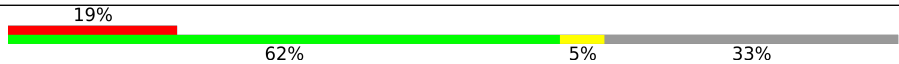

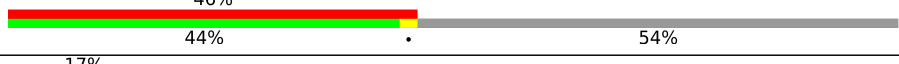




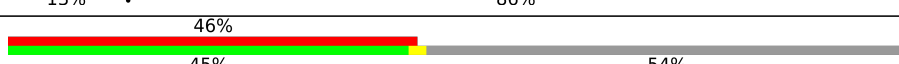









Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
10	k	117	
11	n	1454	
12	q	651	
13	s	244	
14	u	144	
15	v	200	
16	z	600	
17	c	311	
18	e	178	
19	b	200	
20	l	178	
21	o	788	
22	i	146	
23	0	309	
24	8	346	
25	9	323	
26	1	548	
27	2	395	
28	3	308	
29	4	462	
30	5	71	
31	6	782	
32	7	760	
33	EA	439	
34	EB	291	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
35	DA	1872	
36	DB	1199	
37	DD	1085	
37	Dd	1085	
38	DE	800	
38	De	800	
39	DF	677	
39	Df	677	
40	DG	349	
41	DH	310	
42	DI	264	
42	Di	264	
43	DJ	218	
43	Dj	218	
44	DL	161	
44	Dl	161	
45	Dc	929	
46	Dk	211	
47	Dm	124	
48	DO	109	
49	DP	339	
50	DQ	307	
51	BA	316	
52	FB	249	
53	X	69	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
54	Y	69	78% 22%
55	PA	1970	68% 7% 25%
56	PB	1174	88% 8% .
57	PC	275	88% 6% 7%
58	PD	142	80% 11% 9%
59	PE	210	92% 7%
60	PF	127	56% 6% 38%
61	PG	172	86% 13% .
62	PH	150	92% 7% .
63	PI	125	86% 6% 9%
64	PJ	67	94% . .
65	PK	117	96% .
66	PL	58	72% . 24%
67	FA	517	26% 74%
68	w	1368	96% . .
69	x	989	87% . 9%
70	p	841	48% . 52%

2 Entry composition [i](#)

There are 73 unique types of molecules in this entry. The entry contains 171177 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
			Total	C	N	O	S		
1	a	469	3570	2271	614	661	24	0	0

- Molecule 2 is a protein called Mediator of RNA polymerase II transcription subunit 31.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	m	112	983	641	172	165	5	0	0

- Molecule 3 is a protein called Mediator of RNA polymerase II transcription subunit 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	d	158	1264	788	227	243	6	0	0

- Molecule 4 is a protein called Mediator of RNA polymerase II transcription subunit 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	f	167	1329	851	231	242	5	0	0

- Molecule 5 is a protein called Mediator of RNA polymerase II transcription subunit 7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	g	166	1382	880	244	248	10	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
g	10	ALA	LEU	conflict	UNP O43513
g	11	LEU	PRO	conflict	UNP O43513

- Molecule 6 is a protein called Isoform 2 of Mediator of RNA polymerase II transcription subunit 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	h	190	1486	925	262	295	4	0	0

- Molecule 7 is a protein called Mediator of RNA polymerase II transcription subunit 18.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	r	191	1528	969	270	274	15	0	0

- Molecule 8 is a protein called Mediator of RNA polymerase II transcription subunit 20.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	t	193	1499	955	247	280	17	0	0

- Molecule 9 is a protein called Mediator of RNA polymerase II transcription subunit 10.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	j	122	1001	636	174	187	4	0	0

- Molecule 10 is a protein called Mediator of RNA polymerase II transcription subunit 11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	k	112	879	537	163	175	4	0	0

- Molecule 11 is a protein called Mediator of RNA polymerase II transcription subunit 14.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	n	994	7241	4576	1293	1334	38	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
n	133	LEU	ALA	conflict	UNP O60244

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	q	552	4261	2691	764	789	17	0	0

- Molecule 13 is a protein called Mediator of RNA polymerase II transcription subunit 19.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	s	77	485	300	87	96	2	0	0

- Molecule 14 is a protein called Mediator of RNA polymerase II transcription subunit 21.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	u	107	792	492	132	165	3	0	0

- Molecule 15 is a protein called Mediator of RNA polymerase II transcription subunit 22.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
15	v	134	1083	668	185	226	4	0	0

- Molecule 16 is a protein called Mediator of RNA polymerase II transcription subunit 26.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
16	z	97	765	472	136	154	3	0	0

- Molecule 17 is a protein called Mediator of RNA polymerase II transcription subunit 27.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
17	c	255	2069	1314	370	374	11	0	0

- Molecule 18 is a protein called Mediator of RNA polymerase II transcription subunit 28.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
18	e	102	832	520	146	163	3	0	0

- Molecule 19 is a protein called Mediator of RNA polymerase II transcription subunit 29.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
19	b	115	899	563	155	172	9	0	0

- Molecule 20 is a protein called Mediator of RNA polymerase II transcription subunit 30.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
20	l	126	1040	649	191	193	7	0	0

- Molecule 21 is a protein called Mediator of RNA polymerase II transcription subunit 15.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
21	o	156	1221	780	212	222	7	0	0

- Molecule 22 is a protein called Mediator of RNA polymerase II transcription subunit 9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
22	i	62	520	329	92	94	5	0	0

- Molecule 23 is a protein called CDK-activating kinase assembly factor MAT1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
23	0	306	2255	1404	399	441	11	0	0

- Molecule 24 is a protein called Cyclin-dependent kinase 7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
24	8	299	2378	1535	406	426	11	0	0

- Molecule 25 is a protein called Cyclin-H.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
25	9	287	2307	1477	398	417	15	0	0

- Molecule 26 is a protein called General transcription factor IIIH subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
26	1	405	2634	1640	486	501	7	0	0

- Molecule 27 is a protein called General transcription factor IIH subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
27	2	331	2534	1597	441	470	26	0	0

- Molecule 28 is a protein called General transcription factor IIH subunit 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
28	3	263	2065	1323	344	379	19	0	0

- Molecule 29 is a protein called General transcription factor IIH subunit 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
29	4	449	3579	2303	624	638	14	0	0

- Molecule 30 is a protein called General transcription factor IIH subunit 5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
30	5	54	428	277	67	82	2	0	0

- Molecule 31 is a protein called General transcription and DNA repair factor IIH helicase subunit XPB.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
31	6	606	4880	3117	849	884	30	0	0

- Molecule 32 is a protein called General transcription and DNA repair factor IIH helicase subunit XPD.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
32	7	734	5833	3727	1022	1055	29	0	0

- Molecule 33 is a protein called General transcription factor IIE subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
33	EA	179	1476	932	261	272	11	0	0

- Molecule 34 is a protein called Transcription initiation factor IIE subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
34	EB	172	1404	893	243	264	4	0	0

- Molecule 35 is a protein called Transcription initiation factor TFIID subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
35	DA	550	4511	2882	782	820	27	0	0

- Molecule 36 is a protein called Transcription initiation factor TFIID subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
36	DB	963	7796	5011	1315	1412	58	0	0

- Molecule 37 is a protein called Transcription initiation factor TFIID subunit 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
37	DD	159	1330	830	248	249	3	0	0
37	Dd	158	1307	814	238	252	3	0	0

- Molecule 38 is a protein called Transcription initiation factor TFIID subunit 5.

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

- Molecule 39 is a protein called Transcription initiation factor TFIID subunit 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
39	DF	408	3109	1970	542	579	18	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
39	Df	403	3081	1954	533	576	18	0	0

- Molecule 40 is a protein called Transcription initiation factor TFIID subunit 7.

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

- Molecule 41 is a protein called Transcription initiation factor TFIID subunit 8.

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

- Molecule 42 is a protein called Transcription initiation factor TFIID subunit 9.

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

- Molecule 43 is a protein called Transcription initiation factor TFIID subunit 10.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
43	DJ	90	720	466	115	135	4	0	0
43	Dj	95	759	488	124	143	4	0	0

- Molecule 44 is a protein called Transcription initiation factor TFIID subunit 12.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
44	DL	75	614	384	107	120	3	0	0
44	DI	107	876	547	158	166	5	0	0

- Molecule 45 is a protein called Transcription initiation factor TFIID subunit 3.

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

- Molecule 46 is a protein called Transcription initiation factor TFIID subunit 11.

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

- Molecule 47 is a protein called Transcription initiation factor TFIID subunit 13.

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

- Molecule 48 is a protein called Transcription initiation factor IIA subunit 2.

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

- Molecule 49 is a protein called TATA-box-binding protein.

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

- Molecule 50 is a protein called TFIIA-a.

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

- Molecule 51 is a protein called Transcription initiation factor IIB.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
51	BA	251	1939	1214	344	364	17	0	0

- Molecule 52 is a protein called General transcription factor IIF subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	FB	222	Total	C	N	O	S	0	0
			1788	1127	320	338	3		

- Molecule 53 is a DNA chain called DNA (69-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
53	X	69	Total	C	N	O	P	0	0
			1429	672	279	409	69		

- Molecule 54 is a DNA chain called DNA (69-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
54	Y	69	Total	C	N	O	P	0	0
			1400	664	248	419	69		

- Molecule 55 is a protein called RPB1.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	PA	1474	Total	C	N	O	S	0	0
			11655	7333	2070	2180	72		

- Molecule 56 is a protein called DNA-directed RNA polymerase subunit beta.

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

- Molecule 57 is a protein called DNA-directed RNA polymerase II subunit RPB3.

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

- Molecule 58 is a protein called DNA-directed RNA polymerase II subunit RPB4.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	PD	129	Total	C	N	O	S	0	0
			1021	643	174	200	4		

- Molecule 59 is a protein called DNA-directed RNA polymerase II subunit E.

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

- Molecule 60 is a protein called DNA-directed RNA polymerase II subunit F.

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

- Molecule 61 is a protein called DNA-directed RNA polymerase II subunit RPB7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
61	PG	171	1334	867	216	243	8	0	0

- Molecule 62 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC3.

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

- Molecule 63 is a protein called DNA-directed RNA polymerase II subunit RPB9.

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

- Molecule 64 is a protein called RPB10.

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

- Molecule 65 is a protein called RNA_pol_L_2 domain-containing protein.

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

- Molecule 66 is a protein called RPB12.

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

- Molecule 67 is a protein called General transcription factor IIF subunit 1.

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

- Molecule 68 is a protein called Mediator of RNA polymerase II transcription subunit 23.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	w	1334	Total	C	N	O	S	0	0
			10772	6965	1827	1909	71		

- Molecule 69 is a protein called Mediator of RNA polymerase II transcription subunit 24.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	x	896	Total	C	N	O	S	0	0
			7050	4516	1188	1292	54		

- Molecule 70 is a protein called Isoform 2 of Mediator of RNA polymerase II transcription subunit 16.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	p	406	Total	C	N	O	S	0	0
			3124	1982	536	585	21		

- Molecule 71 is ZINC ION (three-letter code: ZN) (formula: Zn).

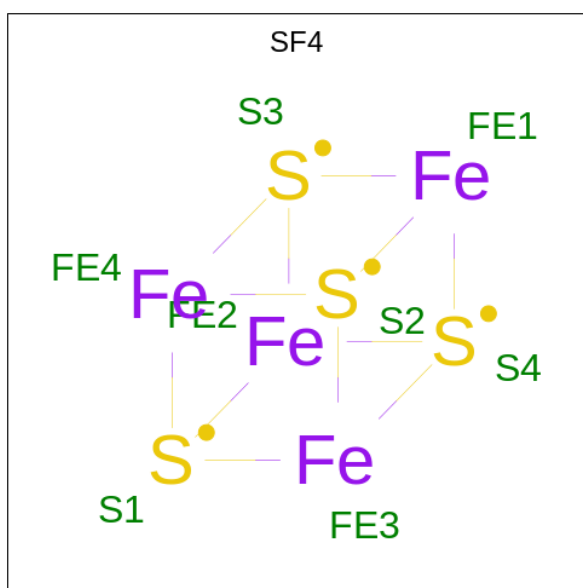
Mol	Chain	Residues	Atoms		AltConf
71	0	2	Total	Zn	0
			2	2	
71	2	3	Total	Zn	0
			3	3	
71	3	1	Total	Zn	0
			1	1	
71	EA	1	Total	Zn	0
			1	1	
71	BA	1	Total	Zn	0
			1	1	
71	PA	2	Total	Zn	0
			2	2	

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms		AltConf
71	PB	1	Total	Zn	0
			1	1	
71	PC	1	Total	Zn	0
			1	1	
71	PI	2	Total	Zn	0
			2	2	
71	PJ	1	Total	Zn	0
			1	1	
71	PL	1	Total	Zn	0
			1	1	

- Molecule 72 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe₄S₄).



Mol	Chain	Residues	Atoms			AltConf
72	7	1	Total	Fe	S	0
			8	4	4	

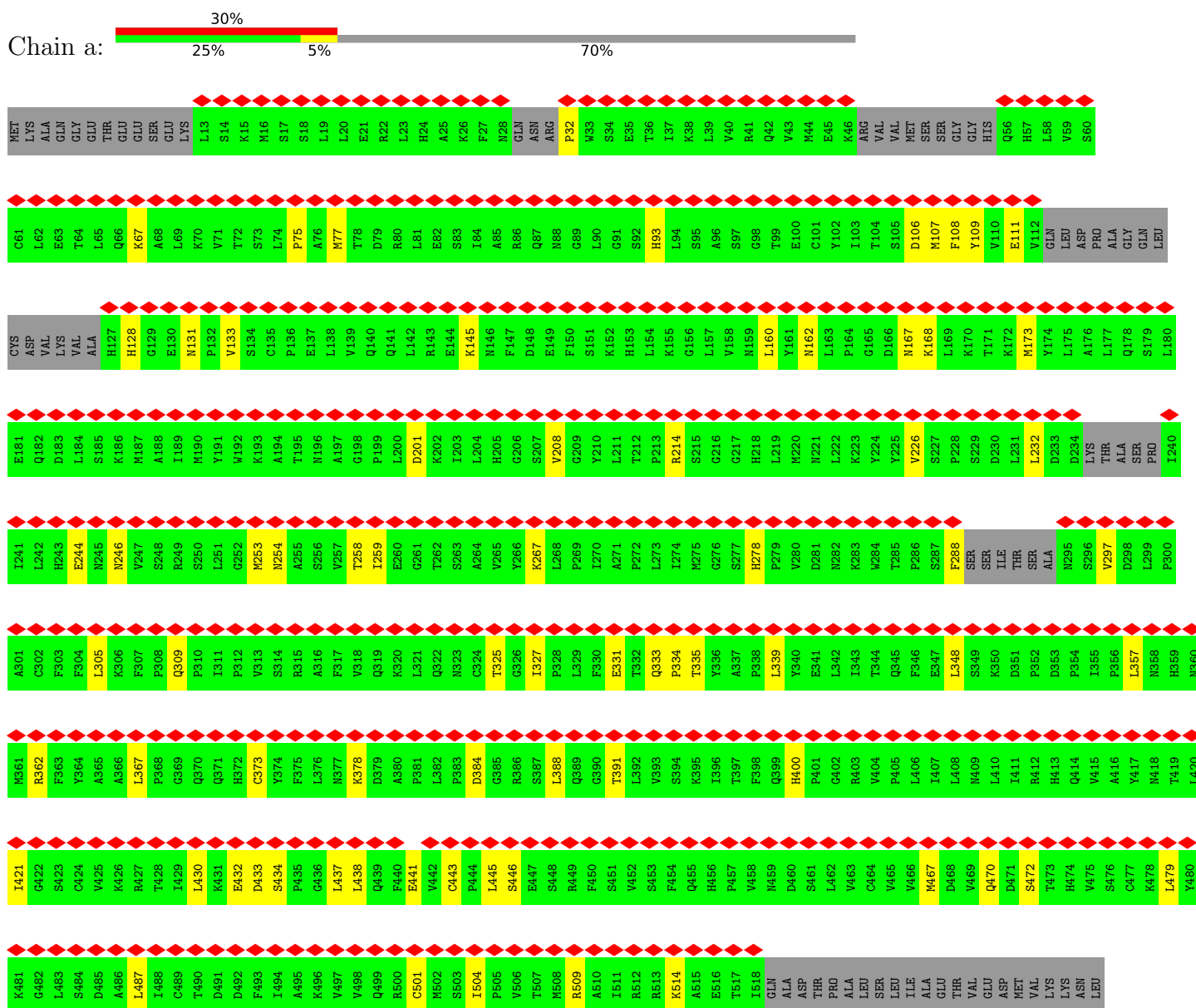
- Molecule 73 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

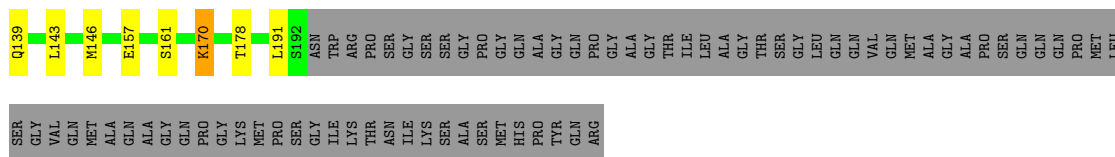
Mol	Chain	Residues	Atoms		AltConf
73	PA	1	Total	Mg	0
			1	1	

3 Residue-property plots

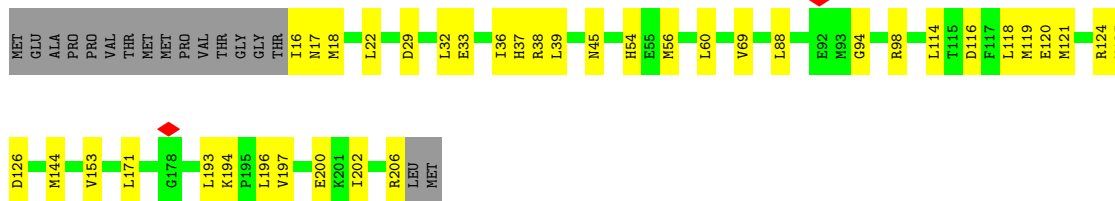
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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

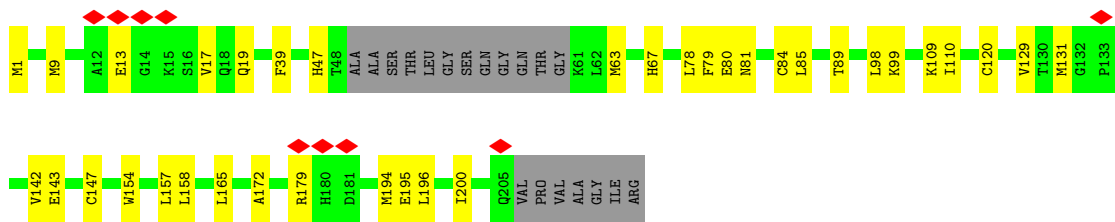




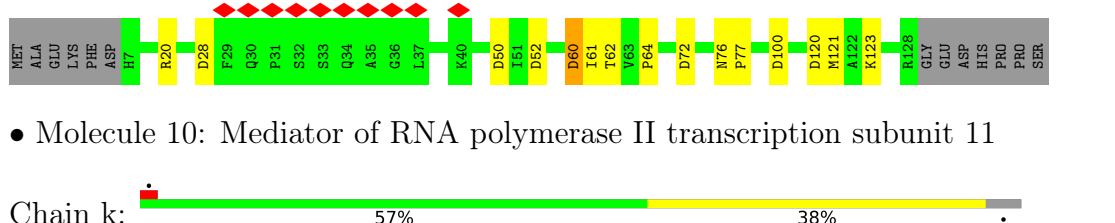
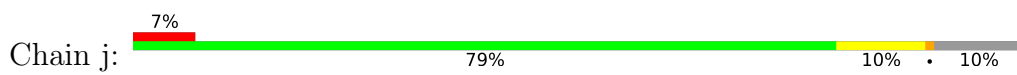
• Molecule 7: Mediator of RNA polymerase II transcription subunit 18



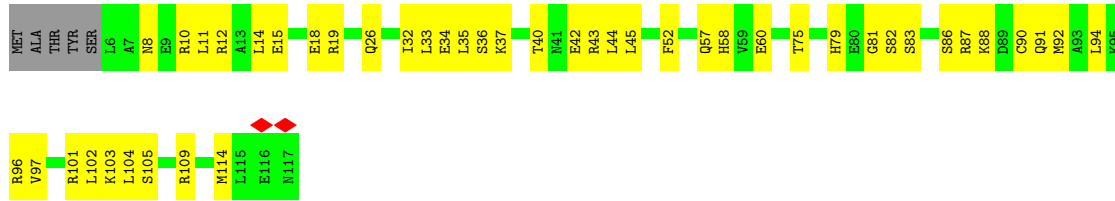
• Molecule 8: Mediator of RNA polymerase II transcription subunit 20



• Molecule 9: Mediator of RNA polymerase II transcription subunit 10

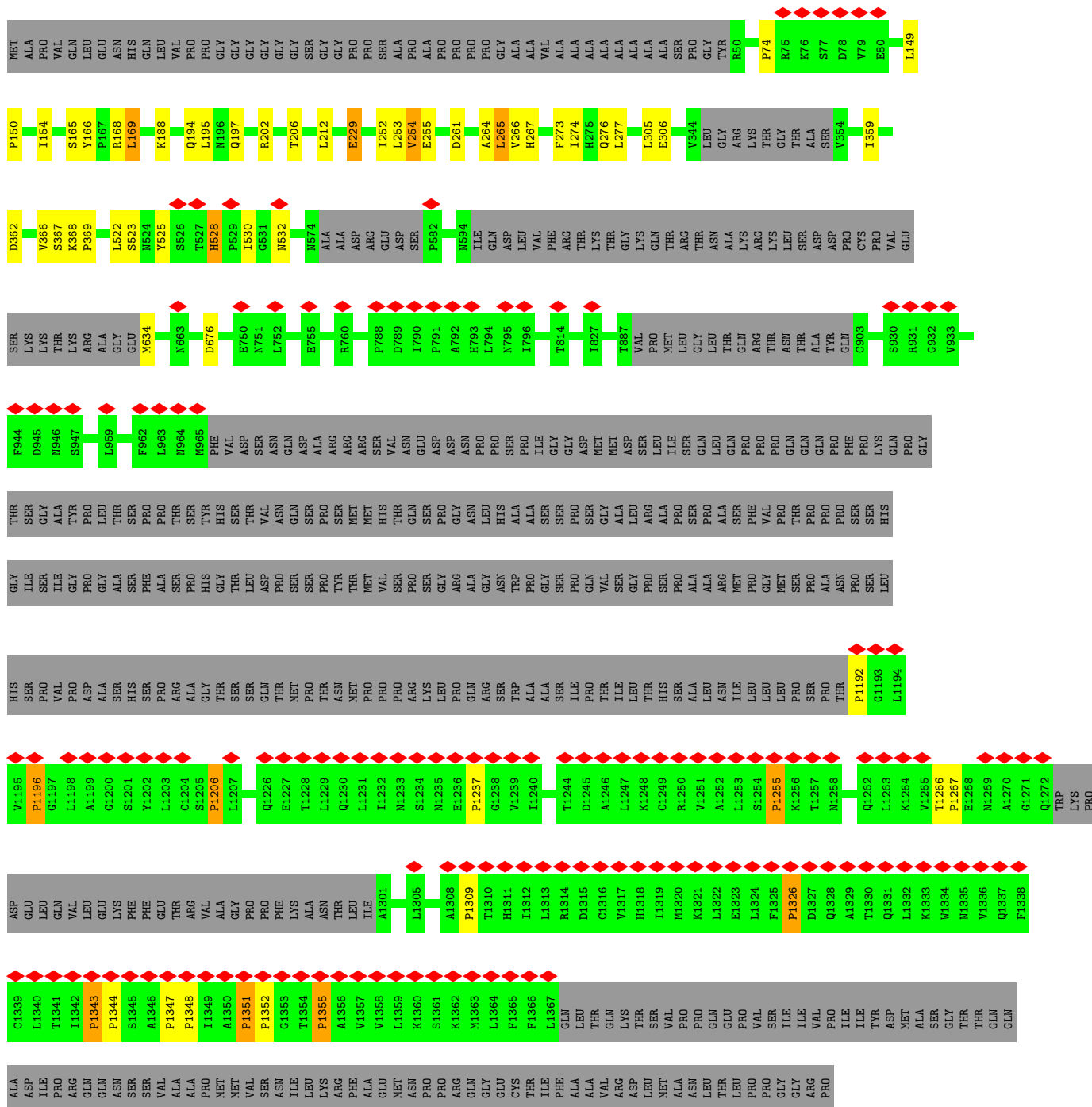


• Molecule 10: Mediator of RNA polymerase II transcription subunit 11

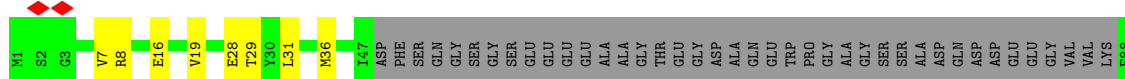


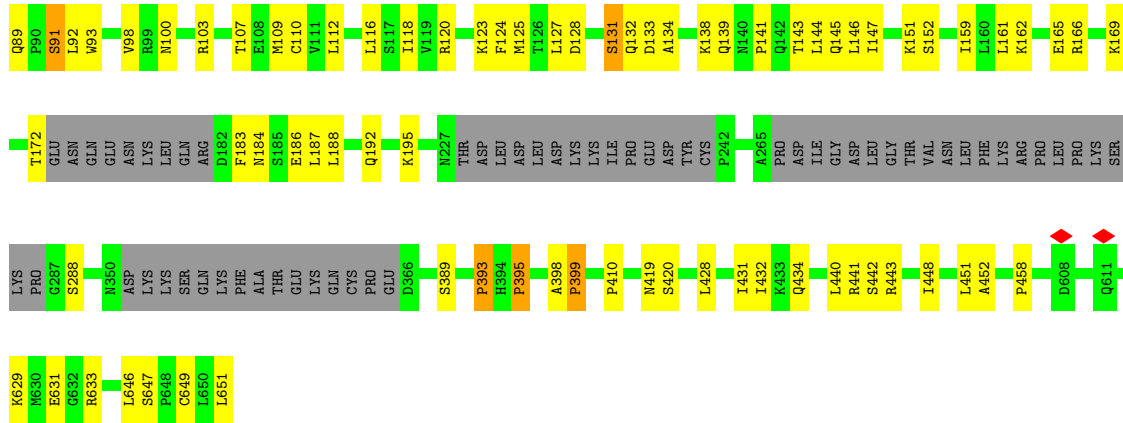
• Molecule 11: Mediator of RNA polymerase II transcription subunit 14



