Full wwPDB EM Validation Report ⓘ

Dec 16, 2024 – 11:09 PM EST

PDB ID	:	7UCK
EMDB ID	:	EMD-26445
Title	:	80S translation initiation complex with ac4c(-1) mRNA and Harringtonine
Authors	:	Yang, R.; Arango, D.; Sturgill, D.; Oberdoerffer, S.
Deposited on	:	2022-03-16
Resolution	:	2.80 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

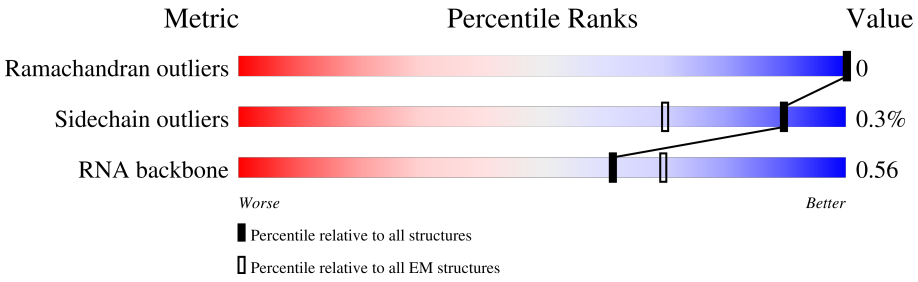
EMDB validation analysis	:	0.0.1.dev113
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.40

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 2.80 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
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 <=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	2	76	47% 79% 14% • 5%
2	1	6	67% 33%
3	5	3546	10% 77% 22% •
4	7	120	• 92% 8%
5	8	156	7% 78% 19% •
6	9	1698	10% 78% 21% •
7	A	248	100%
8	B	394	11% 100%

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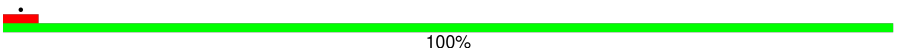
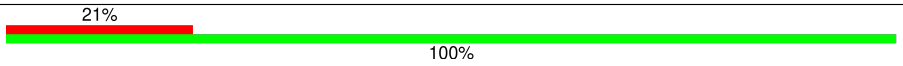
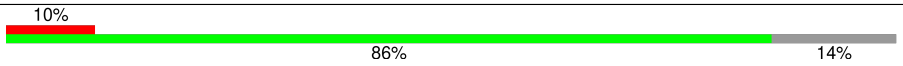
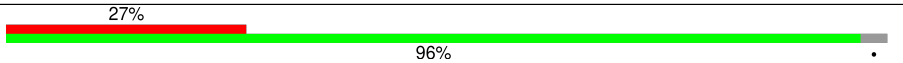
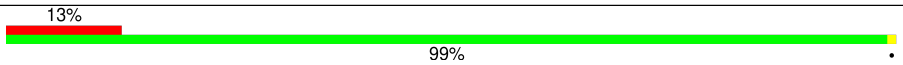
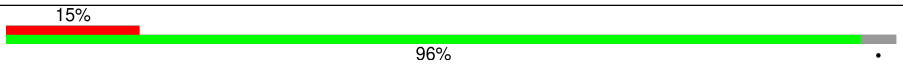
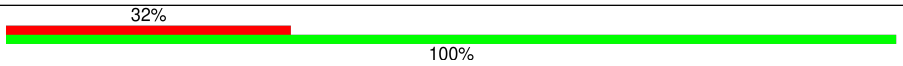
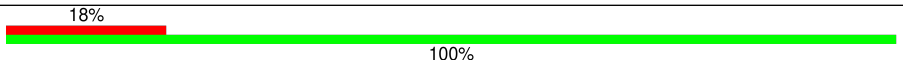
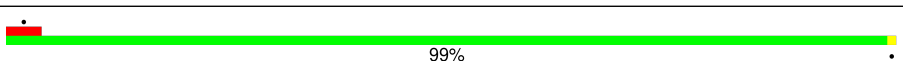
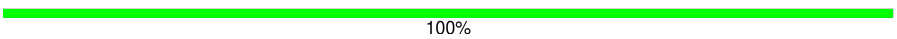
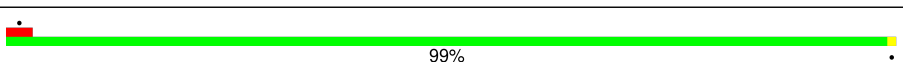
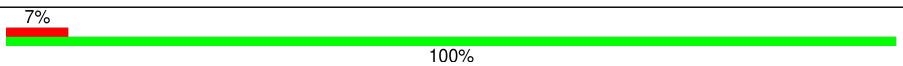
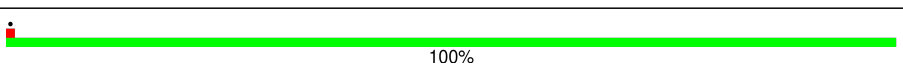
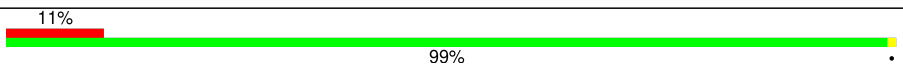
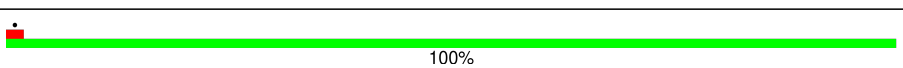
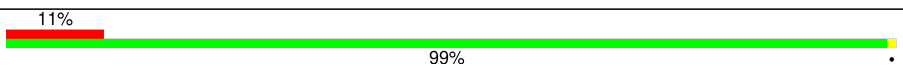
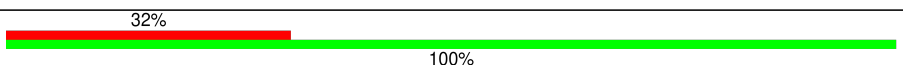
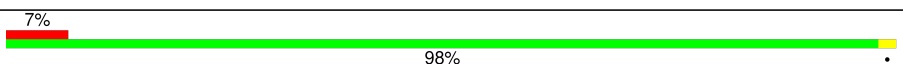
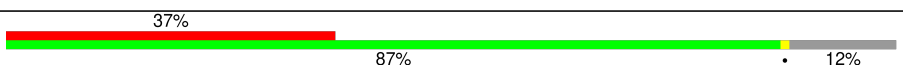
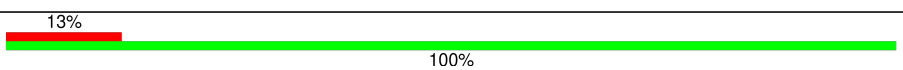
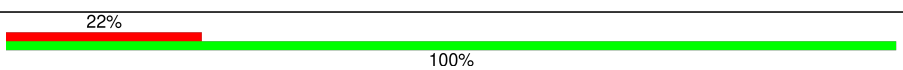
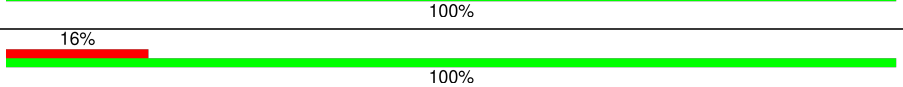
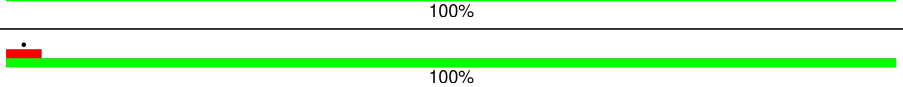
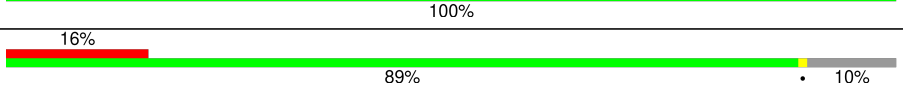
Mol	Chain	Length	Quality of chain
9	C	360	
10	D	291	
11	E	251	
12	F	225	
13	G	234	
14	H	190	
15	I	213	
16	J	170	
17	L	210	
18	M	138	
19	N	203	
20	O	199	
21	P	153	
22	Q	187	
23	R	180	
24	S	176	
25	T	159	
26	U	98	
27	V	131	
28	W	121	
29	X	118	
30	Y	134	
31	Z	135	
32	a	147	
33	b	116	

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Mol	Chain	Length	Quality of chain
34	c	98	9% 100%
35	d	107	12% 100%
36	e	128	100%
37	f	109	99%
38	g	114	11% 99%
39	h	122	17% 100%
40	i	102	15% 100%
41	j	86	100%
42	k	69	51% 100%
43	l	50	100%
44	m	51	16% 100%
45	n	25	100%
46	o	103	10% 99%
47	p	91	100%
48	r	124	6% 100%
49	AA	217	18% 100%
50	BB	213	17% 100%
51	CC	221	9% 100%
52	DD	228	20% 99%
53	EE	262	5% 100%
54	FF	191	13% 97%
55	GG	237	30% 99%
56	HH	189	52% 97%
57	II	206	14% 98%
58	JJ	185	11% 100%

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Mol	Chain	Length	Quality of chain
59	KK	96	33% 100%
60	LL	151	7% 95% 5%
61	NN	149	100%
62	OO	136	10% 100%
63	PP	120	32% 99%
64	QQ	142	12% 100%
65	RR	132	48% 99%
66	SS	144	30% 99%
67	TT	141	18% 100%
68	UU	100	41% 99%
69	VV	83	22% 100%
70	WW	129	100%
71	XX	141	5% 100%
72	YY	124	13% 100%
73	ZZ	75	36% 100%
74	Aa	101	10% 100%
75	Bb	83	28% 100%
76	Cc	62	34% 97%
77	Dd	55	5% 100%
78	Ee	55	27% 100%
79	Gg	313	59% 99%

2 Entry composition (i)

There are 82 unique types of molecules in this entry. The entry contains 210046 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 P-site tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	2	72	1552	694	289	498	71	0	0

- Molecule 2 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	1	6	133	60	25	42	6	0	0

- Molecule 3 is a RNA chain called 28s rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
3	5	3546	76153	33978	13919	24710	3546	0	0

- Molecule 4 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
4	7	120	2558	1141	456	842	119	0	0

There are 7 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
7	2	U	N	conflict	GB X06789.1
7	36	C	N	conflict	GB X06789.1
7	102	U	N	conflict	GB X06789.1
7	112	U	N	conflict	GB X06789.1
7	114	U	N	conflict	GB X06789.1
7	119	U	C	conflict	GB X06789.1
7	120	U	N	conflict	GB X06789.1

- Molecule 5 is a RNA chain called 5.8S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	8	151	Total	C	N	O	P	0	0
			3209	1433	564	1062	150		

- Molecule 6 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	9	1698	Total	C	N	O	P	0	0
			36291	16217	6509	11868	1697		

- Molecule 7 is a protein called 60S ribosomal protein L8.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	A	248	Total	C	N	O	S	0	0
			1898	1189	389	314	6		

- Molecule 8 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	B	394	Total	C	N	O	S	0	0
			3172	2020	597	542	13		

- Molecule 9 is a protein called 60S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	C	360	Total	C	N	O	S	0	0
			2870	1806	575	475	14		

- Molecule 10 is a protein called Ribosomal_L18_c domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	D	291	Total	C	N	O	S	0	0
			2381	1506	436	425	14		

- Molecule 11 is a protein called 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	E	216	Total	C	N	O	S	0	0
			1729	1115	329	282	3		

- Molecule 12 is a protein called 60S ribosomal protein L7.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	F	225	Total	C	N	O	S	0	0
			1875	1205	358	303	9		

- Molecule 13 is a protein called 60S ribosomal protein L7a.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	G	227	Total	C	N	O	S	0	0
			1837	1172	354	307	4		

- Molecule 14 is a protein called 60S ribosomal protein L9.

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

- Molecule 15 is a protein called Ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	I	205	Total	C	N	O	S	0	0
			1664	1056	321	274	13		

- Molecule 16 is a protein called 60S ribosomal protein L11.

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

- Molecule 17 is a protein called 60S ribosomal protein L13.

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

There are 9 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
L	46	ILE	-	insertion	UNP G1TPV0
L	47	ALA	-	insertion	UNP G1TPV0
L	48	PRO	-	insertion	UNP G1TPV0
L	49	ARG	-	insertion	UNP G1TPV0
L	50	PRO	-	insertion	UNP G1TPV0
L	51	ALA	-	insertion	UNP G1TPV0

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Chain	Residue	Modelled	Actual	Comment	Reference
L	52	ALA	-	insertion	UNP G1TPV0
L	53	GLY	-	insertion	UNP G1TPV0
L	54	PRO	-	insertion	UNP G1TPV0

- Molecule 18 is a protein called 60S ribosomal protein L14.

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

- Molecule 19 is a protein called 60S ribosomal protein L15.

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

- Molecule 20 is a protein called 60S ribosomal protein L13a.

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

- Molecule 21 is a protein called 60S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	P	153	Total	C	N	O	S	0	0
			1242	777	241	215	9		

- Molecule 22 is a protein called 60S ribosomal protein L18.

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

- Molecule 23 is a protein called 60S ribosomal protein L19.

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

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
R	38	ARG	HIS	conflict	UNP G1TYL6
R	151	ARG	HIS	conflict	UNP G1TYL6

- Molecule 24 is a protein called 60S ribosomal protein L18a.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	S	176	Total	C	N	O	S	0	0
			1462	930	285	236	11		

- Molecule 25 is a protein called 60S ribosomal protein L21.

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

- Molecule 26 is a protein called 60S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	U	98	Total	C	N	O	S	0	0
			800	514	139	145	2		

- Molecule 27 is a protein called 60S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	V	131	Total	C	N	O	S	0	0
			979	618	184	172	5		

- Molecule 28 is a protein called Ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	W	106	Total	C	N	O	S	0	0
			860	538	174	144	4		

- Molecule 29 is a protein called 60S ribosomal protein L23a.

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

- Molecule 30 is a protein called 60S ribosomal protein L26.

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

- Molecule 31 is a protein called 60S ribosomal protein L27.

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

- Molecule 32 is a protein called 60S ribosomal protein L27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	a	147	Total	C	N	O	S	0	0
			1162	734	239	185	4		

- Molecule 33 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	b	104	Total	C	N	O	S	0	0
			848	527	189	129	3		

- Molecule 34 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	c	98	Total	C	N	O	S	0	0
			761	481	134	140	6		

- Molecule 35 is a protein called 60S ribosomal protein L31.

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

- Molecule 36 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	e	128	Total	C	N	O	S	0	0
			1053	667	216	165	5		

- Molecule 37 is a protein called 60S ribosomal protein L35a.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	f	109	Total	C	N	O	S	0	0
			876	555	174	143	4		

- Molecule 38 is a protein called 60S ribosomal protein L34.

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

- Molecule 39 is a protein called 60S ribosomal protein L35.

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

- Molecule 40 is a protein called 60S ribosomal protein L36.

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

- Molecule 41 is a protein called 60S ribosomal protein L37.

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

- Molecule 42 is a protein called 60S ribosomal protein L38.

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

- Molecule 43 is a protein called 60S ribosomal protein L39.

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

- Molecule 44 is a protein called 60S ribosomal protein L40.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	m	51	Total	C	N	O	S	0	0
			420	261	88	65	6		

- Molecule 45 is a protein called eL41.

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

- Molecule 46 is a protein called 60S ribosomal protein L36a.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	o	103	Total	C	N	O	S	0	0
			842	528	172	136	6		

- Molecule 47 is a protein called 60S ribosomal protein L37a.

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

- Molecule 48 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	r	124	Total	C	N	O	S	0	0
			994	616	205	167	6		

- Molecule 49 is a protein called 40S_SA_C domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	AA	217	Total	C	N	O	S	0	0
			1710	1086	300	316	8		

- Molecule 50 is a protein called 40S ribosomal protein S3a.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	BB	213	Total	C	N	O	S	0	0
			1729	1098	309	308	14		

- Molecule 51 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	CC	221	Total	C	N	O	S	0	0
			1716	1111	295	301	9		

There are 7 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
CC	73	MET	VAL	conflict	UNP G1TUT9
CC	101	SER	ALA	conflict	UNP G1TUT9
CC	119	GLY	ALA	conflict	UNP G1TUT9
CC	194	ARG	HIS	conflict	UNP G1TUT9
CC	215	MET	LEU	conflict	UNP G1TUT9
CC	227	ARG	TRP	conflict	UNP G1TUT9
CC	228	GLY	SER	conflict	UNP G1TUT9

- Molecule 52 is a protein called 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	DD	228	Total	C	N	O	S	0	0
			1768	1126	318	316	8		

- Molecule 53 is a protein called 40S ribosomal protein S4.

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

- Molecule 54 is a protein called Ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	FF	185	Total	C	N	O	S	0	0
			1471	921	277	266	7		

- Molecule 55 is a protein called 40S ribosomal protein S6.

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

- Molecule 56 is a protein called 40S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	HH	185	Total	C	N	O	S	0	0
			1488	952	271	264	1		

- Molecule 57 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	II	203	Total	C	N	O	S	0	0
			1668	1047	328	288	5		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
II	47	ARG	GLY	conflict	UNP G1TJW1

- Molecule 58 is a protein called 40S ribosomal protein S9.

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

- Molecule 59 is a protein called 40S ribosomal protein S10.

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

- Molecule 60 is a protein called 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	LL	143	Total	C	N	O	S	0	0
			1175	749	222	198	6		

- Molecule 61 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	NN	149	Total	C	N	O	S	0	0
			1202	770	228	203	1		

- Molecule 62 is a protein called 40S ribosomal protein S14.

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

- Molecule 63 is a protein called 40S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	PP	120	Total	C	N	O	S	0	0
			997	635	187	168	7		

- Molecule 64 is a protein called 40S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	QQ	142	Total	C	N	O	S	0	0
			1128	717	213	195	3		

- Molecule 65 is a protein called 40S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	RR	132	Total	C	N	O	S	0	0
			1068	670	199	195	4		

- Molecule 66 is a protein called 40S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	SS	144	Total	C	N	O	S	0	0
			1190	746	241	202	1		

- Molecule 67 is a protein called 40S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	TT	141	Total	C	N	O	S	0	0
			1097	688	211	195	3		

- Molecule 68 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	UU	100	Total	C	N	O	S	0	0
			795	498	152	141	4		

- Molecule 69 is a protein called eS21.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	VV	83	Total	C	N	O	S	0	0
			636	393	117	121	5		

There are 7 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
VV	3	ASN	SER	conflict	UNP G1TM82
VV	4	ASP	ASN	conflict	UNP G1TM82
VV	33	GLN	PRO	conflict	UNP G1TM82
VV	50	PHE	SER	conflict	UNP G1TM82
VV	75	ALA	SER	conflict	UNP G1TM82
VV	76	ASP	HIS	conflict	UNP G1TM82
VV	81	LYS	GLN	conflict	UNP G1TM82

- Molecule 70 is a protein called 40S ribosomal protein S15a.

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

- Molecule 71 is a protein called 40S ribosomal protein S23.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	XX	141	Total	C	N	O	S	0	0
			1098	693	219	183	3		

- Molecule 72 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	YY	124	Total	C	N	O	S	0	0
			1011	640	198	168	5		

- Molecule 73 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	ZZ	75	Total	C	N	O	S	0	0
			598	382	111	104	1		

- Molecule 74 is a protein called eS26.

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

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Aa	28	ARG	CYS	conflict	UNP G1TFE8
Aa	56	ALA	VAL	conflict	UNP G1TFE8

- Molecule 75 is a protein called 40S ribosomal protein S27.

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

- Molecule 76 is a protein called 40S ribosomal protein S28.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	Cc	62	Total	C	N	O	S	0	0
			488	297	97	92	2		

- Molecule 77 is a protein called 40S ribosomal protein S29.

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

- Molecule 78 is a protein called 40S ribosomal protein S30.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	Ee	55	Total	C	N	O	S	0	0
			443	274	97	71	1		

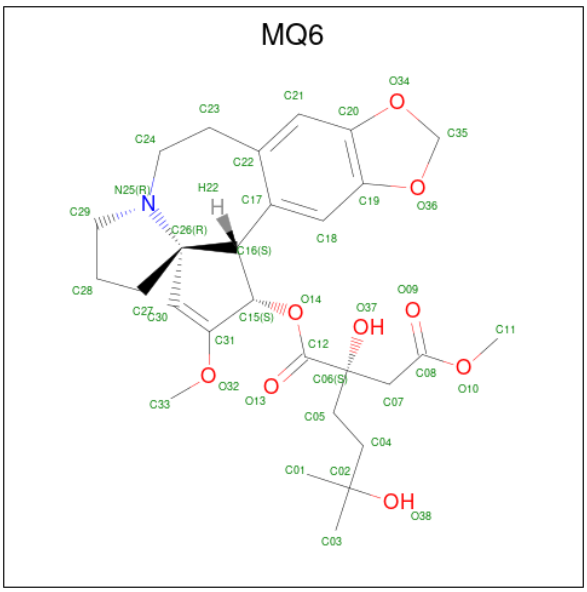
- Molecule 79 is a protein called Receptor of activated protein C kinase 1.

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

- Molecule 80 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	AltConf
80	5	196	Total Mg 196 196	0
80	7	7	Total Mg 7 7	0
80	8	8	Total Mg 8 8	0
80	9	78	Total Mg 78 78	0
80	A	1	Total Mg 1 1	0
80	I	1	Total Mg 1 1	0
80	P	1	Total Mg 1 1	0
80	V	1	Total Mg 1 1	0
80	a	1	Total Mg 1 1	0
80	g	1	Total Mg 1 1	0
80	j	1	Total Mg 1 1	0
80	LL	1	Total Mg 1 1	0

- Molecule 81 is Harringtonine (three-letter code: MQ6) (formula: $C_{28}H_{37}NO_9$).



Mol	Chain	Residues	Atoms				AltConf
81	5	1	Total	C	N	O	0
			38	28	1	9	

- Molecule 82 is ZINC ION (three-letter code: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

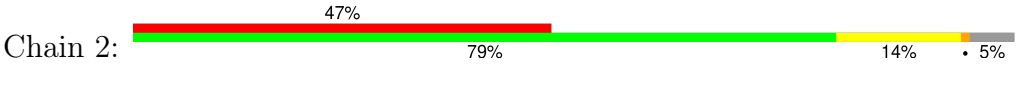
Mol	Chain	Residues	Atoms		AltConf
82	g	1	Total	Zn	0
			1	1	
82	j	1	Total	Zn	0
			1	1	
82	m	1	Total	Zn	0
			1	1	
82	o	1	Total	Zn	0
			1	1	
82	p	1	Total	Zn	0
			1	1	
82	Aa	1	Total	Zn	0
			1	1	
82	Dd	1	Total	Zn	0
			1	1	

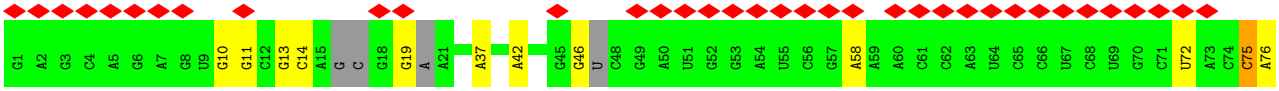
3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: P-site tRNA

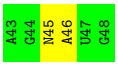
Chain 2:





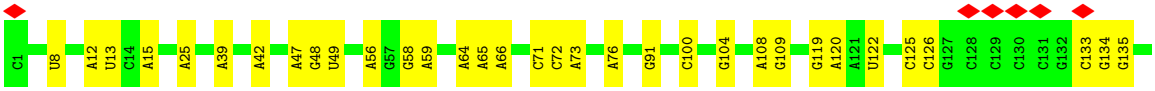
- Molecule 2: mRNA

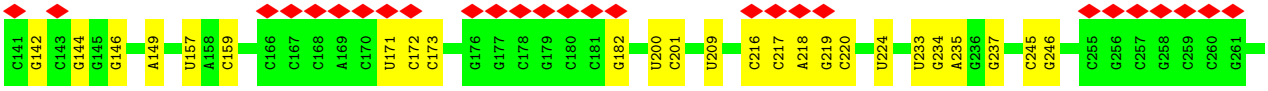
Chain 1:

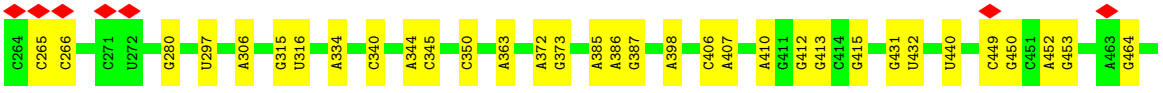


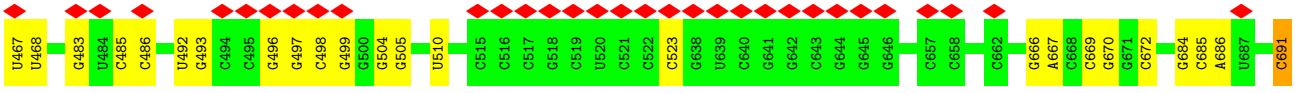
- Molecule 3: 28s rRNA

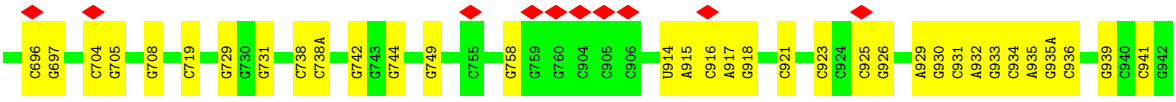
Chain 5:

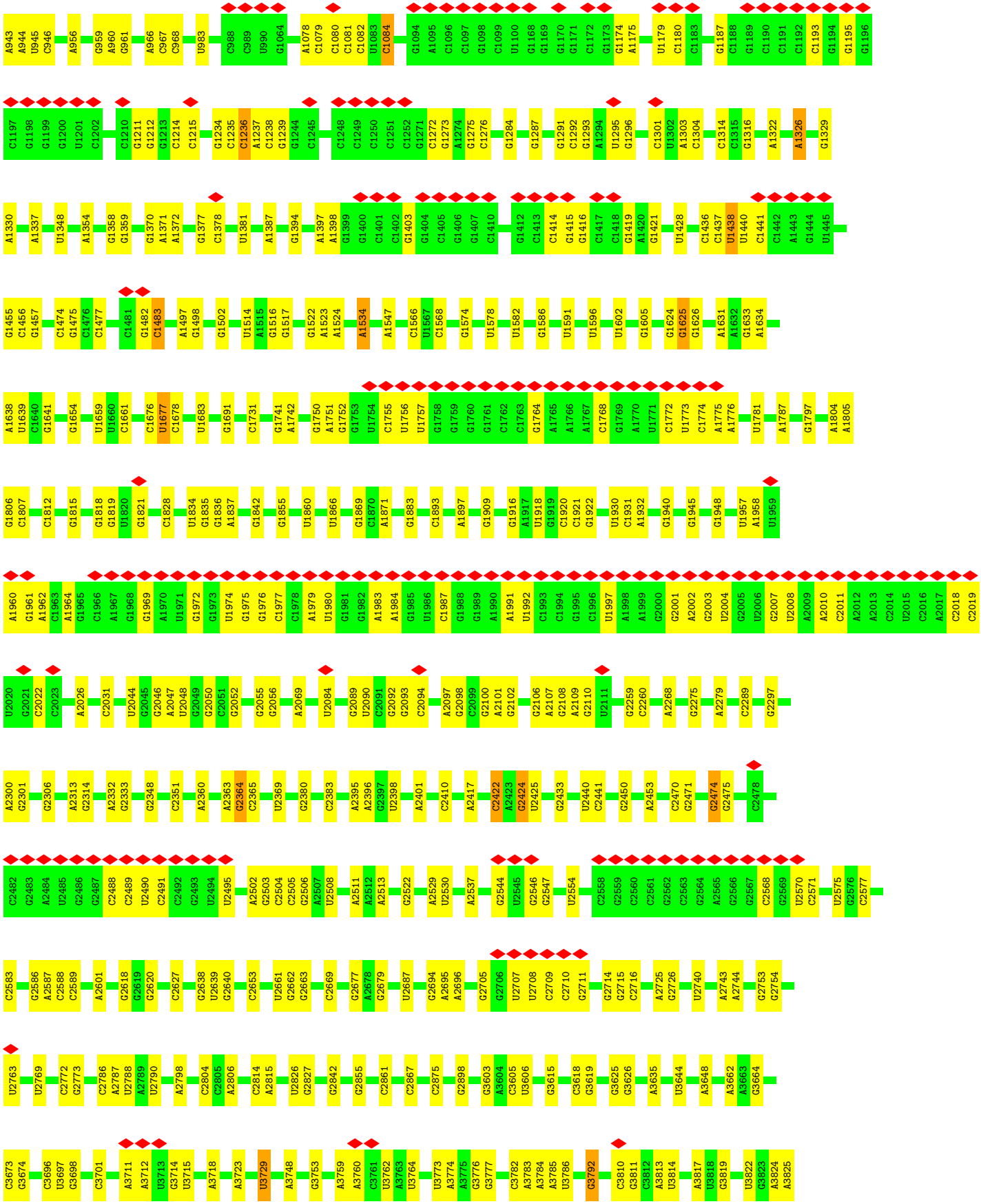


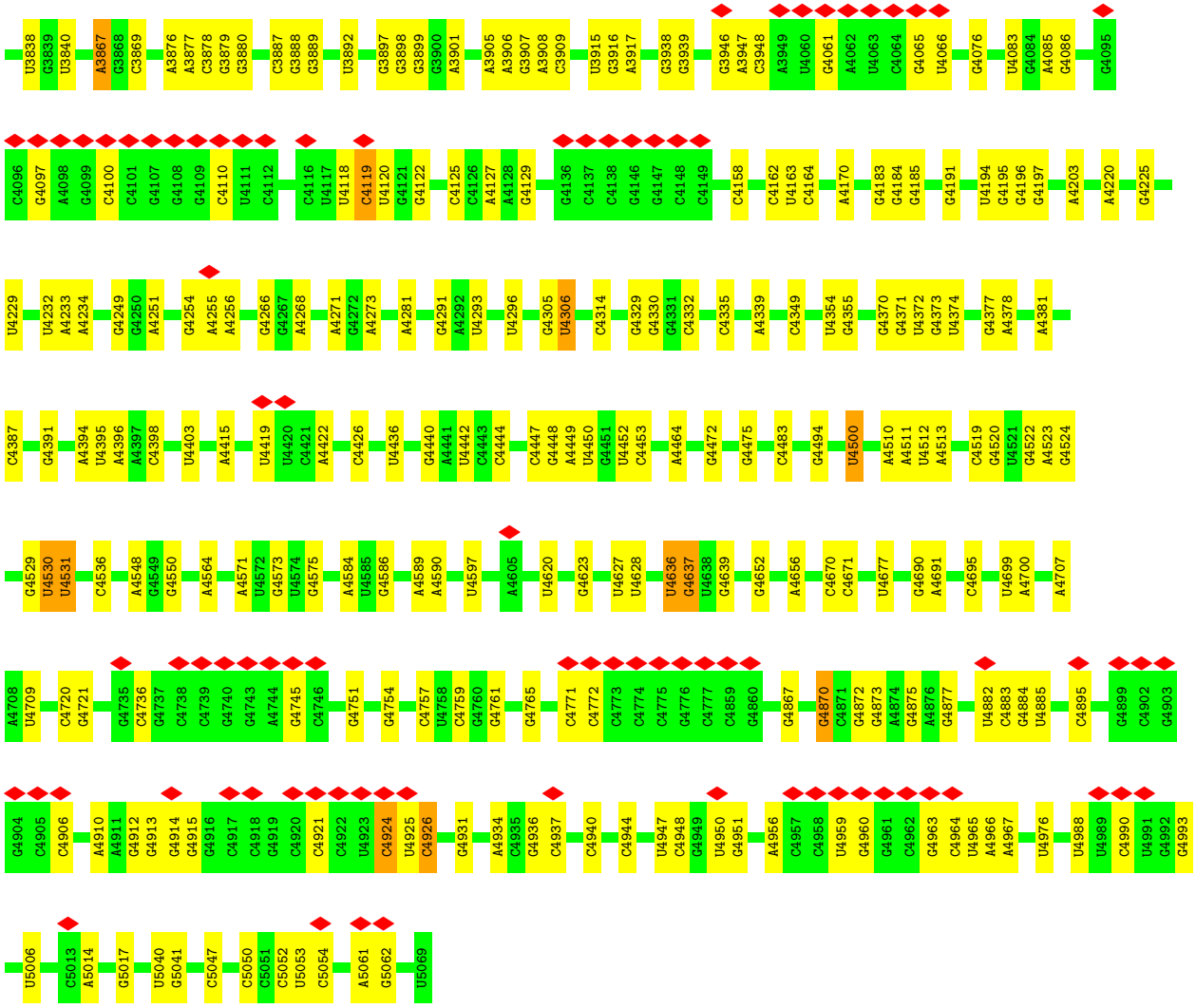






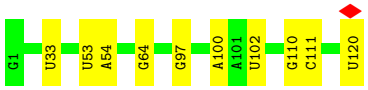



A943 A944 U945 C946 A956 G959 A960 G961 A966 C967 C968 U983 C988 C989 U990 G1064 A1078 C1079 C1080 C1081 C1082 U1083 C1084 G1094 A1095 C1096 C1097 G1098 C1099 U1100 G1168 G1169 G1170 G1171 C1172 G1173 G1174 A1175 U1179 C1180 C1183 G1187 C1188 G1189 C1190 C1191 C1192 C1193 G1194 G1195 G1196
C1197 G1198 G1199 G1200 U1201 C1202 C1210 G1211 G1212 G1213 C1214 C1215 G1234 C1235 C1236 A1237 C1238 G1239 G1244 C1245 C1248 C1249 C1250 C1251 C1252 G1271 C1272 G1273 A1274 G1275 C1276 G1284 G1287 G1291 C1292 G1293 A1294 U1295 G1296 C1301 U1302 A1303 C1304 C1314 C1315 G1316 A1322 A1326 G1329
A1330 A1337 U1348 A1354 G1358 G1359 G1370 A1371 A1372 G1377 C1378 U1381 A1387 G1394 A1397 A1398 G1399 G1400 C1401 C1402 G1403 G1404 C1405 C1406 G1407 C1410 G1412 C1413 C1414 G1415 G1416 C1417 C1418 G1419 A1420 G1421 U1428 C1436 C1437 U1438 U1440 C1441 C1442 A1443 G1444 U1445
G1455 C1456 G1457 C1474 G1475 C1476 C1477 C1481 G1482 C1483 A1497 G1498 G1502 U1514 A1515 G1516 G1517 G1522 A1523 A1524 A1534 A1547 C1566 U1567 C1568 G1574 U1578 U1582 G1586 U1591 U1596 U1602 G1605 G1624 G1625 G1626 A1631 A1632 G1633 A1634
A1638 U1639 C1640 G1641 G1654 U1659 U1660 C1661 C1676 U1677 C1678 U1683 G1691 C1731 G1741 A1742 G1750 A1751 G1752 G1753 U1754 C1755 U1756 U1757 G1758 G1759 G1760 G1761 C1762 C1763 G1764 A1765 A1766 A1767 C1768 G1769 A1770 U1771 C1772 U1773 C1774 A1775 A1776 U1781 A1787 G1797 A1804 A1805
G1806 C1807 C1812 G1815 G1818 G1819 U1820 G1821 C1828 U1834 G1835 G1836 A1837 G1842 G1855 U1860 U1866 G1869 C1870 A1871 G1883 C1893 A1897 G1909 G1916 A1917 U1918 G1919 C1920 C1921 G1922 U1930 C1931 A1932 G1940 G1945 G1948 U1957 A1958 U1959
A1960 G1961 A1962 C1963 A1964 G1965 C1966 A1967 G1968 G1969 A1970 U1971 G1972 G1973 U1974 G1975 G1976 C1977 C1978 A1979 U1980 G1981 G1982 A1983 A1984 G1985 U1986 C1987 G1988 G1989 A1990 A1991 U1992 C1993 C1994 G1995 C1996 U1997 A1998 A1999 G2000 G2001 A2002 G2003 U2004 G2005 U2006 G2007 U2008 A2009 A2010 C2011 A2012 A2013 C2014 U2015 C2016 A2017 C2018 C2019
U2020 G2021 C2022 C2023 A2026 C2031 U2044 G2045 G2046 A2047 U2048 G2049 G2050 C2051 G2052 G2055 G2056 A2069 U2084 G2089 U2090 C2091 G2092 G2093 C2094 A2097 G2098 C2099 G2100 A2101 G2102 G2106 A2107 G2108 A2109 G2110 U2111 G2259 C2260 A2268 G2275 A2279 C2289 G2297
A2300 G2301 G2306 A2313 G2314 A2332 G2333 G2348 C2351 A2360 A2363 G2364 C2365 U2369 G2380 C2383 A2395 A2396 G2397 U2398 A2401 C2410 A2417 C2422 A2423 G2424 U2425 G2433 U2440 C2441 G2450 A2453 C2470 G2471 G2474 G2475 C2478
C2482 G2483 A2484 U2485 G2486 G2487 C2488 C2489 U2490 C2491 C2492 G2493 U2494 U2495 A2502 G2503 C2504 C2505 G2506 A2507 U2508 A2511 A2512 A2513 G2522 A2529 U2530 A2537 G2544 U2545 G2546 G2547 U2554 C2558 G2559 C2560 C2561 G2562 C2563 G2564 A2565 G2566 G2567 C2568 G2569 U2570 C2571 U2575 G2576 C2577
C2583 G2586 A2587 C2588 C2589 A2601 G2618 G2619 G2620 C2627 G2638 U2639 G2640 C2653 U2661 G2662 G2663 C2669 G2677 A2678 G2679 U2687 G2694 A2695 A2696 G2705 G2706 U2707 U2708 C2709 C2710 G2711 G2714 G2715 C2716 A2725 G2726 U2740 A2743 A2744 G2753 G2754
U2763 U2769 C2772 G2773 C2786 A2787 U2788 A2789 U2790 A2798 C2804 C2805 A2806 C2814 A2815 U2826 G2827 G2842 G2855 C2861 C2867 C2875 G2898 G3603 A3604 C3605 U3606 G3615 C3618 G3619 G3625 G3626 A3635 U3644 A3648 A3662 A3663 G3664
C3673 G3674 C3696 U3697 G3698 C3701 A3711 A3712 U3713 G3714 U3715 A3718 A3723 U3729 A3748 G3753 A3759 A3760 C3761 U3762 A3763 U3764 U3773 A3774 A3775 G3776 G3777 C3782 A3783 A3784 A3785 U3786 G3792 C3810 G3811 C3812 A3813 U3814 A3817 U3818 G3819 U3822 G3823 A3824 A3825



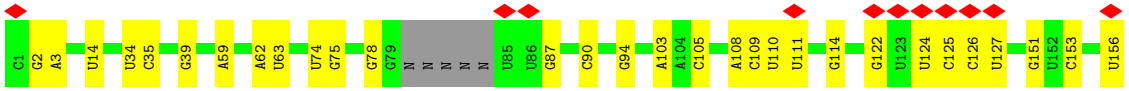
• Molecule 4: 5S rRNA

Chain 7:



