



Full wwPDB EM Validation Report ⓘ

Sep 3, 2024 – 02:37 am BST

PDB ID : 9F1D
EMDB ID : EMD-50126
Title : Mammalian quaternary complex of a translating 80S ribosome, NAC, MetAP1 and NatA/E-HYPK
Authors : Yudin, D.; Scaiola, A.; Ban, N.
Deposited on : 2024-04-18
Resolution : 3.26 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.dev112
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.38.2

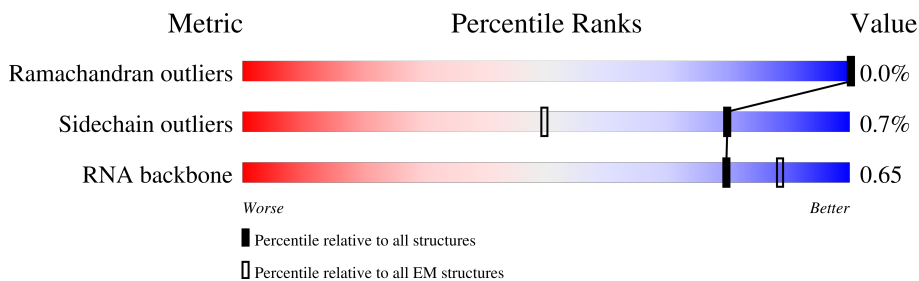
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.26 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	207382	16835
Sidechain outliers	206894	16415
RNA backbone	6643	2191

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	B5	4808	
2	BT	160	
3	Bb	245	
4	Bt	165	
5	AH	3	
6	Aq	135	
7	B7	120	
8	AT	76	

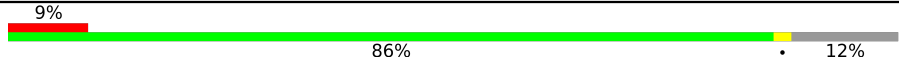

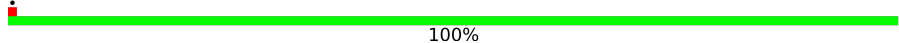

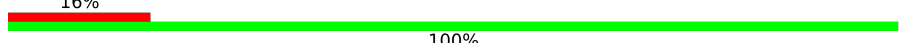
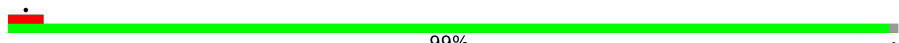


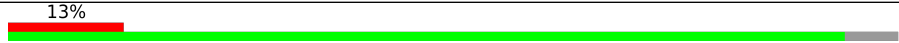

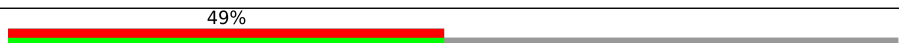


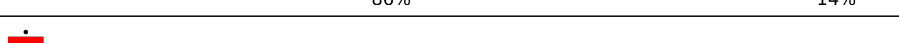
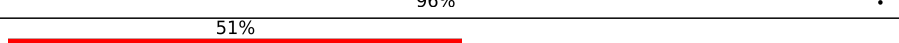
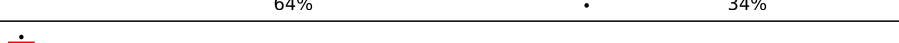
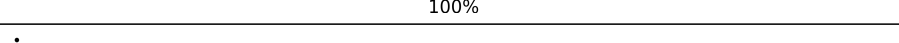
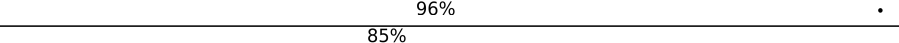
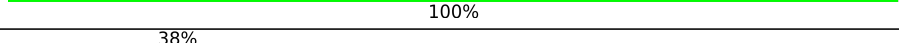

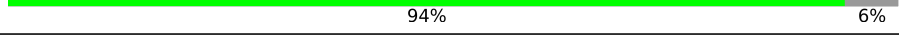
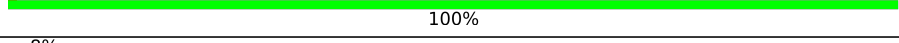
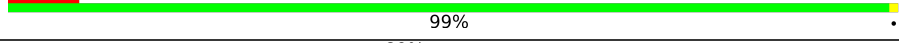

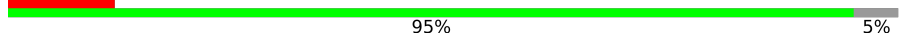
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Mol	Chain	Length	Quality of chain
9	Ar	151	13% 96%
10	B8	158	6% 87% 12%
11	BU	128	78% 20%
12	As	145	9% 99%
13	BA	257	98%
14	BV	140	8% 99%
15	At	119	16% 86% 13%
16	BB	403	98%
17	BP	184	5% 86% 14%
18	BY	145	92% 8%
19	Av	130	98%
20	B	297	99%
21	BX	156	75% 24%
22	BQ	188	98%
23	BZ	136	99%
24	Aw	143	97%
25	BE	291	9% 84% 16%
26	BW	157	28% 77% 23%
27	Au	83	96%
28	Ba	148	98%
29	Ax	130	6% 95%
30	BF	247	91% 9%
31	BR	196	6% 92% 8%
32	AZ	294	75% 25%
33	Ay	124	18% 68% 31%

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Mol	Chain	Length	Quality of chain
34	BG	266	
35	BC	412	
36	BS	176	
37	Aa	264	
38	Az	25	
39	BH	192	
40	EA	386	
41	Ab	293	
42	Bc	115	
43	BI	214	
44	Ct	238	
45	Ac	281	
46	Bd	125	
47	BJ	178	
48	Cu	162	
49	Ad	263	
50	Be	135	
51	BK	27	
52	DA	403	
53	Ae	204	
54	Bf	110	
55	BL	211	
56	DB	915	
57	Af	249	
58	Bg	117	

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Mol	Chain	Length	Quality of chain
59	BM	218	63% 37%
60	DC	235	69% 30%
61	Ag	432	7% 44% 56%
62	Bh	123	99%
63	BN	204	100%
64	DD	228	25% 24% 75%
65	Ah	208	6% 99%
66	Bi	105	96%
67	BO	203	97%
68	A2	1870	9% 79% 15% 5%
69	Ai	194	5% 95% 5%
70	Bj	97	89% 11%
71	AA	84	11% 98%
72	Aj	165	5% 58% 42%
73	Bk	70	9% 99%
74	AB	69	9% 91% 9%
75	Ak	158	13% 97%
76	Bl	51	8% 98%
77	AC	156	32% 47% 53%
78	Al	132	74% 92% 6%
79	Bm	128	41% 59%
80	AD	133	9% 43% 57%
81	Am	151	99%
82	Bo	106	98%
83	AE	115	87% 12%

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Mol	Chain	Length	Quality of chain
84	An	151	
85	Bp	92	
86	AF	317	
87	Ao	145	
88	Br	136	
89	AG	56	
90	Ap	172	
91	Bs	318	

2 Entry composition

There are 99 unique types of molecules in this entry. The entry contains 237089 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 RNA chain called 28S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	B5	3706	79525	35447	14532	25840	3706	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B5	3550	UY1	U	conflict	GB GBCN01009604.1

- Molecule 2 is a protein called 60S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	BT	159	1298	823	252	217	6	0	0

- Molecule 3 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	Bb	108	881	548	196	134	3	0	0

- Molecule 4 is a protein called 60S ribosomal protein L12.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	Bt	156	1178	733	221	220	4	0	0

- Molecule 5 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	O	P		
5	AH	3	36	15	18	3	0	0

- Molecule 6 is a protein called 40S ribosomal protein eS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	Aq	134	Total	C	N	O	S	0	0
			1080	678	201	197	4		

- Molecule 7 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	B7	119	Total	C	N	O	P	0	0
			2538	1131	451	837	119		

- Molecule 8 is a RNA chain called P-site tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	AT	76	Total	C	N	O	P	0	0
			939	393	11	459	76		

- Molecule 9 is a protein called Small ribosomal subunit protein uS13.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	Ar	148	Total	C	N	O	S	0	0
			1217	763	245	208	1		

- Molecule 10 is a RNA chain called 5.8S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	B8	156	Total	C	N	O	P	0	0
			3319	1481	585	1097	156		

- Molecule 11 is a protein called 60S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	BU	102	Total	C	N	O	S	0	0
			831	531	146	152	2		

There are 5 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BU	32	GLY	ARG	variant	UNP G1TSG1
BU	36	ALA	GLU	variant	UNP G1TSG1
BU	39	PHE	SER	variant	UNP G1TSG1
BU	54	GLY	ARG	variant	UNP G1TSG1
BU	97	ARG	HIS	variant	UNP G1TSG1

- Molecule 12 is a protein called 40S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	As	143	1113	698	214	198	3	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
As	119	GLY	TRP	variant	UNP G1TN62
As	142	ASN	LYS	variant	UNP G1TN62

- Molecule 13 is a protein called Large ribosomal subunit protein uL2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	BA	253	1940	1214	396	324	6	0	0

- Molecule 14 is a protein called Ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	BV	139	1034	648	199	182	5	0	0

- Molecule 15 is a protein called 40S ribosomal protein uS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
15	At	104	821	514	155	148	4	0	0

- Molecule 16 is a protein called Ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
16	BB	398	3206	2042	605	546	13	0	0

- Molecule 17 is a protein called Large ribosomal subunit protein uL22.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
17	BP	159	1289	809	249	222	9	0	0

- Molecule 18 is a protein called Ribosomal protein L26.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
18	BY	134	1115	700	226	186	3	0	0

- Molecule 19 is a protein called Ribosomal protein S15a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
19	Av	129	1034	659	193	176	6	0	0

- Molecule 20 is a protein called Large ribosomal subunit protein uL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
20	B	293	2391	1512	438	427	14	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	176	SER	GLY	variant	UNP G1SZF4
B	248	ARG	GLN	variant	UNP G1SZF4

- Molecule 21 is a protein called Large ribosomal subunit protein uL23.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
21	BX	118	967	618	181	167	1	0	0

- Molecule 22 is a protein called Large ribosomal subunit protein eL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
22	BQ	187	1515	946	315	250	4	0	0

- Molecule 23 is a protein called 60S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
23	BZ	135	1107	714	208	182	3	0	0

- Molecule 24 is a protein called 40S ribosomal protein S23.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
24	Aw	141	1099	693	219	184	3	0	0

- Molecule 25 is a protein called 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
25	BE	243	1960	1258	378	321	3	0	0

- Molecule 26 is a protein called Ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
26	BW	121	991	619	202	166	4	0	0

- Molecule 27 is a protein called Small ribosomal subunit protein eS21.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
27	Au	83	640	394	117	124	5	0	0

- Molecule 28 is a protein called 60S ribosomal protein L27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
28	Ba	147	1163	734	239	186	4	0	0

- Molecule 29 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
29	Ax	125	1015	642	199	169	5	0	0

- Molecule 30 is a protein called Ribosomal Protein uL30.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
30	BF	226	1886	1211	362	304	9	0	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BF	61	ARG	GLY	variant	UNP G1TUB1
BF	93	ARG	GLY	variant	UNP G1TUB1
BF	131	MET	VAL	variant	UNP G1TUB1
BF	153	ILE	VAL	variant	UNP G1TUB1

- Molecule 31 is a protein called Ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
31	BR	180	1508	933	328	238	9	0	0

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BR	38	ARG	CYS	variant	UNP G1TJR3
BR	64	ARG	GLN	variant	UNP G1TJR3
BR	94	THR	LYS	variant	UNP G1TJR3

- Molecule 32 is a protein called Small ribosomal subunit protein uS2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
32	AZ	221	1743	1107	305	323	8	0	0

- Molecule 33 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
33	Ay	85	683	439	128	115	1	0	0

- Molecule 34 is a protein called Large ribosomal subunit protein eL8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
34	BG	233	1877	1197	361	315	4	0	0

- Molecule 35 is a protein called Large ribosomal subunit protein uL4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
35	BC	362	2886	1814	577	481	14	0	0

- Molecule 36 is a protein called Large ribosomal subunit protein eL20.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
36	BS	176	1457	924	288	234	11	0	0

- Molecule 37 is a protein called 40S ribosomal protein S3a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
37	Aa	224	1815	1152	328	321	14	0	0

- Molecule 38 is a protein called 60S ribosomal protein L41.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
38	Az	25	239	145	64	27	3	0	0

- Molecule 39 is a protein called 60S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
39	BH	190	1516	954	284	272	6	0	0

- Molecule 40 is a protein called Methionine aminopeptidase 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
40	EA	304	2395	1505	430	442	18	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
EA	220	ASN	ASP	engineered mutation	UNP P53582

- Molecule 41 is a protein called Small ribosomal subunit protein uS5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
41	Ab	220	1706	1105	292	300	9	0	0

- Molecule 42 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
42	Bc	108	836	530	148	151	7	0	0

- Molecule 43 is a protein called 60S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
43	BI	213	1717	1086	332	285	14	0	0

- Molecule 44 is a protein called Nascent polypeptide-associated complex subunit alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
44	Ct	117	908	568	166	170	4	0	0

There are 23 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Ct	-22	MET	-	initiating methionine	UNP Q13765
Ct	-21	GLY	-	expression tag	UNP Q13765
Ct	-20	SER	-	expression tag	UNP Q13765
Ct	-19	SER	-	expression tag	UNP Q13765
Ct	-18	HIS	-	expression tag	UNP Q13765
Ct	-17	HIS	-	expression tag	UNP Q13765
Ct	-16	HIS	-	expression tag	UNP Q13765
Ct	-15	HIS	-	expression tag	UNP Q13765
Ct	-14	HIS	-	expression tag	UNP Q13765
Ct	-13	HIS	-	expression tag	UNP Q13765
Ct	-12	SER	-	expression tag	UNP Q13765
Ct	-11	SER	-	expression tag	UNP Q13765
Ct	-10	GLY	-	expression tag	UNP Q13765
Ct	-9	LEU	-	expression tag	UNP Q13765
Ct	-8	GLU	-	expression tag	UNP Q13765
Ct	-7	VAL	-	expression tag	UNP Q13765
Ct	-6	LEU	-	expression tag	UNP Q13765
Ct	-5	PHE	-	expression tag	UNP Q13765
Ct	-4	GLN	-	expression tag	UNP Q13765
Ct	-3	GLY	-	expression tag	UNP Q13765
Ct	-2	PRO	-	expression tag	UNP Q13765
Ct	-1	SER	-	expression tag	UNP Q13765
Ct	0	GLY	-	expression tag	UNP Q13765

- Molecule 45 is a protein called 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
45	Ac	225	1751	1116	315	313	7	0	0

- Molecule 46 is a protein called 60S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
46	Bd	107	888	560	171	155	2	0	0

- Molecule 47 is a protein called 60S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
47	BJ	170	1362	861	254	241	6	0	0

- Molecule 48 is a protein called Isoform 2 of Transcription factor BTF3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
48	Cu	107	828	518	154	153	3	0	0

- Molecule 49 is a protein called 40S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
49	Ad	262	2076	1324	386	358	8	0	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Ad	25	GLY	SER	variant	UNP G1TK17
Ad	51	ARG	LYS	variant	UNP G1TK17
Ad	78	THR	ALA	variant	UNP G1TK17
Ad	156	VAL	MET	variant	UNP G1TK17

- Molecule 50 is a protein called Ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
50	Be	130	1070	676	221	168	5	0	0

- Molecule 51 is a protein called Nascent chain.

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

- Molecule 52 is a protein called Glutathione S-transferase class-mu 26 kDa isozyme,N-alpha-acetyltransferase 50,N-alpha-acetyltransferase 50.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	DA	155	Total	C	N	O	S		
			1260	808	221	225	6	0	0

- Molecule 53 is a protein called Ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	Ae	191	Total	C	N	O	S		
			1509	943	286	273	7	0	0

- Molecule 54 is a protein called 60S ribosomal protein L35a.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	Bf	110	Total	C	N	O	S		
			884	560	175	144	5	0	0

- Molecule 55 is a protein called Large ribosomal subunit protein eL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	BL	210	Total	C	N	O	S		
			1702	1065	354	279	4	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BL	74	ARG	HIS	variant	UNP G1TKB3
BL	190	ARG	HIS	variant	UNP G1TKB3

- Molecule 56 is a protein called N-alpha-acetyltransferase 15, NatA auxiliary subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	DB	837	Total	C	N	O	S		
			6900	4391	1192	1276	41	0	0

There are 49 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
DB	-48	MET	-	initiating methionine	UNP Q9BXJ9
DB	-47	GLY	-	expression tag	UNP Q9BXJ9
DB	-46	SER	-	expression tag	UNP Q9BXJ9
DB	-45	SER	-	expression tag	UNP Q9BXJ9
DB	-44	HIS	-	expression tag	UNP Q9BXJ9
DB	-43	HIS	-	expression tag	UNP Q9BXJ9
DB	-42	HIS	-	expression tag	UNP Q9BXJ9
DB	-41	HIS	-	expression tag	UNP Q9BXJ9
DB	-40	HIS	-	expression tag	UNP Q9BXJ9
DB	-39	HIS	-	expression tag	UNP Q9BXJ9
DB	-38	SER	-	expression tag	UNP Q9BXJ9
DB	-37	SER	-	expression tag	UNP Q9BXJ9
DB	-36	GLY	-	expression tag	UNP Q9BXJ9
DB	-35	LEU	-	expression tag	UNP Q9BXJ9
DB	-34	VAL	-	expression tag	UNP Q9BXJ9
DB	-33	PRO	-	expression tag	UNP Q9BXJ9
DB	-32	ARG	-	expression tag	UNP Q9BXJ9
DB	-31	GLY	-	expression tag	UNP Q9BXJ9
DB	-30	SER	-	expression tag	UNP Q9BXJ9
DB	-29	HIS	-	expression tag	UNP Q9BXJ9
DB	-28	MET	-	expression tag	UNP Q9BXJ9
DB	-27	ALA	-	expression tag	UNP Q9BXJ9
DB	-26	SER	-	expression tag	UNP Q9BXJ9
DB	-25	MET	-	expression tag	UNP Q9BXJ9
DB	-24	THR	-	expression tag	UNP Q9BXJ9
DB	-23	GLY	-	expression tag	UNP Q9BXJ9
DB	-22	GLY	-	expression tag	UNP Q9BXJ9
DB	-21	GLN	-	expression tag	UNP Q9BXJ9
DB	-20	GLN	-	expression tag	UNP Q9BXJ9
DB	-19	MET	-	expression tag	UNP Q9BXJ9
DB	-18	GLY	-	expression tag	UNP Q9BXJ9
DB	-17	ARG	-	expression tag	UNP Q9BXJ9
DB	-16	ALA	-	expression tag	UNP Q9BXJ9
DB	-15	ARG	-	expression tag	UNP Q9BXJ9
DB	-14	GLY	-	expression tag	UNP Q9BXJ9
DB	-13	ILE	-	expression tag	UNP Q9BXJ9
DB	-12	GLN	-	expression tag	UNP Q9BXJ9
DB	-11	ARG	-	expression tag	UNP Q9BXJ9
DB	-10	PRO	-	expression tag	UNP Q9BXJ9
DB	-9	THR	-	expression tag	UNP Q9BXJ9
DB	-8	SER	-	expression tag	UNP Q9BXJ9
DB	-7	THR	-	expression tag	UNP Q9BXJ9
DB	-6	SER	-	expression tag	UNP Q9BXJ9

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Chain	Residue	Modelled	Actual	Comment	Reference
DB	-5	SER	-	expression tag	UNP Q9BXJ9
DB	-4	LEU	-	expression tag	UNP Q9BXJ9
DB	-3	VAL	-	expression tag	UNP Q9BXJ9
DB	-2	ALA	-	expression tag	UNP Q9BXJ9
DB	-1	ALA	-	expression tag	UNP Q9BXJ9
DB	0	ALA	-	expression tag	UNP Q9BXJ9

- Molecule 57 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
57	Af	237	1923	1200	387	329	7	0	0

- Molecule 58 is a protein called 60S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
58	Bg	114	906	566	187	147	6	0	0

- Molecule 59 is a protein called 60S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
59	BM	138	1137	727	221	182	7	0	0

- Molecule 60 is a protein called N-alpha-acetyltransferase 10.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
60	DC	165	1339	844	242	242	11	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
DC	24	GLN	GLU	engineered mutation	UNP P41227
DC	26	PHE	TYR	engineered mutation	UNP P41227

- Molecule 61 is a protein called 40S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
61	Ag	190	1529	975	281	272	1	0	0

- Molecule 62 is a protein called 60S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
62	Bh	122	1013	640	204	168	1	0	0

- Molecule 63 is a protein called Ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
63	BN	203	1701	1072	359	266	4	0	0

- Molecule 64 is a protein called Isoform 2 of Huntingtin-interacting protein K.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
64	DD	57	439	269	78	89	3	0	0

There are 107 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
DD	-106	MET	-	initiating methionine	UNP Q9NX55
DD	-105	LYS	-	expression tag	UNP Q9NX55
DD	-104	HIS	-	expression tag	UNP Q9NX55
DD	-103	HIS	-	expression tag	UNP Q9NX55
DD	-102	HIS	-	expression tag	UNP Q9NX55
DD	-101	HIS	-	expression tag	UNP Q9NX55
DD	-100	HIS	-	expression tag	UNP Q9NX55
DD	-99	HIS	-	expression tag	UNP Q9NX55
DD	-98	PRO	-	expression tag	UNP Q9NX55
DD	-97	MET	-	expression tag	UNP Q9NX55
DD	-96	SER	-	expression tag	UNP Q9NX55
DD	-95	ASP	-	expression tag	UNP Q9NX55
DD	-94	SER	-	expression tag	UNP Q9NX55
DD	-93	GLU	-	expression tag	UNP Q9NX55
DD	-92	VAL	-	expression tag	UNP Q9NX55
DD	-91	ASN	-	expression tag	UNP Q9NX55
DD	-90	GLN	-	expression tag	UNP Q9NX55
DD	-89	GLU	-	expression tag	UNP Q9NX55
DD	-88	ALA	-	expression tag	UNP Q9NX55

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Chain	Residue	Modelled	Actual	Comment	Reference
DD	-87	LYS	-	expression tag	UNP Q9NX55
DD	-86	PRO	-	expression tag	UNP Q9NX55
DD	-85	GLU	-	expression tag	UNP Q9NX55
DD	-84	VAL	-	expression tag	UNP Q9NX55
DD	-83	LYS	-	expression tag	UNP Q9NX55
DD	-82	PRO	-	expression tag	UNP Q9NX55
DD	-81	GLU	-	expression tag	UNP Q9NX55
DD	-80	VAL	-	expression tag	UNP Q9NX55
DD	-79	LYS	-	expression tag	UNP Q9NX55
DD	-78	PRO	-	expression tag	UNP Q9NX55
DD	-77	GLU	-	expression tag	UNP Q9NX55
DD	-76	THR	-	expression tag	UNP Q9NX55
DD	-75	HIS	-	expression tag	UNP Q9NX55
DD	-74	ILE	-	expression tag	UNP Q9NX55
DD	-73	ASN	-	expression tag	UNP Q9NX55
DD	-72	LEU	-	expression tag	UNP Q9NX55
DD	-71	LYS	-	expression tag	UNP Q9NX55
DD	-70	VAL	-	expression tag	UNP Q9NX55
DD	-69	SER	-	expression tag	UNP Q9NX55
DD	-68	ASP	-	expression tag	UNP Q9NX55
DD	-67	GLY	-	expression tag	UNP Q9NX55
DD	-66	SER	-	expression tag	UNP Q9NX55
DD	-65	SER	-	expression tag	UNP Q9NX55
DD	-64	GLU	-	expression tag	UNP Q9NX55
DD	-63	ILE	-	expression tag	UNP Q9NX55
DD	-62	PHE	-	expression tag	UNP Q9NX55
DD	-61	PHE	-	expression tag	UNP Q9NX55
DD	-60	LYS	-	expression tag	UNP Q9NX55
DD	-59	ILE	-	expression tag	UNP Q9NX55
DD	-58	LYS	-	expression tag	UNP Q9NX55
DD	-57	LYS	-	expression tag	UNP Q9NX55
DD	-56	THR	-	expression tag	UNP Q9NX55
DD	-55	THR	-	expression tag	UNP Q9NX55
DD	-54	PRO	-	expression tag	UNP Q9NX55
DD	-53	LEU	-	expression tag	UNP Q9NX55
DD	-52	ARG	-	expression tag	UNP Q9NX55
DD	-51	ARG	-	expression tag	UNP Q9NX55
DD	-50	LEU	-	expression tag	UNP Q9NX55
DD	-49	MET	-	expression tag	UNP Q9NX55
DD	-48	GLU	-	expression tag	UNP Q9NX55
DD	-47	ALA	-	expression tag	UNP Q9NX55
DD	-46	PHE	-	expression tag	UNP Q9NX55

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Chain	Residue	Modelled	Actual	Comment	Reference
DD	-45	ALA	-	expression tag	UNP Q9NX55
DD	-44	LYS	-	expression tag	UNP Q9NX55
DD	-43	ARG	-	expression tag	UNP Q9NX55
DD	-42	GLN	-	expression tag	UNP Q9NX55
DD	-41	GLY	-	expression tag	UNP Q9NX55
DD	-40	LYS	-	expression tag	UNP Q9NX55
DD	-39	GLU	-	expression tag	UNP Q9NX55
DD	-38	MET	-	expression tag	UNP Q9NX55
DD	-37	ASP	-	expression tag	UNP Q9NX55
DD	-36	SER	-	expression tag	UNP Q9NX55
DD	-35	LEU	-	expression tag	UNP Q9NX55
DD	-34	ARG	-	expression tag	UNP Q9NX55
DD	-33	PHE	-	expression tag	UNP Q9NX55
DD	-32	LEU	-	expression tag	UNP Q9NX55
DD	-31	TYR	-	expression tag	UNP Q9NX55
DD	-30	ASP	-	expression tag	UNP Q9NX55
DD	-29	GLY	-	expression tag	UNP Q9NX55
DD	-28	ILE	-	expression tag	UNP Q9NX55
DD	-27	ARG	-	expression tag	UNP Q9NX55
DD	-26	ILE	-	expression tag	UNP Q9NX55
DD	-25	GLN	-	expression tag	UNP Q9NX55
DD	-24	ALA	-	expression tag	UNP Q9NX55
DD	-23	ASP	-	expression tag	UNP Q9NX55
DD	-22	GLN	-	expression tag	UNP Q9NX55
DD	-21	THR	-	expression tag	UNP Q9NX55
DD	-20	PRO	-	expression tag	UNP Q9NX55
DD	-19	GLU	-	expression tag	UNP Q9NX55
DD	-18	ASP	-	expression tag	UNP Q9NX55
DD	-17	LEU	-	expression tag	UNP Q9NX55
DD	-16	ASP	-	expression tag	UNP Q9NX55
DD	-15	MET	-	expression tag	UNP Q9NX55
DD	-14	GLU	-	expression tag	UNP Q9NX55
DD	-13	ASP	-	expression tag	UNP Q9NX55
DD	-12	ASN	-	expression tag	UNP Q9NX55
DD	-11	ASP	-	expression tag	UNP Q9NX55
DD	-10	ILE	-	expression tag	UNP Q9NX55
DD	-9	ILE	-	expression tag	UNP Q9NX55
DD	-8	GLU	-	expression tag	UNP Q9NX55
DD	-7	ALA	-	expression tag	UNP Q9NX55
DD	-6	HIS	-	expression tag	UNP Q9NX55
DD	-5	ARG	-	expression tag	UNP Q9NX55
DD	-4	GLU	-	expression tag	UNP Q9NX55

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Chain	Residue	Modelled	Actual	Comment	Reference
DD	-3	GLN	-	expression tag	UNP Q9NX55
DD	-2	ILE	-	expression tag	UNP Q9NX55
DD	-1	GLY	-	expression tag	UNP Q9NX55
DD	0	GLY	-	expression tag	UNP Q9NX55

- Molecule 65 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
65	Ah	206	1686	1058	332	291	5	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Ah	47	ARG	GLY	variant	UNP G1TJW1

- Molecule 66 is a protein called 60S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
66	Bi	102	830	520	176	129	5	0	0

- Molecule 67 is a protein called Large ribosomal subunit protein uL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
67	BO	199	1630	1051	319	255	5	0	0

- Molecule 68 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
68	A2	1770	37833	16911	6781	12371	1770	0	0

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A2	1249	B8N	C	conflict	GB GBCT01000564.1
A2	1338	4AC	C	conflict	GB GBCT01000564.1
A2	1843	4AC	C	conflict	GB GBCT01000564.1

- Molecule 69 is a protein called 40S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
69	Ai	185	1525	969	306	248	2	0	0

- Molecule 70 is a protein called Ribosomal protein L37.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
70	Bj	86	705	434	155	111	5	0	0

- Molecule 71 is a protein called 40S ribosomal protein S27.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
71	AA	83	651	408	121	115	7	0	0

- Molecule 72 is a protein called S10_pectin domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
72	Aj	96	810	530	143	131	6	0	0

- Molecule 73 is a protein called 60S ribosomal protein L38.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
73	Bk	69	569	366	103	99	1	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Bk	24	LYS	ASN	variant	UNP G1U001

- Molecule 74 is a protein called 40S ribosomal protein S28.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
74	AB	63	495	302	98	93	2	0	0

- Molecule 75 is a protein called 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
75	Ak	154	1262	804	236	216	6	0	0

- Molecule 76 is a protein called 60S ribosomal protein L39-like.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
76	Bl	50	447	286	96	64	1	0	0

- Molecule 77 is a protein called Ribosomal protein S27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
77	AC	74	610	385	117	101	7	0	0

- Molecule 78 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
78	Al	124	958	600	170	179	9	0	0

- Molecule 79 is a protein called Ubiquitin-ribosomal protein eL40 fusion protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
79	Bm	52	432	269	90	67	6	0	0

- Molecule 80 is a protein called 40S ribosomal protein S30.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
80	AD	57	457	282	101	73	1	0	0

- Molecule 81 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
81	Am	150	1208	773	229	205	1	0	0

- Molecule 82 is a protein called Large ribosomal subunit protein eL42.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
82	Bo	105	863	543	175	139	6	0	0

- Molecule 83 is a protein called Small ribosomal subunit protein eS26.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
83	AE	101	814	507	170	132	5	0	0

- Molecule 84 is a protein called Small ribosomal subunit protein uS11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
84	An	136	1016	621	199	190	6	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
An	165	IAS	ASP	conflict	UNP A0AAA9WYR1

- Molecule 85 is a protein called 60S ribosomal protein L37a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
85	Bp	91	708	445	136	120	7	0	0

- Molecule 86 is a protein called Small ribosomal subunit protein RACK1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
86	AF	313	2436	1535	424	465	12	0	0

- Molecule 87 is a protein called 40S ribosomal protein uS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
87	Ao	128	1048	665	197	179	7	0	0

- Molecule 88 is a protein called Large ribosomal subunit protein eL28.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
88	Br	123	990	613	205	167	5	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Br	103	ARG	HIS	conflict	UNP G1U7L1

- Molecule 89 is a protein called 40S ribosomal protein S29.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
89	AG	55	459	286	94	74	5	0	0

- Molecule 90 is a protein called Small ribosomal subunit protein uS9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
90	Ap	141	1124	715	212	194	3	0	0

- Molecule 91 is a protein called Large ribosomal subunit protein uL10.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
91	Bs	196	1507	959	263	276	9	0	0

- Molecule 92 is UNKNOWN ATOM OR ION (three-letter code: UNX) (formula: X).

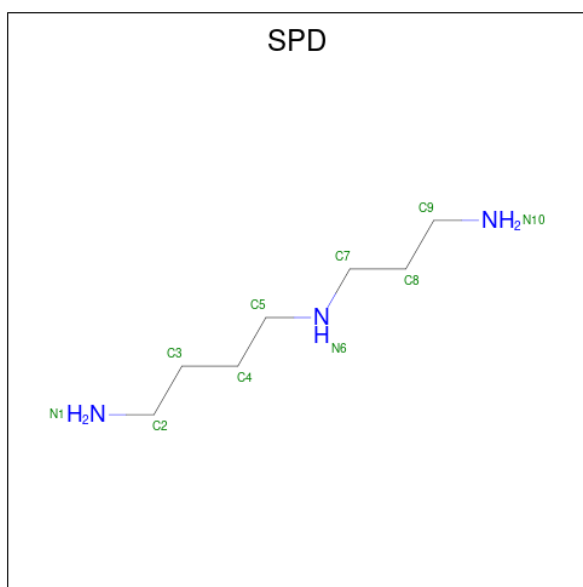
Mol	Chain	Residues	Atoms		AltConf
92	B5	200	Total 200	X 200	0
92	BT	2	Total 2	X 2	0
92	Bb	2	Total 2	X 2	0
92	B7	6	Total 6	X 6	0
92	AT	2	Total 2	X 2	0
92	B8	6	Total 6	X 6	0
92	BA	4	Total 4	X 4	0

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Mol	Chain	Residues	Atoms		AltConf
92	BB	3	Total 3	X 3	0
92	BY	1	Total 1	X 1	0
92	BQ	2	Total 2	X 2	0
92	BH	1	Total 1	X 1	0
92	BI	1	Total 1	X 1	0
92	Ad	1	Total 1	X 1	0
92	Be	3	Total 3	X 3	0
92	Bf	1	Total 1	X 1	0
92	BL	1	Total 1	X 1	0
92	BN	1	Total 1	X 1	0
92	A2	54	Total 54	X 54	0
92	Ak	1	Total 1	X 1	0
92	Bo	1	Total 1	X 1	0
92	AE	1	Total 1	X 1	0
92	An	1	Total 1	X 1	0

- Molecule 93 is SPERMIDINE (three-letter code: SPD) (formula: C₇H₁₉N₃).



Mol	Chain	Residues	Atoms			AltConf
			Total	C	N	
93	B5	1	10	7	3	0
93	B5	1	10	7	3	0
93	B5	1	10	7	3	0
93	B5	1	10	7	3	0
93	B5	1	10	7	3	0
93	B5	1	10	7	3	0
93	B5	1	10	7	3	0
93	B5	1	10	7	3	0
93	B5	1	10	7	3	0
93	B5	1	10	7	3	0
93	B5	1	10	7	3	0
93	B5	1	10	7	3	0
93	B5	1	10	7	3	0
93	B5	1	10	7	3	0

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Mol	Chain	Residues	Atoms			AltConf
			Total	C	N	
93	B5	1	Total 10	C 7	N 3	0
93	B5	1	Total 10	C 7	N 3	0
93	B5	1	Total 10	C 7	N 3	0
93	B5	1	Total 10	C 7	N 3	0
93	B5	1	Total 10	C 7	N 3	0
93	B5	1	Total 10	C 7	N 3	0
93	B5	1	Total 10	C 7	N 3	0
93	B5	1	Total 10	C 7	N 3	0
93	A2	1	Total 10	C 7	N 3	0
93	A2	1	Total 10	C 7	N 3	0
93	A2	1	Total 10	C 7	N 3	0
93	A2	1	Total 10	C 7	N 3	0
93	A2	1	Total 10	C 7	N 3	0
93	A2	1	Total 10	C 7	N 3	0
93	A2	1	Total 10	C 7	N 3	0
93	A2	1	Total 10	C 7	N 3	0

- Molecule 94 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

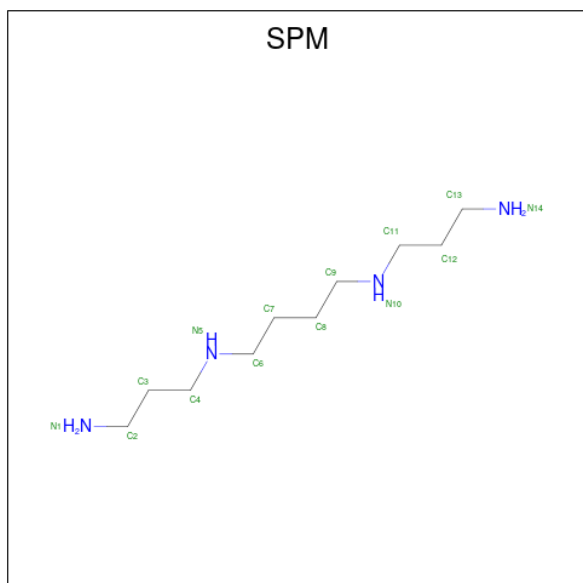
Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
94	B5	283	Total 283	Mg 283	0
94	B7	9	Total 9	Mg 9	0
94	AT	2	Total 2	Mg 2	0

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Mol	Chain	Residues	Atoms		AltConf
94	B8	8	Total	Mg	0
			8	8	
94	BV	1	Total	Mg	0
			1	1	
94	BP	1	Total	Mg	0
			1	1	
94	Ba	1	Total	Mg	0
			1	1	
94	BI	1	Total	Mg	0
			1	1	
94	Ct	1	Total	Mg	0
			1	1	
94	Be	1	Total	Mg	0
			1	1	
94	A2	110	Total	Mg	0
			110	110	
94	Bj	1	Total	Mg	0
			1	1	
94	An	1	Total	Mg	0
			1	1	

- Molecule 95 is SPERMINE (three-letter code: SPM) (formula: $C_{10}H_{26}N_4$).



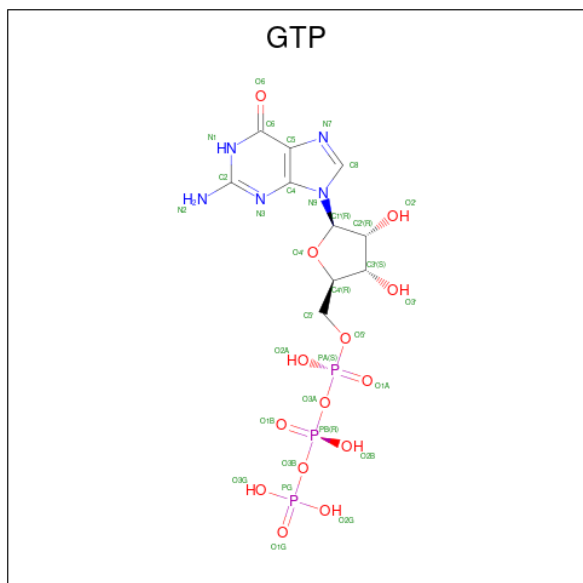
Mol	Chain	Residues	Atoms			AltConf
95	B5	1	Total	C	N	0
			14	10	4	

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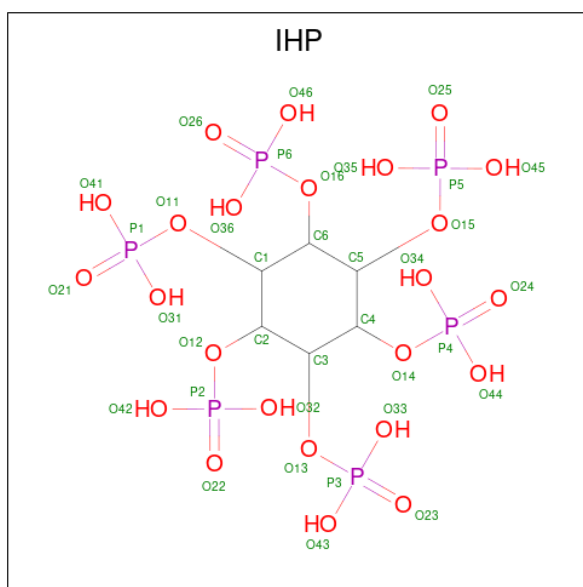
Mol	Chain	Residues	Atoms			AltConf
			Total	C	N	
95	B5	1	14	10	4	0
95	A2	1	14	10	4	0

- Molecule 96 is GUANOSINE-5'-TRIPHOSPHATE (three-letter code: GTP) (formula: $C_{10}H_{16}N_5O_{14}P_3$).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
96	B7	1	32	10	5	14	3	0

- Molecule 97 is INOSITOL HEXAKISPHOSPHATE (three-letter code: IHP) (formula: $C_6H_{18}O_{24}P_6$).



