Full wwPDB EM Validation Report

Dec 18, 2022 – 08:55 pm GMT

PDB ID	:	7ARY
EMDB ID	:	EMD-11378
Title	:	Twist-Tower_twist-corrected-variant
Authors	:	Kube, M.; Kohler, F.; Feigl, E.; Nagel-Yuksel, B.; Willner, E.M.; Funke, J.J.; Gerling, T.; Stommer, P.; Honemann, M.N.; Martin, T.G.; Scheres, S.H.W.; Dietz, H.
Deposited on	:	2020-10-26
Resolution	:	8.50 Å(reported)

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

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

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

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

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

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 8.50 Å.

There are no overall percentile quality scores available for this entry.

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	AA	8064	19% 62% 32% 5%
2	AB	47	57% 38% .
3	AC	53	. 62% 36% .
4	AD	48	56% 38% 6%
5	AE	48	. 71% 27% .
6	AF	55	56% 35% 9%
7	AG	48	79% 75% 23% .
8	AH	31	68% 26% 6%
9	AI	28	71% 25% .
10	AJ	48	81% 15% .
11	AK	32	66% 34%
12	AL	52	27% 71% 25% .
13	AM	38	84% 16%
14	AN	46	15% 74% 24% .
15	AO	46	. 72% 26% .
16	AP	48	8% 71% 27% .
17	AQ	48	67% 75% 25%

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Mol	Chain	Length	Quality of chain
18	AR	46	9% 76% 20%
19	AS	50	24% 70% 28%
20	AT	47	15% 72% 23%
21	AU	40	20% 62% 32% 5%
22	AV	45	53% 69% 29%
23	AW	48	75% 21%
24	AX	37	8% 54% 43%
25	AY	47	6% 66% 32%
26	AZ	40	65% 32%
27	Aa	53	8% 70% 26%
28	Ab	39	10% 67% 31%
29	Ac	31	29% 84% 13%
30	Ad	45	62% 31% 7%
31	Ae	52	37% 69% 27%
32	Af	46	63% 33%
33	Ag	30	7% 63% 33%
34	Ah	39	8% 82% 15%
35	Ai	48	65% 60% 31% 8%
36	Aj	40	72% 22% 5%
37	Ak	38	11% 79% 18%
38	Al	56	27% 71% 29%
39	Am	38	24% 82% 16%
40	An	45	67% 29%
41	Ao	46	13% 74% 22%
42	Ap	48	23% 69% 29%

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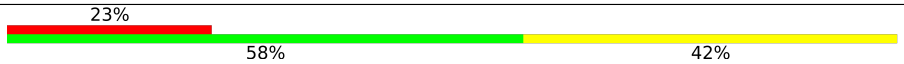
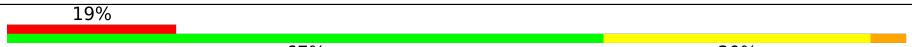
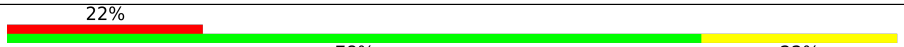
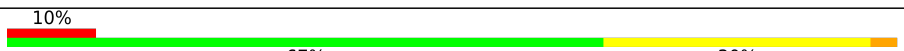
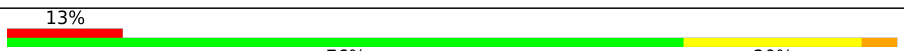
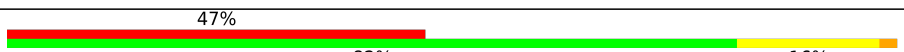
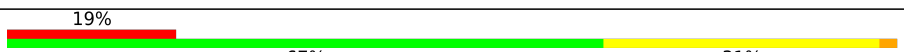
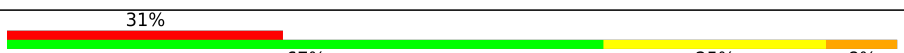
Mol	Chain	Length	Quality of chain
43	Aq	32	
44	Ar	48	
45	As	48	
46	At	54	
47	Au	46	
48	Av	48	
49	Aw	48	
50	Ax	45	
51	Ay	31	
52	Az	30	
53	A0	32	
54	A1	48	
55	A2	46	
56	A3	30	
57	A4	45	
58	A5	45	
59	A6	48	
60	A7	48	
61	A8	60	
62	A9	38	
63	BA	48	
64	BB	31	
65	BC	60	
66	BD	53	
67	BE	32	