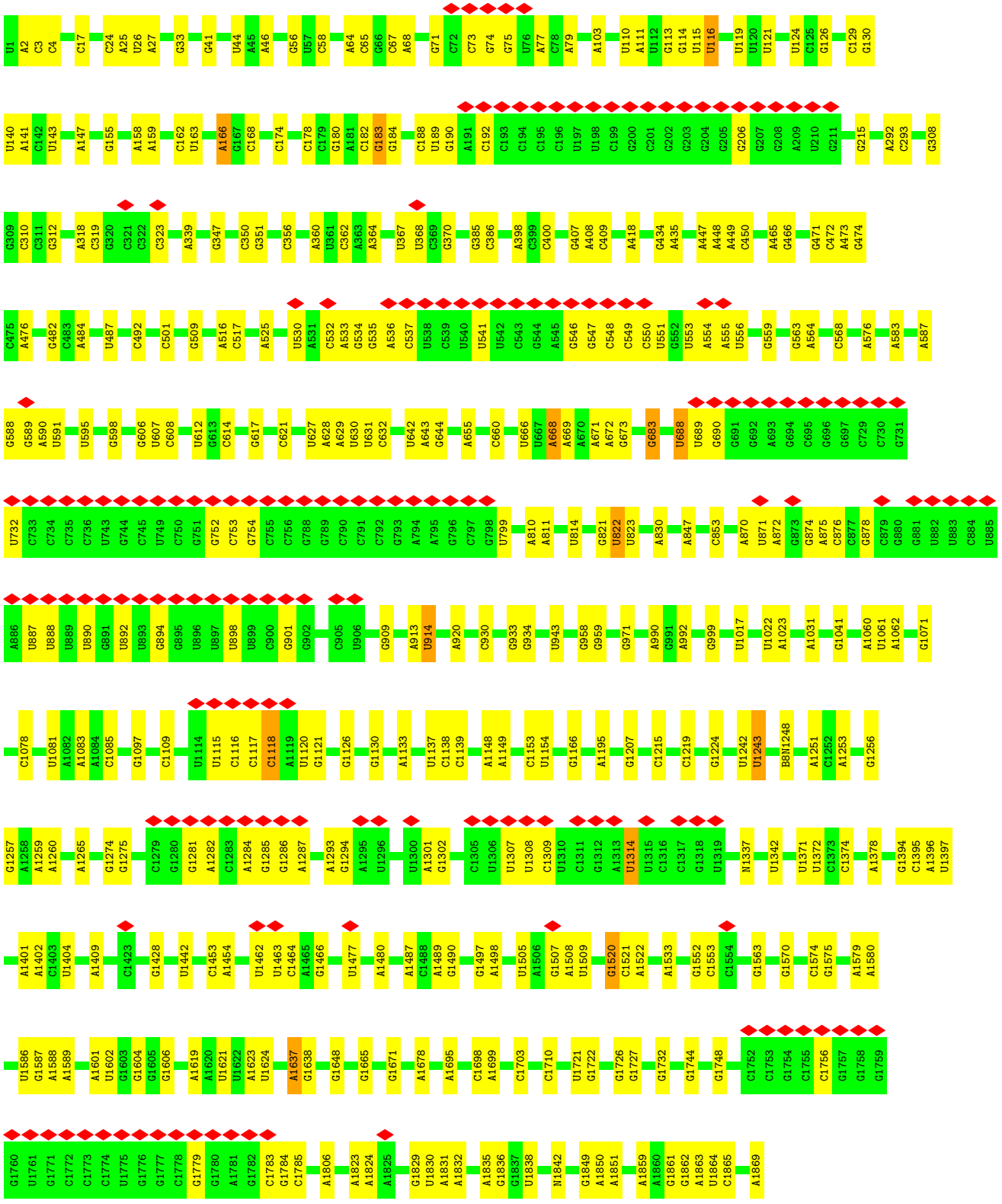
• Molecule 5: 5.8S rRNA

Chain 8:



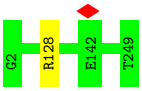
• Molecule 6: 18S rRNA

Chain 9:



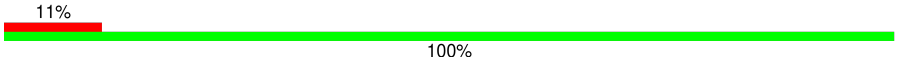
• Molecule 7: 60S ribosomal protein L8

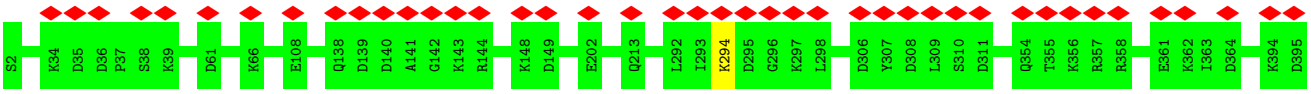
Chain A:



• Molecule 8: 60S ribosomal protein L3

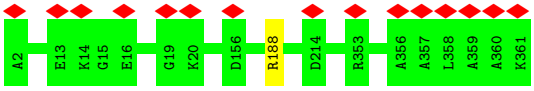
Chain B:





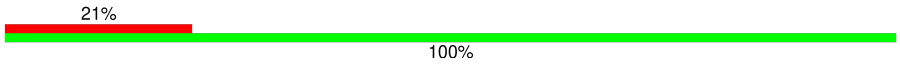
• Molecule 9: 60S ribosomal protein L4

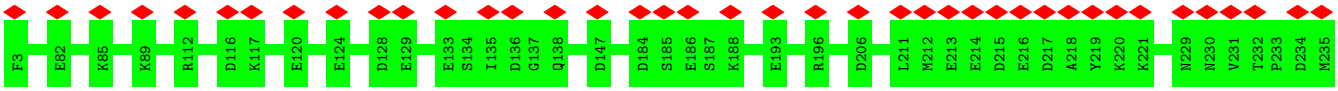
Chain C:

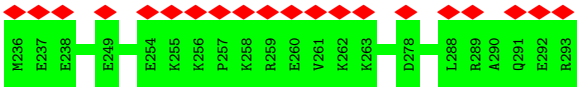


• Molecule 10: Ribosomal_L18_c domain-containing protein

Chain D:

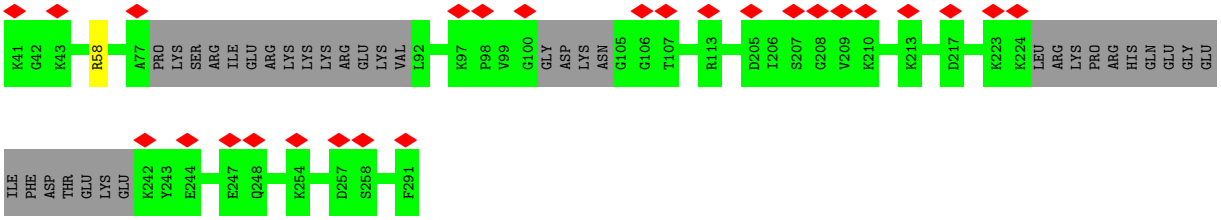






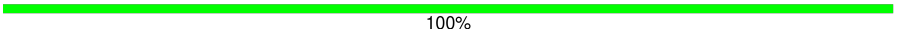
• Molecule 11: 60S ribosomal protein L6

Chain E:



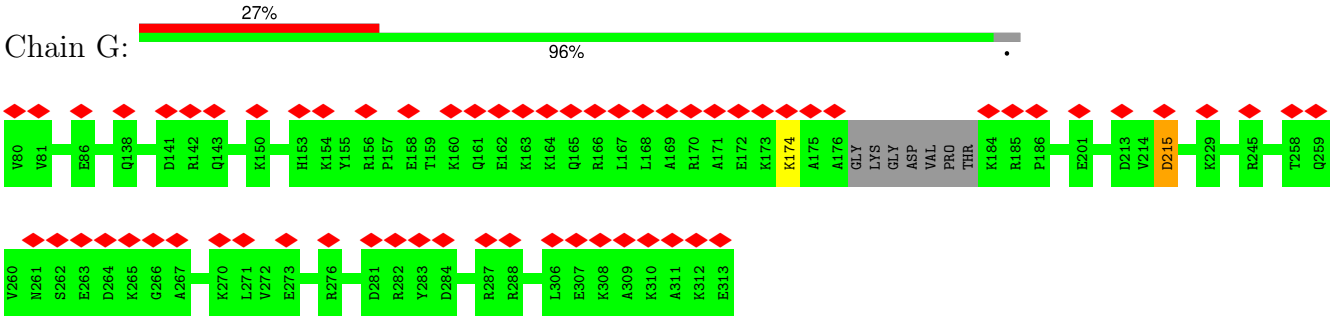
• Molecule 12: 60S ribosomal protein L7

Chain F:



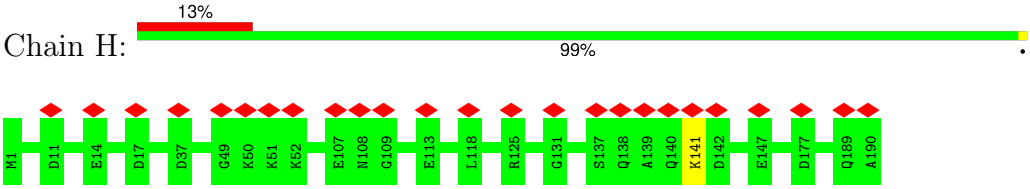
• Molecule 13: 60S ribosomal protein L7a

Chain G:



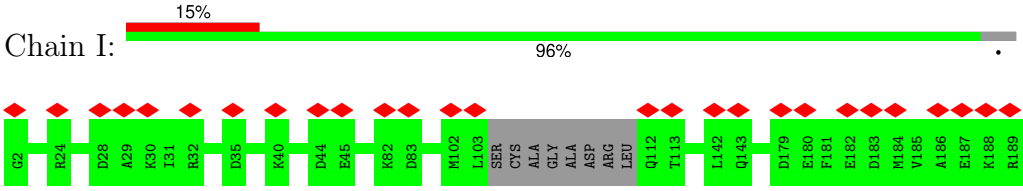
• Molecule 14: 60S ribosomal protein L9

Chain H:



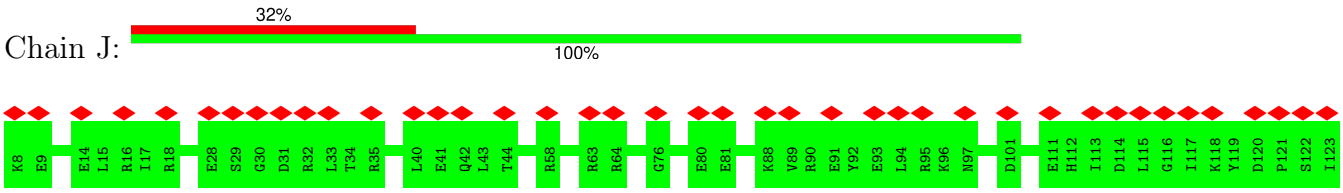
• Molecule 15: Ribosomal protein L10

Chain I:



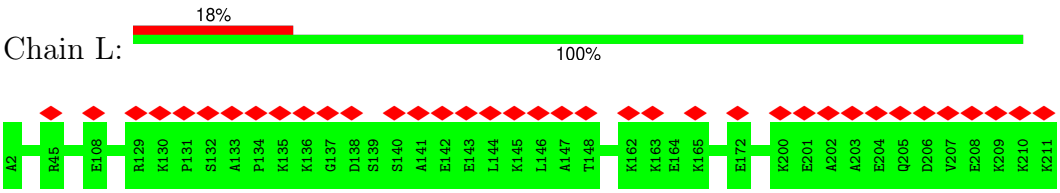
• Molecule 16: 60S ribosomal protein L11

Chain J:



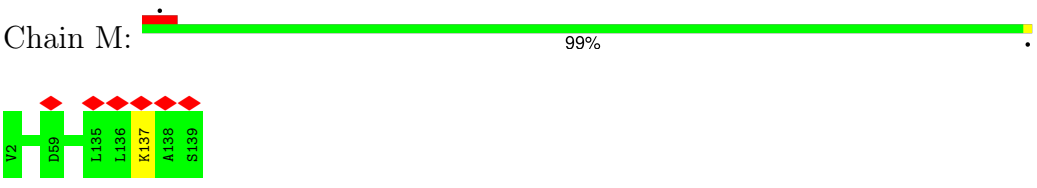
• Molecule 17: 60S ribosomal protein L13

Chain L:



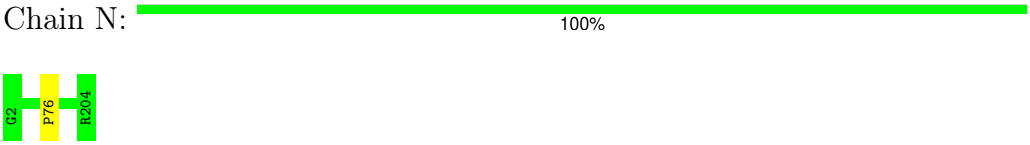
• Molecule 18: 60S ribosomal protein L14

Chain M:



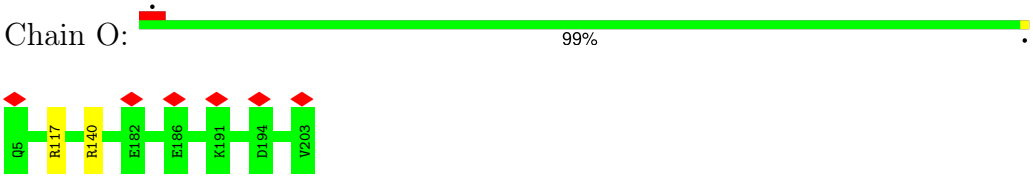
• Molecule 19: 60S ribosomal protein L15

Chain N:



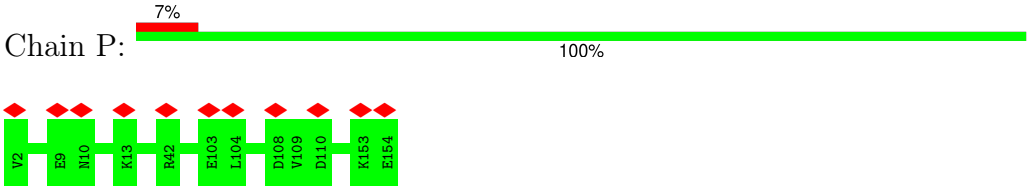
• Molecule 20: 60S ribosomal protein L13a

Chain O:



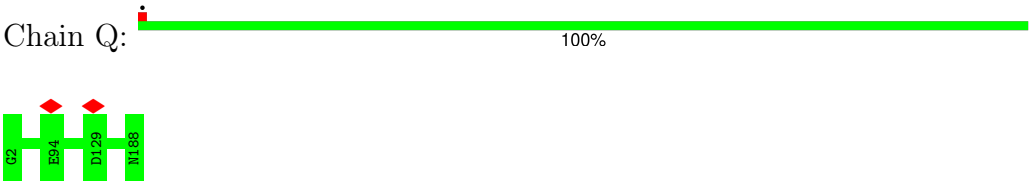
• Molecule 21: 60S ribosomal protein L17

Chain P:



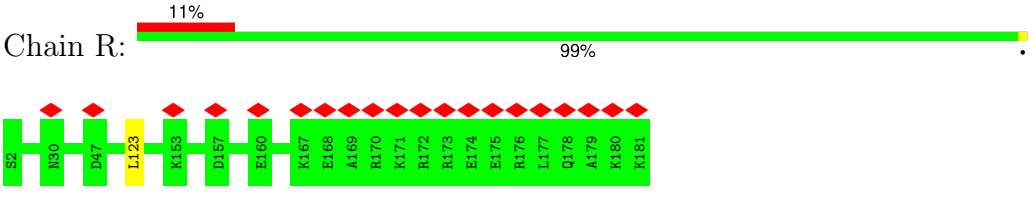
• Molecule 22: 60S ribosomal protein L18

Chain Q:



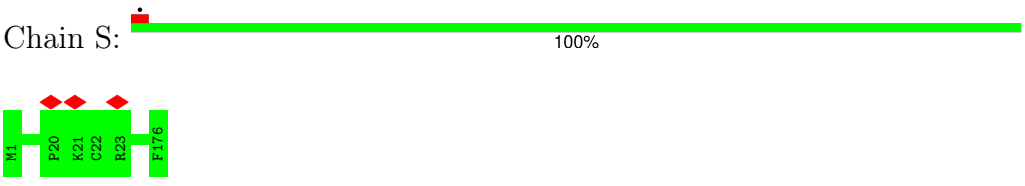
• Molecule 23: 60S ribosomal protein L19

Chain R:



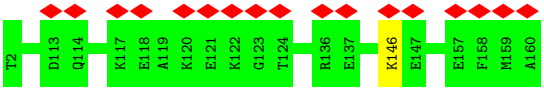
• Molecule 24: 60S ribosomal protein L18a

Chain S:

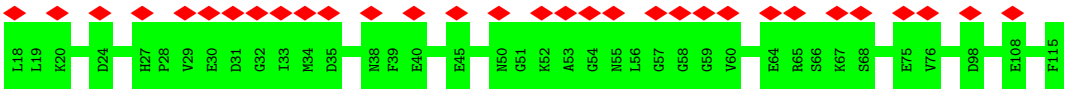


• Molecule 25: 60S ribosomal protein L21

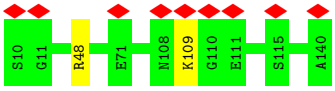
Chain T:



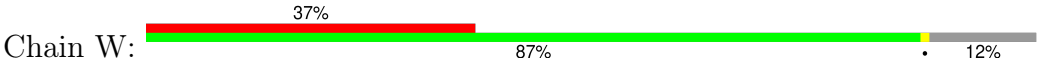
• Molecule 26: 60S ribosomal protein L22



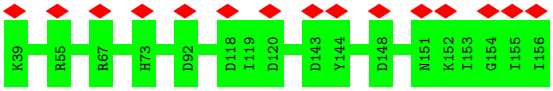
• Molecule 27: 60S ribosomal protein L23



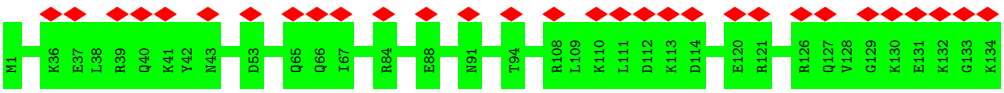
• Molecule 28: Ribosomal protein L24



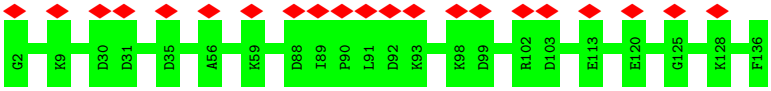
• Molecule 29: 60S ribosomal protein L23a



• Molecule 30: 60S ribosomal protein L26

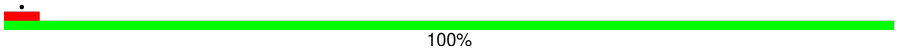


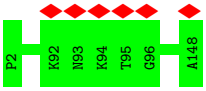
• Molecule 31: 60S ribosomal protein L27



• Molecule 32: 60S ribosomal protein L27a

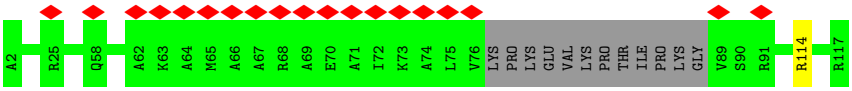
Chain a:





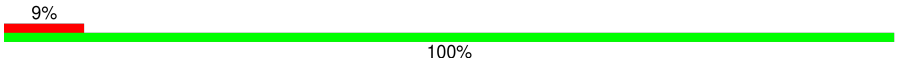
• Molecule 33: 60S ribosomal protein L29

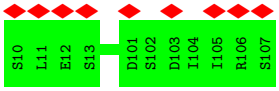
Chain b:



• Molecule 34: 60S ribosomal protein L30

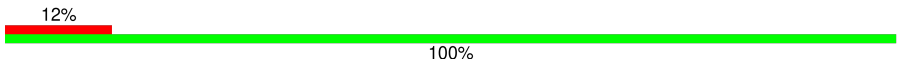
Chain c:

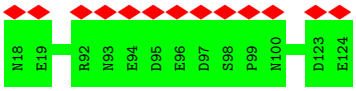




• Molecule 35: 60S ribosomal protein L31

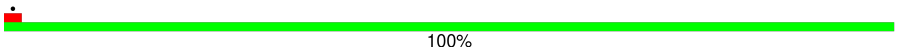
Chain d:

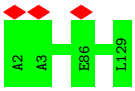




• Molecule 36: 60S ribosomal protein L32

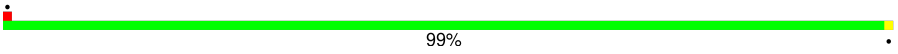
Chain e:

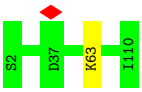




• Molecule 37: 60S ribosomal protein L35a

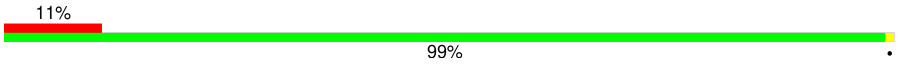
Chain f:

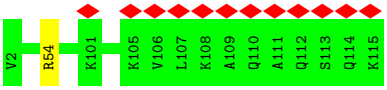




• Molecule 38: 60S ribosomal protein L34

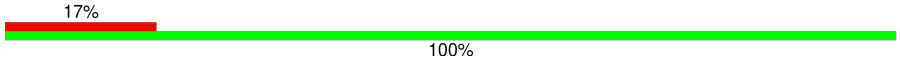
Chain g:

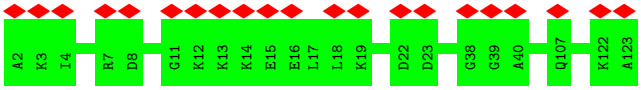




• Molecule 39: 60S ribosomal protein L35

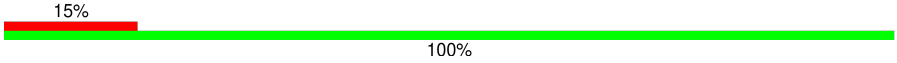
Chain h:

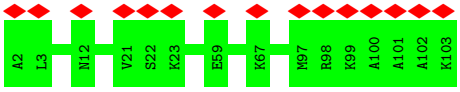




• Molecule 40: 60S ribosomal protein L36

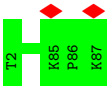
Chain i:





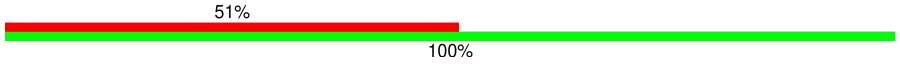
• Molecule 41: 60S ribosomal protein L37

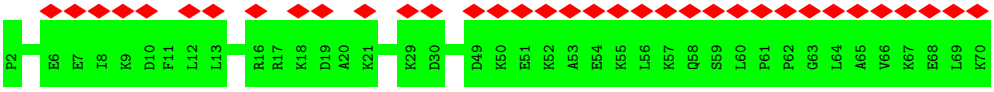
Chain j:



• Molecule 42: 60S ribosomal protein L38

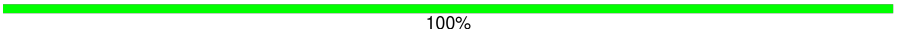
Chain k:





• Molecule 43: 60S ribosomal protein L39

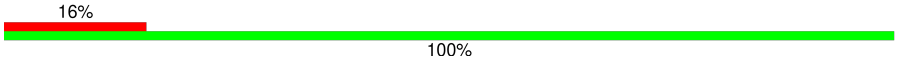
Chain l:

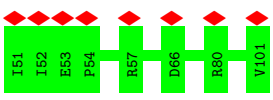


There are no outlier residues recorded for this chain.

• Molecule 44: 60S ribosomal protein L40

Chain m:





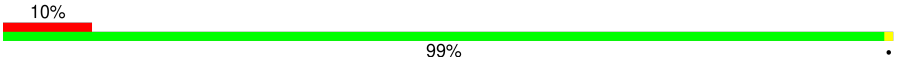
• Molecule 45: eL41

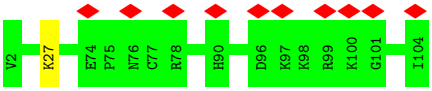
Chain n:

There are no outlier residues recorded for this chain.

• Molecule 46: 60S ribosomal protein L36a

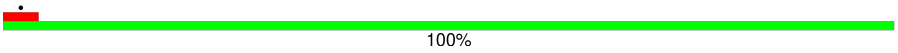
Chain o:

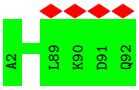




• Molecule 47: 60S ribosomal protein L37a

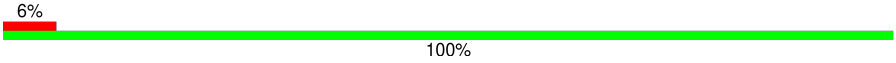
Chain p:

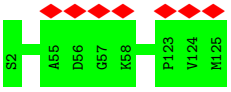




• Molecule 48: 60S ribosomal protein L28

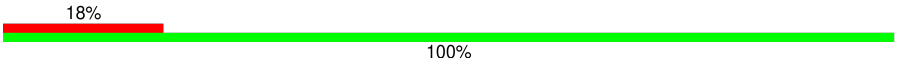
Chain r:

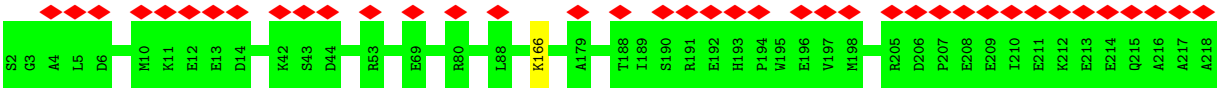




• Molecule 49: 40S_SA_C domain-containing protein

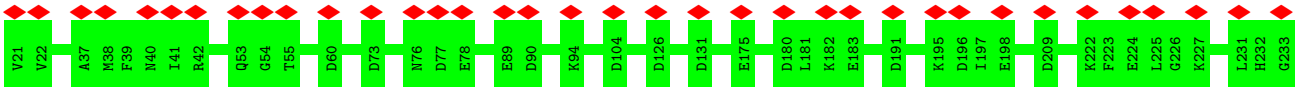
Chain AA:





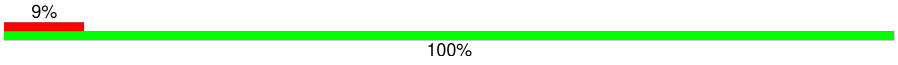
• Molecule 50: 40S ribosomal protein S3a

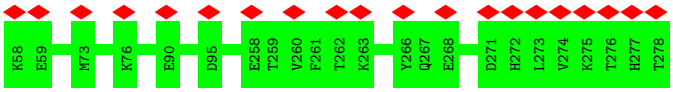
Chain BB:



• Molecule 51: 40S ribosomal protein S2

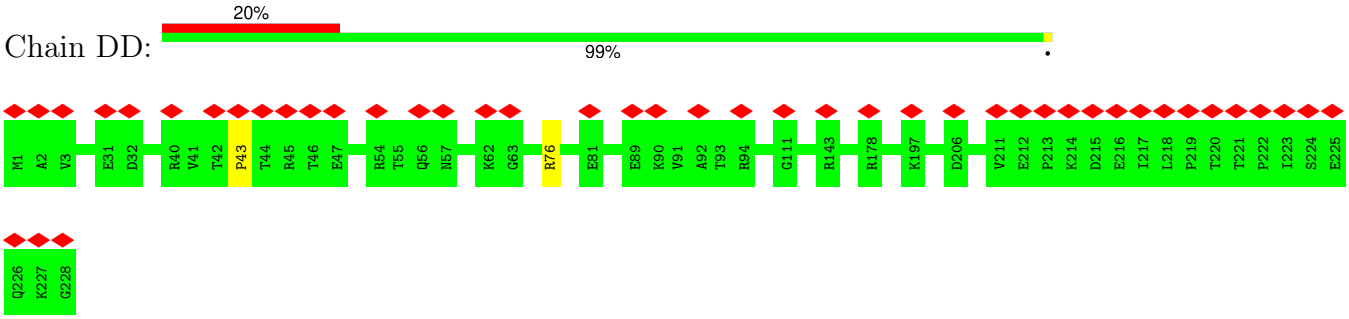
Chain CC:





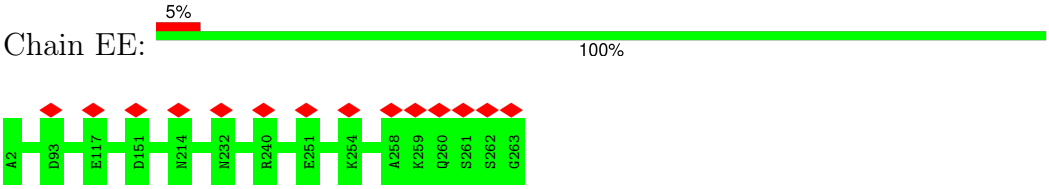
• Molecule 52: 40S ribosomal protein S3

Chain DD:



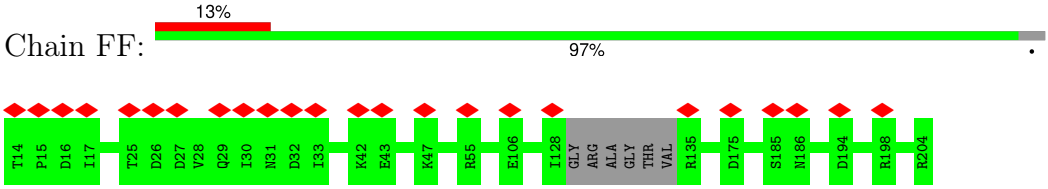
• Molecule 53: 40S ribosomal protein S4

Chain EE:



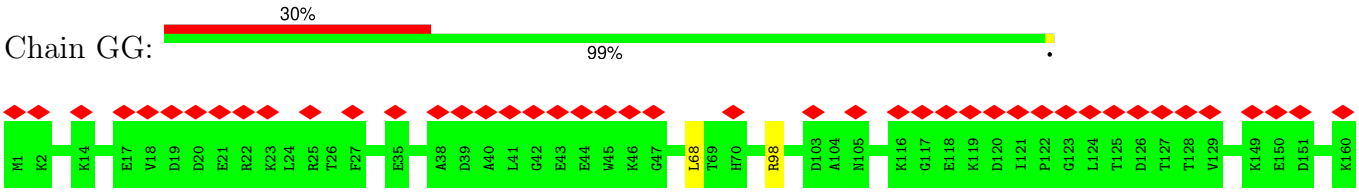
• Molecule 54: Ribosomal protein S5

Chain FF:



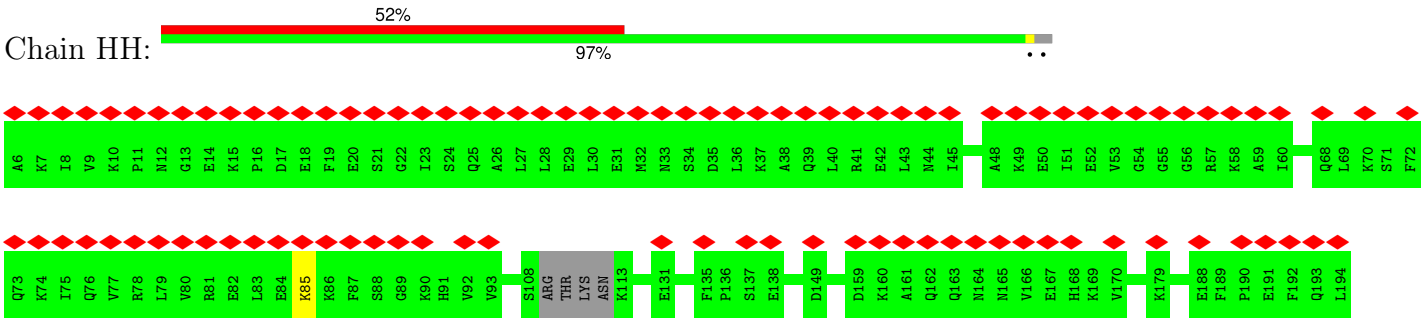
• Molecule 55: 40S ribosomal protein S6

Chain GG:



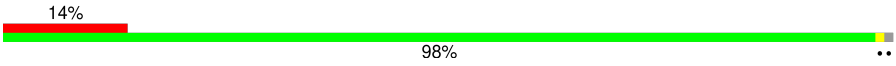
• Molecule 56: 40S ribosomal protein S7

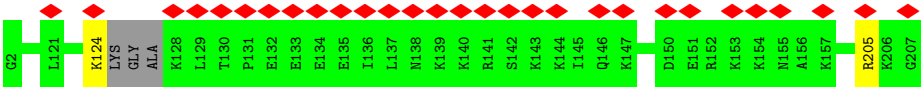
Chain HH:



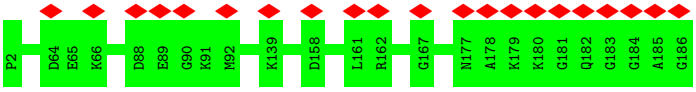
• Molecule 57: 40S ribosomal protein S8

Chain II:

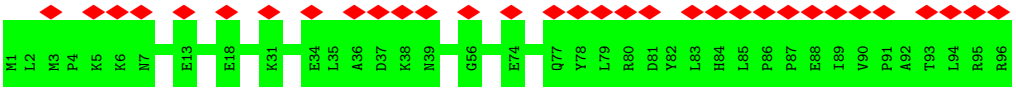




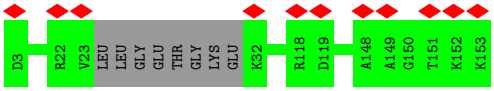
• Molecule 58: 40S ribosomal protein S9



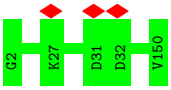
• Molecule 59: 40S ribosomal protein S10



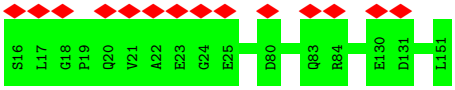
• Molecule 60: 40S ribosomal protein S11



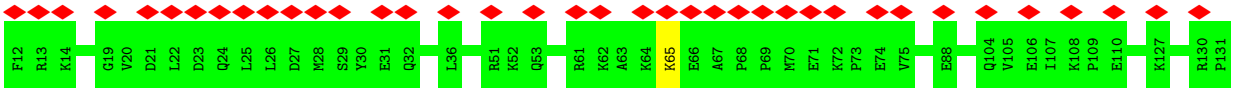
• Molecule 61: 40S ribosomal protein S13



• Molecule 62: 40S ribosomal protein S14

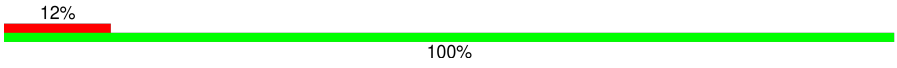


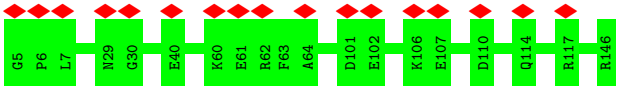
• Molecule 63: 40S ribosomal protein S15



• Molecule 64: 40S ribosomal protein S16

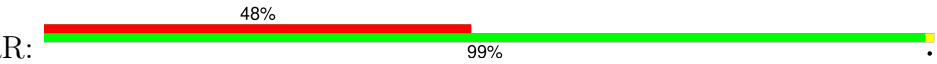
Chain QQ:

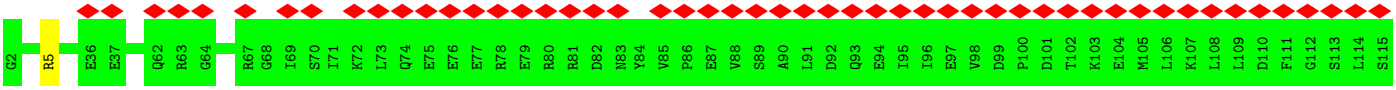


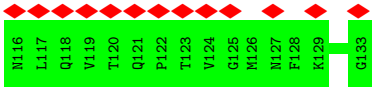


• Molecule 65: 40S ribosomal protein S17

Chain RR:

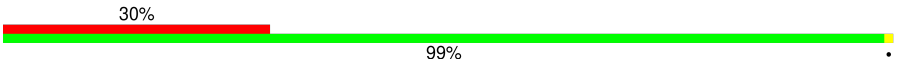


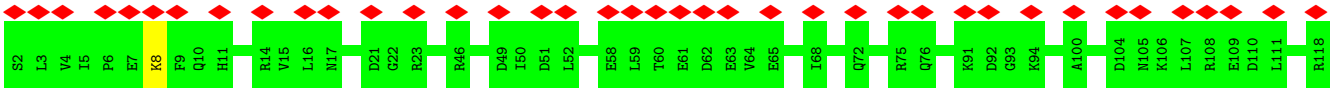


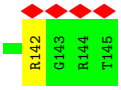


• Molecule 66: 40S ribosomal protein S18

Chain SS:

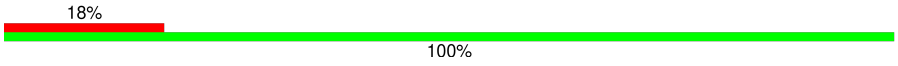


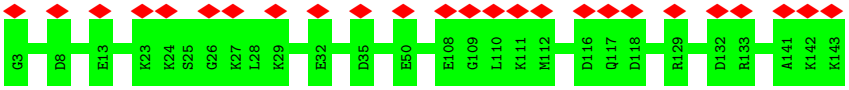




• Molecule 67: 40S ribosomal protein S19

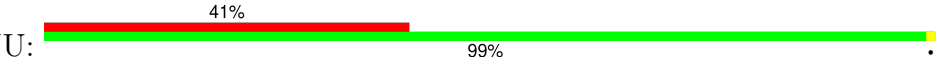
Chain TT:

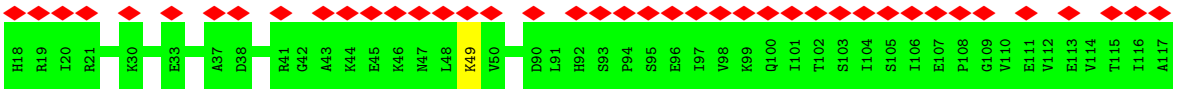




• Molecule 68: 40S ribosomal protein S20

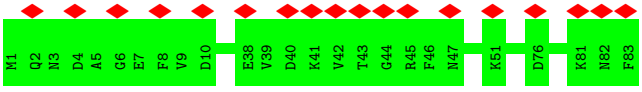
Chain UU:





• Molecule 69: eS21

Chain VV:



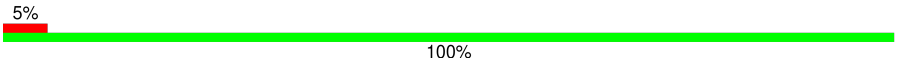
• Molecule 70: 40S ribosomal protein S15a

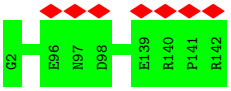
Chain WW:

There are no outlier residues recorded for this chain.