Mol	Chain	Residues	Atoms				AltConf
97	DB	1	Total	C	O	P	0
			36	6	24	6	

- Molecule 98 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
98	Bg	1	Total	Zn	0
			1	1	
98	Bj	1	Total	Zn	0
			1	1	
98	AC	1	Total	Zn	0
			1	1	
98	Bm	1	Total	Zn	0
			1	1	
98	Bo	1	Total	Zn	0
			1	1	
98	AE	1	Total	Zn	0
			1	1	
98	Bp	1	Total	Zn	0
			1	1	
98	AG	1	Total	Zn	0
			1	1	

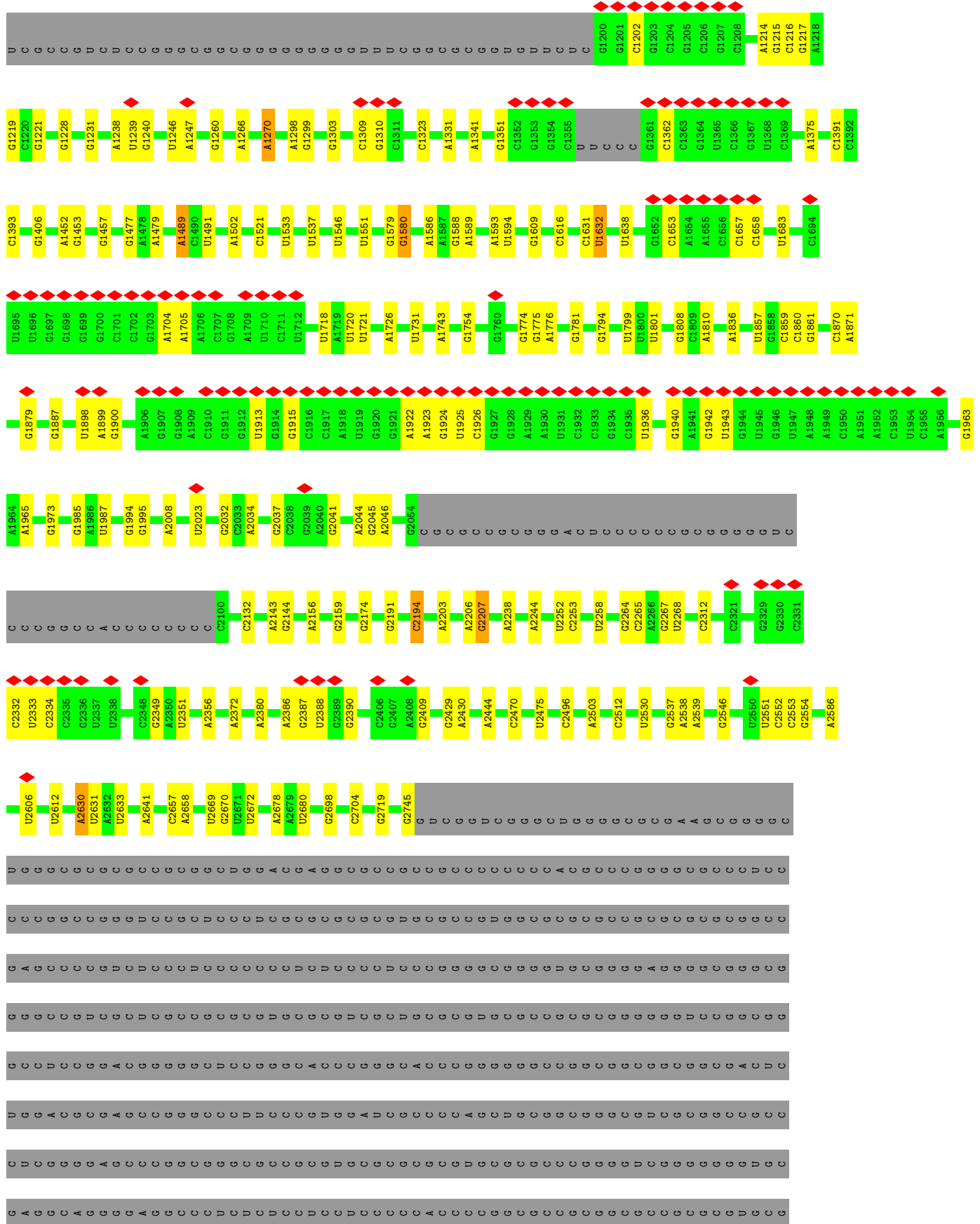
- Molecule 99 is water.

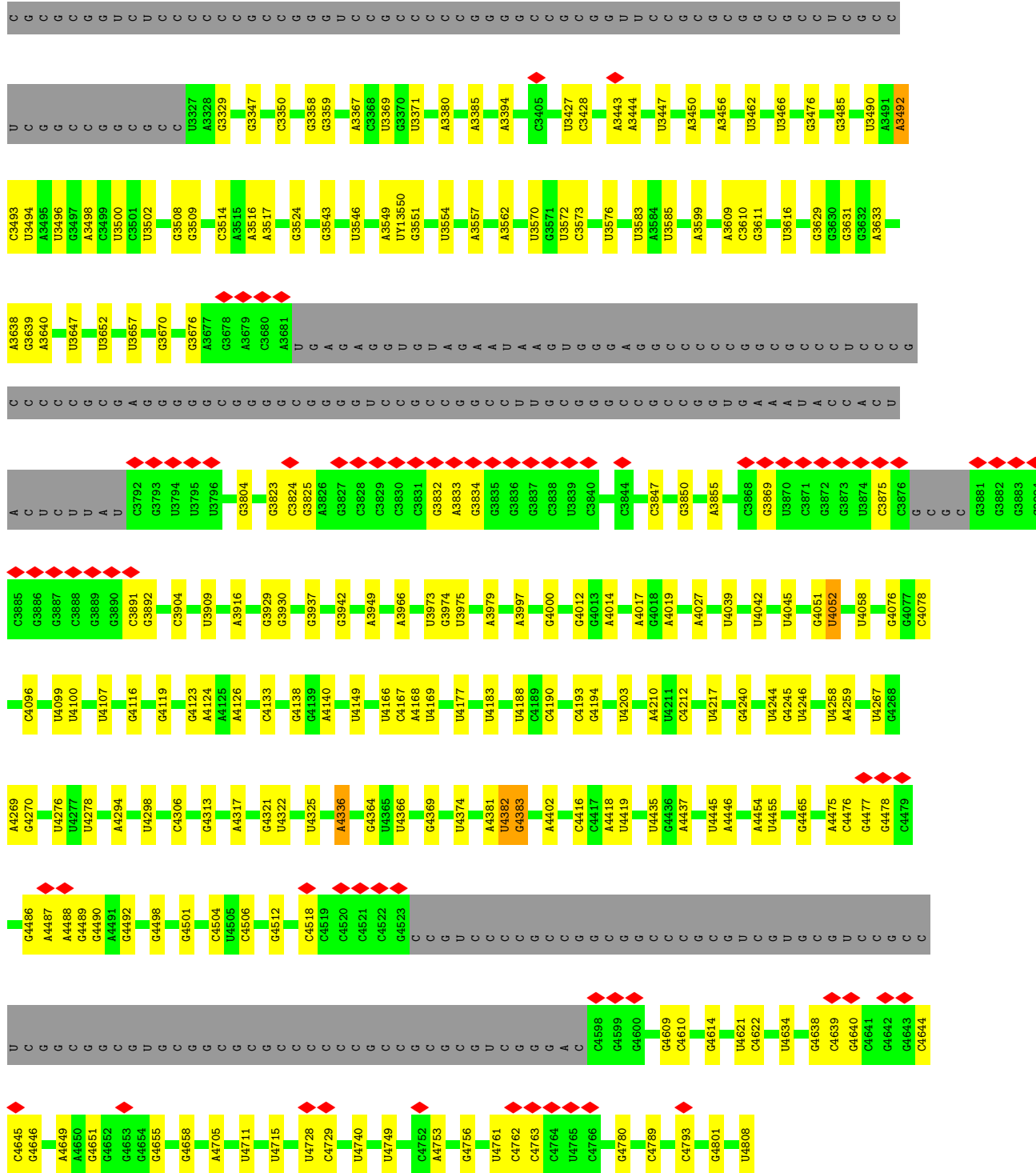
Mol	Chain	Residues	Atoms		AltConf
99	B5	1383	Total 1383	O 1383	0
99	BT	2	Total 2	O 2	0
99	Bb	1	Total 1	O 1	0
99	AH	3	Total 3	O 3	0
99	B7	45	Total 45	O 45	0
99	AT	12	Total 12	O 12	0
99	Ar	2	Total 2	O 2	0
99	B8	48	Total 48	O 48	0
99	As	1	Total 1	O 1	0
99	BA	7	Total 7	O 7	0
99	BV	3	Total 3	O 3	0
99	BB	8	Total 8	O 8	0
99	BP	3	Total 3	O 3	0
99	B	1	Total 1	O 1	0
99	BX	1	Total 1	O 1	0
99	Aw	4	Total 4	O 4	0
99	Ba	7	Total 7	O 7	0
99	BR	5	Total 5	O 5	0
99	BC	6	Total 6	O 6	0
99	Aa	3	Total 3	O 3	0
99	BH	2	Total 2	O 2	0
99	BI	1	Total 1	O 1	0

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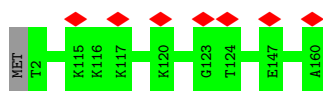
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Mol	Chain	Residues	Atoms		AltConf
99	Ct	3	Total 3	O 3	0
99	Bd	1	Total 1	O 1	0
99	Ad	2	Total 2	O 2	0
99	Be	4	Total 4	O 4	0
99	BL	1	Total 1	O 1	0
99	Af	1	Total 1	O 1	0
99	Bg	3	Total 3	O 3	0
99	BN	6	Total 6	O 6	0
99	A2	531	Total 531	O 531	0
99	Bj	6	Total 6	O 6	0
99	Ak	2	Total 2	O 2	0
99	Bl	3	Total 3	O 3	0
99	Bm	1	Total 1	O 1	0
99	Bo	1	Total 1	O 1	0
99	AE	1	Total 1	O 1	0
99	An	1	Total 1	O 1	0
99	Ap	2	Total 2	O 2	0

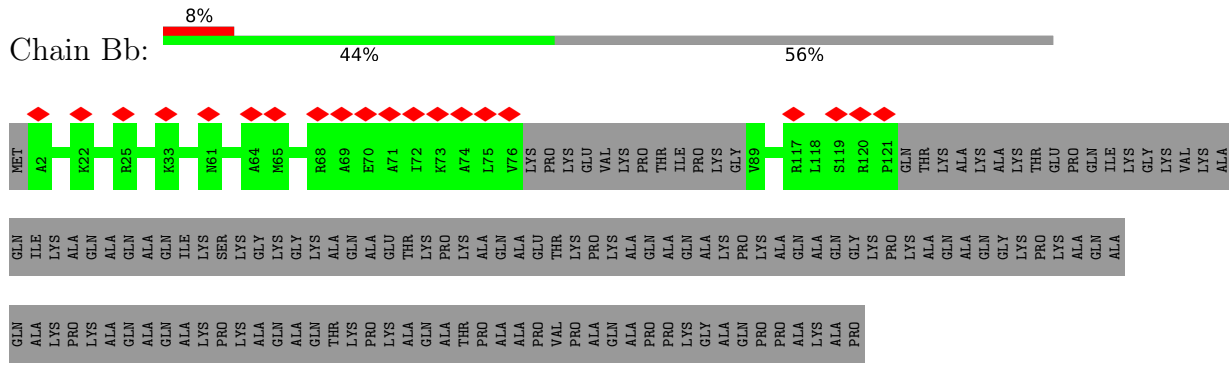




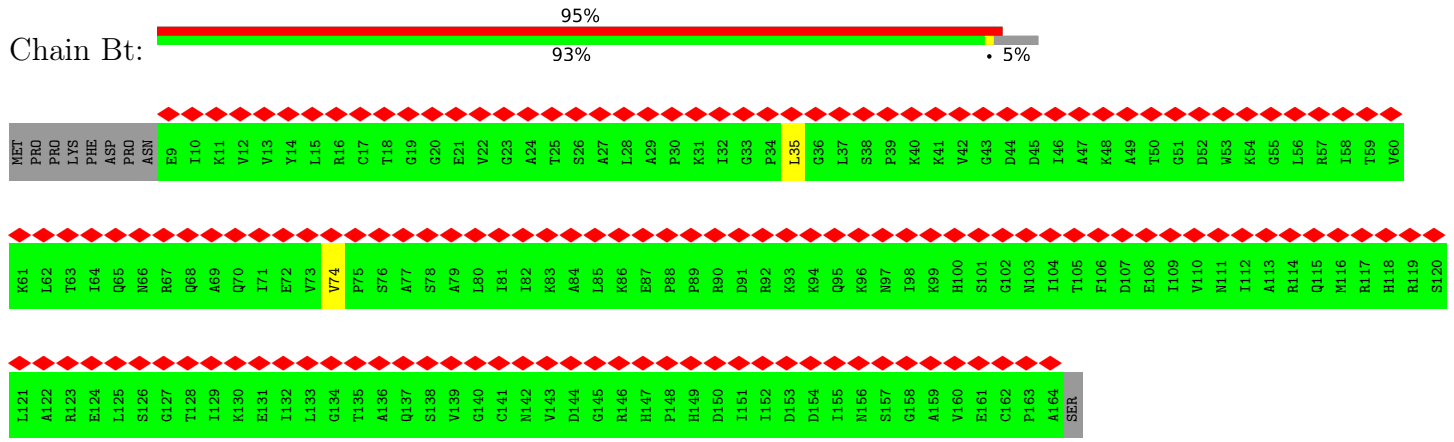
• Molecule 2: 60S ribosomal protein L21



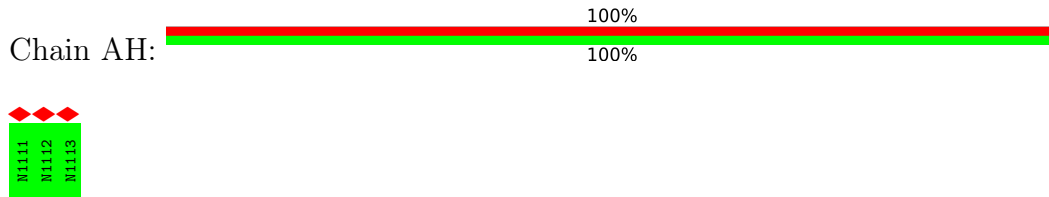
• Molecule 3: 60S ribosomal protein L29



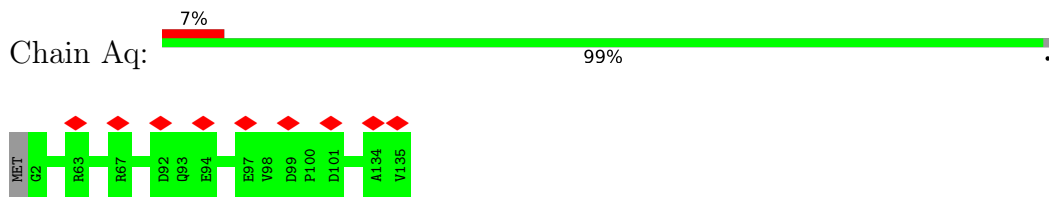
• Molecule 4: 60S ribosomal protein L12



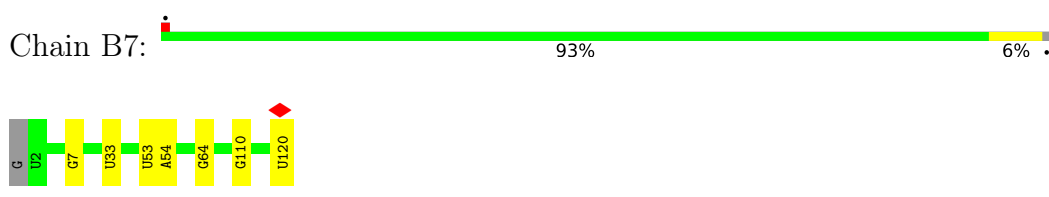
• Molecule 5: mRNA



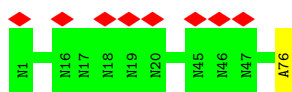
• Molecule 6: 40S ribosomal protein eS17



• Molecule 7: 5S rRNA



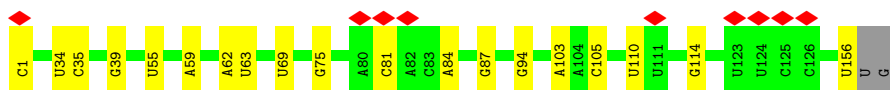
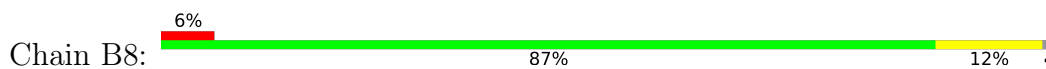
• Molecule 8: P-site tRNA



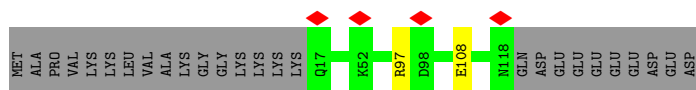
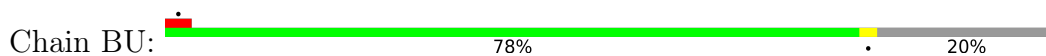
- Molecule 9: Small ribosomal subunit protein uS13



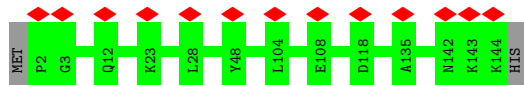
- Molecule 10: 5.8S rRNA



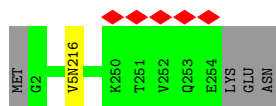
- Molecule 11: 60S ribosomal protein L22



- Molecule 12: 40S ribosomal protein S19



- Molecule 13: Large ribosomal subunit protein uL2

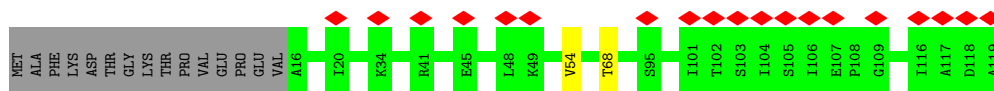
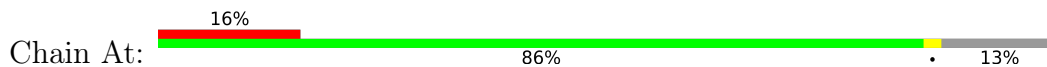


- Molecule 14: Ribosomal protein L23





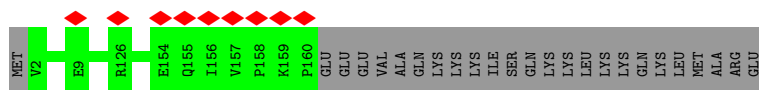
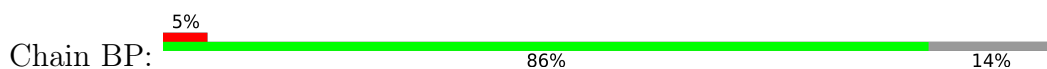
- Molecule 15: 40S ribosomal protein uS10



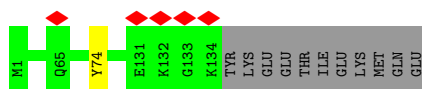
- Molecule 16: Ribosomal protein L3



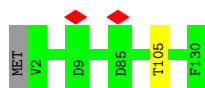
- Molecule 17: Large ribosomal subunit protein uL22



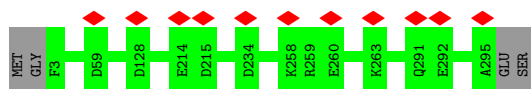
- Molecule 18: Ribosomal protein L26



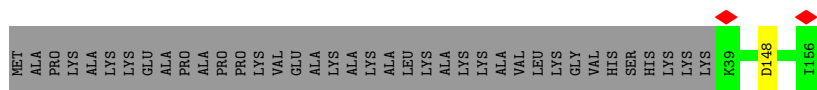
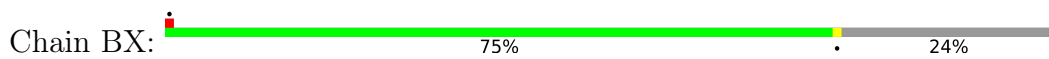
- Molecule 19: Ribosomal protein S15a



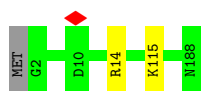
- Molecule 20: Large ribosomal subunit protein uL18



- Molecule 21: Large ribosomal subunit protein uL23



• Molecule 22: Large ribosomal subunit protein eL18



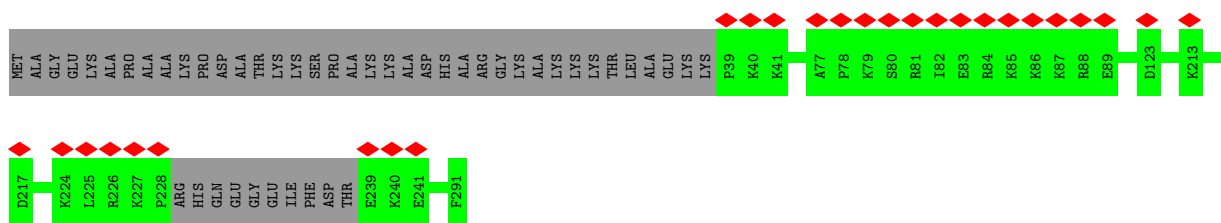
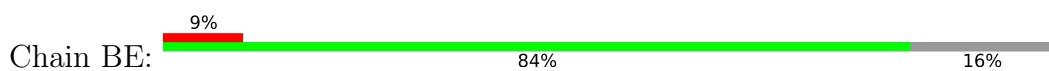
• Molecule 23: 60S ribosomal protein L27



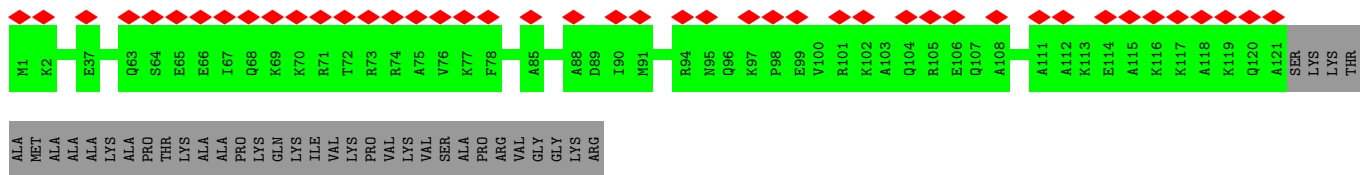
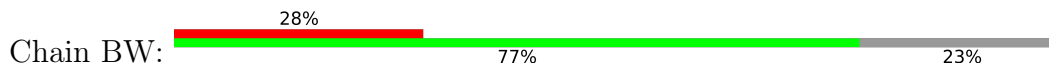
• Molecule 24: 40S ribosomal protein S23



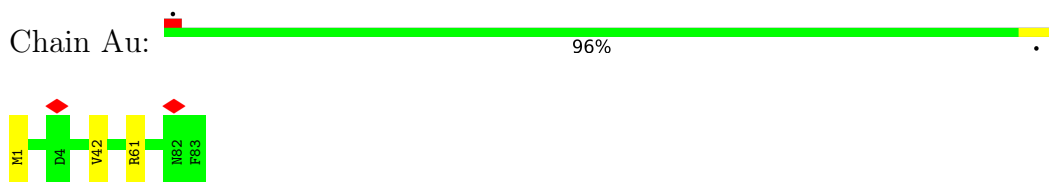
• Molecule 25: 60S ribosomal protein L6



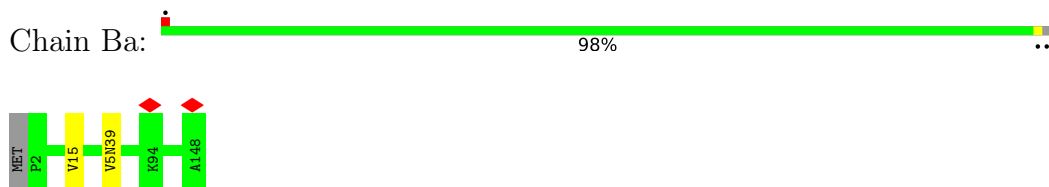
• Molecule 26: Ribosomal protein L24



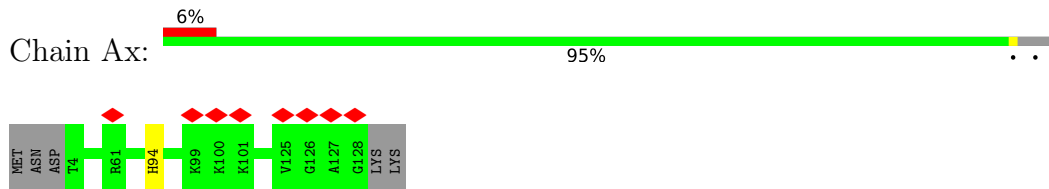
- Molecule 27: Small ribosomal subunit protein eS21



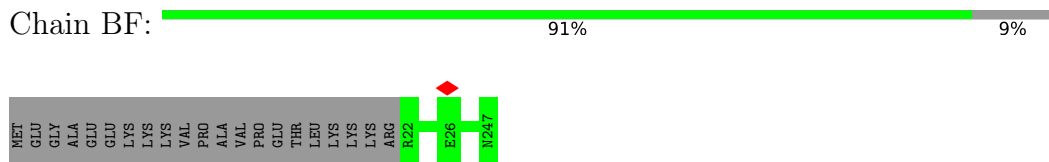
- Molecule 28: 60S ribosomal protein L27a



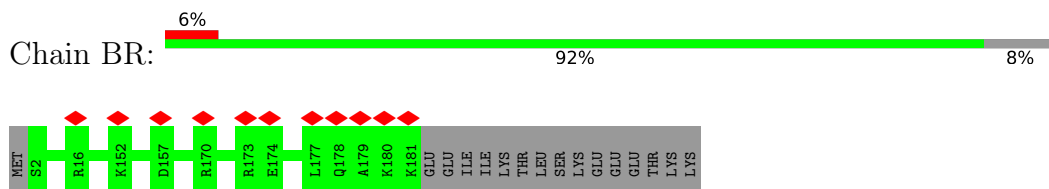
- Molecule 29: 40S ribosomal protein S24



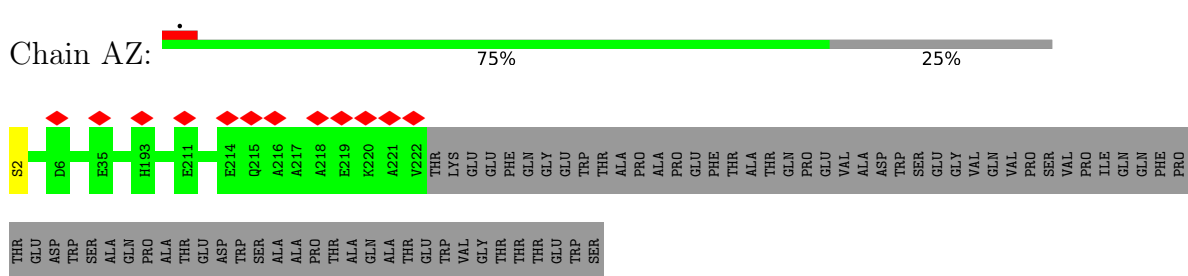
- Molecule 30: Ribosomal Protein uL30



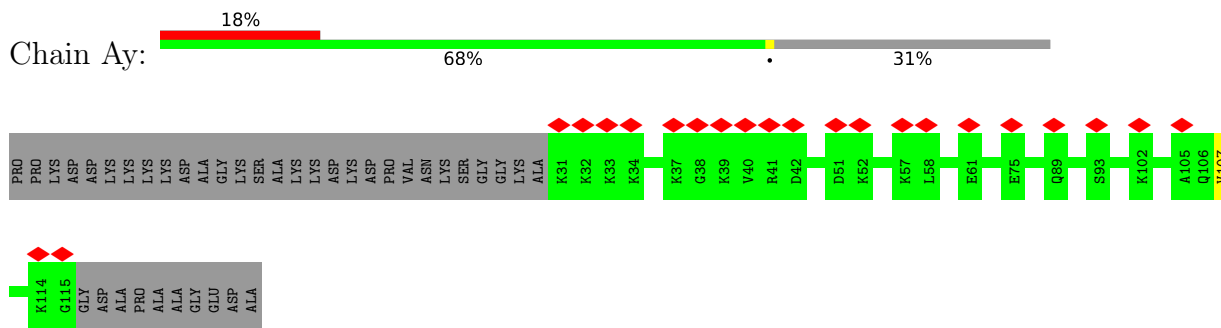
- Molecule 31: Ribosomal protein L19



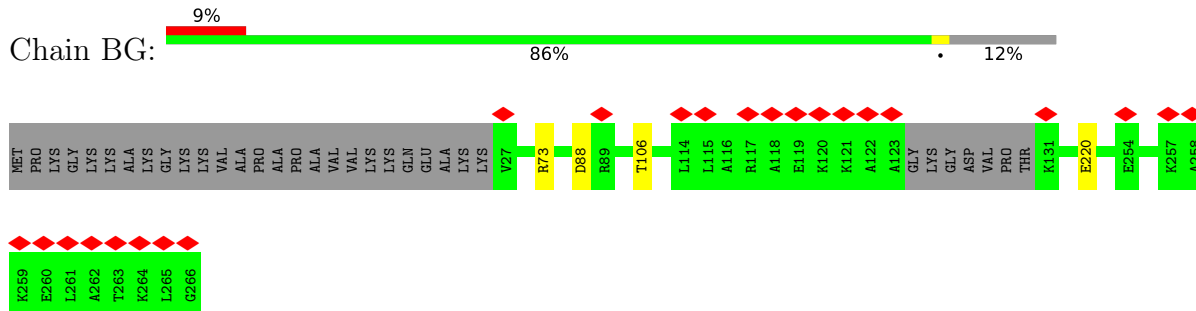
- Molecule 32: Small ribosomal subunit protein uS2



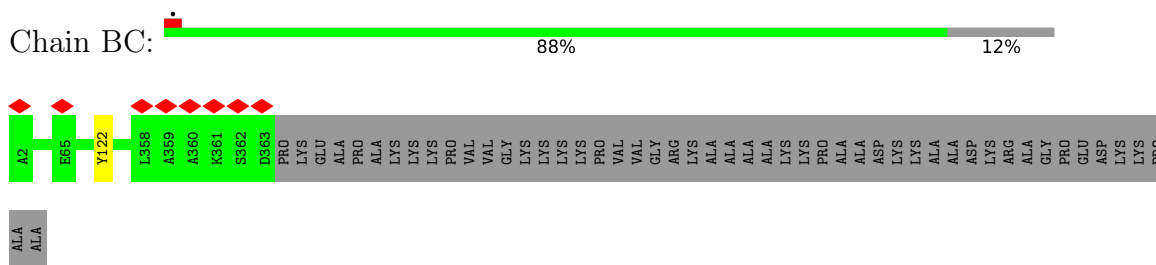
- Molecule 33: 40S ribosomal protein S25



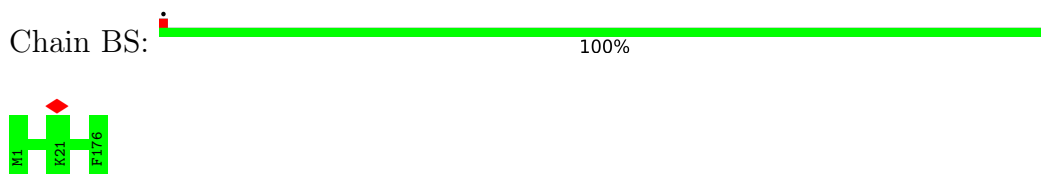
• Molecule 34: Large ribosomal subunit protein eL8



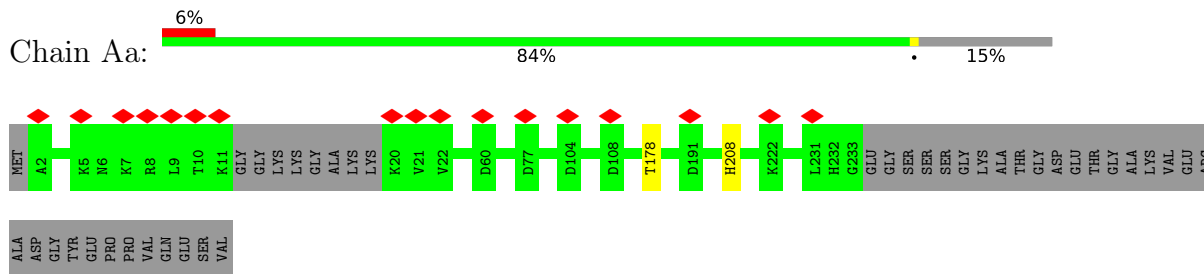
• Molecule 35: Large ribosomal subunit protein uL4



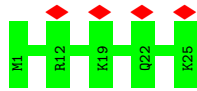
• Molecule 36: Large ribosomal subunit protein eL20



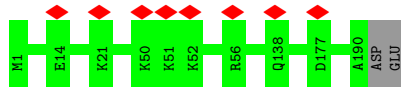
• Molecule 37: 40S ribosomal protein S3a



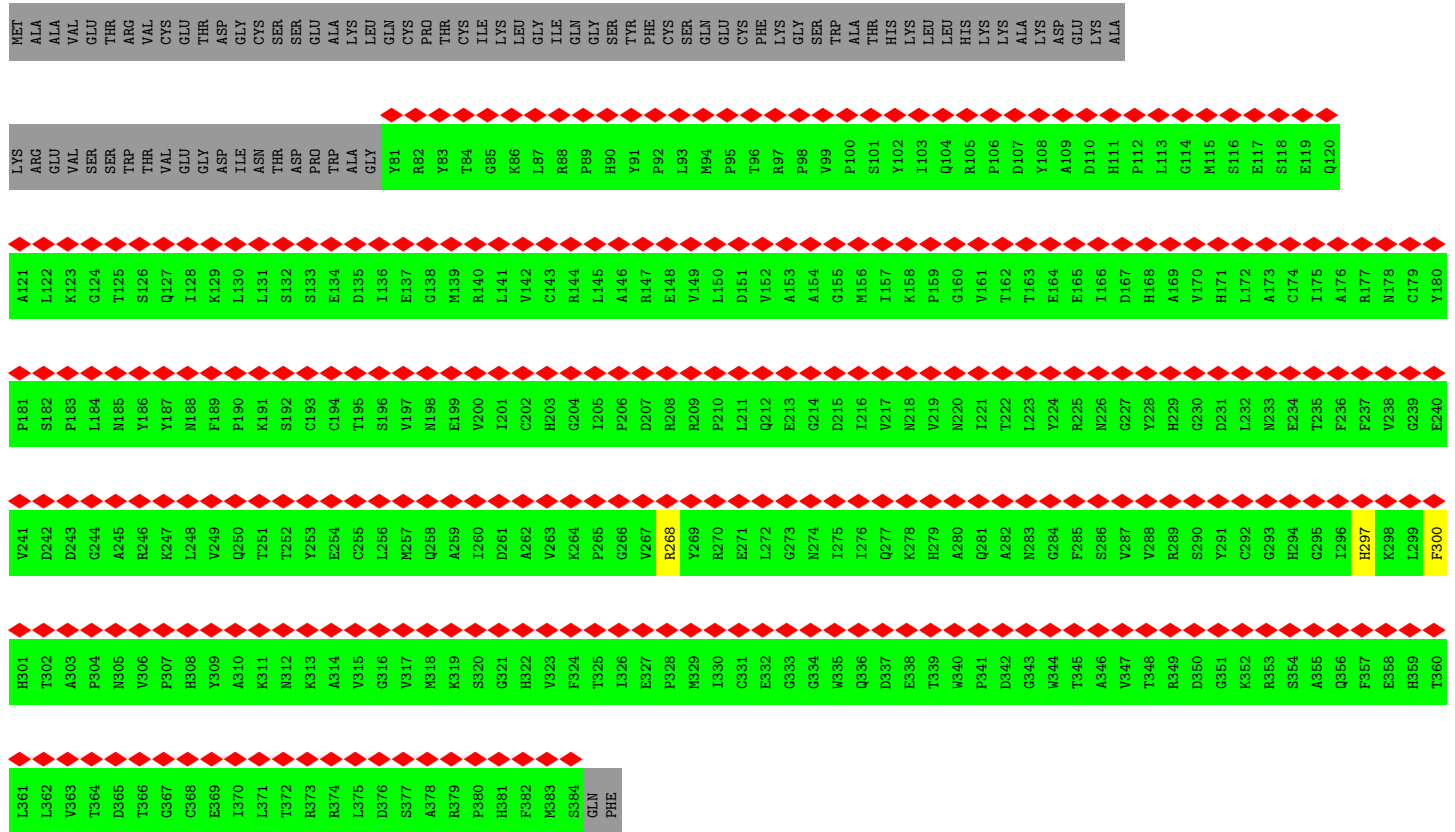
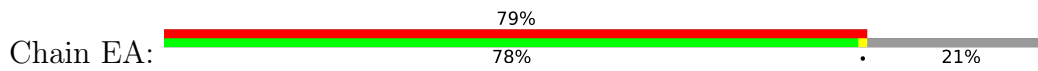
• Molecule 38: 60S ribosomal protein L41



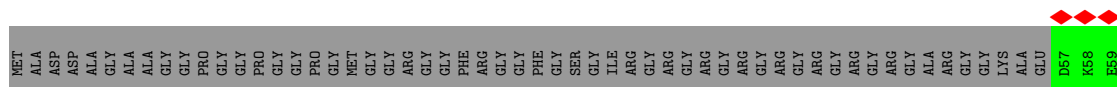
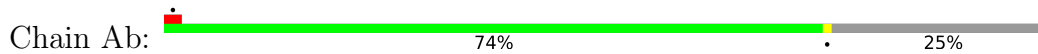
- Molecule 39: 60S ribosomal protein L9

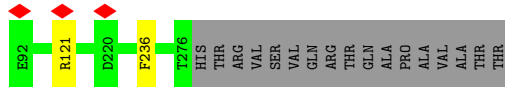


- Molecule 40: Methionine aminopeptidase 1

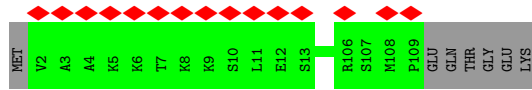


- Molecule 41: Small ribosomal subunit protein uS5

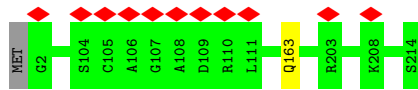




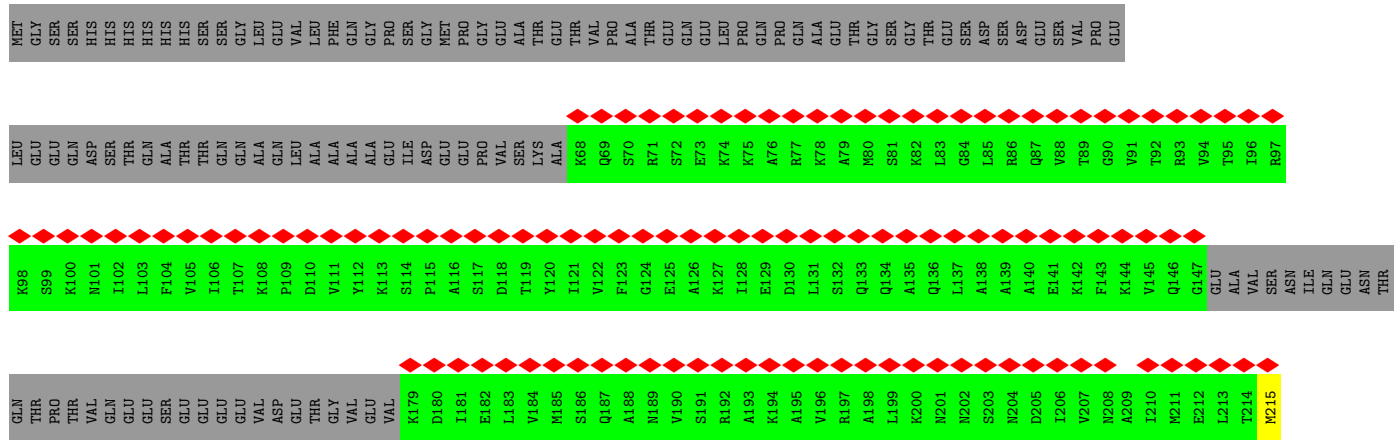
- Molecule 42: 60S ribosomal protein L30



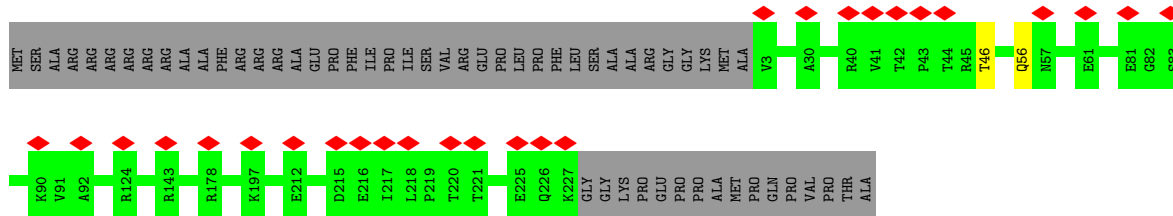
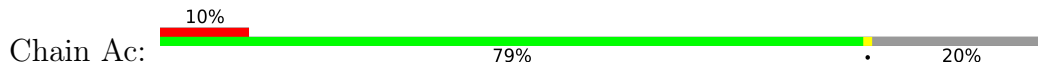
- Molecule 43: 60S ribosomal protein L10



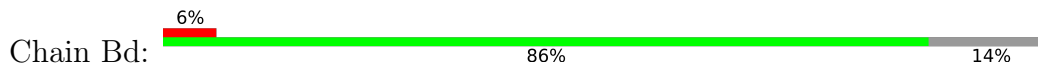
- Molecule 44: Nascent polypeptide-associated complex subunit alpha



- Molecule 45: 40S ribosomal protein S3

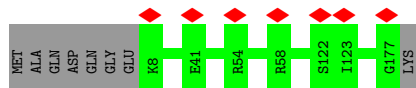


- Molecule 46: 60S ribosomal protein L31

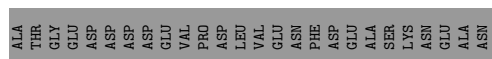
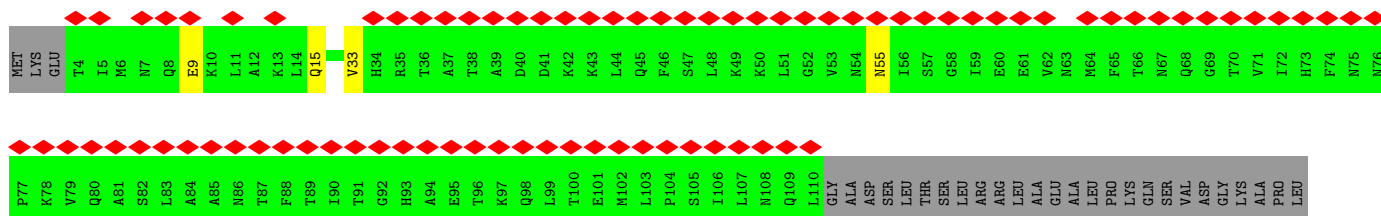