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Mol	Chain	Length	Quality of chain
68	BF	38	11% 63% 32% 5%
69	BG	47	9% 57% 34% 9%
70	BH	57	53% 68% 28%
71	BI	45	76% 20%
72	BJ	45	11% 69% 31%
73	BK	48	10% 63% 33%
74	BL	45	64% 36%
75	BM	48	25% 69% 29%
76	BN	30	40% 73% 17% 10%
77	BO	45	11% 62% 31% 7%
78	BP	45	27% 67% 31%
79	BQ	45	27% 64% 36%
80	BR	38	21% 66% 29% 5%
81	BS	48	19% 77% 21%
82	BT	52	13% 71% 25%
83	BU	39	5% 59% 31% 10%
84	BV	32	31% 56% 38% 6%
85	BW	31	65% 35%
86	BX	45	33% 84% 16%
87	BY	52	12% 77% 21%
88	BZ	46	80% 20%
89	Ba	46	63% 33%
90	Bb	38	11% 53% 32% 16%
91	Bc	45	38% 64% 29% 7%
92	Bd	48	29% 71% 25%

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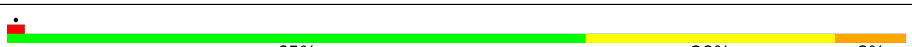
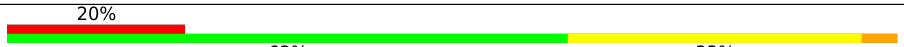
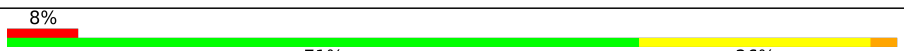
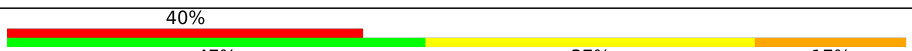
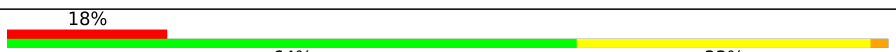
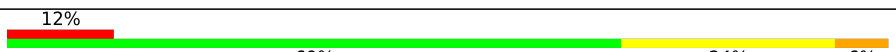
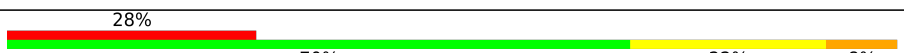
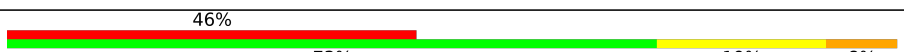
Mol	Chain	Length	Quality of chain
93	Be	45	
94	Bf	38	
95	Bg	38	
96	Bh	40	
97	Bi	49	
98	Bj	48	
99	Bk	30	
100	Bl	40	
101	Bm	38	
102	Bn	43	
103	Bo	45	
104	Bp	47	
105	Bq	48	
106	Br	38	
107	Bs	30	
108	Bt	45	
109	Bu	49	
110	Bv	40	
111	Bw	37	
112	Bx	52	
113	By	30	
114	Bz	40	
115	B0	30	
116	B1	52	
117	B2	30	

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Mol	Chain	Length	Quality of chain
118	B3	56	11% 68% 29%
119	B4	48	19% 77% 21%
120	B5	31	29% 71% 29%
121	B6	45	24% 42% 53%
122	B7	37	16% 76% 22%
123	B8	52	27% 65% 35%
124	B9	38	21% 50% 45% 5%
125	CA	32	31% 59% 41%
126	CB	32	6% 53% 34% 12%
127	CC	30	40% 63% 37%
128	CD	59	59% 66% 25% 8%
129	CE	52	12% 75% 21%
130	CF	40	15% 65% 35%
131	CG	31	61% 35%
132	CH	53	9% 58% 36% 6%
133	CI	30	10% 70% 20% 10%
134	CJ	49	10% 63% 35%
135	CK	56	71% 62% 30% 7%
136	CL	31	71% 29%
137	CM	32	50% 47%
138	CN	40	25% 60% 38%
139	CO	30	23% 70% 20% 10%
140	CP	54	22% 69% 24% 7%
141	CQ	48	75% 21%
142	CR	45	38% 67% 31%

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Mol	Chain	Length	Quality of chain
143	CS	48	6% 58% 40%
144	CT	38	53% 42% 5%
145	CU	30	13% 63% 37%
146	CV	32	28% 75% 25%
147	CW	47	11% 70% 26%
148	CX	48	33% 71% 25%
149	CY	48	63% 33%
150	CZ	46	7% 65% 30%
151	Ca	39	10% 69% 26% 5%
152	Cb	45	22% 80% 16%
153	Cc	30	13% 47% 43% 10%
154	Cd	38	21% 79% 16% 5%
155	Ce	30	10% 63% 33%
156	Cf	40	62% 35%
157	Cg	38	24% 68% 21% 11%
158	Ch	45	27% 60% 40%
159	Ci	48	52% 58% 35% 6%
160	Cj	54	56% 37% 7%
161	Ck	46	26% 70% 28%
162	Cl	45	9% 60% 31% 9%
163	Cm	38	16% 58% 42%
164	Cn	45	36% 73% 27%
165	Co	37	30% 54% 41% 5%
166	Cp	37	51% 41% 8%
167	Cq	36	6% 78% 17% 6%