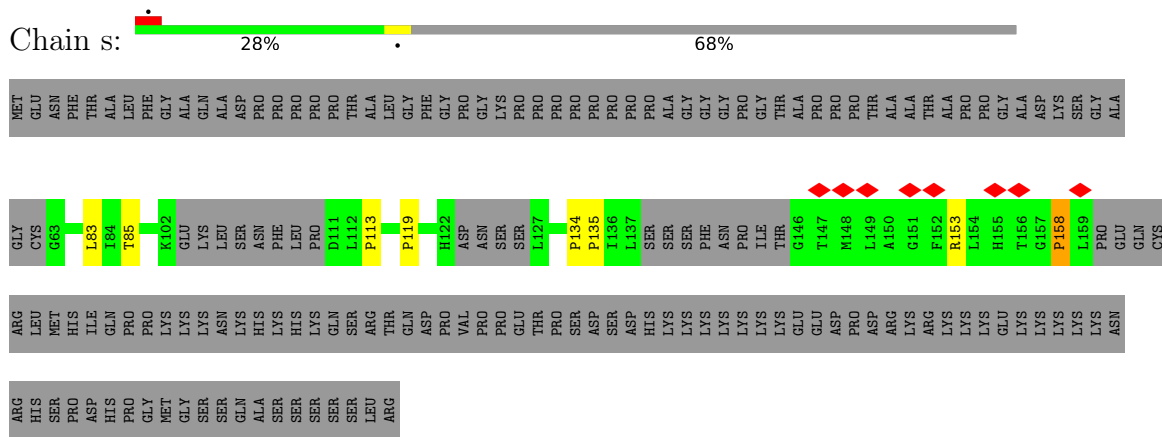


• Molecule 12: Mediator of RNA polymerase II transcription subunit 17

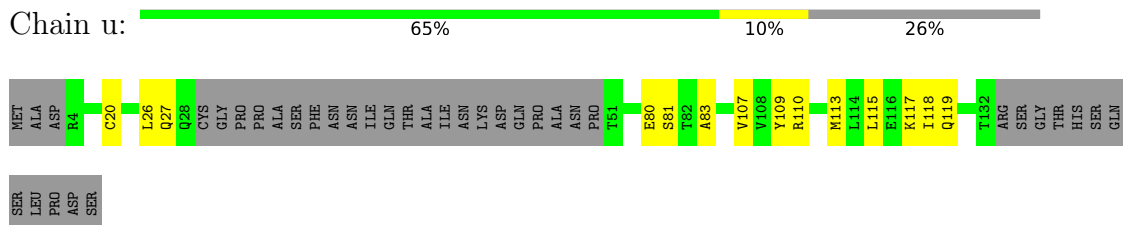




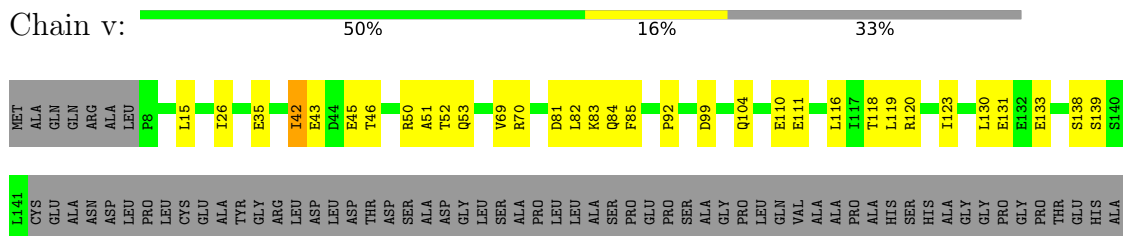
- Molecule 13: Mediator of RNA polymerase II transcription subunit 19



- Molecule 14: Mediator of RNA polymerase II transcription subunit 21

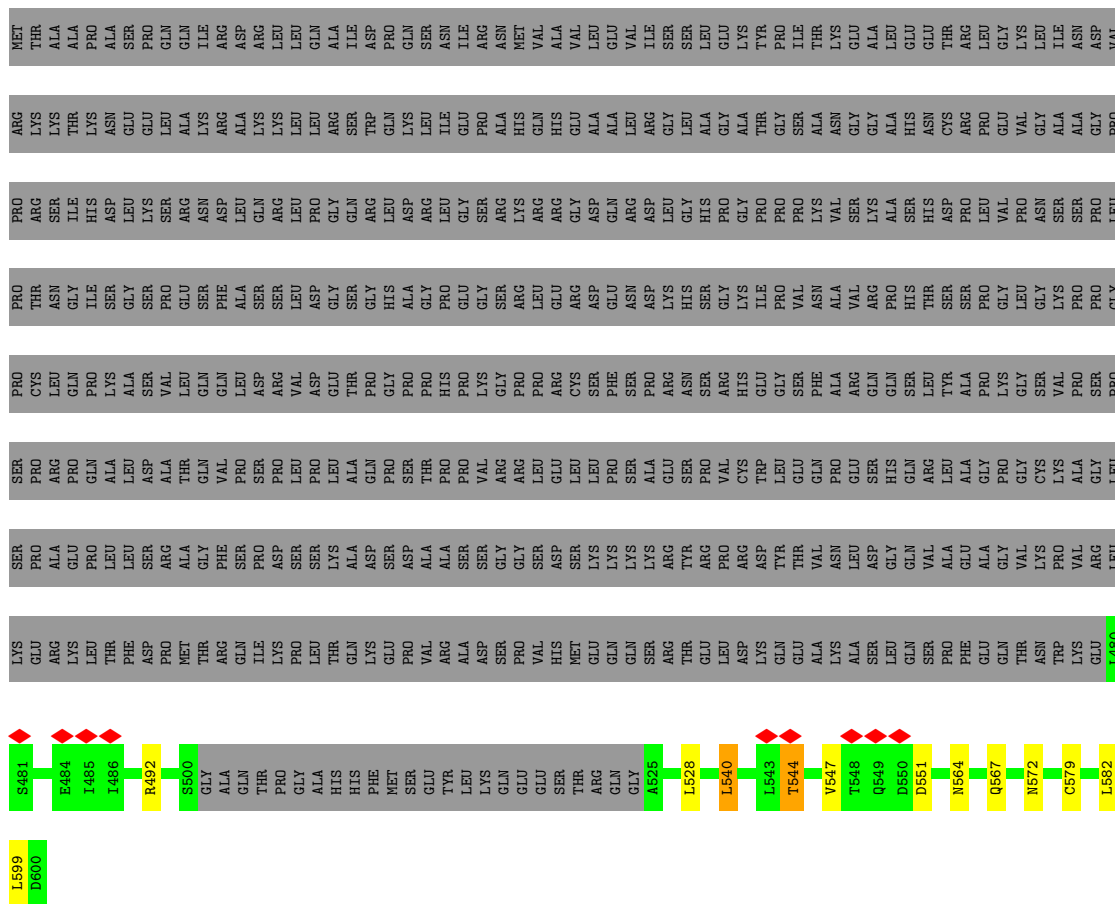


- Molecule 15: Mediator of RNA polymerase II transcription subunit 22

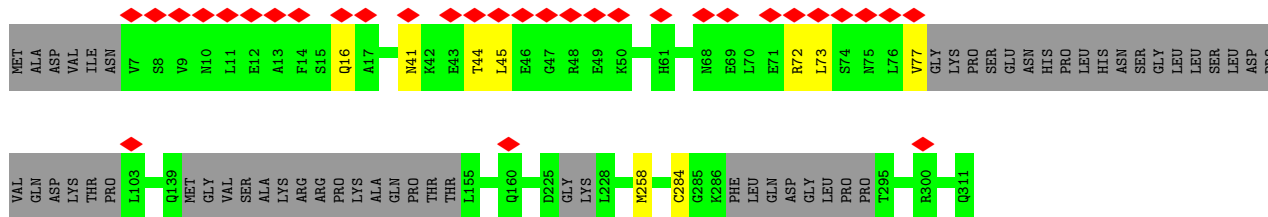
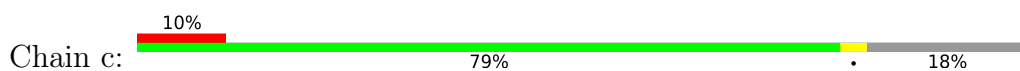


- Molecule 16: Mediator of RNA polymerase II transcription subunit 26

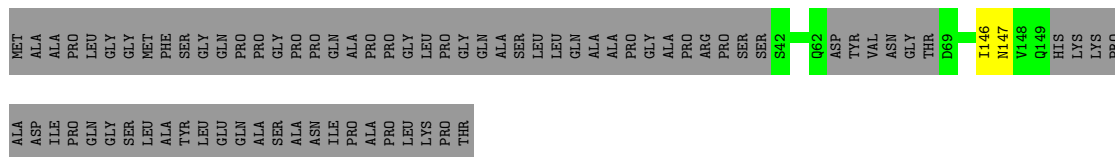




• Molecule 17: Mediator of RNA polymerase II transcription subunit 27

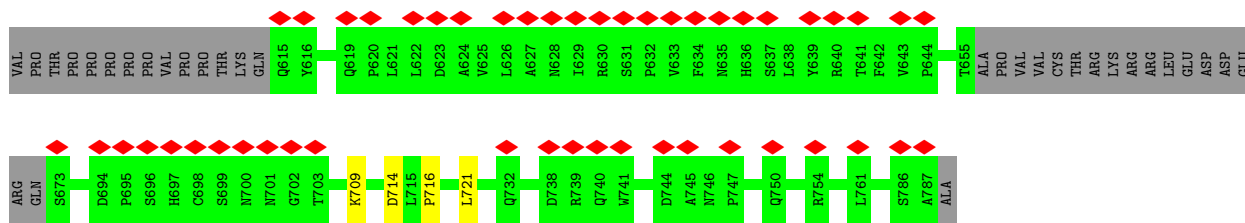


• Molecule 18: Mediator of RNA polymerase II transcription subunit 28

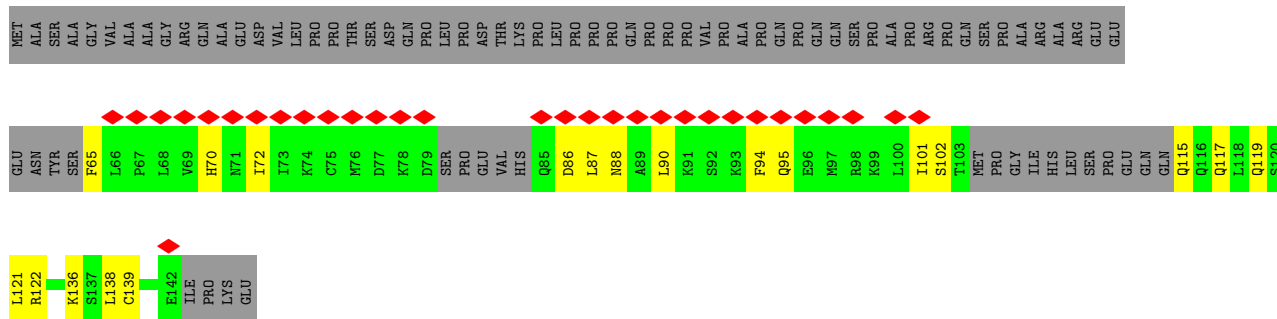


• Molecule 19: Mediator of RNA polymerase II transcription subunit 29

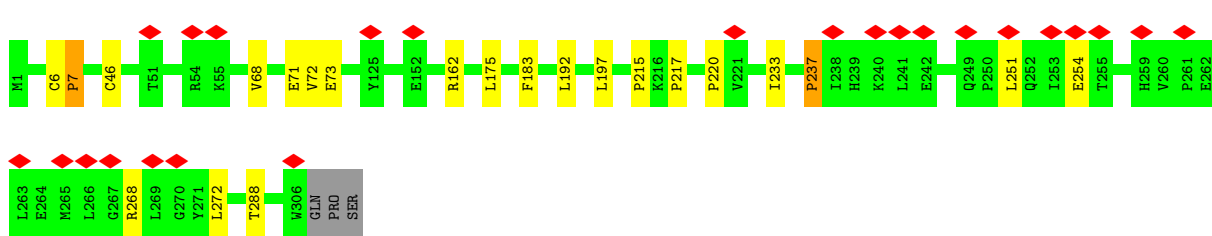
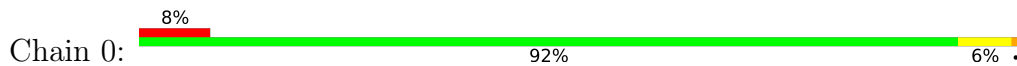




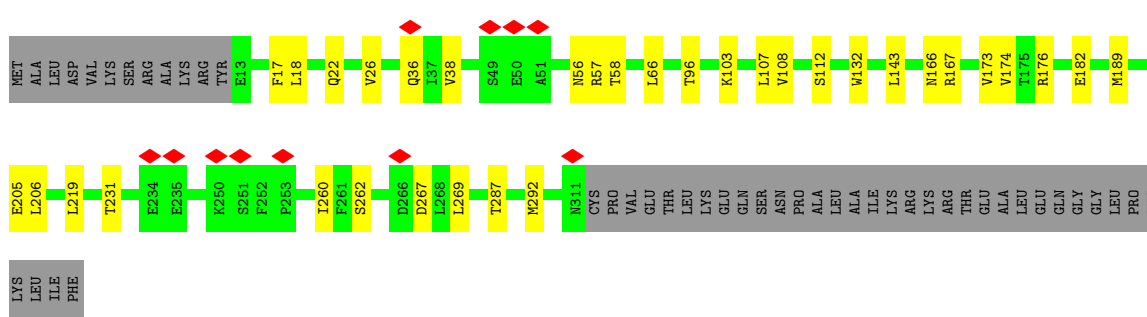
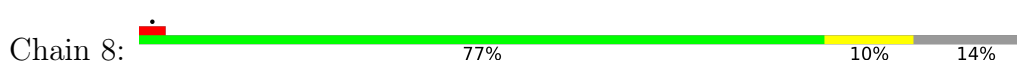
• Molecule 22: Mediator of RNA polymerase II transcription subunit 9



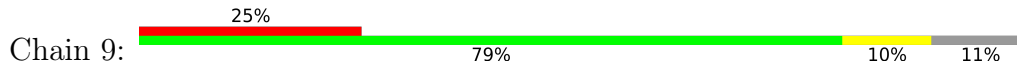
• Molecule 23: CDK-activating kinase assembly factor MAT1

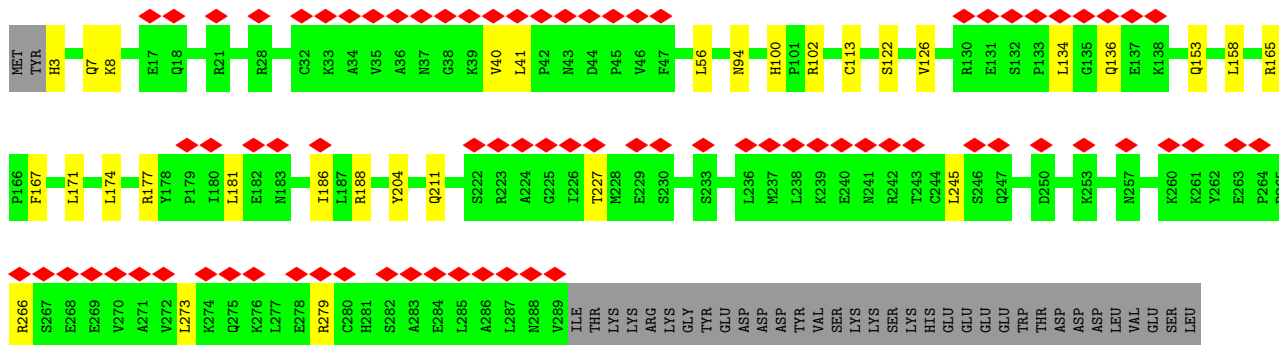


• Molecule 24: Cyclin-dependent kinase 7

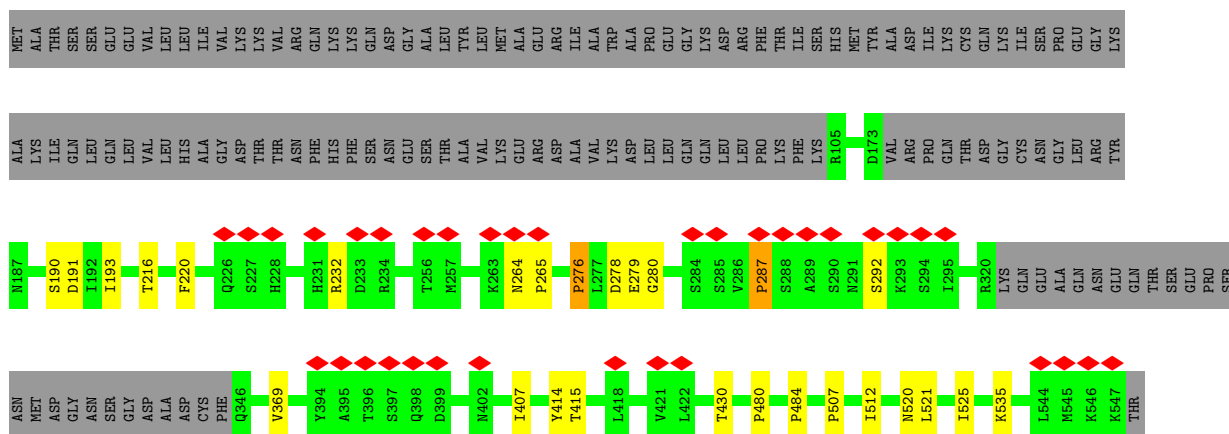


• Molecule 25: Cyclin-H

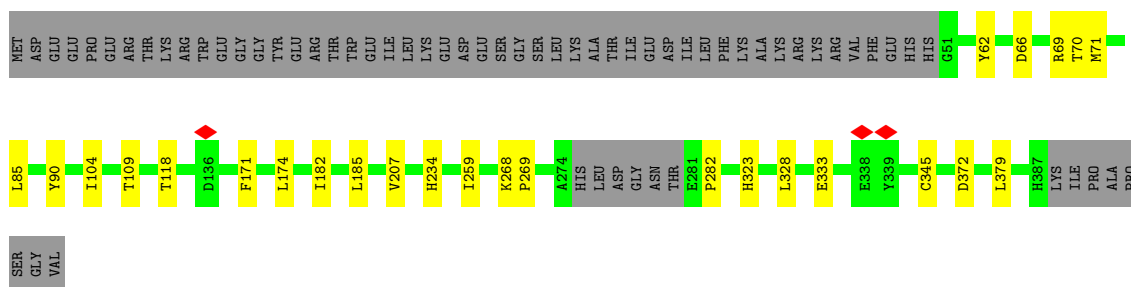
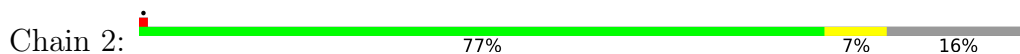




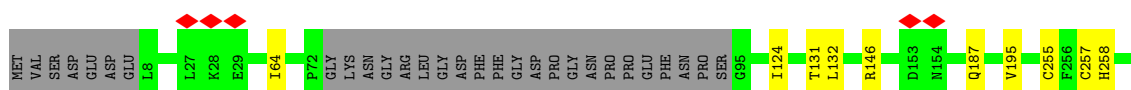
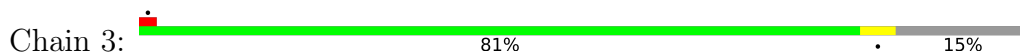
• Molecule 26: General transcription factor IIH subunit 1

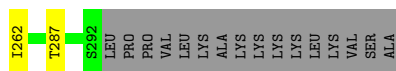


• Molecule 27: General transcription factor IIH subunit 2

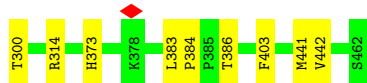
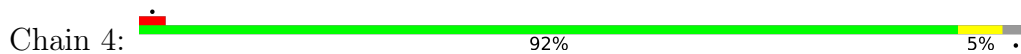


• Molecule 28: General transcription factor IIH subunit 3





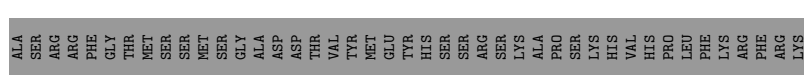
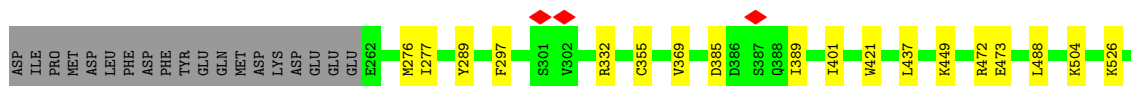
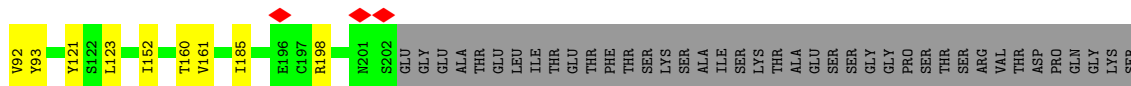
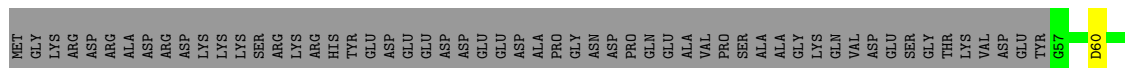
• Molecule 29: General transcription factor IIIH subunit 4