• Molecule 71: 40S ribosomal protein S23

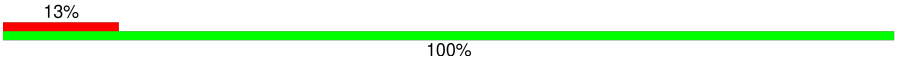
Chain XX:

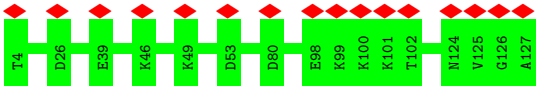




• Molecule 72: 40S ribosomal protein S24

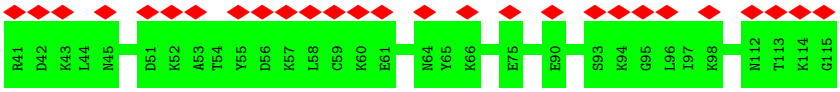
Chain YY:





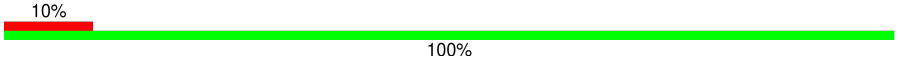
• Molecule 73: 40S ribosomal protein S25

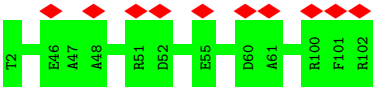
Chain ZZ:



• Molecule 74: eS26

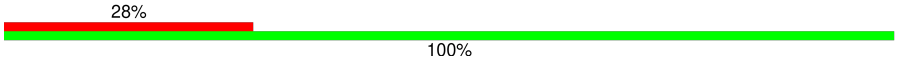
Chain Aa:

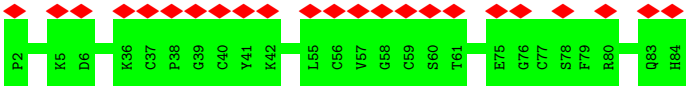




• Molecule 75: 40S ribosomal protein S27

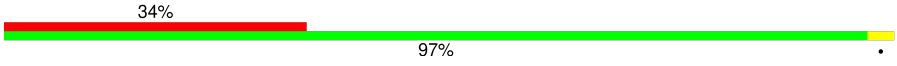
Chain Bb:

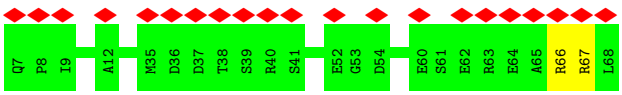




• Molecule 76: 40S ribosomal protein S28

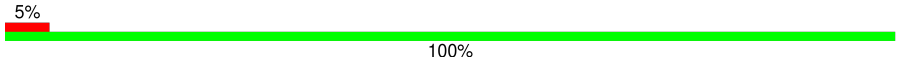
Chain Cc:

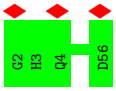




• Molecule 77: 40S ribosomal protein S29

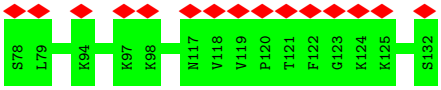
Chain Dd:





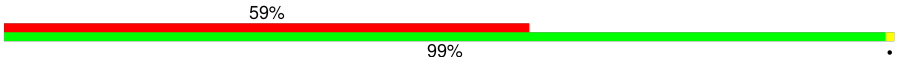
• Molecule 78: 40S ribosomal protein S30

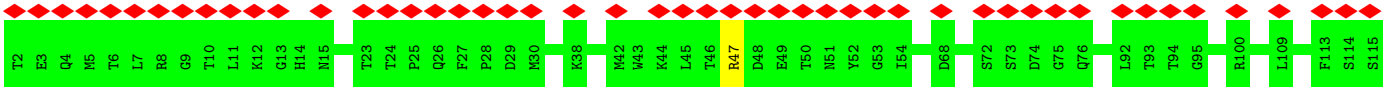
Chain Ee:

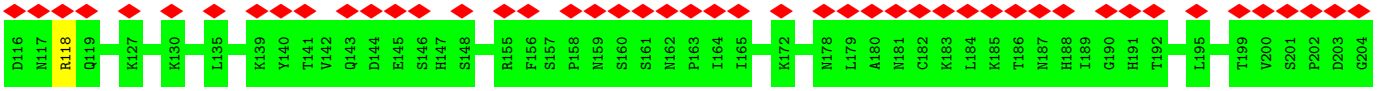


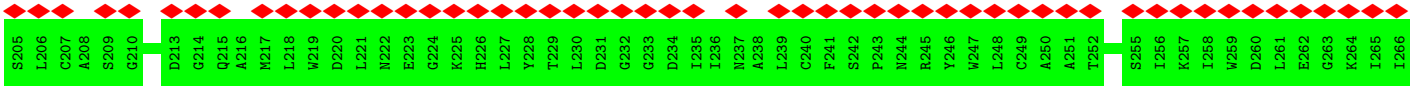
• Molecule 79: Receptor of activated protein C kinase 1

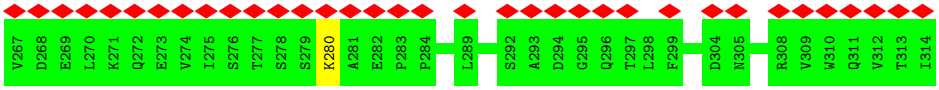
Chain Gg:











4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	107057	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 ($e^-/Å^2$)	50	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.197	Depositor
Minimum map value	-0.002	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.005	Depositor
Recommended contour level	0.037	Depositor
Map size (Å)	651.84, 651.84, 651.84	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.358, 1.358, 1.358	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: A2M, UR3, 4AC, PSU, BGH, MLZ, 5MU, OMG, MHG, OMC, P4U, B8H, B9H, T6A, B8W, B8Q, MG, OMU, B8T, M7A, 1MA, B9B, MA6, 2MG, I4U, P7G, 5MC, 6MZ, MMX, E6G, ZN, B8N, 7MG, MQ6, E7G, B8K

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	2	0.26	0/1698	0.86	4/2640 (0.2%)
2	1	0.23	0/122	0.72	0/186
3	5	0.35	0/82609	0.82	25/128762 (0.0%)
4	7	0.31	0/2858	0.76	0/4455
5	8	0.32	0/3559	0.77	0/5543
6	9	0.34	0/39730	0.82	28/61898 (0.0%)
7	A	0.30	0/1936	0.59	0/2596
8	B	0.29	0/3240	0.57	0/4339
9	C	0.29	0/2913	0.57	0/3913
10	D	0.28	0/2427	0.54	0/3250
11	E	0.27	0/1762	0.57	0/2362
12	F	0.29	0/1911	0.54	0/2549
13	G	0.29	0/1868	0.58	1/2514 (0.0%)
14	H	0.29	0/1535	0.59	0/2063
15	I	0.29	0/1702	0.57	0/2272
16	J	0.29	0/1385	0.61	0/1852
17	L	0.28	0/1733	0.60	0/2316
18	M	0.32	0/1158	0.59	0/1547
19	N	0.31	0/1746	0.62	0/2338
20	O	0.31	0/1662	0.56	0/2222
21	P	0.29	0/1268	0.57	0/1700
22	Q	0.29	0/1539	0.62	0/2054
23	R	0.28	0/1524	0.63	1/2013 (0.0%)
24	S	0.29	0/1501	0.57	0/2012
25	T	0.30	0/1326	0.53	0/1770
26	U	0.32	0/814	0.58	0/1092
27	V	0.29	0/993	0.55	0/1332
28	W	0.30	0/873	0.62	0/1158
29	X	0.27	0/984	0.55	0/1323
30	Y	0.30	0/1132	0.59	0/1504

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
31	Z	0.29	0/1130	0.54	0/1507
32	a	0.30	0/1191	0.56	0/1590
33	b	0.28	0/861	0.56	0/1138
34	c	0.29	0/771	0.53	0/1034
35	d	0.28	0/903	0.57	0/1216
36	e	0.31	0/1071	0.55	0/1429
37	f	0.30	0/895	0.58	0/1198
38	g	0.28	0/916	0.59	0/1220
39	h	0.27	0/1021	0.58	0/1348
40	i	0.26	0/841	0.58	0/1112
41	j	0.30	0/720	0.63	0/952
42	k	0.28	0/575	0.54	0/761
43	l	0.26	0/459	0.57	0/608
44	m	0.28	0/415	0.64	0/550
45	n	0.30	0/240	0.82	0/305
46	o	0.29	0/855	0.55	0/1128
47	p	0.27	0/718	0.52	0/953
48	r	0.28	0/1010	0.58	0/1354
49	AA	0.27	0/1747	0.51	0/2374
50	BB	0.28	0/1756	0.51	0/2350
51	CC	0.32	0/1753	0.53	0/2369
52	DD	0.27	0/1796	0.57	1/2417 (0.0%)
53	EE	0.29	0/2118	0.55	0/2849
54	FF	0.26	0/1492	0.52	0/2005
55	GG	0.26	0/1946	0.59	1/2590 (0.0%)
56	HH	0.27	0/1510	0.53	0/2022
57	II	0.28	0/1696	0.58	0/2261
58	JJ	0.28	0/1550	0.58	0/2069
59	KK	0.27	0/834	0.49	0/1125
60	LL	0.31	0/1195	0.56	0/1597
61	NN	0.27	0/1226	0.56	0/1649
62	OO	0.27	0/1029	0.59	0/1380
63	PP	0.32	0/1017	0.57	0/1358
64	QQ	0.27	0/1146	0.56	0/1534
65	RR	0.27	0/1082	0.54	0/1452
66	SS	0.28	0/1208	0.60	0/1618
67	TT	0.26	0/1115	0.52	0/1493
68	UU	0.25	0/805	0.58	0/1081
69	VV	0.29	0/643	0.56	0/860
70	WW	0.32	0/1051	0.59	0/1406
71	XX	0.29	0/1116	0.54	0/1490
72	YY	0.28	0/1028	0.56	0/1366
73	ZZ	0.25	0/604	0.55	0/810

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
74	Aa	0.28	0/828	0.58	0/1109
75	Bb	0.27	0/665	0.51	0/891
76	Cc	0.27	0/490	0.66	0/656
77	Dd	0.28	0/470	0.56	0/623
78	Ee	0.26	0/447	0.57	0/587
79	Gg	0.27	0/2493	0.55	0/3394
All	All	0.32	0/221956	0.73	61/325763 (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
13	G	0	1
19	N	0	1
All	All	0	2

There are no bond length outliers.

All (61) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	5	2022	C	N3-C2-O2	-7.78	116.45	121.90
3	5	1236	C	C2-N1-C1'	7.62	127.19	118.80
6	9	501	C	C2-N1-C1'	7.52	127.07	118.80
3	5	2019	C	N3-C2-O2	-7.34	116.76	121.90
6	9	356	C	C2-N1-C1'	7.27	126.80	118.80
52	DD	43	PRO	CA-N-CD	-7.19	101.44	111.50
6	9	501	C	N1-C2-O2	7.10	123.16	118.90
3	5	4110	C	N3-C2-O2	-7.02	116.99	121.90
3	5	2022	C	N1-C2-O2	6.91	123.05	118.90
6	9	1453	C	C2-N1-C1'	6.78	126.26	118.80
3	5	1639	U	C2-N1-C1'	6.42	125.41	117.70
6	9	1453	C	N1-C2-O2	6.34	122.70	118.90
55	GG	68	LEU	CA-CB-CG	6.34	129.88	115.30
3	5	1236	C	N1-C2-O2	6.19	122.61	118.90
6	9	630	U	C2-N1-C1'	6.15	125.08	117.70
23	R	123	LEU	CA-CB-CG	6.13	129.41	115.30
3	5	100	C	C2-N1-C1'	6.11	125.52	118.80
3	5	4119	C	C2-N1-C1'	6.00	125.40	118.80
3	5	691	C	C2-N1-C1'	5.96	125.36	118.80
3	5	4197	G	N1-C6-O6	-5.94	116.33	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	9	293	C	N1-C2-O2	5.94	122.46	118.90
6	9	356	C	N1-C2-O2	5.83	122.40	118.90
3	5	2410	C	C2-N1-C1'	5.79	125.17	118.80
3	5	1236	C	C6-N1-C1'	-5.77	113.88	120.80
3	5	4926	C	N1-C2-O2	5.73	122.34	118.90
3	5	1483	C	N1-C2-O2	5.73	122.33	118.90
13	G	215	ASP	CB-CG-OD1	5.70	123.43	118.30
6	9	1022	U	C2-N1-C1'	5.66	124.50	117.70
1	2	75	C	C6-N1-C1'	5.62	127.55	120.80
6	9	293	C	C2-N1-C1'	5.61	124.97	118.80
3	5	4110	C	N1-C2-O2	5.57	122.24	118.90
6	9	501	C	C6-N1-C1'	-5.54	114.16	120.80
3	5	1084	C	C2-N1-C1'	5.53	124.89	118.80
6	9	1118	C	C2-N1-C1'	5.48	124.83	118.80
3	5	4197	G	C5-C6-O6	5.47	131.88	128.60
6	9	688	U	P-O3'-C3'	5.45	126.24	119.70
6	9	1520	G	N3-C4-C5	-5.43	125.89	128.60
6	9	1520	G	C2-N3-C4	5.42	114.61	111.90
6	9	630	U	N1-C2-O2	5.42	126.59	122.80
6	9	1637	A	OP2-P-O3'	5.36	117.00	105.20
3	5	691	C	N1-C2-O2	5.34	122.10	118.90
3	5	4924	C	N3-C2-O2	-5.32	118.18	121.90
1	2	75	C	C6-N1-C2	-5.27	118.19	120.30
6	9	356	C	C6-N1-C1'	-5.25	114.49	120.80
6	9	501	C	N3-C2-O2	-5.25	118.22	121.90
1	2	75	C	N3-C2-O2	-5.25	118.23	121.90
6	9	914	U	N3-C2-O2	-5.23	118.54	122.20
6	9	1624	U	C2-N1-C1'	5.20	123.94	117.70
6	9	1314	U	C2-N1-C1'	5.19	123.93	117.70
3	5	2018	C	N1-C2-O2	5.18	122.01	118.90
6	9	853	C	C2-N1-C1'	5.18	124.49	118.80
3	5	2474	G	P-O3'-C3'	5.14	125.87	119.70
6	9	1281	G	N3-C4-N9	5.14	129.08	126.00
6	9	632	C	C2-N1-C1'	5.12	124.43	118.80
6	9	630	U	N3-C2-O2	-5.11	118.62	122.20
3	5	1438	U	P-O3'-C3'	5.08	125.80	119.70
3	5	133	C	C2-N1-C1'	5.08	124.39	118.80
3	5	2474	G	OP1-P-O3'	5.07	116.36	105.20
6	9	914	U	N1-C2-O2	5.05	126.34	122.80
6	9	183	G	O4'-C1'-N9	5.03	112.22	108.20
1	2	75	C	C5-C4-N4	5.01	123.71	120.20

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
13	G	215	ASP	Peptide
19	N	76	PRO	Peptide

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	
7	A	246/248 (99%)	228 (93%)	18 (7%)	0	100	100
8	B	392/394 (100%)	378 (96%)	14 (4%)	0	100	100
9	C	357/360 (99%)	347 (97%)	10 (3%)	0	100	100
10	D	289/291 (99%)	280 (97%)	9 (3%)	0	100	100
11	E	208/251 (83%)	198 (95%)	10 (5%)	0	100	100
12	F	223/225 (99%)	211 (95%)	12 (5%)	0	100	100
13	G	223/234 (95%)	215 (96%)	8 (4%)	0	100	100
14	H	188/190 (99%)	177 (94%)	11 (6%)	0	100	100
15	I	201/213 (94%)	195 (97%)	6 (3%)	0	100	100
16	J	168/170 (99%)	163 (97%)	5 (3%)	0	100	100
17	L	208/210 (99%)	200 (96%)	8 (4%)	0	100	100
18	M	136/138 (99%)	128 (94%)	8 (6%)	0	100	100
19	N	201/203 (99%)	189 (94%)	12 (6%)	0	100	100
20	O	197/199 (99%)	194 (98%)	3 (2%)	0	100	100
21	P	151/153 (99%)	145 (96%)	6 (4%)	0	100	100
22	Q	185/187 (99%)	180 (97%)	5 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
23	R	178/180 (99%)	171 (96%)	7 (4%)	0	100	100
24	S	174/176 (99%)	167 (96%)	7 (4%)	0	100	100
25	T	157/159 (99%)	151 (96%)	6 (4%)	0	100	100
26	U	96/98 (98%)	93 (97%)	3 (3%)	0	100	100
27	V	129/131 (98%)	125 (97%)	4 (3%)	0	100	100
28	W	102/121 (84%)	99 (97%)	3 (3%)	0	100	100
29	X	116/118 (98%)	114 (98%)	2 (2%)	0	100	100
30	Y	132/134 (98%)	131 (99%)	1 (1%)	0	100	100
31	Z	133/135 (98%)	130 (98%)	3 (2%)	0	100	100
32	a	145/147 (99%)	140 (97%)	5 (3%)	0	100	100
33	b	100/116 (86%)	97 (97%)	3 (3%)	0	100	100
34	c	96/98 (98%)	93 (97%)	3 (3%)	0	100	100
35	d	105/107 (98%)	103 (98%)	2 (2%)	0	100	100
36	e	126/128 (98%)	121 (96%)	5 (4%)	0	100	100
37	f	107/109 (98%)	105 (98%)	2 (2%)	0	100	100
38	g	112/114 (98%)	111 (99%)	1 (1%)	0	100	100
39	h	120/122 (98%)	118 (98%)	2 (2%)	0	100	100
40	i	100/102 (98%)	99 (99%)	1 (1%)	0	100	100
41	j	84/86 (98%)	81 (96%)	3 (4%)	0	100	100
42	k	67/69 (97%)	67 (100%)	0	0	100	100
43	l	48/50 (96%)	44 (92%)	4 (8%)	0	100	100
44	m	48/51 (94%)	46 (96%)	2 (4%)	0	100	100
45	n	23/25 (92%)	23 (100%)	0	0	100	100
46	o	101/103 (98%)	100 (99%)	1 (1%)	0	100	100
47	p	89/91 (98%)	86 (97%)	3 (3%)	0	100	100
48	r	122/124 (98%)	118 (97%)	4 (3%)	0	100	100
49	AA	215/217 (99%)	209 (97%)	6 (3%)	0	100	100
50	BB	211/213 (99%)	202 (96%)	9 (4%)	0	100	100
51	CC	219/221 (99%)	210 (96%)	9 (4%)	0	100	100
52	DD	226/228 (99%)	220 (97%)	6 (3%)	0	100	100
53	EE	260/262 (99%)	255 (98%)	5 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
54	FF	181/191 (95%)	166 (92%)	15 (8%)	0	100	100
55	GG	235/237 (99%)	229 (97%)	6 (3%)	0	100	100
56	HH	181/189 (96%)	171 (94%)	10 (6%)	0	100	100
57	II	199/206 (97%)	190 (96%)	9 (4%)	0	100	100
58	JJ	183/185 (99%)	178 (97%)	5 (3%)	0	100	100
59	KK	94/96 (98%)	92 (98%)	2 (2%)	0	100	100
60	LL	139/151 (92%)	134 (96%)	5 (4%)	0	100	100
61	NN	147/149 (99%)	145 (99%)	2 (1%)	0	100	100
62	OO	134/136 (98%)	132 (98%)	2 (2%)	0	100	100
63	PP	118/120 (98%)	112 (95%)	6 (5%)	0	100	100
64	QQ	140/142 (99%)	135 (96%)	5 (4%)	0	100	100
65	RR	130/132 (98%)	129 (99%)	1 (1%)	0	100	100
66	SS	142/144 (99%)	138 (97%)	4 (3%)	0	100	100
67	TT	139/141 (99%)	136 (98%)	3 (2%)	0	100	100
68	UU	98/100 (98%)	91 (93%)	7 (7%)	0	100	100
69	VV	81/83 (98%)	80 (99%)	1 (1%)	0	100	100
70	WW	127/129 (98%)	122 (96%)	5 (4%)	0	100	100
71	XX	139/141 (99%)	135 (97%)	4 (3%)	0	100	100
72	YY	122/124 (98%)	120 (98%)	2 (2%)	0	100	100
73	ZZ	73/75 (97%)	71 (97%)	2 (3%)	0	100	100
74	Aa	99/101 (98%)	90 (91%)	9 (9%)	0	100	100
75	Bb	81/83 (98%)	79 (98%)	2 (2%)	0	100	100
76	Cc	60/62 (97%)	59 (98%)	1 (2%)	0	100	100
77	Dd	53/55 (96%)	50 (94%)	3 (6%)	0	100	100
78	Ee	53/55 (96%)	53 (100%)	0	0	100	100
79	Gg	311/313 (99%)	293 (94%)	18 (6%)	0	100	100
All	All	10973/11241 (98%)	10587 (96%)	386 (4%)	0	100	100

There are no Ramachandran outliers to report.

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
7	A	190/190 (100%)	189 (100%)	1 (0%)	86 95
8	B	342/342 (100%)	341 (100%)	1 (0%)	91 97
9	C	299/299 (100%)	298 (100%)	1 (0%)	91 97
10	D	247/247 (100%)	247 (100%)	0	100 100
11	E	190/223 (85%)	189 (100%)	1 (0%)	86 95
12	F	196/196 (100%)	196 (100%)	0	100 100
13	G	196/201 (98%)	195 (100%)	1 (0%)	86 95
14	H	169/169 (100%)	168 (99%)	1 (1%)	84 95
15	I	175/180 (97%)	175 (100%)	0	100 100
16	J	143/143 (100%)	143 (100%)	0	100 100
17	L	175/175 (100%)	175 (100%)	0	100 100
18	M	117/117 (100%)	116 (99%)	1 (1%)	75 92
19	N	171/171 (100%)	171 (100%)	0	100 100
20	O	171/171 (100%)	169 (99%)	2 (1%)	67 89
21	P	134/134 (100%)	134 (100%)	0	100 100
22	Q	164/164 (100%)	164 (100%)	0	100 100
23	R	159/159 (100%)	159 (100%)	0	100 100
24	S	157/157 (100%)	157 (100%)	0	100 100
25	T	139/139 (100%)	138 (99%)	1 (1%)	81 94
26	U	88/88 (100%)	88 (100%)	0	100 100
27	V	101/101 (100%)	99 (98%)	2 (2%)	50 81
28	W	86/100 (86%)	85 (99%)	1 (1%)	67 89
29	X	106/106 (100%)	106 (100%)	0	100 100
30	Y	124/124 (100%)	124 (100%)	0	100 100
31	Z	117/117 (100%)	117 (100%)	0	100 100
32	a	119/119 (100%)	119 (100%)	0	100 100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
33	b	84/95 (88%)	83 (99%)	1 (1%)	67 89
34	c	84/84 (100%)	84 (100%)	0	100 100
35	d	98/98 (100%)	98 (100%)	0	100 100
36	e	114/114 (100%)	114 (100%)	0	100 100
37	f	88/88 (100%)	87 (99%)	1 (1%)	70 90
38	g	98/98 (100%)	97 (99%)	1 (1%)	73 91
39	h	109/109 (100%)	109 (100%)	0	100 100
40	i	86/86 (100%)	86 (100%)	0	100 100
41	j	73/73 (100%)	73 (100%)	0	100 100
42	k	64/64 (100%)	64 (100%)	0	100 100
43	l	47/47 (100%)	47 (100%)	0	100 100
44	m	46/46 (100%)	46 (100%)	0	100 100
45	n	24/24 (100%)	24 (100%)	0	100 100
46	o	91/91 (100%)	90 (99%)	1 (1%)	70 90
47	p	74/74 (100%)	74 (100%)	0	100 100
48	r	108/108 (100%)	108 (100%)	0	100 100
49	AA	180/181 (99%)	179 (99%)	1 (1%)	84 95
50	BB	194/194 (100%)	194 (100%)	0	100 100
51	CC	187/187 (100%)	187 (100%)	0	100 100
52	DD	190/190 (100%)	189 (100%)	1 (0%)	86 95
53	EE	224/224 (100%)	224 (100%)	0	100 100
54	FF	158/161 (98%)	158 (100%)	0	100 100
55	GG	207/207 (100%)	206 (100%)	1 (0%)	86 95
56	HH	165/169 (98%)	164 (99%)	1 (1%)	84 95
57	II	177/178 (99%)	175 (99%)	2 (1%)	70 90
58	JJ	161/161 (100%)	161 (100%)	0	100 100
59	KK	87/87 (100%)	87 (100%)	0	100 100
60	LL	130/136 (96%)	130 (100%)	0	100 100
61	NN	130/130 (100%)	130 (100%)	0	100 100
62	OO	106/106 (100%)	106 (100%)	0	100 100
63	PP	109/109 (100%)	108 (99%)	1 (1%)	75 92

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
64	QQ	117/117 (100%)	117 (100%)	0	100 100
65	RR	119/119 (100%)	118 (99%)	1 (1%)	79 93
66	SS	125/125 (100%)	123 (98%)	2 (2%)	58 85
67	TT	111/111 (100%)	111 (100%)	0	100 100
68	UU	92/92 (100%)	91 (99%)	1 (1%)	70 90
69	VV	67/67 (100%)	67 (100%)	0	100 100
70	WW	112/112 (100%)	112 (100%)	0	100 100
71	XX	113/113 (100%)	113 (100%)	0	100 100
72	YY	107/107 (100%)	107 (100%)	0	100 100
73	ZZ	66/66 (100%)	66 (100%)	0	100 100
74	Aa	88/88 (100%)	88 (100%)	0	100 100
75	Bb	75/75 (100%)	75 (100%)	0	100 100
76	Cc	55/55 (100%)	53 (96%)	2 (4%)	30 64
77	Dd	48/48 (100%)	48 (100%)	0	100 100
78	Ee	46/46 (100%)	46 (100%)	0	100 100
79	Gg	272/272 (100%)	269 (99%)	3 (1%)	70 90
All	All	9581/9664 (99%)	9548 (100%)	33 (0%)	90 97

All (33) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
7	A	128	ARG
8	B	294	LYS
9	C	188	ARG
11	E	58	ARG
13	G	174	LYS
14	H	141	LYS
18	M	137	LYS
20	O	117	ARG
20	O	140	ARG
25	T	146	LYS
27	V	48	ARG
27	V	109	LYS
28	W	110	ARG
33	b	114	ARG
37	f	63	LYS

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Mol	Chain	Res	Type
38	g	54	ARG
46	o	27	LYS
49	AA	166	LYS
52	DD	76	ARG
55	GG	98	ARG
56	HH	85	LYS
57	II	124	LYS
57	II	205	ARG
63	PP	65	LYS
65	RR	5	ARG
66	SS	8	LYS
66	SS	142	ARG
68	UU	49	LYS
76	Cc	66	ARG
76	Cc	67	ARG
79	Gg	47	ARG
79	Gg	118	ARG
79	Gg	280	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (66) such sidechains are listed below:

Mol	Chain	Res	Type
7	A	162	ASN
8	B	184	GLN
8	B	258	HIS
11	E	138	GLN
11	E	253	GLN
12	F	150	ASN
13	G	91	ASN
13	G	96	GLN
14	H	98	HIS
14	H	162	GLN
14	H	189	GLN
15	I	95	HIS
15	I	112	GLN
15	I	143	GLN
15	I	144	ASN
17	L	19	GLN
17	L	115	GLN
18	M	48	GLN
18	M	56	GLN
20	O	5	GLN

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Mol	Chain	Res	Type
21	P	72	GLN
21	P	80	GLN
23	R	143	HIS
24	S	146	HIS
25	T	54	HIS
26	U	44	GLN
28	W	79	GLN
28	W	104	GLN
31	Z	79	HIS
31	Z	127	ASN
33	b	19	ASN
36	e	102	ASN
38	g	3	GLN
39	h	107	GLN
41	j	13	ASN
42	k	58	GLN
44	m	83	ASN
50	BB	40	ASN
52	DD	57	ASN
53	EE	67	GLN
54	FF	36	GLN
55	GG	70	HIS
56	HH	68	GLN
56	HH	76	GLN
57	II	7	ASN
58	JJ	113	GLN
58	JJ	154	GLN
60	LL	19	ASN
60	LL	83	GLN
61	NN	5	HIS
62	OO	113	GLN
63	PP	32	GLN
63	PP	103	ASN
63	PP	104	GLN
64	QQ	11	GLN
64	QQ	142	GLN
65	RR	83	ASN
67	TT	51	ASN
68	UU	100	GLN
69	VV	2	GLN
72	YY	94	HIS
76	Cc	29	GLN

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Mol	Chain	Res	Type
78	Ee	88	GLN
79	Gg	104	HIS
79	Gg	117	ASN
79	Gg	226	HIS

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	2	68/76 (89%)	11 (16%)	0
2	1	4/6 (66%)	1 (25%)	0
3	5	3493/3546 (98%)	681 (19%)	55 (1%)
4	7	119/120 (99%)	10 (8%)	0
5	8	149/156 (95%)	29 (19%)	1 (0%)
6	9	1678/1698 (98%)	328 (19%)	18 (1%)
All	All	5511/5602 (98%)	1060 (19%)	74 (1%)

All (1060) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	2	10	G
1	2	11	G
1	2	13	G
1	2	14	C
1	2	19	G
1	2	42	A
1	2	46	G
1	2	58	A
1	2	72	U
1	2	75	C
1	2	76	A
2	1	46	A
3	5	8	U
3	5	13	U
3	5	15	A
3	5	25	A
3	5	39	A
3	5	42	A
3	5	48	G
3	5	49	U
3	5	56	A
3	5	58	G

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Mol	Chain	Res	Type
3	5	59	A
3	5	64	A
3	5	65	A
3	5	66	A
3	5	71	C
3	5	72	C
3	5	73	A
3	5	76	A
3	5	91	G
3	5	104	G
3	5	108	A
3	5	109	G
3	5	119	G
3	5	120	A
3	5	122	U
3	5	126	C
3	5	134	G
3	5	135	G
3	5	142	G
3	5	144	G
3	5	146	G
3	5	149	A
3	5	157	U
3	5	159	C
3	5	171	U
3	5	172	C
3	5	173	C
3	5	182	G
3	5	200	U
3	5	201	C
3	5	209	U
3	5	216	C
3	5	218	A
3	5	219	G
3	5	220	C
3	5	224	U
3	5	233	U
3	5	234	G
3	5	235	A
3	5	246	G
3	5	265	C
3	5	266	C

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Mol	Chain	Res	Type
3	5	280	G
3	5	297	U
3	5	306	A
3	5	315	G
3	5	316	U
3	5	334	A
3	5	340	C
3	5	344	A
3	5	345	C
3	5	350	C
3	5	363	A
3	5	372	A
3	5	386	A
3	5	387	G
3	5	407	A
3	5	410	A
3	5	412	G
3	5	413	G
3	5	415	G
3	5	431	G
3	5	432	U
3	5	440	U
3	5	449	C
3	5	450	G
3	5	452	A
3	5	453	G
3	5	464	G
3	5	467	U
3	5	468	U
3	5	483	G
3	5	486	C
3	5	492	U
3	5	493	G
3	5	496	G
3	5	497	G
3	5	498	C
3	5	499	G
3	5	505	G
3	5	510	U
3	5	523	C
3	5	666	G
3	5	667	A

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Mol	Chain	Res	Type
3	5	669	C
3	5	670	G
3	5	672	C
3	5	685	C
3	5	686	A
3	5	691	C
3	5	696	C
3	5	697	G
3	5	704	C
3	5	705	G
3	5	708	G
3	5	719	C
3	5	731	G
3	5	738	C
3	5	738(A)	C
3	5	742	G
3	5	744	G
3	5	749	G
3	5	758	G
3	5	914	U
3	5	915	A
3	5	916	C
3	5	917	A
3	5	918	G
3	5	921	C
3	5	923	C
3	5	925	C
3	5	926	G
3	5	929	A
3	5	931	C
3	5	932	A
3	5	933	G
3	5	934	C
3	5	935	A
3	5	935(A)	G
3	5	936	C
3	5	939	G
3	5	941	C
3	5	943	A
3	5	944	A
3	5	945	U
3	5	946	C

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Mol	Chain	Res	Type
3	5	956	A
3	5	959	G
3	5	960	A
3	5	961	G
3	5	966	A
3	5	967	C
3	5	968	C
3	5	983	U
3	5	1078	A
3	5	1079	C
3	5	1080	C
3	5	1081	C
3	5	1082	C
3	5	1084	C
3	5	1175	A
3	5	1179	U
3	5	1180	C
3	5	1187	G
3	5	1193	C
3	5	1195	G
3	5	1211	G
3	5	1212	G
3	5	1214	C
3	5	1215	C
3	5	1234	G
3	5	1235	C
3	5	1236	C
3	5	1237	A
3	5	1239	G
3	5	1272	C
3	5	1273	G
3	5	1275	G
3	5	1276	C
3	5	1284	G
3	5	1287	G
3	5	1291	G
3	5	1292	C
3	5	1293	G
3	5	1295	U
3	5	1296	G
3	5	1301	C
3	5	1303	A

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Mol	Chain	Res	Type
3	5	1304	C
3	5	1314	C
3	5	1326	A2M
3	5	1330	A
3	5	1337	A
3	5	1354	A
3	5	1358	G
3	5	1359	G
3	5	1371	A
3	5	1372	A
3	5	1377	G
3	5	1378	C
3	5	1381	U
3	5	1387	A
3	5	1394	G
3	5	1397	A
3	5	1398	A
3	5	1403	G
3	5	1414	C
3	5	1415	G
3	5	1416	G
3	5	1419	G
3	5	1421	G
3	5	1428	U
3	5	1436	C
3	5	1437	C
3	5	1438	U
3	5	1440	U
3	5	1441	C
3	5	1455	G
3	5	1457	G
3	5	1475	G
3	5	1477	C
3	5	1482	G
3	5	1483	C
3	5	1497	A
3	5	1498	G
3	5	1502	G
3	5	1514	U
3	5	1516	G
3	5	1523	A
3	5	1534	A2M

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Mol	Chain	Res	Type
3	5	1547	A
3	5	1566	C
3	5	1568	C
3	5	1578	U
3	5	1586	G
3	5	1591	U
3	5	1596	U
3	5	1602	U
3	5	1624	G
3	5	1625	OMG
3	5	1626	G
3	5	1631	A
3	5	1633	G
3	5	1634	A
3	5	1638	A
3	5	1641	G
3	5	1654	G
3	5	1661	C
3	5	1676	C
3	5	1677	PSU
3	5	1678	C
3	5	1691	G
3	5	1731	C
3	5	1741	G
3	5	1742	A
3	5	1750	G
3	5	1751	A
3	5	1752	G
3	5	1755	C
3	5	1756	U
3	5	1757	U
3	5	1764	G
3	5	1768	C
3	5	1772	C
3	5	1773	U
3	5	1774	C
3	5	1775	A
3	5	1776	A
3	5	1781	U
3	5	1787	A
3	5	1804	A
3	5	1805	A

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Mol	Chain	Res	Type
3	5	1806	G
3	5	1807	C
3	5	1812	C
3	5	1815	G
3	5	1819	G
3	5	1821	G
3	5	1828	C
3	5	1834	U
3	5	1835	G
3	5	1836	G
3	5	1837	A
3	5	1842	G
3	5	1855	G
3	5	1869	G
3	5	1893	C
3	5	1897	A
3	5	1916	G
3	5	1918	U
3	5	1920	C
3	5	1921	C
3	5	1922	G
3	5	1930	U
3	5	1931	C
3	5	1932	A
3	5	1940	G
3	5	1945	G
3	5	1948	G
3	5	1957	U
3	5	1958	A
3	5	1960	A
3	5	1961	G
3	5	1962	A
3	5	1964	A
3	5	1969	G
3	5	1972	G
3	5	1974	U
3	5	1975	G
3	5	1976	G
3	5	1977	C
3	5	1980	U
3	5	1983	A
3	5	1984	A

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Mol	Chain	Res	Type
3	5	1987	C
3	5	1991	A
3	5	1992	U
3	5	1997	U
3	5	2001	G
3	5	2002	A
3	5	2003	G
3	5	2004	U
3	5	2007	G
3	5	2008	U
3	5	2010	A
3	5	2011	C
3	5	2026	A
3	5	2031	C
3	5	2044	U
3	5	2046	G
3	5	2047	A
3	5	2048	U
3	5	2052	G
3	5	2055	G
3	5	2056	G
3	5	2069	A
3	5	2084	U
3	5	2090	U
3	5	2092	G
3	5	2093	G
3	5	2094	C
3	5	2097	A
3	5	2098	G
3	5	2100	G
3	5	2101	A
3	5	2102	G
3	5	2106	G
3	5	2107	A
3	5	2108	G
3	5	2109	A
3	5	2110	G
3	5	2259	G
3	5	2260	C
3	5	2268	A
3	5	2275	G
3	5	2279	A

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Mol	Chain	Res	Type
3	5	2289	C
3	5	2300	A
3	5	2301	G
3	5	2306	G
3	5	2313	A
3	5	2314	G
3	5	2332	A
3	5	2333	G
3	5	2348	G
3	5	2351	C
3	5	2360	A
3	5	2364	OMG
3	5	2369	U
3	5	2383	C
3	5	2395	A
3	5	2396	A
3	5	2398	U
3	5	2417	A
3	5	2422	OMC
3	5	2424	OMG
3	5	2425	U
3	5	2433	G
3	5	2441	C
3	5	2450	G
3	5	2453	A
3	5	2470	C
3	5	2471	G
3	5	2474	G
3	5	2475	G
3	5	2488	C
3	5	2489	C
3	5	2490	U
3	5	2491	C
3	5	2495	U
3	5	2503	G
3	5	2504	C
3	5	2505	C
3	5	2506	G
3	5	2511	A
3	5	2513	A
3	5	2529	A
3	5	2530	U

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Mol	Chain	Res	Type
3	5	2537	A
3	5	2544	G
3	5	2546	G
3	5	2547	G
3	5	2554	U
3	5	2568	C
3	5	2570	U
3	5	2571	C
3	5	2575	U
3	5	2577	C
3	5	2583	C
3	5	2586	G
3	5	2587	A
3	5	2588	C
3	5	2589	C
3	5	2601	A
3	5	2618	G
3	5	2620	G
3	5	2627	C
3	5	2638	G
3	5	2640	G
3	5	2653	C
3	5	2661	U
3	5	2662	G
3	5	2663	G
3	5	2669	C
3	5	2677	G
3	5	2679	G
3	5	2687	U
3	5	2694	G
3	5	2695	A
3	5	2696	A
3	5	2705	G
3	5	2707	U
3	5	2708	U
3	5	2709	C
3	5	2710	C
3	5	2711	G
3	5	2714	G
3	5	2715	G
3	5	2716	C
3	5	2725	A

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Mol	Chain	Res	Type
3	5	2726	G
3	5	2740	U
3	5	2743	A
3	5	2744	A
3	5	2753	G
3	5	2763	U
3	5	2769	U
3	5	2772	C
3	5	2787	A
3	5	2788	U
3	5	2790	U
3	5	2798	A
3	5	2806	A
3	5	2814	C
3	5	2815	A
3	5	2826	U
3	5	2827	G
3	5	2842	G
3	5	2855	G
3	5	2867	C
3	5	2875	C
3	5	2898	G
3	5	3603	G
3	5	3605	C
3	5	3606	U
3	5	3615	G
3	5	3618	C
3	5	3619	G
3	5	3625	G
3	5	3626	G
3	5	3635	A
3	5	3644	U
3	5	3648	A
3	5	3662	A
3	5	3664	G
3	5	3673	C
3	5	3674	G
3	5	3696	C
3	5	3698	G
3	5	3711	A
3	5	3712	A
3	5	3714	G