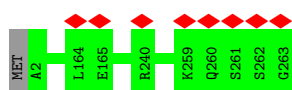
• Molecule 47: 60S ribosomal protein L11



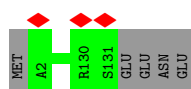
• Molecule 48: Isoform 2 of Transcription factor BTF3



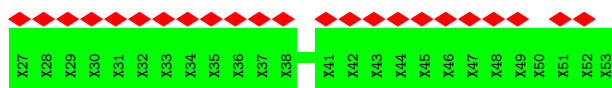
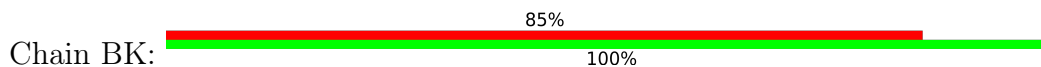
• Molecule 49: 40S ribosomal protein S4



• Molecule 50: Ribosomal protein L32

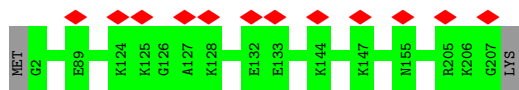


• Molecule 51: Nascent chain

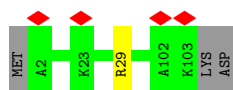


• Molecule 52: Glutathione S-transferase class-mu 26 kDa isozyme,N-alpha-acetyltransferase 50, N-alpha-acetyltransferase 50

MET	GLY	SER	SER	HIS	HIS	HIS	HIS	HIS	SER	GLY	LEU	VAL	PRO	ARG	GLY	SER	HIS	MET	SER	SER	THR	THR	GLY	GLY	GLN	GLN	GLN	MET	GLY	ARG	ALA	ALA	ARG	GLY	ILE	GLN	ARG	PRO	THR	THR	SER	SER	LEU	VAL	ALA	ALA	ALA	MET	PRO	ALA	VAL																																																																				
A12	L13	F14	K15	R16	I17	L18	R19	C20	Y21	E22	H23	Q24	K25	Q26	Y26	R27	R28	K31	F32	S32	S92	C33	K34	Q35	I36	L37	S38	N39	P40	K41	F42	C102	I103	R104	A43	E44	M105	H45	G46	E47	T48	M109	L49	M51	K52	G53	L54	T55	L56	M57	C58	L59	G60	K61	K62	E63	E64	A65	Y66	E67	L68	V69	R71	G72																																																							
L73	R74	M75	D76	L77	K78	S79	H80	W81	C82	W83	H84	W85	Y86	G87	L88	R89	Q90	R91	I92	S92	D93	R94	K95	Y96	D97	E98	N99	I100	K101	C102	E162	D163	Y164	M105	A106	L107	K108	T48	M109	D110	K111	D112	M113	L114	Q115	I116	L117	R118	D119	L120	S121	L122	L123	Q124	I125	A65	Y66	M127	R128	D129	L130	E131	G132																																																								
Y133	R134	E135	T136	R137	Y138	Q139	L140	L141	Q142	L143	R144	P145	A146	Q147	R148	A149	S150	M151	I152	G153	Y154	A155	I156	A157	Y158	H159	L160	L161	E162	D163	Y164	E165	A166	L167	A168	E228	R289	G290	K230	G231	E232	M113	L114	F174	R175	K176	T177	Q178	Q179	T180	S181	P182	D183	K184	I185	D245	Y187	E188	C249	Y189	E191	L192																																																									
L193	L194	Y195	Q196	M197	Q198	Y199	L200	R201	E202	A203	G204	Y205	Y206	R207	E208	A209	E211	H212	L213	C214	L274	T215	Y216	E217	K218	Q219	I220	C221	D222	K223	L224	A225	Y226	E227	E228	R289	G290	K230	G231	E232	L233	L234	L235	Q236	L237	C238	R239	L240	E241	D242	A243	A244	D245	Y247	R248	C249	Q251	E252																																																													
R253	M254	P255	E256	M257	W258	A259	Y260	Y261	K262	G263	L264	E265	K266	A267	L268	K269	P270	A271	M272	L273	L274	E275	Y276	L277	K278	L279	Y280	E281	E282	A283	W284	T285	K286	Y287	P288	R289	G290	L291	V292	P293	R294	E295	L296	P297	L298	N299	F300	L301	S302	G303	E304	K305	F306	K307	E308	C309	L310	D311	K312																																																												
F313	L314	R315	M316	N317	F318	S319	K320	G321	C322	P323	P324	V325	F326	N327	T328	L329	R330	S331	L332	Y333	K334	D335	K336	E337	K338	V339	A340	I341	I342	E343	E344	P405	L345	V346	V347	G348	Y349	E350	T351	S352	L353	K354	S355	C356	R357	L358	F359	N360	P361	N362	D363	D364	G365	K366	E367	E368	F369	P370	T371	T372																																																											
L373	L374	W375	V376	Q377	Y378	Y379	L380	A381	Q382	H383	Y384	D385	K386	I387	G388	Q389	P390	S391	I392	A393	L394	E395	Y396	I397	N398	T399	A400	I401	A402	S403	T404	P405	A406	L407	I408	E409	R470	L410	F411	L412	V413	K414	A415	K416	I417	Y418	K419	N480	H420	A421	G422	M423	I424	K425	E426	A427	A428	R429	W430	M431	D432																																																										
E433	A434	Q435	A436	L437	D438	T439	A440	D441	R442	F443	I444	N445	S446	K447	C448	A449	K450	Y451	M452	R453	K454	A455	N456	L457	I458	K459	E460	A461	E462	E463	M464	C465	S466	K467	F468	T469	R470	E471	G472	V413	S474	A475	V476	E477	N478	L479	N480	H420	A421	M482	Q483	C484	M485	W486	F487	Q488	T489	E490	C491	A492																																																											
Q493	A494	Y495	K496	A497	M498	N499	K500	F501	E502	E503	A504	L505	Y506	K507	C508	H509	E510	I511	E512	R513	H514	F515	I516	E517	I518	T519	D520	E521	Q522	F523	D524	F525	T526	Y527	Y528	C529	M530	R531	K532	I533	T534	L535	R536	S537	Y538	V539	D540	L541	L542	K543	M544	E545	E546	V547	L548	R549	Q550	H551	P552																																																												
F553	Y554	F555	K556	A557	A558	R559	I560	A561	I562	E563	I564	Y565	L566	K567	L568	H569	D570	N571	P572	L573	T574	D575	E576	N577	K578	E579	H580	E581	A582	D583	T584	A585	N586	M587	S588	D589	L592	R596	Q603	K604	K605	I608	E609	E610	E611	K612	K613	M614	A615	E616	K617	E618	E619	Q620	Q621	R622	N623	Q624	K625	K626	K627	K628	D629	D630	D631	D632	E633	E634	V635	G636	G637	P638	P639	E640	E641	L642	L643	I644	P644	E645	E646	K647	L648	A648	K649	E650	E651	T652	P653	L654	L655	L656	F657	A657	L658	G659	F660	L661	T662	P663	L664	K665	M666	L667	V668	K669	E670	M670	K671	I672	E673	L674	L675	E676	K677	E678	Q679	E680	I681
R622	N623	Q624	K625	K626	K627	K628	D629	D630	D631	D632	E633	E634	V635	G636	G637	P638	P639	E640	E641	L642	L643	I644	P644	E645	E646	K647	L648	A648	K649	E650	E651	T652	P653	L654	L655	L656	F657	A657	L658	G659	F660	L661	T662	P663	L664	K665	M666	L667	V668	K669	E670	M670	K671	I672	E673	L674	L675	E676	K677	E678	Q679	E680	I681																																																								
Y682	F683	R684	K685	E686	K687	F688	L689	L690	M691	L692	Q693	S694	V695	K696	R697	A698	F699	A700	I701	D702	S703	S704	H705	P706	M707	L708	H709	E710	C711	M712	I713	R714	L715	F716	N717	T718	A719	V720	C721	E722	S723	K724	D725	L726	S727	D728	T729	V730	R731	T732	V733	L734	L735	K736	E737	M738	N739	R740	L741																																																												
F742	G743	A744	T745	M746	P747	K748	N749	F750	N751	E752	T753	F754	L755	K756	R757	S758	S759	D760	S761	L762	P763	H764	R765	L766	S767	A768	A769	K770	M771	V772	I773	Y774	L775	D776	P777	S778	S779	Q780	K781	R782	A783	I784	E785	L786	A787	T788	T789	L790	D791	E792	S793	L794	T795	N796	R797	N798	L799	Q800	T801																																																												



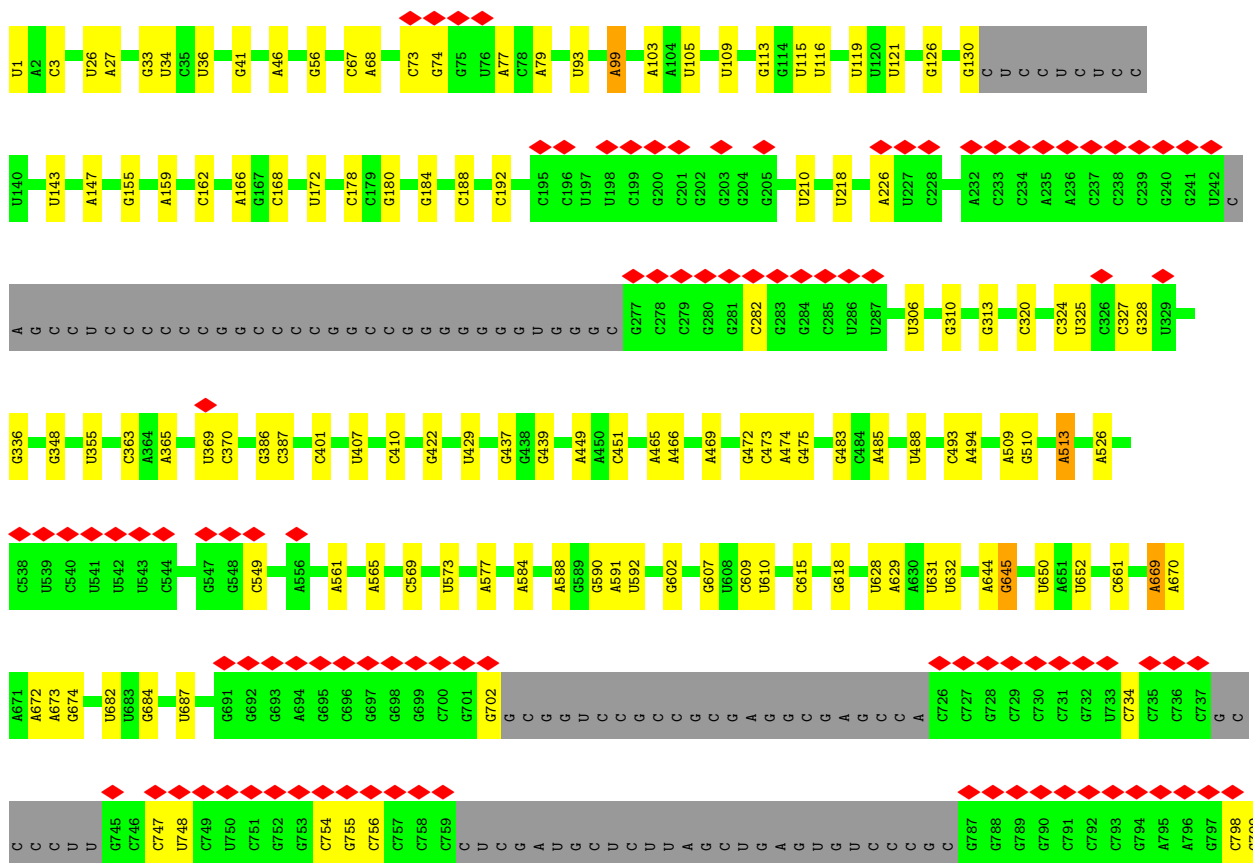
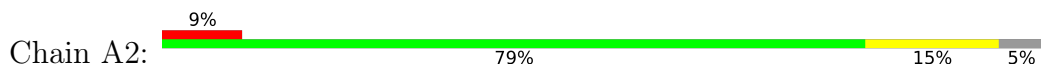
• Molecule 66: 60S ribosomal protein L36

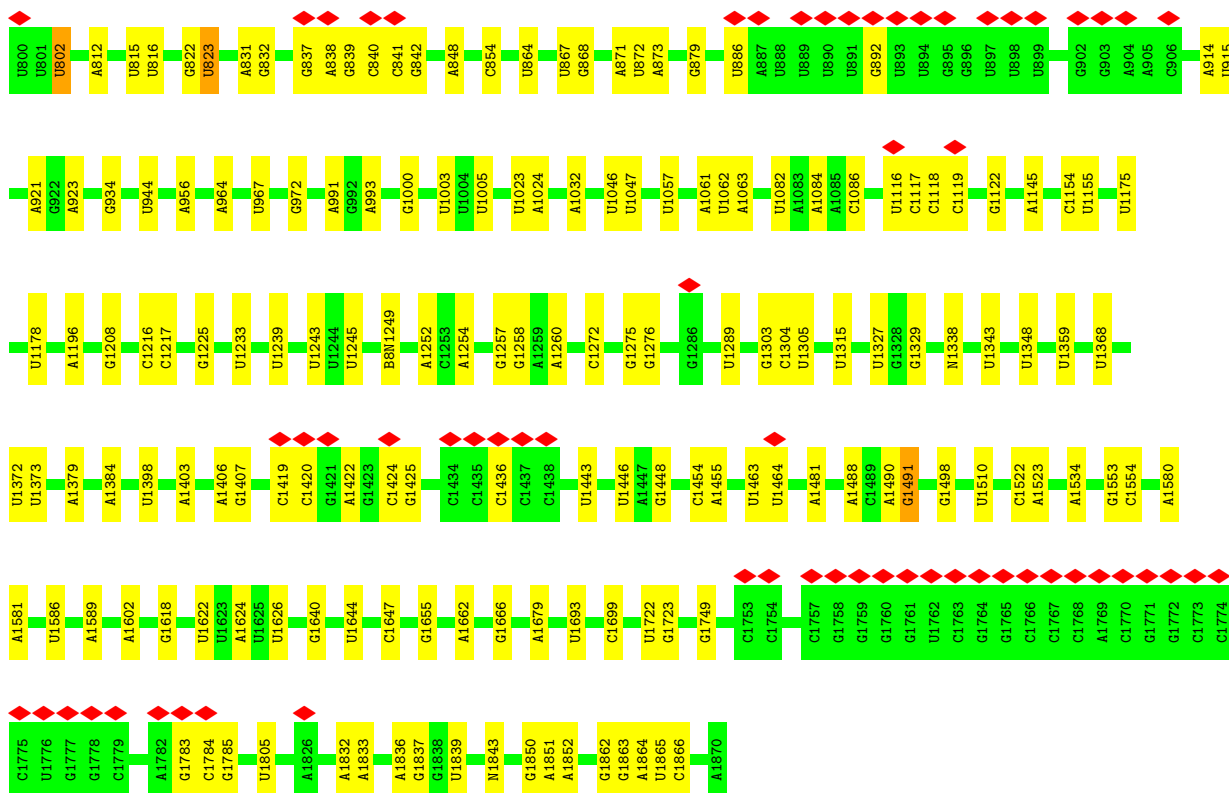


• Molecule 67: Large ribosomal subunit protein uL13

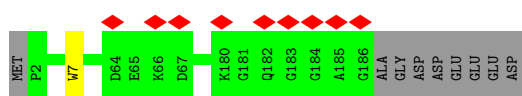


• Molecule 68: 18S rRNA

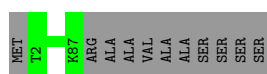
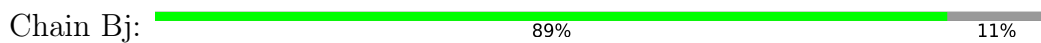




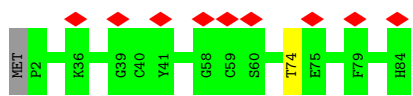
• Molecule 69: 40S ribosomal protein S9



• Molecule 70: Ribosomal protein L37

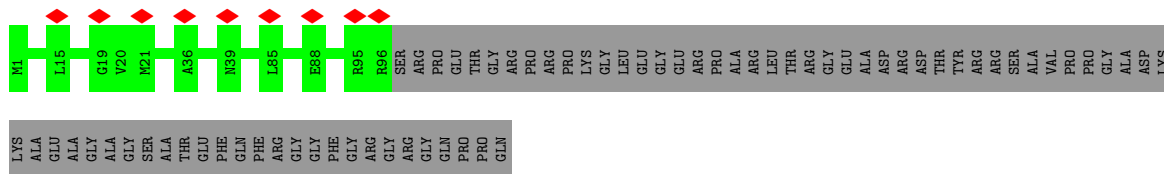


• Molecule 71: 40S ribosomal protein S27

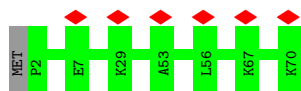


• Molecule 72: S10_ plectin domain-containing protein

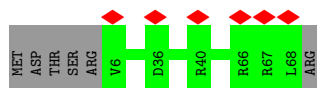
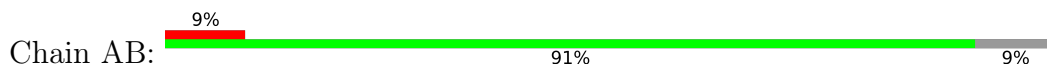




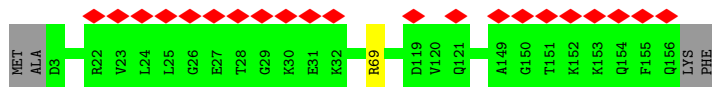
• Molecule 73: 60S ribosomal protein L38



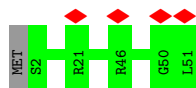
• Molecule 74: 40S ribosomal protein S28



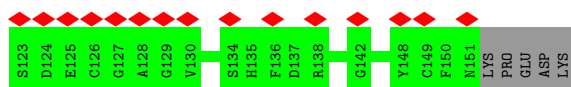
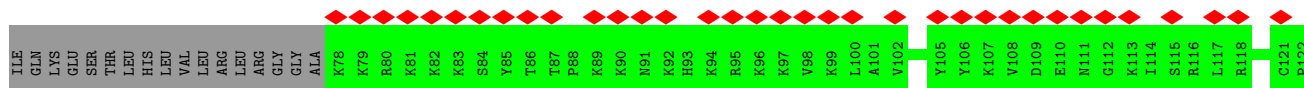
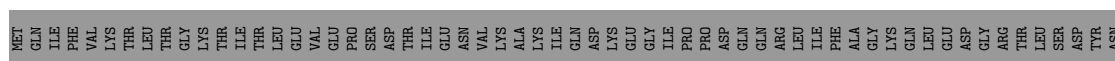
• Molecule 75: 40S ribosomal protein S11



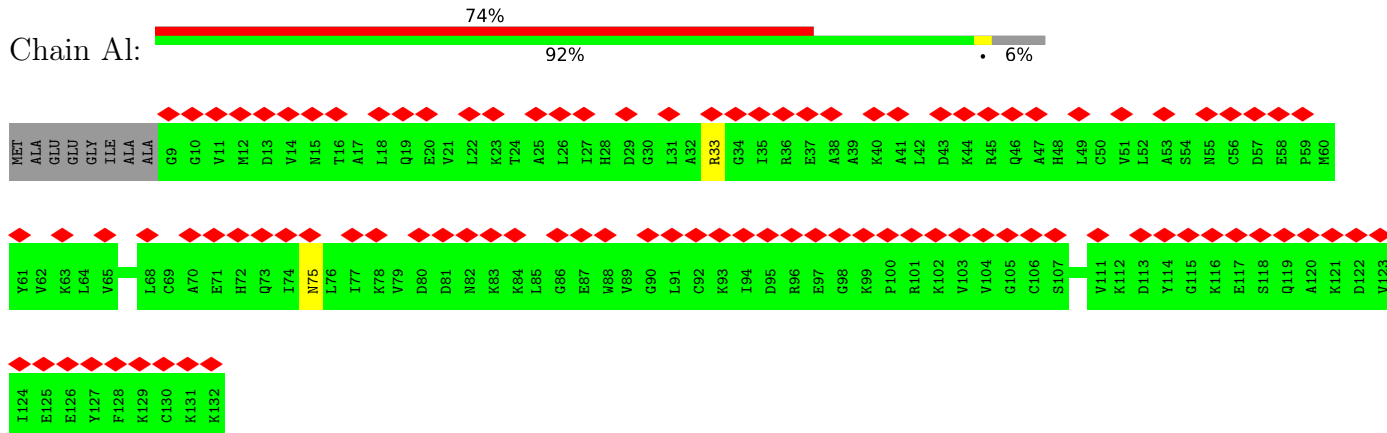
• Molecule 76: 60S ribosomal protein L39-like



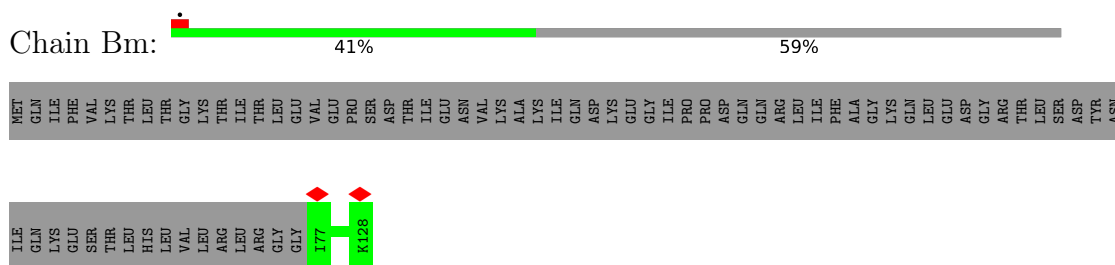
• Molecule 77: Ribosomal protein S27a



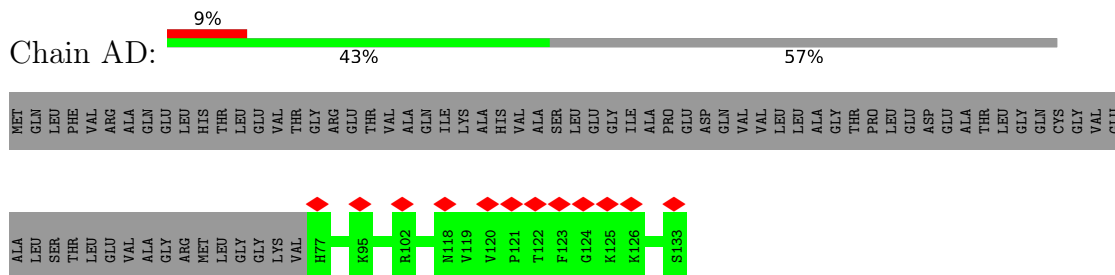
- Molecule 78: 40S ribosomal protein S12



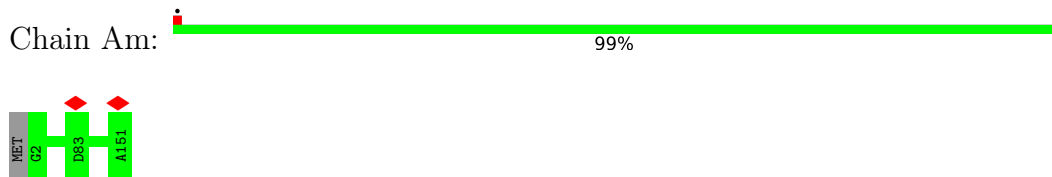
- Molecule 79: Ubiquitin-ribosomal protein eL40 fusion protein



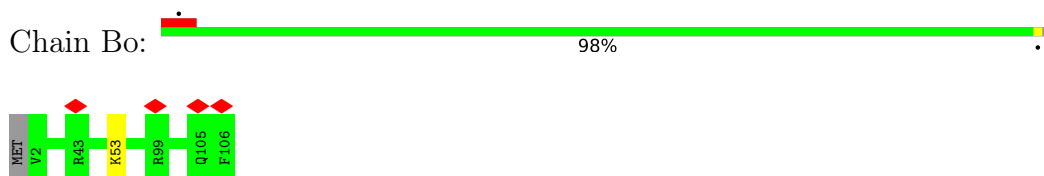
- Molecule 80: 40S ribosomal protein S30



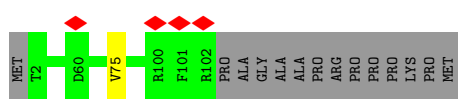
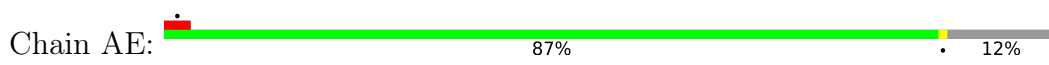
- Molecule 81: 40S ribosomal protein S13



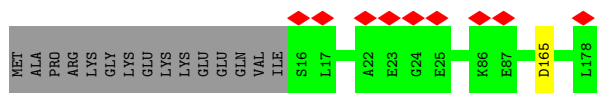
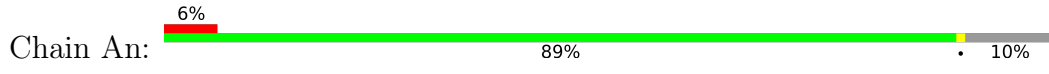
- Molecule 82: Large ribosomal subunit protein eL42



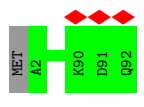
- Molecule 83: Small ribosomal subunit protein eS26



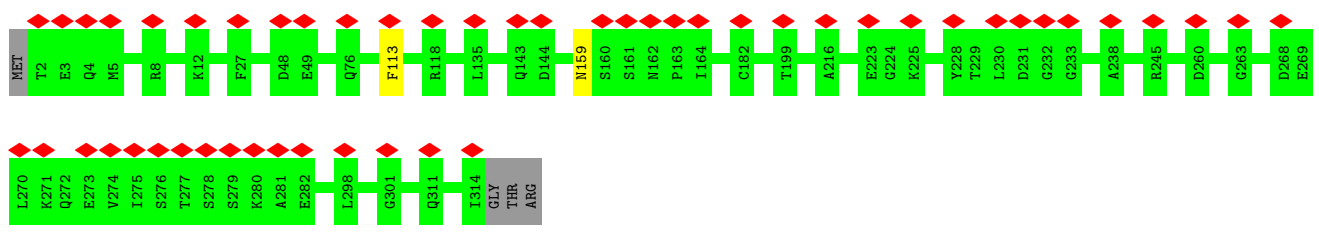
• Molecule 84: Small ribosomal subunit protein uS11



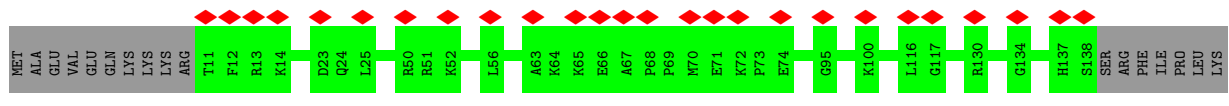
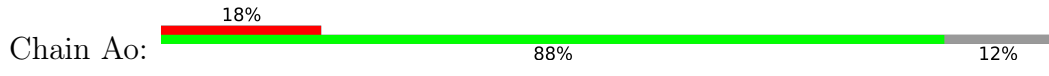
• Molecule 85: 60S ribosomal protein L37a



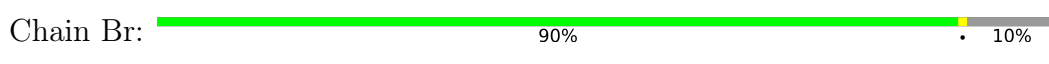
• Molecule 86: Small ribosomal subunit protein RACK1



• Molecule 87: 40S ribosomal protein uS19



• Molecule 88: Large ribosomal subunit protein eL28



• Molecule 89: 40S ribosomal protein S29



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	23034	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	600	Depositor
Maximum defocus (nm)	2400	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	1.400	Depositor
Minimum map value	-0.732	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.058	Depositor
Recommended contour level	0.25	Depositor
Map size (\AA)	593.6, 593.6, 593.6	wwPDB
Map dimensions	560, 560, 560	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.06, 1.06, 1.06	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MG, OMG, NMM, UY1, M3L, AYA, IAS, 5MC, HIC, SPM, B8N, SPD, V5N, ZN, SAC, 6MZ, PSU, 4AC, MA6, MLZ, HY3, OMC, A2M, 1MA, UNX, AME, IHP, GTP, UR3, OMU, G7M

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	B5	0.16	1/86006 (0.0%)	0.67	12/134179 (0.0%)
2	BT	0.24	0/1326	0.48	0/1770
3	Bb	0.23	0/884	0.51	0/1169
4	Bt	0.23	0/1193	0.47	0/1609
6	Aq	0.23	0/1094	0.48	0/1469
7	B7	0.14	0/2835	0.66	0/4418
8	AT	0.12	0/68	0.66	0/103
9	Ar	0.23	0/1226	0.53	0/1643
10	B8	0.23	1/3635 (0.0%)	0.66	0/5661
11	BU	0.24	0/845	0.46	0/1134
12	As	0.23	0/1119	0.45	0/1498
13	BA	0.24	0/1965	0.55	0/2633
14	BV	0.25	0/1048	0.51	0/1402
15	At	0.23	0/831	0.51	0/1115
16	BB	0.24	0/3261	0.49	0/4364
17	BP	0.23	0/1317	0.48	0/1768
18	BY	0.23	0/1132	0.51	0/1504
19	Av	0.24	0/1051	0.48	0/1406
20	B	0.24	0/2437	0.47	0/3264
21	BX	0.24	0/984	0.48	0/1323
22	BQ	0.24	0/1539	0.55	0/2054
23	BZ	0.25	0/1130	0.48	0/1507
24	Aw	0.24	0/1107	0.49	0/1475
25	BE	0.24	0/1998	0.50	0/2673
26	BW	0.24	0/1006	0.50	0/1334
27	Au	0.24	0/636	0.48	0/852
28	Ba	0.24	0/1179	0.50	0/1572
29	Ax	0.24	0/1032	0.51	0/1371
30	BF	0.24	0/1922	0.48	0/2563
31	BR	0.22	0/1524	0.53	0/2013
32	AZ	0.23	0/1771	0.46	0/2406

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	Ay	0.23	0/691	0.46	0/922
34	BG	0.23	0/1908	0.47	0/2566
35	BC	0.23	0/2932	0.50	0/3939
36	BS	0.24	0/1497	0.52	0/2008
37	Aa	0.23	0/1841	0.46	0/2459
38	Az	0.21	0/240	0.65	0/305
39	BH	0.24	0/1535	0.49	0/2063
40	EA	0.23	0/2455	0.47	0/3333
41	Ab	0.24	0/1742	0.45	0/2354
42	Bc	0.23	0/847	0.43	0/1134
43	BI	0.24	0/1756	0.50	0/2346
44	Ct	0.24	0/913	0.45	0/1219
45	Ac	0.24	0/1779	0.49	0/2395
46	Bd	0.23	0/903	0.52	0/1216
47	BJ	0.24	0/1385	0.50	0/1852
48	Cu	0.25	0/836	0.48	0/1122
49	Ad	0.24	0/2118	0.50	0/2849
50	Be	0.23	0/1088	0.51	0/1451
52	DA	0.24	0/1284	0.45	0/1728
53	Ae	0.23	0/1531	0.48	0/2059
54	Bf	0.25	0/903	0.53	0/1208
55	BL	0.24	0/1733	0.53	0/2316
56	DB	0.25	0/7038	0.44	0/9468
57	Af	0.24	0/1946	0.52	0/2590
58	Bg	0.23	0/916	0.53	0/1220
59	BM	0.24	0/1158	0.49	0/1547
60	DC	0.24	0/1368	0.45	0/1843
61	Ag	0.24	0/1552	0.46	0/2079
62	Bh	0.23	0/1021	0.49	0/1348
63	BN	0.23	0/1746	0.54	0/2338
64	DD	0.35	0/439	0.49	0/587
65	Ah	0.24	0/1715	0.51	0/2287
66	Bi	0.23	0/841	0.52	0/1112
67	BO	0.24	0/1662	0.49	0/2222
68	A2	0.15	1/40342 (0.0%)	0.68	13/62877 (0.0%)
69	Ai	0.23	0/1550	0.52	0/2069
70	Bj	0.24	0/720	0.57	0/952
71	AA	0.24	0/665	0.46	0/891
72	Aj	0.23	0/834	0.42	0/1125
73	Bk	0.24	0/575	0.44	0/761
74	AB	0.23	0/497	0.57	0/666
75	Ak	0.25	0/1284	0.51	0/1717
76	Bl	0.22	0/459	0.51	0/608

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
77	AC	0.24	0/622	0.48	0/822
78	Al	0.23	0/968	0.41	0/1296
79	Bm	0.23	0/426	0.50	0/564
80	AD	0.24	0/462	0.53	0/607
81	Am	0.23	0/1232	0.47	0/1656
82	Bo	0.24	0/866	0.50	0/1141
83	AE	0.24	0/828	0.53	0/1109
84	An	0.26	0/1020	0.54	0/1366
85	Bp	0.24	0/718	0.48	0/953
86	AF	0.23	0/2493	0.46	0/3394
87	Ao	0.24	0/1069	0.47	0/1429
88	Br	0.23	0/996	0.53	0/1335
89	AG	0.24	0/470	0.51	0/623
90	Ap	0.23	0/1142	0.51	0/1528
91	Bs	0.24	0/1530	0.45	0/2064
All	All	0.20	3/244188 (0.0%)	0.60	25/356290 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
82	Bo	0	1

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
68	A2	1	U	OP3-P	-10.68	1.48	1.61
1	B5	1	C	OP3-P	-10.61	1.48	1.61
10	B8	1	C	OP3-P	-10.60	1.48	1.61

All (25) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B5	2312	C	C2-N1-C1'	8.82	128.50	118.80
1	B5	2312	C	N1-C2-O2	8.70	124.12	118.90
68	A2	1454	C	C2-N1-C1'	8.60	128.25	118.80
68	A2	1454	C	N1-C2-O2	8.50	124.00	118.90
1	B5	1594	U	C2-N1-C1'	7.57	126.79	117.70
1	B5	2252	U	C2-N1-C1'	7.38	126.55	117.70
68	A2	1315	U	C2-N1-C1'	7.38	126.55	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B5	2312	C	N3-C2-O2	-6.90	117.07	121.90
68	A2	631	U	C2-N1-C1'	6.85	125.92	117.70
68	A2	1315	U	N1-C2-O2	6.78	127.55	122.80
68	A2	1454	C	N3-C2-O2	-6.74	117.18	121.90
1	B5	1594	U	N1-C2-O2	6.66	127.46	122.80
1	B5	2252	U	N1-C2-O2	6.63	127.44	122.80
68	A2	631	U	N1-C2-O2	6.27	127.19	122.80
1	B5	1594	U	N3-C2-O2	-6.26	117.82	122.20
68	A2	1315	U	N3-C2-O2	-6.21	117.85	122.20
1	B5	2312	C	C6-N1-C1'	-6.14	113.43	120.80
68	A2	1454	C	C6-N1-C1'	-5.96	113.65	120.80
1	B5	2252	U	N3-C2-O2	-5.93	118.05	122.20
68	A2	631	U	N3-C2-O2	-5.83	118.12	122.20
1	B5	2312	C	C6-N1-C2	-5.67	118.03	120.30
68	A2	854	C	C2-N1-C1'	5.62	124.98	118.80
68	A2	1454	C	C6-N1-C2	-5.58	118.07	120.30
1	B5	1070	U	C2-N1-C1'	5.34	124.11	117.70
68	A2	1023	U	C2-N1-C1'	5.00	123.70	117.70

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
82	Bo	53	MLZ	Mainchain

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	
2	BT	157/160 (98%)	155 (99%)	2 (1%)	0	100	100
3	Bb	103/245 (42%)	98 (95%)	5 (5%)	0	100	100
4	Bt	154/165 (93%)	153 (99%)	1 (1%)	0	100	100
6	Aq	132/135 (98%)	132 (100%)	0	0	100	100
9	Ar	146/151 (97%)	143 (98%)	3 (2%)	0	100	100
11	BU	100/128 (78%)	98 (98%)	2 (2%)	0	100	100
12	As	140/145 (97%)	140 (100%)	0	0	100	100
13	BA	250/257 (97%)	241 (96%)	9 (4%)	0	100	100
14	BV	137/140 (98%)	136 (99%)	1 (1%)	0	100	100
15	At	102/119 (86%)	100 (98%)	2 (2%)	0	100	100
16	BB	395/403 (98%)	392 (99%)	3 (1%)	0	100	100
17	BP	157/184 (85%)	155 (99%)	2 (1%)	0	100	100
18	BY	132/145 (91%)	131 (99%)	1 (1%)	0	100	100
19	Av	127/130 (98%)	127 (100%)	0	0	100	100
20	B	291/297 (98%)	287 (99%)	4 (1%)	0	100	100
21	BX	116/156 (74%)	114 (98%)	2 (2%)	0	100	100
22	BQ	185/188 (98%)	182 (98%)	3 (2%)	0	100	100
23	BZ	133/136 (98%)	132 (99%)	1 (1%)	0	100	100
24	Aw	138/143 (96%)	136 (99%)	2 (1%)	0	100	100
25	BE	239/291 (82%)	235 (98%)	4 (2%)	0	100	100
26	BW	119/157 (76%)	118 (99%)	1 (1%)	0	100	100
27	Au	81/83 (98%)	79 (98%)	2 (2%)	0	100	100
28	Ba	144/148 (97%)	138 (96%)	5 (4%)	1 (1%)	19	49
29	Ax	123/130 (95%)	123 (100%)	0	0	100	100
30	BF	224/247 (91%)	218 (97%)	6 (3%)	0	100	100
31	BR	178/196 (91%)	178 (100%)	0	0	100	100
32	AZ	219/294 (74%)	215 (98%)	4 (2%)	0	100	100
33	Ay	83/124 (67%)	81 (98%)	2 (2%)	0	100	100
34	BG	229/266 (86%)	226 (99%)	3 (1%)	0	100	100
35	BC	360/412 (87%)	358 (99%)	2 (1%)	0	100	100
36	BS	174/176 (99%)	172 (99%)	2 (1%)	0	100	100
37	Aa	220/264 (83%)	218 (99%)	2 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
38	Az	23/25 (92%)	23 (100%)	0	0	100	100
39	BH	188/192 (98%)	188 (100%)	0	0	100	100
40	EA	302/386 (78%)	297 (98%)	4 (1%)	1 (0%)	37	66
41	Ab	218/293 (74%)	218 (100%)	0	0	100	100
42	Bc	106/115 (92%)	104 (98%)	2 (2%)	0	100	100
43	BI	211/214 (99%)	208 (99%)	3 (1%)	0	100	100
44	Ct	113/238 (48%)	110 (97%)	3 (3%)	0	100	100
45	Ac	223/281 (79%)	221 (99%)	2 (1%)	0	100	100
46	Bd	105/125 (84%)	105 (100%)	0	0	100	100
47	BJ	168/178 (94%)	167 (99%)	1 (1%)	0	100	100
48	Cu	105/162 (65%)	100 (95%)	5 (5%)	0	100	100
49	Ad	260/263 (99%)	257 (99%)	3 (1%)	0	100	100
50	Be	128/135 (95%)	128 (100%)	0	0	100	100
52	DA	153/403 (38%)	150 (98%)	3 (2%)	0	100	100
53	Ae	189/204 (93%)	185 (98%)	4 (2%)	0	100	100
54	Bf	108/110 (98%)	107 (99%)	1 (1%)	0	100	100
55	BL	208/211 (99%)	205 (99%)	3 (1%)	0	100	100
56	DB	835/915 (91%)	823 (99%)	10 (1%)	2 (0%)	44	71
57	Af	235/249 (94%)	234 (100%)	1 (0%)	0	100	100
58	Bg	112/117 (96%)	111 (99%)	1 (1%)	0	100	100
59	BM	136/218 (62%)	134 (98%)	2 (2%)	0	100	100
60	DC	163/235 (69%)	162 (99%)	1 (1%)	0	100	100
61	Ag	188/432 (44%)	185 (98%)	3 (2%)	0	100	100
62	Bh	120/123 (98%)	119 (99%)	1 (1%)	0	100	100
63	BN	201/204 (98%)	199 (99%)	2 (1%)	0	100	100
64	DD	55/228 (24%)	50 (91%)	5 (9%)	0	100	100
65	Ah	204/208 (98%)	201 (98%)	3 (2%)	0	100	100
66	Bi	100/105 (95%)	98 (98%)	2 (2%)	0	100	100
67	BO	197/203 (97%)	196 (100%)	1 (0%)	0	100	100
69	Ai	183/194 (94%)	181 (99%)	2 (1%)	0	100	100
70	Bj	84/97 (87%)	83 (99%)	1 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
71	AA	81/84 (96%)	79 (98%)	2 (2%)	0	100	100
72	Aj	94/165 (57%)	90 (96%)	4 (4%)	0	100	100
73	Bk	67/70 (96%)	67 (100%)	0	0	100	100
74	AB	61/69 (88%)	61 (100%)	0	0	100	100
75	Ak	152/158 (96%)	150 (99%)	2 (1%)	0	100	100
76	Bl	48/51 (94%)	48 (100%)	0	0	100	100
77	AC	72/156 (46%)	71 (99%)	1 (1%)	0	100	100
78	Al	122/132 (92%)	119 (98%)	3 (2%)	0	100	100
79	Bm	49/128 (38%)	49 (100%)	0	0	100	100
80	AD	55/133 (41%)	54 (98%)	1 (2%)	0	100	100
81	Am	148/151 (98%)	147 (99%)	1 (1%)	0	100	100
82	Bo	102/106 (96%)	100 (98%)	2 (2%)	0	100	100
83	AE	99/115 (86%)	98 (99%)	1 (1%)	0	100	100
84	An	132/151 (87%)	129 (98%)	3 (2%)	0	100	100
85	Bp	89/92 (97%)	87 (98%)	2 (2%)	0	100	100
86	AF	311/317 (98%)	304 (98%)	7 (2%)	0	100	100
87	Ao	126/145 (87%)	123 (98%)	3 (2%)	0	100	100
88	Br	121/136 (89%)	120 (99%)	1 (1%)	0	100	100
89	AG	53/56 (95%)	53 (100%)	0	0	100	100
90	Ap	139/172 (81%)	133 (96%)	6 (4%)	0	100	100
91	Bs	194/318 (61%)	188 (97%)	6 (3%)	0	100	100
All	All	13424/16183 (83%)	13230 (99%)	190 (1%)	4 (0%)	100	100