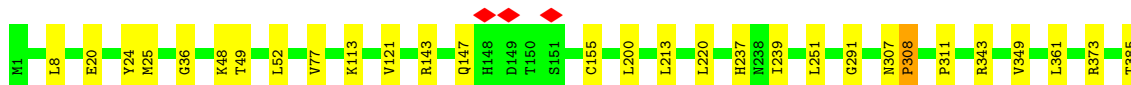
• Molecule 30: General transcription factor IIIH subunit 5

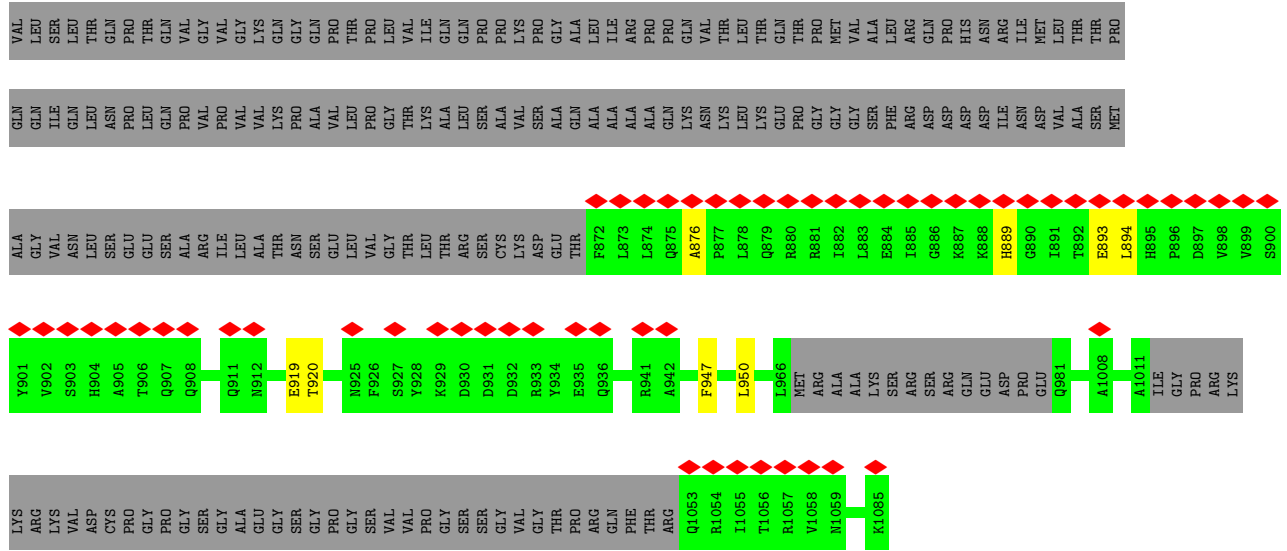


• Molecule 31: General transcription and DNA repair factor IIIH helicase subunit XPB

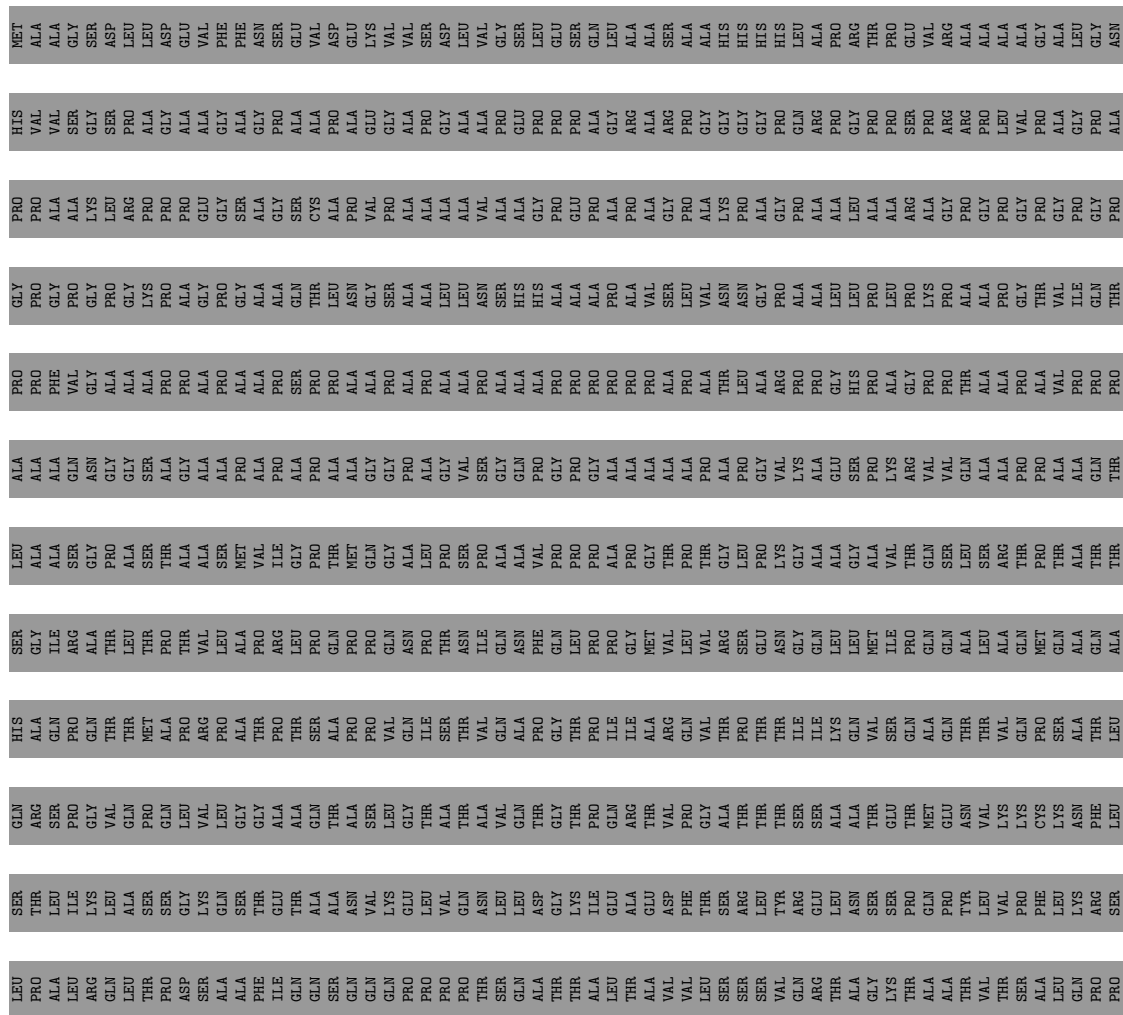


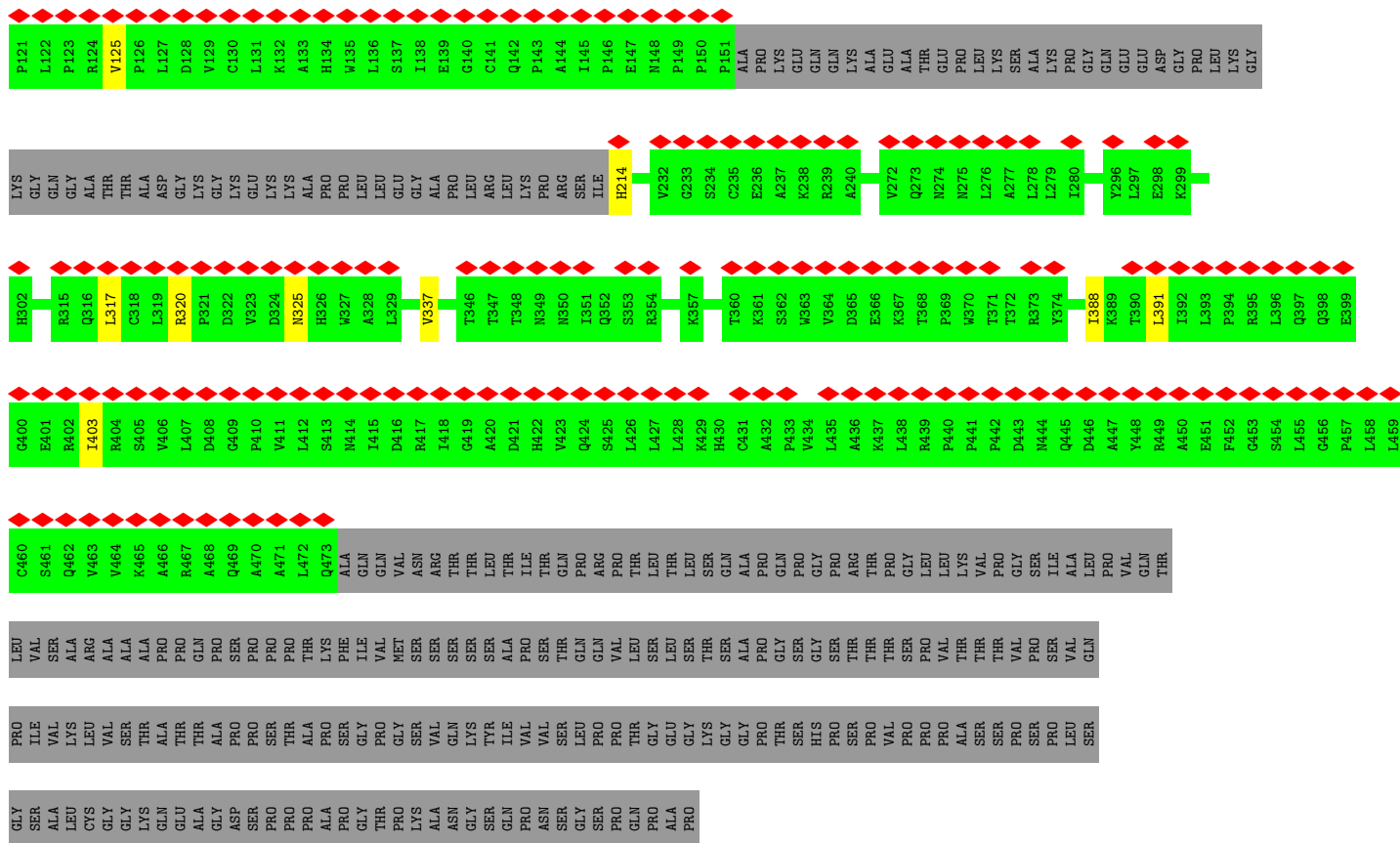
• Molecule 32: General transcription and DNA repair factor IIIH helicase subunit XPD



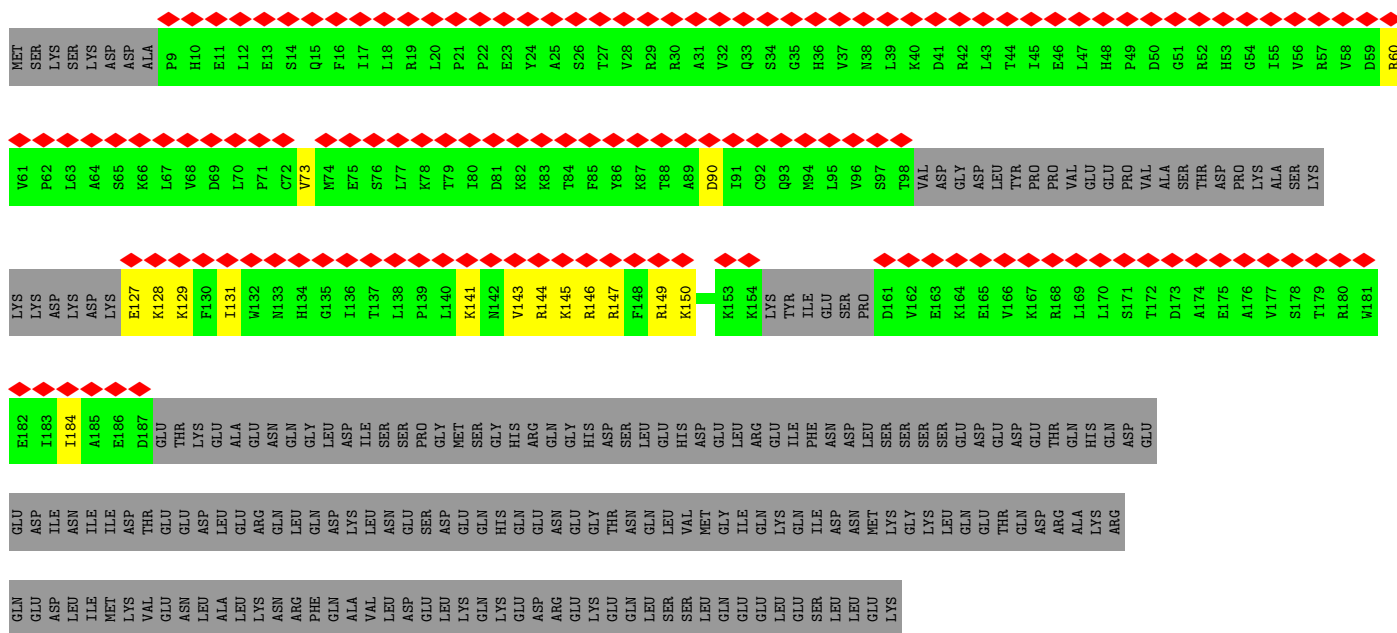
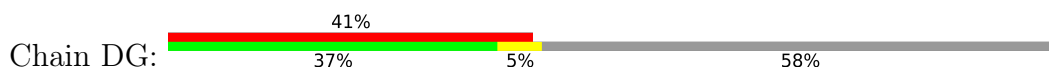


● Molecule 37: Transcription initiation factor TFIID subunit 4

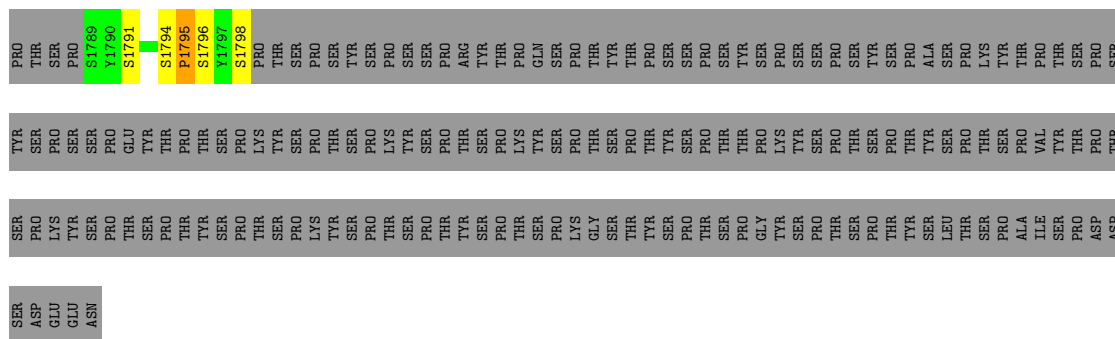




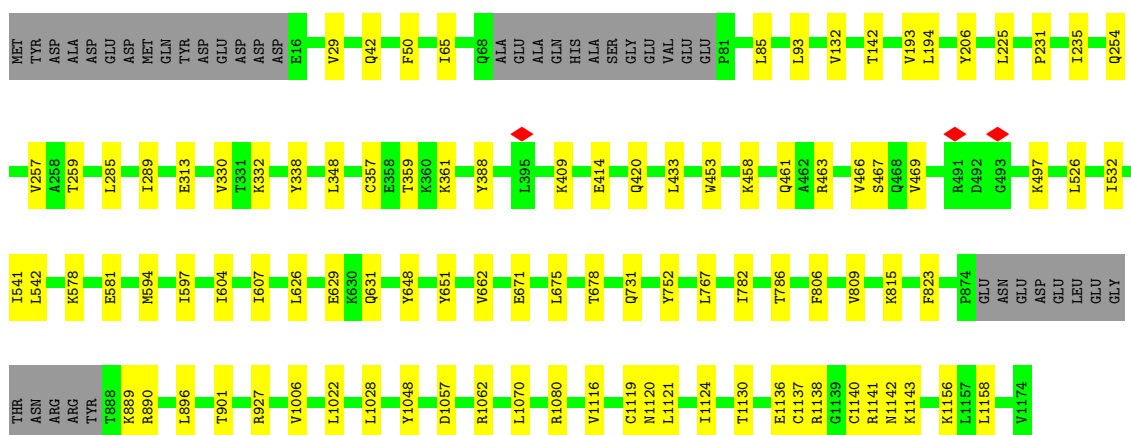
● Molecule 40: Transcription initiation factor TFIID subunit 7



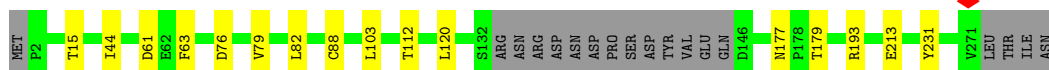
● Molecule 41: Transcription initiation factor TFIID subunit 8



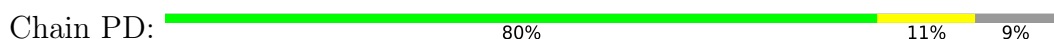
• Molecule 56: DNA-directed RNA polymerase subunit beta



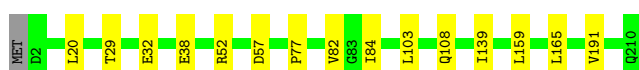
• Molecule 57: DNA-directed RNA polymerase II subunit RPB3



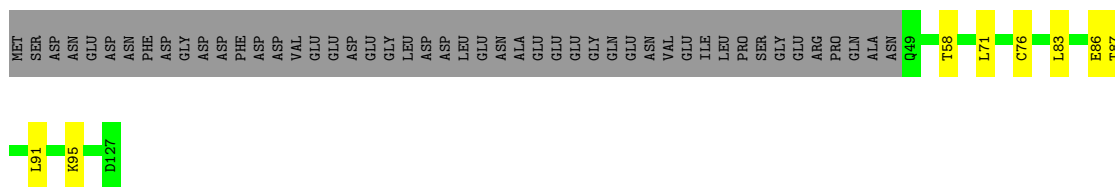
• Molecule 58: DNA-directed RNA polymerase II subunit RPB4



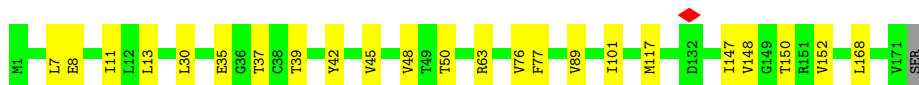
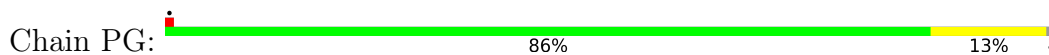
• Molecule 59: DNA-directed RNA polymerase II subunit E



• Molecule 60: DNA-directed RNA polymerase II subunit F



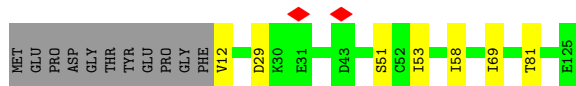
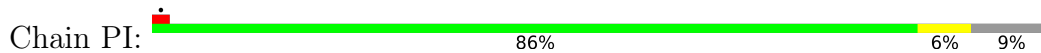
- Molecule 61: DNA-directed RNA polymerase II subunit RPB7



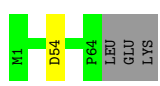
- Molecule 62: DNA-directed RNA polymerases I, II, and III subunit RPABC3



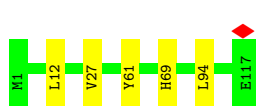
- Molecule 63: DNA-directed RNA polymerase II subunit RPB9



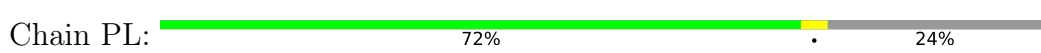
- Molecule 64: RPB10

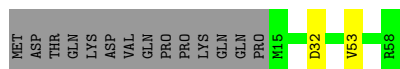


- Molecule 65: RNA_pol_L_2 domain-containing protein



- Molecule 66: RPB12

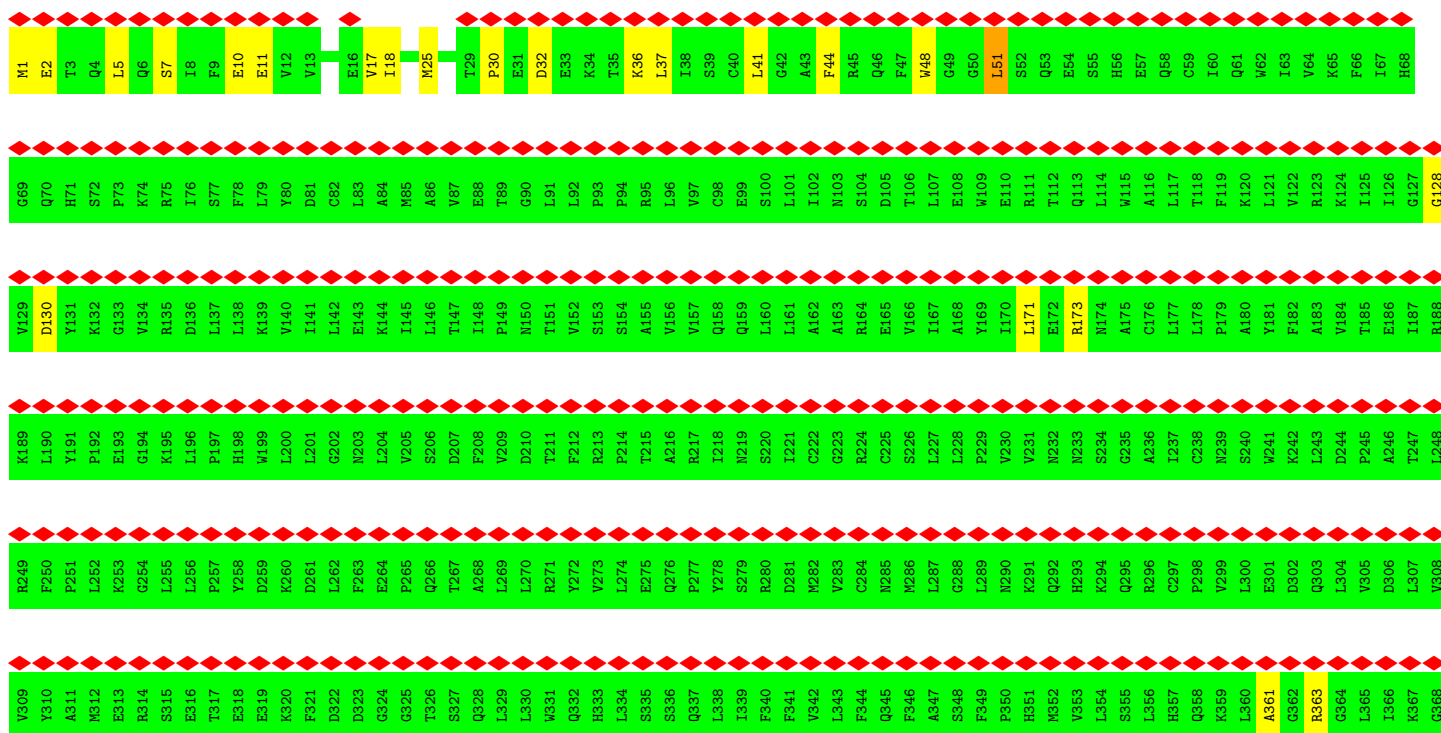




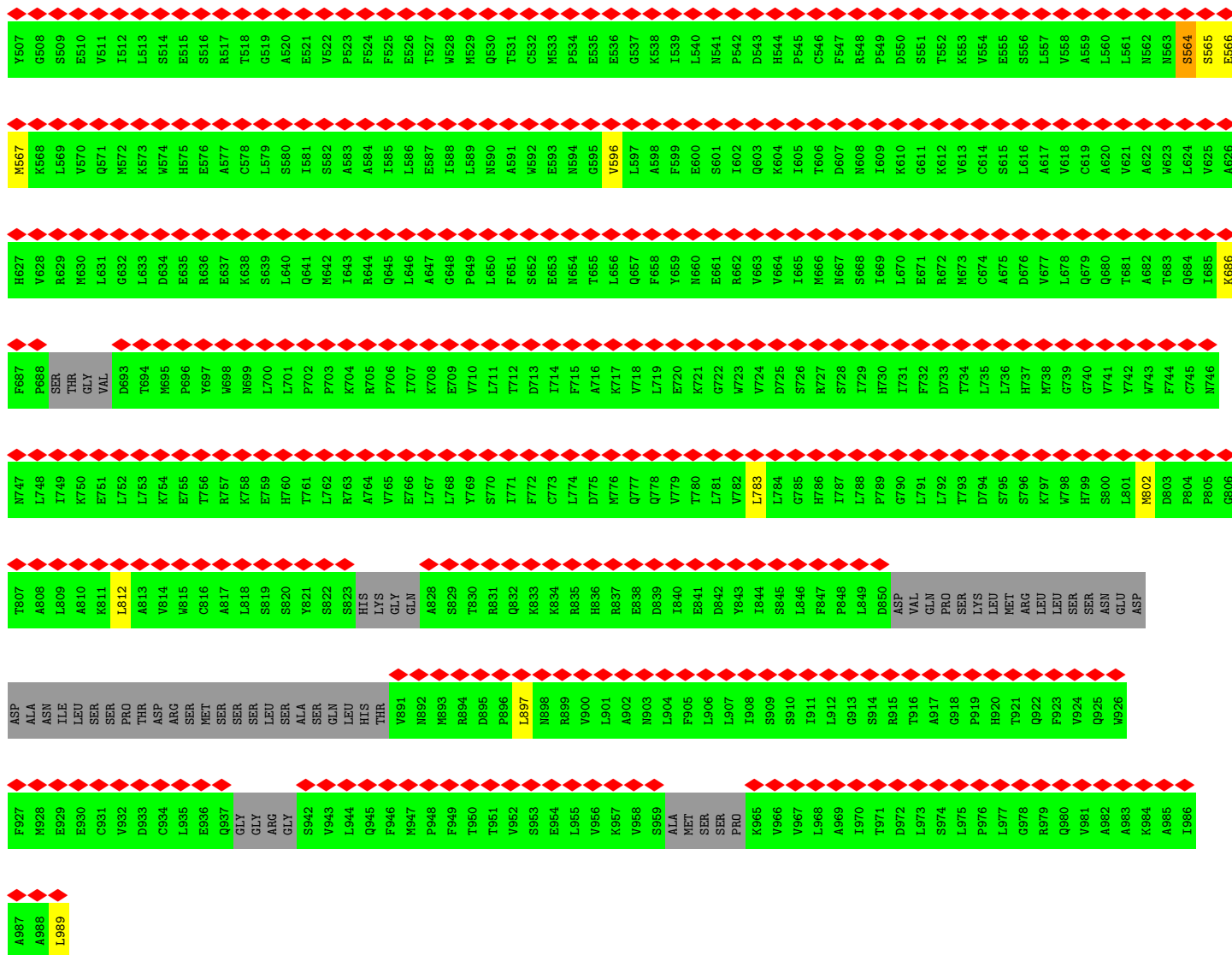
● Molecule 67: General transcription factor IIF subunit 1