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Mol	Chain	Res	Type
3	5	3729	PSU
3	5	3748	A
3	5	3753	G
3	5	3759	A
3	5	3760	A
3	5	3773	U
3	5	3774	A
3	5	3776	G
3	5	3777	G
3	5	3783	A
3	5	3784	A
3	5	3786	U
3	5	3792	OMG
3	5	3810	C
3	5	3811	G
3	5	3813	A
3	5	3814	U
3	5	3817	A
3	5	3819	G
3	5	3822	U
3	5	3824	A
3	5	3838	U
3	5	3840	U
3	5	3867	A2M
3	5	3876	A
3	5	3877	A
3	5	3878	C
3	5	3879	G
3	5	3889	G
3	5	3892	U
3	5	3898	G
3	5	3901	A
3	5	3905	A
3	5	3906	A
3	5	3907	G
3	5	3908	A
3	5	3915	U
3	5	3916	G
3	5	3917	A
3	5	3938	G
3	5	3939	G
3	5	3946	G

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Mol	Chain	Res	Type
3	5	3947	A
3	5	3948	C
3	5	4061	G
3	5	4066	U
3	5	4076	G
3	5	4085	A
3	5	4086	G
3	5	4097	G
3	5	4100	C
3	5	4118	U
3	5	4119	C
3	5	4120	U
3	5	4122	G
3	5	4125	C
3	5	4127	A
3	5	4158	C
3	5	4162	C
3	5	4163	U
3	5	4164	C
3	5	4170	A
3	5	4183	G
3	5	4184	G
3	5	4191	G
3	5	4195	G
3	5	4203	A
3	5	4225	G
3	5	4229	U
3	5	4233	A
3	5	4234	A
3	5	4249	G
3	5	4251	A
3	5	4254	G
3	5	4255	A
3	5	4256	A
3	5	4266	G
3	5	4268	A
3	5	4271	A
3	5	4273	A
3	5	4281	A
3	5	4291	G
3	5	4305	G
3	5	4306	OMU

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Mol	Chain	Res	Type
3	5	4314	C
3	5	4329	G
3	5	4330	G
3	5	4332	C
3	5	4339	A
3	5	4349	C
3	5	4354	U
3	5	4372	U
3	5	4373	G
3	5	4374	U
3	5	4377	G
3	5	4378	A
3	5	4381	A
3	5	4387	C
3	5	4391	G
3	5	4394	A
3	5	4395	U
3	5	4396	A
3	5	4398	C
3	5	4419	U
3	5	4422	A
3	5	4426	C
3	5	4436	U
3	5	4440	G
3	5	4444	C
3	5	4448	G
3	5	4449	A
3	5	4452	U
3	5	4453	C
3	5	4464	A
3	5	4475	G
3	5	4500	PSU
3	5	4510	A
3	5	4511	A
3	5	4512	U
3	5	4513	A
3	5	4519	C
3	5	4520	G
3	5	4522	G
3	5	4524	G
3	5	4530	UR3
3	5	4531	PSU

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Mol	Chain	Res	Type
3	5	4548	A
3	5	4573	G
3	5	4575	G
3	5	4584	A
3	5	4586	G
3	5	4589	A
3	5	4590	A
3	5	4627	U
3	5	4636	PSU
3	5	4637	OMG
3	5	4639	G
3	5	4652	G
3	5	4656	A
3	5	4670	C
3	5	4677	U
3	5	4691	A
3	5	4695	C
3	5	4700	A
3	5	4707	A
3	5	4709	U
3	5	4720	C
3	5	4721	G
3	5	4736	C
3	5	4745	G
3	5	4751	G
3	5	4754	G
3	5	4757	C
3	5	4759	C
3	5	4761	G
3	5	4765	G
3	5	4771	C
3	5	4772	C
3	5	4867	G
3	5	4870	OMG
3	5	4873	G
3	5	4875	G
3	5	4877	G
3	5	4882	U
3	5	4883	C
3	5	4885	U
3	5	4895	C
3	5	4906	C

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Mol	Chain	Res	Type
3	5	4910	A
3	5	4912	G
3	5	4913	G
3	5	4914	G
3	5	4915	G
3	5	4921	C
3	5	4924	C
3	5	4925	U
3	5	4926	C
3	5	4931	G
3	5	4934	A
3	5	4937	C
3	5	4940	C
3	5	4944	C
3	5	4948	C
3	5	4950	U
3	5	4951	G
3	5	4956	A
3	5	4959	U
3	5	4960	G
3	5	4963	G
3	5	4964	C
3	5	4965	U
3	5	4966	A
3	5	4967	A
3	5	4976	U
3	5	4988	U
3	5	4990	C
3	5	4993	G
3	5	5006	U
3	5	5014	A
3	5	5017	G
3	5	5040	U
3	5	5041	G
3	5	5047	C
3	5	5050	C
3	5	5052	C
3	5	5053	U
3	5	5054	C
3	5	5061	A
3	5	5062	G
4	7	33	U

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Mol	Chain	Res	Type
4	7	53	U
4	7	54	A
4	7	64	G
4	7	97	G
4	7	100	A
4	7	102	U
4	7	110	G
4	7	111	C
4	7	120	U
5	8	2	G
5	8	3	A
5	8	34	U
5	8	35	C
5	8	39	G
5	8	59	A
5	8	62	A
5	8	63	U
5	8	74	U
5	8	75	G
5	8	78	G
5	8	87	G
5	8	90	C
5	8	94	G
5	8	103	A
5	8	105	C
5	8	108	A
5	8	109	C
5	8	110	U
5	8	111	U
5	8	114	G
5	8	122	G
5	8	124	U
5	8	125	C
5	8	126	C
5	8	127	U
5	8	151	G
5	8	153	C
5	8	156	U
6	9	2	A
6	9	3	C
6	9	4	C
6	9	17	C

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Mol	Chain	Res	Type
6	9	25	A
6	9	26	U
6	9	33	G
6	9	41	G
6	9	44	U
6	9	46	A
6	9	56	G
6	9	58	C
6	9	64	A
6	9	65	C
6	9	67	C
6	9	68	A
6	9	71	G
6	9	73	C
6	9	74	G
6	9	75	G
6	9	77	A
6	9	79	A
6	9	103	A
6	9	111	A
6	9	113	G
6	9	114	G
6	9	115	U
6	9	116	OMU
6	9	124	U
6	9	126	G
6	9	129	C
6	9	130	G
6	9	141	A
6	9	143	U
6	9	147	A
6	9	155	G
6	9	158	A
6	9	162	C
6	9	163	U
6	9	166	A2M
6	9	168	C
6	9	178	C
6	9	180	G
6	9	182	C
6	9	183	G
6	9	184	G

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Mol	Chain	Res	Type
6	9	188	C
6	9	189	U
6	9	190	G
6	9	192	C
6	9	206	G
6	9	215	G
6	9	292	A
6	9	308	G
6	9	310	C
6	9	312	G
6	9	318	A
6	9	319	C
6	9	323	C
6	9	339	A
6	9	347	G
6	9	350	C
6	9	351	G
6	9	360	A
6	9	362	C
6	9	364	A
6	9	367	U
6	9	368	U
6	9	370	G
6	9	385	G
6	9	386	C
6	9	398	A
6	9	400	C
6	9	407	G
6	9	408	A
6	9	409	C
6	9	418	A
6	9	434	G
6	9	435	A
6	9	447	A
6	9	448	A
6	9	449	A
6	9	450	C
6	9	465	A
6	9	466	G
6	9	471	G
6	9	472	C
6	9	473	A

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Mol	Chain	Res	Type
6	9	474	G
6	9	476	A
6	9	482	G
6	9	487	U
6	9	492	C
6	9	516	A
6	9	525	A
6	9	530	U
6	9	532	C
6	9	533	A
6	9	534	G
6	9	535	G
6	9	536	A
6	9	537	C
6	9	541	U
6	9	546	G
6	9	547	G
6	9	548	C
6	9	549	C
6	9	550	C
6	9	551	U
6	9	554	A
6	9	555	A
6	9	556	U
6	9	559	G
6	9	563	G
6	9	564	A
6	9	576	A
6	9	583	A
6	9	587	A
6	9	588	G
6	9	589	G
6	9	590	A
6	9	591	U
6	9	595	U
6	9	598	G
6	9	606	G
6	9	607	U
6	9	608	C
6	9	614	C
6	9	617	G
6	9	621	C

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Mol	Chain	Res	Type
6	9	627	U
6	9	628	A
6	9	629	A
6	9	631	U
6	9	643	A
6	9	655	A
6	9	660	C
6	9	666	U
6	9	668	A2M
6	9	669	A
6	9	671	A
6	9	672	A
6	9	673	G
6	9	683	OMG
6	9	688	U
6	9	689	U
6	9	690	G
6	9	732	U
6	9	752	G
6	9	753	C
6	9	754	G
6	9	799	U
6	9	810	A
6	9	811	A
6	9	821	G
6	9	822	PSU
6	9	830	A
6	9	847	A
6	9	870	A
6	9	871	U
6	9	872	A
6	9	874	G
6	9	875	A
6	9	876	C
6	9	878	G
6	9	887	U
6	9	888	U
6	9	890	U
6	9	892	U
6	9	894	G
6	9	898	U
6	9	901	G

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Mol	Chain	Res	Type
6	9	909	G
6	9	913	A
6	9	914	U
6	9	920	A
6	9	930	C
6	9	933	G
6	9	934	G
6	9	943	U
6	9	958	G
6	9	959	G
6	9	971	G
6	9	990	A
6	9	992	A
6	9	999	G
6	9	1017	U
6	9	1023	A
6	9	1041	G
6	9	1060	A
6	9	1061	U
6	9	1062	A
6	9	1071	G
6	9	1078	C
6	9	1083	A
6	9	1085	C
6	9	1097	G
6	9	1109	C
6	9	1115	U
6	9	1116	C
6	9	1117	C
6	9	1118	C
6	9	1120	U
6	9	1121	G
6	9	1126	G
6	9	1130	G
6	9	1133	A
6	9	1138	C
6	9	1139	C
6	9	1148	A
6	9	1149	A
6	9	1153	C
6	9	1154	U
6	9	1166	G

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Mol	Chain	Res	Type
6	9	1195	A
6	9	1207	G
6	9	1215	C
6	9	1224	G
6	9	1242	U
6	9	1243	PSU
6	9	1251	A
6	9	1253	A
6	9	1256	G
6	9	1257	G
6	9	1259	A
6	9	1260	A
6	9	1265	A
6	9	1274	G
6	9	1275	G
6	9	1282	A
6	9	1284	A
6	9	1285	G
6	9	1286	G
6	9	1287	A
6	9	1293	A
6	9	1294	G
6	9	1301	A
6	9	1302	G
6	9	1307	U
6	9	1308	U
6	9	1309	C
6	9	1314	U
6	9	1342	U
6	9	1371	U
6	9	1372	U
6	9	1378	A
6	9	1395	C
6	9	1396	A
6	9	1397	U
6	9	1401	A
6	9	1402	A
6	9	1404	U
6	9	1409	A
6	9	1428	G
6	9	1442	U
6	9	1454	A

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Mol	Chain	Res	Type
6	9	1462	U
6	9	1463	U
6	9	1464	C
6	9	1466	G
6	9	1477	U
6	9	1480	A
6	9	1487	A
6	9	1489	A
6	9	1490	G
6	9	1497	G
6	9	1498	A
6	9	1505	U
6	9	1507	G
6	9	1508	A
6	9	1509	U
6	9	1521	C
6	9	1522	A
6	9	1533	A
6	9	1552	G
6	9	1553	C
6	9	1563	G
6	9	1570	G
6	9	1574	C
6	9	1575	G
6	9	1579	A
6	9	1580	A
6	9	1586	U
6	9	1587	G
6	9	1588	A
6	9	1589	A
6	9	1601	A
6	9	1602	U
6	9	1604	G
6	9	1606	G
6	9	1619	A
6	9	1621	U
6	9	1623	A
6	9	1637	A
6	9	1638	G
6	9	1648	G
6	9	1665	G
6	9	1671	G

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Mol	Chain	Res	Type
6	9	1695	A
6	9	1698	C
6	9	1699	A
6	9	1721	U
6	9	1722	G
6	9	1726	G
6	9	1727	G
6	9	1732	G
6	9	1744	G
6	9	1748	G
6	9	1756	C
6	9	1779	G
6	9	1783	C
6	9	1784	G
6	9	1785	C
6	9	1823	A
6	9	1824	A
6	9	1829	G
6	9	1831	A
6	9	1835	A
6	9	1836	G
6	9	1838	U
6	9	1849	G
6	9	1859	A
6	9	1861	G
6	9	1862	G
6	9	1863	A
6	9	1864	U
6	9	1865	C
6	9	1869	A

All (74) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
3	5	12	A
3	5	47	A
3	5	48	G
3	5	125	C
3	5	134	G
3	5	217	C
3	5	245	C
3	5	265	C

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Mol	Chain	Res	Type
3	5	385	A
3	5	406	C
3	5	449	C
3	5	485	C
3	5	492	U
3	5	504	G
3	5	684	G
3	5	685	C
3	5	696	C
3	5	930	G
3	5	1174	G
3	5	1211	G
3	5	1236	C
3	5	1238	C
3	5	1291	G
3	5	1329	G
3	5	1370	G
3	5	1438	U
3	5	1440	U
3	5	1474	C
3	5	1633	G
3	5	1804	A
3	5	1818	G
3	5	1979	A
3	5	1983	A
3	5	2046	G
3	5	2089	G
3	5	2440	U
3	5	2474	G
3	5	2502	A
3	5	2639	U
3	5	2661	U
3	5	2695	A
3	5	3625	G
3	5	3697	U
3	5	3876	A
3	5	3888	G
3	5	4065	G
3	5	4119	C
3	5	4232	U
3	5	4254	G
3	5	4448	G

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Mol	Chain	Res	Type
3	5	4699	U
3	5	4884	G
3	5	4925	U
3	5	4936	G
3	5	4947	U
5	8	124	U
6	9	24	C
6	9	110	U
6	9	140	U
6	9	434	G
6	9	465	A
6	9	532	C
6	9	553	U
6	9	642	U
6	9	688	U
6	9	752	G
6	9	870	A
6	9	874	G
6	9	1137	U
6	9	1394	G
6	9	1395	C
6	9	1489	A
6	9	1520	G
6	9	1637	A

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

139 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	$\#\|Z\| > 2$
3	OMC	5	3887	3	19,22,23	3.00	8 (42%)	25,31,34	0.77	0
6	PSU	9	612	6	18,21,22	1.10	1 (5%)	21,30,33	1.97	6 (28%)
6	A2M	9	1678	6	18,25,26	3.55	7 (38%)	20,36,39	3.36	5 (25%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
3	BGH	5	3899	80,3	25,29,30	4.50	18 (72%)	30,43,46	2.48	13 (43%)
3	I4U	5	1659	3	20,24,25	3.43	8 (40%)	27,34,37	2.00	2 (7%)
3	OMC	5	3701	80,3	19,22,23	2.99	8 (42%)	25,31,34	0.72	0
3	5MC	5	4335	3	19,22,23	3.87	8 (42%)	26,32,35	1.08	2 (7%)
3	B8K	5	4690	3	24,28,29	3.27	11 (45%)	29,42,45	2.45	11 (37%)
3	B8T	5	4483	3	19,22,23	3.60	8 (42%)	25,31,34	0.91	1 (4%)
3	E7G	5	2297	3	24,27,28	3.57	11 (45%)	28,40,43	2.30	9 (32%)
3	PSU	5	4293	3	18,21,22	1.09	1 (5%)	21,30,33	1.95	5 (23%)
3	A2M	5	1524	3	18,25,26	3.61	6 (33%)	20,36,39	3.43	4 (20%)
3	B9H	5	2786	3	21,25,26	3.03	4 (19%)	22,35,38	1.47	3 (13%)
3	M7A	5	4564	3	19,25,26	1.60	2 (10%)	25,37,40	4.23	8 (32%)
3	OMC	5	3909	3	19,22,23	3.00	8 (42%)	25,31,34	0.96	1 (4%)
6	B8Q	9	1219	80,6	18,22,23	2.96	4 (22%)	21,32,35	2.32	7 (33%)
3	P7G	5	3880	3	24,28,29	3.62	11 (45%)	25,41,44	1.34	2 (8%)
3	PSU	5	4450	80,3	18,21,22	1.09	2 (11%)	21,30,33	2.03	5 (23%)
3	UR3	5	4530	3	19,22,23	2.85	7 (36%)	26,32,35	1.64	3 (11%)
3	OMU	5	4620	3	19,22,23	3.03	8 (42%)	25,31,34	1.78	4 (16%)
3	PSU	5	1683	3	18,21,22	1.09	1 (5%)	21,30,33	1.98	5 (23%)
3	B9B	5	1574	80,3	20,28,29	1.73	2 (10%)	19,40,43	7.22	5 (26%)
3	A2M	5	3785	3	18,25,26	3.65	7 (38%)	20,36,39	3.63	6 (30%)
3	OMG	5	4637	3	19,26,27	2.41	8 (42%)	21,38,41	1.46	4 (19%)
3	A2M	5	4523	80,3	18,25,26	3.58	7 (38%)	20,36,39	3.34	4 (20%)
6	OMG	9	644	6	19,26,27	2.39	8 (42%)	21,38,41	1.42	4 (19%)
3	PSU	5	1677	3	18,21,22	1.09	1 (5%)	21,30,33	1.91	5 (23%)
3	A2M	5	2401	80,3	18,25,26	3.60	7 (38%)	20,36,39	3.37	4 (20%)
6	B8N	9	1248	6	25,29,30	3.38	7 (28%)	28,42,45	2.00	7 (25%)
3	P4U	5	1348	3	21,24,25	3.41	8 (38%)	28,33,36	1.57	2 (7%)
3	B8H	5	4296	3	19,22,23	6.85	6 (31%)	21,32,35	2.51	5 (23%)
3	PSU	5	4403	3	18,21,22	1.10	1 (5%)	21,30,33	1.81	5 (23%)
3	B8H	5	3762	3	19,22,23	6.83	6 (31%)	21,32,35	2.51	5 (23%)
3	PSU	5	3715	3	18,21,22	1.09	1 (5%)	21,30,33	1.89	4 (19%)
3	E6G	5	4355	3	19,27,28	2.25	2 (10%)	18,39,42	3.46	6 (33%)
3	B8W	5	4129	3	18,26,27	2.36	2 (11%)	17,38,41	2.74	8 (47%)
3	MHG	5	4371	3	29,32,33	3.55	11 (37%)	34,46,49	2.45	11 (32%)
6	UR3	9	1830	6	19,22,23	2.92	7 (36%)	26,32,35	1.72	4 (15%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
3	B8W	5	4529	80,3	18,26,27	2.36	2 (11%)	17,38,41	2.69	8 (47%)
3	OMG	5	1625	80,3	19,26,27	2.44	8 (42%)	21,38,41	1.45	4 (19%)
6	4AC	9	1337	6	21,24,25	3.19	9 (42%)	28,34,37	1.11	4 (14%)
6	PSU	9	119	6	18,21,22	1.02	1 (5%)	21,30,33	1.76	4 (19%)
6	OMU	9	116	6	19,22,23	3.06	8 (42%)	25,31,34	1.81	6 (24%)
3	OMG	5	373	3	19,26,27	2.39	8 (42%)	21,38,41	1.43	4 (19%)
3	A2M	5	1534	80,3	18,25,26	3.62	7 (38%)	20,36,39	3.41	4 (20%)
3	2MG	5	1517	3	18,26,27	2.50	7 (38%)	16,38,41	1.80	5 (31%)
3	A2M	5	1871	80,3	18,25,26	3.58	7 (38%)	20,36,39	3.35	4 (20%)
3	B8Q	5	1456	3	18,22,23	2.89	6 (33%)	21,32,35	1.91	4 (19%)
6	OMG	9	509	80,6	19,26,27	2.39	8 (42%)	21,38,41	1.44	4 (19%)
3	A2M	5	1326	3	18,25,26	3.59	7 (38%)	20,36,39	3.29	4 (20%)
6	MA6	9	1850	6	19,26,27	1.92	4 (21%)	18,38,41	4.00	4 (22%)
3	OMG	5	4370	3	19,26,27	2.42	8 (42%)	21,38,41	1.43	4 (19%)
3	PSU	5	4636	3	18,21,22	1.12	1 (5%)	21,30,33	2.03	6 (28%)
3	B8W	5	2380	3	18,26,27	2.32	2 (11%)	17,38,41	2.63	6 (35%)
3	B8W	5	4472	3	18,26,27	2.35	2 (11%)	17,38,41	2.58	5 (29%)
3	OMU	5	4306	3	19,22,23	3.01	8 (42%)	25,31,34	1.82	5 (20%)
3	5MC	5	4447	3	19,22,23	3.76	8 (42%)	26,32,35	1.08	1 (3%)
3	A2M	5	3718	3	18,25,26	3.60	7 (38%)	20,36,39	3.28	5 (25%)
6	A2M	9	166	6	18,25,26	3.61	7 (38%)	20,36,39	3.31	6 (30%)
3	PSU	5	3729	3	18,21,22	1.12	1 (5%)	21,30,33	1.95	5 (23%)
3	7MG	5	4550	3	23,26,27	3.46	10 (43%)	27,39,42	2.11	9 (33%)
3	PSU	5	4442	3	18,21,22	1.07	1 (5%)	21,30,33	1.92	5 (23%)
6	PSU	9	1081	6	18,21,22	1.04	1 (5%)	21,30,33	1.82	5 (23%)
3	OMG	5	4494	3	19,26,27	2.43	8 (42%)	21,38,41	1.44	4 (19%)
3	B8T	5	4671	3	19,22,23	3.61	8 (42%)	25,31,34	0.90	1 (4%)
6	PSU	9	1243	6	18,21,22	1.10	1 (5%)	21,30,33	1.90	4 (19%)
3	PSU	5	4500	3	18,21,22	1.10	1 (5%)	21,30,33	1.92	6 (28%)
6	A2M	9	1031	6	18,25,26	3.59	7 (38%)	20,36,39	3.27	5 (25%)
3	OMG	5	1522	3	19,26,27	2.38	8 (42%)	21,38,41	1.44	3 (14%)
3	OMC	5	2804	3	19,22,23	2.96	8 (42%)	25,31,34	0.70	0
3	B9B	5	237	3	20,28,29	1.73	2 (10%)	19,40,43	7.09	5 (26%)
6	OMC	9	1703	6	19,22,23	3.01	8 (42%)	25,31,34	0.75	0
3	E7G	5	1797	3	24,27,28	3.60	11 (45%)	28,40,43	2.33	9 (32%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
6	A2M	9	159	6	18,25,26	3.60	7 (38%)	20,36,39	3.32	5 (25%)
3	PSU	5	4628	3	18,21,22	1.12	1 (5%)	21,30,33	1.96	5 (23%)
3	1MA	5	1322	80,3	17,25,26	4.20	6 (35%)	17,37,40	1.94	3 (17%)
6	OMC	9	517	6	19,22,23	3.02	8 (42%)	25,31,34	0.77	0
3	6MZ	5	4220	3	17,25,26	1.48	2 (11%)	15,36,39	4.00	5 (33%)
6	OMC	9	1710	6	19,22,23	3.02	8 (42%)	25,31,34	0.76	0
3	B8H	5	1860	3	19,22,23	6.84	6 (31%)	21,32,35	2.48	5 (23%)
3	OMG	5	1316	3	19,26,27	2.37	8 (42%)	21,38,41	1.42	4 (19%)
3	A2M	5	4571	3	18,25,26	3.61	7 (38%)	20,36,39	3.25	5 (25%)
3	OMG	5	4623	3	19,26,27	2.40	8 (42%)	21,38,41	1.46	4 (19%)
6	MMX	9	568	6	20,23,24	3.83	5 (25%)	21,33,36	2.90	5 (23%)
3	OMG	5	4196	3	19,26,27	2.40	8 (42%)	21,38,41	1.41	4 (19%)
1	T6A	2	37	1	26,34,35	1.90	7 (26%)	28,49,52	2.07	5 (17%)
3	B8W	5	4185	3	18,26,27	2.32	2 (11%)	17,38,41	2.62	5 (29%)
3	7MG	5	1605	3	23,26,27	3.48	10 (43%)	27,39,42	2.17	9 (33%)
5	OMU	8	14	3,5	19,22,23	3.07	8 (42%)	25,31,34	1.81	5 (20%)
6	A2M	9	668	80,6	18,25,26	3.66	6 (33%)	20,36,39	3.37	4 (20%)
6	5MU	9	814	6	19,22,23	4.96	7 (36%)	27,32,35	3.55	10 (37%)
3	OMG	5	2050	3	19,26,27	2.41	8 (42%)	21,38,41	1.43	4 (19%)
3	PSU	5	3764	3	18,21,22	1.12	1 (5%)	21,30,33	1.84	4 (19%)
6	4AC	9	1842	6	21,24,25	3.17	10 (47%)	28,34,37	1.05	4 (14%)
3	OMG	5	2424	3	19,26,27	2.44	8 (42%)	21,38,41	1.43	4 (19%)
44	MLZ	m	72	44	8,9,10	0.79	0	4,9,11	0.61	0
3	5MC	5	3782	3	19,22,23	3.79	8 (42%)	26,32,35	1.04	2 (7%)
2	4AC	1	45	2	21,24,25	3.28	9 (42%)	28,34,37	1.15	4 (14%)
3	5MU	5	4083	3	19,22,23	4.97	7 (36%)	27,32,35	3.61	10 (37%)
3	OMC	5	2365	3	19,22,23	2.97	8 (42%)	25,31,34	0.76	0
3	7MG	5	2522	3	23,26,27	3.47	10 (43%)	27,39,42	2.20	9 (33%)
3	2MG	5	4872	3	18,26,27	2.54	7 (38%)	16,38,41	2.43	6 (37%)
3	OMG	5	3792	3	19,26,27	2.42	8 (42%)	21,38,41	1.41	4 (19%)
3	PSU	5	2508	3	18,21,22	1.07	1 (5%)	21,30,33	1.89	5 (23%)
3	A2M	5	2363	80,3	18,25,26	3.59	7 (38%)	20,36,39	3.32	5 (25%)
3	OMG	5	2773	3	19,26,27	2.44	8 (42%)	21,38,41	1.42	4 (19%)
6	OMU	9	121	6	19,22,23	3.05	8 (42%)	25,31,34	1.84	4 (16%)
3	OMG	5	2364	3	19,26,27	2.38	8 (42%)	21,38,41	1.43	4 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
6	M7A	9	1806	6	19,25,26	1.64	2 (10%)	25,37,40	4.09	8 (32%)
6	MA6	9	1851	6	19,26,27	1.89	4 (21%)	18,38,41	4.16	4 (22%)
3	UR3	5	1866	3	19,22,23	2.86	6 (31%)	26,32,35	1.57	3 (11%)
6	PSU	9	823	6	18,21,22	1.11	1 (5%)	21,30,33	1.94	5 (23%)
6	A2M	9	27	80,6	18,25,26	3.59	7 (38%)	20,36,39	3.27	4 (20%)
3	A2M	5	3723	3	18,25,26	3.58	7 (38%)	20,36,39	3.29	5 (25%)
3	P7G	5	1909	3	24,28,29	3.70	11 (45%)	25,41,44	1.29	2 (8%)
3	2MG	5	729	3	18,26,27	2.51	6 (33%)	16,38,41	1.42	3 (18%)
3	B8K	5	3897	3	24,28,29	3.18	11 (45%)	29,42,45	2.36	11 (37%)
3	OMC	5	4536	3	19,22,23	2.98	8 (42%)	25,31,34	0.80	0
6	5MC	9	1374	6	19,22,23	3.80	8 (42%)	26,32,35	1.02	2 (7%)
3	A2M	5	3867	3	18,25,26	3.61	7 (38%)	20,36,39	3.39	5 (25%)
3	B9B	5	2754	80,3	20,28,29	1.76	2 (10%)	19,40,43	7.54	4 (21%)
3	1MA	5	4415	3	17,25,26	4.30	6 (35%)	17,37,40	1.85	3 (17%)
3	OMC	5	2422	80,3	19,22,23	3.02	8 (42%)	25,31,34	0.75	0
3	A2M	5	3825	3	18,25,26	3.60	7 (38%)	20,36,39	3.24	5 (25%)
3	PSU	5	1582	3	18,21,22	1.04	1 (5%)	21,30,33	1.69	4 (19%)
3	UR3	5	4597	3	19,22,23	2.90	6 (31%)	26,32,35	1.53	3 (11%)
6	A2M	9	484	6	18,25,26	3.61	7 (38%)	20,36,39	3.31	4 (20%)
3	A2M	5	398	3	18,25,26	3.60	7 (38%)	20,36,39	3.25	5 (25%)
3	OMG	5	4870	3	19,26,27	2.46	8 (42%)	21,38,41	1.53	4 (19%)
3	OMC	5	3869	3	19,22,23	3.01	8 (42%)	25,31,34	0.75	0
9	MLZ	C	333	9	8,9,10	0.84	0	4,9,11	0.70	0
6	6MZ	9	1832	80,6	17,25,26	1.44	2 (11%)	15,36,39	3.86	5 (33%)
3	OMG	5	1883	3	19,26,27	2.41	8 (42%)	21,38,41	1.48	4 (19%)
6	OMC	9	174	6	19,22,23	3.01	8 (42%)	25,31,34	0.73	0
3	OMC	5	2861	3	19,22,23	3.00	8 (42%)	25,31,34	0.75	0
3	PSU	5	4531	3	18,21,22	1.09	1 (5%)	21,30,33	1.91	5 (23%)
3	I4U	5	4194	3	20,24,25	3.40	8 (40%)	27,34,37	2.16	2 (7%)
6	OMG	9	683	6	19,26,27	2.44	8 (42%)	21,38,41	1.46	3 (14%)
6	PSU	9	822	6	18,21,22	1.12	1 (5%)	21,30,33	1.96	5 (23%)

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
3	OMC	5	3887	3	-	1/9/27/28	0/2/2/2
6	PSU	9	612	6	-	0/7/25/26	0/2/2/2
6	A2M	9	1678	6	-	2/5/27/28	0/3/3/3
3	BGH	5	3899	80,3	-	0/13/43/44	0/3/3/3
3	I4U	5	1659	3	-	0/9/29/30	0/2/2/2
3	OMC	5	3701	80,3	-	4/9/27/28	0/2/2/2
3	5MC	5	4335	3	-	0/7/25/26	0/2/2/2
3	B8K	5	4690	3	-	0/11/41/42	0/3/3/3
3	B8T	5	4483	3	-	0/7/27/28	0/2/2/2
3	E7G	5	2297	3	-	1/9/39/40	0/3/3/3
3	PSU	5	4293	3	-	0/7/25/26	0/2/2/2
3	A2M	5	1524	3	-	1/5/27/28	0/3/3/3
3	B9H	5	2786	3	-	2/12/47/48	0/2/2/2
3	M7A	5	4564	3	-	0/7/37/38	0/3/3/3
3	OMC	5	3909	3	-	2/9/27/28	0/2/2/2
6	B8Q	9	1219	80,6	-	2/7/42/43	0/2/2/2
3	P7G	5	3880	3	-	4/10/40/41	0/3/3/3
3	PSU	5	4450	80,3	-	1/7/25/26	0/2/2/2
3	UR3	5	4530	3	-	2/7/25/26	0/2/2/2
3	OMU	5	4620	3	-	0/9/27/28	0/2/2/2
3	PSU	5	1683	3	-	0/7/25/26	0/2/2/2
3	B9B	5	1574	80,3	-	3/7/29/30	0/3/3/3
3	A2M	5	3785	3	-	4/5/27/28	0/3/3/3
3	OMG	5	4637	3	-	2/5/27/28	0/3/3/3
3	A2M	5	4523	80,3	-	0/5/27/28	0/3/3/3
6	OMG	9	644	6	-	2/5/27/28	0/3/3/3
3	PSU	5	1677	3	-	3/7/25/26	0/2/2/2
3	A2M	5	2401	80,3	-	0/5/27/28	0/3/3/3
6	B8N	9	1248	6	-	1/16/34/35	0/2/2/2
3	P4U	5	1348	3	-	4/10/29/30	0/2/2/2
3	B8H	5	4296	3	-	2/7/25/26	0/2/2/2
3	PSU	5	4403	3	-	3/7/25/26	0/2/2/2
3	B8H	5	3762	3	-	2/7/25/26	0/2/2/2
3	PSU	5	3715	3	-	0/7/25/26	0/2/2/2
3	E6G	5	4355	3	-	4/6/28/29	0/3/3/3
3	B8W	5	4129	3	-	2/5/27/28	0/3/3/3
3	MHG	5	4371	3	-	6/16/46/47	0/3/3/3
6	UR3	9	1830	6	-	2/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	B8W	5	4529	80,3	-	2/5/27/28	0/3/3/3
3	OMG	5	1625	80,3	-	1/5/27/28	0/3/3/3
6	4AC	9	1337	6	-	1/11/29/30	0/2/2/2
6	PSU	9	119	6	-	0/7/25/26	0/2/2/2
6	OMU	9	116	6	-	3/9/27/28	0/2/2/2
3	OMG	5	373	3	-	1/5/27/28	0/3/3/3
3	A2M	5	1534	80,3	-	1/5/27/28	0/3/3/3
3	2MG	5	1517	3	-	0/5/27/28	0/3/3/3
3	A2M	5	1871	80,3	-	0/5/27/28	0/3/3/3
3	B8Q	5	1456	3	-	0/7/42/43	0/2/2/2
6	OMG	9	509	80,6	-	0/5/27/28	0/3/3/3
3	A2M	5	1326	3	-	2/5/27/28	0/3/3/3
6	MA6	9	1850	6	-	0/7/29/30	0/3/3/3
3	OMG	5	4370	3	-	1/5/27/28	0/3/3/3
3	PSU	5	4636	3	-	4/7/25/26	0/2/2/2
3	B8W	5	2380	3	-	4/5/27/28	0/3/3/3
3	B8W	5	4472	3	-	2/5/27/28	0/3/3/3
3	OMU	5	4306	3	-	1/9/27/28	0/2/2/2
3	5MC	5	4447	3	-	0/7/25/26	0/2/2/2
3	A2M	5	3718	3	-	1/5/27/28	0/3/3/3
6	A2M	9	166	6	-	2/5/27/28	0/3/3/3
3	PSU	5	3729	3	-	2/7/25/26	0/2/2/2
3	7MG	5	4550	3	-	0/7/37/38	0/3/3/3
3	PSU	5	4442	3	-	0/7/25/26	0/2/2/2
6	PSU	9	1081	6	-	1/7/25/26	0/2/2/2
3	OMG	5	4494	3	-	1/5/27/28	0/3/3/3
3	B8T	5	4671	3	-	1/7/27/28	0/2/2/2
6	PSU	9	1243	6	-	2/7/25/26	0/2/2/2
3	PSU	5	4500	3	-	3/7/25/26	0/2/2/2
6	A2M	9	1031	6	-	1/5/27/28	0/3/3/3
3	OMG	5	1522	3	-	0/5/27/28	0/3/3/3
3	OMC	5	2804	3	-	0/9/27/28	0/2/2/2
3	B9B	5	237	3	-	5/7/29/30	0/3/3/3
6	OMC	9	1703	6	-	2/9/27/28	0/2/2/2
3	E7G	5	1797	3	-	2/9/39/40	0/3/3/3
6	A2M	9	159	6	-	2/5/27/28	0/3/3/3
3	PSU	5	4628	3	-	0/7/25/26	0/2/2/2
3	1MA	5	1322	80,3	-	0/3/25/26	0/3/3/3
6	OMC	9	517	6	-	1/9/27/28	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	6MZ	5	4220	3	-	1/5/27/28	0/3/3/3
6	OMC	9	1710	6	-	0/9/27/28	0/2/2/2
3	B8H	5	1860	3	-	2/7/25/26	0/2/2/2
3	OMG	5	1316	3	-	1/5/27/28	0/3/3/3
3	A2M	5	4571	3	-	0/5/27/28	0/3/3/3
3	OMG	5	4623	3	-	0/5/27/28	0/3/3/3
6	MMX	9	568	6	-	4/9/44/45	0/2/2/2
3	OMG	5	4196	3	-	1/5/27/28	0/3/3/3
1	T6A	2	37	1	-	2/19/41/42	0/3/3/3
3	B8W	5	4185	3	-	2/5/27/28	0/3/3/3
3	7MG	5	1605	3	-	0/7/37/38	0/3/3/3
5	OMU	8	14	3,5	-	1/9/27/28	0/2/2/2
6	A2M	9	668	80,6	-	2/5/27/28	0/3/3/3
6	5MU	9	814	6	-	1/7/25/26	0/2/2/2
3	OMG	5	2050	3	-	0/5/27/28	0/3/3/3
3	PSU	5	3764	3	-	2/7/25/26	0/2/2/2
6	4AC	9	1842	6	-	0/11/29/30	0/2/2/2
3	OMG	5	2424	3	-	2/5/27/28	0/3/3/3
44	MLZ	m	72	44	-	4/7/8/10	-
3	5MC	5	3782	3	-	0/7/25/26	0/2/2/2
2	4AC	1	45	2	-	0/11/29/30	0/2/2/2
3	5MU	5	4083	3	-	0/7/25/26	0/2/2/2
3	OMC	5	2365	3	-	0/9/27/28	0/2/2/2
3	7MG	5	2522	3	-	0/7/37/38	0/3/3/3
3	2MG	5	4872	3	-	1/5/27/28	0/3/3/3
3	OMG	5	3792	3	-	2/5/27/28	0/3/3/3
3	PSU	5	2508	3	-	0/7/25/26	0/2/2/2
3	A2M	5	2363	80,3	-	1/5/27/28	0/3/3/3
3	OMG	5	2773	3	-	0/5/27/28	0/3/3/3
6	OMU	9	121	6	-	1/9/27/28	0/2/2/2
3	OMG	5	2364	3	-	2/5/27/28	0/3/3/3
6	M7A	9	1806	6	-	0/7/37/38	0/3/3/3
6	MA6	9	1851	6	-	2/7/29/30	0/3/3/3
3	UR3	5	1866	3	-	0/7/25/26	0/2/2/2
6	PSU	9	823	6	-	0/7/25/26	0/2/2/2
6	A2M	9	27	80,6	-	1/5/27/28	0/3/3/3
3	A2M	5	3723	3	-	1/5/27/28	0/3/3/3
3	P7G	5	1909	3	-	2/10/40/41	0/3/3/3
3	2MG	5	729	3	-	0/5/27/28	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	B8K	5	3897	3	-	3/11/41/42	0/3/3/3
3	OMC	5	4536	3	-	0/9/27/28	0/2/2/2
6	5MC	9	1374	6	-	0/7/25/26	0/2/2/2
3	A2M	5	3867	3	-	3/5/27/28	0/3/3/3
3	B9B	5	2754	80,3	-	4/7/29/30	0/3/3/3
3	1MA	5	4415	3	-	1/3/25/26	0/3/3/3
3	OMC	5	2422	80,3	-	1/9/27/28	0/2/2/2
3	A2M	5	3825	3	-	0/5/27/28	0/3/3/3
3	PSU	5	1582	3	-	1/7/25/26	0/2/2/2
3	UR3	5	4597	3	-	0/7/25/26	0/2/2/2
6	A2M	9	484	6	-	0/5/27/28	0/3/3/3
3	A2M	5	398	3	-	2/5/27/28	0/3/3/3
3	OMG	5	4870	3	-	3/5/27/28	0/3/3/3
3	OMC	5	3869	3	-	0/9/27/28	0/2/2/2
9	MLZ	C	333	9	-	1/7/8/10	-
6	6MZ	9	1832	80,6	-	2/5/27/28	0/3/3/3
3	OMG	5	1883	3	-	1/5/27/28	0/3/3/3
6	OMC	9	174	6	-	1/9/27/28	0/2/2/2
3	OMC	5	2861	3	-	1/9/27/28	0/2/2/2
3	PSU	5	4531	3	-	2/7/25/26	0/2/2/2
3	I4U	5	4194	3	-	1/9/29/30	0/2/2/2
6	OMG	9	683	6	-	2/5/27/28	0/3/3/3
6	PSU	9	822	6	-	0/7/25/26	0/2/2/2