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
40	EA	297	HIS
56	DB	577	ASN
56	DB	578	LYS
28	Ba	15	VAL

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	
2	BT	139/140 (99%)	139 (100%)	0	100	100
3	Bb	87/183 (48%)	87 (100%)	0	100	100
4	Bt	128/137 (93%)	126 (98%)	2 (2%)	58	74
6	Aq	120/121 (99%)	120 (100%)	0	100	100
9	Ar	127/130 (98%)	125 (98%)	2 (2%)	58	74
11	BU	91/113 (80%)	89 (98%)	2 (2%)	47	68
12	As	112/114 (98%)	112 (100%)	0	100	100
13	BA	194/198 (98%)	194 (100%)	0	100	100
14	BV	106/107 (99%)	106 (100%)	0	100	100
15	At	94/107 (88%)	92 (98%)	2 (2%)	48	69
16	BB	344/347 (99%)	342 (99%)	2 (1%)	84	89
17	BP	140/163 (86%)	140 (100%)	0	100	100
18	BY	124/135 (92%)	123 (99%)	1 (1%)	79	86
19	Av	112/113 (99%)	111 (99%)	1 (1%)	75	84
20	B	247/250 (99%)	247 (100%)	0	100	100
21	BX	106/134 (79%)	105 (99%)	1 (1%)	75	84
22	BQ	164/165 (99%)	162 (99%)	2 (1%)	67	79
23	BZ	117/118 (99%)	117 (100%)	0	100	100
24	Aw	112/114 (98%)	111 (99%)	1 (1%)	75	84
25	BE	216/251 (86%)	216 (100%)	0	100	100
26	BW	100/126 (79%)	100 (100%)	0	100	100
27	Au	67/67 (100%)	65 (97%)	2 (3%)	36	60
28	Ba	118/119 (99%)	118 (100%)	0	100	100
29	Ax	107/112 (96%)	106 (99%)	1 (1%)	75	84
30	BF	197/215 (92%)	197 (100%)	0	100	100
31	BR	159/175 (91%)	159 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
32	AZ	182/242 (75%)	182 (100%)	0	100	100
33	Ay	75/102 (74%)	74 (99%)	1 (1%)	65	78
34	BG	199/223 (89%)	195 (98%)	4 (2%)	50	70
35	BC	302/336 (90%)	301 (100%)	1 (0%)	91	94
36	BS	154/154 (100%)	154 (100%)	0	100	100
37	Aa	203/231 (88%)	201 (99%)	2 (1%)	73	82
38	Az	24/24 (100%)	24 (100%)	0	100	100
39	BH	169/171 (99%)	169 (100%)	0	100	100
40	EA	261/330 (79%)	259 (99%)	2 (1%)	79	86
41	Ab	185/223 (83%)	183 (99%)	2 (1%)	70	81
42	Bc	92/98 (94%)	92 (100%)	0	100	100
43	BI	180/181 (99%)	179 (99%)	1 (1%)	84	89
44	Ct	100/202 (50%)	99 (99%)	1 (1%)	73	82
45	Ac	189/232 (82%)	187 (99%)	2 (1%)	70	81
46	Bd	98/110 (89%)	98 (100%)	0	100	100
47	BJ	143/149 (96%)	143 (100%)	0	100	100
48	Cu	91/136 (67%)	87 (96%)	4 (4%)	24	51
49	Ad	224/225 (100%)	224 (100%)	0	100	100
50	Be	116/121 (96%)	116 (100%)	0	100	100
52	DA	137/355 (39%)	137 (100%)	0	100	100
53	Ae	161/170 (95%)	161 (100%)	0	100	100
54	Bf	89/89 (100%)	89 (100%)	0	100	100
55	BL	175/176 (99%)	173 (99%)	2 (1%)	70	81
56	DB	746/806 (93%)	728 (98%)	18 (2%)	44	66
57	Af	207/218 (95%)	206 (100%)	1 (0%)	86	90
58	Bg	98/100 (98%)	96 (98%)	2 (2%)	50	70
59	BM	117/161 (73%)	117 (100%)	0	100	100
60	DC	141/202 (70%)	139 (99%)	2 (1%)	62	77
61	Ag	170/360 (47%)	169 (99%)	1 (1%)	84	89
62	Bh	109/110 (99%)	109 (100%)	0	100	100
63	BN	171/172 (99%)	171 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
64	DD	45/201 (22%)	43 (96%)	2 (4%)	24	51
65	Ah	178/180 (99%)	178 (100%)	0	100	100
66	Bi	86/89 (97%)	85 (99%)	1 (1%)	67	79
67	BO	171/173 (99%)	169 (99%)	2 (1%)	67	79
69	Ai	161/168 (96%)	160 (99%)	1 (1%)	84	89
70	Bj	73/80 (91%)	73 (100%)	0	100	100
71	AA	75/76 (99%)	74 (99%)	1 (1%)	65	78
72	Aj	87/136 (64%)	87 (100%)	0	100	100
73	Bk	64/65 (98%)	64 (100%)	0	100	100
74	AB	56/62 (90%)	56 (100%)	0	100	100
75	Ak	139/142 (98%)	138 (99%)	1 (1%)	81	87
76	Bl	47/48 (98%)	47 (100%)	0	100	100
77	AC	67/140 (48%)	67 (100%)	0	100	100
78	Al	104/108 (96%)	102 (98%)	2 (2%)	52	71
79	Bm	47/115 (41%)	47 (100%)	0	100	100
80	AD	47/106 (44%)	47 (100%)	0	100	100
81	Am	130/131 (99%)	130 (100%)	0	100	100
82	Bo	92/93 (99%)	92 (100%)	0	100	100
83	AE	88/98 (90%)	87 (99%)	1 (1%)	70	81
84	An	105/118 (89%)	105 (100%)	0	100	100
85	Bp	74/75 (99%)	74 (100%)	0	100	100
86	AF	272/275 (99%)	270 (99%)	2 (1%)	81	87
87	Ao	114/130 (88%)	114 (100%)	0	100	100
88	Br	106/119 (89%)	106 (100%)	0	100	100
89	AG	48/49 (98%)	48 (100%)	0	100	100
90	Ap	117/140 (84%)	117 (100%)	0	100	100
91	Bs	164/258 (64%)	163 (99%)	1 (1%)	84	89
All	All	11693/13738 (85%)	11614 (99%)	79 (1%)	80	87

All (79) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	Bt	35	LEU

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Mol	Chain	Res	Type
4	Bt	74	VAL
9	Ar	83	PHE
9	Ar	103	LEU
11	BU	97	ARG
11	BU	108	GLU
15	At	54	VAL
15	At	68	THR
16	BB	248	LEU
16	BB	343	ARG
18	BY	74	TYR
19	Av	105	THR
21	BX	148	ASP
22	BQ	14	ARG
22	BQ	115	LYS
24	Aw	105	PHE
27	Au	42	VAL
27	Au	61	ARG
29	Ax	94	HIS
33	Ay	107	VAL
34	BG	73	ARG
34	BG	88	ASP
34	BG	106	THR
34	BG	220	GLU
35	BC	122	TYR
37	Aa	178	THR
37	Aa	208	HIS
40	EA	268	ARG
40	EA	300	PHE
41	Ab	121	ARG
41	Ab	236	PHE
43	BI	163	GLN
44	Ct	215	MET
45	Ac	46	THR
45	Ac	56	GLN
48	Cu	9	GLU
48	Cu	15	GLN
48	Cu	33	VAL
48	Cu	55	ASN
55	BL	67	HIS
55	BL	115	GLN
56	DB	55	THR
56	DB	120	LEU

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Mol	Chain	Res	Type
56	DB	123	LEU
56	DB	141	LEU
56	DB	170	ILE
56	DB	210	LEU
56	DB	296	LEU
56	DB	373	LEU
56	DB	374	LEU
56	DB	444	ILE
56	DB	522	GLN
56	DB	547	VAL
56	DB	596	ARG
56	DB	611	GLU
56	DB	628	LYS
56	DB	662	THR
56	DB	683	PHE
56	DB	762	LEU
57	Af	44	GLU
58	Bg	32	TYR
58	Bg	73	HIS
60	DC	16	HIS
60	DC	153	GLN
61	Ag	78	ARG
64	DD	94	MET
64	DD	98	ARG
66	Bi	29	ARG
67	BO	117	ARG
67	BO	174	LEU
69	Ai	7	TRP
71	AA	74	THR
75	Ak	69	ARG
78	Al	33	ARG
78	Al	75	ASN
83	AE	75	VAL
86	AF	113	PHE
86	AF	159	ASN
91	Bs	78	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (108) such sidechains are listed below:

Mol	Chain	Res	Type
2	BT	131	GLN
3	Bb	50	ASN

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Mol	Chain	Res	Type
4	Bt	70	GLN
4	Bt	118	HIS
6	Aq	121	GLN
11	BU	17	GLN
12	As	12	GLN
13	BA	50	HIS
13	BA	97	ASN
13	BA	140	ASN
16	BB	184	GLN
16	BB	289	GLN
17	BP	75	GLN
18	BY	14	ASN
18	BY	61	HIS
21	BX	111	GLN
21	BX	151	ASN
25	BE	131	HIS
26	BW	68	GLN
26	BW	120	GLN
27	Au	2	GLN
28	Ba	60	HIS
29	Ax	19	GLN
29	Ax	85	ASN
29	Ax	89	HIS
30	BF	57	HIS
30	BF	115	GLN
31	BR	39	GLN
31	BR	40	GLN
32	AZ	113	GLN
32	AZ	141	ASN
33	Ay	64	ASN
34	BG	64	GLN
34	BG	81	ASN
35	BC	38	ASN
35	BC	48	ASN
35	BC	61	GLN
35	BC	119	GLN
35	BC	310	HIS
39	BH	42	ASN
40	EA	218	ASN
42	Bc	40	GLN
42	Bc	72	HIS
43	BI	59	GLN

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Mol	Chain	Res	Type
43	BI	163	GLN
44	Ct	201	ASN
45	Ac	145	GLN
48	Cu	15	GLN
48	Cu	17	GLN
49	Ad	98	ASN
49	Ad	142	HIS
52	DA	18	GLN
52	DA	23	ASN
52	DA	24	GLN
52	DA	108	ASN
53	Ae	65	GLN
53	Ae	83	ASN
54	Bf	20	ASN
55	BL	149	GLN
56	DB	126	GLN
56	DB	139	GLN
56	DB	197	ASN
56	DB	509	HIS
56	DB	522	GLN
56	DB	526	HIS
56	DB	569	HIS
56	DB	749	ASN
56	DB	764	HIS
56	DB	827	ASN
58	Bg	114	GLN
59	BM	33	GLN
60	DC	18	ASN
60	DC	25	ASN
60	DC	93	GLN
60	DC	153	GLN
61	Ag	91	HIS
65	Ah	7	ASN
65	Ah	167	GLN
66	Bi	36	HIS
67	BO	180	GLN
71	AA	29	ASN
71	AA	51	GLN
72	Aj	77	GLN
73	Bk	58	GLN
76	Bl	4	HIS
76	Bl	25	GLN

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Mol	Chain	Res	Type
78	Al	28	HIS
78	Al	72	HIS
80	AD	89	GLN
80	AD	113	ASN
81	Am	13	GLN
81	Am	36	GLN
81	Am	105	ASN
84	An	113	GLN
86	AF	159	ASN
86	AF	296	GLN
87	Ao	103	ASN
88	Br	4	HIS
89	AG	3	HIS
89	AG	37	ASN
90	Ap	97	GLN
90	Ap	114	GLN
91	Bs	34	ASN
91	Bs	39	GLN
91	Bs	41	GLN
91	Bs	81	HIS
91	Bs	179	ASN
91	Bs	195	ASN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	B5	3692/4808 (76%)	428 (11%)	2 (0%)
10	B8	155/158 (98%)	15 (9%)	0
5	AH	0/3	-	-
68	A2	1758/1870 (94%)	217 (12%)	0
7	B7	118/120 (98%)	7 (5%)	0
8	AT	2/76 (2%)	1 (50%)	0
All	All	5725/7035 (81%)	668 (11%)	2 (0%)

All (668) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	B5	39	A
1	B5	42	A
1	B5	59	A
1	B5	64	A

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Mol	Chain	Res	Type
1	B5	65	A
1	B5	85	G
1	B5	91	G
1	B5	98	A
1	B5	109	G
1	B5	110	C
1	B5	119	G
1	B5	127	G
1	B5	134	G
1	B5	135	G
1	B5	136	U
1	B5	144	G
1	B5	159	C
1	B5	181	C
1	B5	184	U
1	B5	187	U
1	B5	188	G
1	B5	200	U
1	B5	209	U
1	B5	218	A
1	B5	219	G
1	B5	233	U
1	B5	234	G
1	B5	266	C
1	B5	297	U
1	B5	309	C
1	B5	315	G
1	B5	316	U
1	B5	334	A
1	B5	340	C
1	B5	363	A
1	B5	386	A
1	B5	387	G
1	B5	398	A2M
1	B5	409	G
1	B5	410	A
1	B5	412	G
1	B5	413	G
1	B5	446	C
1	B5	449	C
1	B5	450	G
1	B5	452	A

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Mol	Chain	Res	Type
1	B5	453	G
1	B5	454	U
1	B5	455	C
1	B5	468	U
1	B5	482	U
1	B5	483	G
1	B5	485	U
1	B5	486	C
1	B5	488	G
1	B5	493	U
1	B5	497	G
1	B5	499	C
1	B5	502	U
1	B5	503	C
1	B5	504	U
1	B5	505	C
1	B5	515	U
1	B5	516	U
1	B5	517	C
1	B5	628	U
1	B5	634	C
1	B5	635	G
1	B5	660	G
1	B5	691	G
1	B5	698	C
1	B5	724	G
1	B5	725	G
1	B5	732	C
1	B5	734	G
1	B5	739	G
1	B5	758	C
1	B5	760	C
1	B5	790	G
1	B5	791	C
1	B5	792	G
1	B5	794	G
1	B5	795	A
1	B5	797	C
1	B5	798	C
1	B5	810	U
1	B5	812	A
1	B5	814	A

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Mol	Chain	Res	Type
1	B5	815	G
1	B5	824	C
1	B5	825	G
1	B5	831	A
1	B5	832	G
1	B5	833	C
1	B5	835	G
1	B5	843	A
1	B5	844	A
1	B5	845	U
1	B5	856	A
1	B5	860	A
1	B5	861	G
1	B5	866	A
1	B5	867	C
1	B5	868	C
1	B5	869	U
1	B5	870	G
1	B5	884	U
1	B5	983	G
1	B5	985	G
1	B5	987	C
1	B5	1072	C
1	B5	1073	C
1	B5	1074	C
1	B5	1090	U
1	B5	1091	G
1	B5	1102	G
1	B5	1105	C
1	B5	1106	U
1	B5	1124	A
1	B5	1127	G
1	B5	1129	G
1	B5	1133	C
1	B5	1140	C
1	B5	1202	C
1	B5	1214	A
1	B5	1215	G
1	B5	1216	C
1	B5	1217	G
1	B5	1219	G
1	B5	1221	G

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Mol	Chain	Res	Type
1	B5	1228	G
1	B5	1231	G
1	B5	1238	A
1	B5	1239	U
1	B5	1240	G
1	B5	1246	U
1	B5	1247	A
1	B5	1270	A2M
1	B5	1298	A
1	B5	1299	G
1	B5	1303	G
1	B5	1309	C
1	B5	1310	G
1	B5	1323	C
1	B5	1331	A
1	B5	1341	A
1	B5	1351	G
1	B5	1362	C
1	B5	1375	A
1	B5	1391	C
1	B5	1393	C
1	B5	1406	G
1	B5	1452	A
1	B5	1453	G
1	B5	1457	G
1	B5	1489	A2M
1	B5	1502	A
1	B5	1521	C
1	B5	1533	U
1	B5	1546	U
1	B5	1551	U
1	B5	1579	G
1	B5	1580	OMG
1	B5	1586	A
1	B5	1588	G
1	B5	1589	A
1	B5	1593	A
1	B5	1609	G
1	B5	1616	C
1	B5	1631	C
1	B5	1632	PSU
1	B5	1653	C

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Mol	Chain	Res	Type
1	B5	1657	C
1	B5	1658	C
1	B5	1704	A
1	B5	1705	A
1	B5	1726	A
1	B5	1743	A
1	B5	1754	G
1	B5	1774	G
1	B5	1775	G
1	B5	1776	A
1	B5	1781	G
1	B5	1794	G
1	B5	1808	G
1	B5	1836	A
1	B5	1857	U
1	B5	1859	C
1	B5	1860	C
1	B5	1861	G
1	B5	1870	C
1	B5	1871	A
1	B5	1879	G
1	B5	1887	G
1	B5	1898	U
1	B5	1899	A
1	B5	1900	G
1	B5	1913	U
1	B5	1915	G
1	B5	1922	A
1	B5	1923	A
1	B5	1924	G
1	B5	1925	U
1	B5	1926	C
1	B5	1936	U
1	B5	1940	G
1	B5	1942	G
1	B5	1943	U
1	B5	1963	G
1	B5	1965	A
1	B5	1973	G
1	B5	1985	G
1	B5	1987	U
1	B5	1994	G

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Mol	Chain	Res	Type
1	B5	1995	G
1	B5	2008	A
1	B5	2023	U
1	B5	2032	G
1	B5	2034	A
1	B5	2037	G
1	B5	2041	G
1	B5	2044	A
1	B5	2045	G
1	B5	2046	A
1	B5	2132	C
1	B5	2143	A
1	B5	2144	G
1	B5	2156	A
1	B5	2159	G
1	B5	2174	G
1	B5	2191	G
1	B5	2194	OMC
1	B5	2203	A
1	B5	2207	OMG
1	B5	2238	A
1	B5	2253	C
1	B5	2264	G
1	B5	2268	U
1	B5	2332	C
1	B5	2333	U
1	B5	2334	C
1	B5	2349	G
1	B5	2356	A
1	B5	2372	A
1	B5	2380	A
1	B5	2386	A
1	B5	2387	G
1	B5	2388	U
1	B5	2390	G
1	B5	2409	G
1	B5	2429	G
1	B5	2430	A
1	B5	2444	A
1	B5	2470	C
1	B5	2496	C
1	B5	2503	A

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Mol	Chain	Res	Type
1	B5	2512	C
1	B5	2530	U
1	B5	2537	G
1	B5	2538	A
1	B5	2539	A
1	B5	2546	G
1	B5	2551	U
1	B5	2552	C
1	B5	2553	C
1	B5	2554	G
1	B5	2586	A
1	B5	2606	U
1	B5	2612	U
1	B5	2630	A2M
1	B5	2631	U
1	B5	2633	U
1	B5	2641	A
1	B5	2657	C
1	B5	2669	U
1	B5	2670	G
1	B5	2672	U
1	B5	2678	A
1	B5	2698	G
1	B5	2745	G
1	B5	3329	G
1	B5	3347	G
1	B5	3350	C
1	B5	3358	G
1	B5	3367	A
1	B5	3380	A
1	B5	3385	A
1	B5	3394	A
1	B5	3428	C
1	B5	3443	A
1	B5	3444	A
1	B5	3485	G
1	B5	3492	A2M
1	B5	3493	C
1	B5	3498	A
1	B5	3508	G
1	B5	3509	G
1	B5	3516	A

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Mol	Chain	Res	Type
1	B5	3543	G
1	B5	3546	U
1	B5	3549	A
1	B5	3551	G
1	B5	3570	U
1	B5	3572	U
1	B5	3609	A
1	B5	3610	C
1	B5	3611	G
1	B5	3629	G
1	B5	3633	A
1	B5	3638	A
1	B5	3639	G
1	B5	3640	A
1	B5	3647	U
1	B5	3670	G
1	B5	3804	G
1	B5	3823	G
1	B5	3824	C
1	B5	3825	G
1	B5	3832	G
1	B5	3833	A
1	B5	3834	G
1	B5	3847	C
1	B5	3850	G
1	B5	3855	A
1	B5	3869	G
1	B5	3875	C
1	B5	3891	C
1	B5	3892	G
1	B5	3904	C
1	B5	3909	U
1	B5	3916	A
1	B5	3929	G
1	B5	3930	G
1	B5	3937	G
1	B5	3949	A
1	B5	3975	U
1	B5	3979	A
1	B5	3997	A
1	B5	4000	G
1	B5	4012	G

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Mol	Chain	Res	Type
1	B5	4014	A
1	B5	4017	A
1	B5	4019	A
1	B5	4027	A
1	B5	4051	G
1	B5	4052	OMU
1	B5	4076	G
1	B5	4078	C
1	B5	4096	C
1	B5	4100	U
1	B5	4119	G
1	B5	4123	G
1	B5	4124	A
1	B5	4126	A
1	B5	4133	C
1	B5	4140	A
1	B5	4167	C
1	B5	4168	A
1	B5	4183	U
1	B5	4190	C
1	B5	4194	G
1	B5	4210	A
1	B5	4212	C
1	B5	4258	U
1	B5	4259	A
1	B5	4270	G
1	B5	4294	A
1	B5	4306	C
1	B5	4313	G
1	B5	4321	G
1	B5	4336	A2M
1	B5	4381	A
1	B5	4382	PSU
1	B5	4383	OMG
1	B5	4402	A
1	B5	4416	C
1	B5	4418	A
1	B5	4437	A
1	B5	4446	A
1	B5	4454	A
1	B5	4455	U
1	B5	4465	G

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Mol	Chain	Res	Type
1	B5	4475	A
1	B5	4476	C
1	B5	4477	G
1	B5	4478	G
1	B5	4486	G
1	B5	4487	A
1	B5	4488	A
1	B5	4489	G
1	B5	4490	G
1	B5	4492	G
1	B5	4498	G
1	B5	4501	G
1	B5	4504	C
1	B5	4506	C
1	B5	4512	G
1	B5	4518	C
1	B5	4609	G
1	B5	4610	C
1	B5	4614	G
1	B5	4621	U
1	B5	4622	C
1	B5	4634	U
1	B5	4638	G
1	B5	4639	C
1	B5	4640	G
1	B5	4644	C
1	B5	4645	C
1	B5	4646	G
1	B5	4649	A
1	B5	4651	G
1	B5	4655	G
1	B5	4658	G
1	B5	4705	A
1	B5	4715	U
1	B5	4728	U
1	B5	4729	C
1	B5	4753	A
1	B5	4756	G
1	B5	4761	U
1	B5	4762	C
1	B5	4763	C
1	B5	4780	G

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Mol	Chain	Res	Type
1	B5	4789	C
1	B5	4793	C
1	B5	4801	G
1	B5	4808	U
7	B7	7	G
7	B7	33	U
7	B7	53	U
7	B7	54	A
7	B7	64	G
7	B7	110	G
7	B7	120	U
8	AT	76	A
10	B8	34	U
10	B8	35	C
10	B8	39	G
10	B8	59	A
10	B8	62	A
10	B8	63	U
10	B8	81	C
10	B8	84	A
10	B8	87	G
10	B8	94	G
10	B8	103	A
10	B8	105	C
10	B8	110	U
10	B8	114	G
10	B8	156	U
68	A2	3	C
68	A2	26	U
68	A2	33	G
68	A2	41	G
68	A2	46	A
68	A2	56	G
68	A2	67	C
68	A2	68	A
68	A2	73	C
68	A2	74	G
68	A2	77	A
68	A2	79	A
68	A2	99	A2M
68	A2	103	A
68	A2	113	G

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Mol	Chain	Res	Type
68	A2	115	U
68	A2	126	G
68	A2	130	G
68	A2	143	U
68	A2	147	A
68	A2	155	G
68	A2	162	C
68	A2	168	C
68	A2	178	C
68	A2	180	G
68	A2	184	G
68	A2	188	C
68	A2	192	C
68	A2	226	A
68	A2	282	C
68	A2	306	U
68	A2	310	G
68	A2	313	G
68	A2	320	C
68	A2	324	C
68	A2	325	U
68	A2	327	C
68	A2	328	G
68	A2	336	G
68	A2	348	G
68	A2	363	C
68	A2	365	A
68	A2	369	U
68	A2	370	C
68	A2	386	G
68	A2	387	C
68	A2	401	C
68	A2	410	C
68	A2	422	G
68	A2	439	G
68	A2	449	A
68	A2	451	C
68	A2	465	A
68	A2	466	A
68	A2	472	G
68	A2	473	C
68	A2	474	A

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Mol	Chain	Res	Type
68	A2	475	G
68	A2	483	G
68	A2	488	U
68	A2	493	C
68	A2	494	A
68	A2	509	A
68	A2	513	A2M
68	A2	526	A
68	A2	549	C
68	A2	561	A
68	A2	565	A
68	A2	569	C
68	A2	584	A
68	A2	588	A
68	A2	590	G
68	A2	592	U
68	A2	607	G
68	A2	609	C
68	A2	615	C
68	A2	618	G
68	A2	629	A
68	A2	632	U
68	A2	644	A
68	A2	645	OMG
68	A2	661	C
68	A2	669	A2M
68	A2	670	A
68	A2	672	A
68	A2	673	A
68	A2	674	G
68	A2	702	G
68	A2	734	C
68	A2	747	C
68	A2	748	U
68	A2	754	C
68	A2	755	G
68	A2	756	C
68	A2	798	C
68	A2	799	G
68	A2	802	PSU
68	A2	812	A
68	A2	822	G

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Mol	Chain	Res	Type
68	A2	823	PSU
68	A2	831	A
68	A2	832	G
68	A2	837	G
68	A2	838	A
68	A2	839	G
68	A2	840	C
68	A2	841	C
68	A2	842	G
68	A2	848	A
68	A2	871	A
68	A2	872	U
68	A2	873	A
68	A2	879	G
68	A2	886	U
68	A2	892	G
68	A2	914	A
68	A2	915	U
68	A2	921	A
68	A2	923	A
68	A2	934	G
68	A2	944	U
68	A2	956	A
68	A2	964	A
68	A2	972	G
68	A2	991	A
68	A2	993	A
68	A2	1000	G
68	A2	1003	U
68	A2	1024	A
68	A2	1061	A
68	A2	1062	U
68	A2	1063	A
68	A2	1084	A
68	A2	1086	C
68	A2	1116	U
68	A2	1117	C
68	A2	1118	C
68	A2	1119	C
68	A2	1122	G
68	A2	1145	A
68	A2	1154	C

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Mol	Chain	Res	Type
68	A2	1155	U
68	A2	1196	A
68	A2	1208	G
68	A2	1216	C
68	A2	1217	C
68	A2	1225	G
68	A2	1243	U
68	A2	1252	A
68	A2	1254	A
68	A2	1257	G
68	A2	1258	G
68	A2	1260	A
68	A2	1272	C
68	A2	1275	G
68	A2	1276	G
68	A2	1303	G
68	A2	1304	C
68	A2	1305	U
68	A2	1343	U
68	A2	1359	U
68	A2	1372	U
68	A2	1373	U
68	A2	1379	A
68	A2	1398	U
68	A2	1403	A
68	A2	1406	A
68	A2	1407	G
68	A2	1419	C
68	A2	1420	C
68	A2	1422	A
68	A2	1424	C
68	A2	1425	G
68	A2	1436	C
68	A2	1455	A
68	A2	1463	U
68	A2	1464	U
68	A2	1481	A
68	A2	1488	A
68	A2	1490	A
68	A2	1491	OMG
68	A2	1498	G
68	A2	1510	U

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Mol	Chain	Res	Type
68	A2	1522	C
68	A2	1523	A
68	A2	1534	A
68	A2	1553	G
68	A2	1554	C
68	A2	1580	A
68	A2	1581	A
68	A2	1586	U
68	A2	1589	A
68	A2	1602	A
68	A2	1618	G
68	A2	1622	U
68	A2	1624	A
68	A2	1647	C
68	A2	1655	G
68	A2	1662	A
68	A2	1666	G
68	A2	1699	C
68	A2	1722	U
68	A2	1723	G
68	A2	1749	G
68	A2	1783	G
68	A2	1784	C
68	A2	1785	G
68	A2	1832	A
68	A2	1836	A
68	A2	1837	G
68	A2	1839	U
68	A2	1850	G
68	A2	1862	G
68	A2	1863	G
68	A2	1864	A
68	A2	1865	U
68	A2	1866	C

All (2) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	B5	1588	G
1	B5	4445	U