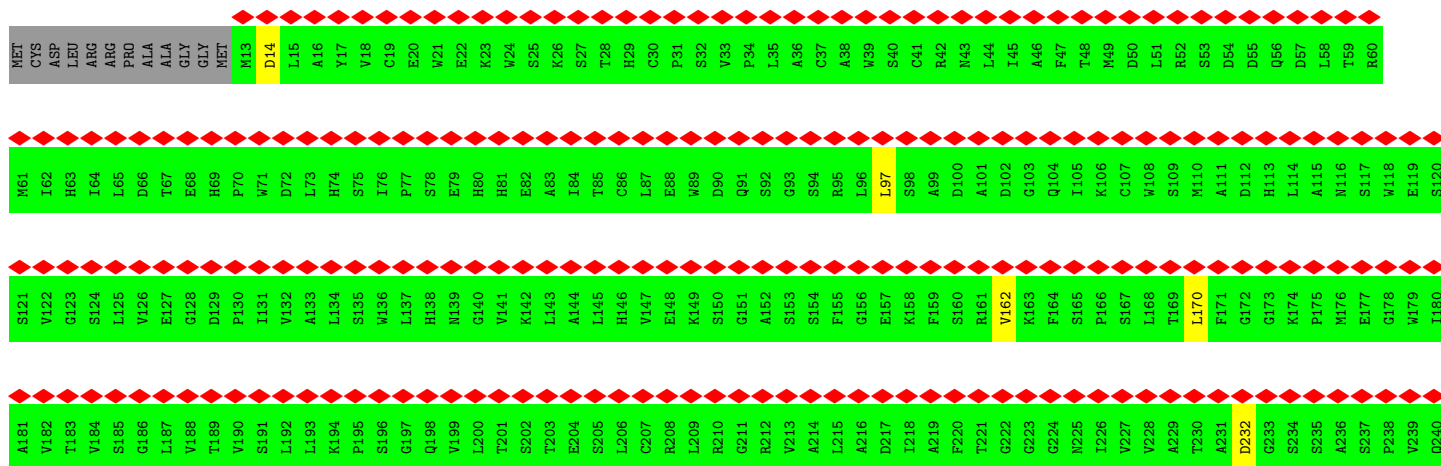
● Molecule 68: Mediator of RNA polymerase II transcription subunit 23



N1089	C1090	D1091	V1092	R1093	F1094	N1095	E1096	F1097	P1098	N1099	P1100	A1101	A1102	H1103	A1104	L1105	H1106	V1107	T1108	C1109	V1110	E1111	L1112	A1113	A1114	L1115	A1116	V1117	S1118	G1119	K1120	E1121	V1122	G1123	N1124	A1125	L1126	L1127	N1128	V1129	L1131	K1132	S1133	Q1134	P1135	L1136	V1137	P1138	R1139	E1140	N1141	T1142	T1143	A1144	W1145	N1146	N1147	A1148		
I969	V970	I971	H972	R973	F974	L975	E976	L977	R978	P979	V980	S981	K982	S983	L984	E985	T986	L987	L988	D989	H990	L991	G992	G993	L994	Y995	K996	F997	H998	D999	R1000	P1001	V1002	T1003	Y1004	L1005	L1006	N1007	T1008	L1009	R1010	Y1011	Y1012	E1013	M1014	H1015	L1016	R1017	R1018	R1019	A1020	F1021	L1022	K1023	R1024	G1025	L1026	V1027	H1028	
A1029	I1030	I1031	G1032	S1033	L1034	K1035	D1036	M1037	R1038	P1039	Q1040	G1041	W1042	C1043	L1044	S1045	D1046	T1047	Y1048	L1049	K1050	C1051	A1052	M1053	M1054	A1055	R1056	E1057	E1058	M1059	P1060	M1061	V1062	P1063	D1064	T1065	D1066	Y1067	Y1068	C1069	R1070	L1071	I1072	G1073	R1074	L1075	V1076	D1077	T1078	M1079	A1080	G1081	K1082	S1083	P1084	G1085	M1086	F1087	P1088	
R369	D370	H371	L372	M373	V374	V375	L376	L377	Q378	F379	I380	S381	G382	S383	I384	Q385	K386	N387	A388	L389	A390	D391	F392	L393	P394	V395	M396	K397	L398	F399	D400	L401	L402	Y403	P404	E405	K406	E407	Y408	I409	P410	V411	P412	D413	I414	M415	K416	P417	Q418	S419	T420	H421	A422	F423	A424	M425	T426	C427	I428	
W429	I430	H431	L432	M433	R434	K435	A436	Q437	N438	D439	M440	S441	K442	L443	Q444	I445	L446	I447	P448	H449	S450	L451	R452	L453	H454	H455	E456	F457	L458	Q459	Q460	S461	L462	R463	M464	K465	S466	L467	Q468	M469	N470	D471	Y472	K473	I474	A475	L476	L477	C478	N479	A480	Y481	S482	T483	M484	S485	E486	C487	F488	
T489	L490	P491	M492	G493	A494	L495	V496	E497	L498	I499	Y500	G501	N502	G503	I504	M505	R506	I507	P508	L509	P510	G511	T512	N513	C514	M515	A516	S517	G518	S519	I520	T521	P522	L523	P524	M525	N526	L527	L528	D529	S530	L531	T532	V533	H534	A535	K536	M537	S538	L539	I540	H541	S542	I543	A544	T545	E546	V547	I548	
K549	L550	A551	H552	G553	K554	S555	S556	V557	A558	L559	A560	P561	A562	L563	V564	E565	T566	Y567	S568	R569	L570	L571	V572	Y573	M574	E575	I576	E577	S578	L579	G580	I581	K582	G583	F584	M585	S586	Q587	L588	L589	P590	T591	V592	F593	K594	S595	H596	A597	M598	G599	I600	L601	H602	T603	L604	L605	E606	M607	F608	
S609	Y610	R611	M612	G613	H614	I615	Q616	P617	A618	Y619	R620	V621	Q622	L623	L624	S625	H626	L627	H628	T629	L630	A631	A632	V633	A634	Q635	T636	N637	Q638	N639	Q640	L641	H642	L643	C644	V645	E646	S647	T648	A649	L650	R651	L652	I653	T654	A655	L656	G657	S658	S659	E660	V661	Q662	P663	Q664	L665	T666	R667	F668	
L669	S670	D671	P672	K673	T674	V675	L676	S677	A678	E679	S680	E681	E682	L683	N684	R685	A686	L687	I688	L689	T690	L691	A692	R693	A694	T695	I696	V697	T698	D699	F700	F701	T702	G703	S704	D705	R706	S707	I707	Q708	G709	T710	W711	C712	L713	D714	I715	L716	Q717	T718	I719	M720	S721	F722	T723	P724	H725	W726	W727	A728
S729	H730	I731	L732	G733	C734	F735	P736	G737	P738	L739	Q740	A741	F742	F743	K744	Q745	W746	M747	V748	P749	Q750	E751	S752	R753	F754	M755	L756	K757	K758	M759	V760	E761	E762	E763	Y764	R765	K766	W767	K768	S769	M770	S771	N772	E773	N774	D775	I776	I777	T778	H779	F780	S781	M782	Q783	G784	S785	P786	F787	L788	
F789	L790	C791	L792	L793	W794	K795	M796	L797	L798	E799	T800	D801	H802	L803	N804	Q805	L806	G807	Y808	R809	V810	L811	E812	R813	L814	G815	A816	R817	A818	L819	V820	H821	H822	G823	R824	T825	F826	A827	D828	F829	L830	V831	G832	E833	F834	S835	T836	S837	A838	G839	G840	Q841	Q842	L843	N844	K845	C846	I847	E848	
L849	L850	M851	D852	M853	W854	M855	K856	Y857	M858	L859	V860	T861	L862	D863	R864	L865	L866	L867	C868	L869	A870	M871	R872	S873	H874	E875	G876	M877	E878	A879	Q880	H881	C882	Y883	F884	L885	L886	Q887	L888	L889	L890	L891	K892	P893	N894	D895	F896	R897	N898	R899	V900	S901	D902	F903	Y904	X905	E906	N907	S908	
P909	E910	H911	W912	L913	Q914	N915	D916	W917	H918	T919	K920	H921	N922	N923	Y924	H925	K926	K927	Y928	P929	E930	K931	L932	Y933	F934	E935	G936	L937	A938	E939	Q940	V941	D942	P943	P944	Y945	Y946	L947	Q948	S949	P950	Y951	L952	P953	L954	Y955	F956	G957	N958	V959	C960	L961	R962	F963	L964	P965	V966	F967	D968	
I969	V970	I971	H972	R973	F974	L975	E976	L977	R978	P979	V980	S981	K982	S983	L984	E985	T986	L987	L988	D989	H990	L991	G992	G993	L994	Y995	K996	F997	H998	D999	R1000	P1001	V1002	T1003	Y1004	L1005	L1006	N1007	T1008	L1009	R1010	Y1011	Y1012	E1013	M1014	H1015	L1016	R1017	R1018	R1019	A1020	F1021	L1022	K1023	R1024	G1025	L1026	V1027	H1028	



• Molecule 70: Isoform 2 of Mediator of RNA polymerase II transcription subunit 16



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	67732	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	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	7.867	Depositor
Minimum map value	-3.734	Depositor
Average map value	-0.002	Depositor
Map value standard deviation	0.101	Depositor
Recommended contour level	0.41	Depositor
Map size (\AA)	674.39996, 674.39996, 674.39996	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.405, 1.405, 1.405	Depositor

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: SF4, 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	0.65	0/3645	0.77	1/4952 (0.0%)
2	m	0.27	0/1010	0.37	0/1359
3	d	0.64	0/1277	0.82	0/1714
4	f	0.54	0/1359	0.70	2/1845 (0.1%)
5	g	0.61	0/1411	0.80	0/1901
6	h	0.62	0/1507	0.75	0/2036
7	r	0.61	0/1558	0.73	0/2096
8	t	0.69	0/1530	0.90	0/2066
9	j	0.41	0/1016	0.73	8/1363 (0.6%)
10	k	0.65	0/885	0.60	0/1190
11	n	0.36	0/7371	0.56	18/10037 (0.2%)
12	q	0.48	1/4336 (0.0%)	0.57	4/5865 (0.1%)
13	s	0.54	0/489	0.83	5/663 (0.8%)
14	u	0.48	0/797	0.72	1/1082 (0.1%)
15	v	0.67	0/1092	0.86	0/1468
16	z	0.62	0/781	0.81	0/1067
17	c	0.40	0/2106	0.53	1/2842 (0.0%)
18	e	0.26	0/840	0.36	0/1128
19	b	0.51	0/911	0.62	0/1229
20	l	0.26	0/1048	0.41	0/1405
21	o	0.35	0/1256	0.60	0/1724
22	i	0.66	0/523	0.67	0/692
23	0	0.66	0/2288	0.69	4/3101 (0.1%)
24	8	0.62	0/2437	0.63	0/3306
25	9	0.63	0/2356	0.63	0/3185
26	1	0.72	0/2674	0.66	6/3660 (0.2%)
27	2	0.65	0/2588	0.63	2/3509 (0.1%)
28	3	0.64	0/2102	0.61	0/2844
29	4	0.63	0/3663	0.62	0/4965
30	5	0.64	0/433	0.62	0/585
31	6	0.63	0/4983	0.62	0/6731
32	7	0.63	0/5957	0.62	2/8071 (0.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	EA	0.62	0/1499	0.63	0/2012
34	EB	0.64	0/1428	0.63	0/1917
35	DA	0.62	0/4627	0.63	1/6248 (0.0%)
36	DB	0.63	0/7993	0.61	0/10836
37	DD	0.62	0/1343	0.64	1/1795 (0.1%)
37	Dd	0.63	0/1321	0.58	0/1772
38	DE	0.64	0/4469	0.64	0/6050
38	De	0.64	0/4433	0.63	0/6004
39	DF	0.65	0/3167	0.65	0/4303
39	Df	0.65	0/3140	0.63	0/4268
40	DG	0.62	0/1199	0.61	0/1612
41	DH	0.64	0/1673	0.62	0/2285
42	DI	0.62	0/981	0.63	0/1332
42	Di	0.61	0/989	0.60	0/1343
43	DJ	0.62	0/736	0.63	1/998 (0.1%)
43	Dj	0.62	0/775	0.62	0/1049
44	DL	0.63	0/622	0.72	3/841 (0.4%)
44	DI	0.63	0/888	0.69	3/1194 (0.3%)
45	Dc	0.64	0/1035	0.61	0/1406
46	Dk	0.64	0/799	0.59	0/1070
47	Dm	0.63	0/733	0.61	0/977
48	DO	0.65	0/781	0.64	0/1061
49	DP	0.64	0/1438	0.61	0/1935
50	DQ	0.64	0/1013	0.62	0/1366
51	BA	0.65	0/1967	0.62	0/2656
52	FB	0.63	0/1817	0.62	0/2445
53	X	1.14	21/1607 (1.3%)	0.98	1/2481 (0.0%)
54	Y	0.97	11/1565 (0.7%)	1.02	9/2410 (0.4%)
55	PA	0.64	0/11881	0.65	0/16057
56	PB	0.64	0/9243	0.62	0/12475
57	PC	0.63	0/2102	0.62	0/2857
58	PD	0.64	0/1036	0.60	0/1397
59	PE	0.62	0/1751	0.62	0/2366
60	PF	0.63	0/645	0.63	0/871
61	PG	0.65	0/1365	0.64	0/1853
62	PH	0.64	0/1207	0.63	0/1628
63	PI	0.64	0/948	0.63	0/1284
64	PJ	0.63	0/516	0.63	0/696
65	PK	0.62	0/956	0.60	0/1294
66	PL	0.64	0/377	0.60	0/500
67	FA	0.61	0/1130	0.60	0/1528
68	w	0.58	0/11053	0.62	1/15018 (0.0%)
69	x	0.59	0/7179	0.65	6/9712 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
70	p	0.71	0/3191	0.73	4/4333 (0.1%)
All	All	0.62	33/174847 (0.0%)	0.65	84/237216 (0.0%)

All (33) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	X	-39	DA	O3'-P	-16.78	1.41	1.61
53	X	-37	DG	C1'-N9	-7.92	1.36	1.47
53	X	-9	DG	C1'-N9	-7.91	1.36	1.47
53	X	-26	DA	C1'-N9	-7.85	1.36	1.47
53	X	-19	DG	C1'-N9	-7.51	1.36	1.47
53	X	-27	DA	C1'-N9	-7.51	1.36	1.47
53	X	-15	DG	C1'-N9	-7.28	1.37	1.47
53	X	-22	DG	C1'-N9	-7.18	1.37	1.47
53	X	-21	DG	C1'-N9	-7.15	1.37	1.47
53	X	-36	DG	C1'-N9	-7.13	1.37	1.47
54	Y	-18	DG	C1'-N9	-7.03	1.37	1.47
54	Y	-27	DG	C1'-N9	-6.84	1.37	1.47
53	X	-17	DG	C1'-N9	-6.76	1.37	1.47
53	X	-11	DG	C1'-N9	-6.68	1.37	1.47
54	Y	-16	DG	C1'-N9	-6.66	1.38	1.47
53	X	29	DG	C1'-N9	-6.66	1.38	1.47
54	Y	7	DA	C1'-N9	-6.65	1.38	1.47
54	Y	-14	DG	C1'-N9	-6.65	1.38	1.47
54	Y	34	DG	C1'-N9	-6.64	1.38	1.47
53	X	21	DG	C1'-N9	-6.63	1.38	1.47
53	X	-5	DG	C1'-N9	-6.62	1.38	1.47
54	Y	4	DA	C1'-N9	-6.61	1.38	1.47
54	Y	1	DA	C1'-N9	-6.55	1.38	1.47
53	X	25	DA	C1'-N9	-6.50	1.38	1.47
53	X	1	DA	C1'-N9	-6.33	1.38	1.47
54	Y	18	DA	C1'-N9	-6.32	1.38	1.47
53	X	-14	DG	C1'-N9	-6.16	1.38	1.47
54	Y	-5	DC	O3'-P	5.67	1.68	1.61
12	q	452	ALA	C-N	5.55	1.46	1.34
54	Y	-7	DC	C1'-N1	5.20	1.56	1.49
53	X	-12	DC	O3'-P	5.14	1.67	1.61
53	X	-4	DT	C1'-N1	5.12	1.55	1.49
53	X	-1	DT	C1'-N1	5.11	1.55	1.49

All (84) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	j	77	PRO	CA-N-CD	-8.98	98.92	111.50
69	x	485	PRO	CA-N-CD	-8.43	99.70	111.50
69	x	54	PRO	N-CA-CB	-8.18	93.49	103.30
54	Y	-6	DG	P-O3'-C3'	8.13	129.46	119.70
11	n	1355	PRO	N-CA-CB	6.84	111.51	103.30
11	n	1343	PRO	N-CA-CB	6.78	111.44	103.30
11	n	1351	PRO	N-CA-CB	6.69	111.33	103.30
11	n	1237	PRO	N-CA-CB	6.53	111.14	103.30
54	Y	35	DC	C1'-O4'-C4'	-6.47	103.63	110.10
11	n	1196	PRO	N-CA-CB	6.46	111.06	103.30
53	X	-37	DG	P-O3'-C3'	6.32	127.28	119.70
11	n	1255	PRO	N-CA-CB	6.23	110.78	103.30
11	n	1347	PRO	N-CA-CB	6.20	110.74	103.30
11	n	1267	PRO	N-CA-CB	6.11	110.63	103.30
11	n	1326	PRO	N-CA-CB	6.10	110.62	103.30
68	w	30	PRO	N-CA-CB	6.00	110.51	103.30
70	p	97	LEU	CB-CG-CD1	-6.00	100.80	111.00
54	Y	35	DC	P-O3'-C3'	5.93	126.82	119.70
11	n	1344	PRO	N-CA-CB	5.93	110.42	103.30
35	DA	498	PRO	N-CA-CB	5.92	110.40	103.30
17	c	284	CYS	CB-CA-C	-5.87	98.66	110.40
11	n	1352	PRO	N-CA-CB	5.87	110.34	103.30
23	0	217	PRO	N-CA-CB	5.87	110.34	103.30
11	n	1192	PRO	N-CA-CB	5.83	110.30	103.30
69	x	484	LYS	C-N-CD	5.77	140.51	128.40
11	n	369	PRO	N-CA-C	-5.75	97.16	112.10
54	Y	-8	DT	P-O3'-C3'	-5.74	112.81	119.70
11	n	1206	PRO	N-CA-CB	5.68	110.11	103.30
13	s	135	PRO	N-CA-CB	5.67	110.10	103.30
12	q	393	PRO	N-CA-CB	5.65	110.08	103.30
13	s	158	PRO	N-CA-CB	5.65	110.08	103.30
26	1	507	PRO	N-CA-CB	5.64	110.07	103.30
26	1	276	PRO	N-CA-CB	5.64	110.07	103.30
13	s	113	PRO	N-CA-CB	5.63	110.05	103.30
13	s	134	PRO	N-CA-CB	5.63	110.05	103.30
70	p	443	LEU	CA-CB-CG	5.61	128.19	115.30
12	q	410	PRO	N-CA-CB	5.59	110.00	103.30
13	s	119	PRO	N-CA-CB	5.59	110.00	103.30
12	q	395	PRO	N-CA-CB	5.57	109.98	103.30
11	n	1309	PRO	N-CA-CB	5.54	109.95	103.30
26	1	480	PRO	N-CA-CB	5.54	109.95	103.30
27	2	269	PRO	N-CA-CB	5.53	109.94	103.30
23	0	237	PRO	N-CA-CB	5.53	109.93	103.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	n	74	PRO	N-CA-CB	5.51	109.91	103.30
11	n	1348	PRO	N-CA-CB	5.51	109.91	103.30
1	a	32	PRO	N-CA-CB	5.50	109.91	103.30
27	2	282	PRO	N-CA-CB	5.49	109.88	103.30
26	1	265	PRO	N-CA-CB	5.48	109.88	103.30
23	0	215	PRO	N-CA-CB	5.47	109.87	103.30
32	7	308	PRO	N-CA-CB	5.46	109.86	103.30
23	0	220	PRO	N-CA-CB	5.45	109.84	103.30
54	Y	35	DC	O4'-C1'-N1	5.45	111.82	108.00
26	1	484	PRO	N-CA-CB	5.44	109.83	103.30
14	u	107	VAL	CG1-CB-CG2	-5.44	102.20	110.90
26	1	287	PRO	N-CA-CB	5.42	109.80	103.30
69	x	359	CYS	CA-CB-SG	5.36	123.64	114.00
69	x	783	LEU	CA-CB-CG	5.33	127.56	115.30
12	q	399	PRO	N-CA-CB	5.29	109.65	103.30
9	j	50	ASP	CB-CG-OD2	5.28	123.05	118.30
54	Y	36	DC	P-O3'-C3'	5.26	126.01	119.70
70	p	14	ASP	CB-CG-OD2	5.25	123.03	118.30
9	j	72	ASP	CB-CG-OD2	5.24	123.02	118.30
54	Y	35	DC	C2'-C3'-O3'	-5.24	95.32	112.60
11	n	676	ASP	CB-CG-OD2	5.22	123.00	118.30
70	p	275	ASP	CB-CG-OD2	5.21	122.99	118.30
44	DL	79	ASP	CB-CG-OD2	5.20	122.98	118.30
9	j	100	ASP	CB-CG-OD2	5.20	122.98	118.30
9	j	52	ASP	CB-CG-OD2	5.19	122.97	118.30
9	j	28	ASP	CB-CG-OD2	5.19	122.97	118.30
44	DL	89	ASP	CB-CG-OD2	5.19	122.97	118.30
9	j	120	ASP	CB-CG-OD2	5.17	122.96	118.30
9	j	60	ASP	CB-CG-OD2	5.17	122.95	118.30
37	DD	947	PHE	CB-CA-C	5.17	120.74	110.40
32	7	311	PRO	N-CA-CB	5.16	109.49	103.30
44	DL	90	ASP	CB-CG-OD2	5.16	122.94	118.30
4	f	118	ARG	CB-CA-C	5.15	120.71	110.40
44	Dl	89	ASP	CB-CG-OD2	5.15	122.94	118.30
44	Dl	79	ASP	CB-CG-OD2	5.14	122.93	118.30
4	f	31	ASP	CB-CG-OD2	5.12	122.91	118.30
54	Y	35	DC	C3'-C2'-C1'	-5.12	96.36	102.50
54	Y	34	DG	P-O3'-C3'	5.10	125.82	119.70
44	Dl	90	ASP	CB-CG-OD2	5.09	122.88	118.30
43	DJ	118	ASP	CB-CG-OD2	5.09	122.88	118.30
69	x	355	CYS	CA-CB-SG	5.01	123.03	114.00