All (845) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	5	4296	B8H	C6-C5	-16.56	1.11	1.35
3	5	1860	B8H	C6-C5	-16.55	1.11	1.35
3	5	3762	B8H	C6-C5	-16.37	1.11	1.35
3	5	4415	1MA	C2-N3	15.92	1.48	1.28
3	5	4296	B8H	C4-N3	-15.63	1.09	1.38
3	5	1860	B8H	C4-N3	-15.59	1.09	1.38
3	5	3762	B8H	C4-N3	-15.55	1.09	1.38
3	5	1322	1MA	C2-N3	15.46	1.47	1.28
3	5	3762	B8H	C4-C5	13.62	1.82	1.44
3	5	4296	B8H	C4-C5	13.54	1.81	1.44
3	5	1860	B8H	C4-C5	13.49	1.81	1.44
3	5	3762	B8H	C6-N1	12.64	1.67	1.36
3	5	4296	B8H	C6-N1	12.57	1.66	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	5	1860	B8H	C6-N1	12.55	1.66	1.36
3	5	3899	BGH	C3'-C2'	-12.21	1.26	1.53
6	9	814	5MU	C2-N1	11.87	1.57	1.38
3	5	4083	5MU	C2-N1	11.50	1.56	1.38
3	5	4083	5MU	C6-N1	10.93	1.56	1.38
6	9	814	5MU	C6-N1	10.78	1.56	1.38
3	5	1659	I4U	C4-N3	10.36	1.44	1.31
3	5	1348	P4U	C4-N3	10.31	1.44	1.31
6	9	568	MMX	C4-N3	10.26	1.54	1.45
3	5	4194	I4U	C4-N3	10.23	1.44	1.31
3	5	4083	5MU	C4-C5	10.07	1.61	1.44
6	9	814	5MU	C4-C5	9.73	1.60	1.44
6	9	568	MMX	C2-N1	9.38	1.49	1.37
3	5	4447	5MC	C6-C5	9.27	1.49	1.34
3	5	1456	B8Q	C6-C5	9.19	1.52	1.33
3	5	4335	5MC	C6-C5	9.17	1.49	1.34
3	5	1524	A2M	C3'-C4'	-9.15	1.29	1.53
6	9	1374	5MC	C6-C5	9.09	1.49	1.34
3	5	3782	5MC	C6-C5	9.02	1.49	1.34
6	9	1219	B8Q	C6-C5	9.01	1.52	1.33
6	9	668	A2M	C3'-C4'	-8.99	1.30	1.53
6	9	159	A2M	C3'-C4'	-8.96	1.30	1.53
6	9	166	A2M	C3'-C4'	-8.96	1.30	1.53
3	5	1871	A2M	C3'-C4'	-8.95	1.30	1.53
3	5	3867	A2M	C3'-C4'	-8.94	1.30	1.53
3	5	4523	A2M	C3'-C4'	-8.93	1.30	1.53
3	5	4571	A2M	C3'-C4'	-8.93	1.30	1.53
3	5	398	A2M	C3'-C4'	-8.93	1.30	1.53
3	5	2786	B9H	C2-N3	8.92	1.48	1.37
3	5	3825	A2M	C3'-C4'	-8.91	1.30	1.53
3	5	2363	A2M	C3'-C4'	-8.91	1.30	1.53
3	5	2401	A2M	C3'-C4'	-8.91	1.30	1.53
6	9	27	A2M	C3'-C4'	-8.87	1.30	1.53
3	5	1326	A2M	C3'-C4'	-8.86	1.30	1.53
3	5	3723	A2M	C3'-C4'	-8.85	1.30	1.53
3	5	3718	A2M	C3'-C4'	-8.83	1.30	1.53
6	9	1678	A2M	C3'-C4'	-8.82	1.30	1.53
6	9	1031	A2M	C3'-C4'	-8.78	1.30	1.53
3	5	1534	A2M	C3'-C4'	-8.75	1.30	1.53
6	9	484	A2M	C3'-C4'	-8.73	1.30	1.53
3	5	4690	B8K	C8-N9	8.66	1.51	1.45
3	5	4371	MHG	C8-N9	8.64	1.51	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	5	3785	A2M	C3'-C4'	-8.46	1.31	1.53
3	5	2297	E7G	C8-N9	8.44	1.51	1.45
6	9	568	MMX	C2-N3	8.40	1.48	1.37
3	5	1909	P7G	C8-N9	8.31	1.51	1.45
3	5	1797	E7G	C8-N9	8.19	1.51	1.45
3	5	4550	7MG	C8-N9	8.13	1.51	1.45
3	5	3897	B8K	C8-N9	8.09	1.51	1.45
6	9	668	A2M	O4'-C1'	-8.07	1.30	1.40
3	5	3785	A2M	O4'-C1'	-8.06	1.30	1.40
3	5	2522	7MG	C8-N9	8.05	1.51	1.45
3	5	4129	B8W	C2-N2	8.04	1.49	1.33
6	9	1248	B8N	C4-N3	-8.04	1.26	1.40
3	5	4371	MHG	C2-N3	8.04	1.47	1.32
3	5	4472	B8W	C2-N2	8.02	1.49	1.33
3	5	4529	B8W	C2-N2	8.00	1.49	1.33
3	5	2380	B8W	C2-N2	8.00	1.49	1.33
6	9	1248	B8N	C6-N1	7.99	1.55	1.36
3	5	4185	B8W	C2-N2	7.95	1.49	1.33
3	5	1605	7MG	C8-N9	7.92	1.51	1.45
3	5	1909	P7G	C5-N7	7.90	1.45	1.35
3	5	3785	A2M	O4'-C4'	7.86	1.62	1.45
3	5	3880	P7G	C8-N9	7.82	1.50	1.45
3	5	3718	A2M	O4'-C4'	7.80	1.62	1.45
3	5	398	A2M	O4'-C4'	7.80	1.62	1.45
6	9	166	A2M	O4'-C4'	7.76	1.62	1.45
3	5	1534	A2M	O4'-C1'	-7.74	1.30	1.40
6	9	159	A2M	O4'-C4'	7.74	1.62	1.45
6	9	484	A2M	O4'-C1'	-7.73	1.30	1.40
3	5	2401	A2M	O4'-C4'	7.70	1.62	1.45
3	5	3867	A2M	O4'-C1'	-7.69	1.30	1.40
6	9	1031	A2M	O4'-C4'	7.69	1.62	1.45
3	5	1534	A2M	O4'-C4'	7.69	1.62	1.45
3	5	1797	E7G	C5-N7	7.67	1.45	1.35
3	5	2786	B9H	C6-C5	7.67	1.49	1.33
3	5	1326	A2M	O4'-C1'	-7.67	1.30	1.40
3	5	3825	A2M	O4'-C4'	7.64	1.62	1.45
6	9	27	A2M	O4'-C1'	-7.61	1.30	1.40
6	9	1248	B8N	C4-C5	7.60	1.64	1.47
3	5	3723	A2M	O4'-C4'	7.60	1.61	1.45
3	5	2363	A2M	O4'-C1'	-7.60	1.30	1.40
3	5	1524	A2M	O4'-C1'	-7.60	1.30	1.40
3	5	1871	A2M	O4'-C4'	7.59	1.61	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	5	4523	A2M	O4'-C4'	7.57	1.61	1.45
3	5	4571	A2M	O4'-C4'	7.56	1.61	1.45
6	9	484	A2M	O4'-C4'	7.55	1.61	1.45
3	5	4571	A2M	O4'-C1'	-7.52	1.31	1.40
3	5	1326	A2M	O4'-C4'	7.52	1.61	1.45
3	5	2297	E7G	C5-N7	7.50	1.45	1.35
6	9	27	A2M	O4'-C4'	7.48	1.61	1.45
3	5	3825	A2M	O4'-C1'	-7.47	1.31	1.40
3	5	3880	P7G	C5-N7	7.47	1.45	1.35
6	9	1678	A2M	O4'-C1'	-7.47	1.31	1.40
3	5	2363	A2M	O4'-C4'	7.47	1.61	1.45
6	9	1031	A2M	O4'-C1'	-7.44	1.31	1.40
6	9	814	5MU	C4-N3	-7.44	1.24	1.38
3	5	4083	5MU	C4-N3	-7.43	1.24	1.38
3	5	3723	A2M	O4'-C1'	-7.40	1.31	1.40
2	1	45	4AC	C4-N3	7.40	1.45	1.32
3	5	3867	A2M	O4'-C4'	7.40	1.61	1.45
3	5	4671	B8T	C2-N3	7.38	1.51	1.36
3	5	4523	A2M	O4'-C1'	-7.37	1.31	1.40
6	9	1678	A2M	O4'-C4'	7.37	1.61	1.45
3	5	1871	A2M	O4'-C1'	-7.36	1.31	1.40
6	9	166	A2M	O4'-C1'	-7.36	1.31	1.40
3	5	3718	A2M	O4'-C1'	-7.35	1.31	1.40
3	5	1524	A2M	O4'-C4'	7.35	1.61	1.45
3	5	4483	B8T	C2-N3	7.35	1.50	1.36
3	5	2401	A2M	O4'-C1'	-7.35	1.31	1.40
3	5	4355	E6G	O6-C6	7.34	1.43	1.34
6	9	668	A2M	O4'-C4'	7.34	1.61	1.45
6	9	159	A2M	O4'-C1'	-7.33	1.31	1.40
6	9	1830	UR3	C2-N1	7.33	1.48	1.38
5	8	14	OMU	C2-N1	7.31	1.49	1.38
3	5	4671	B8T	C4-N3	7.29	1.45	1.32
3	5	398	A2M	O4'-C1'	-7.24	1.31	1.40
3	5	4483	B8T	C4-N3	7.22	1.44	1.32
6	9	121	OMU	C2-N1	7.21	1.49	1.38
6	9	116	OMU	C2-N1	7.19	1.49	1.38
3	5	4371	MHG	C5-N7	7.14	1.44	1.35
3	5	4620	OMU	C2-N1	7.13	1.49	1.38
3	5	4597	UR3	C2-N1	7.12	1.48	1.38
6	9	1842	4AC	C4-N3	7.12	1.44	1.32
6	9	1337	4AC	C4-N3	7.10	1.44	1.32
3	5	4306	OMU	C2-N1	7.06	1.49	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	5	1866	UR3	C2-N1	6.96	1.48	1.38
6	9	116	OMU	C2-N3	6.96	1.50	1.38
3	5	1605	7MG	C5-N7	6.93	1.44	1.35
3	5	4483	B8T	C6-C5	6.90	1.51	1.35
3	5	4335	5MC	C5-C4	6.89	1.49	1.44
3	5	4550	7MG	C5-N7	6.86	1.44	1.35
5	8	14	OMU	C2-N3	6.85	1.49	1.38
3	5	4530	UR3	C2-N1	6.83	1.48	1.38
3	5	4671	B8T	C6-C5	6.83	1.50	1.35
3	5	3782	5MC	C4-N3	6.82	1.45	1.34
3	5	2522	7MG	C5-N7	6.79	1.44	1.35
6	9	121	OMU	C2-N3	6.76	1.49	1.38
3	5	4620	OMU	C2-N3	6.76	1.49	1.38
3	5	4335	5MC	C4-N3	6.76	1.45	1.34
3	5	4597	UR3	C6-C5	6.74	1.50	1.35
3	5	4530	UR3	C6-C5	6.73	1.50	1.35
6	9	1830	UR3	C6-C5	6.72	1.50	1.35
3	5	1866	UR3	C6-C5	6.71	1.50	1.35
6	9	1374	5MC	C4-N3	6.68	1.44	1.34
3	5	4690	B8K	C2-N3	6.66	1.49	1.33
3	5	4306	OMU	C2-N3	6.65	1.49	1.38
3	5	3899	BGH	C8-N9	6.63	1.50	1.45
3	5	3897	B8K	C2-N3	6.60	1.49	1.33
3	5	4083	5MU	C6-C5	6.58	1.45	1.34
6	9	1374	5MC	C5-C4	6.56	1.49	1.44
6	9	814	5MU	C6-C5	6.54	1.45	1.34
3	5	3880	P7G	C4-N3	6.53	1.48	1.37
3	5	3869	OMC	C2-N3	6.51	1.49	1.36
3	5	3782	5MC	C5-C4	6.51	1.49	1.44
3	5	2786	B9H	C2-N1	6.50	1.47	1.38
3	5	2422	OMC	C2-N3	6.48	1.49	1.36
6	9	1710	OMC	C2-N3	6.47	1.49	1.36
6	9	174	OMC	C2-N3	6.46	1.49	1.36
6	9	1703	OMC	C2-N3	6.43	1.49	1.36
3	5	2861	OMC	C2-N3	6.43	1.49	1.36
3	5	4447	5MC	C4-N3	6.42	1.44	1.34
6	9	517	OMC	C2-N3	6.41	1.49	1.36
3	5	1909	P7G	C4-N3	6.40	1.48	1.37
3	5	3701	OMC	C2-N3	6.40	1.49	1.36
3	5	3887	OMC	C2-N3	6.39	1.49	1.36
6	9	1219	B8Q	C2-N3	6.39	1.47	1.35
3	5	3909	OMC	C2-N3	6.37	1.49	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	5	4194	I4U	C6-C5	6.36	1.49	1.35
3	5	2365	OMC	C2-N3	6.36	1.49	1.36
2	1	45	4AC	C6-C5	6.35	1.49	1.35
3	5	2804	OMC	C2-N3	6.34	1.48	1.36
2	1	45	4AC	C2-N3	6.33	1.48	1.36
6	9	1337	4AC	C6-C5	6.32	1.49	1.35
3	5	4536	OMC	C2-N3	6.31	1.48	1.36
3	5	1659	I4U	C6-C5	6.28	1.49	1.35
3	5	4371	MHG	C2-N1	6.27	1.46	1.36
6	9	1842	4AC	C6-C5	6.24	1.49	1.35
3	5	4671	B8T	C4-N4	6.21	1.48	1.36
3	5	4447	5MC	C5-C4	6.20	1.48	1.44
3	5	4483	B8T	C4-N4	6.18	1.48	1.36
3	5	3782	5MC	C2-N3	6.14	1.48	1.36
3	5	4335	5MC	C2-N3	6.13	1.48	1.36
3	5	1348	P4U	C6-C5	6.13	1.49	1.35
6	9	1374	5MC	C2-N3	6.11	1.48	1.36
3	5	1348	P4U	C2-N3	6.10	1.48	1.36
6	9	1337	4AC	C2-N3	6.08	1.48	1.36
6	9	1842	4AC	C2-N3	6.08	1.48	1.36
3	5	3701	OMC	C6-C5	6.07	1.49	1.35
3	5	2422	OMC	C6-C5	6.06	1.49	1.35
3	5	1659	I4U	C2-N3	6.03	1.48	1.36
3	5	4355	E6G	C2-N2	6.03	1.45	1.33
3	5	2365	OMC	C6-C5	6.02	1.49	1.35
6	9	517	OMC	C6-C5	6.01	1.49	1.35
3	5	3880	P7G	C2-N2	6.01	1.48	1.34
3	5	3909	OMC	C6-C5	6.01	1.49	1.35
3	5	4536	OMC	C6-C5	6.01	1.49	1.35
3	5	1909	P7G	C2-N2	6.01	1.48	1.34
6	9	1703	OMC	C6-C5	6.00	1.49	1.35
6	9	174	OMC	C6-C5	6.00	1.49	1.35
6	9	1710	OMC	C6-C5	6.00	1.49	1.35
3	5	3887	OMC	C6-C5	5.97	1.48	1.35
3	5	2861	OMC	C6-C5	5.96	1.48	1.35
3	5	1797	E7G	C4-N3	5.96	1.47	1.34
3	5	3869	OMC	C6-C5	5.96	1.48	1.35
3	5	4447	5MC	C2-N3	5.93	1.48	1.36
3	5	3880	P7G	C4-N9	5.93	1.44	1.35
3	5	2804	OMC	C6-C5	5.89	1.48	1.35
6	9	1248	B8N	C2-N1	5.89	1.56	1.39
3	5	1909	P7G	C4-N9	5.87	1.44	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	5	1456	B8Q	C2-N3	5.85	1.46	1.35
3	5	4371	MHG	C2-N2	5.84	1.45	1.33
3	5	4194	I4U	C2-N3	5.84	1.47	1.36
3	5	1797	E7G	C2-N3	5.84	1.47	1.33
3	5	2297	E7G	C4-N3	5.83	1.47	1.34
3	5	2522	7MG	C2-N3	5.82	1.47	1.33
3	5	1605	7MG	C2-N3	5.78	1.47	1.33
3	5	1605	7MG	C4-N3	5.77	1.47	1.34
3	5	729	2MG	C2-N2	5.75	1.45	1.33
3	5	4550	7MG	C2-N3	5.72	1.47	1.33
3	5	2297	E7G	C2-N3	5.69	1.47	1.33
3	5	2754	B9B	C2-N2	5.69	1.45	1.33
3	5	2522	7MG	C4-N3	5.69	1.47	1.34
3	5	3899	BGH	C4-N3	5.68	1.47	1.34
3	5	237	B9B	C2-N2	5.67	1.45	1.33
3	5	4550	7MG	C4-N3	5.66	1.47	1.34
3	5	4597	UR3	C2-N3	5.62	1.50	1.39
6	9	121	OMU	C6-C5	5.61	1.48	1.35
5	8	14	OMU	C6-C5	5.60	1.48	1.35
3	5	4371	MHG	C4-N3	5.60	1.47	1.34
3	5	1517	2MG	C2-N2	5.59	1.45	1.33
3	5	4620	OMU	C6-C5	5.59	1.48	1.35
3	5	1574	B9B	C2-N2	5.58	1.45	1.33
6	9	1830	UR3	C2-N3	5.57	1.50	1.39
6	9	683	OMG	C2-N3	5.57	1.46	1.33
3	5	4872	2MG	C2-N2	5.55	1.45	1.33
6	9	116	OMU	C6-C5	5.55	1.47	1.35
3	5	1625	OMG	C2-N3	5.55	1.46	1.33
3	5	4306	OMU	C6-C5	5.51	1.47	1.35
3	5	4196	OMG	C2-N3	5.51	1.46	1.33
3	5	4494	OMG	C2-N3	5.50	1.46	1.33
3	5	2424	OMG	C2-N3	5.49	1.46	1.33
3	5	4637	OMG	C2-N3	5.48	1.46	1.33
3	5	3792	OMG	C2-N3	5.48	1.46	1.33
3	5	2773	OMG	C2-N3	5.48	1.46	1.33
3	5	1866	UR3	C2-N3	5.47	1.49	1.39
3	5	4870	OMG	C2-N3	5.44	1.46	1.33
6	9	644	OMG	C2-N3	5.43	1.46	1.33
3	5	4530	UR3	C2-N3	5.42	1.49	1.39
3	5	1797	E7G	C4-N9	5.41	1.44	1.37
6	9	509	OMG	C2-N3	5.41	1.46	1.33
3	5	4370	OMG	C2-N3	5.39	1.46	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	5	4623	OMG	C2-N3	5.39	1.46	1.33
3	5	3899	BGH	O4'-C1'	-5.39	1.29	1.42
3	5	373	OMG	C2-N3	5.39	1.46	1.33
3	5	2050	OMG	C2-N3	5.38	1.46	1.33
3	5	1316	OMG	C2-N3	5.34	1.46	1.33
3	5	1883	OMG	C2-N3	5.34	1.46	1.33
3	5	1909	P7G	C2-N1	5.30	1.46	1.33
3	5	2364	OMG	C2-N3	5.29	1.46	1.33
3	5	3880	P7G	C2-N1	5.26	1.45	1.33
3	5	729	2MG	C4-N3	5.25	1.49	1.37
3	5	3899	BGH	C2-N3	5.23	1.45	1.33
6	9	1248	B8N	C6-C5	5.23	1.42	1.35
3	5	1797	E7G	C2-N2	5.23	1.46	1.34
3	5	1522	OMG	C2-N3	5.22	1.45	1.33
3	5	3869	OMC	C4-N3	5.20	1.44	1.34
3	5	4529	B8W	O6-C6	5.19	1.49	1.35
3	5	2297	E7G	C2-N2	5.19	1.46	1.34
3	5	2861	OMC	C4-N3	5.18	1.44	1.34
3	5	4129	B8W	O6-C6	5.17	1.49	1.35
6	9	1703	OMC	C4-N3	5.17	1.44	1.34
6	9	1710	OMC	C4-N3	5.16	1.44	1.34
3	5	4690	B8K	C4-N9	5.16	1.44	1.37
3	5	3899	BGH	C2'-C1'	5.16	1.65	1.53
6	9	174	OMC	C4-N3	5.15	1.44	1.34
3	5	3899	BGH	C4-N9	5.14	1.44	1.37
3	5	3887	OMC	C4-N3	5.12	1.44	1.34
3	5	2422	OMC	C4-N3	5.12	1.44	1.34
3	5	1605	7MG	C4-N9	5.12	1.44	1.37
6	9	517	OMC	C4-N3	5.11	1.44	1.34
3	5	3701	OMC	C4-N3	5.11	1.44	1.34
1	2	37	T6A	C10-N6	5.09	1.48	1.37
3	5	2297	E7G	C4-N9	5.08	1.44	1.37
3	5	2804	OMC	C4-N3	5.06	1.44	1.34
3	5	4536	OMC	C4-N3	5.06	1.44	1.34
3	5	2365	OMC	C4-N3	5.03	1.44	1.34
3	5	2522	7MG	C4-N9	5.01	1.44	1.37
3	5	4472	B8W	O6-C6	5.00	1.49	1.35
1	2	37	T6A	C10-N11	4.99	1.49	1.35
3	5	3899	BGH	O4'-C4'	4.98	1.56	1.45
3	5	1517	2MG	C4-N3	4.98	1.49	1.37
3	5	4371	MHG	C4-N9	4.96	1.43	1.37
3	5	3909	OMC	C4-N3	4.95	1.44	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	5	1605	7MG	C2-N2	4.89	1.45	1.34
3	5	2522	7MG	C2-N2	4.88	1.45	1.34
3	5	4185	B8W	O6-C6	4.88	1.48	1.35
3	5	3899	BGH	C2-N2	4.88	1.45	1.34
3	5	4550	7MG	C2-N2	4.88	1.45	1.34
3	5	4637	OMG	C4-N3	4.88	1.49	1.37
3	5	4415	1MA	C2-N1	4.88	1.45	1.35
3	5	1625	OMG	C4-N3	4.87	1.49	1.37
3	5	3897	B8K	C4-N9	4.86	1.43	1.37
3	5	4872	2MG	C2-N1	4.86	1.44	1.36
6	9	1850	MA6	C6-N6	4.85	1.48	1.37
3	5	4220	6MZ	C6-C5	-4.84	1.37	1.44
3	5	3792	OMG	C4-N3	4.84	1.48	1.37
3	5	2424	OMG	C4-N3	4.83	1.48	1.37
3	5	4870	OMG	C4-N3	4.83	1.48	1.37
3	5	4370	OMG	C4-N3	4.83	1.48	1.37
3	5	2773	OMG	C4-N3	4.82	1.48	1.37
6	9	509	OMG	C4-N3	4.82	1.48	1.37
3	5	4196	OMG	C4-N3	4.81	1.48	1.37
6	9	683	OMG	C4-N3	4.81	1.48	1.37
3	5	4494	OMG	C4-N3	4.81	1.48	1.37
6	9	644	OMG	C4-N3	4.80	1.48	1.37
3	5	1883	OMG	C4-N3	4.79	1.48	1.37
6	9	1851	MA6	C6-N6	4.79	1.48	1.37
3	5	2380	B8W	O6-C6	4.78	1.48	1.35
6	9	1710	OMC	C4-N4	4.78	1.45	1.33
3	5	4623	OMG	C4-N3	4.77	1.48	1.37
3	5	2861	OMC	C4-N4	4.77	1.45	1.33
6	9	1703	OMC	C4-N4	4.76	1.45	1.33
3	5	2050	OMG	C4-N3	4.76	1.48	1.37
3	5	3899	BGH	C5'-C4'	-4.76	1.37	1.51
3	5	373	OMG	C4-N3	4.76	1.48	1.37
6	9	174	OMC	C4-N4	4.76	1.45	1.33
3	5	3887	OMC	C4-N4	4.75	1.45	1.33
3	5	3869	OMC	C4-N4	4.75	1.45	1.33
3	5	2365	OMC	C4-N4	4.74	1.45	1.33
6	9	1832	6MZ	C6-C5	-4.74	1.37	1.44
3	5	1522	OMG	C4-N3	4.74	1.48	1.37
6	9	517	OMC	C4-N4	4.74	1.45	1.33
3	5	2422	OMC	C4-N4	4.73	1.45	1.33
3	5	3701	OMC	C4-N4	4.73	1.45	1.33
6	9	1219	B8Q	C2-N1	4.73	1.45	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	5	4550	7MG	C4-N9	4.73	1.43	1.37
3	5	3909	OMC	C4-N4	4.72	1.45	1.33
3	5	2804	OMC	C4-N4	4.72	1.45	1.33
3	5	4536	OMC	C4-N4	4.72	1.45	1.33
3	5	2754	B9B	O6-C6	4.72	1.40	1.34
3	5	4671	B8T	C2-N1	4.71	1.50	1.40
3	5	2364	OMG	C4-N3	4.70	1.48	1.37
3	5	1316	OMG	C4-N3	4.69	1.48	1.37
6	9	517	OMC	C2-N1	4.68	1.49	1.40
3	5	3909	OMC	C2-N1	4.66	1.49	1.40
6	9	1703	OMC	C2-N1	4.65	1.49	1.40
3	5	4690	B8K	C4-N3	4.63	1.44	1.34
6	9	1710	OMC	C2-N1	4.62	1.49	1.40
3	5	4483	B8T	C2-N1	4.62	1.49	1.40
3	5	1322	1MA	C2-N1	4.62	1.45	1.35
3	5	1517	2MG	C2-N1	4.61	1.44	1.36
3	5	2422	OMC	C2-N1	4.60	1.49	1.40
3	5	237	B9B	O6-C6	4.58	1.40	1.34
3	5	4872	2MG	C4-N3	4.57	1.48	1.37
3	5	3897	B8K	C4-N3	4.57	1.44	1.34
3	5	3869	OMC	C2-N1	4.56	1.49	1.40
3	5	3762	B8H	C2-N3	4.56	1.45	1.38
3	5	729	2MG	C2-N1	4.52	1.43	1.36
6	9	174	OMC	C2-N1	4.52	1.49	1.40
3	5	4536	OMC	C2-N1	4.51	1.49	1.40
3	5	3887	OMC	C2-N1	4.50	1.49	1.40
3	5	4447	5MC	C6-N1	4.48	1.45	1.38
3	5	1574	B9B	O6-C6	4.48	1.40	1.34
3	5	4335	5MC	C4-N4	4.46	1.45	1.34
3	5	2861	OMC	C2-N1	4.45	1.49	1.40
3	5	4335	5MC	C6-N1	4.45	1.45	1.38
6	9	1374	5MC	C6-N1	4.44	1.45	1.38
6	9	116	OMU	C4-N3	4.44	1.46	1.38
3	5	2804	OMC	C2-N1	4.44	1.49	1.40
3	5	1860	B8H	C2-N3	4.38	1.45	1.38
3	5	3782	5MC	C6-N1	4.37	1.45	1.38
3	5	3701	OMC	C2-N1	4.37	1.49	1.40
3	5	3782	5MC	C4-N4	4.37	1.45	1.34
6	9	568	MMX	C5-C4	-4.36	1.48	1.52
6	9	1374	5MC	C4-N4	4.36	1.45	1.34
3	5	2365	OMC	C2-N1	4.36	1.49	1.40
3	5	4335	5MC	C2-N1	4.36	1.49	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	5	4296	B8H	C2-N3	4.36	1.45	1.38
6	9	1806	M7A	C5-N7	4.35	1.49	1.39
3	5	4447	5MC	C4-N4	4.34	1.45	1.34
3	5	1348	P4U	O4-C4	4.34	1.40	1.35
3	5	3782	5MC	C2-N1	4.32	1.49	1.40
2	1	45	4AC	C7-N4	4.31	1.45	1.37
6	9	121	OMU	C4-N3	4.26	1.45	1.38
6	9	1806	M7A	C6-N6	4.26	1.45	1.34
6	9	1374	5MC	C2-N1	4.25	1.49	1.40
3	5	4306	OMU	C4-N3	4.24	1.45	1.38
5	8	14	OMU	C4-N3	4.24	1.45	1.38
2	1	45	4AC	C2-N1	4.23	1.48	1.40
3	5	1348	P4U	C2-N1	4.23	1.48	1.40
3	5	4620	OMU	C4-N3	4.23	1.45	1.38
2	1	45	4AC	C4-N4	4.19	1.46	1.39
3	5	4564	M7A	C5-N7	4.16	1.49	1.39
6	9	1337	4AC	C2-N1	4.13	1.48	1.40
3	5	4415	1MA	C4-N3	4.12	1.50	1.37
3	5	4447	5MC	C2-N1	4.12	1.48	1.40
3	5	4564	M7A	C6-N6	4.12	1.44	1.34
3	5	2424	OMG	C2-N2	4.11	1.43	1.34
6	9	1337	4AC	C7-N4	4.11	1.45	1.37
3	5	2773	OMG	C2-N2	4.08	1.43	1.34
3	5	2050	OMG	C2-N2	4.08	1.43	1.34
3	5	4370	OMG	C2-N2	4.07	1.43	1.34
3	5	3792	OMG	C2-N2	4.07	1.43	1.34
3	5	4494	OMG	C2-N2	4.07	1.43	1.34
3	5	3897	B8K	C5-C6	4.06	1.53	1.43
3	5	4870	OMG	C2-N2	4.06	1.43	1.34
3	5	1625	OMG	C2-N2	4.06	1.43	1.34
3	5	1659	I4U	C2-N1	4.06	1.48	1.40
3	5	4196	OMG	C2-N2	4.06	1.43	1.34
6	9	1842	4AC	C7-N4	4.05	1.45	1.37
6	9	644	OMG	C2-N2	4.05	1.43	1.34
6	9	1850	MA6	C6-C5	-4.05	1.38	1.44
3	5	1456	B8Q	C2-N1	4.04	1.44	1.38
3	5	4690	B8K	C5-C6	4.04	1.53	1.43
3	5	4637	OMG	C2-N2	4.04	1.43	1.34
3	5	1883	OMG	C2-N2	4.03	1.43	1.34
3	5	4623	OMG	C2-N2	4.01	1.43	1.34
3	5	1522	OMG	C2-N2	3.99	1.43	1.34
3	5	2364	OMG	C2-N2	3.98	1.43	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	5	1316	OMG	C2-N2	3.97	1.43	1.34
3	5	1322	1MA	C4-N3	3.97	1.49	1.37
6	9	1337	4AC	C4-N4	3.96	1.45	1.39
3	5	373	OMG	C2-N2	3.95	1.43	1.34
6	9	1842	4AC	C2-N1	3.95	1.48	1.40
6	9	1842	4AC	C4-N4	3.94	1.45	1.39
6	9	683	OMG	C2-N2	3.94	1.43	1.34
3	5	3880	P7G	C2-N3	3.94	1.47	1.37
6	9	509	OMG	C2-N2	3.93	1.43	1.34
3	5	4194	I4U	C2-N1	3.93	1.48	1.40
2	1	45	4AC	C5-C4	3.89	1.49	1.41
3	5	3899	BGH	C5-C6	3.86	1.53	1.43
3	5	1909	P7G	C2-N3	3.86	1.47	1.37
3	5	4872	2MG	C6-N1	3.85	1.43	1.37
6	9	1248	B8N	C1'-C5	3.82	1.58	1.50
3	5	3899	BGH	C2-N1	3.81	1.46	1.37
6	9	1337	4AC	C5-C4	3.80	1.49	1.41
3	5	4870	OMG	C6-N1	3.80	1.43	1.37
6	9	1851	MA6	C6-C5	-3.80	1.39	1.44
3	5	1605	7MG	C2-N1	3.78	1.46	1.37
3	5	2297	E7G	C2-N1	3.76	1.46	1.37
3	5	4550	7MG	C2-N1	3.76	1.46	1.37
3	5	1797	E7G	C2-N1	3.75	1.46	1.37
3	5	1909	P7G	C6-N1	3.73	1.44	1.38
3	5	2522	7MG	C2-N1	3.73	1.46	1.37
3	5	2424	OMG	C6-N1	3.72	1.43	1.37
6	9	1842	4AC	C5-C4	3.72	1.49	1.41
3	5	2773	OMG	C6-N1	3.70	1.43	1.37
6	9	683	OMG	C6-N1	3.69	1.43	1.37
3	5	3880	P7G	C6-N1	3.67	1.44	1.38
3	5	4671	B8T	C5-C4	3.67	1.49	1.41
3	5	3764	PSU	C6-C5	3.65	1.39	1.35
3	5	3792	OMG	C6-N1	3.64	1.43	1.37
3	5	1883	OMG	C6-N1	3.63	1.43	1.37
3	5	2364	OMG	C6-N1	3.63	1.43	1.37
3	5	4494	OMG	C6-N1	3.63	1.43	1.37
3	5	2050	OMG	C6-N1	3.62	1.43	1.37
3	5	4370	OMG	C6-N1	3.60	1.43	1.37
3	5	4637	OMG	C6-N1	3.59	1.43	1.37
3	5	4403	PSU	C6-C5	3.59	1.39	1.35
3	5	4483	B8T	C5-C4	3.59	1.48	1.41
3	5	4628	PSU	C6-C5	3.58	1.39	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	5	4690	B8K	C2-N2	3.58	1.42	1.34
3	5	3729	PSU	C6-C5	3.57	1.39	1.35
6	9	1243	PSU	C6-C5	3.56	1.39	1.35
3	5	3897	B8K	C6-N1	3.56	1.45	1.38
3	5	4636	PSU	C6-C5	3.56	1.39	1.35
3	5	3897	B8K	C2-N2	3.55	1.42	1.34
3	5	3715	PSU	C6-C5	3.55	1.39	1.35
3	5	1625	OMG	C6-N1	3.54	1.43	1.37
6	9	823	PSU	C6-C5	3.54	1.39	1.35
3	5	4293	PSU	C6-C5	3.54	1.39	1.35
3	5	4623	OMG	C6-N1	3.54	1.43	1.37
3	5	1522	OMG	C6-N1	3.53	1.43	1.37
3	5	4531	PSU	C6-C5	3.53	1.39	1.35
3	5	4371	MHG	C5-C6	3.53	1.52	1.43
3	5	3897	B8K	C2-N1	3.51	1.46	1.37
6	9	822	PSU	C6-C5	3.51	1.39	1.35
3	5	4550	7MG	C5-C6	3.51	1.52	1.43
3	5	373	OMG	C6-N1	3.51	1.43	1.37
3	5	4690	B8K	C6-N1	3.51	1.45	1.38
3	5	4500	PSU	C6-C5	3.50	1.39	1.35
3	5	1797	E7G	C5-C6	3.49	1.52	1.43
3	5	2522	7MG	C5-C6	3.48	1.52	1.43
3	5	4371	MHG	C8-N7	3.47	1.52	1.45
6	9	644	OMG	C6-N1	3.47	1.43	1.37
3	5	2508	PSU	C6-C5	3.46	1.39	1.35
3	5	4690	B8K	C2-N1	3.46	1.46	1.37
3	5	1517	2MG	C6-N1	3.45	1.43	1.37
3	5	4196	OMG	C6-N1	3.45	1.43	1.37
3	5	2297	E7G	C5-C6	3.42	1.52	1.43
3	5	1316	OMG	C6-N1	3.42	1.43	1.37
3	5	1582	PSU	C6-C5	3.42	1.39	1.35
6	9	509	OMG	C6-N1	3.41	1.43	1.37
3	5	4442	PSU	C6-C5	3.41	1.39	1.35
3	5	1683	PSU	C6-C5	3.41	1.39	1.35
3	5	4194	I4U	O4-C41	-3.38	1.39	1.47
3	5	4597	UR3	C6-N1	3.38	1.46	1.38
3	5	1605	7MG	C5-C6	3.38	1.52	1.43
6	9	612	PSU	C6-C5	3.38	1.39	1.35
6	9	119	PSU	C6-C5	3.37	1.39	1.35
3	5	3899	BGH	C5-N7	3.37	1.46	1.39
3	5	1866	UR3	C6-N1	3.34	1.46	1.38
3	5	2297	E7G	C6-N1	3.34	1.45	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	9	1830	UR3	C6-N1	3.34	1.46	1.38
1	2	37	T6A	C6-C5	-3.33	1.39	1.44
3	5	4450	PSU	C6-C5	3.32	1.39	1.35
6	9	1081	PSU	C6-C5	3.32	1.39	1.35
3	5	1677	PSU	C6-C5	3.31	1.39	1.35
3	5	3899	BGH	C71-N7	3.31	1.47	1.39
3	5	3899	BGH	C6-N1	3.30	1.45	1.38
3	5	4690	B8K	C71-N7	3.27	1.46	1.39
6	9	1851	MA6	C9-N6	3.26	1.52	1.45
3	5	4483	B8T	C6-N1	3.25	1.45	1.38
3	5	2297	E7G	C8-N7	3.24	1.51	1.45
3	5	1797	E7G	C6-N1	3.23	1.44	1.38
3	5	4872	2MG	C5-C6	3.23	1.53	1.47
6	9	1710	OMC	C6-N1	3.22	1.45	1.38
3	5	4194	I4U	C6-N1	3.21	1.45	1.38
3	5	2422	OMC	C6-N1	3.21	1.45	1.38
3	5	3887	OMC	C6-N1	3.21	1.45	1.38
3	5	4530	UR3	C6-N1	3.20	1.45	1.38
3	5	1659	I4U	O4-C41	-3.20	1.40	1.47
6	9	517	OMC	C6-N1	3.20	1.45	1.38
3	5	1524	A2M	C6-N6	3.19	1.45	1.34
3	5	1659	I4U	C6-N1	3.19	1.45	1.38
6	9	159	A2M	C6-N6	3.19	1.45	1.34
3	5	3723	A2M	C6-N6	3.18	1.45	1.34
3	5	3899	BGH	O3'-C3'	3.18	1.50	1.43
3	5	3718	A2M	C6-N6	3.18	1.45	1.34
3	5	4571	A2M	C6-N6	3.18	1.45	1.34
6	9	174	OMC	C6-N1	3.18	1.45	1.38
6	9	1678	A2M	C6-N6	3.17	1.45	1.34
3	5	4536	OMC	C6-N1	3.17	1.45	1.38
3	5	3869	OMC	C6-N1	3.17	1.45	1.38
6	9	1031	A2M	C6-N6	3.17	1.45	1.34
6	9	166	A2M	C6-N6	3.17	1.45	1.34
6	9	683	OMG	C5-C6	3.16	1.53	1.47
6	9	484	A2M	C6-N6	3.16	1.45	1.34
6	9	1703	OMC	C6-N1	3.15	1.45	1.38
3	5	3897	B8K	C71-N7	3.15	1.46	1.39
3	5	398	A2M	C6-N6	3.15	1.45	1.34
3	5	4671	B8T	C6-N1	3.15	1.45	1.38
3	5	729	2MG	C6-N1	3.15	1.42	1.37
3	5	2401	A2M	C6-N6	3.15	1.45	1.34
3	5	3867	A2M	C6-N6	3.15	1.45	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	5	1909	P7G	C8-N7	3.14	1.51	1.45
3	5	1797	E7G	C8-N7	3.14	1.51	1.45
2	1	45	4AC	C6-N1	3.14	1.45	1.38
3	5	3897	B8K	C5-N7	3.14	1.45	1.39
3	5	4690	B8K	C5-N7	3.14	1.45	1.39
3	5	2804	OMC	C6-N1	3.14	1.45	1.38
6	9	1850	MA6	C9-N6	3.14	1.52	1.45
6	9	27	A2M	C6-N6	3.14	1.45	1.34
3	5	4523	A2M	C6-N6	3.13	1.45	1.34
3	5	1534	A2M	C6-N6	3.13	1.45	1.34
3	5	2861	OMC	C6-N1	3.12	1.45	1.38
3	5	3701	OMC	C6-N1	3.12	1.45	1.38
3	5	3909	OMC	C6-N1	3.12	1.45	1.38
3	5	3825	A2M	C6-N6	3.12	1.45	1.34
3	5	4371	MHG	C6-N1	3.12	1.44	1.38
3	5	2365	OMC	C6-N1	3.12	1.45	1.38
6	9	668	A2M	C6-N6	3.11	1.45	1.34
6	9	1842	4AC	C6-N1	3.11	1.45	1.38
3	5	2363	A2M	C6-N6	3.10	1.45	1.34
3	5	1871	A2M	C6-N6	3.10	1.45	1.34
6	9	1337	4AC	C6-N1	3.10	1.45	1.38
3	5	1605	7MG	C6-N1	3.09	1.44	1.38
3	5	1348	P4U	C6-N1	3.09	1.45	1.38
6	9	1850	MA6	C2-N3	3.08	1.36	1.32
3	5	2522	7MG	C6-N1	3.07	1.44	1.38
3	5	1326	A2M	C6-N6	3.07	1.45	1.34
3	5	3785	A2M	C6-N6	3.07	1.45	1.34
3	5	2773	OMG	C5-C6	3.07	1.53	1.47
3	5	4447	5MC	O2-C2	-3.04	1.18	1.23
6	9	121	OMU	O4-C4	-3.04	1.18	1.24
3	5	3909	OMC	O2-C2	-3.04	1.18	1.23
3	5	1517	2MG	C5-C6	3.03	1.53	1.47
3	5	729	2MG	C5-C6	3.03	1.53	1.47
3	5	4870	OMG	C5-C6	3.01	1.53	1.47
3	5	4550	7MG	C6-N1	3.01	1.44	1.38
5	8	14	OMU	O4-C4	-3.01	1.18	1.24
3	5	3785	A2M	O3'-C3'	3.00	1.50	1.43
3	5	3897	B8K	C5-C4	3.00	1.46	1.37
3	5	4690	B8K	C5-C4	2.99	1.46	1.37
3	5	4306	OMU	O4-C4	-2.97	1.18	1.24
3	5	4083	5MU	O4-C4	-2.97	1.17	1.23
3	5	4620	OMU	O4-C4	-2.96	1.18	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	9	814	5MU	O4-C4	-2.94	1.18	1.23
3	5	2364	OMG	C5-C6	2.94	1.53	1.47
3	5	4370	OMG	C5-C6	2.93	1.53	1.47
6	9	484	A2M	O3'-C3'	2.92	1.50	1.43
3	5	4494	OMG	C5-C6	2.92	1.53	1.47
6	9	116	OMU	O4-C4	-2.92	1.18	1.24
6	9	1851	MA6	C2-N3	2.92	1.36	1.32
3	5	3880	P7G	C8-N7	2.91	1.51	1.45
3	5	3899	BGH	C1'-N9	-2.91	1.41	1.46
3	5	373	OMG	C5-C6	2.91	1.53	1.47
3	5	1534	A2M	O2'-C2'	-2.89	1.35	1.42
6	9	668	A2M	O3'-C3'	2.88	1.50	1.43
3	5	4623	OMG	C5-C6	2.88	1.53	1.47
3	5	1522	OMG	C5-C6	2.88	1.53	1.47
3	5	4196	OMG	C5-C6	2.88	1.53	1.47
3	5	3792	OMG	C5-C6	2.88	1.53	1.47
6	9	509	OMG	C5-C6	2.87	1.53	1.47
3	5	4872	2MG	C5-C4	-2.87	1.36	1.43
3	5	1625	OMG	C5-C6	2.87	1.53	1.47
3	5	4335	5MC	O2-C2	-2.85	1.18	1.23
3	5	2050	OMG	C5-C6	2.85	1.53	1.47
3	5	1348	P4U	O2-C2	-2.83	1.18	1.23
3	5	1316	OMG	C5-C6	2.83	1.53	1.47
3	5	1883	OMG	C5-C4	-2.83	1.36	1.43
3	5	2401	A2M	O2'-C2'	-2.83	1.35	1.42
3	5	2861	OMC	O2-C2	-2.83	1.18	1.23
3	5	4637	OMG	C5-C6	2.83	1.53	1.47
6	9	166	A2M	O2'-C2'	-2.82	1.35	1.42
5	8	14	OMU	C6-N1	2.82	1.44	1.38
3	5	1522	OMG	C5-C4	-2.82	1.36	1.43
3	5	1909	P7G	O6-C6	-2.82	1.18	1.23
3	5	3867	A2M	O2'-C2'	-2.81	1.35	1.42
6	9	121	OMU	C6-N1	2.81	1.44	1.38
6	9	1374	5MC	O2-C2	-2.81	1.18	1.23
6	9	644	OMG	C5-C6	2.80	1.53	1.47
3	5	3785	A2M	O2'-C2'	-2.80	1.35	1.42
3	5	1659	I4U	O2-C2	-2.80	1.18	1.23
3	5	4671	B8T	O2-C2	-2.79	1.18	1.23
1	2	37	T6A	C2-N3	2.79	1.36	1.32
3	5	2424	OMG	C5-C6	2.79	1.52	1.47
3	5	398	A2M	O3'-C3'	2.79	1.49	1.43
3	5	4870	OMG	C5-C4	-2.79	1.36	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	5	1316	OMG	C5-C4	-2.78	1.36	1.43
3	5	3825	A2M	O2'-C2'	-2.78	1.35	1.42
3	5	1524	A2M	O2'-C2'	-2.78	1.35	1.42
3	5	3880	P7G	O6-C6	-2.78	1.18	1.23
3	5	4571	A2M	O2'-C2'	-2.78	1.35	1.42
3	5	4194	I4U	O2-C2	-2.78	1.18	1.23
3	5	4523	A2M	O2'-C2'	-2.78	1.35	1.42
3	5	2050	OMG	C5-C4	-2.77	1.36	1.43
6	9	1031	A2M	O3'-C3'	2.77	1.49	1.43
3	5	3718	A2M	O3'-C3'	2.77	1.49	1.43
3	5	4483	B8T	O2-C2	-2.77	1.18	1.23
3	5	2365	OMC	O2-C2	-2.76	1.18	1.23
3	5	3723	A2M	O3'-C3'	2.76	1.49	1.43
3	5	373	OMG	C5-C4	-2.76	1.36	1.43
3	5	2401	A2M	O3'-C3'	2.76	1.49	1.43
3	5	1534	A2M	O3'-C3'	2.76	1.49	1.43
6	9	683	OMG	C5-C4	-2.76	1.36	1.43
6	9	668	A2M	O2'-C2'	-2.75	1.35	1.42
3	5	3718	A2M	O2'-C2'	-2.75	1.35	1.42
6	9	1031	A2M	O2'-C2'	-2.75	1.35	1.42
3	5	3899	BGH	O6-C6	-2.75	1.18	1.23
6	9	27	A2M	O2'-C2'	-2.75	1.35	1.42
3	5	2363	A2M	O2'-C2'	-2.75	1.35	1.42
3	5	4536	OMC	O2-C2	-2.75	1.18	1.23
3	5	4523	A2M	O3'-C3'	2.75	1.49	1.43
3	5	4370	OMG	C5-C4	-2.75	1.36	1.43
3	5	4623	OMG	C5-C4	-2.74	1.36	1.43
6	9	159	A2M	O2'-C2'	-2.74	1.35	1.42
6	9	1842	4AC	O2-C2	-2.74	1.18	1.23
3	5	2422	OMC	O2-C2	-2.74	1.18	1.23
3	5	1871	A2M	O2'-C2'	-2.73	1.35	1.42
6	9	517	OMC	O2-C2	-2.73	1.18	1.23
6	9	484	A2M	O2'-C2'	-2.73	1.35	1.42
3	5	3887	OMC	O2-C2	-2.73	1.18	1.23
3	5	4620	OMU	C6-N1	2.73	1.44	1.38
3	5	3869	OMC	O2-C2	-2.73	1.18	1.23
3	5	1326	A2M	O2'-C2'	-2.73	1.35	1.42
3	5	3782	5MC	O2-C2	-2.72	1.18	1.23
3	5	3867	A2M	O3'-C3'	2.72	1.49	1.43
6	9	509	OMG	C5-C4	-2.72	1.36	1.43
6	9	644	OMG	C5-C4	-2.72	1.36	1.43
3	5	4196	OMG	C5-C4	-2.71	1.36	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	5	2424	OMG	C5-C4	-2.71	1.36	1.43
3	5	4571	A2M	O3'-C3'	2.71	1.49	1.43
3	5	4494	OMG	C5-C4	-2.71	1.36	1.43
3	5	1883	OMG	C5-C6	2.70	1.52	1.47
3	5	2804	OMC	O2-C2	-2.70	1.18	1.23
3	5	4306	OMU	C6-N1	2.70	1.44	1.38
3	5	398	A2M	O2'-C2'	-2.70	1.36	1.42
3	5	2364	OMG	C5-C4	-2.70	1.36	1.43
6	9	1337	4AC	O2-C2	-2.69	1.18	1.23
3	5	1625	OMG	C5-C4	-2.69	1.36	1.43
3	5	1909	P7G	C5-C4	2.69	1.43	1.36
3	5	4637	OMG	C5-C4	-2.69	1.36	1.43
6	9	1678	A2M	O2'-C2'	-2.69	1.36	1.42
6	9	174	OMC	O2-C2	-2.69	1.18	1.23
6	9	1703	OMC	O2-C2	-2.68	1.18	1.23
3	5	3701	OMC	O2-C2	-2.68	1.18	1.23
3	5	4550	7MG	O6-C6	-2.68	1.18	1.23
6	9	1710	OMC	O2-C2	-2.68	1.18	1.23
3	5	1517	2MG	C5-C4	-2.67	1.36	1.43
3	5	1326	A2M	O3'-C3'	2.67	1.49	1.43
6	9	116	OMU	C6-N1	2.66	1.44	1.38
3	5	3723	A2M	O2'-C2'	-2.66	1.36	1.42
3	5	3825	A2M	O3'-C3'	2.65	1.49	1.43
3	5	2773	OMG	C5-C4	-2.64	1.36	1.43
3	5	1524	A2M	O3'-C3'	2.64	1.49	1.43
6	9	1678	A2M	O3'-C3'	2.64	1.49	1.43
6	9	814	5MU	O2-C2	-2.63	1.18	1.23
3	5	3880	P7G	C5-C4	2.63	1.43	1.36
3	5	1871	A2M	O3'-C3'	2.63	1.49	1.43
3	5	4083	5MU	O2-C2	-2.63	1.18	1.23
3	5	3792	OMG	C5-C4	-2.62	1.36	1.43
3	5	2363	A2M	O3'-C3'	2.61	1.49	1.43
3	5	1605	7MG	O6-C6	-2.61	1.18	1.23
6	9	27	A2M	O3'-C3'	2.61	1.49	1.43
6	9	159	A2M	O3'-C3'	2.59	1.49	1.43
2	1	45	4AC	O2-C2	-2.59	1.18	1.23
3	5	1866	UR3	C4-N3	2.58	1.45	1.40
3	5	2522	7MG	O6-C6	-2.57	1.18	1.23
3	5	4306	OMU	O2-C2	-2.55	1.18	1.23
3	5	2773	OMG	C2-N1	2.55	1.43	1.37
3	5	2424	OMG	C2-N1	2.54	1.43	1.37
6	9	166	A2M	O3'-C3'	2.54	1.49	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	5	4870	OMG	C2-N1	2.53	1.43	1.37
3	5	4597	UR3	C4-N3	2.53	1.45	1.40
3	5	1322	1MA	CM1-N1	-2.53	1.41	1.46
3	5	4530	UR3	C4-N3	2.53	1.45	1.40
3	5	1797	E7G	O6-C6	-2.50	1.18	1.23
3	5	3792	OMG	C2-N1	2.50	1.43	1.37
6	9	1830	UR3	C4-N3	2.49	1.45	1.40
3	5	4370	OMG	C2-N1	2.49	1.43	1.37
3	5	1883	OMG	C2-N1	2.49	1.43	1.37
6	9	683	OMG	C2-N1	2.48	1.43	1.37
3	5	2297	E7G	O6-C6	-2.48	1.18	1.23
3	5	4623	OMG	C2-N1	2.47	1.43	1.37
3	5	2050	OMG	C2-N1	2.47	1.43	1.37
6	9	517	OMC	C5-C4	2.46	1.48	1.42
3	5	4620	OMU	O2-C2	-2.46	1.18	1.23
3	5	4415	1MA	C6-N1	2.46	1.44	1.41
6	9	121	OMU	O2-C2	-2.46	1.18	1.23
3	5	1625	OMG	C2-N1	2.45	1.43	1.37
3	5	1316	OMG	C2-N1	2.45	1.43	1.37
3	5	729	2MG	C5-C4	-2.45	1.37	1.43
3	5	4494	OMG	C2-N1	2.45	1.43	1.37
6	9	1710	OMC	C5-C4	2.45	1.48	1.42
3	5	3701	OMC	C5-C4	2.44	1.48	1.42
3	5	2364	OMG	C2-N1	2.44	1.43	1.37
5	8	14	OMU	O2-C2	-2.44	1.18	1.23
6	9	174	OMC	C5-C4	2.42	1.48	1.42
3	5	4220	6MZ	C2-N3	2.42	1.35	1.32
6	9	509	OMG	C2-N1	2.42	1.43	1.37
3	5	4371	MHG	O6-C6	-2.42	1.19	1.23
3	5	4637	OMG	C2-N1	2.42	1.43	1.37
3	5	2422	OMC	C5-C4	2.42	1.48	1.42
6	9	1703	OMC	C5-C4	2.41	1.48	1.42
3	5	2365	OMC	C5-C4	2.40	1.48	1.42
3	5	3887	OMC	C5-C4	2.40	1.48	1.42
3	5	4196	OMG	C2-N1	2.39	1.43	1.37
3	5	373	OMG	C2-N1	2.39	1.43	1.37
6	9	644	OMG	C2-N1	2.39	1.43	1.37
1	2	37	T6A	ODA-C13	2.39	1.29	1.22
3	5	3909	OMC	C5-C4	2.39	1.48	1.42
3	5	1322	1MA	C6-N1	2.38	1.44	1.41
3	5	1322	1MA	C5-C4	-2.38	1.37	1.43
3	5	2861	OMC	C5-C4	2.37	1.48	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	5	1522	OMG	C2-N1	2.37	1.43	1.37
6	9	116	OMU	O2-C2	-2.37	1.18	1.23
3	5	4536	OMC	C5-C4	2.36	1.48	1.42
3	5	3869	OMC	C5-C4	2.36	1.48	1.42
6	9	121	OMU	C5-C4	2.34	1.48	1.43
3	5	4194	I4U	C5-C4	2.33	1.49	1.43
3	5	4530	UR3	O2-C2	-2.31	1.18	1.22
1	2	37	T6A	C2-N1	2.31	1.38	1.33
3	5	1883	OMG	O6-C6	-2.31	1.18	1.23
5	8	14	OMU	C5-C4	2.31	1.48	1.43
3	5	2804	OMC	C5-C4	2.30	1.48	1.42
6	9	509	OMG	O6-C6	-2.30	1.18	1.23
3	5	4306	OMU	C5-C4	2.29	1.48	1.43
3	5	4620	OMU	C5-C4	2.29	1.48	1.43
3	5	398	A2M	C2-N3	2.27	1.35	1.32
3	5	3723	A2M	C2-N3	2.26	1.35	1.32
6	9	1678	A2M	C2-N3	2.26	1.35	1.32
3	5	1316	OMG	O6-C6	-2.26	1.18	1.23
6	9	1830	UR3	C5-C4	2.25	1.49	1.43
3	5	2364	OMG	O6-C6	-2.25	1.18	1.23
3	5	4637	OMG	O6-C6	-2.25	1.18	1.23
6	9	116	OMU	C5-C4	2.24	1.48	1.43
3	5	1659	I4U	C5-C4	2.24	1.49	1.43
3	5	2050	OMG	O6-C6	-2.23	1.18	1.23
3	5	1625	OMG	O6-C6	-2.22	1.18	1.23
3	5	4597	UR3	C5-C4	2.22	1.49	1.43
3	5	373	OMG	O6-C6	-2.22	1.18	1.23
3	5	4530	UR3	C5-C4	2.22	1.49	1.43
6	9	644	OMG	O6-C6	-2.22	1.18	1.23
3	5	1522	OMG	O6-C6	-2.22	1.18	1.23
1	2	37	T6A	O10-C10	-2.22	1.18	1.23
6	9	166	A2M	C2-N3	2.22	1.35	1.32
3	5	4870	OMG	O6-C6	-2.21	1.18	1.23
3	5	4196	OMG	O6-C6	-2.21	1.18	1.23
3	5	4494	OMG	O6-C6	-2.21	1.18	1.23
3	5	4370	OMG	O6-C6	-2.20	1.18	1.23
3	5	4623	OMG	O6-C6	-2.20	1.18	1.23
3	5	1866	UR3	C5-C4	2.20	1.49	1.43
3	5	4571	A2M	C2-N3	2.20	1.35	1.32
3	5	1456	B8Q	O2-C2	-2.20	1.18	1.22
3	5	2424	OMG	O6-C6	-2.20	1.18	1.23
3	5	2773	OMG	O6-C6	-2.17	1.18	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	5	3792	OMG	O6-C6	-2.17	1.18	1.23
6	9	159	A2M	C2-N3	2.17	1.35	1.32
3	5	4415	1MA	CM1-N1	-2.17	1.42	1.46
3	5	1456	B8Q	C4-C5	2.17	1.54	1.49
3	5	2786	B9H	C31-N3	-2.16	1.43	1.46
6	9	1031	A2M	C2-N3	2.16	1.35	1.32
6	9	484	A2M	C2-N3	2.16	1.35	1.32
3	5	2363	A2M	C2-N3	2.16	1.35	1.32
3	5	4296	B8H	O4-C4	-2.16	1.19	1.23
3	5	1534	A2M	C2-N3	2.15	1.35	1.32
3	5	4415	1MA	C5-C4	-2.15	1.37	1.43
3	5	3718	A2M	C2-N3	2.15	1.35	1.32
3	5	3825	A2M	C2-N3	2.14	1.35	1.32
6	9	1832	6MZ	C2-N3	2.13	1.35	1.32
3	5	3867	A2M	C2-N3	2.12	1.35	1.32
6	9	1219	B8Q	O2-C2	-2.12	1.18	1.22
6	9	1248	B8N	O4-C4	-2.11	1.18	1.23
3	5	1860	B8H	O4-C4	-2.11	1.19	1.23
6	9	1830	UR3	O2-C2	-2.10	1.18	1.22
3	5	3785	A2M	C2-N3	2.09	1.35	1.32
3	5	3762	B8H	O4-C4	-2.09	1.19	1.23
3	5	1456	B8Q	C6-N1	2.08	1.43	1.38
3	5	1348	P4U	C5-C4	2.08	1.48	1.43
6	9	683	OMG	O6-C6	-2.07	1.18	1.23
3	5	1326	A2M	C2-N3	2.07	1.35	1.32
3	5	1871	A2M	C2-N3	2.07	1.35	1.32
6	9	27	A2M	C2-N3	2.06	1.35	1.32
6	9	1842	4AC	O7-C7	-2.06	1.18	1.23
6	9	568	MMX	O2-C2	-2.03	1.18	1.22
3	5	1517	2MG	O6-C6	-2.03	1.18	1.23
3	5	2401	A2M	C2-N3	2.02	1.35	1.32
3	5	4523	A2M	C2-N3	2.01	1.35	1.32
3	5	4872	2MG	O6-C6	-2.01	1.18	1.23
3	5	4450	PSU	C4-C5	-2.01	1.38	1.44