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

223 non-standard protein/DNA/RNA residues are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
68	PSU	A2	1233	68	18,21,22	1.35	2 (11%)	22,30,33	1.88	3 (13%)
68	OMC	A2	463	68	19,22,23	0.82	0	26,31,34	0.85	0
16	HIC	BB	245	16	8,11,12	0.88	0	6,14,16	0.84	0
1	A2M	B5	2658	1,94	18,25,26	1.02	1 (5%)	18,36,39	1.18	2 (11%)
68	A2M	A2	99	94,68	18,25,26	1.01	1 (5%)	18,36,39	1.20	2 (11%)
68	PSU	A2	802	68	18,21,22	1.35	2 (11%)	22,30,33	1.84	3 (13%)
24	HY3	Aw	62	24	6,8,9	2.03	1 (16%)	5,10,12	1.11	1 (20%)
1	1MA	B5	1266	1,94	16,25,26	1.58	2 (12%)	18,37,40	1.04	2 (11%)
68	PSU	A2	1047	68	18,21,22	1.35	2 (11%)	22,30,33	1.88	3 (13%)
68	OMU	A2	172	68	19,22,23	1.19	2 (10%)	26,31,34	1.70	4 (15%)
68	A2M	A2	513	68	18,25,26	1.03	1 (5%)	18,36,39	1.20	2 (11%)
12	NMM	As	67	12	9,11,12	0.60	0	6,12,14	0.52	0
1	PSU	B5	3427	1	18,21,22	1.35	2 (11%)	22,30,33	1.87	3 (13%)
13	V5N	BA	216	13	4,11,12	0.78	0	5,14,16	1.53	1 (20%)
1	PSU	B5	1720	1	18,21,22	1.35	2 (11%)	22,30,33	1.88	3 (13%)
1	PSU	B5	3447	1	18,21,22	1.35	2 (11%)	22,30,33	1.86	3 (13%)
68	PSU	A2	1082	68	18,21,22	1.36	2 (11%)	22,30,33	1.86	3 (13%)
1	PSU	B5	3585	1,94	18,21,22	1.36	2 (11%)	22,30,33	1.86	3 (13%)
68	OMG	A2	510	94,68	18,26,27	0.93	1 (5%)	19,38,41	1.08	2 (10%)
1	OMG	B5	2207	1	18,26,27	0.92	1 (5%)	19,38,41	1.06	2 (10%)
1	PSU	B5	2475	1	18,21,22	1.34	2 (11%)	22,30,33	1.86	3 (13%)
1	PSU	B5	4382	1	18,21,22	1.34	2 (11%)	22,30,33	1.88	3 (13%)
68	OMU	A2	121	68	19,22,23	1.21	2 (10%)	26,31,34	1.68	4 (15%)
1	OMG	B5	3359	1	18,26,27	0.93	1 (5%)	19,38,41	1.11	2 (10%)
68	PSU	A2	1178	68	18,21,22	1.32	2 (11%)	22,30,33	1.84	3 (13%)
1	A2M	B5	3557	1	18,25,26	1.01	1 (5%)	18,36,39	1.21	2 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
27	AME	Au	1	27	9,10,11	0.48	0	9,11,13	0.86	1 (11%)
28	V5N	Ba	39	28	4,11,12	0.78	0	5,14,16	1.47	1 (20%)
68	6MZ	A2	1833	94,68	18,25,26	0.92	1 (5%)	16,36,39	1.86	4 (25%)
1	PSU	B5	3652	1,94	18,21,22	1.34	2 (11%)	22,30,33	1.87	3 (13%)
1	A2M	B5	1479	1	18,25,26	1.03	1 (5%)	18,36,39	1.25	2 (11%)
3	MLZ	Bb	5	3	8,9,10	0.48	0	4,9,11	0.16	0
68	A2M	A2	166	68	18,25,26	1.06	1 (5%)	18,36,39	1.26	2 (11%)
1	PSU	B5	4322	1	18,21,22	1.33	2 (11%)	22,30,33	1.86	3 (13%)
1	OMG	B5	4383	1	18,26,27	0.95	1 (5%)	19,38,41	1.09	2 (10%)
1	A2M	B5	2630	1,94	18,25,26	1.00	1 (5%)	18,36,39	1.35	2 (11%)
68	PSU	A2	687	68	18,21,22	1.34	2 (11%)	22,30,33	1.86	3 (13%)
1	A2M	B5	4336	1	18,25,26	1.03	1 (5%)	18,36,39	1.24	2 (11%)
1	OMU	B5	4244	1	19,22,23	1.21	2 (10%)	26,31,34	1.68	5 (19%)
68	A2M	A2	1032	68	18,25,26	1.02	1 (5%)	18,36,39	1.22	2 (11%)
1	OMG	B5	3974	1	18,26,27	0.92	1 (5%)	19,38,41	1.12	2 (10%)
68	PSU	A2	1175	68	18,21,22	1.34	2 (11%)	22,30,33	1.87	3 (13%)
68	MA6	A2	1852	68	18,26,27	1.09	2 (11%)	19,38,41	1.94	3 (15%)
1	OMC	B5	2704	1	19,22,23	0.82	0	26,31,34	0.84	1 (3%)
1	PSU	B5	3371	1	18,21,22	1.36	2 (11%)	22,30,33	1.83	3 (13%)
1	A2M	B5	3450	1	18,25,26	1.03	1 (5%)	18,36,39	1.19	2 (11%)
1	PSU	B5	1718	1	18,21,22	1.34	2 (11%)	22,30,33	1.87	3 (13%)
68	OMU	A2	628	68	19,22,23	1.17	2 (10%)	26,31,34	1.70	5 (19%)
1	PSU	B5	3466	1	18,21,22	1.34	2 (11%)	22,30,33	1.86	3 (13%)
1	PSU	B5	3369	1	18,21,22	1.35	2 (11%)	22,30,33	1.89	3 (13%)
1	OMU	B5	4052	1	19,22,23	1.21	2 (10%)	26,31,34	1.68	4 (15%)
68	PSU	A2	1245	68	18,21,22	1.34	2 (11%)	22,30,33	1.86	3 (13%)
1	PSU	B5	4435	1	18,21,22	1.34	2 (11%)	22,30,33	1.89	3 (13%)
68	MA6	A2	1851	68	18,26,27	1.09	2 (11%)	19,38,41	2.01	3 (15%)
68	PSU	A2	864	68	18,21,22	1.34	2 (11%)	22,30,33	1.88	3 (13%)
1	PSU	B5	4325	1	18,21,22	1.34	2 (11%)	22,30,33	1.88	3 (13%)
1	A2M	B5	400	1	18,25,26	1.03	1 (5%)	18,36,39	1.22	2 (11%)
68	PSU	A2	109	68	18,21,22	1.34	2 (11%)	22,30,33	1.88	3 (13%)
68	OMG	A2	868	68	18,26,27	0.92	1 (5%)	19,38,41	1.09	2 (10%)
1	PSU	B5	4217	1	18,21,22	1.34	2 (11%)	22,30,33	1.89	3 (13%)
68	PSU	A2	1046	68	18,21,22	1.35	2 (11%)	22,30,33	1.87	3 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
68	PSU	A2	34	68	18,21,22	1.35	2 (11%)	22,30,33	1.86	3 (13%)
68	A2M	A2	591	68	18,25,26	1.05	1 (5%)	18,36,39	1.24	2 (11%)
1	OMG	B5	3676	1	18,26,27	0.93	1 (5%)	19,38,41	1.09	2 (10%)
68	OMU	A2	429	68	19,22,23	1.20	3 (15%)	26,31,34	1.68	4 (15%)
1	OMG	B5	2267	1	18,26,27	0.91	1 (5%)	19,38,41	1.07	2 (10%)
68	PSU	A2	1239	68	18,21,22	1.35	2 (11%)	22,30,33	1.86	3 (13%)
68	OMC	A2	518	68	19,22,23	0.81	0	26,31,34	0.82	0
1	PSU	B5	4045	1	18,21,22	1.35	2 (11%)	22,30,33	1.88	3 (13%)
1	5MC	B5	3514	1,94	18,22,23	0.96	2 (11%)	26,32,35	1.15	3 (11%)
9	SAC	Ar	2	9	7,8,9	0.53	0	8,9,11	0.90	1 (12%)
84	IAS	An	165	84	6,7,8	0.98	0	6,8,10	1.33	1 (16%)
1	PSU	B5	3490	1	18,21,22	1.33	2 (11%)	22,30,33	1.85	3 (13%)
1	OMC	B5	1284	1	19,22,23	0.82	0	26,31,34	0.81	0
68	OMG	A2	1329	68	18,26,27	0.94	1 (5%)	19,38,41	1.07	2 (10%)
1	OMG	B5	4138	1	18,26,27	0.93	1 (5%)	19,38,41	1.08	2 (10%)
1	PSU	B5	4267	1,94	18,21,22	1.34	2 (11%)	22,30,33	1.90	3 (13%)
68	PSU	A2	610	68	18,21,22	1.34	2 (11%)	22,30,33	1.86	3 (13%)
1	UY1	B5	3550	1	19,22,23	1.39	3 (15%)	22,31,34	1.87	5 (22%)
68	4AC	A2	1338	68	21,24,25	1.06	2 (9%)	29,34,37	1.21	3 (10%)
1	OMG	B5	1477	1	18,26,27	0.94	1 (5%)	19,38,41	1.06	2 (10%)
1	PSU	B5	4374	1	18,21,22	1.36	2 (11%)	22,30,33	1.90	3 (13%)
68	G7M	A2	1640	68	20,26,27	2.98	7 (35%)	17,39,42	0.95	1 (5%)
68	PSU	A2	105	68	18,21,22	1.35	2 (11%)	22,30,33	1.86	3 (13%)
68	PSU	A2	682	68	18,21,22	1.35	2 (11%)	22,30,33	1.88	3 (13%)
68	OMC	A2	1392	68	19,22,23	0.82	0	26,31,34	0.84	0
10	OMG	B8	75	10	18,26,27	0.94	1 (5%)	19,38,41	1.07	2 (10%)
68	OMG	A2	645	68	18,26,27	0.93	1 (5%)	19,38,41	1.09	2 (10%)
68	A2M	A2	1384	68	18,25,26	1.03	1 (5%)	18,36,39	1.22	2 (11%)
68	PSU	A2	573	68	18,21,22	1.35	2 (11%)	22,30,33	1.88	3 (13%)
68	PSU	A2	1693	68	18,21,22	1.36	2 (11%)	22,30,33	1.86	3 (13%)
68	PSU	A2	218	68	18,21,22	1.34	2 (11%)	22,30,33	1.87	3 (13%)
1	PSU	B5	3494	1	18,21,22	1.36	2 (11%)	22,30,33	1.87	3 (13%)
1	PSU	B5	1731	1	18,21,22	1.34	2 (11%)	22,30,33	1.89	3 (13%)
1	PSU	B5	4246	1	18,21,22	1.33	2 (11%)	22,30,33	1.89	3 (13%)
68	PSU	A2	1446	68	18,21,22	1.34	2 (11%)	22,30,33	1.88	3 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	OMG	B5	4369	1	18,26,27	0.93	1 (5%)	19,38,41	1.09	2 (10%)
1	PSU	B5	4166	1	18,21,22	1.39	2 (11%)	22,30,33	1.81	4 (18%)
1	OMG	B5	4116	1	18,26,27	0.93	1 (5%)	19,38,41	1.08	2 (10%)
10	PSU	B8	69	10	18,21,22	1.35	2 (11%)	22,30,33	1.85	3 (13%)
68	PSU	A2	650	68	18,21,22	1.33	2 (11%)	22,30,33	1.87	3 (13%)
1	A2M	B5	3492	1,68	18,25,26	1.00	1 (5%)	18,36,39	1.38	2 (11%)
1	OMU	B5	2258	1	19,22,23	1.22	4 (21%)	26,31,34	1.67	4 (15%)
1	OMC	B5	3433	1	19,22,23	0.80	0	26,31,34	0.75	0
1	PSU	B5	4419	1	18,21,22	1.34	2 (11%)	22,30,33	1.86	3 (13%)
1	OMG	B5	2719	1	18,26,27	0.93	1 (5%)	19,38,41	1.08	2 (10%)
68	PSU	A2	816	68	18,21,22	1.35	2 (11%)	22,30,33	1.88	3 (13%)
1	OMC	B5	2667	1	19,22,23	0.81	0	26,31,34	0.79	0
68	PSU	A2	119	68	18,21,22	1.34	2 (11%)	22,30,33	1.87	3 (13%)
1	OMC	B5	3573	1	19,22,23	0.80	0	26,31,34	0.87	1 (3%)
1	OMC	B5	3619	1	19,22,23	0.81	0	26,31,34	0.82	0
68	A2M	A2	159	68	18,25,26	1.01	1 (5%)	18,36,39	1.25	2 (11%)
68	PSU	A2	652	68	18,21,22	1.35	2 (11%)	22,30,33	1.87	3 (13%)
68	PSU	A2	867	68	18,21,22	1.34	2 (11%)	22,30,33	1.89	3 (13%)
1	OMC	B5	2208	1,94	19,22,23	0.82	0	26,31,34	0.78	0
1	PSU	B5	3462	1	18,21,22	1.35	2 (11%)	22,30,33	1.88	3 (13%)
1	A2M	B5	2206	1,94	18,25,26	1.02	1 (5%)	18,36,39	1.25	2 (11%)
68	PSU	A2	815	68	18,21,22	1.36	2 (11%)	22,30,33	1.86	3 (13%)
68	PSU	A2	1644	94,68	18,21,22	1.33	2 (11%)	22,30,33	1.88	3 (13%)
68	PSU	A2	36	68	18,21,22	1.33	2 (11%)	22,30,33	1.88	3 (13%)
1	A2M	B5	4269	1,94	18,25,26	1.03	1 (5%)	18,36,39	1.23	2 (11%)
68	OMU	A2	1805	68	19,22,23	1.22	3 (15%)	26,31,34	1.69	4 (15%)
1	PSU	B5	4107	1	18,21,22	1.36	2 (11%)	22,30,33	1.87	3 (13%)
1	OMU	B5	2680	1	19,22,23	1.21	2 (10%)	26,31,34	1.71	4 (15%)
68	A2M	A2	577	68	18,25,26	1.04	1 (5%)	18,36,39	1.20	2 (11%)
1	A2M	B5	1810	1,94	18,25,26	1.02	1 (5%)	18,36,39	1.25	2 (11%)
1	PSU	B5	4058	1	18,21,22	1.35	2 (11%)	22,30,33	1.87	3 (13%)
68	OMG	A2	1448	68	18,26,27	0.94	1 (5%)	19,38,41	1.08	2 (10%)
68	PSU	A2	1057	68	18,21,22	1.35	2 (11%)	22,30,33	1.87	3 (13%)
1	OMU	B5	3973	1	19,22,23	1.21	2 (10%)	26,31,34	1.69	4 (15%)
1	OMC	B5	2194	1,94	19,22,23	0.82	0	26,31,34	0.92	1 (3%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	UR3	B5	4276	1	19,22,23	0.99	0	26,32,35	1.41	1 (3%)
68	A2M	A2	469	68	18,25,26	1.03	1 (5%)	18,36,39	1.22	2 (11%)
1	PSU	B5	4711	1	18,21,22	1.33	2 (11%)	22,30,33	1.86	3 (13%)
68	PSU	A2	1005	68	18,21,22	1.34	2 (11%)	22,30,33	1.88	3 (13%)
1	PSU	B5	4099	1	18,21,22	1.35	2 (11%)	22,30,33	1.88	3 (13%)
1	PSU	B5	3576	1	18,21,22	1.36	2 (11%)	22,30,33	1.87	3 (13%)
68	PSU	A2	210	68	18,21,22	1.35	2 (11%)	22,30,33	1.84	3 (13%)
68	OMU	A2	116	68	19,22,23	1.19	2 (10%)	26,31,34	1.70	4 (15%)
68	PSU	A2	823	68	18,21,22	1.36	2 (11%)	22,30,33	1.85	3 (13%)
68	OMU	A2	355	68	19,22,23	1.21	2 (10%)	26,31,34	1.68	4 (15%)
1	PSU	B5	1801	1	18,21,22	1.36	2 (11%)	22,30,33	1.88	3 (13%)
1	OMC	B5	2647	1	19,22,23	0.81	0	26,31,34	0.83	0
1	OMG	B5	4245	1	18,26,27	0.94	1 (5%)	19,38,41	1.05	2 (10%)
1	PSU	B5	4042	1	18,21,22	1.34	2 (11%)	22,30,33	1.88	3 (13%)
1	PSU	B5	1683	1	18,21,22	1.34	2 (11%)	22,30,33	1.88	3 (13%)
1	OMC	B5	4202	1	19,22,23	0.81	0	26,31,34	0.82	0
1	OMG	B5	1260	1	18,26,27	0.94	1 (5%)	19,38,41	1.12	2 (10%)
1	OMC	B5	3540	1	19,22,23	0.81	0	26,31,34	0.85	0
1	PSU	B5	1721	1	18,21,22	1.33	2 (11%)	22,30,33	1.88	3 (13%)
68	OMG	A2	602	68	18,26,27	0.94	1 (5%)	19,38,41	1.06	2 (10%)
1	OMU	B5	4366	1	19,22,23	1.23	3 (15%)	26,31,34	1.71	4 (15%)
1	OMG	B5	3942	1,8	18,26,27	0.94	1 (5%)	19,38,41	1.08	2 (10%)
1	PSU	B5	4298	1	18,21,22	1.35	2 (11%)	22,30,33	1.88	3 (13%)
68	A2M	A2	669	94,68	18,25,26	0.98	1 (5%)	18,36,39	1.33	2 (11%)
35	AYA	BC	2	35	6,7,8	0.70	0	5,8,10	0.32	0
1	OMG	B5	1580	1	18,26,27	0.93	1 (5%)	19,38,41	1.07	2 (10%)
1	PSU	B5	1638	1	18,21,22	1.34	2 (11%)	22,30,33	1.87	3 (13%)
1	A2M	B5	3517	1	18,25,26	0.98	1 (5%)	18,36,39	1.32	2 (11%)
68	B8N	A2	1249	68	24,29,30	1.30	3 (12%)	29,42,45	1.29	3 (10%)
68	OMC	A2	1704	68	19,22,23	0.82	0	26,31,34	0.79	0
1	OMC	B5	4282	1,94	19,22,23	0.82	0	26,31,34	0.85	0
1	PSU	B5	3616	1	18,21,22	1.34	2 (11%)	22,30,33	1.89	3 (13%)
1	PSU	B5	4177	1	18,21,22	1.34	2 (11%)	22,30,33	1.87	3 (13%)
1	OMG	B5	4240	1	18,26,27	0.93	1 (5%)	19,38,41	1.07	2 (10%)
1	OMG	B5	4364	1	18,26,27	0.93	1 (5%)	19,38,41	1.09	2 (10%)
68	OMC	A2	174	94,68	19,22,23	0.82	0	26,31,34	0.81	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	PSU	B5	4169	1	18,21,22	1.33	2 (11%)	22,30,33	1.87	3 (13%)
68	OMG	A2	684	68	18,26,27	0.92	1 (5%)	19,38,41	1.07	2 (10%)
68	OMG	A2	437	68	18,26,27	0.94	1 (5%)	19,38,41	1.08	2 (10%)
1	A2M	B5	4317	1	18,25,26	1.02	1 (5%)	18,36,39	1.24	2 (11%)
1	OMC	B5	2265	1,94	19,22,23	0.83	0	26,31,34	0.89	1 (3%)
82	MLZ	B ₀	53	82	8,9,10	0.48	0	4,9,11	0.12	0
1	5MC	B5	4193	1	18,22,23	0.99	2 (11%)	26,32,35	1.17	2 (7%)
1	6MZ	B5	3966	1	18,25,26	0.89	1 (5%)	16,36,39	1.99	4 (25%)
68	PSU	A2	1626	68	18,21,22	1.36	2 (11%)	22,30,33	1.87	3 (13%)
68	A2M	A2	1679	68	18,25,26	1.01	1 (5%)	18,36,39	1.30	2 (11%)
1	PSU	B5	4749	1	18,21,22	1.35	2 (11%)	22,30,33	1.89	3 (13%)
1	OMG	B5	3476	1	18,26,27	0.93	1 (5%)	19,38,41	1.08	2 (10%)
1	PSU	B5	4278	1	18,21,22	1.37	2 (11%)	22,30,33	1.87	3 (13%)
1	PSU	B5	4039	1	18,21,22	1.35	2 (11%)	22,30,33	1.87	3 (13%)
68	A2M	A2	485	68	18,25,26	1.03	1 (5%)	18,36,39	1.23	2 (11%)
1	PSU	B5	3583	1	18,21,22	1.36	2 (11%)	22,30,33	1.87	3 (13%)
68	OMG	A2	1491	94,68	18,26,27	0.93	1 (5%)	19,38,41	1.06	2 (10%)
1	OMU	B5	3657	1	19,22,23	1.22	3 (15%)	26,31,34	1.72	4 (15%)
1	OMG	B5	3631	1	18,26,27	0.94	1 (5%)	19,38,41	1.10	2 (10%)
10	PSU	B8	55	10	18,21,22	1.34	2 (11%)	22,30,33	1.87	3 (13%)
68	PSU	A2	407	68	18,21,22	1.34	2 (11%)	22,30,33	1.89	3 (13%)
68	OMU	A2	1327	94,68	19,22,23	1.19	2 (10%)	26,31,34	1.70	5 (19%)
1	PSU	B5	3554	1	18,21,22	1.34	2 (11%)	22,30,33	1.86	3 (13%)
1	A2M	B5	1489	1,94	18,25,26	0.99	1 (5%)	18,36,39	1.34	2 (11%)
1	PSU	B5	3502	1	18,21,22	1.35	2 (11%)	22,30,33	1.88	3 (13%)
1	PSU	B5	2351	1	18,21,22	1.33	2 (11%)	22,30,33	1.88	3 (13%)
1	PSU	B5	1491	1	18,21,22	1.36	2 (11%)	22,30,33	1.90	3 (13%)
1	PSU	B5	1632	1	18,21,22	1.38	2 (11%)	22,30,33	1.85	4 (18%)
1	A2M	B5	2244	1,94	18,25,26	1.01	1 (5%)	18,36,39	1.20	2 (11%)
68	PSU	A2	93	68	18,21,22	1.35	2 (11%)	22,30,33	1.88	3 (13%)
1	PSU	B5	4740	1	18,21,22	1.35	2 (11%)	22,30,33	1.86	3 (13%)
68	A2M	A2	27	94,68	18,25,26	1.03	1 (5%)	18,36,39	1.19	2 (11%)
32	SAC	AZ	2	32	7,8,9	0.52	0	8,9,11	0.86	1 (12%)
1	OMC	B5	3601	1	19,22,23	0.80	0	26,31,34	0.80	0
1	A2M	B5	398	1	18,25,26	1.02	1 (5%)	18,36,39	1.23	2 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
68	OMU	A2	1289	68	19,22,23	1.22	3 (15%)	26,31,34	1.67	5 (19%)
88	SAC	Br	2	88	7,8,9	0.53	0	8,9,11	0.84	1 (12%)
1	A2M	B5	1270	1	18,25,26	1.00	1 (5%)	18,36,39	1.23	2 (11%)
1	A2M	B5	3456	1	18,25,26	1.01	1 (5%)	18,36,39	1.24	2 (11%)
1	OMG	B5	3524	1	18,26,27	0.93	1 (5%)	19,38,41	1.06	2 (10%)
1	OMC	B5	1820	1,94	19,22,23	0.80	0	26,31,34	0.79	0
68	OMU	A2	1443	94,68	19,22,23	1.23	3 (15%)	26,31,34	1.69	4 (15%)
79	M3L	Bm	98	79	10,11,12	0.82	0	9,14,16	0.54	0
1	PSU	B5	1799	1	18,21,22	1.33	2 (11%)	22,30,33	1.87	3 (13%)
1	PSU	B5	3496	1	18,21,22	1.35	2 (11%)	22,30,33	1.87	3 (13%)
1	PSU	B5	3500	1	18,21,22	1.34	2 (11%)	22,30,33	1.87	3 (13%)
68	PSU	A2	967	68	18,21,22	1.36	2 (11%)	22,30,33	1.85	3 (13%)
68	PSU	A2	1368	68	18,21,22	1.33	2 (11%)	22,30,33	1.86	3 (13%)
1	PSU	B5	1537	1	18,21,22	1.35	2 (11%)	22,30,33	1.87	3 (13%)
1	PSU	B5	4203	1	18,21,22	1.36	2 (11%)	22,30,33	1.85	3 (13%)
1	A2M	B5	3599	1	18,25,26	1.00	1 (5%)	18,36,39	1.26	2 (11%)
1	PSU	B5	4188	1	18,21,22	1.35	2 (11%)	22,30,33	1.88	3 (13%)
68	PSU	A2	1348	68	18,21,22	1.33	2 (11%)	22,30,33	1.87	3 (13%)
1	A2M	B5	3562	1	18,25,26	1.03	1 (5%)	18,36,39	1.20	2 (11%)
68	4AC	A2	1843	68	21,24,25	1.10	2 (9%)	29,34,37	1.25	3 (10%)
1	PSU	B5	4149	1	18,21,22	1.34	2 (11%)	22,30,33	1.87	3 (13%)

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
68	PSU	A2	1233	68	-	0/7/25/26	0/2/2/2
68	OMC	A2	463	68	-	0/9/27/28	0/2/2/2
16	HIC	BB	245	16	-	2/5/6/8	0/1/1/1
1	A2M	B5	2658	1,94	-	0/5/27/28	0/3/3/3
68	A2M	A2	99	94,68	-	2/5/27/28	0/3/3/3
68	PSU	A2	802	68	-	2/7/25/26	0/2/2/2
24	HY3	Aw	62	24	-	1/1/12/14	0/1/1/1
1	1MA	B5	1266	1,94	-	0/3/25/26	0/3/3/3
68	PSU	A2	1047	68	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
68	OMU	A2	172	68	-	0/9/27/28	0/2/2/2
68	A2M	A2	513	68	-	2/5/27/28	0/3/3/3
12	NMM	As	67	12	-	0/9/11/13	-
1	PSU	B5	3427	1	-	0/7/25/26	0/2/2/2
13	V5N	BA	216	13	-	1/5/10/12	0/1/1/1
1	PSU	B5	1720	1	-	0/7/25/26	0/2/2/2
1	PSU	B5	3447	1	-	0/7/25/26	0/2/2/2
68	PSU	A2	1082	68	-	0/7/25/26	0/2/2/2
1	PSU	B5	3585	1,94	-	0/7/25/26	0/2/2/2
68	OMG	A2	510	94,68	-	1/5/27/28	0/3/3/3
1	OMG	B5	2207	1	-	2/5/27/28	0/3/3/3
1	PSU	B5	2475	1	-	0/7/25/26	0/2/2/2
1	PSU	B5	4382	1	-	4/7/25/26	0/2/2/2
68	OMU	A2	121	68	-	0/9/27/28	0/2/2/2
1	OMG	B5	3359	1	-	0/5/27/28	0/3/3/3
68	PSU	A2	1178	68	-	0/7/25/26	0/2/2/2
1	A2M	B5	3557	1	-	0/5/27/28	0/3/3/3
27	AME	Au	1	27	-	2/9/10/12	-
28	V5N	Ba	39	28	-	0/5/10/12	0/1/1/1
68	6MZ	A2	1833	94,68	-	0/5/27/28	0/3/3/3
1	PSU	B5	3652	1,94	-	0/7/25/26	0/2/2/2
1	A2M	B5	1479	1	-	0/5/27/28	0/3/3/3
3	MLZ	Bb	5	3	-	1/7/8/10	-
68	A2M	A2	166	68	-	0/5/27/28	0/3/3/3
1	PSU	B5	4322	1	-	0/7/25/26	0/2/2/2
1	OMG	B5	4383	1	-	0/5/27/28	0/3/3/3
1	A2M	B5	2630	1,94	-	0/5/27/28	0/3/3/3
68	PSU	A2	687	68	-	0/7/25/26	0/2/2/2
1	A2M	B5	4336	1	-	1/5/27/28	0/3/3/3
1	OMU	B5	4244	1	-	0/9/27/28	0/2/2/2
68	A2M	A2	1032	68	-	1/5/27/28	0/3/3/3
1	OMG	B5	3974	1	-	0/5/27/28	0/3/3/3
68	PSU	A2	1175	68	-	0/7/25/26	0/2/2/2
68	MA6	A2	1852	68	-	3/7/29/30	0/3/3/3
1	OMC	B5	2704	1	-	1/9/27/28	0/2/2/2
1	PSU	B5	3371	1	-	0/7/25/26	0/2/2/2
1	A2M	B5	3450	1	-	0/5/27/28	0/3/3/3
1	PSU	B5	1718	1	-	0/7/25/26	0/2/2/2
68	OMU	A2	628	68	-	4/9/27/28	0/2/2/2
1	PSU	B5	3466	1	-	0/7/25/26	0/2/2/2
1	PSU	B5	3369	1	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	OMU	B5	4052	1	-	0/9/27/28	0/2/2/2
68	PSU	A2	1245	68	-	0/7/25/26	0/2/2/2
1	PSU	B5	4435	1	-	0/7/25/26	0/2/2/2
68	MA6	A2	1851	68	-	0/7/29/30	0/3/3/3
68	PSU	A2	864	68	-	0/7/25/26	0/2/2/2
1	PSU	B5	4325	1	-	0/7/25/26	0/2/2/2
1	A2M	B5	400	1	-	0/5/27/28	0/3/3/3
68	PSU	A2	109	68	-	0/7/25/26	0/2/2/2
68	OMG	A2	868	68	-	0/5/27/28	0/3/3/3
1	PSU	B5	4217	1	-	0/7/25/26	0/2/2/2
68	PSU	A2	1046	68	-	0/7/25/26	0/2/2/2
68	PSU	A2	34	68	-	0/7/25/26	0/2/2/2
68	A2M	A2	591	68	-	0/5/27/28	0/3/3/3
1	OMG	B5	3676	1	-	0/5/27/28	0/3/3/3
68	OMU	A2	429	68	-	5/9/27/28	0/2/2/2
1	OMG	B5	2267	1	-	1/5/27/28	0/3/3/3
68	PSU	A2	1239	68	-	0/7/25/26	0/2/2/2
68	OMC	A2	518	68	-	0/9/27/28	0/2/2/2
1	PSU	B5	4045	1	-	0/7/25/26	0/2/2/2
1	5MC	B5	3514	1,94	-	0/7/25/26	0/2/2/2
9	SAC	Ar	2	9	-	0/7/8/10	-
84	IAS	An	165	84	-	2/7/7/8	-
1	PSU	B5	3490	1	-	0/7/25/26	0/2/2/2
1	OMC	B5	1284	1	-	1/9/27/28	0/2/2/2
68	OMG	A2	1329	68	-	0/5/27/28	0/3/3/3
1	OMG	B5	4138	1	-	1/5/27/28	0/3/3/3
1	PSU	B5	4267	1,94	-	0/7/25/26	0/2/2/2
68	PSU	A2	610	68	-	0/7/25/26	0/2/2/2
1	UY1	B5	3550	1	-	1/9/27/28	0/2/2/2
68	4AC	A2	1338	68	-	3/11/29/30	0/2/2/2
1	OMG	B5	1477	1	-	0/5/27/28	0/3/3/3
1	PSU	B5	4374	1	-	0/7/25/26	0/2/2/2
68	G7M	A2	1640	68	-	2/3/25/26	0/3/3/3
68	PSU	A2	105	68	-	0/7/25/26	0/2/2/2
68	PSU	A2	682	68	-	0/7/25/26	0/2/2/2
68	OMC	A2	1392	68	-	0/9/27/28	0/2/2/2
10	OMG	B8	75	10	-	0/5/27/28	0/3/3/3
68	OMG	A2	645	68	-	3/5/27/28	0/3/3/3
68	A2M	A2	1384	68	-	0/5/27/28	0/3/3/3
68	PSU	A2	573	68	-	0/7/25/26	0/2/2/2
68	PSU	A2	1693	68	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
68	PSU	A2	218	68	-	0/7/25/26	0/2/2/2
1	PSU	B5	3494	1	-	0/7/25/26	0/2/2/2
1	PSU	B5	1731	1	-	0/7/25/26	0/2/2/2
1	PSU	B5	4246	1	-	1/7/25/26	0/2/2/2
68	PSU	A2	1446	68	-	0/7/25/26	0/2/2/2
1	OMG	B5	4369	1	-	1/5/27/28	0/3/3/3
1	PSU	B5	4166	1	-	4/7/25/26	0/2/2/2
1	OMG	B5	4116	1	-	0/5/27/28	0/3/3/3
10	PSU	B8	69	10	-	0/7/25/26	0/2/2/2
68	PSU	A2	650	68	-	0/7/25/26	0/2/2/2
1	A2M	B5	3492	1,68	-	1/5/27/28	0/3/3/3
1	OMU	B5	2258	1	-	1/9/27/28	0/2/2/2
1	OMC	B5	3433	1	-	4/9/27/28	0/2/2/2
1	PSU	B5	4419	1	-	0/7/25/26	0/2/2/2
1	OMG	B5	2719	1	-	0/5/27/28	0/3/3/3
68	PSU	A2	816	68	-	0/7/25/26	0/2/2/2
1	OMC	B5	2667	1	-	2/9/27/28	0/2/2/2
68	PSU	A2	119	68	-	0/7/25/26	0/2/2/2
1	OMC	B5	3573	1	-	1/9/27/28	0/2/2/2
1	OMC	B5	3619	1	-	2/9/27/28	0/2/2/2
68	A2M	A2	159	68	-	0/5/27/28	0/3/3/3
68	PSU	A2	652	68	-	0/7/25/26	0/2/2/2
68	PSU	A2	867	68	-	0/7/25/26	0/2/2/2
1	OMC	B5	2208	1,94	-	0/9/27/28	0/2/2/2
1	PSU	B5	3462	1	-	0/7/25/26	0/2/2/2
1	A2M	B5	2206	1,94	-	0/5/27/28	0/3/3/3
68	PSU	A2	815	68	-	0/7/25/26	0/2/2/2
68	PSU	A2	1644	94,68	-	0/7/25/26	0/2/2/2
68	PSU	A2	36	68	-	0/7/25/26	0/2/2/2
1	A2M	B5	4269	1,94	-	0/5/27/28	0/3/3/3
68	OMU	A2	1805	68	-	0/9/27/28	0/2/2/2
1	PSU	B5	4107	1	-	0/7/25/26	0/2/2/2
1	OMU	B5	2680	1	-	1/9/27/28	0/2/2/2
68	A2M	A2	577	68	-	2/5/27/28	0/3/3/3
1	A2M	B5	1810	1,94	-	1/5/27/28	0/3/3/3
1	PSU	B5	4058	1	-	0/7/25/26	0/2/2/2
68	OMG	A2	1448	68	-	3/5/27/28	0/3/3/3
68	PSU	A2	1057	68	-	0/7/25/26	0/2/2/2
1	OMU	B5	3973	1	-	0/9/27/28	0/2/2/2
1	OMC	B5	2194	1,94	-	2/9/27/28	0/2/2/2
1	UR3	B5	4276	1	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
68	A2M	A2	469	68	-	2/5/27/28	0/3/3/3
1	PSU	B5	4711	1	-	0/7/25/26	0/2/2/2
68	PSU	A2	1005	68	-	0/7/25/26	0/2/2/2
1	PSU	B5	4099	1	-	0/7/25/26	0/2/2/2
1	PSU	B5	3576	1	-	1/7/25/26	0/2/2/2
68	PSU	A2	210	68	-	0/7/25/26	0/2/2/2
68	OMU	A2	116	68	-	1/9/27/28	0/2/2/2
68	PSU	A2	823	68	-	0/7/25/26	0/2/2/2
68	OMU	A2	355	68	-	1/9/27/28	0/2/2/2
1	PSU	B5	1801	1	-	0/7/25/26	0/2/2/2
1	OMC	B5	2647	1	-	1/9/27/28	0/2/2/2
1	OMG	B5	4245	1	-	0/5/27/28	0/3/3/3
1	PSU	B5	4042	1	-	0/7/25/26	0/2/2/2
1	PSU	B5	1683	1	-	0/7/25/26	0/2/2/2
1	OMC	B5	4202	1	-	0/9/27/28	0/2/2/2
1	OMG	B5	1260	1	-	1/5/27/28	0/3/3/3
1	OMC	B5	3540	1	-	0/9/27/28	0/2/2/2
1	PSU	B5	1721	1	-	0/7/25/26	0/2/2/2
68	OMG	A2	602	68	-	0/5/27/28	0/3/3/3
1	OMU	B5	4366	1	-	0/9/27/28	0/2/2/2
1	OMG	B5	3942	1,8	-	0/5/27/28	0/3/3/3
1	PSU	B5	4298	1	-	0/7/25/26	0/2/2/2
68	A2M	A2	669	94,68	-	2/5/27/28	0/3/3/3
35	AYA	BC	2	35	-	0/4/6/8	-
1	OMG	B5	1580	1	-	0/5/27/28	0/3/3/3
1	PSU	B5	1638	1	-	0/7/25/26	0/2/2/2
1	A2M	B5	3517	1	-	2/5/27/28	0/3/3/3
68	B8N	A2	1249	68	-	4/16/34/35	0/2/2/2
68	OMC	A2	1704	68	-	0/9/27/28	0/2/2/2
1	OMC	B5	4282	1,94	-	0/9/27/28	0/2/2/2
1	PSU	B5	3616	1	-	0/7/25/26	0/2/2/2
1	PSU	B5	4177	1	-	0/7/25/26	0/2/2/2
1	OMG	B5	4240	1	-	0/5/27/28	0/3/3/3
1	OMG	B5	4364	1	-	0/5/27/28	0/3/3/3
68	OMC	A2	174	94,68	-	0/9/27/28	0/2/2/2
1	PSU	B5	4169	1	-	0/7/25/26	0/2/2/2
68	OMG	A2	684	68	-	2/5/27/28	0/3/3/3
68	OMG	A2	437	68	-	0/5/27/28	0/3/3/3
1	A2M	B5	4317	1	-	1/5/27/28	0/3/3/3
1	OMC	B5	2265	1,94	-	1/9/27/28	0/2/2/2
82	MLZ	Bo	53	82	-	0/7/8/10	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	5MC	B5	4193	1	-	4/7/25/26	0/2/2/2
1	6MZ	B5	3966	1	-	0/5/27/28	0/3/3/3
68	PSU	A2	1626	68	-	0/7/25/26	0/2/2/2
68	A2M	A2	1679	68	-	0/5/27/28	0/3/3/3
1	PSU	B5	4749	1	-	0/7/25/26	0/2/2/2
1	OMG	B5	3476	1	-	2/5/27/28	0/3/3/3
1	PSU	B5	4278	1	-	0/7/25/26	0/2/2/2
1	PSU	B5	4039	1	-	0/7/25/26	0/2/2/2
68	A2M	A2	485	68	-	0/5/27/28	0/3/3/3
1	PSU	B5	3583	1	-	0/7/25/26	0/2/2/2
68	OMG	A2	1491	94,68	-	0/5/27/28	0/3/3/3
1	OMU	B5	3657	1	-	0/9/27/28	0/2/2/2
1	OMG	B5	3631	1	-	2/5/27/28	0/3/3/3
10	PSU	B8	55	10	-	0/7/25/26	0/2/2/2
68	PSU	A2	407	68	-	0/7/25/26	0/2/2/2
68	OMU	A2	1327	94,68	-	0/9/27/28	0/2/2/2
1	PSU	B5	3554	1	-	0/7/25/26	0/2/2/2
1	A2M	B5	1489	1,94	-	2/5/27/28	0/3/3/3
1	PSU	B5	3502	1	-	0/7/25/26	0/2/2/2
1	PSU	B5	2351	1	-	0/7/25/26	0/2/2/2
1	PSU	B5	1491	1	-	0/7/25/26	0/2/2/2
1	PSU	B5	1632	1	-	0/7/25/26	0/2/2/2
1	A2M	B5	2244	1,94	-	0/5/27/28	0/3/3/3
68	PSU	A2	93	68	-	0/7/25/26	0/2/2/2
1	PSU	B5	4740	1	-	0/7/25/26	0/2/2/2
68	A2M	A2	27	94,68	-	2/5/27/28	0/3/3/3
32	SAC	AZ	2	32	-	2/7/8/10	-
1	OMC	B5	3601	1	-	0/9/27/28	0/2/2/2
1	A2M	B5	398	1	-	3/5/27/28	0/3/3/3
68	OMU	A2	1289	68	-	0/9/27/28	0/2/2/2
88	SAC	Br	2	88	-	0/7/8/10	-
1	A2M	B5	1270	1	-	0/5/27/28	0/3/3/3
1	A2M	B5	3456	1	-	0/5/27/28	0/3/3/3
1	OMG	B5	3524	1	-	0/5/27/28	0/3/3/3
1	OMC	B5	1820	1,94	-	2/9/27/28	0/2/2/2
68	OMU	A2	1443	94,68	-	1/9/27/28	0/2/2/2
79	M3L	Bm	98	79	-	1/9/10/12	-
1	PSU	B5	1799	1	-	0/7/25/26	0/2/2/2
1	PSU	B5	3496	1	-	0/7/25/26	0/2/2/2
1	PSU	B5	3500	1	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
68	PSU	A2	967	68	-	0/7/25/26	0/2/2/2
68	PSU	A2	1368	68	-	0/7/25/26	0/2/2/2
1	PSU	B5	1537	1	-	0/7/25/26	0/2/2/2
1	PSU	B5	4203	1	-	0/7/25/26	0/2/2/2
1	A2M	B5	3599	1	-	1/5/27/28	0/3/3/3
1	PSU	B5	4188	1	-	0/7/25/26	0/2/2/2
68	PSU	A2	1348	68	-	0/7/25/26	0/2/2/2
1	A2M	B5	3562	1	-	0/5/27/28	0/3/3/3
68	4AC	A2	1843	68	-	4/11/29/30	0/2/2/2
1	PSU	B5	4149	1	-	0/7/25/26	0/2/2/2

All (327) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
68	A2	1640	G7M	C5-C4	7.38	1.53	1.39
68	A2	1640	G7M	O6-C6	7.24	1.38	1.23
1	B5	1266	1MA	C2-N3	4.84	1.34	1.29
24	Aw	62	HY3	C3-CA	-4.61	1.50	1.55
68	A2	1640	G7M	C2-N2	4.45	1.44	1.34
68	A2	1640	G7M	C2-N1	3.84	1.47	1.37
1	B5	3550	UY1	C6-C5	3.67	1.39	1.35
68	A2	1640	G7M	C8-N9	3.46	1.39	1.33
68	A2	1851	MA6	C5-N7	3.37	1.52	1.39
1	B5	1632	PSU	C6-C5	3.36	1.39	1.35
68	A2	1852	MA6	C5-N7	3.33	1.51	1.39
68	A2	1640	G7M	C2-N3	3.30	1.41	1.33
1	B5	1266	1MA	C6-N6	3.27	1.35	1.27
1	B5	4166	PSU	C6-C5	3.27	1.39	1.35
68	A2	1239	PSU	C6-C5	3.22	1.39	1.35
68	A2	210	PSU	C6-C5	3.20	1.39	1.35
1	B5	3494	PSU	C6-C5	3.19	1.39	1.35
68	A2	1693	PSU	C6-C5	3.18	1.39	1.35
1	B5	3554	PSU	C6-C5	3.18	1.39	1.35
1	B5	3583	PSU	C6-C5	3.17	1.39	1.35
68	A2	967	PSU	C6-C5	3.17	1.39	1.35
1	B5	4107	PSU	C6-C5	3.17	1.39	1.35
1	B5	1491	PSU	C6-C5	3.17	1.39	1.35
68	A2	1640	G7M	C6-N1	3.16	1.42	1.37
68	A2	573	PSU	C6-C5	3.16	1.39	1.35
1	B5	3447	PSU	C6-C5	3.16	1.39	1.35
1	B5	4188	PSU	C6-C5	3.16	1.39	1.35
1	B5	4740	PSU	C6-C5	3.16	1.39	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
68	A2	802	PSU	C6-C5	3.16	1.39	1.35
1	B5	2475	PSU	C6-C5	3.16	1.39	1.35
68	A2	105	PSU	C6-C5	3.15	1.39	1.35
68	A2	815	PSU	C6-C5	3.15	1.39	1.35
1	B5	4278	PSU	C6-C5	3.15	1.39	1.35
68	A2	34	PSU	C6-C5	3.15	1.39	1.35
1	B5	3502	PSU	C6-C5	3.15	1.39	1.35
1	B5	1801	PSU	C6-C5	3.15	1.39	1.35
68	A2	1057	PSU	C6-C5	3.15	1.39	1.35
68	A2	218	PSU	C6-C5	3.15	1.39	1.35
68	A2	1175	PSU	C6-C5	3.15	1.39	1.35
10	B8	69	PSU	C6-C5	3.14	1.39	1.35
68	A2	867	PSU	C6-C5	3.14	1.39	1.35
68	A2	407	PSU	C6-C5	3.14	1.39	1.35
68	A2	864	PSU	C6-C5	3.14	1.39	1.35
68	A2	1446	PSU	C6-C5	3.14	1.39	1.35
68	A2	109	PSU	C6-C5	3.14	1.39	1.35
1	B5	3427	PSU	C6-C5	3.13	1.39	1.35
68	A2	1233	PSU	C6-C5	3.13	1.39	1.35
1	B5	1683	PSU	C6-C5	3.13	1.39	1.35
68	A2	816	PSU	C6-C5	3.13	1.39	1.35
1	B5	3462	PSU	C6-C5	3.13	1.39	1.35
1	B5	4203	PSU	C6-C5	3.13	1.39	1.35
1	B5	4382	PSU	C6-C5	3.13	1.39	1.35
1	B5	1799	PSU	C6-C5	3.13	1.39	1.35
68	A2	652	PSU	C6-C5	3.13	1.39	1.35
1	B5	3466	PSU	C6-C5	3.12	1.39	1.35
68	A2	687	PSU	C6-C5	3.12	1.39	1.35
1	B5	4374	PSU	C6-C5	3.12	1.39	1.35
68	A2	36	PSU	C6-C5	3.12	1.39	1.35
1	B5	4322	PSU	C6-C5	3.12	1.39	1.35
68	A2	1047	PSU	C6-C5	3.12	1.39	1.35
68	A2	1082	PSU	C6-C5	3.12	1.39	1.35
1	B5	1537	PSU	C6-C5	3.12	1.39	1.35
1	B5	4042	PSU	C6-C5	3.12	1.39	1.35
68	A2	823	PSU	C6-C5	3.12	1.39	1.35
68	A2	1046	PSU	C6-C5	3.12	1.39	1.35
1	B5	3500	PSU	C6-C5	3.11	1.39	1.35
68	A2	1005	PSU	C6-C5	3.11	1.38	1.35
68	A2	1626	PSU	C6-C5	3.11	1.38	1.35
1	B5	1718	PSU	C6-C5	3.11	1.38	1.35
1	B5	3585	PSU	C6-C5	3.10	1.38	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	B8	55	PSU	C6-C5	3.10	1.38	1.35
68	A2	682	PSU	C6-C5	3.10	1.38	1.35
1	B5	4749	PSU	C6-C5	3.10	1.38	1.35
1	B5	3576	PSU	C6-C5	3.10	1.38	1.35
1	B5	4177	PSU	C6-C5	3.10	1.38	1.35
1	B5	3371	PSU	C6-C5	3.10	1.38	1.35
68	A2	93	PSU	C6-C5	3.10	1.38	1.35
68	A2	1245	PSU	C6-C5	3.10	1.38	1.35
1	B5	4045	PSU	C6-C5	3.09	1.38	1.35
68	A2	650	PSU	C6-C5	3.09	1.38	1.35
1	B5	4298	PSU	C6-C5	3.09	1.38	1.35
68	A2	610	PSU	C6-C5	3.09	1.38	1.35
1	B5	1721	PSU	C6-C5	3.09	1.38	1.35
1	B5	4099	PSU	C6-C5	3.09	1.38	1.35
1	B5	1638	PSU	C6-C5	3.08	1.38	1.35
1	B5	4058	PSU	C6-C5	3.08	1.38	1.35
68	A2	1368	PSU	C6-C5	3.08	1.38	1.35
1	B5	4267	PSU	C6-C5	3.08	1.38	1.35
1	B5	3490	PSU	C6-C5	3.08	1.38	1.35
1	B5	3496	PSU	C6-C5	3.08	1.38	1.35
1	B5	4246	PSU	C6-C5	3.07	1.38	1.35
1	B5	1720	PSU	C6-C5	3.07	1.38	1.35
68	A2	119	PSU	C6-C5	3.07	1.38	1.35
1	B5	4419	PSU	C6-C5	3.06	1.38	1.35
68	A2	1644	PSU	C6-C5	3.06	1.38	1.35
68	A2	1249	B8N	C6-C5	3.05	1.39	1.34
1	B5	3369	PSU	C6-C5	3.05	1.38	1.35
1	B5	4435	PSU	C6-C5	3.05	1.38	1.35
1	B5	4169	PSU	C6-C5	3.05	1.38	1.35
68	A2	1348	PSU	C6-C5	3.05	1.38	1.35
1	B5	1731	PSU	C6-C5	3.04	1.38	1.35
68	A2	1249	B8N	C4-N3	-3.04	1.34	1.40
1	B5	4039	PSU	C6-C5	3.04	1.38	1.35
1	B5	4217	PSU	C6-C5	3.04	1.38	1.35
1	B5	2351	PSU	C6-C5	3.03	1.38	1.35
1	B5	3652	PSU	C6-C5	3.02	1.38	1.35
1	B5	4711	PSU	C6-C5	3.02	1.38	1.35
1	B5	4149	PSU	C6-C5	3.01	1.38	1.35
1	B5	3616	PSU	C6-C5	3.00	1.38	1.35
1	B5	4325	PSU	C6-C5	3.00	1.38	1.35
68	A2	1178	PSU	C6-C5	2.98	1.38	1.35
68	A2	1843	4AC	C4-N4	-2.93	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B5	4193	5MC	C6-C5	2.89	1.39	1.34
68	A2	1338	4AC	C4-N4	-2.84	1.35	1.39
1	B5	3369	PSU	C4-N3	-2.78	1.33	1.38
1	B5	3616	PSU	C4-N3	-2.74	1.33	1.38
1	B5	4374	PSU	C4-N3	-2.71	1.33	1.38
1	B5	4058	PSU	C4-N3	-2.71	1.33	1.38
1	B5	1801	PSU	C4-N3	-2.70	1.33	1.38
1	B5	3371	PSU	C4-N3	-2.70	1.33	1.38
1	B5	4107	PSU	C4-N3	-2.70	1.33	1.38
1	B5	4278	PSU	C4-N3	-2.70	1.33	1.38
1	B5	4039	PSU	C4-N3	-2.70	1.33	1.38
1	B5	3514	5MC	C6-C5	2.70	1.39	1.34
1	B5	1491	PSU	C4-N3	-2.69	1.33	1.38
1	B5	4042	PSU	C4-N3	-2.69	1.33	1.38
68	A2	816	PSU	C4-N3	-2.69	1.33	1.38
1	B5	4749	PSU	C4-N3	-2.69	1.33	1.38
1	B5	4099	PSU	C4-N3	-2.69	1.33	1.38
68	A2	650	PSU	C4-N3	-2.68	1.33	1.38
1	B5	1731	PSU	C4-N3	-2.68	1.33	1.38
1	B5	3502	PSU	C4-N3	-2.68	1.33	1.38
1	B5	4246	PSU	C4-N3	-2.68	1.33	1.38
1	B5	2351	PSU	C4-N3	-2.68	1.33	1.38
1	B5	3427	PSU	C4-N3	-2.68	1.33	1.38
68	A2	1082	PSU	C4-N3	-2.68	1.33	1.38
1	B5	3462	PSU	C4-N3	-2.68	1.33	1.38
10	B8	55	PSU	C4-N3	-2.68	1.33	1.38
1	B5	4382	PSU	C4-N3	-2.67	1.33	1.38
1	B5	4203	PSU	C4-N3	-2.67	1.33	1.38
68	A2	407	PSU	C4-N3	-2.67	1.33	1.38
1	B5	3576	PSU	C4-N3	-2.67	1.33	1.38
1	B5	3585	PSU	C4-N3	-2.67	1.33	1.38
1	B5	3652	PSU	C4-N3	-2.67	1.33	1.38
1	B5	4298	PSU	C4-N3	-2.67	1.33	1.38
1	B5	4188	PSU	C4-N3	-2.67	1.33	1.38
68	A2	652	PSU	C4-N3	-2.67	1.33	1.38
68	A2	105	PSU	C4-N3	-2.67	1.33	1.38
68	A2	815	PSU	C4-N3	-2.67	1.33	1.38
68	A2	93	PSU	C4-N3	-2.67	1.33	1.38
68	A2	218	PSU	C4-N3	-2.67	1.33	1.38
68	A2	1368	PSU	C4-N3	-2.67	1.33	1.38
68	A2	1047	PSU	C4-N3	-2.67	1.33	1.38
68	A2	1046	PSU	C4-N3	-2.66	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
68	A2	864	PSU	C4-N3	-2.66	1.33	1.38
68	A2	1693	PSU	C4-N3	-2.66	1.33	1.38
68	A2	867	PSU	C4-N3	-2.66	1.33	1.38
1	B5	4149	PSU	C4-N3	-2.66	1.33	1.38
68	A2	1233	PSU	C4-N3	-2.66	1.33	1.38
68	A2	1239	PSU	C4-N3	-2.66	1.33	1.38
1	B5	3550	UY1	C2-N1	2.66	1.40	1.36
1	B5	1720	PSU	C4-N3	-2.66	1.33	1.38
1	B5	3496	PSU	C4-N3	-2.66	1.33	1.38
1	B5	3490	PSU	C4-N3	-2.66	1.33	1.38
68	A2	1626	PSU	C4-N3	-2.66	1.33	1.38
68	A2	573	PSU	C4-N3	-2.65	1.33	1.38
1	B5	4169	PSU	C4-N3	-2.65	1.33	1.38
1	B5	4435	PSU	C4-N3	-2.65	1.33	1.38
68	A2	1644	PSU	C4-N3	-2.65	1.33	1.38
68	A2	1245	PSU	C4-N3	-2.65	1.33	1.38
68	A2	1057	PSU	C4-N3	-2.65	1.33	1.38
1	B5	1638	PSU	C4-N3	-2.65	1.33	1.38
1	B5	3583	PSU	C4-N3	-2.65	1.33	1.38
1	B5	4740	PSU	C4-N3	-2.65	1.33	1.38
68	A2	967	PSU	C4-N3	-2.65	1.33	1.38
1	B5	4325	PSU	C4-N3	-2.65	1.33	1.38
1	B5	1537	PSU	C4-N3	-2.64	1.33	1.38
1	B5	1799	PSU	C4-N3	-2.64	1.33	1.38
68	A2	34	PSU	C4-N3	-2.64	1.33	1.38
10	B8	69	PSU	C4-N3	-2.64	1.33	1.38
68	A2	610	PSU	C4-N3	-2.64	1.33	1.38
68	A2	1005	PSU	C4-N3	-2.64	1.33	1.38
1	B5	3466	PSU	C4-N3	-2.64	1.33	1.38
68	A2	682	PSU	C4-N3	-2.64	1.33	1.38
1	B5	3500	PSU	C4-N3	-2.64	1.33	1.38
68	A2	1175	PSU	C4-N3	-2.64	1.33	1.38
68	A2	687	PSU	C4-N3	-2.64	1.33	1.38
1	B5	4177	PSU	C4-N3	-2.64	1.33	1.38
68	A2	1348	PSU	C4-N3	-2.64	1.33	1.38
1	B5	4711	PSU	C4-N3	-2.63	1.33	1.38
1	B5	2475	PSU	C4-N3	-2.63	1.33	1.38
68	A2	109	PSU	C4-N3	-2.63	1.34	1.38
1	B5	4045	PSU	C4-N3	-2.63	1.34	1.38
68	A2	1178	PSU	C4-N3	-2.63	1.34	1.38
68	A2	1446	PSU	C4-N3	-2.63	1.34	1.38
68	A2	802	PSU	C4-N3	-2.62	1.34	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B5	1721	PSU	C4-N3	-2.62	1.34	1.38
68	A2	823	PSU	C4-N3	-2.62	1.34	1.38
1	B5	1718	PSU	C4-N3	-2.61	1.34	1.38
1	B5	1683	PSU	C4-N3	-2.61	1.34	1.38
68	A2	36	PSU	C4-N3	-2.61	1.34	1.38
68	A2	119	PSU	C4-N3	-2.60	1.34	1.38
1	B5	4419	PSU	C4-N3	-2.60	1.34	1.38
1	B5	4267	PSU	C4-N3	-2.60	1.34	1.38
1	B5	1632	PSU	C4-N3	-2.60	1.34	1.38
1	B5	4217	PSU	C4-N3	-2.60	1.34	1.38
1	B5	3447	PSU	C4-N3	-2.60	1.34	1.38
1	B5	3494	PSU	C4-N3	-2.59	1.34	1.38
1	B5	3554	PSU	C4-N3	-2.59	1.34	1.38
1	B5	4322	PSU	C4-N3	-2.58	1.34	1.38
68	A2	210	PSU	C4-N3	-2.57	1.34	1.38
1	B5	4166	PSU	C4-N3	-2.56	1.34	1.38
68	A2	591	A2M	C5-C4	2.55	1.47	1.40
1	B5	4366	OMU	C4-N3	-2.54	1.34	1.38
1	B5	4244	OMU	C4-N3	-2.54	1.34	1.38
1	B5	3657	OMU	C4-N3	-2.54	1.34	1.38
1	B5	3973	OMU	C4-N3	-2.52	1.34	1.38
1	B5	4052	OMU	C4-N3	-2.52	1.34	1.38
68	A2	1327	OMU	C4-N3	-2.51	1.34	1.38
1	B5	4138	OMG	C6-N1	-2.51	1.34	1.37
68	A2	1249	B8N	C2-N3	-2.51	1.34	1.38
1	B5	2680	OMU	C4-N3	-2.51	1.34	1.38
1	B5	2258	OMU	C4-N3	-2.51	1.34	1.38
68	A2	355	OMU	C4-N3	-2.50	1.34	1.38
68	A2	121	OMU	C4-N3	-2.50	1.34	1.38
1	B5	2719	OMG	C6-N1	-2.49	1.34	1.37
68	A2	577	A2M	C5-C4	2.49	1.47	1.40
68	A2	1805	OMU	C4-N3	-2.49	1.34	1.38
1	B5	3942	OMG	C6-N1	-2.49	1.34	1.37
10	B8	75	OMG	C6-N1	-2.49	1.34	1.37
68	A2	1289	OMU	C4-N3	-2.48	1.34	1.38
68	A2	1833	6MZ	C5-C4	2.48	1.47	1.40
68	A2	116	OMU	C4-N3	-2.48	1.34	1.38
68	A2	513	A2M	C5-C4	2.48	1.47	1.40
68	A2	166	A2M	C5-C4	2.47	1.47	1.40
68	A2	1491	OMG	C6-N1	-2.47	1.34	1.37
1	B5	3562	A2M	C5-C4	2.47	1.47	1.40
1	B5	3492	A2M	C5-C4	2.47	1.47	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
68	A2	429	OMU	C4-N3	-2.47	1.34	1.38
1	B5	2207	OMG	C6-N1	-2.47	1.34	1.37
68	A2	469	A2M	C5-C4	2.47	1.47	1.40
1	B5	1580	OMG	C6-N1	-2.47	1.34	1.37
1	B5	1477	OMG	C6-N1	-2.47	1.34	1.37
1	B5	2658	A2M	C5-C4	2.46	1.47	1.40
1	B5	4245	OMG	C6-N1	-2.46	1.34	1.37
68	A2	510	OMG	C6-N1	-2.46	1.34	1.37
68	A2	159	A2M	C5-C4	2.46	1.47	1.40
68	A2	628	OMU	C4-N3	-2.46	1.34	1.38
68	A2	437	OMG	C6-N1	-2.46	1.34	1.37
68	A2	1443	OMU	C4-N3	-2.46	1.34	1.38
1	B5	3599	A2M	C5-C4	2.46	1.47	1.40
1	B5	2630	A2M	C5-C4	2.45	1.47	1.40
1	B5	3966	6MZ	C5-C4	2.45	1.47	1.40
1	B5	4116	OMG	C6-N1	-2.45	1.34	1.37
68	A2	1329	OMG	C6-N1	-2.45	1.34	1.37
68	A2	485	A2M	C5-C4	2.45	1.47	1.40
1	B5	3631	OMG	C6-N1	-2.45	1.34	1.37
68	A2	27	A2M	C5-C4	2.45	1.47	1.40
1	B5	3557	A2M	C5-C4	2.45	1.47	1.40
1	B5	4317	A2M	C5-C4	2.45	1.47	1.40
68	A2	1679	A2M	C5-C4	2.45	1.47	1.40
1	B5	398	A2M	C5-C4	2.45	1.47	1.40
1	B5	1479	A2M	C5-C4	2.44	1.47	1.40
68	A2	172	OMU	C4-N3	-2.44	1.34	1.38
68	A2	1384	A2M	C5-C4	2.44	1.47	1.40
1	B5	2244	A2M	C5-C4	2.44	1.47	1.40
1	B5	1260	OMG	C6-N1	-2.44	1.34	1.37
1	B5	400	A2M	C5-C4	2.44	1.47	1.40
1	B5	4383	OMG	C6-N1	-2.44	1.34	1.37
1	B5	2206	A2M	C5-C4	2.44	1.47	1.40
68	A2	645	OMG	C6-N1	-2.43	1.34	1.37
1	B5	3450	A2M	C5-C4	2.43	1.47	1.40
1	B5	4240	OMG	C6-N1	-2.43	1.34	1.37
1	B5	3359	OMG	C6-N1	-2.43	1.34	1.37
1	B5	4336	A2M	C5-C4	2.42	1.47	1.40
1	B5	4364	OMG	C6-N1	-2.42	1.34	1.37
1	B5	3974	OMG	C6-N1	-2.42	1.34	1.37
68	A2	1032	A2M	C5-C4	2.42	1.47	1.40
68	A2	99	A2M	C5-C4	2.42	1.47	1.40
1	B5	3456	A2M	C5-C4	2.42	1.47	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
68	A2	602	OMG	C6-N1	-2.42	1.34	1.37
1	B5	1810	A2M	C5-C4	2.42	1.47	1.40
1	B5	1270	A2M	C5-C4	2.41	1.47	1.40
68	A2	1448	OMG	C6-N1	-2.41	1.34	1.37
1	B5	4369	OMG	C6-N1	-2.41	1.34	1.37
1	B5	4269	A2M	C5-C4	2.41	1.47	1.40
1	B5	3476	OMG	C6-N1	-2.41	1.34	1.37
68	A2	669	A2M	C5-C4	2.40	1.47	1.40
68	A2	684	OMG	C6-N1	-2.40	1.34	1.37
1	B5	3524	OMG	C6-N1	-2.39	1.34	1.37
1	B5	3517	A2M	C5-C4	2.39	1.47	1.40
1	B5	2267	OMG	C6-N1	-2.38	1.34	1.37
1	B5	1489	A2M	C5-C4	2.37	1.47	1.40
1	B5	3676	OMG	C6-N1	-2.36	1.34	1.37
68	A2	868	OMG	C6-N1	-2.30	1.34	1.37
1	B5	3514	5MC	C6-N1	-2.30	1.34	1.38
1	B5	4366	OMU	C2-N3	-2.20	1.34	1.38
68	A2	1443	OMU	C2-N3	-2.20	1.34	1.38
68	A2	1289	OMU	C2-N1	2.19	1.42	1.38
1	B5	4193	5MC	C6-N1	-2.19	1.34	1.38
68	A2	1843	4AC	C7-N4	-2.18	1.33	1.37
1	B5	4244	OMU	C2-N3	-2.18	1.34	1.38
1	B5	3550	UY1	C6-N1	-2.18	1.32	1.36
1	B5	3657	OMU	C2-N3	-2.16	1.34	1.38
1	B5	2680	OMU	C2-N3	-2.16	1.34	1.38
68	A2	355	OMU	C2-N3	-2.16	1.34	1.38
68	A2	1327	OMU	C2-N3	-2.16	1.34	1.38
68	A2	121	OMU	C2-N3	-2.13	1.34	1.38
1	B5	3973	OMU	C2-N3	-2.13	1.34	1.38
1	B5	2258	OMU	C2-N3	-2.12	1.34	1.38
68	A2	429	OMU	C2-N3	-2.12	1.34	1.38
1	B5	4052	OMU	C2-N3	-2.11	1.34	1.38
68	A2	172	OMU	C2-N3	-2.11	1.34	1.38
68	A2	1805	OMU	C2-N3	-2.11	1.34	1.38
68	A2	1851	MA6	C4-N3	-2.10	1.32	1.35
68	A2	628	OMU	C2-N3	-2.10	1.34	1.38
68	A2	116	OMU	C2-N3	-2.10	1.34	1.38
68	A2	1443	OMU	C2-N1	2.09	1.41	1.38
68	A2	1289	OMU	C2-N3	-2.08	1.34	1.38
68	A2	1805	OMU	C2-N1	2.07	1.41	1.38
68	A2	1852	MA6	C4-N3	-2.05	1.32	1.35
1	B5	2258	OMU	C2-N1	2.05	1.41	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
68	A2	429	OMU	C2-N1	2.04	1.41	1.38
1	B5	2258	OMU	C5-C4	-2.02	1.39	1.43
68	A2	1338	4AC	C7-N4	-2.01	1.33	1.37
1	B5	3657	OMU	C5-C4	-2.01	1.39	1.43
1	B5	4366	OMU	C5-C4	-2.00	1.39	1.43