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	457/1581 (29%)	421 (92%)	29 (6%)	7 (2%)	10	46
2	m	110/131 (84%)	106 (96%)	4 (4%)	0	100	100
3	d	154/270 (57%)	143 (93%)	6 (4%)	5 (3%)	4	30
4	f	163/246 (66%)	142 (87%)	15 (9%)	6 (4%)	3	28
5	g	164/233 (70%)	145 (88%)	10 (6%)	9 (6%)	2	21
6	h	188/268 (70%)	167 (89%)	12 (6%)	9 (5%)	2	23
7	r	189/208 (91%)	176 (93%)	10 (5%)	3 (2%)	9	44
8	t	189/212 (89%)	166 (88%)	15 (8%)	8 (4%)	3	25
9	j	120/135 (89%)	110 (92%)	6 (5%)	4 (3%)	4	30
10	k	110/117 (94%)	99 (90%)	9 (8%)	2 (2%)	8	41
11	n	980/1454 (67%)	877 (90%)	86 (9%)	17 (2%)	9	43
12	q	540/651 (83%)	474 (88%)	53 (10%)	13 (2%)	6	36
13	s	69/244 (28%)	60 (87%)	7 (10%)	2 (3%)	4	32
14	u	103/144 (72%)	93 (90%)	8 (8%)	2 (2%)	8	40
15	v	132/200 (66%)	119 (90%)	10 (8%)	3 (2%)	6	37
16	z	93/600 (16%)	84 (90%)	7 (8%)	2 (2%)	6	37
17	c	245/311 (79%)	232 (95%)	13 (5%)	0	100	100
18	e	98/178 (55%)	92 (94%)	4 (4%)	2 (2%)	7	40
19	b	111/200 (56%)	109 (98%)	1 (1%)	1 (1%)	17	55

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
20	l	120/178 (67%)	115 (96%)	5 (4%)	0	100	100
21	o	152/788 (19%)	138 (91%)	10 (7%)	4 (3%)	5	34
22	i	56/146 (38%)	54 (96%)	1 (2%)	1 (2%)	8	41
23	0	304/309 (98%)	285 (94%)	15 (5%)	4 (1%)	12	48
24	8	297/346 (86%)	290 (98%)	7 (2%)	0	100	100
25	9	285/323 (88%)	279 (98%)	6 (2%)	0	100	100
26	1	399/548 (73%)	336 (84%)	53 (13%)	10 (2%)	5	35
27	2	327/395 (83%)	315 (96%)	10 (3%)	2 (1%)	25	64
28	3	259/308 (84%)	257 (99%)	2 (1%)	0	100	100
29	4	447/462 (97%)	431 (96%)	12 (3%)	4 (1%)	17	55
30	5	52/71 (73%)	50 (96%)	2 (4%)	0	100	100
31	6	602/782 (77%)	585 (97%)	14 (2%)	3 (0%)	29	67
32	7	732/760 (96%)	704 (96%)	23 (3%)	5 (1%)	22	61
33	EA	175/439 (40%)	163 (93%)	12 (7%)	0	100	100
34	EB	170/291 (58%)	161 (95%)	4 (2%)	5 (3%)	4	32
35	DA	534/1872 (28%)	523 (98%)	9 (2%)	2 (0%)	34	71
36	DB	959/1199 (80%)	932 (97%)	25 (3%)	2 (0%)	47	80
37	DD	153/1085 (14%)	148 (97%)	4 (3%)	1 (1%)	22	61
37	Dd	154/1085 (14%)	152 (99%)	2 (1%)	0	100	100
38	DE	540/800 (68%)	524 (97%)	16 (3%)	0	100	100
38	De	531/800 (66%)	514 (97%)	16 (3%)	1 (0%)	47	80
39	DF	404/677 (60%)	393 (97%)	9 (2%)	2 (0%)	29	67
39	Df	399/677 (59%)	394 (99%)	4 (1%)	1 (0%)	41	76
40	DG	139/349 (40%)	137 (99%)	2 (1%)	0	100	100
41	DH	207/310 (67%)	199 (96%)	5 (2%)	3 (1%)	11	46
42	DI	118/264 (45%)	116 (98%)	1 (1%)	1 (1%)	19	59
42	Di	119/264 (45%)	118 (99%)	1 (1%)	0	100	100
43	DJ	86/218 (39%)	84 (98%)	2 (2%)	0	100	100
43	Dj	91/218 (42%)	90 (99%)	1 (1%)	0	100	100
44	DL	73/161 (45%)	68 (93%)	2 (3%)	3 (4%)	3	25
44	DI	105/161 (65%)	104 (99%)	0	1 (1%)	15	53

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
45	Dc	125/929 (14%)	122 (98%)	1 (1%)	2 (2%)	9	44
46	Dk	96/211 (46%)	93 (97%)	3 (3%)	0	100	100
47	Dm	85/124 (68%)	82 (96%)	3 (4%)	0	100	100
48	DO	95/109 (87%)	91 (96%)	2 (2%)	2 (2%)	7	38
49	DP	175/339 (52%)	170 (97%)	4 (2%)	1 (1%)	25	64
50	DQ	118/307 (38%)	115 (98%)	2 (2%)	1 (1%)	19	59
51	BA	247/316 (78%)	244 (99%)	3 (1%)	0	100	100
52	FB	218/249 (88%)	210 (96%)	7 (3%)	1 (0%)	29	67
55	PA	1460/1970 (74%)	1415 (97%)	38 (3%)	7 (0%)	29	67
56	PB	1128/1174 (96%)	1104 (98%)	22 (2%)	2 (0%)	47	80
57	PC	253/275 (92%)	252 (100%)	1 (0%)	0	100	100
58	PD	127/142 (89%)	127 (100%)	0	0	100	100
59	PE	207/210 (99%)	204 (99%)	2 (1%)	1 (0%)	29	67
60	PF	77/127 (61%)	76 (99%)	0	1 (1%)	12	48
61	PG	169/172 (98%)	165 (98%)	4 (2%)	0	100	100
62	PH	146/150 (97%)	144 (99%)	2 (1%)	0	100	100
63	PI	112/125 (90%)	111 (99%)	1 (1%)	0	100	100
64	PJ	62/67 (92%)	61 (98%)	1 (2%)	0	100	100
65	PK	115/117 (98%)	114 (99%)	1 (1%)	0	100	100
66	PL	42/58 (72%)	42 (100%)	0	0	100	100
67	FA	130/517 (25%)	126 (97%)	4 (3%)	0	100	100
68	w	1332/1368 (97%)	1261 (95%)	65 (5%)	6 (0%)	29	67
69	x	876/989 (89%)	820 (94%)	51 (6%)	5 (1%)	25	64
70	p	400/841 (48%)	367 (92%)	32 (8%)	1 (0%)	41	76
All	All	20999/34555 (61%)	19990 (95%)	829 (4%)	180 (1%)	21	55

All (180) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	a	67	LYS
1	a	331	GLU
4	f	25	ASN
4	f	35	GLU
4	f	36	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
5	g	31	ALA
6	h	100	PHE
6	h	130	ARG
6	h	161	SER
8	t	99	LYS
9	j	61	ILE
9	j	64	PRO
11	n	154	ILE
11	n	1196	PRO
11	n	1255	PRO
11	n	1266	THR
11	n	1326	PRO
12	q	131	SER
12	q	288	SER
12	q	393	PRO
12	q	398	ALA
12	q	399	PRO
13	s	158	PRO
15	v	42	ILE
23	0	7	PRO
23	0	237	PRO
26	1	264	ASN
26	1	276	PRO
26	1	278	ASP
26	1	287	PRO
26	1	292	SER
27	2	268	LYS
29	4	135	GLN
31	6	421	TRP
32	7	307	ASN
32	7	463	PRO
34	EB	171	ILE
35	DA	498	PRO
36	DB	366	ASP
37	DD	876	ALA
39	DF	442	PRO
44	DL	73	ASN
55	PA	1652	PRO
55	PA	1654	SER
60	PF	76	CYS
68	w	51	LEU
69	x	54	PRO

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	a	334	PRO
1	a	430	LEU
5	g	29	GLY
6	h	37	TYR
7	r	45	ASN
8	t	165	LEU
11	n	169	LEU
11	n	254	VAL
11	n	1351	PRO
12	q	395	PRO
12	q	419	ASN
15	v	139	SER
16	z	544	THR
18	e	146	ILE
21	o	714	ASP
31	6	610	VAL
31	6	622	VAL
32	7	36	GLY
32	7	308	PRO
34	EB	134	ASP
36	DB	427	PRO
48	DO	52	VAL
50	DQ	320	VAL
55	PA	1669	PRO
68	w	32	ASP
68	w	1196	CYS
69	x	485	PRO
69	x	566	GLU
1	a	487	LEU
3	d	144	SER
3	d	146	GLU
4	f	139	TYR
5	g	39	LYS
5	g	41	SER
6	h	41	THR
8	t	120	CYS
9	j	60	ASP
11	n	165	SER
11	n	1206	PRO
12	q	91	SER
12	q	420	SER
12	q	458	PRO

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
14	u	81	SER
21	o	709	LYS
22	i	139	CYS
26	1	280	GLY
26	1	520	ASN
34	EB	212	VAL
44	DL	114	LYS
45	Dc	117	ALA
56	PB	467	SER
68	w	1203	MET
69	x	484	LYS
70	p	250	SER
1	a	208	VAL
3	d	143	ILE
4	f	138	ARG
5	g	20	GLU
5	g	26	ILE
6	h	170	LYS
7	r	94	GLY
7	r	153	VAL
8	t	47	HIS
8	t	109	LYS
11	n	265	LEU
11	n	528	HIS
11	n	1355	PRO
12	q	127	LEU
12	q	134	ALA
18	e	147	ASN
19	b	100	GLN
23	0	233	ILE
26	1	279	GLU
26	1	369	VAL
34	EB	225	VAL
39	DF	66	LEU
41	DH	129	VAL
45	Dc	100	PRO
39	Df	93	PRO
48	DO	84	VAL
52	FB	38	GLY
55	PA	1662	PRO
68	w	128	GLY
3	d	178	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	f	61	ASN
5	g	74	HIS
8	t	129	VAL
10	k	79	HIS
10	k	81	GLY
11	n	264	ALA
11	n	1343	PRO
13	s	153	ARG
14	u	83	ALA
15	v	51	ALA
16	z	540	LEU
21	o	721	LEU
23	0	192	LEU
29	4	129	TRP
34	EB	174	ALA
44	DL	112	GLU
38	De	510	ALA
69	x	564	SER
6	h	99	VAL
11	n	229	GLU
12	q	89	GLN
26	l	512	ILE
29	4	384	PRO
41	DH	163	PRO
44	Dl	60	LYS
49	DP	207	PRO
55	PA	1659	PRO
56	PB	231	PRO
68	w	361	ALA
5	g	137	VAL
11	n	150	PRO
41	DH	140	ARG
1	a	75	PRO
8	t	172	ALA
21	o	716	PRO
35	DA	504	PRO
55	PA	1795	PRO
3	d	176	TYR
6	h	42	TRP
6	h	98	PRO
8	t	17	VAL
9	j	76	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
29	4	189	GLU
32	7	291	GLY
42	DI	85	SER
55	PA	462	PRO
5	g	14	PRO
27	2	259	ILE
59	PE	77	PRO

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	387/1391 (28%)	322 (83%)	65 (17%)	2 13
2	m	102/115 (89%)	102 (100%)	0	100 100
3	d	138/230 (60%)	100 (72%)	38 (28%)	0 3
4	f	144/223 (65%)	126 (88%)	18 (12%)	4 22
5	g	157/215 (73%)	122 (78%)	35 (22%)	1 6
6	h	168/225 (75%)	128 (76%)	40 (24%)	0 5
7	r	168/183 (92%)	133 (79%)	35 (21%)	1 7
8	t	166/178 (93%)	137 (82%)	29 (18%)	2 12
9	j	113/124 (91%)	109 (96%)	4 (4%)	36 60
10	k	94/98 (96%)	51 (54%)	43 (46%)	0 0
11	n	689/1272 (54%)	651 (94%)	38 (6%)	21 49
12	q	461/577 (80%)	391 (85%)	70 (15%)	3 17
13	s	31/208 (15%)	29 (94%)	2 (6%)	17 44
14	u	78/119 (66%)	67 (86%)	11 (14%)	3 19
15	v	122/173 (70%)	91 (75%)	31 (25%)	0 4
16	z	89/512 (17%)	76 (85%)	13 (15%)	3 18
17	c	231/280 (82%)	223 (96%)	8 (4%)	36 60
18	e	94/152 (62%)	94 (100%)	0	100 100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
19	b	102/163 (63%)	92 (90%)	10 (10%)	8	29
20	l	116/155 (75%)	116 (100%)	0	100	100
21	o	141/697 (20%)	141 (100%)	0	100	100
22	i	61/133 (46%)	43 (70%)	18 (30%)	0	2
23	0	209/283 (74%)	193 (92%)	16 (8%)	13	39
24	8	259/299 (87%)	225 (87%)	34 (13%)	4	21
25	9	252/296 (85%)	221 (88%)	31 (12%)	4	22
26	1	176/484 (36%)	163 (93%)	13 (7%)	13	40
27	2	279/352 (79%)	257 (92%)	22 (8%)	12	38
28	3	234/272 (86%)	221 (94%)	13 (6%)	21	48
29	4	387/399 (97%)	366 (95%)	21 (5%)	22	49
30	5	48/64 (75%)	43 (90%)	5 (10%)	7	27
31	6	533/688 (78%)	488 (92%)	45 (8%)	11	36
32	7	616/664 (93%)	571 (93%)	45 (7%)	14	41
33	EA	163/373 (44%)	151 (93%)	12 (7%)	13	40
34	EB	155/261 (59%)	143 (92%)	12 (8%)	13	39
35	DA	488/1665 (29%)	449 (92%)	39 (8%)	12	38
36	DB	876/1083 (81%)	798 (91%)	78 (9%)	9	33
37	DD	144/815 (18%)	138 (96%)	6 (4%)	30	55
37	Dd	146/815 (18%)	138 (94%)	8 (6%)	21	49
38	DE	478/657 (73%)	433 (91%)	45 (9%)	8	30
38	De	475/657 (72%)	424 (89%)	51 (11%)	6	26
39	DF	324/574 (56%)	298 (92%)	26 (8%)	12	38
39	Df	322/574 (56%)	309 (96%)	13 (4%)	31	57
40	DG	133/322 (41%)	117 (88%)	16 (12%)	5	23
41	DH	181/270 (67%)	167 (92%)	14 (8%)	13	39
42	DI	106/235 (45%)	102 (96%)	4 (4%)	33	58
42	Di	107/235 (46%)	103 (96%)	4 (4%)	34	59
43	DJ	79/154 (51%)	76 (96%)	3 (4%)	33	58
43	Dj	83/154 (54%)	80 (96%)	3 (4%)	35	60
44	DL	70/141 (50%)	67 (96%)	3 (4%)	29	55

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
44	Dl	98/141 (70%)	94 (96%)	4 (4%)	30	56
45	Dc	113/833 (14%)	106 (94%)	7 (6%)	18	45
46	Dk	87/182 (48%)	83 (95%)	4 (5%)	27	53
47	Dm	80/106 (76%)	73 (91%)	7 (9%)	10	34
48	DO	84/98 (86%)	80 (95%)	4 (5%)	25	52
49	DP	153/293 (52%)	144 (94%)	9 (6%)	19	47
50	DQ	111/269 (41%)	108 (97%)	3 (3%)	44	66
51	BA	214/268 (80%)	199 (93%)	15 (7%)	15	42
52	FB	196/218 (90%)	177 (90%)	19 (10%)	8	29
55	PA	1303/1748 (74%)	1167 (90%)	136 (10%)	7	27
56	PB	993/1027 (97%)	899 (90%)	94 (10%)	8	30
57	PC	234/252 (93%)	218 (93%)	16 (7%)	16	43
58	PD	108/126 (86%)	92 (85%)	16 (15%)	3	17
59	PE	191/192 (100%)	177 (93%)	14 (7%)	14	41
60	PF	69/111 (62%)	62 (90%)	7 (10%)	7	28
61	PG	147/153 (96%)	124 (84%)	23 (16%)	2	16
62	PH	129/131 (98%)	119 (92%)	10 (8%)	12	38
63	PI	103/112 (92%)	96 (93%)	7 (7%)	16	43
64	PJ	53/56 (95%)	52 (98%)	1 (2%)	57	74
65	PK	106/106 (100%)	101 (95%)	5 (5%)	26	53
66	PL	41/55 (74%)	39 (95%)	2 (5%)	25	52
67	FA	117/448 (26%)	115 (98%)	2 (2%)	60	78
68	w	1202/1232 (98%)	1181 (98%)	21 (2%)	60	78
69	x	787/864 (91%)	769 (98%)	18 (2%)	50	70
70	p	353/736 (48%)	346 (98%)	7 (2%)	55	73
All	All	18247/29966 (61%)	16706 (92%)	1541 (8%)	14	36

All (1541) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	a	77	MET
1	a	93	HIS
1	a	106	ASP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	a	107	MET
1	a	108	PHE
1	a	109	TYR
1	a	111	GLU
1	a	128	HIS
1	a	131	ASN
1	a	133	VAL
1	a	145	LYS
1	a	160	LEU
1	a	162	ASN
1	a	167	ASN
1	a	168	LYS
1	a	173	MET
1	a	201	ASP
1	a	214	ARG
1	a	226	VAL
1	a	232	LEU
1	a	244	GLU
1	a	246	ASN
1	a	253	MET
1	a	254	ASN
1	a	258	THR
1	a	259	ILE
1	a	267	LYS
1	a	278	HIS
1	a	288	PHE
1	a	297	VAL
1	a	305	LEU
1	a	309	GLN
1	a	325	THR
1	a	327	ILE
1	a	333	GLN
1	a	335	THR
1	a	339	LEU
1	a	348	LEU
1	a	357	LEU
1	a	362	ARG
1	a	367	LEU
1	a	373	CYS
1	a	378	LYS
1	a	384	ASP
1	a	388	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	a	391	THR
1	a	400	HIS
1	a	421	ILE
1	a	432	GLU
1	a	433	ASP
1	a	434	SER
1	a	437	LEU
1	a	438	LEU
1	a	441	GLU
1	a	443	CYS
1	a	445	LEU
1	a	446	SER
1	a	467	MET
1	a	470	GLN
1	a	472	SER
1	a	479	LEU
1	a	501	CYS
1	a	504	ILE
1	a	509	ARG
1	a	514	LYS
3	d	26	THR
3	d	27	ARG
3	d	28	GLU
3	d	34	LEU
3	d	44	LEU
3	d	62	GLU
3	d	63	ASN
3	d	64	GLN
3	d	66	LEU
3	d	68	LEU
3	d	69	LEU
3	d	71	HIS
3	d	72	ARG
3	d	76	PHE
3	d	77	GLN
3	d	78	GLU
3	d	79	LEU
3	d	80	MET
3	d	84	LEU
3	d	86	GLN
3	d	88	LYS
3	d	89	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	d	111	GLN
3	d	119	GLN
3	d	121	LEU
3	d	127	GLN
3	d	135	ILE
3	d	137	LYS
3	d	147	GLU
3	d	150	LYS
3	d	151	TYR
3	d	154	ARG
3	d	159	ASN
3	d	162	CYS
3	d	168	VAL
3	d	171	ASP
3	d	179	ASP
3	d	187	LEU
4	f	16	VAL
4	f	24	LEU
4	f	26	SER
4	f	28	SER
4	f	36	ARG
4	f	42	ASP
4	f	43	ARG
4	f	49	VAL
4	f	50	VAL
4	f	51	LYS
4	f	53	GLN
4	f	56	THR
4	f	57	LEU
4	f	58	GLU
4	f	60	LEU
4	f	61	ASN
4	f	62	GLN
4	f	120	LEU
5	g	11	LEU
5	g	15	MET
5	g	17	TYR
5	g	18	ILE
5	g	19	LYS
5	g	25	ASN
5	g	28	GLU
5	g	30	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
5	g	33	LYS
5	g	39	LYS
5	g	45	PHE
5	g	49	PHE
5	g	51	CYS
5	g	52	ASP
5	g	54	LEU
5	g	55	ILE
5	g	64	ILE
5	g	72	PHE
5	g	74	HIS
5	g	83	MET
5	g	92	LEU
5	g	110	GLU
5	g	122	LEU
5	g	124	ASN
5	g	127	ARG
5	g	138	MET
5	g	139	MET
5	g	143	LYS
5	g	153	PHE
5	g	155	LYS
5	g	159	ARG
5	g	162	GLU
5	g	163	MET
5	g	166	ASN
5	g	174	ASP
6	h	3	ARG
6	h	7	GLN
6	h	15	LEU
6	h	16	LEU
6	h	17	SER
6	h	18	GLN
6	h	21	ASP
6	h	22	LEU
6	h	23	LYS
6	h	32	LYS
6	h	33	LEU
6	h	34	GLU
6	h	37	TYR
6	h	39	ARG
6	h	46	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	h	48	SER
6	h	51	LEU
6	h	52	LEU
6	h	53	SER
6	h	56	LEU
6	h	59	LEU
6	h	66	GLU
6	h	85	ARG
6	h	88	ASP
6	h	89	LEU
6	h	91	ARG
6	h	92	GLN
6	h	100	PHE
6	h	101	SER
6	h	102	HIS
6	h	110	ARG
6	h	111	THR
6	h	112	LYS
6	h	139	GLN
6	h	143	LEU
6	h	146	MET
6	h	157	GLU
6	h	170	LYS
6	h	178	THR
6	h	191	LEU
7	r	16	ILE
7	r	17	ASN
7	r	18	MET
7	r	22	LEU
7	r	29	ASP
7	r	32	LEU
7	r	33	GLU
7	r	36	ILE
7	r	37	HIS
7	r	38	ARG
7	r	39	LEU
7	r	54	HIS
7	r	56	MET
7	r	60	LEU
7	r	69	VAL
7	r	88	LEU
7	r	98	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
7	r	114	LEU
7	r	116	ASP
7	r	118	LEU
7	r	119	MET
7	r	120	GLU
7	r	121	MET
7	r	124	ARG
7	r	125	MET
7	r	126	ASP
7	r	144	MET
7	r	171	LEU
7	r	193	LEU
7	r	194	LYS
7	r	196	LEU
7	r	197	VAL
7	r	200	GLU
7	r	202	ILE
7	r	206	ARG
8	t	1	MET
8	t	9	MET
8	t	13	GLU
8	t	19	GLN
8	t	39	PHE
8	t	63	MET
8	t	67	HIS
8	t	78	LEU
8	t	79	PHE
8	t	80	GLU
8	t	81	ASN
8	t	84	CYS
8	t	85	LEU
8	t	89	THR
8	t	98	LEU
8	t	110	ILE
8	t	131	MET
8	t	138	ILE
8	t	142	VAL
8	t	143	GLU
8	t	147	CYS
8	t	154	TRP
8	t	157	LEU
8	t	158	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
8	t	179	ARG
8	t	194	MET
8	t	195	GLU
8	t	196	LEU
8	t	200	ILE
9	j	20	ARG
9	j	62	THR
9	j	121	MET
9	j	123	LYS
10	k	8	ASN
10	k	10	ARG
10	k	11	LEU
10	k	12	ARG
10	k	14	LEU
10	k	15	GLU
10	k	18	GLU
10	k	19	ARG
10	k	26	GLN
10	k	32	ILE
10	k	33	LEU
10	k	34	GLU
10	k	35	LEU
10	k	36	SER
10	k	37	LYS
10	k	40	THR
10	k	42	GLU
10	k	43	ARG
10	k	44	LEU
10	k	45	LEU
10	k	52	PHE
10	k	57	GLN
10	k	58	HIS
10	k	60	GLU
10	k	75	THR
10	k	82	SER
10	k	83	SER
10	k	86	SER
10	k	87	ARG
10	k	88	LYS
10	k	90	CYS
10	k	91	GLN
10	k	92	MET