All (607) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	5	2754	B9B	O6-C6-N1	-31.66	93.18	120.23
3	5	1574	B9B	O6-C6-N1	-30.30	94.34	120.23
3	5	237	B9B	O6-C6-N1	-29.61	94.93	120.23
6	9	1851	MA6	N1-C6-N6	-14.81	99.73	116.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	5	4564	M7A	C5-C6-N6	14.20	147.88	123.75
6	9	1850	MA6	N1-C6-N6	-14.12	100.52	116.83
6	9	1806	M7A	C5-C6-N6	13.75	147.12	123.75
3	5	4220	6MZ	C1'-N9-C4	-13.36	103.17	126.64
6	9	1832	6MZ	C1'-N9-C4	-12.47	104.74	126.64
3	5	4083	5MU	C5-C4-N3	11.79	125.57	115.32
3	5	4564	M7A	N6-C6-N1	-11.61	92.52	118.38
6	9	814	5MU	C5-C4-N3	11.60	125.40	115.32
6	9	1806	M7A	N6-C6-N1	-11.39	93.00	118.38
3	5	1534	A2M	C5-C6-N6	10.86	136.86	120.31
3	5	2401	A2M	C5-C6-N6	10.76	136.70	120.31
3	5	1524	A2M	C5-C6-N6	10.69	136.60	120.31
6	9	159	A2M	C5-C6-N6	10.67	136.57	120.31
3	5	2363	A2M	C5-C6-N6	10.67	136.56	120.31
6	9	668	A2M	C5-C6-N6	10.66	136.55	120.31
3	5	3718	A2M	C5-C6-N6	10.63	136.51	120.31
3	5	1871	A2M	C5-C6-N6	10.61	136.48	120.31
6	9	484	A2M	C5-C6-N6	10.60	136.46	120.31
3	5	1326	A2M	C5-C6-N6	10.56	136.39	120.31
3	5	3723	A2M	C5-C6-N6	10.53	136.34	120.31
6	9	166	A2M	C5-C6-N6	10.50	136.31	120.31
3	5	3867	A2M	C5-C6-N6	10.50	136.30	120.31
3	5	3785	A2M	C5-C6-N6	10.49	136.28	120.31
6	9	1678	A2M	C5-C6-N6	10.48	136.28	120.31
6	9	27	A2M	C5-C6-N6	10.47	136.26	120.31
3	5	4571	A2M	C5-C6-N6	10.45	136.24	120.31
3	5	4523	A2M	C5-C6-N6	10.45	136.23	120.31
3	5	3825	A2M	C5-C6-N6	10.42	136.18	120.31
3	5	398	A2M	C5-C6-N6	10.40	136.16	120.31
6	9	1031	A2M	C5-C6-N6	10.35	136.08	120.31
3	5	4355	E6G	O6-C6-N1	9.99	128.77	120.23
3	5	4194	I4U	O4-C4-C5	9.91	122.49	115.45
3	5	4083	5MU	C5-C6-N1	-9.54	112.95	123.31
6	9	814	5MU	C5-C6-N1	-9.49	113.00	123.31
3	5	1659	I4U	O4-C4-C5	9.20	121.98	115.45
6	9	568	MMX	N3-C2-N1	8.28	122.27	116.83
6	9	568	MMX	C4-N3-C2	-8.25	113.90	121.62
3	5	1534	A2M	N6-C6-N1	-7.23	102.89	118.33
3	5	3785	A2M	N6-C6-N1	-7.02	103.34	118.33
3	5	2401	A2M	N6-C6-N1	-7.02	103.34	118.33
6	9	484	A2M	N6-C6-N1	-6.99	103.39	118.33
6	9	668	A2M	N6-C6-N1	-6.96	103.46	118.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	5	1871	A2M	N6-C6-N1	-6.93	103.52	118.33
6	9	159	A2M	N6-C6-N1	-6.92	103.54	118.33
3	5	1326	A2M	N6-C6-N1	-6.91	103.57	118.33
3	5	2363	A2M	N6-C6-N1	-6.91	103.57	118.33
3	5	3867	A2M	N6-C6-N1	-6.88	103.62	118.33
6	9	27	A2M	N6-C6-N1	-6.87	103.66	118.33
3	5	1524	A2M	N6-C6-N1	-6.86	103.67	118.33
3	5	3718	A2M	N6-C6-N1	-6.85	103.69	118.33
6	9	1678	A2M	N6-C6-N1	-6.84	103.72	118.33
3	5	398	A2M	N6-C6-N1	-6.83	103.73	118.33
3	5	3825	A2M	N6-C6-N1	-6.82	103.76	118.33
3	5	3723	A2M	N6-C6-N1	-6.82	103.77	118.33
3	5	4296	B8H	C4-N3-C2	-6.81	118.42	127.34
6	9	166	A2M	N6-C6-N1	-6.80	103.81	118.33
3	5	4523	A2M	N6-C6-N1	-6.80	103.81	118.33
3	5	4571	A2M	N6-C6-N1	-6.80	103.81	118.33
6	9	1031	A2M	N6-C6-N1	-6.78	103.85	118.33
3	5	3762	B8H	C4-N3-C2	-6.75	118.48	127.34
3	5	4355	E6G	N2-C2-N3	6.66	128.18	117.79
3	5	3785	A2M	N3-C2-N1	-6.64	119.66	128.67
3	5	1860	B8H	C4-N3-C2	-6.63	118.64	127.34
6	9	1031	A2M	N3-C2-N1	-6.63	119.68	128.67
3	5	4872	2MG	N1-C2-N2	6.52	123.22	116.56
3	5	4564	M7A	N3-C4-N9	6.51	135.03	126.88
3	5	3762	B8H	N3-C2-N1	6.49	121.49	115.22
3	5	1524	A2M	N3-C2-N1	-6.48	119.87	128.67
3	5	1326	A2M	N3-C2-N1	-6.48	119.88	128.67
3	5	2401	A2M	N3-C2-N1	-6.46	119.90	128.67
3	5	4371	MHG	C2-N3-C4	6.46	120.08	112.00
3	5	1871	A2M	N3-C2-N1	-6.44	119.93	128.67
6	9	1851	MA6	N3-C2-N1	-6.42	119.96	128.67
3	5	4523	A2M	N3-C2-N1	-6.41	119.97	128.67
6	9	668	A2M	N3-C2-N1	-6.40	119.98	128.67
3	5	1534	A2M	N3-C2-N1	-6.38	120.01	128.67
6	9	484	A2M	N3-C2-N1	-6.36	120.03	128.67
3	5	4571	A2M	N3-C2-N1	-6.35	120.05	128.67
6	9	1678	A2M	N3-C2-N1	-6.33	120.07	128.67
3	5	1860	B8H	N3-C2-N1	6.33	121.34	115.22
6	9	1850	MA6	N3-C2-N1	-6.31	120.10	128.67
3	5	1348	P4U	O4-C4-C5	6.31	119.93	115.45
3	5	4296	B8H	N3-C2-N1	6.31	121.32	115.22
6	9	159	A2M	N3-C2-N1	-6.30	120.11	128.67

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	5	3723	A2M	N3-C2-N1	-6.30	120.12	128.67
6	9	1832	6MZ	N3-C2-N1	-6.29	120.13	128.67
6	9	27	A2M	N3-C2-N1	-6.29	120.14	128.67
6	9	166	A2M	N3-C2-N1	-6.28	120.14	128.67
3	5	2363	A2M	N3-C2-N1	-6.28	120.15	128.67
3	5	3867	A2M	N3-C2-N1	-6.26	120.17	128.67
3	5	2380	B8W	N2-C2-N3	6.25	127.55	117.79
3	5	398	A2M	N3-C2-N1	-6.25	120.19	128.67
3	5	3825	A2M	N3-C2-N1	-6.25	120.19	128.67
3	5	2297	E7G	C4-C5-N7	6.24	110.00	104.94
3	5	4185	B8W	N2-C2-N3	6.18	127.44	117.79
1	2	37	T6A	N3-C2-N1	-6.17	120.29	128.67
3	5	1797	E7G	C4-C5-N7	6.15	109.93	104.94
3	5	4220	6MZ	N3-C2-N1	-6.14	120.34	128.67
3	5	4472	B8W	N2-C2-N3	6.13	127.35	117.79
3	5	4129	B8W	N2-C2-N3	6.11	127.33	117.79
3	5	4371	MHG	C4-C5-N7	6.10	109.89	104.94
3	5	4529	B8W	N2-C2-N3	6.07	127.26	117.79
3	5	3718	A2M	N3-C2-N1	-6.07	120.44	128.67
6	9	1851	MA6	C1'-N9-C4	-5.90	116.28	126.64
6	9	1850	MA6	C1'-N9-C4	-5.87	116.33	126.64
6	9	121	OMU	C4-N3-C2	-5.81	119.41	126.61
3	5	3899	BGH	C5-C6-N1	5.76	121.08	110.94
3	5	4129	B8W	N3-C2-N1	-5.75	119.90	127.21
3	5	4306	OMU	C4-N3-C2	-5.70	119.54	126.61
3	5	4472	B8W	N3-C2-N1	-5.64	120.04	127.21
6	9	1806	M7A	N3-C2-N1	-5.63	120.05	128.58
3	5	4185	B8W	N3-C2-N1	-5.62	120.06	127.21
3	5	4564	M7A	N3-C2-N1	-5.56	120.16	128.58
5	8	14	OMU	C4-N3-C2	-5.54	119.74	126.61
6	9	1806	M7A	N3-C4-N9	5.52	133.78	126.88
3	5	4530	UR3	C4-N3-C2	-5.51	120.14	124.58
3	5	3785	A2M	C4'-O4'-C1'	-5.51	104.88	109.92
3	5	4690	B8K	C5-C6-N1	5.50	120.62	110.94
6	9	116	OMU	C4-N3-C2	-5.47	119.82	126.61
3	5	4355	E6G	N3-C2-N1	-5.45	120.28	127.21
3	5	3899	BGH	C4-C5-N7	5.41	109.30	104.93
3	5	2380	B8W	N3-C2-N1	-5.41	120.33	127.21
3	5	4529	B8W	N3-C2-N1	-5.41	120.33	127.21
3	5	4620	OMU	C4-N3-C2	-5.40	119.91	126.61
3	5	3897	B8K	C5-C6-N1	5.39	120.42	110.94
3	5	1866	UR3	C4-N3-C2	-5.34	120.28	124.58

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	5	4690	B8K	C4-C5-N7	5.34	109.25	104.93
3	5	2754	B9B	N3-C2-N1	-5.33	120.44	127.21
3	5	237	B9B	N3-C2-N1	-5.26	120.52	127.21
3	5	1322	1MA	N1-C2-N3	-5.25	119.33	125.90
3	5	1574	B9B	N3-C2-N1	-5.24	120.54	127.21
6	9	1219	B8Q	C1'-N1-C2	5.24	125.62	117.04
6	9	1830	UR3	C4-N3-C2	-5.20	120.39	124.58
3	5	4597	UR3	C4-N3-C2	-5.17	120.42	124.58
6	9	814	5MU	O4-C4-C5	-5.11	119.07	124.92
3	5	4371	MHG	C5-C6-N1	5.09	119.91	110.94
1	2	37	T6A	N6-C10-N11	5.08	120.76	113.77
6	9	1248	B8N	C5-C4-N3	5.05	125.32	116.15
3	5	1797	E7G	C5-C6-N1	5.04	119.81	110.94
3	5	4450	PSU	C4-N3-C2	-5.02	119.46	126.37
3	5	4636	PSU	C4-N3-C2	-5.02	119.46	126.37
3	5	1456	B8Q	N3-C2-N1	5.01	124.14	117.16
3	5	4450	PSU	N1-C2-N3	5.00	120.44	115.17
3	5	3897	B8K	C4-C5-N7	5.00	108.97	104.93
3	5	1683	PSU	N1-C2-N3	5.00	120.44	115.17
3	5	2297	E7G	C5-C6-N1	4.99	119.73	110.94
3	5	1605	7MG	C5-C6-N1	4.98	119.70	110.94
3	5	4636	PSU	N1-C2-N3	4.97	120.41	115.17
3	5	4293	PSU	N1-C2-N3	4.96	120.40	115.17
3	5	2522	7MG	C5-C6-N1	4.96	119.66	110.94
3	5	4531	PSU	C4-N3-C2	-4.93	119.58	126.37
3	5	4628	PSU	C4-N3-C2	-4.93	119.58	126.37
3	5	3880	P7G	C4-C5-N7	4.91	110.02	106.71
6	9	822	PSU	N1-C2-N3	4.91	120.34	115.17
3	5	1677	PSU	C4-N3-C2	-4.90	119.62	126.37
3	5	4415	1MA	N1-C2-N3	-4.89	119.78	125.90
3	5	4628	PSU	N1-C2-N3	4.89	120.32	115.17
3	5	4293	PSU	C4-N3-C2	-4.88	119.64	126.37
3	5	4083	5MU	O4-C4-C5	-4.88	119.34	124.92
3	5	4550	7MG	C5-C6-N1	4.87	119.51	110.94
3	5	1683	PSU	C4-N3-C2	-4.87	119.67	126.37
6	9	823	PSU	C4-N3-C2	-4.86	119.68	126.37
3	5	2508	PSU	C4-N3-C2	-4.85	119.69	126.37
3	5	1677	PSU	N1-C2-N3	4.85	120.28	115.17
3	5	4442	PSU	N1-C2-N3	4.85	120.28	115.17
3	5	4083	5MU	C4-N3-C2	-4.83	121.01	127.34
3	5	4531	PSU	N1-C2-N3	4.82	120.25	115.17
3	5	3729	PSU	C4-N3-C2	-4.82	119.73	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	9	612	PSU	N1-C2-N3	4.81	120.25	115.17
6	9	823	PSU	N1-C2-N3	4.81	120.24	115.17
3	5	3899	BGH	C2-N3-C4	4.81	120.58	112.30
3	5	3729	PSU	N1-C2-N3	4.81	120.24	115.17
3	5	4442	PSU	C4-N3-C2	-4.80	119.76	126.37
6	9	1243	PSU	C4-N3-C2	-4.80	119.77	126.37
6	9	612	PSU	C4-N3-C2	-4.79	119.77	126.37
3	5	4500	PSU	C4-N3-C2	-4.79	119.78	126.37
6	9	822	PSU	C4-N3-C2	-4.77	119.80	126.37
3	5	4690	B8K	C2-N3-C4	4.77	120.51	112.30
3	5	3715	PSU	N1-C2-N3	4.76	120.19	115.17
3	5	4500	PSU	N1-C2-N3	4.73	120.16	115.17
3	5	3715	PSU	C4-N3-C2	-4.72	119.86	126.37
3	5	2508	PSU	N1-C2-N3	4.72	120.15	115.17
3	5	4083	5MU	N3-C2-N1	4.72	121.04	114.89
6	9	814	5MU	C4-N3-C2	-4.72	121.16	127.34
3	5	3897	B8K	C2-N3-C4	4.68	120.35	112.30
6	9	1243	PSU	N1-C2-N3	4.67	120.10	115.17
3	5	4403	PSU	C4-N3-C2	-4.65	119.97	126.37
3	5	3764	PSU	N1-C2-N3	4.64	120.06	115.17
6	9	1081	PSU	C4-N3-C2	-4.64	119.98	126.37
6	9	1219	B8Q	O2-C2-N3	-4.64	116.44	122.95
6	9	814	5MU	N3-C2-N1	4.64	120.93	114.89
3	5	1524	A2M	C4'-O4'-C1'	-4.64	105.68	109.92
3	5	3867	A2M	C4'-O4'-C1'	-4.62	105.69	109.92
3	5	1909	P7G	C4-C5-N7	4.61	109.82	106.71
3	5	2754	B9B	N2-C2-N3	4.57	124.92	117.79
3	5	2522	7MG	C2-N3-C4	4.56	120.16	112.30
3	5	1574	B9B	C2-N3-C4	4.53	120.37	115.48
6	9	1081	PSU	N1-C2-N3	4.53	119.95	115.17
3	5	3764	PSU	C4-N3-C2	-4.53	120.13	126.37
3	5	4403	PSU	N1-C2-N3	4.53	119.94	115.17
6	9	119	PSU	N1-C2-N3	4.52	119.93	115.17
3	5	1797	E7G	C2-N3-C4	4.52	120.08	112.30
3	5	1456	B8Q	C31-N3-C4	4.52	122.58	114.76
3	5	2754	B9B	C2-N3-C4	4.48	120.31	115.48
3	5	1605	7MG	C2-N3-C4	4.47	119.99	112.30
3	5	237	B9B	N2-C2-N3	4.46	124.75	117.79
6	9	119	PSU	C4-N3-C2	-4.45	120.24	126.37
3	5	2297	E7G	C2-N3-C4	4.45	119.96	112.30
6	9	1219	B8Q	N3-C2-N1	4.43	123.34	117.16
3	5	4415	1MA	C5-C6-N1	4.42	120.31	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	5	4550	7MG	C2-N3-C4	4.37	119.83	112.30
3	5	4690	B8K	C72-C71-N7	4.35	125.22	118.80
6	9	1248	B8N	C4-N3-C2	-4.35	120.27	125.62
3	5	1582	PSU	N1-C2-N3	4.33	119.73	115.17
3	5	2786	B9H	C31-N3-C2	4.30	122.57	117.29
1	2	37	T6A	C2-N1-C6	4.30	119.93	116.60
3	5	1582	PSU	C4-N3-C2	-4.29	120.47	126.37
3	5	237	B9B	C2-N3-C4	4.28	120.10	115.48
3	5	2522	7MG	C5-C4-N3	-4.27	120.11	128.13
3	5	1322	1MA	C5-C6-N1	4.27	120.08	113.95
3	5	4472	B8W	C2-N3-C4	4.24	120.05	115.48
6	9	1248	B8N	C1'-C5-C4	4.23	124.03	117.61
3	5	4529	B8W	C2-N3-C4	4.20	120.01	115.48
3	5	1605	7MG	C5-C4-N3	-4.18	120.28	128.13
3	5	1797	E7G	C5-C4-N3	-4.18	120.28	128.13
3	5	4185	B8W	C2-N3-C4	4.16	119.97	115.48
3	5	4129	B8W	C2-N3-C4	4.14	119.95	115.48
3	5	4355	E6G	C2-N3-C4	4.13	119.94	115.48
3	5	2380	B8W	C2-N3-C4	4.12	119.93	115.48
3	5	4371	MHG	C5-C4-N3	-4.10	120.44	128.13
3	5	1517	2MG	N1-C2-N2	4.06	120.71	116.56
3	5	3897	B8K	C72-C71-N7	4.00	124.70	118.80
3	5	2297	E7G	C5-C4-N3	-3.99	120.64	128.13
3	5	4550	7MG	C5-C4-N3	-3.98	120.65	128.13
3	5	1605	7MG	C4-C5-N7	3.94	110.03	105.38
3	5	1456	B8Q	O2-C2-N3	-3.93	117.44	122.95
3	5	2522	7MG	C4-C5-N7	3.92	110.01	105.38
6	9	1678	A2M	C4'-O4'-C1'	-3.89	106.36	109.92
3	5	4185	B8W	C1'-N9-C4	-3.87	119.83	126.64
3	5	4083	5MU	C5M-C5-C6	-3.87	117.61	122.85
3	5	4371	MHG	C2-N1-C6	-3.87	119.88	124.55
6	9	121	OMU	N3-C2-N1	3.84	119.89	114.89
6	9	121	OMU	C5-C4-N3	3.82	120.15	114.80
3	5	4371	MHG	N1-C2-N2	3.80	120.44	116.56
6	9	1219	B8Q	C31-N3-C4	3.80	121.34	114.76
3	5	4523	A2M	C4'-O4'-C1'	-3.79	106.45	109.92
3	5	4355	E6G	N2-C2-N1	-3.79	111.54	117.22
3	5	4306	OMU	N3-C2-N1	3.77	119.81	114.89
5	8	14	OMU	C5-C4-N3	3.77	120.08	114.80
6	9	116	OMU	N3-C2-N1	3.76	119.79	114.89
3	5	4550	7MG	C4-C5-N7	3.75	109.81	105.38
3	5	4620	OMU	N3-C2-N1	3.74	119.76	114.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	5	1574	B9B	N2-C2-N3	3.72	123.60	117.79
3	5	4690	B8K	C5-C4-N9	3.72	111.10	106.33
3	5	4296	B8H	C5-C4-N3	3.71	124.72	116.55
6	9	1219	B8Q	C6-N1-C2	-3.70	118.78	121.80
3	5	4083	5MU	C5M-C5-C4	3.69	122.72	118.78
3	5	4306	OMU	C5-C4-N3	3.68	119.96	114.80
3	5	2786	B9H	C4-N3-C2	-3.68	115.37	122.00
5	8	14	OMU	N3-C2-N1	3.67	119.67	114.89
3	5	4597	UR3	C5-C4-N3	3.67	119.87	115.04
3	5	3897	B8K	C5-C4-N9	3.65	111.01	106.33
3	5	1860	B8H	C5-C4-N3	3.64	124.56	116.55
3	5	4447	5MC	C5-C6-N1	-3.64	119.36	123.31
3	5	1860	B8H	O2-C2-N1	-3.63	119.11	122.78
3	5	1866	UR3	C5-C4-N3	3.63	119.82	115.04
6	9	568	MMX	O2-C2-N3	-3.61	117.48	122.10
3	5	4872	2MG	CM2-N2-C2	-3.61	115.89	123.65
6	9	683	OMG	C8-N7-C5	3.60	108.69	102.55
3	5	3762	B8H	C5-C4-N3	3.60	124.47	116.55
3	5	4194	I4U	C5-C4-N3	-3.54	119.66	124.86
3	5	4529	B8W	C61-O6-C6	3.54	120.77	116.65
3	5	3762	B8H	O2-C2-N1	-3.53	119.20	122.78
3	5	4620	OMU	C5-C4-N3	3.52	119.74	114.80
3	5	4472	B8W	C1'-N9-C4	-3.51	120.47	126.64
6	9	1248	B8N	N3-C2-N1	3.51	121.01	116.72
6	9	1830	UR3	C5-C4-N3	3.51	119.66	115.04
6	9	1830	UR3	C1'-N1-C2	3.48	122.74	117.04
3	5	1322	1MA	C8-N7-C5	3.48	108.47	102.55
3	5	1659	I4U	C5-C4-N3	-3.48	119.76	124.86
6	9	116	OMU	C5-C4-N3	3.47	119.66	114.80
3	5	4530	UR3	C5-C4-N3	3.47	119.61	115.04
3	5	4690	B8K	C5-C4-N3	-3.47	121.62	128.13
3	5	3785	A2M	O4'-C1'-N9	3.47	113.34	108.75
6	9	1832	6MZ	C2-N1-C6	3.45	119.27	116.60
3	5	3899	BGH	C72-C71-N7	3.45	123.88	118.80
3	5	4296	B8H	O2-C2-N1	-3.44	119.30	122.78
3	5	1348	P4U	C5-C4-N3	-3.43	119.82	124.86
3	5	3899	BGH	C5-C4-N9	3.42	110.72	106.33
3	5	2380	B8W	N2-C2-N1	-3.41	112.11	117.22
3	5	1871	A2M	C4'-O4'-C1'	-3.41	106.81	109.92
3	5	4129	B8W	C1'-N9-C4	-3.39	120.68	126.64
6	9	1374	5MC	C5-C6-N1	-3.38	119.65	123.31
3	5	4415	1MA	C8-N7-C5	3.37	108.29	102.55