All (537) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B5	4267	PSU	N1-C2-N3	6.04	121.98	115.13
1	B5	4374	PSU	N1-C2-N3	6.02	121.95	115.13
1	B5	4217	PSU	N1-C2-N3	6.02	121.95	115.13
1	B5	1537	PSU	N1-C2-N3	6.02	121.94	115.13
1	B5	4278	PSU	N1-C2-N3	6.01	121.94	115.13
1	B5	3369	PSU	N1-C2-N3	6.01	121.94	115.13
1	B5	4435	PSU	N1-C2-N3	6.01	121.94	115.13
1	B5	3494	PSU	N1-C2-N3	6.01	121.93	115.13
68	A2	867	PSU	N1-C2-N3	6.00	121.93	115.13
1	B5	4749	PSU	N1-C2-N3	6.00	121.93	115.13
1	B5	3616	PSU	N1-C2-N3	6.00	121.93	115.13
1	B5	1491	PSU	N1-C2-N3	6.00	121.93	115.13
1	B5	4325	PSU	N1-C2-N3	6.00	121.92	115.13
68	A2	1644	PSU	N1-C2-N3	5.99	121.92	115.13
1	B5	1720	PSU	N1-C2-N3	5.99	121.92	115.13
68	A2	407	PSU	N1-C2-N3	5.99	121.92	115.13
68	A2	1047	PSU	N1-C2-N3	5.99	121.92	115.13
1	B5	1731	PSU	N1-C2-N3	5.98	121.91	115.13
1	B5	4045	PSU	N1-C2-N3	5.98	121.91	115.13
68	A2	1446	PSU	N1-C2-N3	5.98	121.91	115.13
1	B5	4382	PSU	N1-C2-N3	5.98	121.90	115.13
68	A2	1005	PSU	N1-C2-N3	5.98	121.90	115.13
68	A2	682	PSU	N1-C2-N3	5.98	121.90	115.13
1	B5	2351	PSU	N1-C2-N3	5.97	121.90	115.13
1	B5	1721	PSU	N1-C2-N3	5.97	121.90	115.13
1	B5	3502	PSU	N1-C2-N3	5.97	121.89	115.13
1	B5	1801	PSU	N1-C2-N3	5.97	121.89	115.13
1	B5	3583	PSU	N1-C2-N3	5.97	121.89	115.13
1	B5	4246	PSU	N1-C2-N3	5.97	121.89	115.13
68	A2	816	PSU	N1-C2-N3	5.97	121.89	115.13
68	A2	1233	PSU	N1-C2-N3	5.97	121.89	115.13
1	B5	3576	PSU	N1-C2-N3	5.96	121.89	115.13
1	B5	4099	PSU	N1-C2-N3	5.96	121.89	115.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B5	3585	PSU	N1-C2-N3	5.96	121.89	115.13
1	B5	4107	PSU	N1-C2-N3	5.96	121.89	115.13
68	A2	93	PSU	N1-C2-N3	5.96	121.89	115.13
68	A2	652	PSU	N1-C2-N3	5.96	121.89	115.13
68	A2	1626	PSU	N1-C2-N3	5.96	121.88	115.13
1	B5	4042	PSU	N1-C2-N3	5.96	121.88	115.13
1	B5	4058	PSU	N1-C2-N3	5.96	121.88	115.13
68	A2	864	PSU	N1-C2-N3	5.96	121.88	115.13
1	B5	4169	PSU	N1-C2-N3	5.95	121.88	115.13
68	A2	815	PSU	N1-C2-N3	5.95	121.87	115.13
68	A2	36	PSU	N1-C2-N3	5.95	121.87	115.13
68	A2	109	PSU	N1-C2-N3	5.95	121.87	115.13
1	B5	3652	PSU	N1-C2-N3	5.95	121.87	115.13
1	B5	1718	PSU	N1-C2-N3	5.94	121.86	115.13
1	B5	4149	PSU	N1-C2-N3	5.94	121.86	115.13
1	B5	3462	PSU	N1-C2-N3	5.94	121.86	115.13
68	A2	573	PSU	N1-C2-N3	5.94	121.86	115.13
1	B5	2475	PSU	N1-C2-N3	5.94	121.86	115.13
1	B5	3500	PSU	N1-C2-N3	5.94	121.86	115.13
1	B5	4039	PSU	N1-C2-N3	5.94	121.86	115.13
1	B5	1683	PSU	N1-C2-N3	5.94	121.86	115.13
68	A2	1046	PSU	N1-C2-N3	5.94	121.86	115.13
1	B5	4177	PSU	N1-C2-N3	5.93	121.85	115.13
68	A2	650	PSU	N1-C2-N3	5.93	121.85	115.13
1	B5	4298	PSU	N1-C2-N3	5.93	121.85	115.13
68	A2	687	PSU	N1-C2-N3	5.93	121.85	115.13
68	A2	1348	PSU	N1-C2-N3	5.93	121.85	115.13
1	B5	3427	PSU	N1-C2-N3	5.93	121.85	115.13
68	A2	119	PSU	N1-C2-N3	5.93	121.85	115.13
1	B5	3496	PSU	N1-C2-N3	5.92	121.84	115.13
68	A2	610	PSU	N1-C2-N3	5.92	121.84	115.13
1	B5	4188	PSU	N1-C2-N3	5.92	121.84	115.13
1	B5	4740	PSU	N1-C2-N3	5.92	121.84	115.13
68	A2	210	PSU	N1-C2-N3	5.92	121.84	115.13
68	A2	1239	PSU	N1-C2-N3	5.92	121.84	115.13
68	A2	823	PSU	N1-C2-N3	5.92	121.84	115.13
1	B5	1638	PSU	N1-C2-N3	5.92	121.83	115.13
1	B5	3447	PSU	N1-C2-N3	5.92	121.83	115.13
68	A2	34	PSU	N1-C2-N3	5.92	121.83	115.13
68	A2	1245	PSU	N1-C2-N3	5.91	121.83	115.13
1	B5	1799	PSU	N1-C2-N3	5.91	121.83	115.13
1	B5	4419	PSU	N1-C2-N3	5.91	121.83	115.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
68	A2	1057	PSU	N1-C2-N3	5.91	121.83	115.13
10	B8	55	PSU	N1-C2-N3	5.91	121.83	115.13
68	A2	105	PSU	N1-C2-N3	5.91	121.83	115.13
68	A2	1368	PSU	N1-C2-N3	5.91	121.82	115.13
1	B5	4203	PSU	N1-C2-N3	5.90	121.82	115.13
68	A2	967	PSU	N1-C2-N3	5.90	121.82	115.13
1	B5	3554	PSU	N1-C2-N3	5.90	121.82	115.13
1	B5	4711	PSU	N1-C2-N3	5.90	121.81	115.13
1	B5	3466	PSU	N1-C2-N3	5.90	121.81	115.13
1	B5	4322	PSU	N1-C2-N3	5.90	121.81	115.13
1	B5	3490	PSU	N1-C2-N3	5.89	121.81	115.13
68	A2	1693	PSU	N1-C2-N3	5.89	121.81	115.13
1	B5	1632	PSU	N1-C2-N3	5.89	121.81	115.13
68	A2	1175	PSU	N1-C2-N3	5.89	121.80	115.13
68	A2	1851	MA6	C4-C5-N7	-5.89	103.26	109.40
68	A2	218	PSU	N1-C2-N3	5.89	121.80	115.13
1	B5	3966	6MZ	C2-N1-C6	5.88	121.63	116.59
68	A2	802	PSU	N1-C2-N3	5.87	121.78	115.13
68	A2	1082	PSU	N1-C2-N3	5.87	121.78	115.13
10	B8	69	PSU	N1-C2-N3	5.86	121.77	115.13
1	B5	3371	PSU	N1-C2-N3	5.85	121.75	115.13
68	A2	1178	PSU	N1-C2-N3	5.83	121.74	115.13
1	B5	4276	UR3	C4-N3-C2	-5.77	119.13	124.56
68	A2	1833	6MZ	C2-N1-C6	5.69	121.47	116.59
1	B5	4166	PSU	N1-C2-N3	5.69	121.57	115.13
68	A2	1852	MA6	C4-C5-N7	-5.55	103.62	109.40
1	B5	3550	UY1	C4-N3-C2	-5.19	118.86	126.34
68	A2	1843	4AC	N4-C4-N3	4.62	121.61	113.85
1	B5	3657	OMU	C4-N3-C2	-4.52	120.61	126.58
68	A2	1338	4AC	N4-C4-N3	4.52	121.44	113.85
68	A2	628	OMU	C4-N3-C2	-4.51	120.63	126.58
68	A2	1327	OMU	C4-N3-C2	-4.48	120.67	126.58
68	A2	1851	MA6	C1'-N9-C4	-4.45	118.83	126.64
1	B5	2680	OMU	C4-N3-C2	-4.44	120.72	126.58
68	A2	116	OMU	C4-N3-C2	-4.44	120.72	126.58
1	B5	3973	OMU	C4-N3-C2	-4.43	120.74	126.58
1	B5	4244	OMU	C4-N3-C2	-4.42	120.75	126.58
1	B5	4366	OMU	C4-N3-C2	-4.41	120.76	126.58
68	A2	172	OMU	C4-N3-C2	-4.40	120.78	126.58
68	A2	429	OMU	C4-N3-C2	-4.38	120.81	126.58
68	A2	1443	OMU	C4-N3-C2	-4.36	120.83	126.58
68	A2	355	OMU	C4-N3-C2	-4.36	120.83	126.58

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
68	A2	121	OMU	C4-N3-C2	-4.35	120.84	126.58
1	B5	4052	OMU	C4-N3-C2	-4.34	120.85	126.58
1	B5	2258	OMU	C4-N3-C2	-4.32	120.88	126.58
68	A2	1805	OMU	C4-N3-C2	-4.32	120.89	126.58
68	A2	1852	MA6	C1'-N9-C4	-4.27	119.14	126.64
68	A2	1289	OMU	C4-N3-C2	-4.25	120.97	126.58
68	A2	1851	MA6	N3-C2-N1	-4.22	122.08	128.68
1	B5	3550	UY1	N1-C2-N3	4.18	119.86	115.13
68	A2	1852	MA6	N3-C2-N1	-4.15	122.20	128.68
68	A2	116	OMU	N3-C2-N1	4.11	120.34	114.89
1	B5	3657	OMU	N3-C2-N1	4.10	120.33	114.89
1	B5	4244	OMU	N3-C2-N1	4.09	120.33	114.89
68	A2	429	OMU	N3-C2-N1	4.09	120.32	114.89
1	B5	2680	OMU	N3-C2-N1	4.08	120.31	114.89
1	B5	4366	OMU	N3-C2-N1	4.07	120.29	114.89
68	A2	628	OMU	N3-C2-N1	4.07	120.29	114.89
1	B5	3973	OMU	N3-C2-N1	4.07	120.29	114.89
68	A2	1443	OMU	N3-C2-N1	4.06	120.27	114.89
68	A2	355	OMU	N3-C2-N1	4.05	120.26	114.89
68	A2	121	OMU	N3-C2-N1	4.04	120.26	114.89
68	A2	1805	OMU	N3-C2-N1	4.03	120.23	114.89
1	B5	2258	OMU	N3-C2-N1	4.01	120.21	114.89
68	A2	172	OMU	N3-C2-N1	4.01	120.21	114.89
68	A2	1327	OMU	N3-C2-N1	4.01	120.21	114.89
1	B5	4052	OMU	N3-C2-N1	3.99	120.19	114.89
1	B5	4267	PSU	C4-N3-C2	-3.95	120.65	126.34
1	B5	3369	PSU	C4-N3-C2	-3.94	120.66	126.34
68	A2	1289	OMU	N3-C2-N1	3.93	120.11	114.89
68	A2	218	PSU	C4-N3-C2	-3.93	120.67	126.34
1	B5	1491	PSU	C4-N3-C2	-3.93	120.67	126.34
1	B5	1720	PSU	C4-N3-C2	-3.93	120.68	126.34
1	B5	4246	PSU	C4-N3-C2	-3.93	120.68	126.34
68	A2	682	PSU	C4-N3-C2	-3.92	120.69	126.34
1	B5	1801	PSU	C4-N3-C2	-3.91	120.70	126.34
1	B5	2351	PSU	C4-N3-C2	-3.91	120.70	126.34
1	B5	1731	PSU	C4-N3-C2	-3.91	120.70	126.34
1	B5	3616	PSU	C4-N3-C2	-3.91	120.70	126.34
68	A2	1348	PSU	C4-N3-C2	-3.91	120.70	126.34
1	B5	1683	PSU	C4-N3-C2	-3.91	120.71	126.34
1	B5	1799	PSU	C4-N3-C2	-3.91	120.71	126.34
1	B5	4749	PSU	C4-N3-C2	-3.91	120.71	126.34
1	B5	3502	PSU	C4-N3-C2	-3.91	120.71	126.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B5	4188	PSU	C4-N3-C2	-3.91	120.71	126.34
68	A2	867	PSU	C4-N3-C2	-3.91	120.71	126.34
68	A2	573	PSU	C4-N3-C2	-3.90	120.72	126.34
68	A2	1644	PSU	C4-N3-C2	-3.90	120.72	126.34
1	B5	4217	PSU	C4-N3-C2	-3.90	120.72	126.34
1	B5	1718	PSU	C4-N3-C2	-3.90	120.72	126.34
68	A2	407	PSU	C4-N3-C2	-3.90	120.72	126.34
1	B5	4298	PSU	C4-N3-C2	-3.90	120.72	126.34
68	A2	1446	PSU	C4-N3-C2	-3.90	120.72	126.34
68	A2	1057	PSU	C4-N3-C2	-3.90	120.72	126.34
68	A2	36	PSU	C4-N3-C2	-3.90	120.73	126.34
68	A2	93	PSU	C4-N3-C2	-3.89	120.73	126.34
1	B5	4042	PSU	C4-N3-C2	-3.89	120.73	126.34
68	A2	864	PSU	C4-N3-C2	-3.89	120.73	126.34
1	B5	1721	PSU	C4-N3-C2	-3.89	120.73	126.34
68	A2	1175	PSU	C4-N3-C2	-3.89	120.73	126.34
1	B5	4325	PSU	C4-N3-C2	-3.89	120.74	126.34
68	A2	109	PSU	C4-N3-C2	-3.89	120.74	126.34
1	B5	3500	PSU	C4-N3-C2	-3.88	120.74	126.34
68	A2	816	PSU	C4-N3-C2	-3.88	120.74	126.34
1	B5	4039	PSU	C4-N3-C2	-3.88	120.74	126.34
1	B5	4149	PSU	C4-N3-C2	-3.88	120.74	126.34
68	A2	1368	PSU	C4-N3-C2	-3.88	120.75	126.34
1	B5	3427	PSU	C4-N3-C2	-3.88	120.75	126.34
1	B5	4045	PSU	C4-N3-C2	-3.88	120.75	126.34
68	A2	1046	PSU	C4-N3-C2	-3.88	120.75	126.34
1	B5	1638	PSU	C4-N3-C2	-3.87	120.76	126.34
1	B5	4435	PSU	C4-N3-C2	-3.87	120.76	126.34
1	B5	3652	PSU	C4-N3-C2	-3.87	120.76	126.34
68	A2	1005	PSU	C4-N3-C2	-3.87	120.76	126.34
68	A2	1233	PSU	C4-N3-C2	-3.87	120.76	126.34
1	B5	3462	PSU	C4-N3-C2	-3.87	120.76	126.34
68	A2	1245	PSU	C4-N3-C2	-3.87	120.76	126.34
68	A2	119	PSU	C4-N3-C2	-3.87	120.77	126.34
1	B5	3496	PSU	C4-N3-C2	-3.87	120.77	126.34
1	B5	4374	PSU	C4-N3-C2	-3.87	120.77	126.34
68	A2	652	PSU	C4-N3-C2	-3.87	120.77	126.34
1	B5	4177	PSU	C4-N3-C2	-3.86	120.77	126.34
1	B5	4740	PSU	C4-N3-C2	-3.86	120.77	126.34
1	B5	4107	PSU	C4-N3-C2	-3.86	120.77	126.34
68	A2	1239	PSU	C4-N3-C2	-3.86	120.77	126.34
1	B5	4099	PSU	C4-N3-C2	-3.86	120.77	126.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
68	A2	1047	PSU	C4-N3-C2	-3.86	120.78	126.34
68	A2	650	PSU	C4-N3-C2	-3.86	120.78	126.34
1	B5	4711	PSU	C4-N3-C2	-3.86	120.78	126.34
1	B5	3466	PSU	C4-N3-C2	-3.86	120.78	126.34
1	B5	3554	PSU	C4-N3-C2	-3.86	120.78	126.34
10	B8	69	PSU	C4-N3-C2	-3.85	120.79	126.34
1	B5	1537	PSU	C4-N3-C2	-3.85	120.79	126.34
10	B8	55	PSU	C4-N3-C2	-3.85	120.79	126.34
68	A2	815	PSU	C4-N3-C2	-3.85	120.80	126.34
1	B5	3490	PSU	C4-N3-C2	-3.85	120.80	126.34
68	A2	687	PSU	C4-N3-C2	-3.84	120.81	126.34
1	B5	4322	PSU	C4-N3-C2	-3.84	120.81	126.34
68	A2	105	PSU	C4-N3-C2	-3.83	120.82	126.34
68	A2	1693	PSU	C4-N3-C2	-3.82	120.83	126.34
68	A2	1626	PSU	C4-N3-C2	-3.82	120.83	126.34
68	A2	610	PSU	C4-N3-C2	-3.82	120.83	126.34
1	B5	4419	PSU	C4-N3-C2	-3.82	120.83	126.34
1	B5	2475	PSU	C4-N3-C2	-3.82	120.83	126.34
1	B5	3583	PSU	C4-N3-C2	-3.82	120.83	126.34
1	B5	4203	PSU	C4-N3-C2	-3.82	120.84	126.34
68	A2	1178	PSU	C4-N3-C2	-3.82	120.84	126.34
1	B5	4169	PSU	C4-N3-C2	-3.82	120.84	126.34
1	B5	4382	PSU	C4-N3-C2	-3.81	120.85	126.34
68	A2	1082	PSU	C4-N3-C2	-3.81	120.85	126.34
1	B5	3585	PSU	C4-N3-C2	-3.81	120.85	126.34
1	B5	3447	PSU	C4-N3-C2	-3.81	120.86	126.34
1	B5	4058	PSU	C4-N3-C2	-3.80	120.86	126.34
1	B5	4278	PSU	C4-N3-C2	-3.79	120.87	126.34
1	B5	3494	PSU	C4-N3-C2	-3.79	120.87	126.34
1	B5	4193	5MC	C5-C6-N1	-3.79	119.44	123.34
68	A2	34	PSU	C4-N3-C2	-3.78	120.89	126.34
1	B5	3576	PSU	C4-N3-C2	-3.77	120.91	126.34
68	A2	967	PSU	C4-N3-C2	-3.76	120.92	126.34
68	A2	210	PSU	C4-N3-C2	-3.75	120.94	126.34
68	A2	802	PSU	C4-N3-C2	-3.73	120.96	126.34
1	B5	3371	PSU	C4-N3-C2	-3.72	120.98	126.34
68	A2	823	PSU	C4-N3-C2	-3.68	121.03	126.34
1	B5	1632	PSU	C4-N3-C2	-3.65	121.08	126.34
68	A2	1327	OMU	C5-C4-N3	3.65	120.30	114.84
68	A2	628	OMU	C5-C4-N3	3.61	120.24	114.84
1	B5	3657	OMU	C5-C4-N3	3.60	120.22	114.84
1	B5	3973	OMU	C5-C4-N3	3.57	120.18	114.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B5	2680	OMU	C5-C4-N3	3.56	120.17	114.84
1	B5	4366	OMU	C5-C4-N3	3.56	120.16	114.84
68	A2	116	OMU	C5-C4-N3	3.56	120.16	114.84
1	B5	4244	OMU	C5-C4-N3	3.55	120.16	114.84
1	B5	4052	OMU	C5-C4-N3	3.54	120.14	114.84
68	A2	172	OMU	C5-C4-N3	3.54	120.14	114.84
68	A2	429	OMU	C5-C4-N3	3.54	120.14	114.84
68	A2	1289	OMU	C5-C4-N3	3.54	120.13	114.84
68	A2	1443	OMU	C5-C4-N3	3.54	120.13	114.84
68	A2	121	OMU	C5-C4-N3	3.53	120.12	114.84
1	B5	2258	OMU	C5-C4-N3	3.53	120.12	114.84
1	B5	4374	PSU	O2-C2-N1	-3.53	118.91	122.79
68	A2	1805	OMU	C5-C4-N3	3.52	120.10	114.84
68	A2	355	OMU	C5-C4-N3	3.51	120.09	114.84
1	B5	3576	PSU	O2-C2-N1	-3.49	118.94	122.79
68	A2	1626	PSU	O2-C2-N1	-3.49	118.95	122.79
68	A2	823	PSU	O2-C2-N1	-3.48	118.96	122.79
10	B8	55	PSU	O2-C2-N1	-3.45	118.99	122.79
1	B5	4382	PSU	O2-C2-N1	-3.45	119.00	122.79
1	B5	4045	PSU	O2-C2-N1	-3.44	119.00	122.79
1	B5	4267	PSU	O2-C2-N1	-3.44	119.00	122.79
1	B5	1491	PSU	O2-C2-N1	-3.44	119.00	122.79
1	B5	3494	PSU	O2-C2-N1	-3.43	119.01	122.79
1	B5	4169	PSU	O2-C2-N1	-3.43	119.01	122.79
1	B5	4419	PSU	O2-C2-N1	-3.43	119.01	122.79
1	B5	2475	PSU	O2-C2-N1	-3.43	119.02	122.79
68	A2	1233	PSU	O2-C2-N1	-3.43	119.02	122.79
1	B5	4435	PSU	O2-C2-N1	-3.42	119.02	122.79
1	B5	1731	PSU	O2-C2-N1	-3.42	119.03	122.79
1	B5	4217	PSU	O2-C2-N1	-3.42	119.03	122.79
1	B5	3462	PSU	O2-C2-N1	-3.41	119.03	122.79
1	B5	4325	PSU	O2-C2-N1	-3.41	119.03	122.79
1	B5	3616	PSU	O2-C2-N1	-3.41	119.04	122.79
68	A2	652	PSU	O2-C2-N1	-3.41	119.04	122.79
68	A2	573	PSU	O2-C2-N1	-3.40	119.05	122.79
1	B5	3447	PSU	O2-C2-N1	-3.40	119.05	122.79
68	A2	864	PSU	O2-C2-N1	-3.40	119.05	122.79
68	A2	1046	PSU	O2-C2-N1	-3.40	119.05	122.79
68	A2	109	PSU	O2-C2-N1	-3.40	119.05	122.79
1	B5	4278	PSU	O2-C2-N1	-3.39	119.05	122.79
68	A2	802	PSU	O2-C2-N1	-3.39	119.06	122.79
68	A2	93	PSU	O2-C2-N1	-3.39	119.06	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
68	A2	1446	PSU	O2-C2-N1	-3.39	119.06	122.79
68	A2	867	PSU	O2-C2-N1	-3.39	119.06	122.79
1	B5	1638	PSU	O2-C2-N1	-3.39	119.06	122.79
1	B5	3585	PSU	O2-C2-N1	-3.39	119.06	122.79
1	B5	3583	PSU	O2-C2-N1	-3.39	119.06	122.79
1	B5	4058	PSU	O2-C2-N1	-3.39	119.06	122.79
1	B5	1683	PSU	O2-C2-N1	-3.39	119.06	122.79
1	B5	4107	PSU	O2-C2-N1	-3.39	119.06	122.79
68	A2	36	PSU	O2-C2-N1	-3.39	119.06	122.79
68	A2	1644	PSU	O2-C2-N1	-3.38	119.06	122.79
1	B5	3427	PSU	O2-C2-N1	-3.38	119.07	122.79
68	A2	210	PSU	O2-C2-N1	-3.38	119.07	122.79
68	A2	1047	PSU	O2-C2-N1	-3.38	119.07	122.79
1	B5	4166	PSU	C4-N3-C2	-3.38	121.47	126.34
68	A2	1175	PSU	O2-C2-N1	-3.38	119.07	122.79
1	B5	3466	PSU	O2-C2-N1	-3.38	119.07	122.79
1	B5	3652	PSU	O2-C2-N1	-3.37	119.08	122.79
68	A2	1245	PSU	O2-C2-N1	-3.37	119.08	122.79
68	A2	34	PSU	O2-C2-N1	-3.37	119.08	122.79
68	A2	407	PSU	O2-C2-N1	-3.37	119.08	122.79
68	A2	1693	PSU	O2-C2-N1	-3.37	119.08	122.79
68	A2	610	PSU	O2-C2-N1	-3.37	119.08	122.79
1	B5	4149	PSU	O2-C2-N1	-3.37	119.08	122.79
68	A2	682	PSU	O2-C2-N1	-3.36	119.09	122.79
1	B5	1799	PSU	O2-C2-N1	-3.36	119.09	122.79
1	B5	4099	PSU	O2-C2-N1	-3.36	119.09	122.79
1	B5	4298	PSU	O2-C2-N1	-3.36	119.09	122.79
1	B5	3514	5MC	C5-C6-N1	-3.36	119.88	123.34
68	A2	119	PSU	O2-C2-N1	-3.36	119.09	122.79
1	B5	4042	PSU	O2-C2-N1	-3.36	119.09	122.79
1	B5	4177	PSU	O2-C2-N1	-3.36	119.09	122.79
1	B5	4322	PSU	O2-C2-N1	-3.36	119.09	122.79
68	A2	967	PSU	O2-C2-N1	-3.36	119.09	122.79
1	B5	2351	PSU	O2-C2-N1	-3.36	119.09	122.79
68	A2	1057	PSU	O2-C2-N1	-3.36	119.09	122.79
1	B5	1721	PSU	O2-C2-N1	-3.36	119.10	122.79
1	B5	4749	PSU	O2-C2-N1	-3.35	119.10	122.79
1	B5	3554	PSU	O2-C2-N1	-3.35	119.10	122.79
68	A2	687	PSU	O2-C2-N1	-3.35	119.10	122.79
1	B5	4246	PSU	O2-C2-N1	-3.35	119.10	122.79
68	A2	1239	PSU	O2-C2-N1	-3.35	119.11	122.79
68	A2	650	PSU	O2-C2-N1	-3.35	119.11	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B5	3496	PSU	O2-C2-N1	-3.35	119.11	122.79
1	B5	1718	PSU	O2-C2-N1	-3.34	119.11	122.79
1	B5	3502	PSU	O2-C2-N1	-3.34	119.11	122.79
68	A2	1005	PSU	O2-C2-N1	-3.33	119.12	122.79
1	B5	1720	PSU	O2-C2-N1	-3.33	119.12	122.79
1	B5	4188	PSU	O2-C2-N1	-3.33	119.13	122.79
1	B5	1537	PSU	O2-C2-N1	-3.32	119.13	122.79
1	B5	4711	PSU	O2-C2-N1	-3.32	119.14	122.79
68	A2	816	PSU	O2-C2-N1	-3.31	119.15	122.79
1	B5	3369	PSU	O2-C2-N1	-3.31	119.15	122.79
68	A2	105	PSU	O2-C2-N1	-3.31	119.15	122.79
1	B5	1801	PSU	O2-C2-N1	-3.30	119.16	122.79
1	B5	4740	PSU	O2-C2-N1	-3.30	119.16	122.79
1	B5	3500	PSU	O2-C2-N1	-3.29	119.16	122.79
68	A2	1178	PSU	O2-C2-N1	-3.29	119.16	122.79
68	A2	815	PSU	O2-C2-N1	-3.29	119.17	122.79
1	B5	4203	PSU	O2-C2-N1	-3.29	119.17	122.79
68	A2	1368	PSU	O2-C2-N1	-3.29	119.17	122.79
1	B5	1489	A2M	N3-C2-N1	-3.29	123.54	128.68
1	B5	3490	PSU	O2-C2-N1	-3.28	119.18	122.79
68	A2	1348	PSU	O2-C2-N1	-3.28	119.18	122.79
1	B5	4039	PSU	O2-C2-N1	-3.27	119.19	122.79
1	B5	3456	A2M	N3-C2-N1	-3.27	123.57	128.68
1	B5	3371	PSU	O2-C2-N1	-3.27	119.19	122.79
1	B5	4166	PSU	O2-C2-N1	-3.27	119.19	122.79
1	B5	1632	PSU	O2-C2-N1	-3.26	119.20	122.79
68	A2	1679	A2M	N3-C2-N1	-3.26	123.58	128.68
1	B5	4336	A2M	N3-C2-N1	-3.26	123.58	128.68
68	A2	1082	PSU	O2-C2-N1	-3.26	119.20	122.79
68	A2	591	A2M	N3-C2-N1	-3.25	123.60	128.68
68	A2	218	PSU	O2-C2-N1	-3.25	119.22	122.79
68	A2	166	A2M	N3-C2-N1	-3.22	123.64	128.68
1	B5	1810	A2M	N3-C2-N1	-3.22	123.64	128.68
1	B5	3966	6MZ	C9-N6-C6	-3.22	120.10	122.87
1	B5	1270	A2M	N3-C2-N1	-3.22	123.65	128.68
68	A2	1032	A2M	N3-C2-N1	-3.21	123.65	128.68
1	B5	4269	A2M	N3-C2-N1	-3.21	123.66	128.68
1	B5	3492	A2M	N3-C2-N1	-3.21	123.66	128.68
1	B5	3517	A2M	N3-C2-N1	-3.21	123.66	128.68
68	A2	99	A2M	N3-C2-N1	-3.21	123.66	128.68
1	B5	398	A2M	N3-C2-N1	-3.20	123.67	128.68
68	A2	1249	B8N	C4-N3-C2	-3.20	121.41	125.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
68	A2	469	A2M	N3-C2-N1	-3.20	123.68	128.68
1	B5	3557	A2M	N3-C2-N1	-3.19	123.69	128.68
10	B8	69	PSU	O2-C2-N1	-3.19	119.28	122.79
1	B5	400	A2M	N3-C2-N1	-3.19	123.69	128.68
68	A2	1384	A2M	N3-C2-N1	-3.19	123.69	128.68
1	B5	4317	A2M	N3-C2-N1	-3.18	123.70	128.68
68	A2	27	A2M	N3-C2-N1	-3.18	123.71	128.68
68	A2	669	A2M	N3-C2-N1	-3.17	123.73	128.68
68	A2	513	A2M	N3-C2-N1	-3.17	123.73	128.68
1	B5	3599	A2M	N3-C2-N1	-3.16	123.73	128.68
1	B5	2244	A2M	N3-C2-N1	-3.16	123.73	128.68
1	B5	2206	A2M	N3-C2-N1	-3.16	123.74	128.68
1	B5	3562	A2M	N3-C2-N1	-3.14	123.77	128.68
1	B5	3450	A2M	N3-C2-N1	-3.14	123.77	128.68
1	B5	1479	A2M	N3-C2-N1	-3.14	123.77	128.68
1	B5	2630	A2M	N3-C2-N1	-3.14	123.78	128.68
68	A2	485	A2M	N3-C2-N1	-3.13	123.78	128.68
68	A2	577	A2M	N3-C2-N1	-3.11	123.82	128.68
1	B5	3966	6MZ	N3-C2-N1	-3.10	123.83	128.68
68	A2	159	A2M	N3-C2-N1	-3.09	123.85	128.68
1	B5	2658	A2M	N3-C2-N1	-3.07	123.88	128.68
68	A2	628	OMU	O4-C4-C5	-3.04	119.82	125.16
68	A2	1327	OMU	O4-C4-C5	-3.02	119.84	125.16
68	A2	1833	6MZ	N3-C2-N1	-3.02	123.96	128.68
68	A2	172	OMU	O4-C4-C5	-3.02	119.86	125.16
1	B5	2680	OMU	O4-C4-C5	-2.99	119.90	125.16
1	B5	4366	OMU	O4-C4-C5	-2.99	119.91	125.16
1	B5	4052	OMU	O4-C4-C5	-2.99	119.91	125.16
68	A2	1289	OMU	O4-C4-C5	-2.98	119.91	125.16
68	A2	116	OMU	O4-C4-C5	-2.98	119.92	125.16
1	B5	2258	OMU	O4-C4-C5	-2.97	119.94	125.16
68	A2	121	OMU	O4-C4-C5	-2.97	119.94	125.16
1	B5	3973	OMU	O4-C4-C5	-2.96	119.95	125.16
68	A2	1805	OMU	O4-C4-C5	-2.96	119.95	125.16
1	B5	4244	OMU	O4-C4-C5	-2.96	119.95	125.16
68	A2	429	OMU	O4-C4-C5	-2.96	119.95	125.16
1	B5	3657	OMU	O4-C4-C5	-2.95	119.97	125.16
68	A2	1249	B8N	N3-C2-N1	2.95	120.92	116.76
68	A2	1640	G7M	C2-N1-C6	-2.94	119.68	125.10
68	A2	1443	OMU	O4-C4-C5	-2.92	120.02	125.16
68	A2	355	OMU	O4-C4-C5	-2.92	120.03	125.16
1	B5	2206	A2M	C4-C5-N7	-2.77	106.51	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B5	1489	A2M	C4-C5-N7	-2.77	106.51	109.40
1	B5	4269	A2M	C4-C5-N7	-2.75	106.53	109.40
1	B5	4336	A2M	C4-C5-N7	-2.74	106.55	109.40
68	A2	166	A2M	C4-C5-N7	-2.74	106.55	109.40
68	A2	469	A2M	C4-C5-N7	-2.71	106.57	109.40
68	A2	1679	A2M	C4-C5-N7	-2.71	106.57	109.40
68	A2	669	A2M	C4-C5-N7	-2.71	106.57	109.40
68	A2	159	A2M	C4-C5-N7	-2.71	106.58	109.40
1	B5	3450	A2M	C4-C5-N7	-2.71	106.58	109.40
1	B5	1810	A2M	C4-C5-N7	-2.70	106.58	109.40
1	B5	4317	A2M	C4-C5-N7	-2.70	106.59	109.40
68	A2	513	A2M	C4-C5-N7	-2.69	106.60	109.40
1	B5	398	A2M	C4-C5-N7	-2.69	106.60	109.40
68	A2	1032	A2M	C4-C5-N7	-2.68	106.60	109.40
1	B5	2244	A2M	C4-C5-N7	-2.68	106.61	109.40
1	B5	3557	A2M	C4-C5-N7	-2.68	106.61	109.40
68	A2	577	A2M	C4-C5-N7	-2.67	106.61	109.40
1	B5	1270	A2M	C4-C5-N7	-2.67	106.61	109.40
1	B5	3456	A2M	C4-C5-N7	-2.66	106.62	109.40
68	A2	99	A2M	C4-C5-N7	-2.66	106.63	109.40
68	A2	485	A2M	C4-C5-N7	-2.65	106.64	109.40
1	B5	2658	A2M	C4-C5-N7	-2.65	106.64	109.40
68	A2	27	A2M	C4-C5-N7	-2.65	106.64	109.40
1	B5	400	A2M	C4-C5-N7	-2.64	106.64	109.40
1	B5	3562	A2M	C4-C5-N7	-2.63	106.65	109.40
1	B5	3599	A2M	C4-C5-N7	-2.62	106.67	109.40
1	B5	3517	A2M	C4-C5-N7	-2.61	106.67	109.40
1	B5	1479	A2M	C4-C5-N7	-2.60	106.69	109.40
68	A2	1384	A2M	C4-C5-N7	-2.60	106.69	109.40
1	B5	2630	A2M	C4-C5-N7	-2.60	106.69	109.40
1	B5	3514	5MC	C5-C4-N3	-2.58	118.89	121.67
84	An	165	IAS	OD1-CG-CB	-2.58	117.92	125.43
1	B5	3966	6MZ	C4-C5-N7	-2.58	106.72	109.40
1	B5	3492	A2M	C4-C5-N7	-2.57	106.72	109.40
1	B5	4193	5MC	C5-C4-N3	-2.52	118.96	121.67
68	A2	591	A2M	C4-C5-N7	-2.48	106.81	109.40
68	A2	1843	4AC	C5-C4-N4	-2.48	118.61	122.92
27	Au	1	AME	O-C-CA	-2.48	118.29	124.78
1	B5	3550	UY1	CM2-O2'-C2'	-2.46	108.08	114.52
13	BA	216	V5N	O-C-CA	-2.45	118.36	124.78
68	A2	1833	6MZ	C4-C5-N7	-2.43	106.86	109.40
9	Ar	2	SAC	O-C-CA	-2.43	118.42	124.78