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
10	k	94	LEU
10	k	96	ARG
10	k	97	VAL
10	k	101	ARG
10	k	102	LEU
10	k	103	LYS
10	k	104	LEU
10	k	105	SER
10	k	109	ARG
10	k	114	MET
11	n	149	LEU
11	n	166	TYR
11	n	168	ARG
11	n	169	LEU
11	n	188	LYS
11	n	194	GLN
11	n	195	LEU
11	n	197	GLN
11	n	202	ARG
11	n	206	THR
11	n	212	LEU
11	n	229	GLU
11	n	252	ILE
11	n	253	LEU
11	n	254	VAL
11	n	255	GLU
11	n	261	ASP
11	n	265	LEU
11	n	266	VAL
11	n	267	HIS
11	n	273	PHE
11	n	274	ILE
11	n	276	GLN
11	n	277	LEU
11	n	305	LEU
11	n	306	GLU
11	n	359	ILE
11	n	362	ASP
11	n	366	VAL
11	n	367	SER
11	n	368	LYS
11	n	522	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
11	n	523	SER
11	n	525	TYR
11	n	528	HIS
11	n	530	ILE
11	n	532	ASN
11	n	634	MET
12	q	7	VAL
12	q	8	ARG
12	q	16	GLU
12	q	19	VAL
12	q	28	GLU
12	q	29	THR
12	q	31	LEU
12	q	36	MET
12	q	91	SER
12	q	92	LEU
12	q	93	TRP
12	q	98	VAL
12	q	100	ASN
12	q	103	ARG
12	q	107	THR
12	q	109	MET
12	q	110	CYS
12	q	112	LEU
12	q	116	LEU
12	q	118	ILE
12	q	120	ARG
12	q	123	LYS
12	q	124	PHE
12	q	125	MET
12	q	128	ASP
12	q	131	SER
12	q	132	GLN
12	q	133	ASP
12	q	138	LYS
12	q	139	GLN
12	q	141	PRO
12	q	143	THR
12	q	144	LEU
12	q	145	GLN
12	q	146	LEU
12	q	147	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
12	q	151	LYS
12	q	152	SER
12	q	159	ILE
12	q	161	LEU
12	q	162	LYS
12	q	165	GLU
12	q	166	ARG
12	q	169	LYS
12	q	172	THR
12	q	183	PHE
12	q	184	ASN
12	q	186	GLU
12	q	187	LEU
12	q	188	LEU
12	q	192	GLN
12	q	195	LYS
12	q	389	SER
12	q	428	LEU
12	q	431	ILE
12	q	432	ILE
12	q	434	GLN
12	q	440	LEU
12	q	441	ARG
12	q	442	SER
12	q	443	ARG
12	q	448	ILE
12	q	451	LEU
12	q	629	LYS
12	q	631	GLU
12	q	633	ARG
12	q	646	LEU
12	q	647	SER
12	q	649	CYS
12	q	651	LEU
13	s	83	LEU
13	s	85	THR
14	u	20	CYS
14	u	26	LEU
14	u	27	GLN
14	u	80	GLU
14	u	109	TYR
14	u	110	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
14	u	113	MET
14	u	115	LEU
14	u	117	LYS
14	u	118	ILE
14	u	119	GLN
15	v	15	LEU
15	v	26	ILE
15	v	35	GLU
15	v	42	ILE
15	v	43	GLU
15	v	45	GLU
15	v	46	THR
15	v	50	ARG
15	v	52	THR
15	v	53	GLN
15	v	69	VAL
15	v	70	ARG
15	v	81	ASP
15	v	82	LEU
15	v	83	LYS
15	v	84	GLN
15	v	85	PHE
15	v	92	PRO
15	v	99	ASP
15	v	104	GLN
15	v	110	GLU
15	v	111	GLU
15	v	116	LEU
15	v	118	THR
15	v	119	LEU
15	v	120	ARG
15	v	123	ILE
15	v	130	LEU
15	v	131	GLU
15	v	133	GLU
15	v	138	SER
16	z	492	ARG
16	z	528	LEU
16	z	540	LEU
16	z	544	THR
16	z	547	VAL
16	z	551	ASP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
16	z	564	ASN
16	z	567	GLN
16	z	572	ASN
16	z	579	CYS
16	z	582	LEU
16	z	591	LEU
16	z	599	LEU
17	c	16	GLN
17	c	41	ASN
17	c	44	THR
17	c	45	LEU
17	c	72	ARG
17	c	73	LEU
17	c	77	VAL
17	c	258	MET
19	b	57	VAL
19	b	60	TYR
19	b	74	LEU
19	b	82	LEU
19	b	92	GLN
19	b	103	ASP
19	b	122	LEU
19	b	126	CYS
19	b	132	ASP
19	b	184	LYS
22	i	65	PHE
22	i	70	HIS
22	i	72	ILE
22	i	86	ASP
22	i	87	LEU
22	i	88	ASN
22	i	90	LEU
22	i	94	PHE
22	i	95	GLN
22	i	101	ILE
22	i	102	SER
22	i	115	GLN
22	i	117	GLN
22	i	119	GLN
22	i	121	LEU
22	i	122	ARG
22	i	136	LYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
22	i	138	LEU
23	0	6	CYS
23	0	7	PRO
23	0	46	CYS
23	0	68	VAL
23	0	71	GLU
23	0	72	VAL
23	0	73	GLU
23	0	162	ARG
23	0	175	LEU
23	0	183	PHE
23	0	197	LEU
23	0	251	LEU
23	0	254	GLU
23	0	268	ARG
23	0	272	LEU
23	0	288	THR
24	8	17	PHE
24	8	18	LEU
24	8	22	GLN
24	8	26	VAL
24	8	36	GLN
24	8	38	VAL
24	8	56	ASN
24	8	57	ARG
24	8	58	THR
24	8	66	LEU
24	8	96	THR
24	8	103	LYS
24	8	107	LEU
24	8	108	VAL
24	8	112	SER
24	8	132	TRP
24	8	143	LEU
24	8	166	ASN
24	8	167	ARG
24	8	173	VAL
24	8	174	VAL
24	8	176	ARG
24	8	182	GLU
24	8	189	MET
24	8	205	GLU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
24	8	206	LEU
24	8	219	LEU
24	8	231	THR
24	8	260	ILE
24	8	262	SER
24	8	267	ASP
24	8	269	LEU
24	8	287	THR
24	8	292	MET
25	9	3	HIS
25	9	7	GLN
25	9	8	LYS
25	9	40	VAL
25	9	41	LEU
25	9	56	LEU
25	9	94	ASN
25	9	100	HIS
25	9	102	ARG
25	9	113	CYS
25	9	122	SER
25	9	126	VAL
25	9	134	LEU
25	9	136	GLN
25	9	153	GLN
25	9	158	LEU
25	9	165	ARG
25	9	167	PHE
25	9	171	LEU
25	9	174	LEU
25	9	177	ARG
25	9	181	LEU
25	9	186	ILE
25	9	188	ARG
25	9	204	TYR
25	9	211	GLN
25	9	227	THR
25	9	245	LEU
25	9	266	ARG
25	9	273	LEU
25	9	279	ARG
26	1	190	SER
26	1	191	ASP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
26	1	193	ILE
26	1	216	THR
26	1	220	PHE
26	1	232	ARG
26	1	407	ILE
26	1	414	TYR
26	1	415	THR
26	1	430	THR
26	1	521	LEU
26	1	525	ILE
26	1	535	LYS
27	2	62	TYR
27	2	66	ASP
27	2	69	ARG
27	2	70	THR
27	2	71	MET
27	2	85	LEU
27	2	90	TYR
27	2	104	ILE
27	2	109	THR
27	2	118	THR
27	2	171	PHE
27	2	174	LEU
27	2	182	ILE
27	2	185	LEU
27	2	207	VAL
27	2	234	HIS
27	2	323	HIS
27	2	328	LEU
27	2	333	GLU
27	2	345	CYS
27	2	372	ASP
27	2	379	LEU
28	3	64	ILE
28	3	124	ILE
28	3	131	THR
28	3	132	LEU
28	3	146	ARG
28	3	187	GLN
28	3	195	VAL
28	3	255	CYS
28	3	257	CYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
28	3	258	HIS
28	3	261	LEU
28	3	262	ILE
28	3	287	THR
29	4	34	LEU
29	4	47	GLU
29	4	73	LEU
29	4	75	VAL
29	4	162	PHE
29	4	168	SER
29	4	184	LEU
29	4	188	THR
29	4	205	LEU
29	4	215	PHE
29	4	264	HIS
29	4	265	LEU
29	4	284	THR
29	4	300	THR
29	4	314	ARG
29	4	373	HIS
29	4	383	LEU
29	4	386	THR
29	4	403	PHE
29	4	441	MET
29	4	442	VAL
30	5	16	MET
30	5	24	ASP
30	5	32	LYS
30	5	39	ASP
30	5	60	LEU
31	6	60	ASP
31	6	92	VAL
31	6	93	TYR
31	6	121	TYR
31	6	123	LEU
31	6	152	ILE
31	6	160	THR
31	6	161	VAL
31	6	185	ILE
31	6	198	ARG
31	6	276	MET
31	6	277	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
31	6	289	TYR
31	6	297	PHE
31	6	332	ARG
31	6	355	CYS
31	6	369	VAL
31	6	385	ASP
31	6	389	ILE
31	6	401	ILE
31	6	437	LEU
31	6	449	LYS
31	6	472	ARG
31	6	473	GLU
31	6	488	LEU
31	6	504	LYS
31	6	526	LYS
31	6	530	ARG
31	6	534	TYR
31	6	547	LEU
31	6	554	ARG
31	6	555	ASN
31	6	558	ILE
31	6	568	LEU
31	6	598	HIS
31	6	601	LYS
31	6	603	ASN
31	6	608	SER
31	6	613	THR
31	6	621	ASN
31	6	633	ARG
31	6	650	MET
31	6	655	TYR
31	6	676	ARG
31	6	690	ILE
32	7	8	LEU
32	7	20	GLU
32	7	24	TYR
32	7	25	MET
32	7	48	LYS
32	7	49	THR
32	7	52	LEU
32	7	77	VAL
32	7	113	LYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	7	121	VAL
32	7	143	ARG
32	7	147	GLN
32	7	155	CYS
32	7	200	LEU
32	7	213	LEU
32	7	220	LEU
32	7	237	HIS
32	7	239	ILE
32	7	251	LEU
32	7	343	ARG
32	7	349	VAL
32	7	361	LEU
32	7	373	ARG
32	7	385	THR
32	7	387	GLU
32	7	416	ILE
32	7	418	ILE
32	7	427	THR
32	7	432	ILE
32	7	444	ILE
32	7	457	THR
32	7	463	PRO
32	7	481	PHE
32	7	485	LEU
32	7	490	LEU
32	7	504	ILE
32	7	518	ARG
32	7	571	THR
32	7	577	THR
32	7	596	LEU
32	7	650	ASP
32	7	654	PHE
32	7	678	VAL
32	7	681	ASP
32	7	724	MET
33	EA	43	VAL
33	EA	121	SER
33	EA	124	ARG
33	EA	128	LYS
33	EA	131	VAL
33	EA	135	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
33	EA	153	ARG
33	EA	154	CYS
33	EA	157	CYS
33	EA	161	VAL
33	EA	164	ASP
33	EA	187	ILE
34	EB	73	TYR
34	EB	88	ARG
34	EB	97	LEU
34	EB	136	LYS
34	EB	139	PHE
34	EB	188	GLN
34	EB	194	ARG
34	EB	204	ASN
34	EB	209	GLN
34	EB	218	LYS
34	EB	223	VAL
34	EB	224	THR
35	DA	341	TRP
35	DA	396	LEU
35	DA	403	LEU
35	DA	405	VAL
35	DA	470	ILE
35	DA	477	TYR
35	DA	479	ARG
35	DA	487	ASP
35	DA	491	MET
35	DA	493	ARG
35	DA	496	GLU
35	DA	500	LEU
35	DA	502	LEU
35	DA	509	LEU
35	DA	511	LEU
35	DA	588	ILE
35	DA	628	LEU
35	DA	639	LEU
35	DA	661	GLU
35	DA	667	THR
35	DA	675	ASP
35	DA	721	GLU
35	DA	722	THR
35	DA	743	PHE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
35	DA	776	LEU
35	DA	828	GLU
35	DA	848	LEU
35	DA	849	CYS
35	DA	863	VAL
35	DA	867	ASP
35	DA	951	THR
35	DA	966	VAL
35	DA	1052	ARG
35	DA	1053	PHE
35	DA	1055	VAL
35	DA	1058	HIS
35	DA	1165	LEU
35	DA	1180	VAL
35	DA	1203	GLU
36	DB	24	ARG
36	DB	66	ASN
36	DB	105	TYR
36	DB	114	VAL
36	DB	125	GLU
36	DB	134	LEU
36	DB	136	LYS
36	DB	138	VAL
36	DB	140	GLU
36	DB	149	ASN
36	DB	166	VAL
36	DB	177	VAL
36	DB	220	LEU
36	DB	221	VAL
36	DB	225	TYR
36	DB	229	MET
36	DB	230	ARG
36	DB	232	LYS
36	DB	286	GLU
36	DB	288	PHE
36	DB	309	ILE
36	DB	314	VAL
36	DB	316	VAL
36	DB	323	SER
36	DB	355	PHE
36	DB	365	SER
36	DB	413	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	DB	414	LEU
36	DB	418	PHE
36	DB	430	HIS
36	DB	431	LEU
36	DB	435	ILE
36	DB	449	PHE
36	DB	454	HIS
36	DB	484	SER
36	DB	486	GLN
36	DB	487	LYS
36	DB	494	SER
36	DB	501	SER
36	DB	510	VAL
36	DB	566	VAL
36	DB	583	GLU
36	DB	625	LEU
36	DB	626	LEU
36	DB	636	VAL
36	DB	637	LEU
36	DB	638	ARG
36	DB	646	ASP
36	DB	670	GLU
36	DB	671	LYS
36	DB	674	THR
36	DB	678	ARG
36	DB	693	ARG
36	DB	697	SER
36	DB	699	CYS
36	DB	709	MET
36	DB	712	THR
36	DB	760	LEU
36	DB	763	VAL
36	DB	764	HIS
36	DB	785	ARG
36	DB	786	LYS
36	DB	787	ASN
36	DB	788	LYS
36	DB	791	ASP
36	DB	810	VAL
36	DB	812	VAL
36	DB	821	ASN
36	DB	846	TYR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	DB	851	THR
36	DB	901	ASP
36	DB	916	ASN
36	DB	923	ARG
36	DB	944	LEU
36	DB	945	CYS
36	DB	946	ASN
36	DB	981	LEU
36	DB	983	ARG
37	DD	889	HIS
37	DD	893	GLU
37	DD	894	LEU
37	DD	919	GLU
37	DD	920	THR
37	DD	950	LEU
38	DE	214	TYR
38	DE	224	PHE
38	DE	229	LEU
38	DE	232	HIS
38	DE	235	GLU
38	DE	239	LEU
38	DE	240	PHE
38	DE	268	HIS
38	DE	270	ASP
38	DE	285	LEU
38	DE	307	LEU
38	DE	326	ASN
38	DE	341	ILE
38	DE	359	LEU
38	DE	377	LEU
38	DE	474	THR
38	DE	476	VAL
38	DE	477	ASP
38	DE	507	VAL
38	DE	515	LEU
38	DE	521	ASP
38	DE	523	VAL
38	DE	542	HIS
38	DE	551	PHE
38	DE	559	LEU
38	DE	562	SER
38	DE	567	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
38	DE	570	TRP
38	DE	572	LEU
38	DE	585	ASN
38	DE	593	PHE
38	DE	629	ASP
38	DE	635	PHE
38	DE	636	HIS
38	DE	653	LEU
38	DE	668	HIS
38	DE	675	LEU
38	DE	696	TRP
38	DE	715	CYS
38	DE	718	ARG
38	DE	719	PHE
38	DE	747	LEU
38	DE	761	LEU
38	DE	765	SER
38	DE	785	PHE
39	DF	12	THR
39	DF	55	LEU
39	DF	60	MET
39	DF	63	ARG
39	DF	66	LEU
39	DF	83	LEU
39	DF	114	LEU
39	DF	122	LEU
39	DF	136	LEU
39	DF	211	ARG
39	DF	252	LEU
39	DF	253	TYR
39	DF	273	GLN
39	DF	274	ASN
39	DF	279	LEU
39	DF	294	THR
39	DF	297	LEU
39	DF	298	GLU
39	DF	301	VAL
39	DF	304	LEU
39	DF	320	ARG
39	DF	324	ASP
39	DF	342	LYS
39	DF	388	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
39	DF	412	LEU
39	DF	427	LEU
40	DG	60	ARG
40	DG	73	VAL
40	DG	90	ASP
40	DG	127	GLU
40	DG	128	LYS
40	DG	129	LYS
40	DG	131	ILE
40	DG	141	LYS
40	DG	143	VAL
40	DG	144	ARG
40	DG	145	LYS
40	DG	146	ARG
40	DG	147	ARG
40	DG	149	ARG
40	DG	150	LYS
40	DG	184	ILE
41	DH	47	GLU
41	DH	50	PHE
41	DH	59	GLU
41	DH	80	CYS
41	DH	104	VAL
41	DH	135	THR
41	DH	142	HIS
41	DH	153	PHE
41	DH	160	ILE
41	DH	161	LYS
41	DH	169	VAL
41	DH	175	LEU
41	DH	200	THR
41	DH	232	LEU
42	DI	60	HIS
42	DI	67	ASP
42	DI	119	ARG
42	DI	132	LEU
43	DJ	127	THR
43	DJ	145	GLU
43	DJ	198	GLU
44	DL	56	GLN
44	DL	59	THR
44	DL	63	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
45	Dc	12	VAL
45	Dc	33	LEU
45	Dc	44	GLN
45	Dc	62	ILE
45	Dc	77	LEU
45	Dc	118	GLU
45	Dc	124	ILE
37	Dd	860	VAL
37	Dd	863	LEU
37	Dd	894	LEU
37	Dd	917	ILE
37	Dd	929	LYS
37	Dd	936	GLN
37	Dd	1079	LEU
37	Dd	1084	LEU
38	De	205	TYR
38	De	208	GLN
38	De	238	GLN
38	De	239	LEU
38	De	243	LEU
38	De	268	HIS
38	De	286	THR
38	De	324	LYS
38	De	328	GLN
38	De	334	GLN
38	De	337	LEU
38	De	365	ARG
38	De	369	LYS
38	De	424	GLN
38	De	450	ARG
38	De	453	LEU
38	De	456	ASP
38	De	465	THR
38	De	470	TYR
38	De	476	VAL
38	De	477	ASP
38	De	509	GLN
38	De	522	ASP
38	De	523	VAL
38	De	542	HIS
38	De	551	PHE
38	De	556	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
38	De	570	TRP
38	De	585	ASN
38	De	593	PHE
38	De	634	ARG
38	De	635	PHE
38	De	651	VAL
38	De	653	LEU
38	De	662	VAL
38	De	663	ARG
38	De	668	HIS
38	De	675	LEU
38	De	677	PHE
38	De	704	VAL
38	De	719	PHE
38	De	720	SER
38	De	725	ILE
38	De	746	ASP
38	De	747	LEU
38	De	756	THR
38	De	761	LEU
38	De	766	GLN
38	De	778	THR
38	De	785	PHE
38	De	790	LEU
39	Df	64	GLN
39	Df	92	ILE
39	Df	104	LEU
39	Df	109	GLU
39	Df	125	VAL
39	Df	214	HIS
39	Df	317	LEU
39	Df	320	ARG
39	Df	325	ASN
39	Df	337	VAL
39	Df	388	ILE
39	Df	391	LEU
39	Df	403	ILE
42	Di	15	ASP
42	Di	28	ILE
42	Di	31	TYR
42	Di	70	ASP
43	Dj	125	ASP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
43	Dj	144	PHE
43	Dj	197	MET
46	Dk	124	TYR
46	Dk	144	THR
46	Dk	146	VAL
46	Dk	178	GLU
44	Dl	59	THR
44	Dl	74	GLU
44	Dl	141	LYS
44	Dl	144	THR
47	Dm	32	PHE
47	Dm	45	ASP
47	Dm	50	TYR
47	Dm	55	ASP
47	Dm	82	GLN
47	Dm	86	ILE
47	Dm	91	ARG
48	DO	31	GLN
48	DO	55	ARG
48	DO	56	VAL
48	DO	59	ARG
49	DP	176	CYS
49	DP	196	ARG
49	DP	197	PHE
49	DP	204	ILE
49	DP	250	PHE
49	DP	278	GLN
49	DP	300	ILE
49	DP	306	VAL
49	DP	323	GLU
50	DQ	311	GLU
50	DQ	317	GLU
50	DQ	340	ASP
51	BA	36	GLU
51	BA	44	ARG
51	BA	48	VAL
51	BA	120	GLU
51	BA	128	ILE
51	BA	138	THR
51	BA	173	VAL
51	BA	176	THR
51	BA	177	PHE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
51	BA	193	ARG
51	BA	195	PHE
51	BA	245	VAL
51	BA	280	VAL
51	BA	286	ARG
51	BA	310	VAL
52	FB	4	ARG
52	FB	48	THR
52	FB	51	ARG
52	FB	94	THR
52	FB	106	LEU
52	FB	124	TYR
52	FB	137	LYS
52	FB	141	LEU
52	FB	148	VAL
52	FB	158	ASN
52	FB	160	GLN
52	FB	174	LYS
52	FB	175	ARG
52	FB	177	ARG
52	FB	193	LYS
52	FB	197	TYR
52	FB	206	THR
52	FB	211	VAL
52	FB	225	VAL
55	PA	22	GLN
55	PA	38	GLU
55	PA	45	GLU
55	PA	47	THR
55	PA	57	LEU
55	PA	59	ASP
55	PA	65	ILE
55	PA	66	GLU
55	PA	111	CYS
55	PA	114	CYS
55	PA	116	LYS
55	PA	132	LYS
55	PA	138	LYS
55	PA	143	HIS
55	PA	198	LEU
55	PA	199	TYR
55	PA	215	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
55	PA	216	LEU
55	PA	221	VAL
55	PA	255	VAL
55	PA	265	VAL
55	PA	273	GLN
55	PA	274	ASP
55	PA	276	LEU
55	PA	309	LEU
55	PA	318	VAL
55	PA	327	ARG
55	PA	329	MET
55	PA	336	LEU
55	PA	350	VAL
55	PA	357	LYS
55	PA	373	LEU
55	PA	375	ILE
55	PA	408	ARG
55	PA	452	ASP
55	PA	475	ARG
55	PA	481	THR
55	PA	483	ARG
55	PA	484	LEU
55	PA	509	LEU
55	PA	510	GLU
55	PA	517	GLU
55	PA	521	VAL
55	PA	534	VAL
55	PA	539	GLN
55	PA	592	PHE
55	PA	621	ILE
55	PA	628	VAL
55	PA	647	THR
55	PA	676	ILE
55	PA	681	LEU
55	PA	685	HIS
55	PA	689	ILE
55	PA	693	ILE
55	PA	705	THR
55	PA	719	LYS
55	PA	736	THR
55	PA	743	ARG
55	PA	749	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
55	PA	762	GLU
55	PA	793	VAL
55	PA	862	ARG
55	PA	873	VAL
55	PA	875	TYR
55	PA	879	VAL
55	PA	906	LEU
55	PA	908	THR
55	PA	909	LEU
55	PA	921	ARG
55	PA	922	PHE
55	PA	924	TYR
55	PA	972	THR
55	PA	978	VAL
55	PA	1021	VAL
55	PA	1031	ARG
55	PA	1034	GLN
55	PA	1057	GLU
55	PA	1078	GLN
55	PA	1121	VAL
55	PA	1129	ASN
55	PA	1132	LYS
55	PA	1136	THR
55	PA	1139	LEU
55	PA	1144	LEU
55	PA	1152	GLU
55	PA	1157	ILE
55	PA	1158	LEU
55	PA	1182	GLN
55	PA	1186	VAL
55	PA	1195	VAL
55	PA	1196	TYR
55	PA	1198	GLU
55	PA	1201	ASP
55	PA	1204	VAL
55	PA	1206	ARG
55	PA	1226	LEU
55	PA	1246	ILE
55	PA	1279	MET
55	PA	1281	ASP
55	PA	1292	MET
55	PA	1293	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
55	PA	1298	LEU
55	PA	1310	HIS
55	PA	1314	THR
55	PA	1325	ASP
55	PA	1337	GLU
55	PA	1341	VAL
55	PA	1362	ILE
55	PA	1402	CYS
55	PA	1405	MET
55	PA	1412	MET
55	PA	1432	PHE
55	PA	1435	THR
55	PA	1441	GLU
55	PA	1456	GLU
55	PA	1475	LEU
55	PA	1482	TYR
55	PA	1646	THR
55	PA	1647	SER
55	PA	1649	SER
55	PA	1650	TYR
55	PA	1653	THR
55	PA	1654	SER
55	PA	1657	TYR
55	PA	1658	SER
55	PA	1661	SER
55	PA	1663	SER
55	PA	1664	TYR
55	PA	1666	PRO
55	PA	1667	THR
55	PA	1678	TYR
55	PA	1791	SER
55	PA	1794	SER
55	PA	1795	PRO
55	PA	1796	SER
55	PA	1798	SER
56	PB	29	VAL
56	PB	42	GLN
56	PB	50	PHE
56	PB	65	ILE
56	PB	85	LEU
56	PB	93	LEU
56	PB	132	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
56	PB	142	THR
56	PB	193	VAL
56	PB	194	LEU
56	PB	206	TYR
56	PB	225	LEU
56	PB	235	ILE
56	PB	254	GLN
56	PB	257	VAL
56	PB	259	THR
56	PB	285	LEU
56	PB	289	ILE
56	PB	313	GLU
56	PB	330	VAL
56	PB	332	LYS
56	PB	338	TYR
56	PB	348	LEU
56	PB	357	CYS
56	PB	359	THR
56	PB	361	LYS
56	PB	388	TYR
56	PB	409	LYS
56	PB	414	GLU
56	PB	420	GLN
56	PB	433	LEU
56	PB	453	TRP
56	PB	458	LYS
56	PB	461	GLN
56	PB	463	ARG
56	PB	466	VAL
56	PB	469	VAL
56	PB	497	LYS
56	PB	526	LEU
56	PB	532	ILE
56	PB	541	ILE
56	PB	542	LEU
56	PB	578	LYS
56	PB	581	GLU
56	PB	594	MET
56	PB	597	ILE
56	PB	604	ILE
56	PB	607	ILE
56	PB	626	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
56	PB	629	GLU
56	PB	631	GLN
56	PB	648	TYR
56	PB	651	TYR
56	PB	662	VAL
56	PB	671	GLU
56	PB	675	LEU
56	PB	678	THR
56	PB	731	GLN
56	PB	752	TYR
56	PB	767	LEU
56	PB	782	ILE
56	PB	786	THR
56	PB	806	PHE
56	PB	809	VAL
56	PB	815	LYS
56	PB	823	PHE
56	PB	889	LYS
56	PB	890	ARG
56	PB	896	LEU
56	PB	901	THR
56	PB	927	ARG
56	PB	1006	VAL
56	PB	1022	LEU
56	PB	1028	LEU
56	PB	1048	TYR
56	PB	1057	ASP
56	PB	1062	ARG
56	PB	1070	LEU
56	PB	1080	ARG
56	PB	1116	VAL
56	PB	1119	CYS
56	PB	1120	ASN
56	PB	1121	LEU
56	PB	1124	ILE
56	PB	1130	THR
56	PB	1136	GLU
56	PB	1137	CYS
56	PB	1138	ARG
56	PB	1140	CYS
56	PB	1141	ARG
56	PB	1142	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
56	PB	1143	LYS
56	PB	1156	LYS
56	PB	1158	LEU
57	PC	15	THR
57	PC	44	ILE
57	PC	61	ASP
57	PC	63	PHE
57	PC	76	ASP
57	PC	79	VAL
57	PC	82	LEU
57	PC	88	CYS
57	PC	103	LEU
57	PC	112	THR
57	PC	120	LEU
57	PC	177	ASN
57	PC	179	THR
57	PC	193	ARG
57	PC	213	GLU
57	PC	231	TYR
58	PD	15	GLU
58	PD	32	LEU
58	PD	41	LEU
58	PD	42	GLU
58	PD	45	LYS
58	PD	54	GLU
58	PD	67	TYR
58	PD	73	ARG
58	PD	74	PHE
58	PD	95	PHE
58	PD	103	LEU
58	PD	107	THR
58	PD	110	GLU
58	PD	118	LEU
58	PD	131	LEU
58	PD	135	GLN
59	PE	20	LEU
59	PE	29	THR
59	PE	32	GLU
59	PE	38	GLU
59	PE	52	ARG
59	PE	57	ASP
59	PE	82	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
59	PE	84	ILE
59	PE	103	LEU
59	PE	108	GLN
59	PE	139	ILE
59	PE	159	LEU
59	PE	165	LEU
59	PE	191	VAL
60	PF	58	THR
60	PF	71	LEU
60	PF	83	LEU
60	PF	86	GLU
60	PF	87	THR
60	PF	91	LEU
60	PF	95	LYS
61	PG	7	LEU
61	PG	8	GLU
61	PG	11	ILE
61	PG	13	LEU
61	PG	30	LEU
61	PG	35	GLU
61	PG	37	THR
61	PG	39	THR
61	PG	42	TYR
61	PG	45	VAL
61	PG	48	VAL
61	PG	50	THR
61	PG	63	ARG
61	PG	76	VAL
61	PG	77	PHE
61	PG	89	VAL
61	PG	101	ILE
61	PG	117	MET
61	PG	147	ILE
61	PG	148	VAL
61	PG	150	THR
61	PG	152	VAL
61	PG	168	LEU
62	PH	4	ILE
62	PH	63	THR
62	PH	64	LEU
62	PH	69	THR
62	PH	72	ASP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
62	PH	76	ASN
62	PH	102	ASP
62	PH	110	THR
62	PH	132	LEU
62	PH	141	VAL
63	PI	12	VAL
63	PI	29	ASP
63	PI	51	SER
63	PI	53	ILE
63	PI	58	ILE
63	PI	69	ILE
63	PI	81	THR
64	PJ	54	ASP
65	PK	12	LEU
65	PK	27	VAL
65	PK	61	TYR
65	PK	69	HIS
65	PK	94	LEU
66	PL	32	ASP
66	PL	53	VAL
67	FA	37	VAL
67	FA	122	THR
68	w	1	MET
68	w	2	GLU
68	w	5	LEU
68	w	7	SER
68	w	10	GLU
68	w	11	GLU
68	w	17	VAL
68	w	18	ILE
68	w	25	MET
68	w	36	LYS
68	w	37	LEU
68	w	41	LEU
68	w	44	PHE
68	w	48	TRP
68	w	51	LEU
68	w	130	ASP
68	w	171	LEU
68	w	173	ARG
68	w	363	ARG
68	w	425	MET