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	5	3899	BGH	C5-C4-N3	-3.37	121.80	128.13
3	5	3899	BGH	N9-C8-N7	3.37	107.75	103.31
3	5	1522	OMG	C8-N7-C5	3.35	108.26	102.55
3	5	4220	6MZ	C2-N1-C6	3.35	119.20	116.60
3	5	4870	OMG	C8-N7-C5	3.35	108.25	102.55
3	5	1316	OMG	C8-N7-C5	3.35	108.25	102.55
3	5	4623	OMG	C8-N7-C5	3.34	108.23	102.55
3	5	2380	B8W	C1'-N9-C4	-3.33	120.79	126.64
3	5	4335	5MC	C5-C6-N1	-3.31	119.72	123.31
3	5	3897	B8K	C5-C4-N3	-3.31	121.92	128.13
3	5	4494	OMG	C8-N7-C5	3.30	108.17	102.55
3	5	4371	MHG	C5-C4-N9	3.29	110.55	106.33
3	5	4370	OMG	C8-N7-C5	3.29	108.15	102.55
3	5	1517	2MG	C5-C6-N1	3.29	120.35	114.07
6	9	644	OMG	C8-N7-C5	3.27	108.12	102.55
3	5	2773	OMG	C8-N7-C5	3.27	108.12	102.55
3	5	2401	A2M	C4'-O4'-C1'	-3.27	106.93	109.92
6	9	1850	MA6	C2-N1-C6	3.26	120.03	116.84
3	5	373	OMG	C8-N7-C5	3.26	108.09	102.55
3	5	4196	OMG	C8-N7-C5	3.25	108.08	102.55
6	9	814	5MU	C5M-C5-C6	-3.25	118.45	122.85
6	9	509	OMG	C8-N7-C5	3.25	108.07	102.55
3	5	4690	B8K	N9-C8-N7	3.24	107.59	103.31
3	5	2364	OMG	C8-N7-C5	3.24	108.07	102.55
3	5	4872	2MG	C8-N7-C5	3.24	108.06	102.55
3	5	3792	OMG	C8-N7-C5	3.23	108.05	102.55
3	5	4637	OMG	C8-N7-C5	3.22	108.03	102.55
3	5	4529	B8W	N2-C2-N1	-3.22	112.40	117.22
3	5	1625	OMG	C8-N7-C5	3.21	108.01	102.55
3	5	4550	7MG	C5-C4-N9	3.21	110.44	106.33
3	5	4872	2MG	C5-C6-N1	3.20	120.17	114.07
3	5	2050	OMG	C8-N7-C5	3.19	107.98	102.55
3	5	1883	OMG	C5-C6-N1	3.18	120.15	114.07
3	5	4870	OMG	C5-C6-N1	3.18	120.14	114.07
3	5	1883	OMG	C8-N7-C5	3.18	107.97	102.55
6	9	509	OMG	C5-C6-N1	3.17	120.13	114.07
3	5	4872	2MG	N2-C2-N3	-3.17	116.47	120.51
3	5	2424	OMG	C5-C6-N1	3.16	120.09	114.07
3	5	4185	B8W	N2-C2-N1	-3.15	112.50	117.22
3	5	4637	OMG	C5-C6-N1	3.15	120.08	114.07
3	5	729	2MG	C5-C6-N1	3.15	120.08	114.07
3	5	2050	OMG	C5-C6-N1	3.14	120.07	114.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	9	1851	MA6	C2-N1-C6	3.14	119.92	116.84
3	5	4494	OMG	C5-C6-N1	3.13	120.05	114.07
3	5	3782	5MC	C5-C6-N1	-3.13	119.91	123.31
3	5	4623	OMG	C2-N1-C6	-3.13	119.38	125.11
3	5	1534	A2M	C4'-O4'-C1'	-3.13	107.06	109.92
3	5	4637	OMG	C2-N1-C6	-3.13	119.39	125.11
3	5	4623	OMG	C5-C6-N1	3.12	120.03	114.07
3	5	4450	PSU	C6-C5-C4	3.12	120.28	118.17
3	5	4196	OMG	C5-C6-N1	3.12	120.03	114.07
6	9	644	OMG	C5-C6-N1	3.12	120.02	114.07
3	5	1517	2MG	C8-N7-C5	3.12	107.86	102.55
6	9	509	OMG	C2-N1-C6	-3.12	119.41	125.11
3	5	2364	OMG	C5-C6-N1	3.11	120.00	114.07
3	5	1625	OMG	C5-C6-N1	3.11	120.00	114.07
3	5	4530	UR3	C6-N1-C2	-3.10	119.26	121.80
3	5	4370	OMG	C5-C6-N1	3.10	119.98	114.07
6	9	683	OMG	C5-C6-N1	3.10	119.98	114.07
3	5	2522	7MG	C5-C4-N9	3.10	110.30	106.33
6	9	116	OMU	O4-C4-C5	-3.09	119.83	125.16
3	5	3897	B8K	N9-C8-N7	3.09	107.39	103.31
3	5	1625	OMG	C2-N1-C6	-3.09	119.46	125.11
3	5	2297	E7G	C5-C4-N9	3.08	110.28	106.33
3	5	2424	OMG	C8-N7-C5	3.08	107.80	102.55
3	5	4472	B8W	N2-C2-N1	-3.08	112.61	117.22
3	5	373	OMG	C2-N1-C6	-3.07	119.48	125.11
3	5	729	2MG	C8-N7-C5	3.07	107.78	102.55
6	9	1806	M7A	C2-N3-C4	3.07	119.33	111.83
3	5	373	OMG	C5-C6-N1	3.07	119.93	114.07
6	9	644	OMG	C2-N1-C6	-3.06	119.51	125.11
3	5	4196	OMG	C2-N1-C6	-3.06	119.52	125.11
3	5	2363	A2M	C4'-O4'-C1'	-3.06	107.13	109.92
6	9	1832	6MZ	C9-N6-C6	-3.05	120.02	122.85
3	5	2424	OMG	C2-N1-C6	-3.05	119.53	125.11
3	5	4494	OMG	C2-N1-C6	-3.05	119.53	125.11
3	5	3792	OMG	C5-C6-N1	3.04	119.88	114.07
3	5	3899	BGH	C6-C5-C4	-3.04	117.05	122.40
3	5	1883	OMG	C2-N1-C6	-3.04	119.55	125.11
3	5	1522	OMG	C5-C6-N1	3.03	119.86	114.07
3	5	2773	OMG	C5-C6-N1	3.02	119.84	114.07
5	8	14	OMU	O4-C4-C5	-3.01	119.97	125.16
6	9	568	MMX	C31-N3-C2	3.01	121.26	117.49
3	5	3897	B8K	C6-C5-C4	-2.99	117.15	122.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	5	4450	PSU	O2-C2-N1	-2.99	119.71	122.79
3	5	4564	M7A	C2-N3-C4	2.98	119.12	111.83
6	9	683	OMG	C2-N1-C6	-2.98	119.65	125.11
3	5	3792	OMG	C2-N1-C6	-2.98	119.65	125.11
3	5	2050	OMG	C2-N1-C6	-2.98	119.66	125.11
3	5	1316	OMG	C5-C6-N1	2.97	119.74	114.07
3	5	4129	B8W	N2-C2-N1	-2.97	112.77	117.22
3	5	1797	E7G	C5-C4-N9	2.95	110.12	106.33
3	5	2297	E7G	O6-C6-C5	-2.95	120.39	127.62
3	5	3723	A2M	C4'-O4'-C1'	-2.95	107.23	109.92
3	5	4129	B8W	C61-O6-C6	2.94	120.08	116.65
6	9	27	A2M	C4'-O4'-C1'	-2.94	107.23	109.92
3	5	4306	OMU	O4-C4-C5	-2.94	120.10	125.16
3	5	4690	B8K	C6-C5-C4	-2.93	117.24	122.40
3	5	2364	OMG	C2-N1-C6	-2.93	119.74	125.11
3	5	4371	MHG	O6-C6-C5	-2.93	120.43	127.62
3	5	4870	OMG	C2-N1-C6	-2.93	119.75	125.11
3	5	4370	OMG	C2-N1-C6	-2.92	119.77	125.11
6	9	121	OMU	O4-C4-C5	-2.91	120.14	125.16
6	9	1830	UR3	C6-N1-C2	-2.91	119.42	121.80
3	5	1605	7MG	C5-C4-N9	2.91	110.06	106.33
3	5	1316	OMG	C2-N1-C6	-2.91	119.78	125.11
3	5	3899	BGH	C2-N1-C6	-2.91	119.84	125.11
2	1	45	4AC	C6-C5-C4	2.91	120.50	117.00
6	9	1243	PSU	O2-C2-N1	-2.90	119.80	122.79
3	5	2773	OMG	C2-N1-C6	-2.89	119.83	125.11
6	9	823	PSU	O2-C2-N1	-2.89	119.81	122.79
3	5	1797	E7G	O6-C6-C5	-2.88	120.55	127.62
3	5	1605	7MG	N9-C4-N3	2.87	129.66	125.46
3	5	4620	OMU	O4-C4-C5	-2.87	120.22	125.16
6	9	612	PSU	O2-C2-N1	-2.85	119.85	122.79
3	5	1522	OMG	C2-N1-C6	-2.84	119.91	125.11
3	5	1909	P7G	N9-C8-N7	2.83	107.38	103.37
3	5	1797	E7G	N9-C4-N3	2.83	129.60	125.46
3	5	1605	7MG	O6-C6-C5	-2.82	120.69	127.62
3	5	2522	7MG	O6-C6-C5	-2.82	120.69	127.62
3	5	2522	7MG	N9-C4-N3	2.82	129.59	125.46
1	2	37	T6A	N6-C6-N1	2.80	121.87	118.71
3	5	2522	7MG	C2-N1-C6	-2.80	120.03	125.11
3	5	1683	PSU	O2-C2-N1	-2.80	119.90	122.79
3	5	2297	E7G	C2-N1-C6	-2.80	120.04	125.11
3	5	1797	E7G	C2-N1-C6	-2.80	120.04	125.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	5	1605	7MG	C2-N1-C6	-2.79	120.05	125.11
6	9	1806	M7A	C71-N7-C5	-2.76	111.93	123.44
3	5	4564	M7A	N9-C8-N7	-2.75	99.47	103.37
3	5	4628	PSU	O2-C2-N1	-2.73	119.97	122.79
6	9	1248	B8N	O4-C4-N3	-2.73	115.56	119.99
3	5	3764	PSU	O2-C2-N1	-2.73	119.97	122.79
3	5	3715	PSU	O2-C2-N1	-2.73	119.98	122.79
3	5	4671	B8T	C6-C5-C4	2.72	120.27	117.00
3	5	237	B9B	C61-O6-C6	-2.71	113.05	117.65
3	5	4500	PSU	O2-C2-N1	-2.71	119.99	122.79
3	5	3729	PSU	O2-C2-N1	-2.70	120.00	122.79
3	5	3764	PSU	C6-N1-C2	-2.70	120.18	122.69
3	5	4442	PSU	O2-C2-N1	-2.70	120.00	122.79
3	5	4293	PSU	O2-C2-N1	-2.70	120.00	122.79
3	5	1683	PSU	C6-N1-C2	-2.69	120.20	122.69
6	9	1031	A2M	C4'-O4'-C1'	-2.69	107.46	109.92
6	9	668	A2M	C4'-O4'-C1'	-2.68	107.47	109.92
3	5	3867	A2M	C1'-N9-C4	2.68	131.34	126.64
3	5	4550	7MG	O6-C6-C5	-2.67	121.06	127.62
3	5	4083	5MU	O4-C4-N3	-2.67	115.09	120.11
3	5	4636	PSU	O2-C2-N1	-2.67	120.04	122.79
3	5	4296	B8H	O4-C4-N3	-2.67	115.10	120.11
3	5	4550	7MG	C2-N1-C6	-2.67	120.28	125.11
6	9	822	PSU	C6-N1-C2	-2.66	120.22	122.69
3	5	3762	B8H	O4-C4-N3	-2.65	115.12	120.11
6	9	1081	PSU	O2-C2-N1	-2.65	120.06	122.79
6	9	1337	4AC	C6-C5-C4	2.65	120.19	117.00
3	5	4531	PSU	O2-C2-N1	-2.63	120.08	122.79
6	9	822	PSU	O2-C2-N1	-2.62	120.09	122.79
3	5	4636	PSU	C6-C5-C4	2.62	119.94	118.17
3	5	3718	A2M	C1'-N9-C4	2.61	131.23	126.64
6	9	814	5MU	C5M-C5-C4	2.61	121.57	118.78
3	5	1677	PSU	O2-C2-N1	-2.61	120.10	122.79
3	5	1677	PSU	C6-C5-C4	2.61	119.93	118.17
3	5	1860	B8H	O4-C4-N3	-2.60	115.22	120.11
3	5	4690	B8K	C2-N1-C6	-2.59	120.41	125.11
1	2	37	T6A	O10-C10-N6	-2.59	119.04	123.64
3	5	3825	A2M	C4'-O4'-C1'	-2.59	107.56	109.92
6	9	1248	B8N	C31-N3-C4	2.58	120.83	117.18
3	5	3909	OMC	O2-C2-N3	-2.57	118.28	122.33
3	5	4564	M7A	C71-N7-C5	-2.56	112.75	123.44
3	5	1326	A2M	C4'-O4'-C1'	-2.55	107.59	109.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	5	3899	BGH	C2'-C1'-N9	-2.55	108.95	114.14
6	9	1219	B8Q	C31-N3-C2	2.53	121.68	117.70
3	5	4531	PSU	C6-C5-C4	2.52	119.87	118.17
3	5	1883	OMG	O6-C6-C5	-2.51	119.34	124.32
3	5	2522	7MG	N9-C8-N7	2.51	106.92	103.37
3	5	3897	B8K	C2-N1-C6	-2.50	120.58	125.11
6	9	568	MMX	C5-C6-N1	2.50	114.52	110.64
3	5	2786	B9H	O2-C2-N1	-2.50	117.21	122.78
3	5	4483	B8T	C6-C5-C4	2.50	120.01	117.00
3	5	2380	B8W	C61-O6-C6	-2.49	113.75	116.65
6	9	1842	4AC	C6-C5-C4	2.48	119.99	117.00
3	5	2363	A2M	C1'-N9-C4	2.48	131.00	126.64
3	5	3715	PSU	C6-N1-C2	-2.47	120.40	122.69
6	9	612	PSU	C6-N1-C2	-2.47	120.40	122.69
6	9	119	PSU	C6-N1-C2	-2.47	120.40	122.69
3	5	2297	E7G	N9-C4-N3	2.46	129.07	125.46
6	9	119	PSU	O2-C2-N1	-2.46	120.25	122.79
2	1	45	4AC	N4-C4-N3	2.46	117.86	113.87
3	5	1605	7MG	N9-C8-N7	2.46	106.85	103.37
3	5	3880	P7G	N9-C8-N7	2.45	106.85	103.37
3	5	4564	M7A	C5-C4-N3	-2.45	120.90	126.56
6	9	814	5MU	O4-C4-N3	-2.44	115.52	120.11
3	5	4293	PSU	C6-N1-C2	-2.44	120.43	122.69
3	5	3729	PSU	C6-N1-C2	-2.43	120.43	122.69
3	5	4442	PSU	C6-N1-C2	-2.43	120.44	122.69
6	9	1219	B8Q	C1'-N1-C6	-2.42	115.60	120.78
3	5	4371	MHG	N9-C4-N3	2.42	129.01	125.46
6	9	612	PSU	O4'-C1'-C2'	2.42	108.50	105.15
6	9	1678	A2M	C1'-N9-C4	2.41	130.87	126.64
6	9	1806	M7A	C5-C4-N3	-2.40	121.00	126.56
6	9	823	PSU	C6-N1-C2	-2.40	120.46	122.69
3	5	4355	E6G	C61-O6-C6	-2.40	114.24	117.32
3	5	1582	PSU	C6-N1-C2	-2.39	120.47	122.69
3	5	4628	PSU	C6-N1-C2	-2.39	120.47	122.69
6	9	822	PSU	O4'-C1'-C2'	2.38	108.45	105.15
3	5	4083	5MU	O2-C2-N1	-2.38	119.70	122.80
3	5	398	A2M	C4'-O4'-C1'	-2.38	107.75	109.92
3	5	4450	PSU	C6-N1-C2	-2.38	120.49	122.69
6	9	814	5MU	C6-C5-C4	2.37	119.97	118.02
3	5	3729	PSU	C6-C5-C4	2.37	119.77	118.17
3	5	4220	6MZ	C6-C5-C4	2.36	120.17	117.68
3	5	3723	A2M	C1'-N9-C4	2.35	130.78	126.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	5	2424	OMG	O6-C6-C5	-2.35	119.65	124.32
3	5	4500	PSU	C6-N1-C2	-2.35	120.51	122.69
3	5	4550	7MG	N9-C4-N3	2.35	128.90	125.46
3	5	1574	B9B	C61-O6-C6	-2.34	113.67	117.65
6	9	166	A2M	C5'-C4'-C3'	-2.34	106.79	115.21
3	5	3899	BGH	O6-C6-C5	-2.34	121.89	127.62
3	5	4872	2MG	O6-C6-C5	-2.33	119.69	124.32
3	5	2508	PSU	O2-C2-N1	-2.33	120.38	122.79
3	5	4129	B8W	O6-C6-C5	2.33	119.91	116.72
6	9	1806	M7A	C4-N9-C1'	-2.33	121.20	126.63
2	1	45	4AC	CM7-C7-N4	2.33	119.03	115.27
3	5	4529	B8W	O6-C6-C5	2.33	119.90	116.72
3	5	1517	2MG	O6-C6-C5	-2.32	119.72	124.32
6	9	1337	4AC	C5-C4-N3	-2.32	118.97	122.60
2	1	45	4AC	C5-C4-N3	-2.31	118.98	122.60
3	5	3785	A2M	O4'-C1'-C2'	-2.31	102.67	106.61
3	5	398	A2M	C1'-N9-C4	2.30	130.69	126.64
6	9	1243	PSU	C6-N1-C2	-2.30	120.56	122.69
6	9	1842	4AC	N4-C4-N3	2.29	117.59	113.87
3	5	4636	PSU	C6-N1-C2	-2.29	120.57	122.69
3	5	4403	PSU	O2-C2-N1	-2.29	120.43	122.79
3	5	4403	PSU	O4'-C1'-C2'	2.29	108.31	105.15
3	5	4371	MHG	N9-C8-N7	2.28	106.60	103.37
3	5	1677	PSU	C6-N1-C2	-2.28	120.58	122.69
3	5	1582	PSU	O2-C2-N1	-2.28	120.44	122.79
3	5	1797	E7G	N9-C8-N7	2.27	106.59	103.37
6	9	1842	4AC	C5-C4-N3	-2.27	119.04	122.60
3	5	4403	PSU	C6-N1-C2	-2.27	120.58	122.69
3	5	3718	A2M	C4'-O4'-C1'	-2.27	107.85	109.92
3	5	4220	6MZ	C9-N6-C6	-2.26	120.75	122.85
3	5	4637	OMG	O6-C6-C5	-2.25	119.85	124.32
6	9	116	OMU	C1'-N1-C2	2.24	121.61	117.59
6	9	484	A2M	C1'-N9-C4	2.24	130.57	126.64
3	5	4597	UR3	C6-N1-C2	-2.23	119.97	121.80
6	9	1832	6MZ	C6-C5-C4	2.23	120.04	117.68
3	5	2050	OMG	O6-C6-C5	-2.22	119.92	124.32
3	5	4690	B8K	O6-C6-C5	-2.21	122.19	127.62
3	5	4494	OMG	O6-C6-C5	-2.21	119.93	124.32
3	5	1625	OMG	O6-C6-C5	-2.21	119.94	124.32
3	5	4550	7MG	N9-C8-N7	2.21	106.50	103.37
3	5	2297	E7G	N9-C8-N7	2.21	106.50	103.37
6	9	1081	PSU	C6-N1-C2	-2.21	120.64	122.69

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	5	4500	PSU	O4'-C1'-C2'	2.20	108.20	105.15
3	5	1517	2MG	CM2-N2-C2	-2.20	118.92	123.65
3	5	4636	PSU	O4'-C1'-C2'	2.20	108.19	105.15
6	9	1248	B8N	O4'-C1'-C2'	2.20	108.19	105.15
6	9	612	PSU	C6-C5-C4	2.20	119.66	118.17
3	5	4531	PSU	C6-N1-C2	-2.20	120.65	122.69
3	5	4529	B8W	C1'-N9-C4	-2.20	122.78	126.64
6	9	159	A2M	C4'-O4'-C1'	-2.19	107.92	109.92
6	9	166	A2M	C1'-N9-C4	2.19	130.50	126.64
3	5	3897	B8K	O6-C6-C5	-2.19	122.26	127.62
3	5	4623	OMG	O6-C6-C5	-2.18	119.99	124.32
6	9	644	OMG	O6-C6-C5	-2.18	120.00	124.32
3	5	3792	OMG	O6-C6-C5	-2.17	120.02	124.32
3	5	4442	PSU	O4'-C1'-C2'	2.17	108.15	105.15
3	5	3825	A2M	C1'-N9-C4	2.17	130.44	126.64
3	5	4529	B8W	C4-C5-N7	-2.16	107.05	109.34
6	9	1337	4AC	CM7-C7-N4	2.16	118.76	115.27
3	5	729	2MG	O6-C6-C5	-2.16	120.04	124.32
3	5	2364	OMG	O6-C6-C5	-2.16	120.04	124.32
3	5	2508	PSU	C6-N1-C2	-2.15	120.69	122.69
5	8	14	OMU	C1'-N1-C2	2.15	121.45	117.59
6	9	159	A2M	C1'-N9-C4	2.15	130.42	126.64
3	5	4371	MHG	C21-N2-C2	-2.15	119.03	123.65
3	5	4306	OMU	O2-C2-N1	-2.15	120.00	122.80
3	5	4870	OMG	O6-C6-C5	-2.15	120.07	124.32
3	5	4129	B8W	C4-C5-N7	-2.14	107.08	109.34
3	5	1866	UR3	C6-N1-C2	-2.13	120.06	121.80
3	5	4370	OMG	O6-C6-C5	-2.13	120.10	124.32
6	9	1031	A2M	C1'-N9-C4	2.13	130.38	126.64
3	5	4500	PSU	C6-C5-C4	2.12	119.60	118.17
3	5	373	OMG	O6-C6-C5	-2.12	120.13	124.32
3	5	2508	PSU	C6-C5-C4	2.11	119.60	118.17
6	9	1081	PSU	O4'-C1'-C2'	2.11	108.07	105.15
6	9	814	5MU	C1'-N1-C2	2.11	121.38	117.59
3	5	3899	BGH	O4'-C4'-C3'	-2.10	100.98	105.15
3	5	4571	A2M	C1'-N9-C4	2.10	130.33	126.64
3	5	3782	5MC	CM5-C5-C6	-2.10	120.01	122.85
3	5	4196	OMG	O6-C6-C5	-2.10	120.17	124.32
3	5	1683	PSU	C6-C5-C4	2.10	119.59	118.17
6	9	1842	4AC	CM7-C7-N4	2.09	118.64	115.27
3	5	4293	PSU	C6-C5-C4	2.09	119.58	118.17
3	5	4571	A2M	C4'-O4'-C1'	-2.09	108.02	109.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	9	823	PSU	O4'-C1'-C2'	2.08	108.03	105.15
3	5	4628	PSU	C6-C5-C4	2.07	119.57	118.17
3	5	1456	B8Q	C31-N3-C2	2.07	120.95	117.70
6	9	1337	4AC	N4-C4-N3	2.07	117.22	113.87
3	5	2773	OMG	O6-C6-C5	-2.05	120.25	124.32
6	9	116	OMU	O2-C2-N1	-2.05	120.12	122.80
3	5	3897	B8K	N1-C2-N3	-2.04	119.58	123.32
6	9	509	OMG	O6-C6-C5	-2.04	120.29	124.32
3	5	4690	B8K	N1-C2-N3	-2.03	119.60	123.32
6	9	1374	5MC	CM5-C5-C6	-2.02	120.11	122.85
6	9	166	A2M	C2'-C3'-C4'	2.02	106.33	101.99
3	5	1316	OMG	O6-C6-C5	-2.01	120.34	124.32
3	5	3899	BGH	N1-C2-N3	-2.01	119.64	123.32
3	5	4335	5MC	CM5-C5-C6	-2.01	120.14	122.85
3	5	4083	5MU	C6-C5-C4	2.01	119.67	118.02

There are no chirality outliers.

All (178) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
9	C	333	MLZ	CD-CE-NZ-CM
3	5	237	B9B	C5-C6-O6-C61
3	5	237	B9B	N1-C6-O6-C61
3	5	237	B9B	C3'-C4'-C5'-O5'
3	5	237	B9B	O4'-C4'-C5'-O5'
3	5	398	A2M	C1'-C2'-O2'-CM'
3	5	1316	OMG	C1'-C2'-O2'-CM2
3	5	1326	A2M	C1'-C2'-O2'-CM'
3	5	1348	P4U	O4'-C4'-C5'-O5'
3	5	1574	B9B	C5-C6-O6-C61
3	5	1574	B9B	N1-C6-O6-C61
3	5	1582	PSU	C2'-C1'-C5-C4
3	5	1860	B8H	O4'-C4'-C5'-O5'
3	5	2380	B8W	C5-C6-O6-C61
3	5	2380	B8W	O4'-C4'-C5'-O5'
3	5	2424	OMG	O4'-C4'-C5'-O5'
3	5	2754	B9B	C5-C6-O6-C61
3	5	2754	B9B	N1-C6-O6-C61
3	5	2861	OMC	C1'-C2'-O2'-CM2
3	5	3723	A2M	C1'-C2'-O2'-CM'
3	5	3762	B8H	C3'-C4'-C5'-O5'
3	5	3762	B8H	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
3	5	3792	OMG	O4'-C4'-C5'-O5'
3	5	3867	A2M	O4'-C4'-C5'-O5'
3	5	3867	A2M	C3'-C4'-C5'-O5'
3	5	3867	A2M	C1'-C2'-O2'-CM'
3	5	3880	P7G	O4'-C4'-C5'-O5'
3	5	3897	B8K	O4'-C4'-C5'-O5'
3	5	4129	B8W	C5-C6-O6-C61
3	5	4129	B8W	N1-C6-O6-C61
3	5	4185	B8W	C5-C6-O6-C61
3	5	4185	B8W	N1-C6-O6-C61
3	5	4196	OMG	C1'-C2'-O2'-CM2
3	5	4306	OMU	C1'-C2'-O2'-CM2
3	5	4355	E6G	C5-C6-O6-C61
3	5	4355	E6G	N1-C6-O6-C61
3	5	4371	MHG	C2'-C1'-N9-C8
3	5	4371	MHG	C71-C72-C73-C75
3	5	4403	PSU	C2'-C1'-C5-C4
3	5	4403	PSU	O4'-C1'-C5-C4
3	5	4403	PSU	O4'-C1'-C5-C6
3	5	4472	B8W	C5-C6-O6-C61
3	5	4472	B8W	N1-C6-O6-C61
3	5	4500	PSU	O4'-C4'-C5'-O5'
3	5	4529	B8W	C5-C6-O6-C61
3	5	4529	B8W	N1-C6-O6-C61
3	5	4530	UR3	O4'-C4'-C5'-O5'
3	5	4530	UR3	C3'-C4'-C5'-O5'
3	5	4870	OMG	O4'-C4'-C5'-O5'
5	8	14	OMU	C1'-C2'-O2'-CM2
6	9	27	A2M	C1'-C2'-O2'-CM'
6	9	116	OMU	C1'-C2'-O2'-CM2
6	9	116	OMU	O4'-C4'-C5'-O5'
6	9	121	OMU	C1'-C2'-O2'-CM2
6	9	166	A2M	O4'-C4'-C5'-O5'
6	9	174	OMC	C1'-C2'-O2'-CM2
6	9	568	MMX	O4'-C1'-N1-C2
6	9	568	MMX	O4'-C1'-N1-C6
6	9	644	OMG	C1'-C2'-O2'-CM2
6	9	683	OMG	O4'-C4'-C5'-O5'
6	9	1678	A2M	C1'-C2'-O2'-CM'
6	9	1830	UR3	O4'-C1'-N1-C6
6	9	1830	UR3	O4'-C1'-N1-C2
6	9	1832	6MZ	N1-C6-N6-C9

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Mol	Chain	Res	Type	Atoms
6	9	1851	MA6	O4'-C4'-C5'-O5'
44	m	72	MLZ	N-CA-CB-CG
44	m	72	MLZ	C-CA-CB-CG
44	m	72	MLZ	CD-CE-NZ-CM
3	5	1348	P4U	C3'-C4'-C5'-O5'
3	5	2364	OMG	O4'-C4'-C5'-O5'
3	5	2380	B8W	C3'-C4'-C5'-O5'
3	5	2424	OMG	C3'-C4'-C5'-O5'
3	5	3764	PSU	C3'-C4'-C5'-O5'
3	5	3764	PSU	O4'-C4'-C5'-O5'
3	5	3792	OMG	C3'-C4'-C5'-O5'
3	5	4500	PSU	C3'-C4'-C5'-O5'
3	5	4637	OMG	C3'-C4'-C5'-O5'
3	5	4870	OMG	C3'-C4'-C5'-O5'
6	9	116	OMU	C3'-C4'-C5'-O5'
6	9	166	A2M	C3'-C4'-C5'-O5'
6	9	568	MMX	C3'-C4'-C5'-O5'
6	9	668	A2M	C3'-C4'-C5'-O5'
6	9	683	OMG	C3'-C4'-C5'-O5'
3	5	2380	B8W	N1-C6-O6-C61
3	5	1677	PSU	C3'-C4'-C5'-O5'
3	5	1677	PSU	O4'-C4'-C5'-O5'
3	5	1797	E7G	O4'-C4'-C5'-O5'
3	5	3880	P7G	C3'-C4'-C5'-O5'
3	5	4296	B8H	C3'-C4'-C5'-O5'
3	5	4296	B8H	O4'-C4'-C5'-O5'
6	9	568	MMX	O4'-C4'-C5'-O5'
6	9	1703	OMC	O4'-C4'-C5'-O5'
3	5	4355	E6G	C62-C61-O6-C6
3	5	3701	OMC	C2'-C1'-N1-C6
3	5	1860	B8H	C3'-C4'-C5'-O5'
3	5	3729	PSU	O4'-C4'-C5'-O5'
3	5	3785	A2M	O4'-C4'-C5'-O5'
3	5	3785	A2M	C3'-C4'-C5'-O5'
6	9	1851	MA6	C3'-C4'-C5'-O5'
3	5	3897	B8K	C3'-C4'-C5'-O5'
3	5	4371	MHG	O4'-C4'-C5'-O5'
3	5	4531	PSU	O4'-C4'-C5'-O5'
6	9	159	A2M	C3'-C4'-C5'-O5'
6	9	1243	PSU	O4'-C4'-C5'-O5'
6	9	668	A2M	O4'-C4'-C5'-O5'
3	5	2297	E7G	C72-C71-N7-C8

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Mol	Chain	Res	Type	Atoms
3	5	237	B9B	O6-C61-C62-C63
3	5	2364	OMG	C3'-C4'-C5'-O5'
3	5	2422	OMC	O4'-C4'-C5'-O5'
3	5	2786	B9H	C32-C31-N3-C2
3	5	1348	P4U	O4-C41-C42-C43
44	m	72	MLZ	CE-CD-CG-CB
3	5	1909	P7G	C72-C71-N7-C8
3	5	398	A2M	O4'-C4'-C5'-O5'
3	5	1797	E7G	C3'-C4'-C5'-O5'
6	9	1703	OMC	C3'-C4'-C5'-O5'
3	5	1348	P4U	N3-C4-O4-C41
3	5	3701	OMC	C2'-C1'-N1-C2
3	5	4637	OMG	O4'-C4'-C5'-O5'
3	5	3718	A2M	C1'-C2'-O2'-CM'
3	5	4415	1MA	C3'-C4'-C5'-O5'
3	5	4531	PSU	C3'-C4'-C5'-O5'
3	5	3701	OMC	O4'-C1'-N1-C6
6	9	1832	6MZ	C5-C6-N6-C9
3	5	4872	2MG	O4'-C4'-C5'-O5'
6	9	159	A2M	O4'-C4'-C5'-O5'
6	9	517	OMC	O4'-C4'-C5'-O5'
3	5	4870	OMG	C4'-C5'-O5'-P
3	5	2754	B9B	C62-C61-O6-C6
3	5	3785	A2M	C3'-C2'-O2'-CM'
3	5	2754	B9B	C4'-C5'-O5'-P
3	5	3897	B8K	C4'-C5'-O5'-P
6	9	644	OMG	C4'-C5'-O5'-P
1	2	37	T6A	C13-C12-C14-C15
3	5	1677	PSU	O4'-C1'-C5-C4
3	5	4450	PSU	O4'-C1'-C5-C4
6	9	1248	B8N	O4'-C1'-C5-C4
3	5	3701	OMC	O4'-C1'-N1-C2
3	5	4371	MHG	C3'-C4'-C5'-O5'
3	5	373	OMG	C4'-C5'-O5'-P
6	9	1337	4AC	O4'-C4'-C5'-O5'
3	5	1524	A2M	C3'-C2'-O2'-CM'
3	5	2363	A2M	C3'-C2'-O2'-CM'
3	5	4370	OMG	C3'-C2'-O2'-CM2
3	5	3880	P7G	N7-C71-C72-C73
3	5	1534	A2M	C4'-C5'-O5'-P
3	5	3729	PSU	C3'-C4'-C5'-O5'
3	5	4194	I4U	O4'-C4'-C5'-O5'

Continued on next page...