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
68	A2	1833	6MZ	C9-N6-C6	-2.40	120.80	122.87
68	A2	868	OMG	C8-N7-C5	2.39	107.53	102.99
1	B5	4369	OMG	C8-N7-C5	2.38	107.53	102.99
68	A2	1338	4AC	C5-C4-N4	-2.38	118.79	122.92
68	A2	1329	OMG	C8-N7-C5	2.38	107.52	102.99
68	A2	684	OMG	C8-N7-C5	2.37	107.51	102.99
1	B5	4138	OMG	C8-N7-C5	2.36	107.49	102.99
1	B5	3676	OMG	C8-N7-C5	2.35	107.47	102.99
1	B5	3974	OMG	C8-N7-C5	2.35	107.47	102.99
68	A2	1338	4AC	C6-C5-C4	2.35	119.84	116.96
1	B5	2719	OMG	C5-C6-N1	2.35	118.10	113.95
32	AZ	2	SAC	O-C-CA	-2.35	118.63	124.78
1	B5	3476	OMG	C8-N7-C5	2.34	107.45	102.99
1	B5	1260	OMG	C8-N7-C5	2.34	107.45	102.99
1	B5	4116	OMG	C8-N7-C5	2.34	107.45	102.99
1	B5	1266	1MA	C8-N7-C5	2.34	107.44	102.99
1	B5	3550	UY1	C6-C5-C4	2.34	119.83	118.20
1	B5	4383	OMG	C8-N7-C5	2.34	107.44	102.99
1	B5	4383	OMG	C5-C6-N1	2.33	118.08	113.95
68	A2	645	OMG	C8-N7-C5	2.33	107.44	102.99
1	B5	1260	OMG	C5-C6-N1	2.33	118.07	113.95
68	A2	602	OMG	C8-N7-C5	2.33	107.43	102.99
1	B5	3942	OMG	C5-C6-N1	2.33	118.06	113.95
1	B5	2267	OMG	C5-C6-N1	2.33	118.06	113.95
1	B5	3359	OMG	C8-N7-C5	2.33	107.42	102.99
10	B8	75	OMG	C5-C6-N1	2.32	118.06	113.95
1	B5	3942	OMG	C8-N7-C5	2.32	107.42	102.99
1	B5	3631	OMG	C5-C6-N1	2.32	118.05	113.95
68	A2	1448	OMG	C8-N7-C5	2.32	107.41	102.99
1	B5	4364	OMG	C8-N7-C5	2.32	107.41	102.99
1	B5	4240	OMG	C8-N7-C5	2.32	107.41	102.99
68	A2	645	OMG	C5-C6-N1	2.32	118.04	113.95
1	B5	4116	OMG	C5-C6-N1	2.31	118.04	113.95
1	B5	1477	OMG	C8-N7-C5	2.31	107.39	102.99
1	B5	4245	OMG	C8-N7-C5	2.31	107.39	102.99
10	B8	75	OMG	C8-N7-C5	2.31	107.39	102.99
1	B5	4166	PSU	C6-C5-C4	-2.31	116.58	118.20
68	A2	510	OMG	C8-N7-C5	2.31	107.39	102.99
1	B5	3524	OMG	C5-C6-N1	2.31	118.02	113.95
1	B5	3524	OMG	C8-N7-C5	2.31	107.38	102.99
1	B5	2207	OMG	C8-N7-C5	2.30	107.38	102.99
1	B5	4138	OMG	C5-C6-N1	2.30	118.02	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B5	3631	OMG	C8-N7-C5	2.30	107.37	102.99
1	B5	3550	UY1	O2-C2-N1	-2.30	120.26	122.79
68	A2	437	OMG	C8-N7-C5	2.30	107.36	102.99
1	B5	3974	OMG	C5-C6-N1	2.30	118.01	113.95
68	A2	1448	OMG	C5-C6-N1	2.29	118.00	113.95
1	B5	3359	OMG	C5-C6-N1	2.29	118.00	113.95
1	B5	1580	OMG	C8-N7-C5	2.29	107.36	102.99
1	B5	1580	OMG	C5-C6-N1	2.29	118.00	113.95
1	B5	2207	OMG	C5-C6-N1	2.29	118.00	113.95
1	B5	4364	OMG	C5-C6-N1	2.29	118.00	113.95
68	A2	437	OMG	C5-C6-N1	2.29	118.00	113.95
68	A2	1329	OMG	C5-C6-N1	2.29	118.00	113.95
1	B5	2719	OMG	C8-N7-C5	2.29	107.35	102.99
1	B5	2194	OMC	O2-C2-N3	-2.29	118.61	122.33
28	Ba	39	V5N	O-C-CA	-2.28	118.80	124.78
1	B5	3476	OMG	C5-C6-N1	2.28	117.98	113.95
1	B5	1266	1MA	C5-C6-N1	2.28	117.29	113.90
68	A2	602	OMG	C5-C6-N1	2.28	117.97	113.95
1	B5	1477	OMG	C5-C6-N1	2.27	117.97	113.95
68	A2	868	OMG	C5-C6-N1	2.27	117.96	113.95
68	A2	1491	OMG	C5-C6-N1	2.27	117.96	113.95
68	A2	510	OMG	C5-C6-N1	2.27	117.95	113.95
1	B5	2267	OMG	C8-N7-C5	2.27	107.31	102.99
1	B5	4240	OMG	C5-C6-N1	2.26	117.94	113.95
1	B5	4369	OMG	C5-C6-N1	2.26	117.94	113.95
68	A2	684	OMG	C5-C6-N1	2.26	117.94	113.95
1	B5	4245	OMG	C5-C6-N1	2.26	117.94	113.95
88	Br	2	SAC	O-C-CA	-2.24	118.90	124.78
68	A2	1491	OMG	C8-N7-C5	2.24	107.26	102.99
1	B5	3676	OMG	C5-C6-N1	2.24	117.90	113.95
68	A2	1327	OMU	O2-C2-N1	-2.23	119.82	122.79
68	A2	628	OMU	O2-C2-N1	-2.22	119.83	122.79
68	A2	1843	4AC	C6-C5-C4	2.22	119.68	116.96
1	B5	2265	OMC	O2-C2-N3	-2.21	118.74	122.33
24	Aw	62	HY3	O-C-CA	-2.21	118.68	124.83
68	A2	1289	OMU	C1'-N1-C2	2.18	121.52	117.57
68	A2	1249	B8N	C5-C4-N3	2.13	120.11	116.17
1	B5	3514	5MC	O2-C2-N3	-2.12	118.88	122.33
1	B5	3573	OMC	O2-C2-N3	-2.09	118.93	122.33
1	B5	4244	OMU	O2-C2-N1	-2.04	120.08	122.79
1	B5	2704	OMC	O2-C2-N3	-2.03	119.03	122.33
1	B5	1632	PSU	O4'-C1'-C2'	2.01	107.98	105.14

There are no chirality outliers.

All (120) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	B5	2207	OMG	O4'-C4'-C5'-O5'
1	B5	2207	OMG	C3'-C4'-C5'-O5'
1	B5	3433	OMC	C2'-C1'-N1-C2
1	B5	3433	OMC	C2'-C1'-N1-C6
1	B5	3599	A2M	C1'-C2'-O2'-CM'
1	B5	4166	PSU	C2'-C1'-C5-C4
1	B5	4166	PSU	C2'-C1'-C5-C6
1	B5	4193	5MC	C2'-C1'-N1-C2
1	B5	4193	5MC	C2'-C1'-N1-C6
1	B5	4336	A2M	C4'-C5'-O5'-P
1	B5	4382	PSU	O4'-C1'-C5-C4
1	B5	4382	PSU	O4'-C1'-C5-C6
1	B5	4382	PSU	C3'-C4'-C5'-O5'
13	BA	216	V5N	O-C-CA-CB
16	BB	245	HIC	CA-CB-CG-ND1
68	A2	429	OMU	C2'-C1'-N1-C2
68	A2	429	OMU	C2'-C1'-N1-C6
68	A2	513	A2M	O4'-C4'-C5'-O5'
68	A2	513	A2M	C3'-C4'-C5'-O5'
68	A2	628	OMU	C2'-C1'-N1-C6
68	A2	645	OMG	O4'-C4'-C5'-O5'
68	A2	1448	OMG	C3'-C4'-C5'-O5'
68	A2	1852	MA6	C5-C6-N6-C9
79	Bm	98	M3L	O-C-CA-CB
68	A2	1249	B8N	N34-C33-C34-O35
68	A2	1338	4AC	N3-C4-N4-C7
68	A2	1338	4AC	O7-C7-N4-C4
68	A2	1338	4AC	CM7-C7-N4-C4
68	A2	1843	4AC	N3-C4-N4-C7
68	A2	1843	4AC	C5-C4-N4-C7
68	A2	1843	4AC	O7-C7-N4-C4
68	A2	1843	4AC	CM7-C7-N4-C4
68	A2	628	OMU	C2'-C1'-N1-C2
1	B5	398	A2M	O4'-C4'-C5'-O5'
1	B5	398	A2M	C3'-C4'-C5'-O5'
1	B5	1489	A2M	O4'-C4'-C5'-O5'
1	B5	3517	A2M	O4'-C4'-C5'-O5'
1	B5	3517	A2M	C3'-C4'-C5'-O5'
68	A2	99	A2M	O4'-C4'-C5'-O5'
68	A2	645	OMG	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
68	A2	669	A2M	O4'-C4'-C5'-O5'
68	A2	669	A2M	C3'-C4'-C5'-O5'
27	Au	1	AME	CT2-CT1-N-CA
27	Au	1	AME	OT-CT1-N-CA
68	A2	429	OMU	O4'-C1'-N1-C2
68	A2	1249	B8N	N34-C33-C34-O36
1	B5	1489	A2M	C3'-C4'-C5'-O5'
1	B5	4382	PSU	O4'-C4'-C5'-O5'
68	A2	684	OMG	O4'-C4'-C5'-O5'
68	A2	429	OMU	O4'-C1'-N1-C6
68	A2	99	A2M	C3'-C4'-C5'-O5'
68	A2	577	A2M	C3'-C4'-C5'-O5'
68	A2	1448	OMG	O4'-C4'-C5'-O5'
68	A2	1640	G7M	O4'-C4'-C5'-O5'
68	A2	1640	G7M	C3'-C4'-C5'-O5'
68	A2	469	A2M	O4'-C4'-C5'-O5'
68	A2	1249	B8N	C32-C33-C34-O36
1	B5	3576	PSU	C4'-C5'-O5'-P
68	A2	645	OMG	C4'-C5'-O5'-P
68	A2	577	A2M	O4'-C4'-C5'-O5'
32	AZ	2	SAC	C-CA-N-C1A
32	AZ	2	SAC	CB-CA-N-C1A
1	B5	2680	OMU	C3'-C2'-O2'-CM2
1	B5	3619	OMC	C3'-C2'-O2'-CM2
1	B5	4369	OMG	C3'-C2'-O2'-CM2
68	A2	355	OMU	C3'-C2'-O2'-CM2
84	An	165	IAS	C-CA-CB-CG
1	B5	3619	OMC	C4'-C5'-O5'-P
3	Bb	5	MLZ	N-CA-CB-CG
68	A2	802	PSU	C3'-C4'-C5'-O5'
68	A2	1249	B8N	C32-C33-C34-O35
1	B5	4193	5MC	O4'-C1'-N1-C6
1	B5	4246	PSU	C4'-C5'-O5'-P
68	A2	1852	MA6	C4'-C5'-O5'-P
68	A2	1852	MA6	C5-C6-N6-C10
68	A2	27	A2M	O4'-C4'-C5'-O5'
68	A2	628	OMU	O4'-C1'-N1-C6
68	A2	628	OMU	O4'-C1'-N1-C2
1	B5	1820	OMC	C3'-C2'-O2'-CM2
1	B5	2258	OMU	C3'-C2'-O2'-CM2
1	B5	2267	OMG	C3'-C2'-O2'-CM2
1	B5	4193	5MC	O4'-C1'-N1-C2

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Mol	Chain	Res	Type	Atoms
1	B5	3433	OMC	O4'-C1'-N1-C6
1	B5	3550	UY1	C4'-C5'-O5'-P
68	A2	684	OMG	C3'-C4'-C5'-O5'
84	An	165	IAS	N-CA-CB-CG
1	B5	4166	PSU	O4'-C1'-C5-C4
1	B5	398	A2M	C3'-C2'-O2'-CM'
1	B5	1260	OMG	C3'-C2'-O2'-CM2
1	B5	1284	OMC	C3'-C2'-O2'-CM2
1	B5	2265	OMC	C3'-C2'-O2'-CM2
1	B5	2647	OMC	C3'-C2'-O2'-CM2
1	B5	2667	OMC	C3'-C2'-O2'-CM2
1	B5	2704	OMC	C3'-C2'-O2'-CM2
1	B5	3573	OMC	C3'-C2'-O2'-CM2
1	B5	4138	OMG	C3'-C2'-O2'-CM2
68	A2	116	OMU	C3'-C2'-O2'-CM2
68	A2	1448	OMG	C3'-C2'-O2'-CM2
68	A2	429	OMU	O4'-C4'-C5'-O5'
68	A2	1032	A2M	O4'-C4'-C5'-O5'
1	B5	2194	OMC	C2'-C1'-N1-C2
1	B5	3492	A2M	O4'-C4'-C5'-O5'
1	B5	4317	A2M	O4'-C4'-C5'-O5'
68	A2	510	OMG	O4'-C4'-C5'-O5'
1	B5	1820	OMC	C1'-C2'-O2'-CM2
1	B5	2667	OMC	C1'-C2'-O2'-CM2
1	B5	3476	OMG	C1'-C2'-O2'-CM2
1	B5	3631	OMG	C1'-C2'-O2'-CM2
1	B5	1810	A2M	C3'-C2'-O2'-CM'
1	B5	3476	OMG	C3'-C2'-O2'-CM2
1	B5	3631	OMG	C3'-C2'-O2'-CM2
68	A2	1443	OMU	C3'-C2'-O2'-CM2
1	B5	3433	OMC	O4'-C1'-N1-C2
24	Aw	62	HY3	O-C-CA-C3
1	B5	4166	PSU	O4'-C1'-C5-C6
1	B5	2194	OMC	O4'-C4'-C5'-O5'
68	A2	469	A2M	C3'-C4'-C5'-O5'
68	A2	27	A2M	C3'-C4'-C5'-O5'
16	BB	245	HIC	CA-CB-CG-CD2
68	A2	802	PSU	C4'-C5'-O5'-P

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 758 ligands modelled in this entry, 295 are unknown and 428 are monoatomic - leaving 35 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	$\# Z > 2$
93	SPD	B5	5182	-	9,9,9	0.15	0	8,8,8	0.18	0
93	SPD	B5	5100	-	9,9,9	0.15	0	8,8,8	0.17	0
93	SPD	B5	5241	-	9,9,9	0.16	0	8,8,8	0.16	0
93	SPD	A2	1922	-	9,9,9	0.16	0	8,8,8	0.18	0
93	SPD	B5	4922	-	9,9,9	0.15	0	8,8,8	0.19	0
93	SPD	B5	4982	-	9,9,9	0.15	0	8,8,8	0.19	0
93	SPD	A2	1930	-	9,9,9	0.15	0	8,8,8	0.18	0
93	SPD	B5	5162	-	9,9,9	0.15	0	8,8,8	0.19	0
93	SPD	A2	1929	-	9,9,9	0.15	0	8,8,8	0.17	0
93	SPD	A2	1915	-	9,9,9	0.16	0	8,8,8	0.17	0
95	SPM	B5	5059	-	13,13,13	0.15	0	12,12,12	0.14	0
93	SPD	B5	5202	-	9,9,9	0.16	0	8,8,8	0.19	0
93	SPD	B5	5000	-	9,9,9	0.15	0	8,8,8	0.17	0
93	SPD	B5	5344	-	9,9,9	0.16	0	8,8,8	0.18	0
93	SPD	B5	5323	-	9,9,9	0.15	0	8,8,8	0.18	0
93	SPD	A2	1955	-	9,9,9	0.15	0	8,8,8	0.17	0
93	SPD	B5	5079	-	9,9,9	0.15	0	8,8,8	0.19	0
95	SPM	B5	5194	-	13,13,13	0.15	0	12,12,12	0.21	0
93	SPD	B5	4941	-	9,9,9	0.15	0	8,8,8	0.18	0
93	SPD	B5	5141	-	9,9,9	0.15	0	8,8,8	0.20	0
93	SPD	B5	5222	-	9,9,9	0.15	0	8,8,8	0.18	0
93	SPD	B5	5303	-	9,9,9	0.15	0	8,8,8	0.15	0
93	SPD	A2	1908	-	9,9,9	0.15	0	8,8,8	0.18	0
93	SPD	B5	5039	-	9,9,9	0.15	0	8,8,8	0.19	0
93	SPD	B5	5366	-	9,9,9	0.16	0	8,8,8	0.22	0
96	GTP	B7	214	7	26,34,34	0.94	2 (7%)	32,54,54	0.78	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
93	SPD	B5	5120	-	9,9,9	0.15	0	8,8,8	0.18	0
95	SPM	A2	1962	-	13,13,13	0.15	0	12,12,12	0.16	0
93	SPD	B5	4962	-	9,9,9	0.16	0	8,8,8	0.18	0
93	SPD	A2	1939	-	9,9,9	0.16	0	8,8,8	0.17	0
93	SPD	B5	5387	-	9,9,9	0.15	0	8,8,8	0.19	0
93	SPD	B5	4902	-	9,9,9	0.16	0	8,8,8	0.17	0
97	IHP	DB	901	-	36,36,36	1.55	6 (16%)	54,60,60	1.14	4 (7%)
93	SPD	A2	1947	-	9,9,9	0.15	0	8,8,8	0.18	0
93	SPD	B5	5019	-	9,9,9	0.16	0	8,8,8	0.19	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '2' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
93	SPD	B5	5182	-	-	0/7/7/7	-
93	SPD	B5	5100	-	-	0/7/7/7	-
93	SPD	B5	5241	-	-	1/7/7/7	-
93	SPD	A2	1922	-	-	0/7/7/7	-
93	SPD	B5	4922	-	-	0/7/7/7	-
93	SPD	B5	4982	-	-	1/7/7/7	-
93	SPD	A2	1930	-	-	0/7/7/7	-
93	SPD	B5	5162	-	-	0/7/7/7	-
93	SPD	A2	1929	-	-	0/7/7/7	-
93	SPD	A2	1915	-	-	0/7/7/7	-
95	SPM	B5	5059	-	-	0/11/11/11	-
93	SPD	B5	5202	-	-	1/7/7/7	-
93	SPD	B5	5000	-	-	0/7/7/7	-
93	SPD	B5	5344	-	-	1/7/7/7	-
93	SPD	B5	5323	-	-	1/7/7/7	-
93	SPD	A2	1955	-	-	0/7/7/7	-
93	SPD	B5	5079	-	-	0/7/7/7	-
95	SPM	B5	5194	-	-	1/11/11/11	-
93	SPD	B5	4941	-	-	0/7/7/7	-
93	SPD	B5	5141	-	-	0/7/7/7	-
93	SPD	B5	5222	-	-	0/7/7/7	-
93	SPD	B5	5303	-	-	1/7/7/7	-
93	SPD	A2	1908	-	-	1/7/7/7	-
93	SPD	B5	5039	-	-	0/7/7/7	-
93	SPD	B5	5366	-	-	0/7/7/7	-
96	GTP	B7	214	7	-	0/18/38/38	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
93	SPD	B5	5120	-	-	0/7/7/7	-
95	SPM	A2	1962	-	-	1/11/11/11	-
93	SPD	B5	4962	-	-	0/7/7/7	-
93	SPD	A2	1939	-	-	0/7/7/7	-
93	SPD	B5	5387	-	-	1/7/7/7	-
93	SPD	B5	4902	-	-	1/7/7/7	-
97	IHP	DB	901	-	-	10/30/54/54	0/1/1/1
93	SPD	A2	1947	-	-	1/7/7/7	-
93	SPD	B5	5019	-	-	0/7/7/7	-

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
97	DB	901	IHP	P2-O12	3.51	1.65	1.59
97	DB	901	IHP	P5-O15	3.43	1.65	1.59
97	DB	901	IHP	P1-O11	3.27	1.65	1.59
97	DB	901	IHP	P6-O16	3.22	1.65	1.59
97	DB	901	IHP	P3-O13	3.20	1.65	1.59
97	DB	901	IHP	P4-O14	3.19	1.65	1.59
96	B7	214	GTP	C5-C6	-2.59	1.42	1.47
96	B7	214	GTP	C8-N7	-2.04	1.31	1.35

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
97	DB	901	IHP	C6-C5-C4	4.35	119.94	110.41
97	DB	901	IHP	C5-C4-C3	3.62	118.33	110.41
97	DB	901	IHP	C5-C6-C1	3.52	118.12	110.41
97	DB	901	IHP	C4-C3-C2	2.19	115.21	110.41

There are no chirality outliers.

All (22) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
97	DB	901	IHP	C1-C2-O12-P2
97	DB	901	IHP	C4-C5-O15-P5
97	DB	901	IHP	C4-O14-P4-O24
95	A2	1962	SPM	C8-C9-N10-C11
97	DB	901	IHP	C2-O12-P2-O32
97	DB	901	IHP	C4-O14-P4-O34
97	DB	901	IHP	C1-O11-P1-O21

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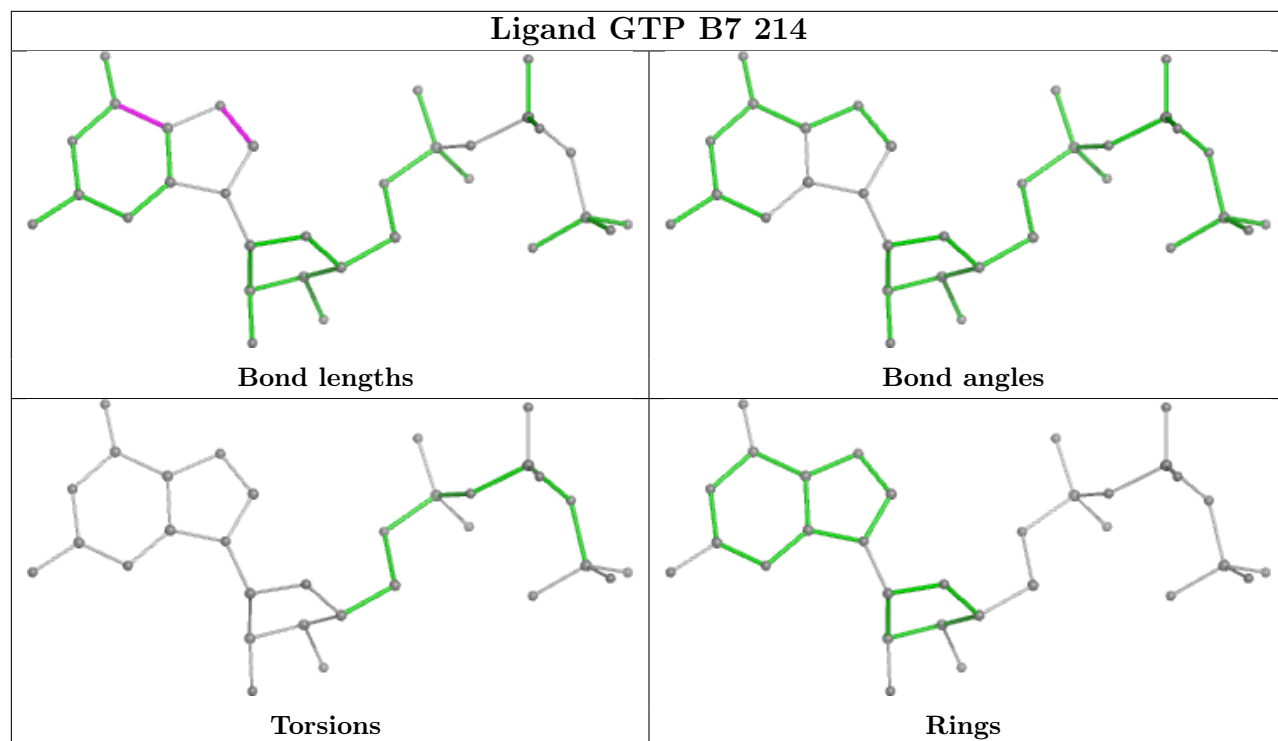
Continued from previous page...

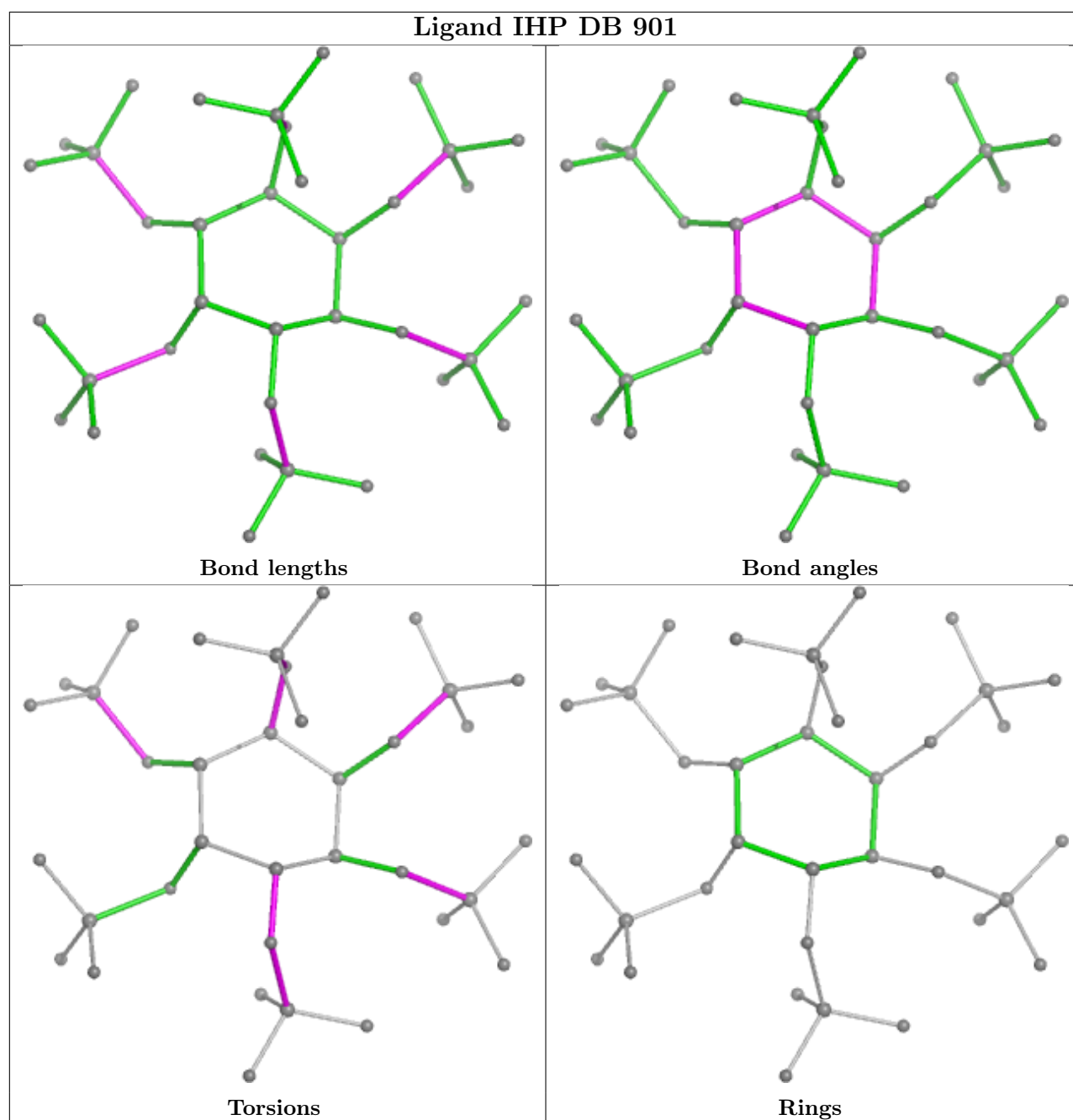
Mol	Chain	Res	Type	Atoms
93	B5	5323	SPD	C2-C3-C4-C5
93	A2	1947	SPD	C2-C3-C4-C5
93	B5	4982	SPD	C4-C5-N6-C7
93	A2	1908	SPD	C2-C3-C4-C5
97	DB	901	IHP	C1-O11-P1-O41
97	DB	901	IHP	C2-O12-P2-O42
97	DB	901	IHP	C5-O15-P5-O45
97	DB	901	IHP	C6-O16-P6-O36
93	B5	4902	SPD	C2-C3-C4-C5
93	B5	5344	SPD	C2-C3-C4-C5
93	B5	5241	SPD	C2-C3-C4-C5
93	B5	5387	SPD	C2-C3-C4-C5
93	B5	5303	SPD	C2-C3-C4-C5
93	B5	5202	SPD	C2-C3-C4-C5
95	B5	5194	SPM	C6-C7-C8-C9

There are no ring outliers.

No monomer is involved in short contacts.

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





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

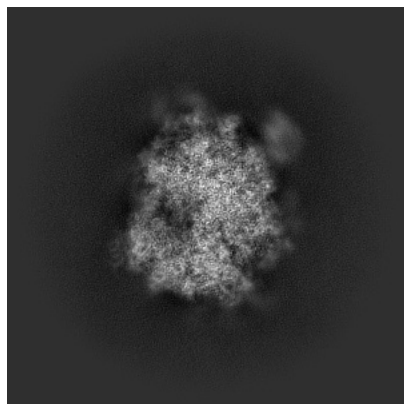
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-50126. These allow visual inspection of the internal detail of the map and identification of artifacts.