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
68	w	726	ASN
69	x	4	VAL
69	x	52	ILE
69	x	54	PRO
69	x	87	ASP
69	x	107	ARG
69	x	218	CYS
69	x	359	CYS
69	x	477	TYR
69	x	479	SER
69	x	564	SER
69	x	565	SER
69	x	567	MET
69	x	596	VAL
69	x	686	LYS
69	x	802	MET
69	x	812	LEU
69	x	897	LEU
69	x	989	LEU
70	p	162	VAL
70	p	170	LEU
70	p	232	ASP
70	p	252	LYS
70	p	289	ASP
70	p	295	LEU
70	p	401	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (353) such sidechains are listed below:

Mol	Chain	Res	Type
1	a	56	GLN
1	a	87	GLN
1	a	131	ASN
1	a	146	ASN
1	a	162	ASN
1	a	167	ASN
1	a	254	ASN
1	a	333	GLN
1	a	359	HIS
1	a	439	GLN
1	a	459	ASN
2	m	26	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	m	80	GLN
2	m	100	GLN
2	m	106	GLN
2	m	116	GLN
2	m	124	GLN
3	d	113	GLN
3	d	119	GLN
3	d	127	GLN
3	d	191	ASN
4	f	61	ASN
4	f	72	HIS
4	f	84	GLN
4	f	87	GLN
4	f	107	GLN
5	g	25	ASN
5	g	50	GLN
5	g	88	ASN
5	g	124	ASN
5	g	142	GLN
5	g	166	ASN
6	h	18	GLN
6	h	65	HIS
6	h	102	HIS
6	h	139	GLN
6	h	144	ASN
7	r	30	HIS
7	r	54	HIS
7	r	134	HIS
8	t	19	GLN
8	t	103	GLN
8	t	192	GLN
8	t	204	GLN
9	j	11	HIS
9	j	38	ASN
9	j	92	ASN
10	k	41	ASN
10	k	66	GLN
10	k	77	GLN
10	k	91	GLN
11	n	189	GLN
11	n	201	HIS
11	n	270	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
11	n	304	GLN
11	n	311	GLN
11	n	330	HIS
11	n	411	GLN
11	n	507	GLN
11	n	590	GLN
11	n	668	HIS
11	n	698	GLN
11	n	841	ASN
11	n	880	ASN
11	n	909	GLN
12	q	139	GLN
12	q	262	GLN
12	q	290	HIS
12	q	292	GLN
12	q	367	HIS
12	q	437	HIS
12	q	461	GLN
12	q	496	ASN
12	q	506	HIS
12	q	519	GLN
12	q	533	GLN
12	q	547	GLN
12	q	565	ASN
12	q	595	GLN
12	q	611	GLN
12	q	626	GLN
12	q	634	ASN
14	u	7	GLN
14	u	21	ASN
14	u	97	ASN
15	v	16	GLN
15	v	32	ASN
15	v	53	GLN
15	v	56	GLN
15	v	58	ASN
15	v	89	ASN
16	z	483	ASN
16	z	527	GLN
16	z	549	GLN
16	z	567	GLN
16	z	585	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
16	z	592	ASN
17	c	10	ASN
17	c	41	ASN
17	c	237	GLN
17	c	278	GLN
17	c	306	HIS
17	c	311	GLN
18	e	97	GLN
18	e	132	HIS
18	e	140	GLN
19	b	66	GLN
19	b	129	GLN
19	b	136	HIS
20	l	72	GLN
20	l	102	ASN
20	l	151	GLN
21	o	701	ASN
21	o	705	HIS
21	o	753	HIS
22	i	85	GLN
23	0	156	GLN
23	0	160	GLN
23	0	281	GLN
23	0	294	HIS
23	0	298	GLN
24	8	33	ASN
24	8	56	ASN
24	8	113	HIS
24	8	130	GLN
24	8	166	ASN
25	9	3	HIS
25	9	7	GLN
25	9	37	ASN
25	9	93	ASN
25	9	136	GLN
25	9	153	GLN
25	9	183	ASN
25	9	211	GLN
26	1	309	HIS
26	1	384	HIS
27	2	147	ASN
27	2	324	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
27	2	380	HIS
28	3	18	ASN
28	3	46	ASN
28	3	108	ASN
28	3	185	GLN
28	3	187	GLN
30	5	36	GLN
31	6	377	GLN
31	6	497	GLN
31	6	586	GLN
31	6	603	ASN
32	7	60	GLN
32	7	154	HIS
32	7	262	ASN
32	7	328	HIS
32	7	562	GLN
33	EA	65	ASN
33	EA	143	GLN
33	EA	181	ASN
34	EB	160	GLN
34	EB	193	ASN
34	EB	204	ASN
34	EB	209	GLN
35	DA	401	ASN
35	DA	569	ASN
35	DA	606	HIS
35	DA	693	GLN
35	DA	837	HIS
35	DA	860	ASN
35	DA	896	GLN
36	DB	30	HIS
36	DB	66	ASN
36	DB	123	ASN
36	DB	147	HIS
36	DB	183	GLN
36	DB	235	HIS
36	DB	279	HIS
36	DB	285	HIS
36	DB	353	GLN
36	DB	439	HIS
36	DB	486	GLN
36	DB	509	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	DB	576	ASN
36	DB	599	ASN
36	DB	608	ASN
36	DB	652	GLN
36	DB	750	GLN
36	DB	823	ASN
36	DB	864	ASN
36	DB	882	HIS
37	DD	912	ASN
37	DD	925	ASN
37	DD	936	GLN
37	DD	1075	HIS
38	DE	232	HIS
38	DE	294	ASN
38	DE	334	GLN
38	DE	351	GLN
38	DE	424	GLN
38	DE	542	HIS
38	DE	585	ASN
38	DE	668	HIS
38	DE	760	ASN
39	DF	119	ASN
39	DF	221	GLN
39	DF	244	GLN
39	DF	270	ASN
39	DF	275	ASN
39	DF	349	ASN
40	DG	53	HIS
41	DH	82	HIS
41	DH	145	HIS
42	DI	38	GLN
42	DI	60	HIS
42	DI	76	GLN
42	DI	98	GLN
42	DI	126	ASN
43	DJ	160	GLN
44	DL	117	GLN
45	Dc	27	GLN
45	Dc	44	GLN
45	Dc	94	HIS
37	Dd	912	ASN
37	Dd	1069	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
38	De	254	ASN
38	De	294	ASN
38	De	336	HIS
38	De	368	ASN
38	De	424	GLN
38	De	542	HIS
38	De	556	ASN
38	De	585	ASN
38	De	638	ASN
38	De	668	HIS
38	De	782	HIS
39	Df	87	HIS
39	Df	119	ASN
39	Df	142	GLN
39	Df	292	ASN
39	Df	325	ASN
42	Di	81	GLN
43	Dj	160	GLN
43	Dj	173	HIS
44	Dl	64	GLN
44	Dl	73	ASN
44	Dl	148	HIS
48	DO	16	GLN
48	DO	31	GLN
48	DO	54	ASN
48	DO	77	ASN
49	DP	193	ASN
49	DP	278	GLN
50	DQ	60	HIS
50	DQ	359	ASN
51	BA	140	ASN
51	BA	234	HIS
52	FB	29	GLN
52	FB	86	GLN
52	FB	91	GLN
52	FB	112	GLN
52	FB	158	ASN
52	FB	181	GLN
55	PA	22	GLN
55	PA	123	ASN
55	PA	296	ASN
55	PA	461	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
55	PA	465	HIS
55	PA	485	ASN
55	PA	507	GLN
55	PA	539	GLN
55	PA	739	ASN
55	PA	765	ASN
55	PA	780	ASN
55	PA	861	GLN
55	PA	904	GLN
55	PA	1101	GLN
55	PA	1105	ASN
55	PA	1310	HIS
55	PA	1410	HIS
55	PA	1445	HIS
56	PB	23	GLN
56	PB	90	GLN
56	PB	197	GLN
56	PB	227	ASN
56	PB	452	ASN
56	PB	460	HIS
56	PB	537	GLN
56	PB	582	GLN
56	PB	639	HIS
56	PB	642	GLN
56	PB	683	GLN
56	PB	716	HIS
56	PB	731	GLN
56	PB	749	HIS
56	PB	817	GLN
56	PB	930	GLN
56	PB	941	GLN
56	PB	1009	GLN
56	PB	1094	GLN
56	PB	1115	GLN
56	PB	1145	GLN
57	PC	6	GLN
57	PC	83	GLN
57	PC	217	GLN
57	PC	262	GLN
57	PC	268	GLN
58	PD	47	GLN
58	PD	135	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
59	PE	95	GLN
59	PE	108	GLN
61	PG	139	GLN
62	PH	130	ASN
63	PI	45	GLN
64	PJ	26	GLN
65	PK	89	ASN
67	FA	121	ASN
68	w	113	GLN
68	w	293	HIS
68	w	357	HIS
68	w	358	GLN
68	w	378	GLN
68	w	421	HIS
68	w	513	ASN
68	w	726	ASN
68	w	783	GLN
68	w	822	HIS
68	w	851	ASN
68	w	874	HIS
68	w	921	HIS
68	w	923	ASN
68	w	925	HIS
68	w	972	HIS
68	w	1059	ASN
68	w	1134	GLN
68	w	1300	HIS
68	w	1320	ASN
69	x	8	GLN
69	x	111	HIS
69	x	217	GLN
69	x	266	GLN
69	x	361	ASN
69	x	380	ASN
69	x	402	ASN
69	x	404	GLN
69	x	472	ASN
69	x	502	HIS
69	x	544	HIS
70	p	63	HIS
70	p	80	HIS
70	p	225	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
70	p	272	ASN
70	p	282	HIS
70	p	387	HIS
70	p	400	GLN
70	p	435	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 18 ligands modelled in this entry, 17 are monoatomic - leaving 1 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
72	SF4	7	1000	32	0,12,12	-	-	-		

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
72	SF4	7	1000	32	-	-	0/6/5/5

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 [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

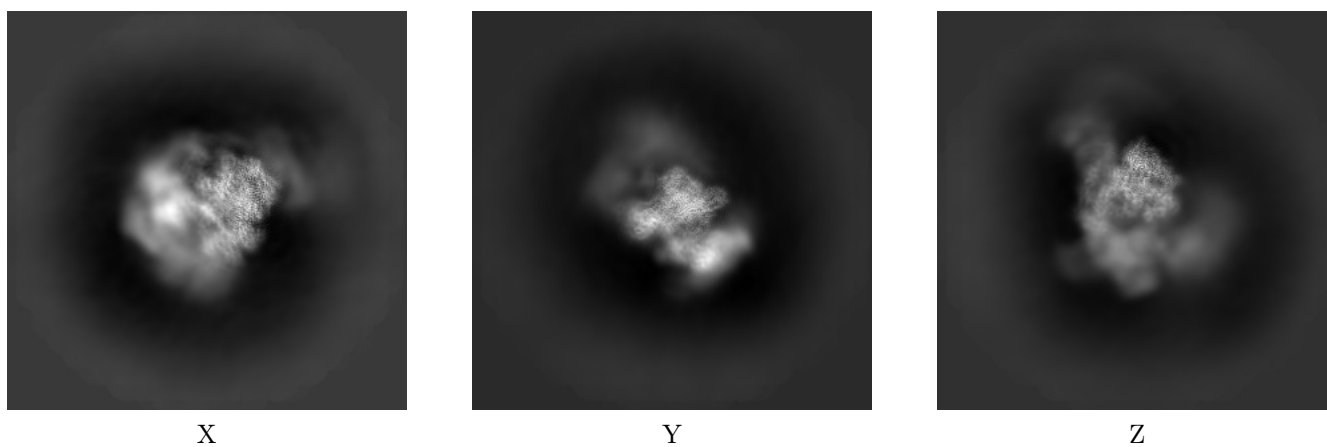
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-31207. 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 [i](#)

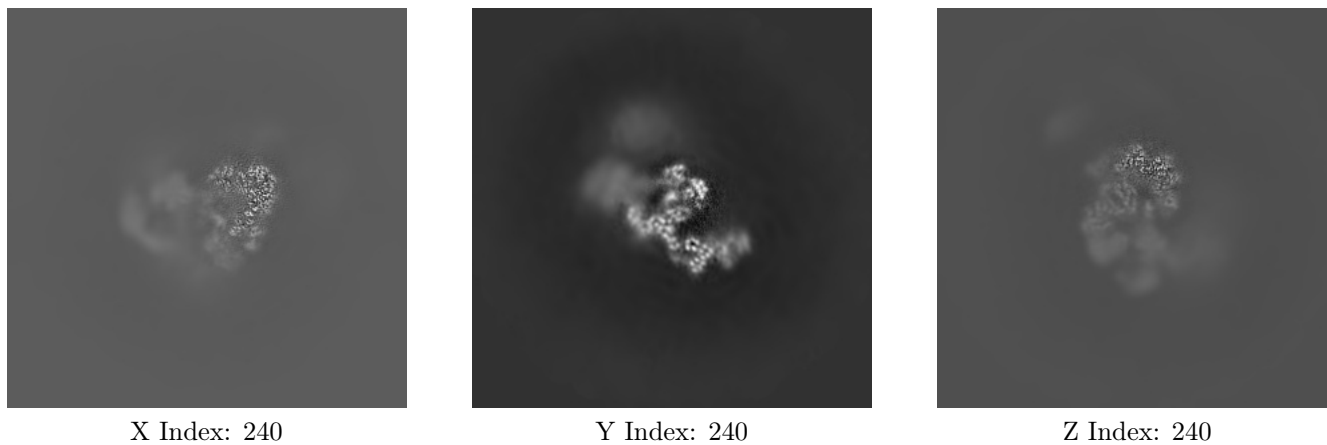
6.1.1 Primary map



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

6.2 Central slices [i](#)

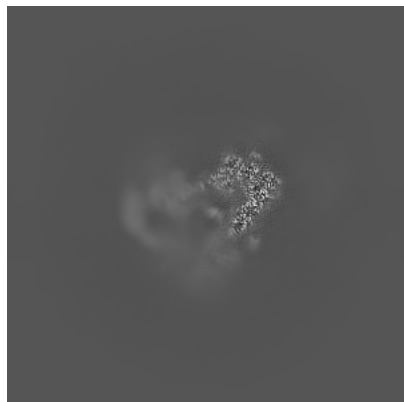
6.2.1 Primary map



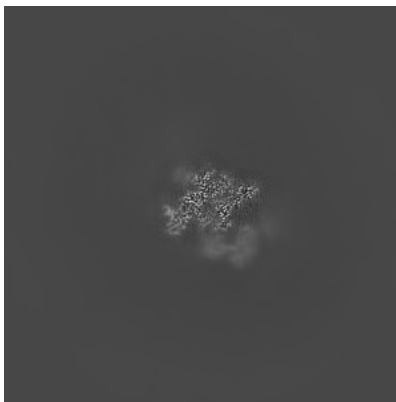
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

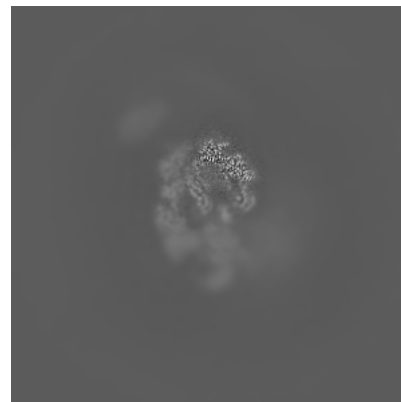
6.3.1 Primary map



X Index: 246



Y Index: 287

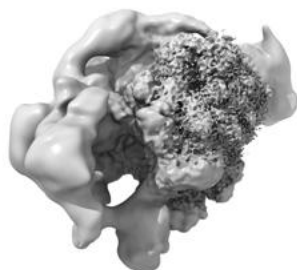


Z Index: 247

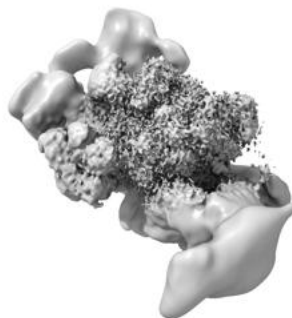
The images above show the largest variance slices of the map in three orthogonal directions.