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Mol	Chain	Res	Type	Atoms
3	5	4355	E6G	O4'-C4'-C5'-O5'
3	5	1326	A2M	C4'-C5'-O5'-P
3	5	1625	OMG	C4'-C5'-O5'-P
3	5	3887	OMC	C4'-C5'-O5'-P
3	5	4636	PSU	C4'-C5'-O5'-P
1	2	37	T6A	O4'-C4'-C5'-O5'
3	5	1883	OMG	C3'-C4'-C5'-O5'
3	5	1909	P7G	C72-C71-N7-C5
3	5	3785	A2M	C1'-C2'-O2'-CM'
6	9	1031	A2M	C1'-C2'-O2'-CM'
3	5	4500	PSU	C4'-C5'-O5'-P
6	9	1243	PSU	C3'-C4'-C5'-O5'
3	5	4636	PSU	O4'-C1'-C5-C6
3	5	3880	P7G	C72-C71-N7-C8
3	5	3909	OMC	C2'-C1'-N1-C6
6	9	1219	B8Q	C2'-C1'-N1-C6
3	5	1574	B9B	C62-C61-O6-C6
6	9	1678	A2M	O4'-C4'-C5'-O5'
3	5	4371	MHG	C72-C73-C74-C76
3	5	4371	MHG	C75-C73-C74-C76
3	5	4636	PSU	C2'-C1'-C5-C6
6	9	1219	B8Q	C2'-C1'-N1-C2
3	5	4494	OMG	C3'-C2'-O2'-CM2
3	5	4220	6MZ	N1-C6-N6-C9
3	5	3909	OMC	C2'-C1'-N1-C2
6	9	814	5MU	C2'-C1'-N1-C2
3	5	4671	B8T	C4'-C5'-O5'-P
6	9	1081	PSU	C4'-C5'-O5'-P
3	5	2786	B9H	C32-C31-N3-C4
3	5	4636	PSU	O4'-C4'-C5'-O5'

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 305 ligands modelled in this entry, 304 are monoatomic - leaving 1 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
81	MQ6	5	5294	-	40,42,42	1.27	5 (12%)	40,65,65	2.64	9 (22%)

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
81	MQ6	5	5294	-	-	14/26/73/73	0/5/5/5

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	5	5294	MQ6	O37-C06	-3.48	1.36	1.43
81	5	5294	MQ6	O14-C12	2.40	1.38	1.34
81	5	5294	MQ6	C30-C31	2.16	1.35	1.32
81	5	5294	MQ6	C17-C16	2.11	1.54	1.51
81	5	5294	MQ6	C24-C23	-2.05	1.49	1.52

All (9) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
81	5	5294	MQ6	O37-C06-C05	-12.42	89.02	108.88
81	5	5294	MQ6	O37-C06-C07	6.16	123.42	109.38
81	5	5294	MQ6	O14-C12-C06	4.87	120.18	111.24
81	5	5294	MQ6	C23-C22-C21	-3.49	111.78	119.35
81	5	5294	MQ6	C28-C29-N25	2.58	107.64	103.94
81	5	5294	MQ6	C15-O14-C12	2.50	121.17	117.24
81	5	5294	MQ6	C20-C21-C22	-2.36	117.55	121.10
81	5	5294	MQ6	O14-C12-O13	-2.26	119.95	123.95
81	5	5294	MQ6	C21-C22-C17	2.04	122.06	119.49

There are no chirality outliers.

All (14) torsion outliers are listed below:

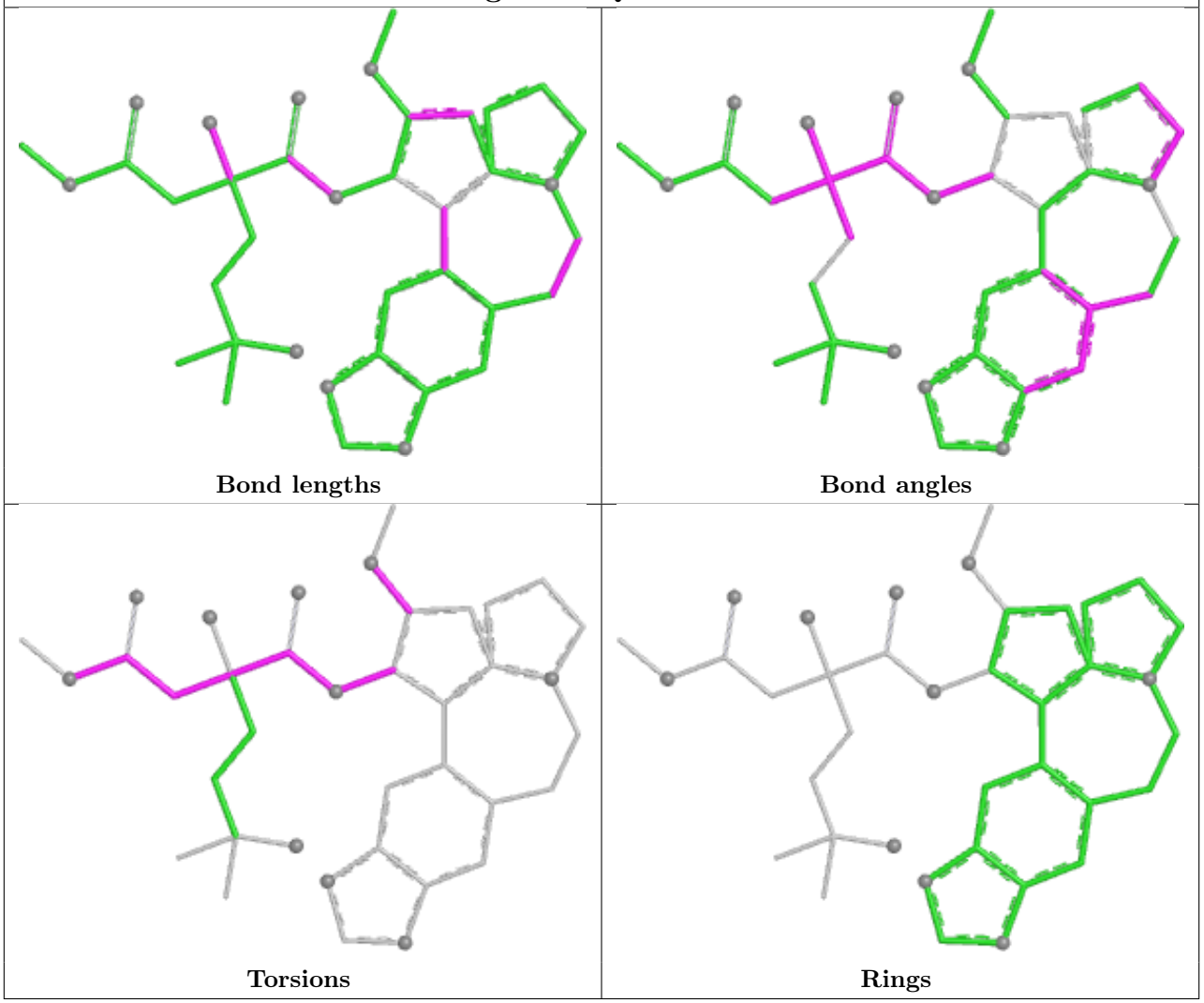
Mol	Chain	Res	Type	Atoms
81	5	5294	MQ6	C31-C15-O14-C12
81	5	5294	MQ6	C07-C06-C12-O13
81	5	5294	MQ6	C07-C06-C12-O14
81	5	5294	MQ6	C06-C12-O14-C15
81	5	5294	MQ6	C30-C31-O32-C33
81	5	5294	MQ6	O13-C12-O14-C15
81	5	5294	MQ6	C07-C08-O10-C11
81	5	5294	MQ6	O09-C08-O10-C11
81	5	5294	MQ6	O37-C06-C07-C08
81	5	5294	MQ6	C05-C06-C12-O13
81	5	5294	MQ6	C05-C06-C12-O14
81	5	5294	MQ6	O37-C06-C12-O14
81	5	5294	MQ6	C06-C07-C08-O10
81	5	5294	MQ6	C06-C07-C08-O09

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 then 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.

Ligand MQ6 5 5294



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
3	5	24
6	9	11

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	5	2113:G	O3'	2258:C	P	41.43
1	5	1252:C	O3'	1271:G	P	35.31
1	5	1219:G	O3'	1233:G	P	20.31
1	5	4101:C	O3'	4107:G	P	17.50
1	5	1407:G	O3'	1410:C	P	17.49
1	9	697:G	O3'	729:C	P	17.38
1	9	834:C	O3'	841:G	P	17.21
1	5	523:C	O3'	638:G	P	17.20
1	9	756:C	O3'	788:G	P	17.09
1	9	1417:C	O3'	1423:C	P	16.92
1	5	3949:A	O3'	4060:U	P	16.50
1	5	990:U	O3'	1064:G	P	16.15
1	9	323:C	O3'	329:G	P	16.11
1	9	1761:U	O3'	1771:G	P	15.92
1	5	4138:C	O3'	4146:G	P	15.81
1	5	1696:C	O3'	1720:C	P	15.03
1	5	760:G	O3'	904:C	P	14.80
1	5	4777:C	O3'	4859:C	P	14.59
1	9	130:G	O3'	140:U	P	14.50
1	5	5022:U	O3'	5028:G	P	13.85
1	5	1364:U	O3'	1368:A	P	13.70
1	5	2901:G	O3'	3597:G	P	13.31
1	5	182:G	O3'	189:G	P	10.59
1	5	1180:C	O3'	1183:C	P	9.14
1	5	4729:A	O3'	4735:G	P	9.10
1	9	225:G	O3'	287:U	P	7.51
1	9	745:C	O3'	749:U	P	6.75
1	9	736:C	O3'	743:U	P	6.58
1	5	512:U	O3'	515:C	P	6.30
1	5	500:G	O3'	504:G	P	5.97
1	9	1432:U	O3'	1438:A	P	4.94
1	5	4740:G	O3'	4743:G	P	3.98
1	5	1100:U	O3'	1168:G	P	3.65
1	5	1239:G	O3'	1244:G	P	3.12
1	5	4899:G	O3'	4902:C	P	3.12

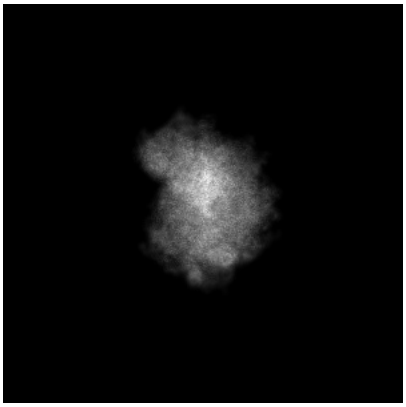
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-26445. These allow visual inspection of the internal detail of the map and identification of artifacts.

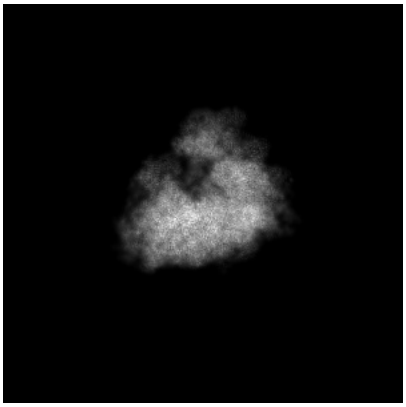
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

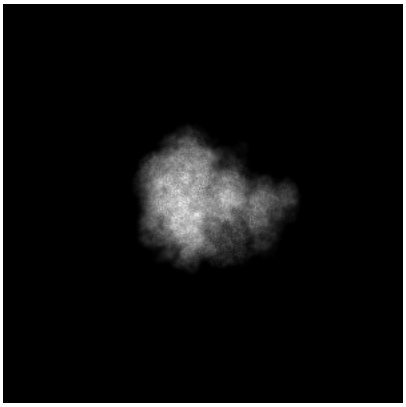
6.1.1 Primary map



X



Y

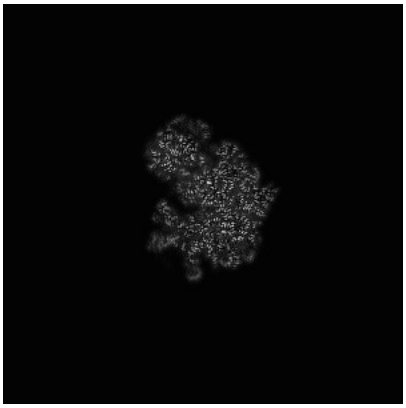


Z

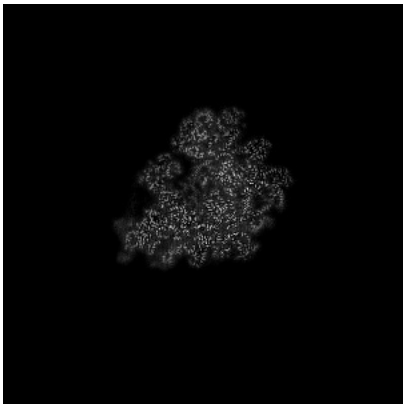
The images above show the map projected in three orthogonal directions.

6.2 Central slices

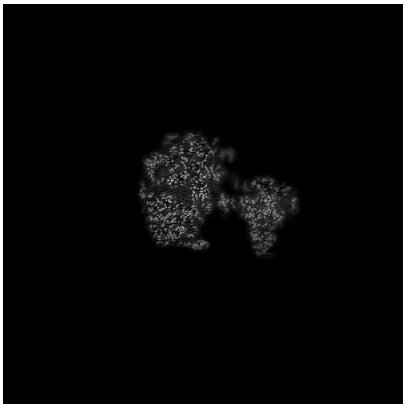
6.2.1 Primary map



X Index: 240



Y Index: 240

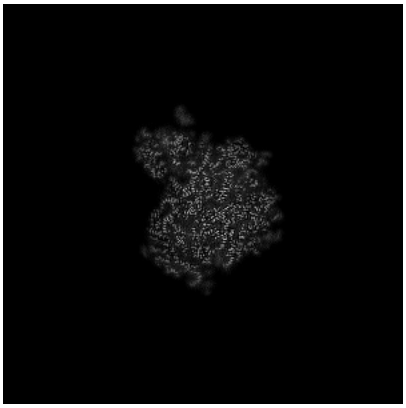


Z Index: 240

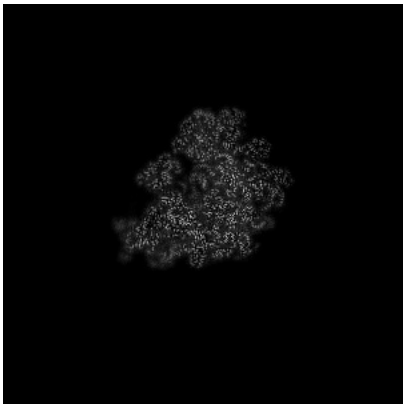
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

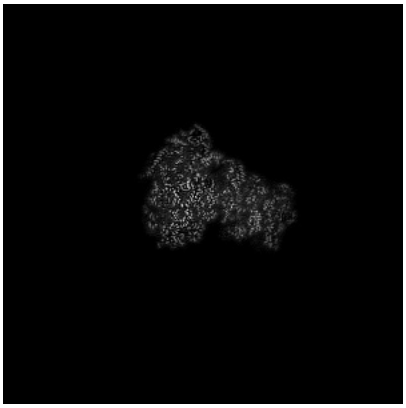
6.3.1 Primary map



X Index: 221



Y Index: 242

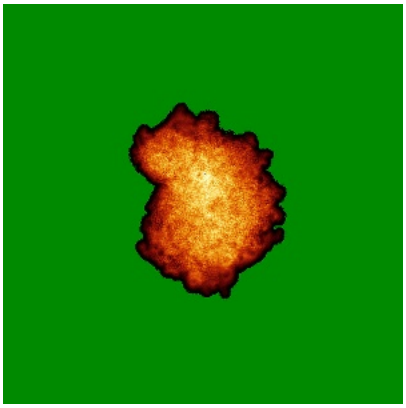


Z Index: 255

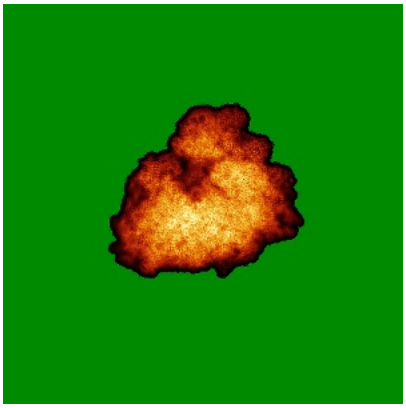
The images above show the largest variance slices of the map in three orthogonal directions.

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

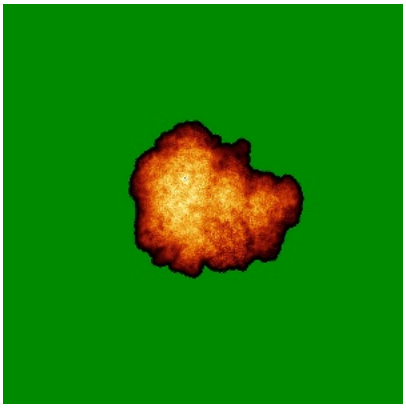
6.4.1 Primary map



X



Y

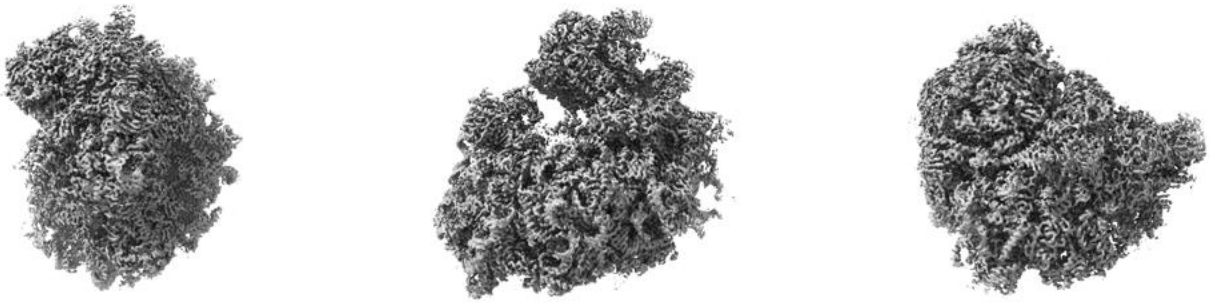


Z

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

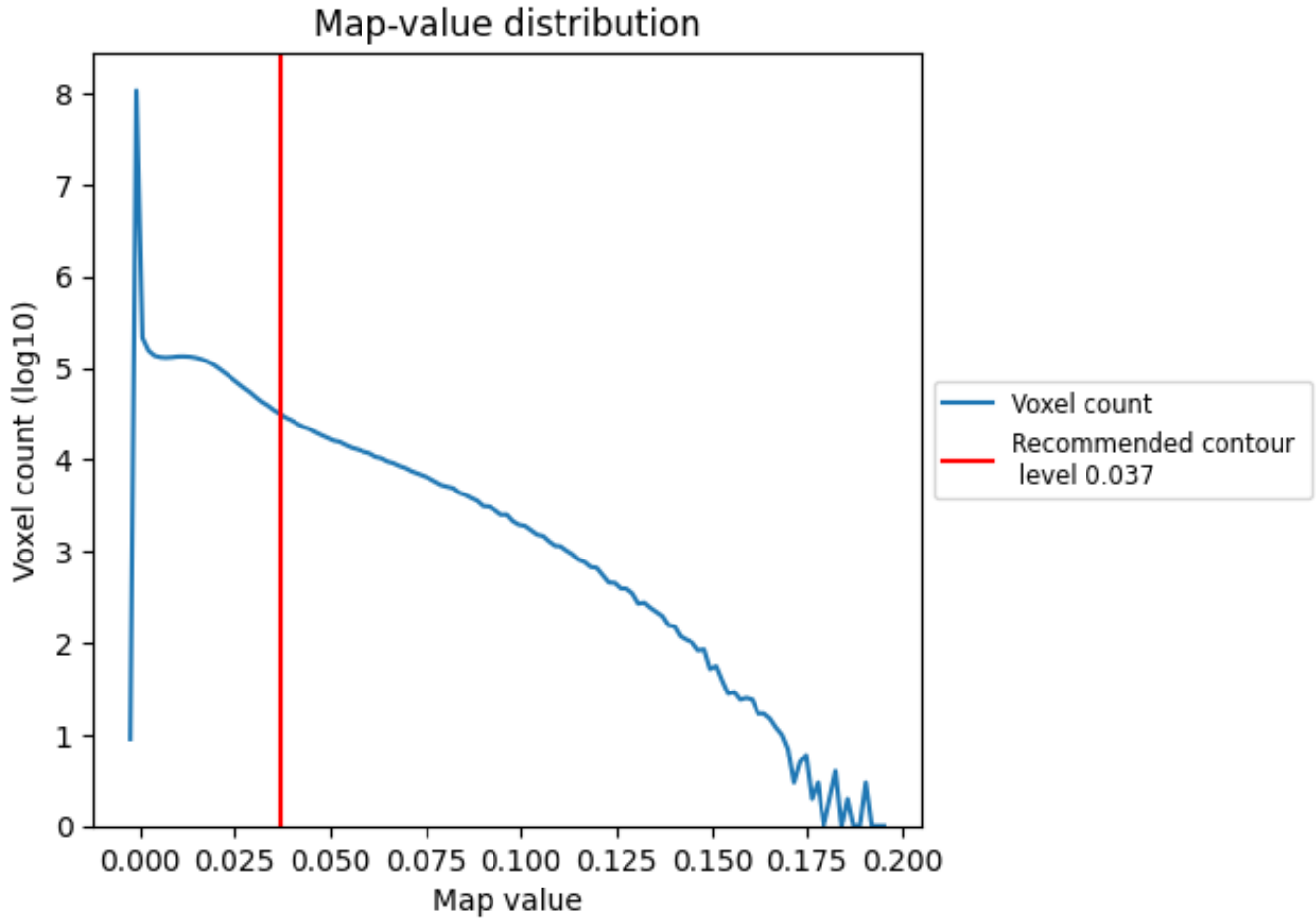
6.6 Mask visualisation (i)

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

7 Map analysis

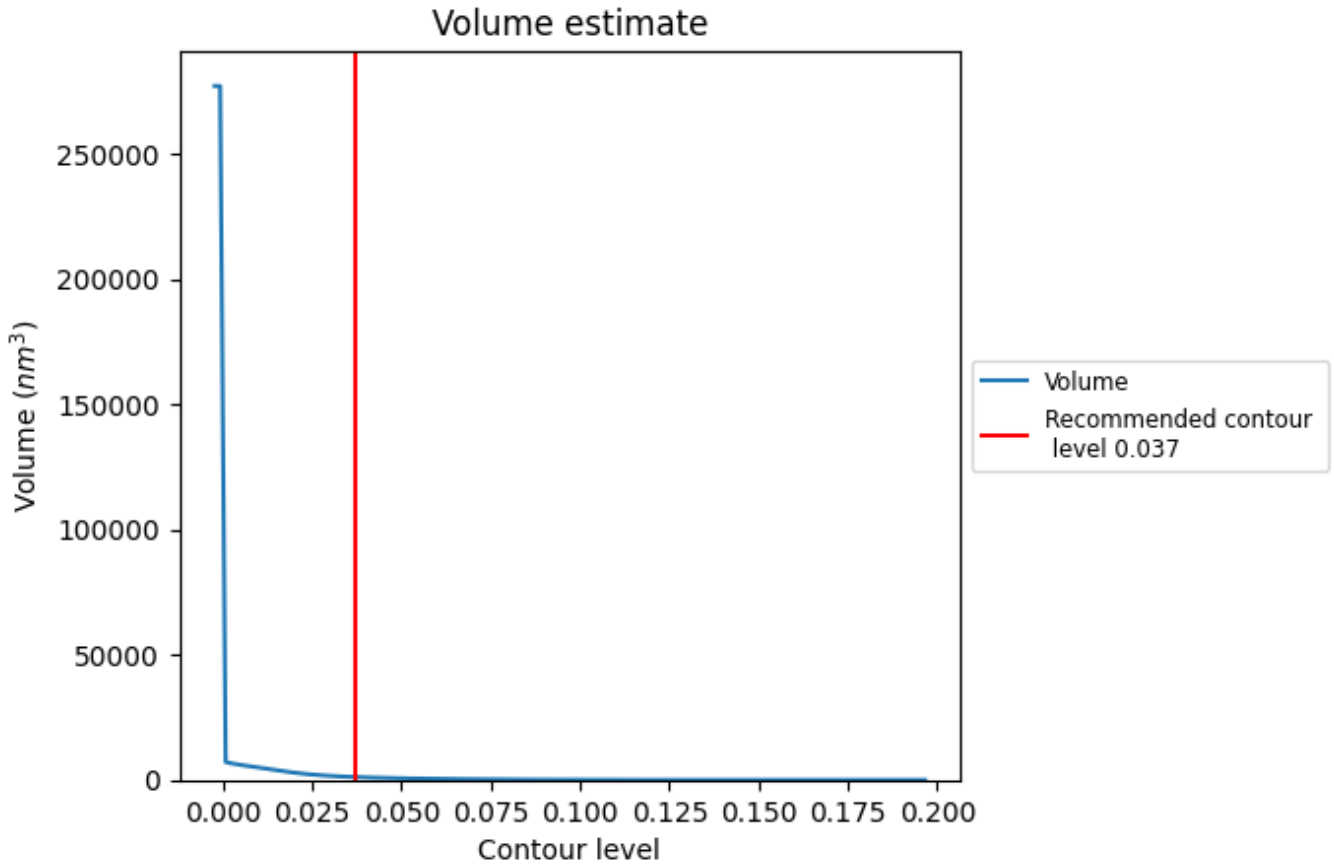
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

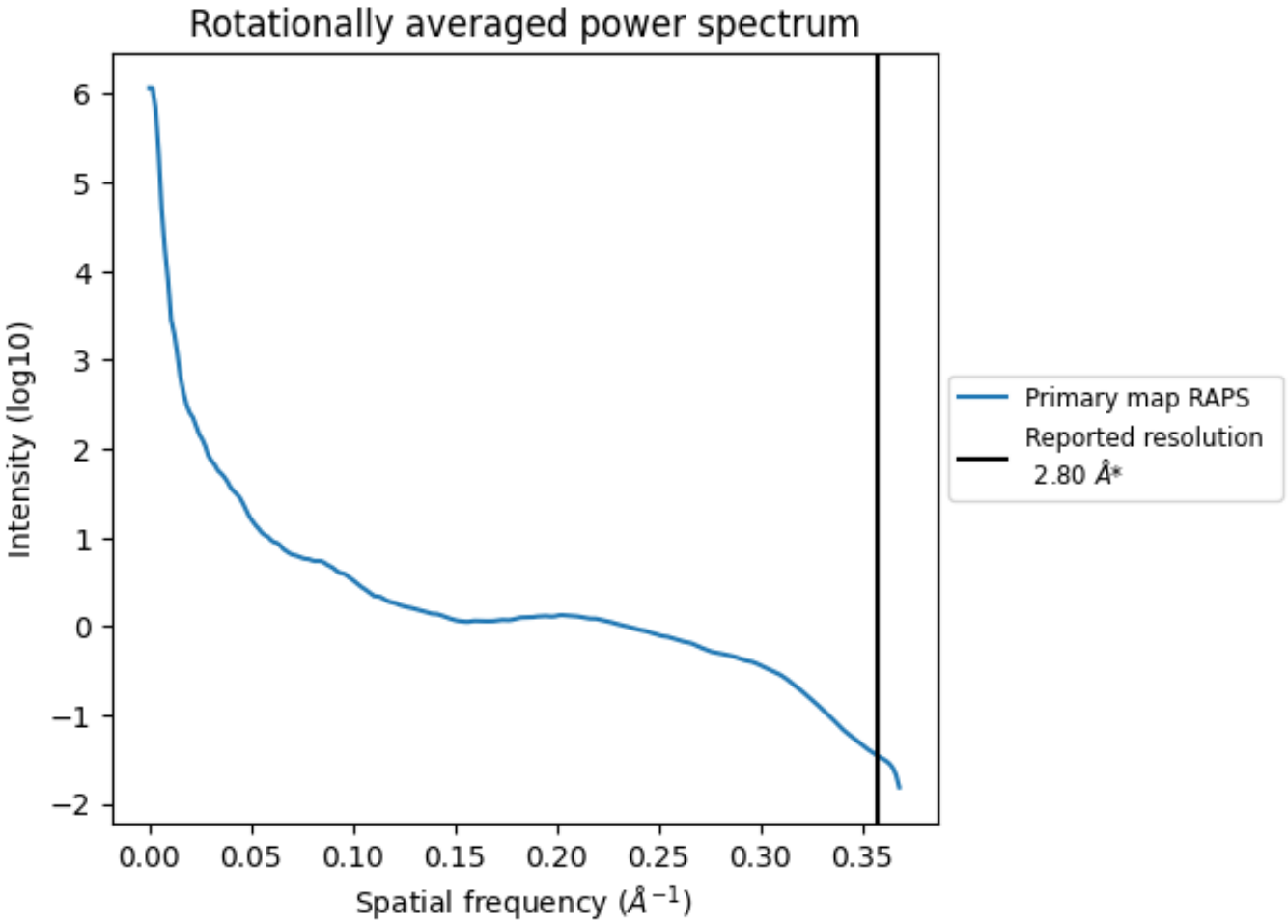
7.2 Volume estimate



The volume at the recommended contour level is 1162 nm^3; this corresponds to an approximate mass of 1050 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 0.357 Å^{-1}

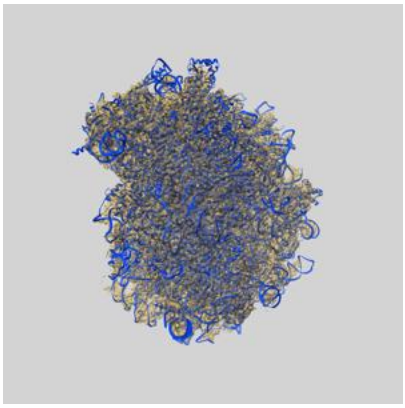
8 Fourier-Shell correlation

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

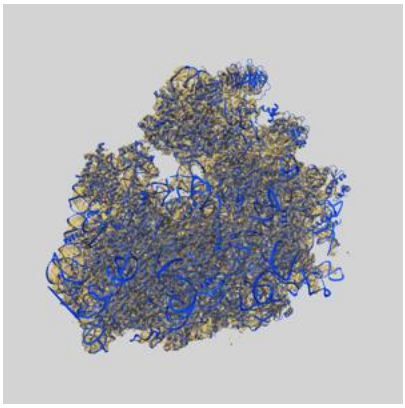
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-26445 and PDB model 7UCK. Per-residue inclusion information can be found in section 3 on page 21.

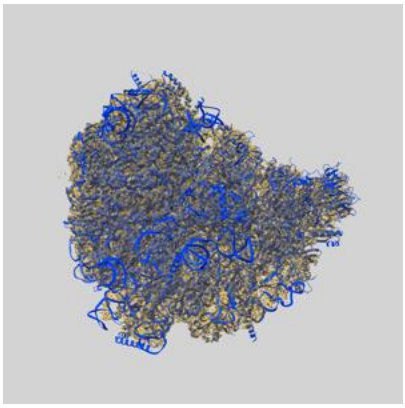
9.1 Map-model overlay



X



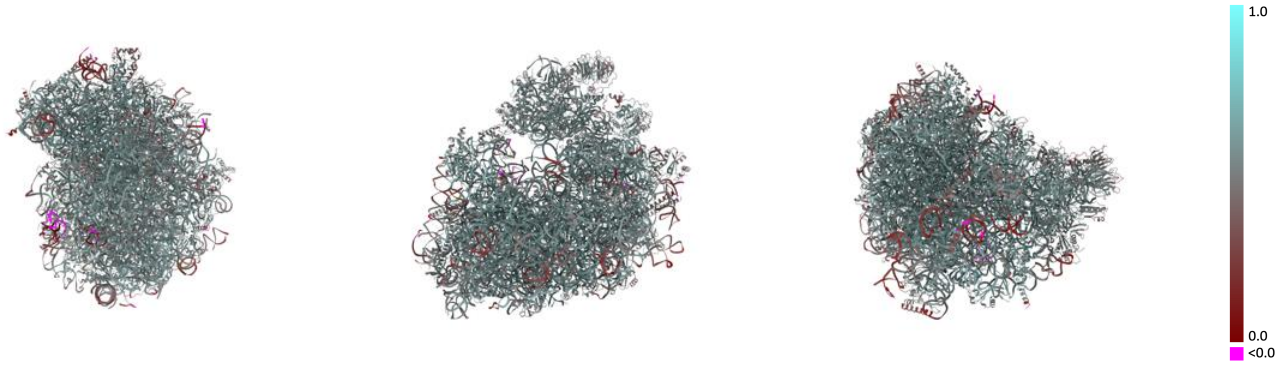
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.037 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

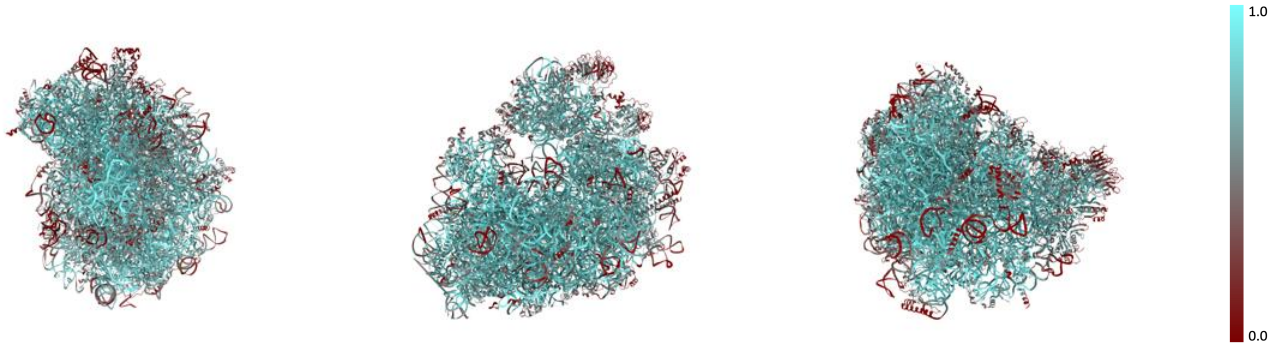
9.2 Q-score mapped to coordinate model (i)



X Y Z

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

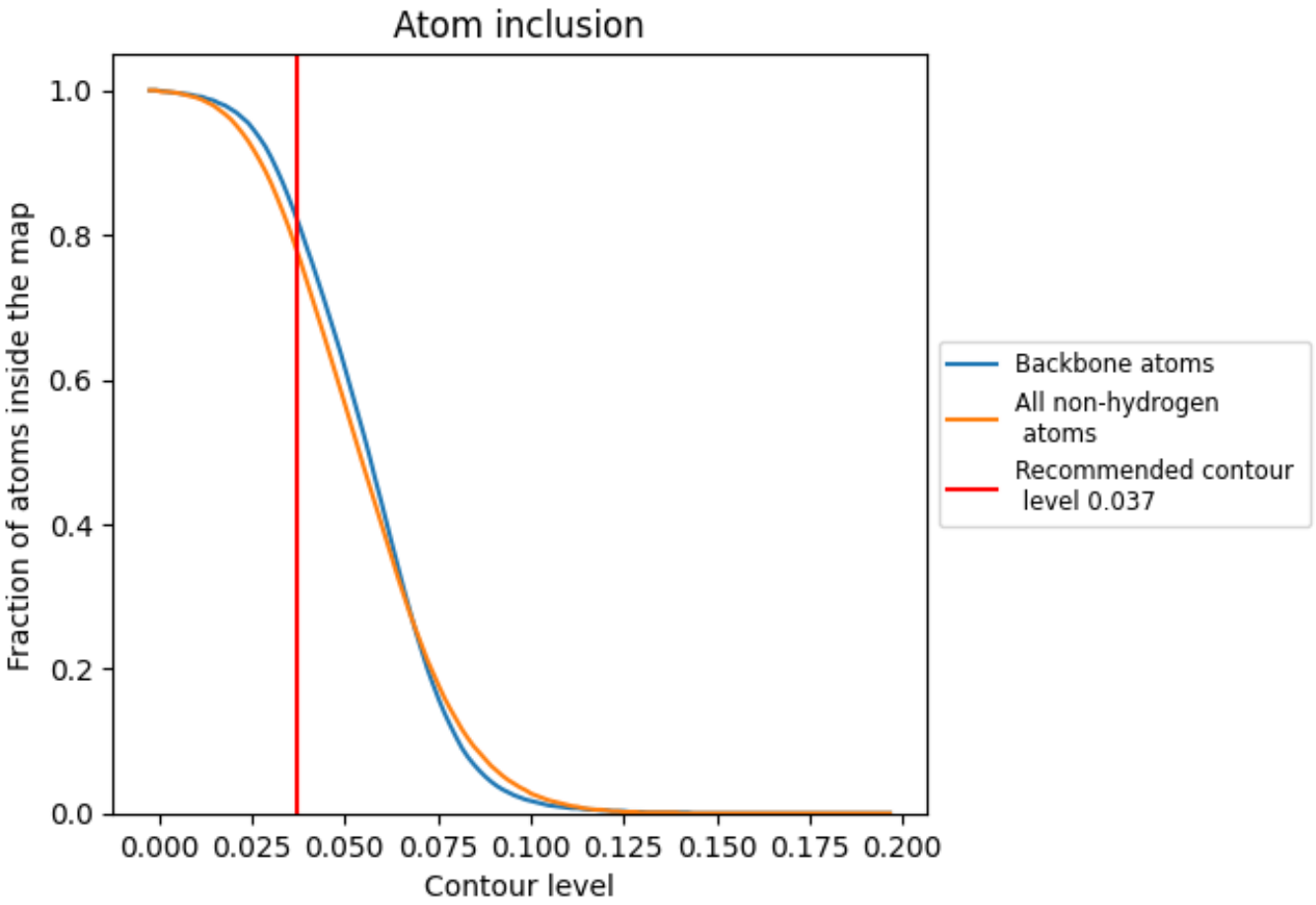
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.037).

9.4 Atom inclusion (i)



At the recommended contour level, 82% of all backbone atoms, 78% 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 (0.037) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7810	0.5480
1	0.9170	0.5710
2	0.4110	0.5020
5	0.8450	0.5480
7	0.9200	0.5820
8	0.8760	0.5650
9	0.8550	0.5460
A	0.8750	0.5890
AA	0.5810	0.5490
Aa	0.7760	0.5540
B	0.7290	0.5740
BB	0.6570	0.5410
Bb	0.5670	0.5220
C	0.8220	0.5720
CC	0.7270	0.5640
Cc	0.5130	0.4950
D	0.6320	0.5460
DD	0.5910	0.5160
Dd	0.8390	0.5710
E	0.7140	0.5420
EE	0.7840	0.5690
Ee	0.5750	0.5190
F	0.8690	0.5750
FF	0.6510	0.5330
G	0.5690	0.5200
GG	0.5460	0.4980
Gg	0.3380	0.4730
H	0.6070	0.5480
HH	0.3700	0.4780
I	0.6420	0.5480
II	0.7610	0.5540
J	0.5230	0.5080
JJ	0.7540	0.5570
KK	0.5340	0.4910
L	0.6920	0.5400

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Chain	Atom inclusion	Q-score
LL	0.8160	0.5770
M	0.7560	0.5510
N	0.9090	0.5940
NN	0.7920	0.5700
O	0.8140	0.5680
OO	0.7130	0.5460
P	0.7850	0.5790
PP	0.5230	0.5030
Q	0.8700	0.5930
QQ	0.7080	0.5370
R	0.7610	0.5420
RR	0.4210	0.5000
S	0.8200	0.5780
SS	0.5770	0.5160
T	0.7650	0.5560
TT	0.6660	0.5380
U	0.5400	0.5040
UU	0.5030	0.4950
V	0.7220	0.5730
VV	0.5920	0.5590
W	0.5160	0.4740
WW	0.8260	0.5840
X	0.6660	0.5450
XX	0.7820	0.5750
Y	0.6420	0.5410
YY	0.6530	0.5350
Z	0.6530	0.5460
ZZ	0.4490	0.5020
a	0.8650	0.6000
b	0.6970	0.5320
c	0.6910	0.5390
d	0.6980	0.5630
e	0.8580	0.5920
f	0.8930	0.5900
g	0.8020	0.5640
h	0.6180	0.5280
i	0.6680	0.5350
j	0.9140	0.5980
k	0.4520	0.5000
l	0.8270	0.5740
m	0.7100	0.5630
n	0.9130	0.5840

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Chain	Atom inclusion	Q-score
o	0.7530	0.5730
p	0.8010	0.5630
r	0.8140	0.5810