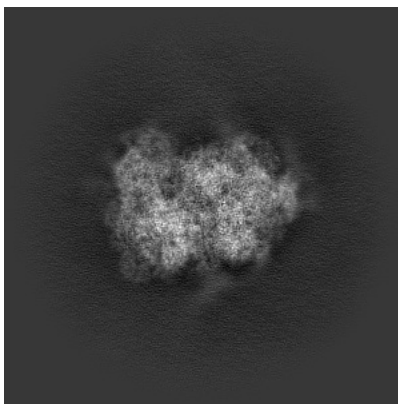
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

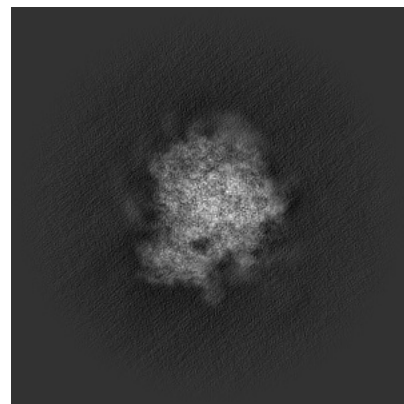
6.1.1 Primary map



X

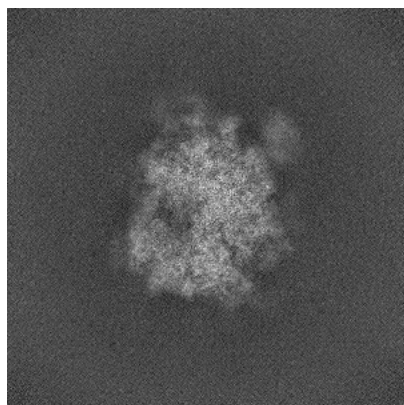


Y

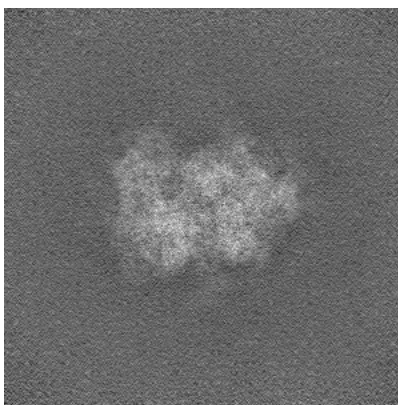


Z

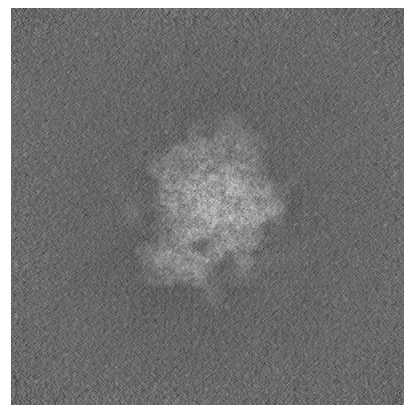
6.1.2 Raw map



X



Y

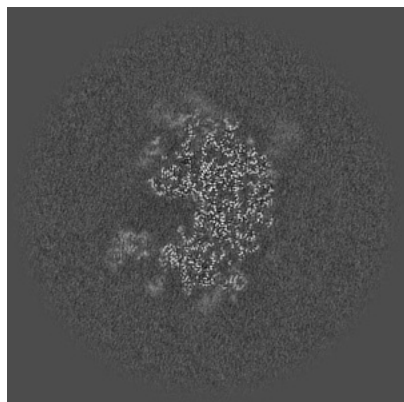


Z

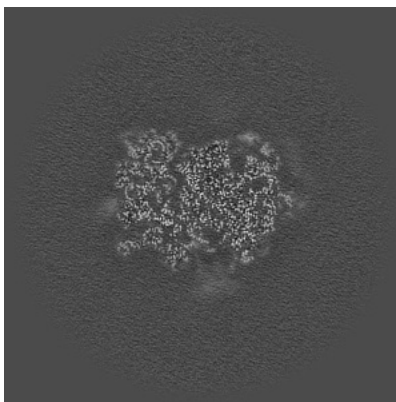
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

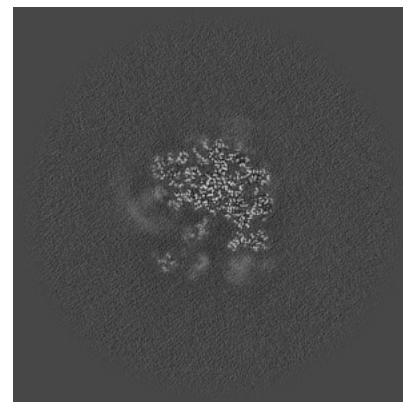
6.2.1 Primary map



X Index: 280

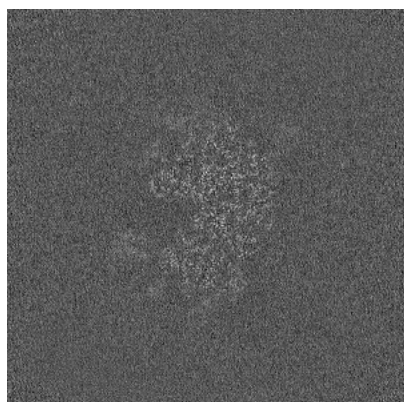


Y Index: 280

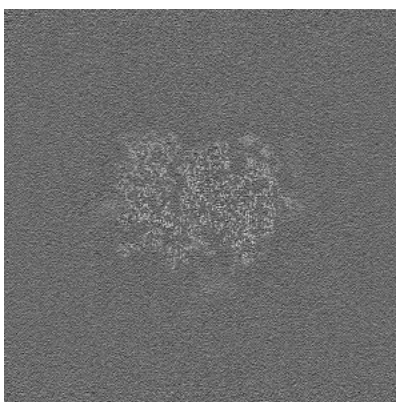


Z Index: 280

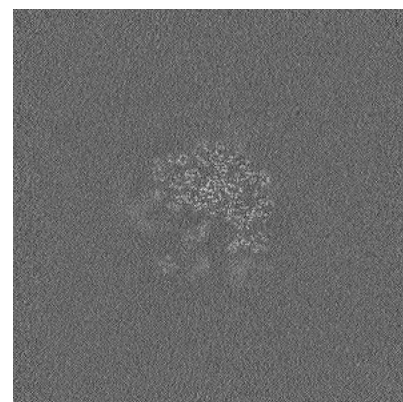
6.2.2 Raw map



X Index: 280



Y Index: 280

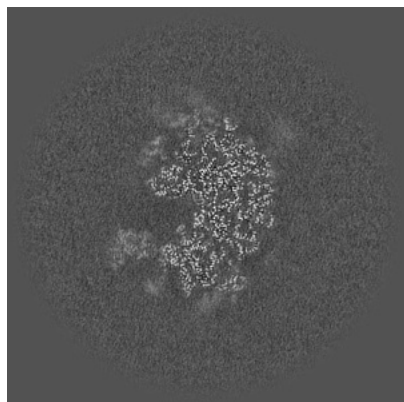


Z Index: 280

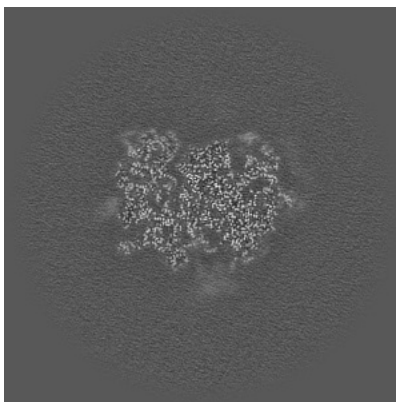
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

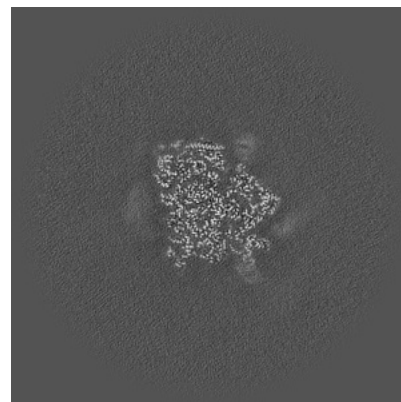
6.3.1 Primary map



X Index: 279

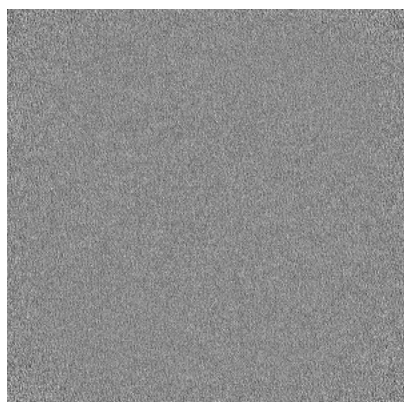


Y Index: 281

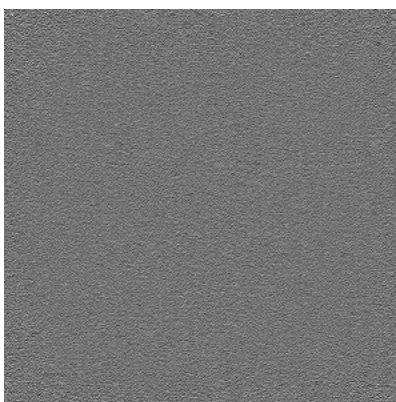


Z Index: 309

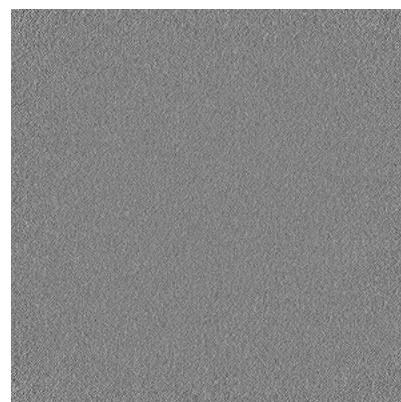
6.3.2 Raw map



X Index: 0



Y Index: 0

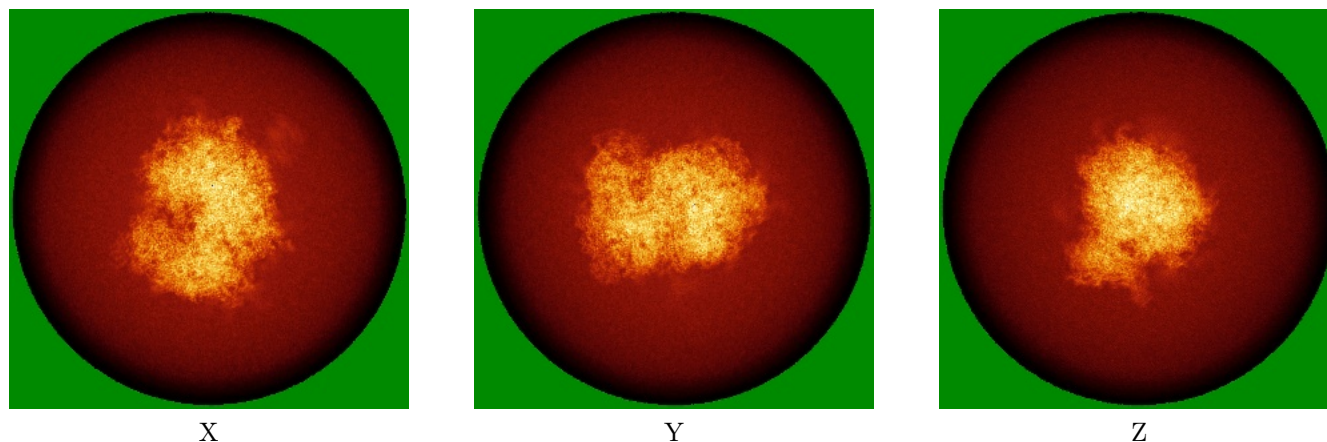


Z Index: 0

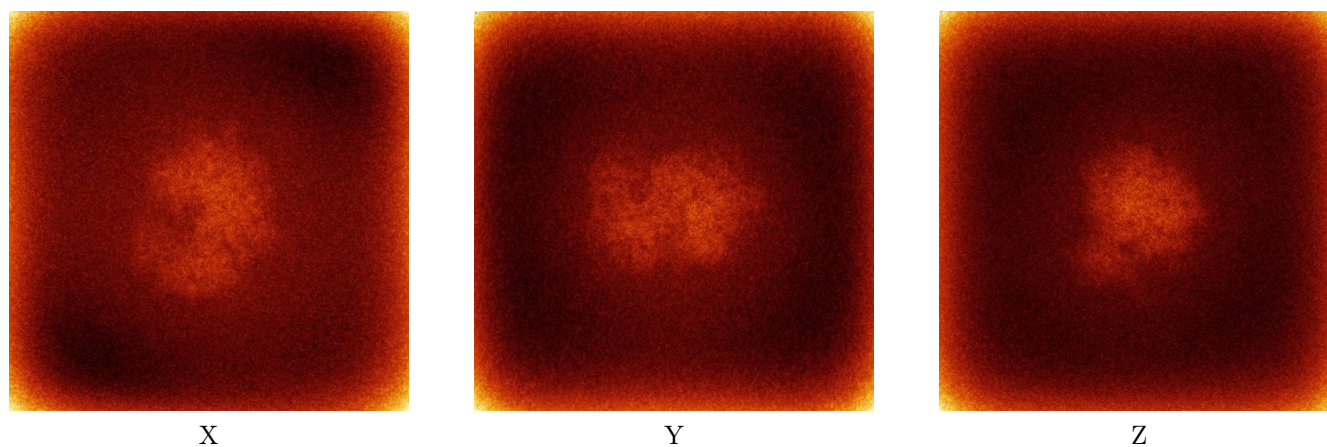
The images above show the largest variance slices of the map in three orthogonal directions.

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

6.4.1 Primary map



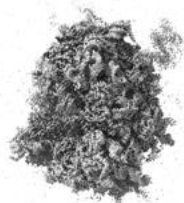
6.4.2 Raw map



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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



X



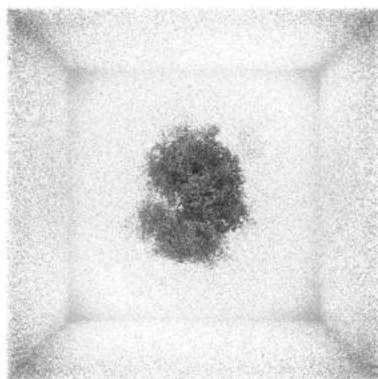
Y



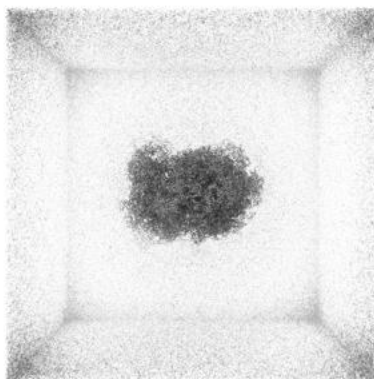
Z

The images above show the 3D surface view of the map at the recommended contour level 0.25. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

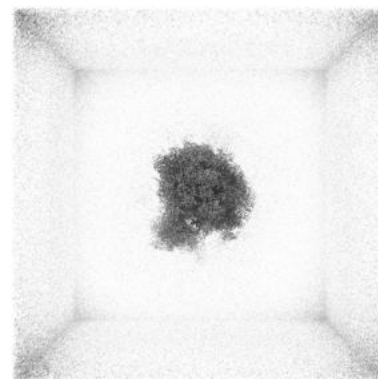
6.5.2 Raw map



X



Y



Z

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

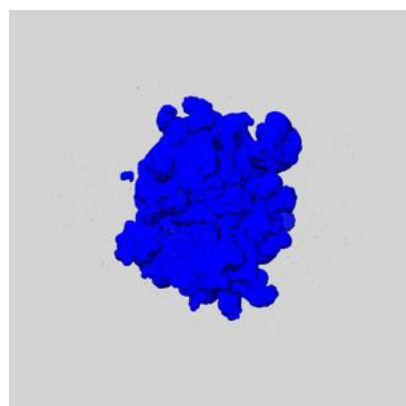
6.6 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

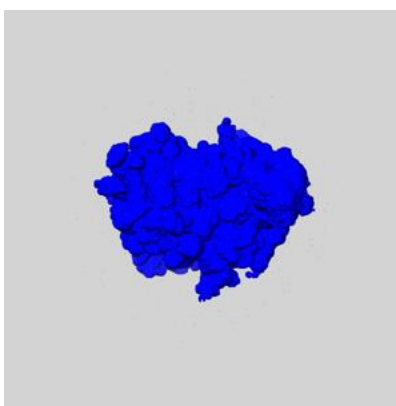
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

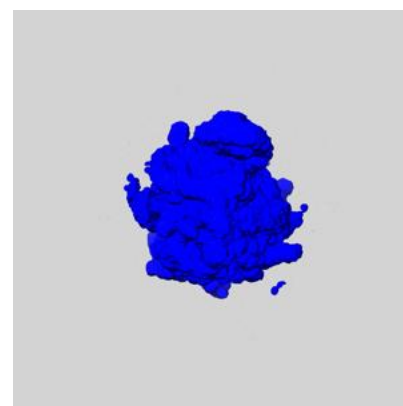
6.6.1 emd_50126_msk_1.map [i](#)



X

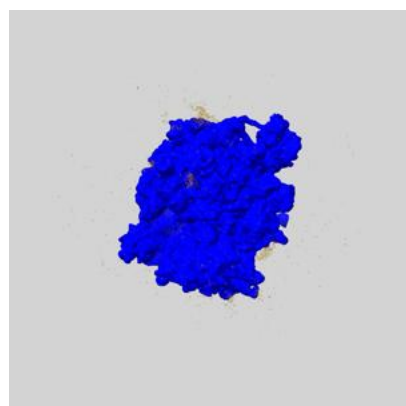


Y

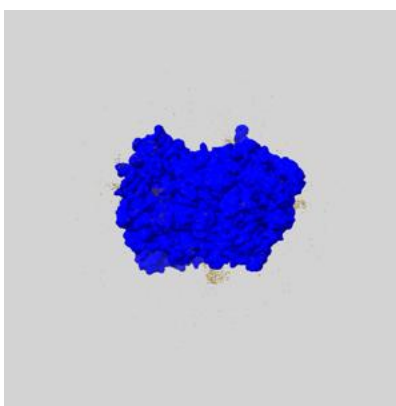


Z

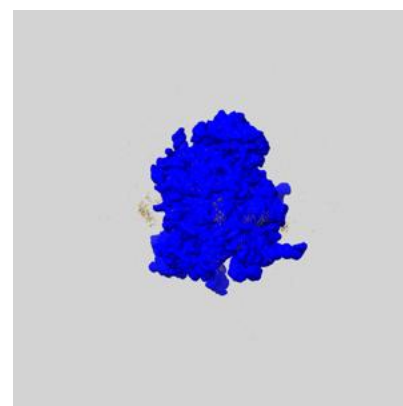
6.6.2 emd_50126_msk_2.map [i](#)



X



Y

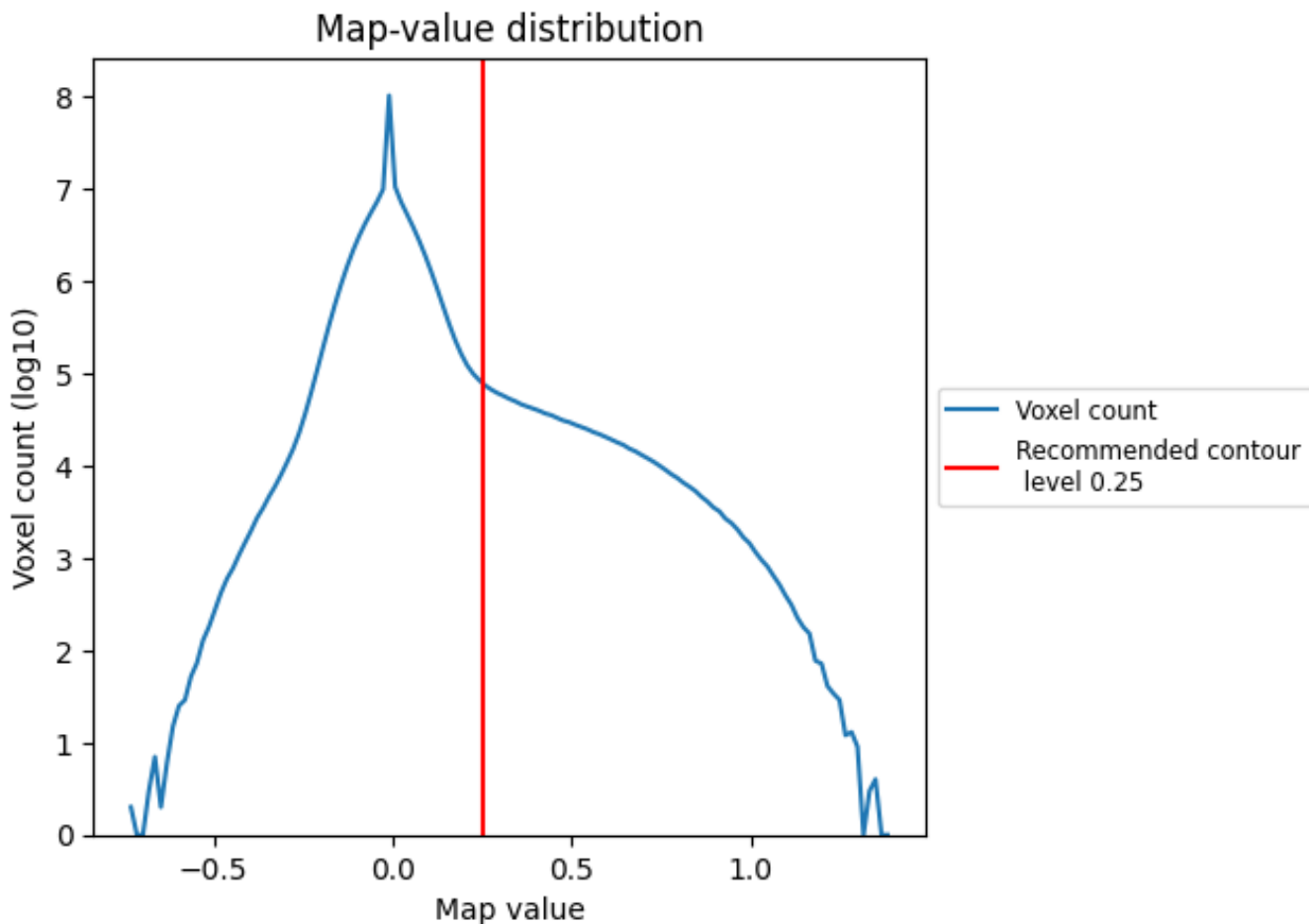


Z

7 Map analysis [i](#)

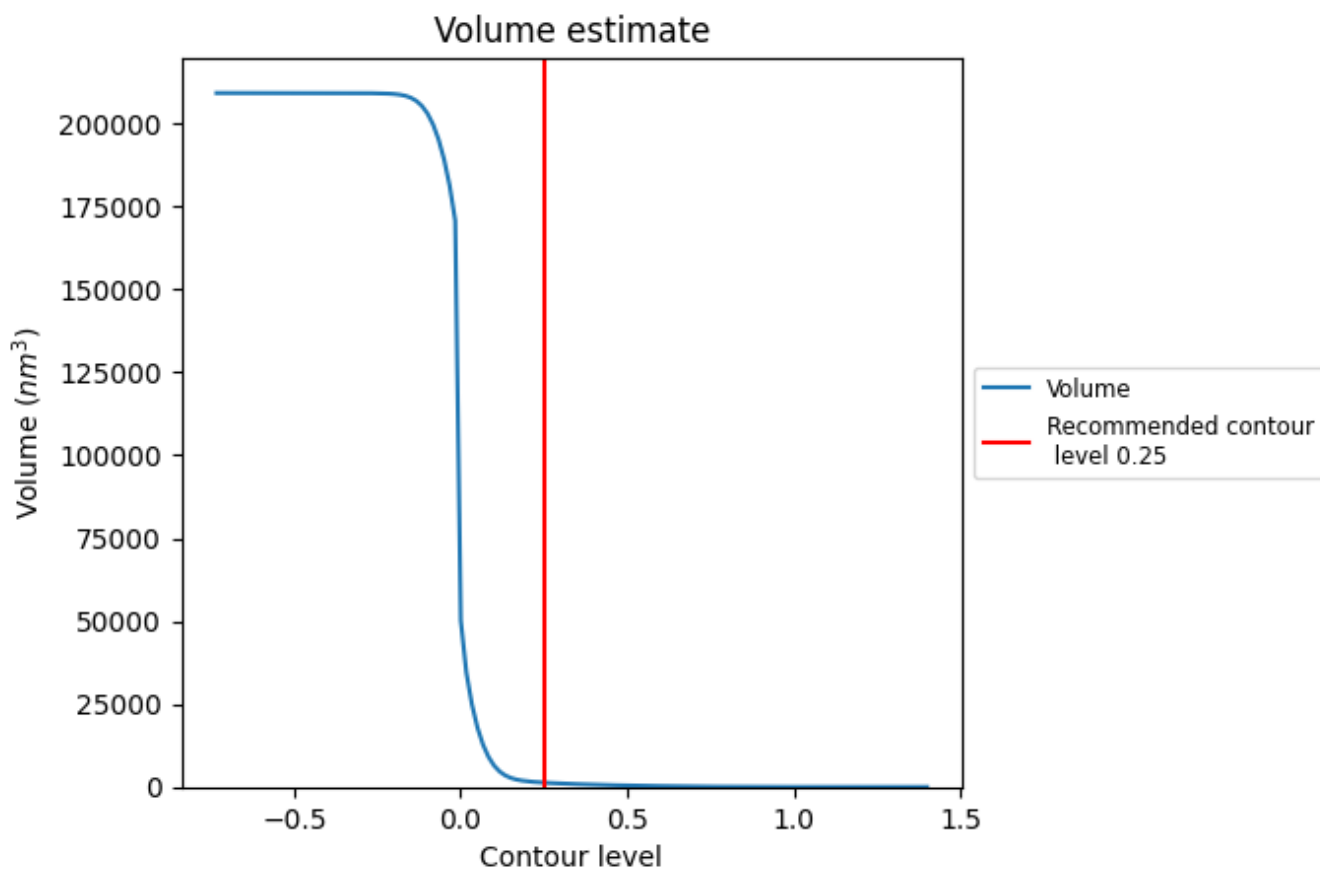
This section contains the results of statistical analysis of the map.

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.

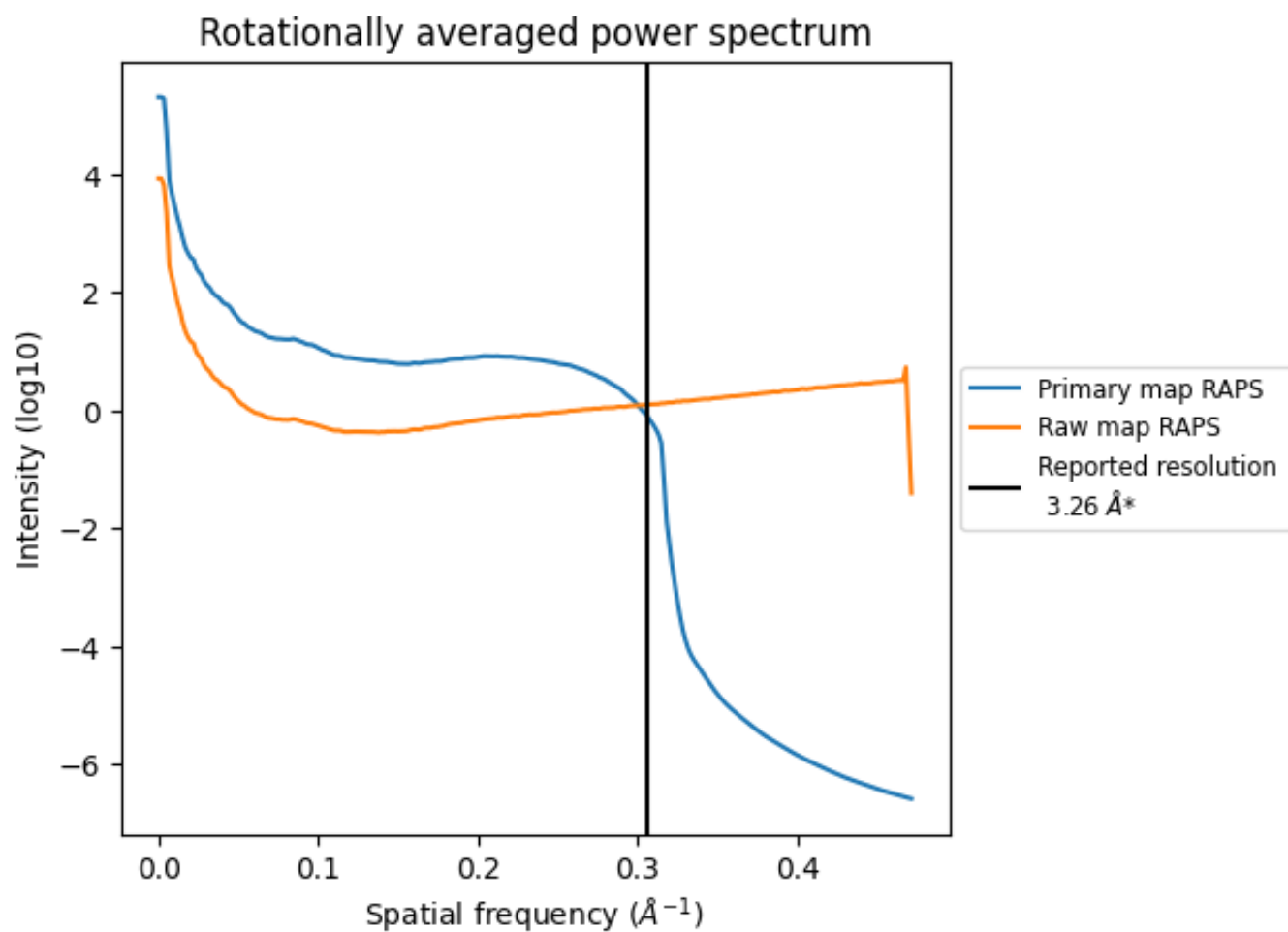
7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 1299 nm³; this corresponds to an approximate mass of 1173 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

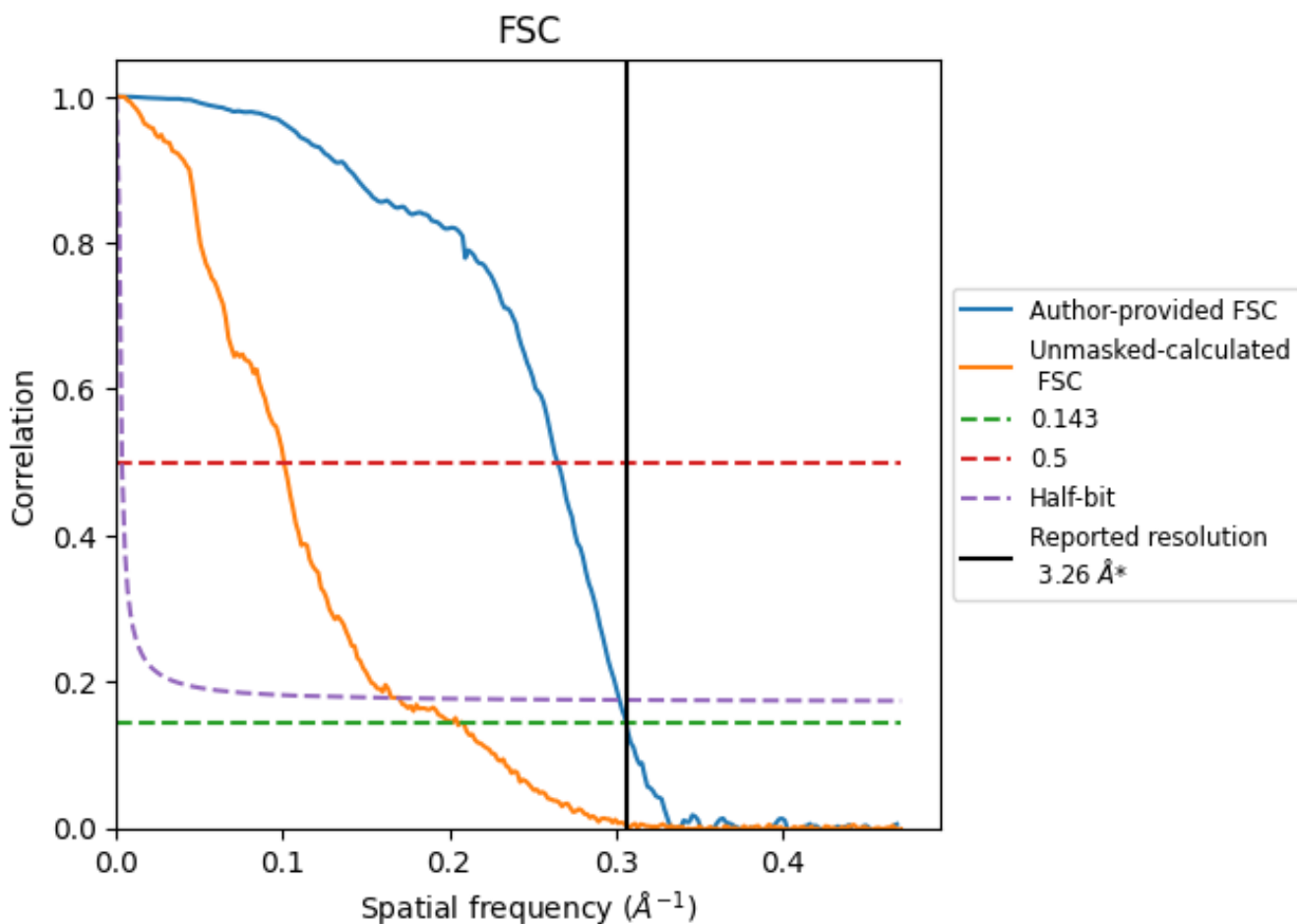


*Reported resolution corresponds to spatial frequency of 0.307 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.307 Å⁻¹

8.2 Resolution estimates

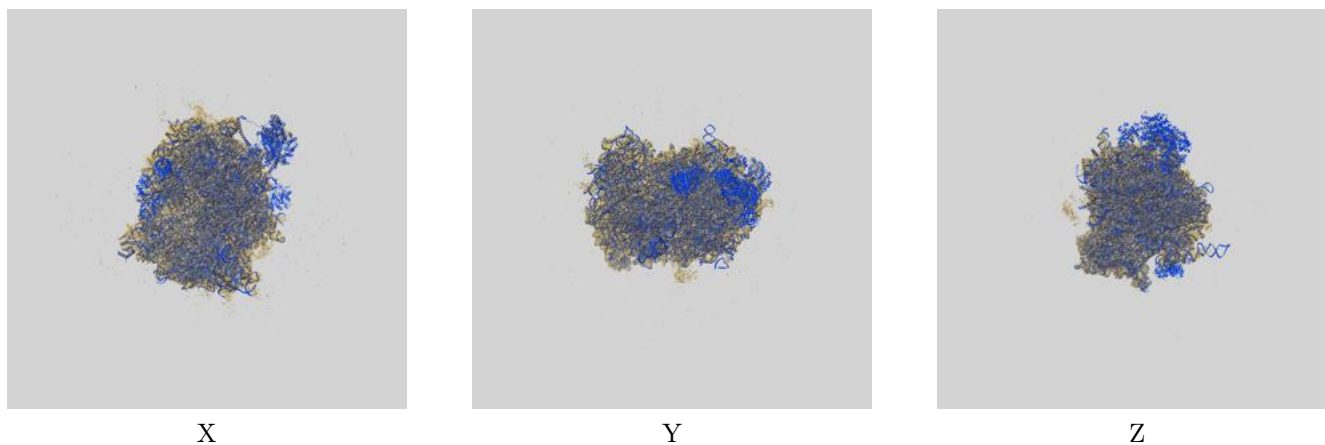
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.26	-	-
Author-provided FSC curve	3.26	3.77	3.31
Unmasked-calculated*	4.88	9.93	5.87

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.88 differs from the reported value 3.26 by more than 10 %

9 Map-model fit [i](#)

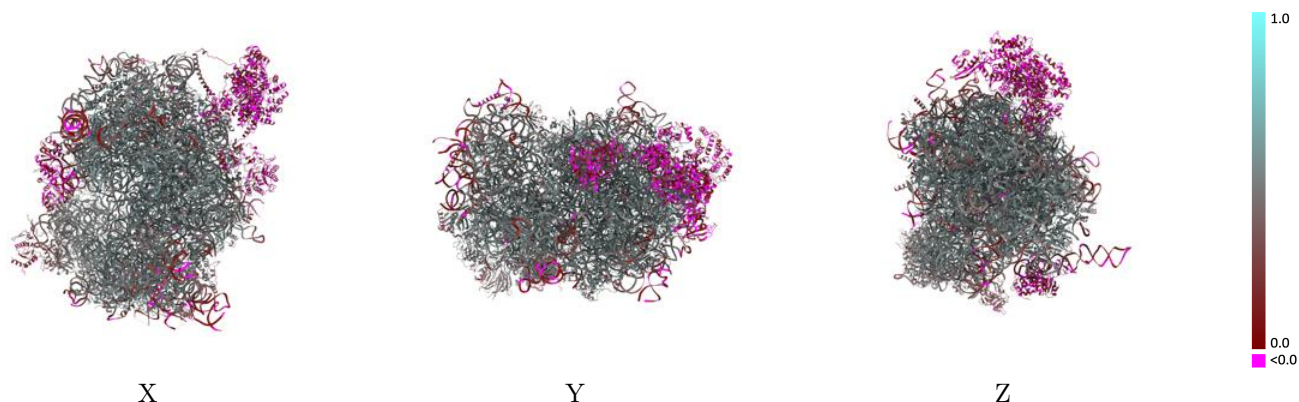
This section contains information regarding the fit between EMDB map EMD-50126 and PDB model 9F1D. Per-residue inclusion information can be found in section [3](#) on page [35](#).

9.1 Map-model overlay [i](#)



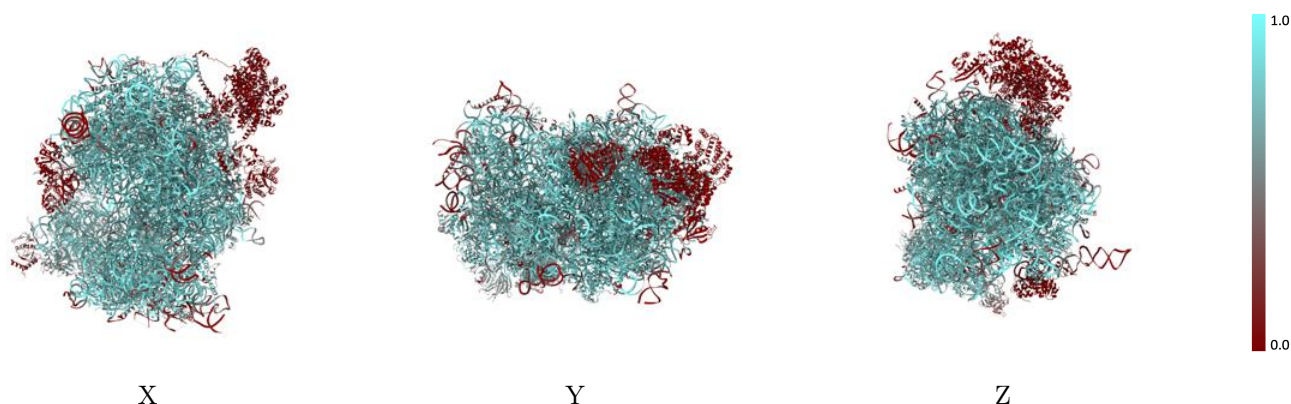
The images above show the 3D surface view of the map at the recommended contour level 0.25 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



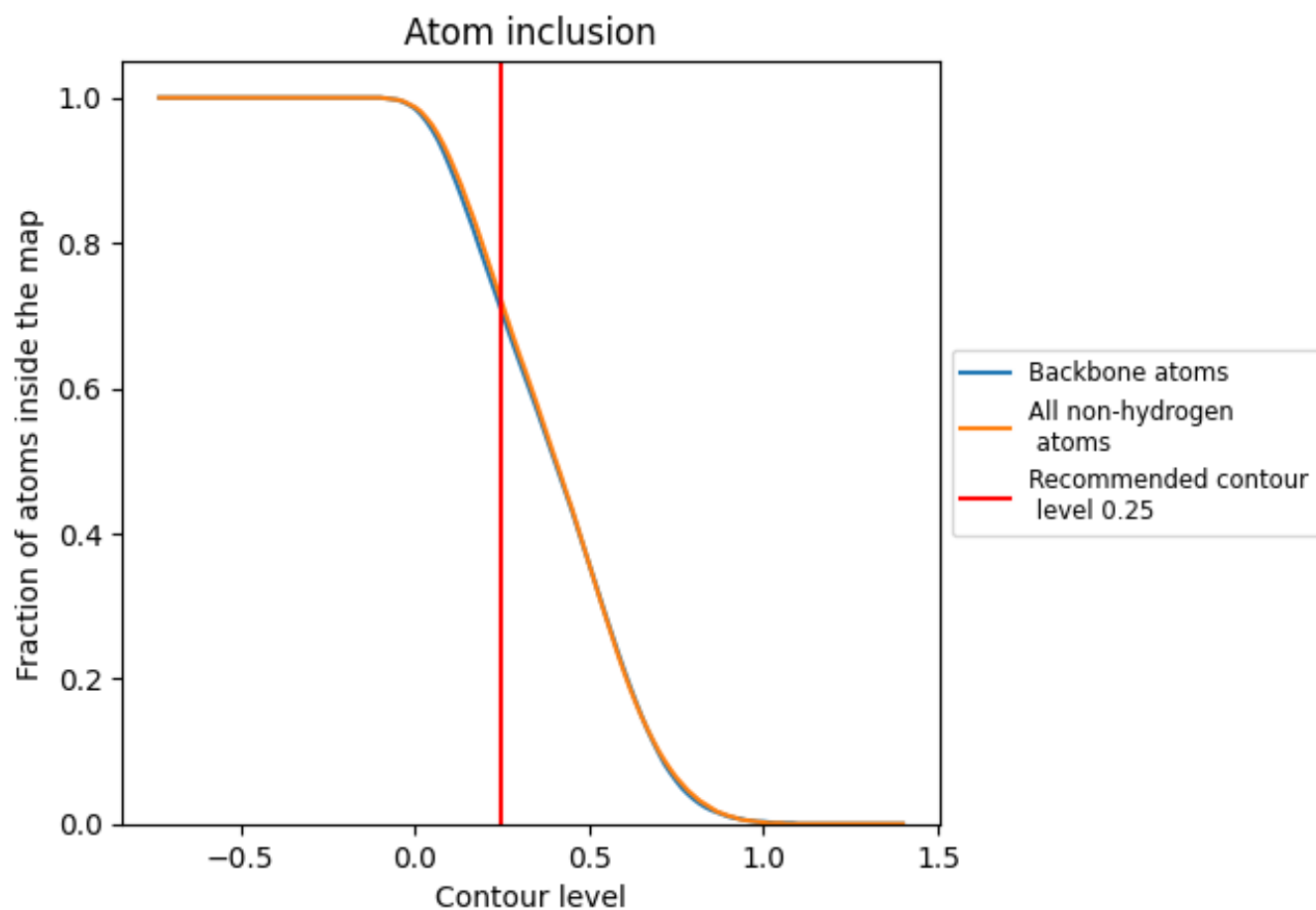
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.25).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 70% of all backbone atoms, 72% 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 (0.25) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7170	 0.4470
A2	 0.8080	 0.4530
AA	 0.6850	 0.4930
AB	 0.6560	 0.4740
AC	 0.3050	 0.2390
AD	 0.5910	 0.4330
AE	 0.7460	 0.5090
AF	 0.5890	 0.3900
AG	 0.7760	 0.4930
AH	 0.1390	 0.4330
AT	 0.6570	 0.4410
AZ	 0.7330	 0.4930
Aa	 0.6800	 0.4900
Ab	 0.7510	 0.5170
Ac	 0.6280	 0.4370
Ad	 0.7350	 0.5090
Ae	 0.6540	 0.4590
Af	 0.6250	 0.4190
Ag	 0.6330	 0.4300
Ah	 0.7210	 0.4960
Ai	 0.7410	 0.4910
Aj	 0.6380	 0.4050
Ak	 0.6870	 0.4880
Al	 0.2070	 0.1750
Am	 0.7440	 0.5220
An	 0.7090	 0.5030
Ao	 0.5990	 0.4060
Ap	 0.6840	 0.4750
Aq	 0.6850	 0.4660
Ar	 0.6320	 0.4270
As	 0.6770	 0.4480
At	 0.5950	 0.4170
Au	 0.7270	 0.5060
Av	 0.7710	 0.5370
Aw	 0.7310	 0.5300

































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Chain	Atom inclusion	Q-score
Ax	0.6910	0.4590
Ay	0.5290	0.3970
Az	0.6240	0.5030
B	0.7700	0.5000
B5	0.8200	0.4700
B7	0.9110	0.5140
B8	0.8540	0.4930
BA	0.7870	0.5470
BB	0.7850	0.5380
BC	0.7910	0.5390
BE	0.7060	0.4750
BF	0.7870	0.5360
BG	0.6950	0.4820
BH	0.7190	0.5080
BI	0.7680	0.5320
BJ	0.7060	0.4860
BK	0.1700	0.4450
BL	0.7420	0.5090
BM	0.7890	0.5160
BN	0.8280	0.5550
BO	0.7800	0.5350
BP	0.7600	0.5320
BQ	0.7910	0.5450
BR	0.7290	0.4960
BS	0.8040	0.5420
BT	0.7460	0.5190
BU	0.6880	0.4870
BV	0.7030	0.5220
BW	0.5320	0.3540
BX	0.7420	0.5200
BY	0.7450	0.5230
BZ	0.7650	0.5120
Ba	0.8140	0.5480
Bb	0.6580	0.4560
Bc	0.6700	0.4790
Bd	0.7210	0.5170
Be	0.7710	0.5390
Bf	0.8200	0.5510
Bg	0.7350	0.5160
Bh	0.7550	0.5060
Bi	0.7220	0.5030
Bj	0.8430	0.5550

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Chain	Atom inclusion	Q-score
Bk	 0.6550	 0.4630
Bl	 0.7420	 0.5300
Bm	 0.7780	 0.5440
Bo	 0.7290	 0.5210
Bp	 0.7370	 0.5320
Br	 0.7970	 0.5410
Bs	 0.0190	 0.0810
Bt	 0.0130	 0.0520
Ct	 0.0360	 0.0630
Cu	 0.1890	 0.1950
DA	 0.0010	 0.0140
DB	 0.0490	 0.0560
DC	 0.0250	 0.0300
DD	 0.0000	 0.0100
EA	 0.0010	 0.0590