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 0.41. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

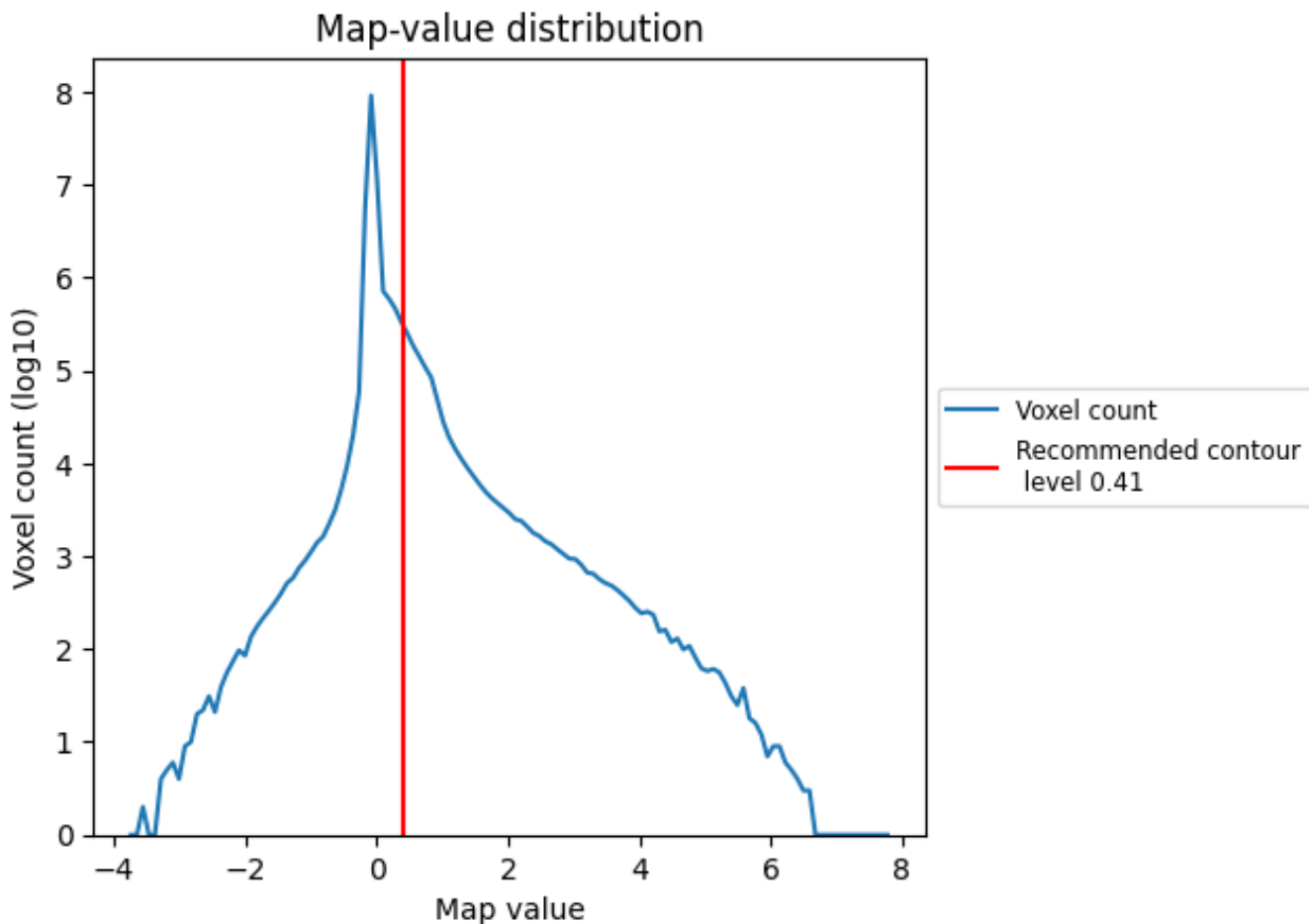
6.5 Mask visualisation

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

7 Map analysis [i](#)

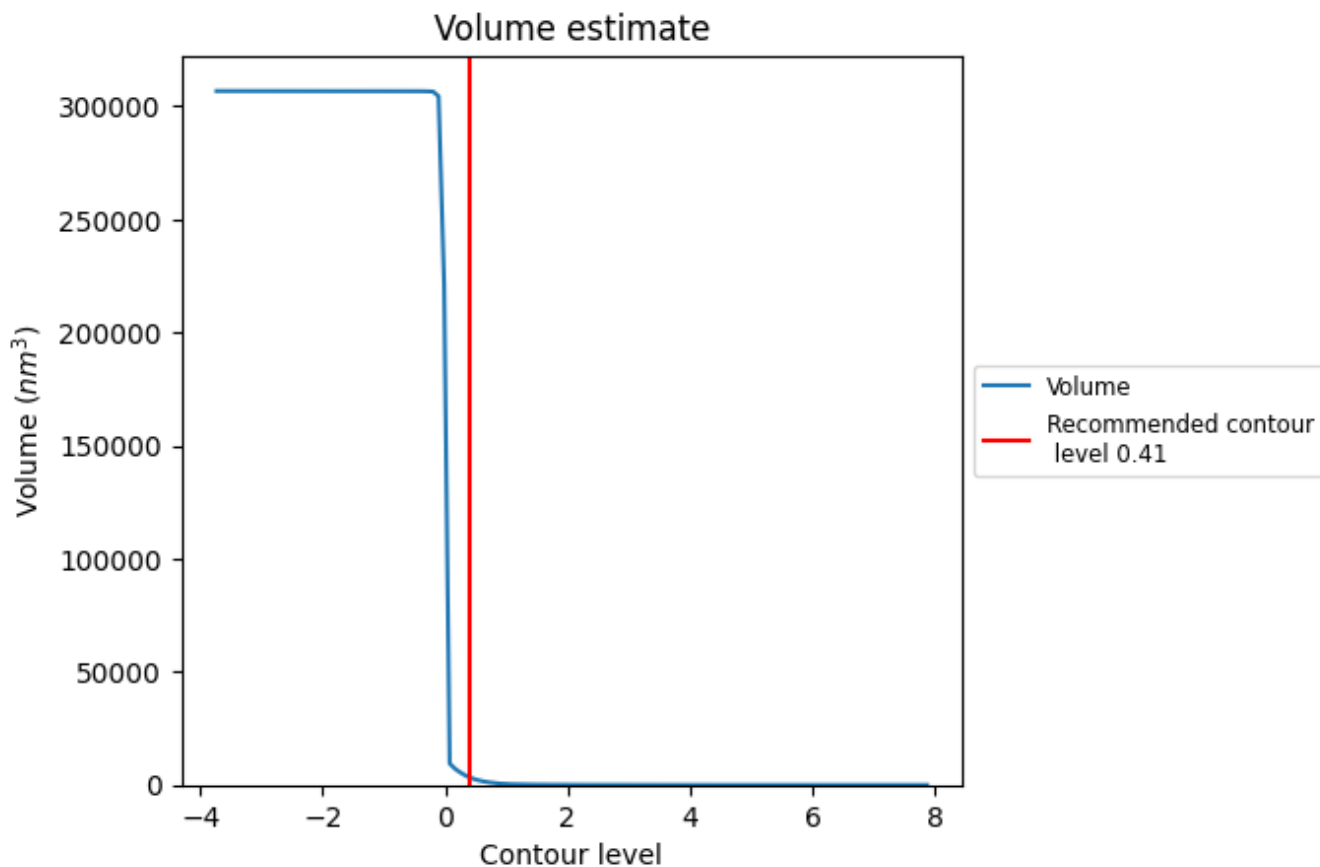
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

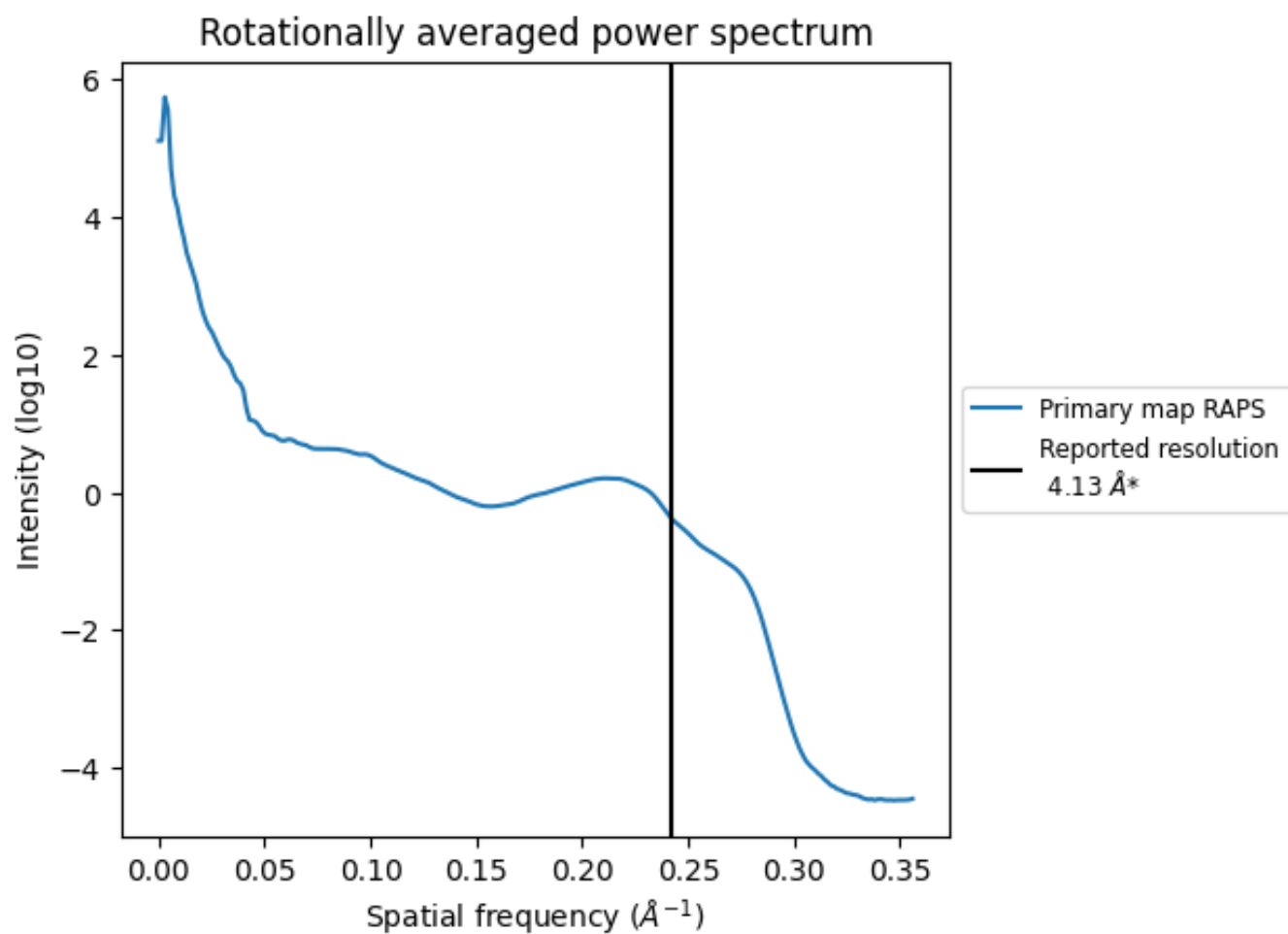
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 3240 nm^3 ; this corresponds to an approximate mass of 2927 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 0.242 Å⁻¹

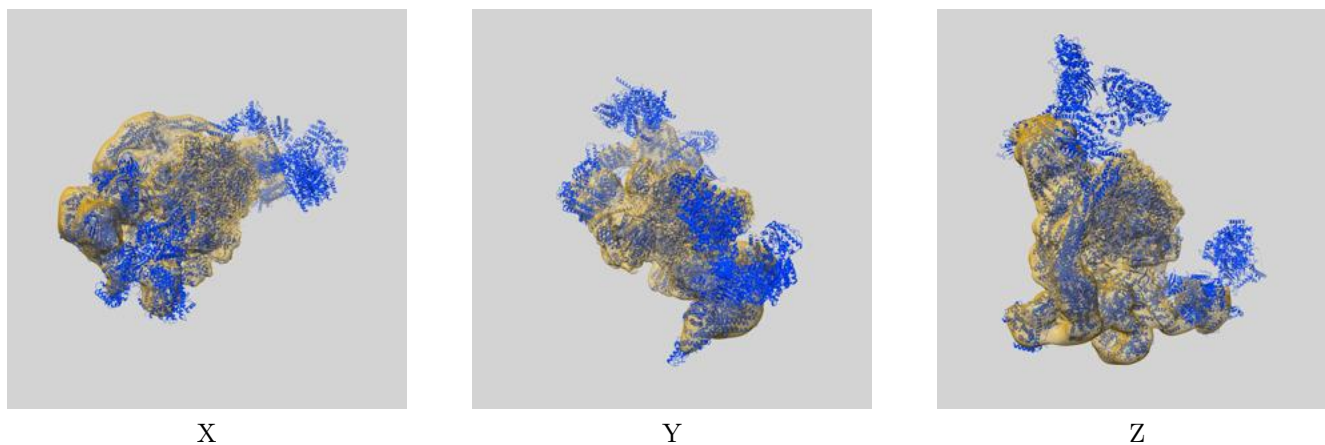
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

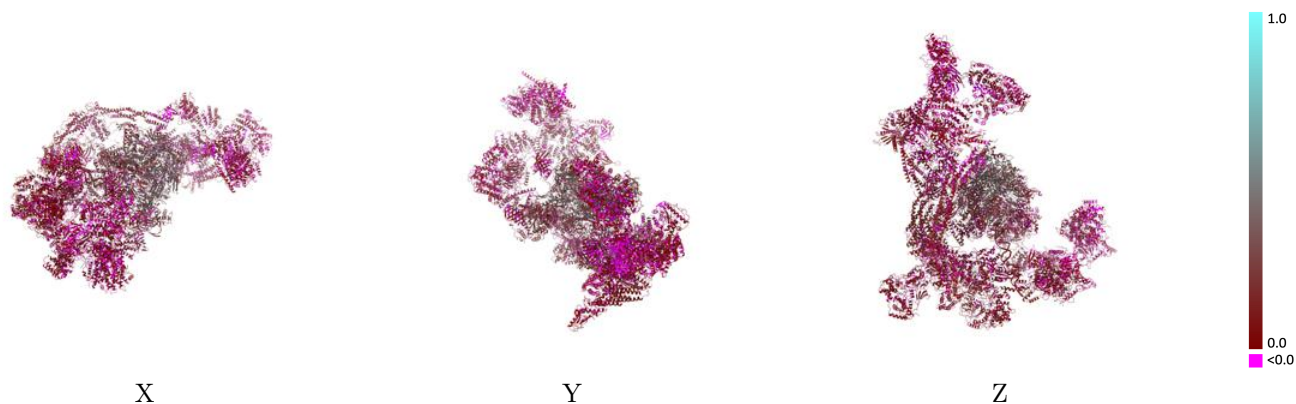
This section contains information regarding the fit between EMDB map EMD-31207 and PDB model 7ENC. Per-residue inclusion information can be found in section 3 on page 18.

9.1 Map-model overlay [i](#)



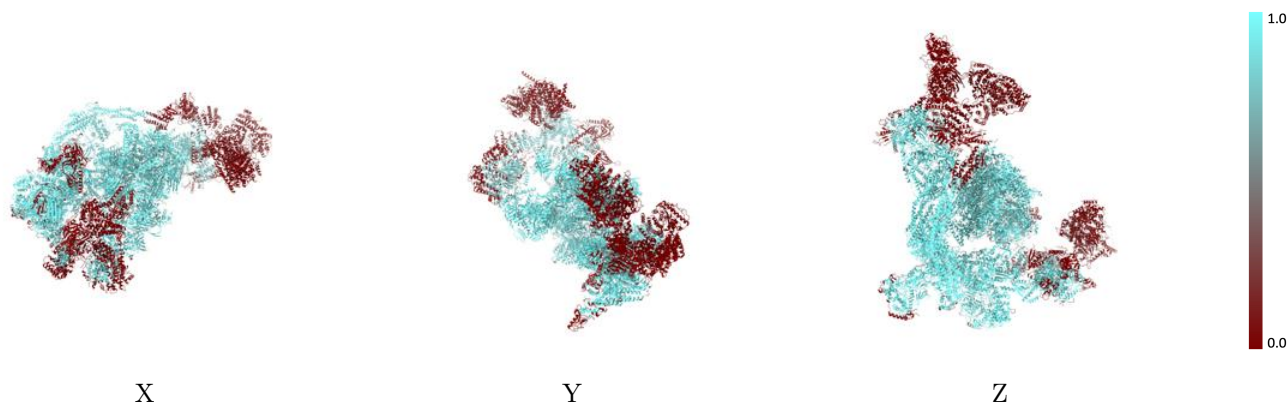
The images above show the 3D surface view of the map at the recommended contour level 0.41 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



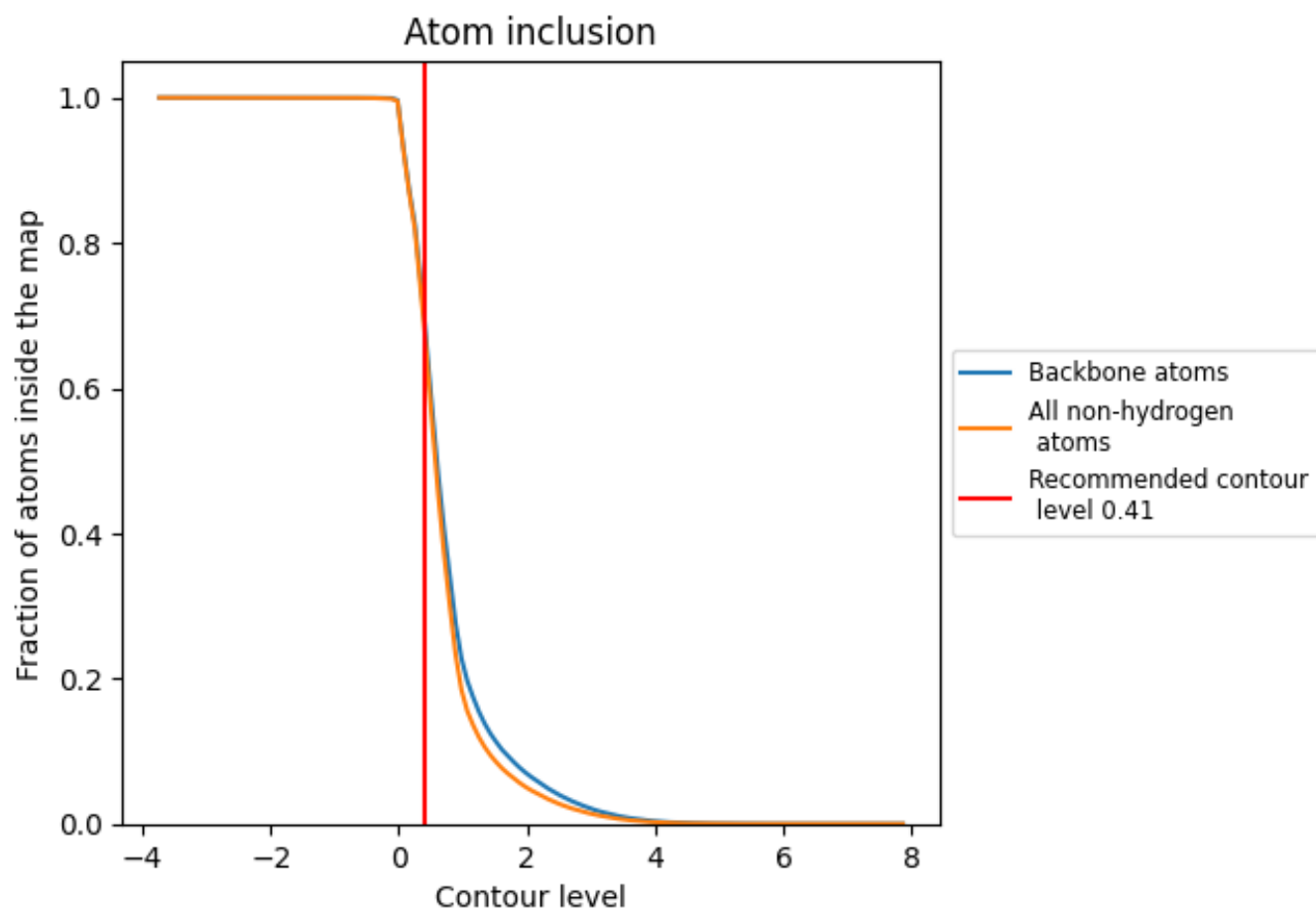
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.41).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 69% of all backbone atoms, 67% 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 (0.41) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.6727	 0.1030
0	 0.8867	 0.0830
1	 0.8998	 0.0380
2	 0.9832	 0.0690
3	 0.9745	 0.0630
4	 0.9620	 0.0740
5	 0.9788	 0.0560
6	 0.9801	 0.0700
7	 0.9842	 0.0970
8	 0.9410	 0.0760
9	 0.7294	 0.0650
BA	 0.9130	 0.2020
DA	 0.2539	 0.0410
DB	 0.8243	 0.0560
DD	 0.6079	 0.0580
DE	 0.6887	 0.0520
DF	 0.5059	 0.0580
DG	 0.0200	 0.0240
DH	 0.6951	 0.0550
DI	 0.5241	 0.0260
DJ	 0.5819	 0.0500
DL	 0.0281	 0.0310
DO	 0.9353	 0.1010
DP	 0.9673	 0.1650
DQ	 0.8707	 0.0990
Dc	 0.0000	 0.0330
Dd	 0.0000	 0.0140
De	 0.0000	 0.0180
Df	 0.2937	 0.0470
Di	 0.0000	 0.0440
Dj	 0.0000	 0.0320
Dk	 0.0000	 -0.0020
Dl	 0.0000	 0.0200
Dm	 0.0000	 0.0190
EA	 0.9798	 0.1020



Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
EB	 0.9870	 0.1230
FA	 0.9479	 0.0680
FB	 0.9521	 0.1150
PA	 0.9234	 0.2390
PB	 0.9390	 0.3370
PC	 0.9301	 0.3250
PD	 0.9373	 0.1590
PE	 0.9559	 0.2170
PF	 0.8880	 0.2560
PG	 0.9483	 0.1770
PH	 0.9241	 0.3110
PI	 0.9262	 0.1450
PJ	 0.9091	 0.3050
PK	 0.8805	 0.2840
PL	 0.9185	 0.2750
X	 0.9986	 0.1760
Y	 0.9950	 0.2000
a	 0.0028	 0.0340
b	 0.5512	 0.0380
c	 0.8450	 0.0550
d	 0.7480	 0.0840
e	 0.9597	 0.0930
f	 0.9869	 0.1340
g	 0.9808	 0.1050
h	 0.9870	 0.1610
i	 0.5010	 0.0850
j	 0.9189	 0.0640
k	 0.9556	 0.1540
l	 0.9171	 0.0710
m	 0.9990	 0.0910
n	 0.8740	 0.0690
o	 0.6689	 0.0440
p	 0.0000	 -0.0260
q	 0.9874	 0.0940
r	 0.9753	 0.0870
s	 0.9042	 0.0620
t	 0.9283	 0.0540
u	 0.9923	 0.0930
v	 0.9887	 0.1300
w	 0.0109	 0.0280
x	 0.0360	 0.0360
z	 0.8983	 0.0450