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Mol	Chain	Length	Quality of chain
168	Cr	38	5% 55% 37% 8%
169	Cs	39	10% 67% 26% 8%
170	Ct	38	55% 42%
171	Cu	36	19% 69% 31%
172	Cv	37	57% 32% 11%
173	Cw	31	26% 61% 39%
174	Cx	37	41% 73% 16% 11%
175	Cy	45	42% 56% 42%
176	Cz	52	13% 67% 25% 8%
177	C0	60	22% 72% 23% 5%
178	C1	47	60% 60% 36%
179	C2	32	44% 69% 28%
180	C3	37	19% 78% 22%
181	C4	57	28% 72% 28%
182	C5	44	95% 59% 41%
183	C6	47	28% 68% 28%
184	C7	47	13% 72% 26%
185	C8	38	29% 71% 26%
186	C9	37	41% 68% 32%
187	DA	60	28% 48% 47% 5%
188	DB	43	93% 74% 23%
189	DC	46	11% 67% 33%
190	DD	38	58% 39%
191	DE	46	61% 37%
192	DF	31	19% 68% 29%

2 Entry composition

There are 192 unique types of molecules in this entry. The entry contains 331913 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 DNA chain called SCAFFOLD STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	AA	8064	164972	78873	29001	49035	8063	0	0

- Molecule 2 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	AB	47	972	463	191	272	46	0	0

- Molecule 3 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
3	AC	53	1091	520	212	307	52	0	0

- Molecule 4 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
4	AD	48	989	472	188	282	47	0	0

- Molecule 5 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
5	AE	48	971	465	171	288	47	0	0

- Molecule 6 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
6	AF	55	1131	540	216	321	54	0	0

- Molecule 7 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	AG	48	Total 970	C 471	N 150	O 302	P 47	0	0

- Molecule 8 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	AH	31	Total 636	C 307	N 116	O 183	P 30	0	0

- Molecule 9 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	AI	28	Total 570	C 277	N 92	O 174	P 27	0	0

- Molecule 10 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	AJ	48	Total 977	C 468	N 177	O 285	P 47	0	0

- Molecule 11 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	AK	32	Total 657	C 312	N 123	O 191	P 31	0	0

- Molecule 12 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	AL	52	Total 1065	C 511	N 188	O 315	P 51	0	0

- Molecule 13 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	AM	38	Total 766	C 374	N 121	O 234	P 37	0	0

- Molecule 14 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	AN	46	Total	C	N	O	P	0	0
			946	453	174	274	45		

- Molecule 15 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	AO	46	Total	C	N	O	P	0	0
			947	450	192	260	45		

- Molecule 16 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	AP	48	Total	C	N	O	P	0	0
			982	470	175	290	47		

- Molecule 17 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	AQ	48	Total	C	N	O	P	0	0
			972	473	157	295	47		

- Molecule 18 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	AR	46	Total	C	N	O	P	0	0
			942	451	170	276	45		

- Molecule 19 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	AS	50	Total	C	N	O	P	0	0
			1012	488	184	291	49		

- Molecule 20 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	AT	47	Total	C	N	O	P	0	0
			959	458	184	271	46		

- Molecule 21 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	AU	40	Total	C	N	O	P	0	0
			823	391	164	229	39		

- Molecule 22 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	AV	45	Total	C	N	O	P	0	0
			918	445	149	280	44		

- Molecule 23 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	AW	48	Total	C	N	O	P	0	0
			982	467	187	281	47		

- Molecule 24 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	AX	37	Total	C	N	O	P	0	0
			763	360	156	211	36		

- Molecule 25 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	AY	47	Total	C	N	O	P	0	0
			966	466	176	278	46		

- Molecule 26 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	AZ	40	Total	C	N	O	P	0	0
			813	388	152	234	39		

- Molecule 27 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	Aa	53	Total	C	N	O	P	0	0
			1086	519	204	311	52		

- Molecule 28 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	Ab	39	Total 798	C 383	N 145	O 232	P 38	0	0

- Molecule 29 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	Ac	31	Total 624	C 300	N 108	O 186	P 30	0	0

- Molecule 30 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	Ad	45	Total 927	C 443	N 187	O 253	P 44	0	0

- Molecule 31 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	Ae	52	Total 1056	C 509	N 175	O 321	P 51	0	0

- Molecule 32 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Af	46	Total 936	C 449	N 169	O 273	P 45	0	0

- Molecule 33 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Ag	30	Total 616	C 296	N 109	O 182	P 29	0	0

- Molecule 34 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	Ah	39	Total 801	C 380	N 157	O 226	P 38	0	0

- Molecule 35 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Ai	48	Total	C	N	O	P	0	0
			981	475	158	301	47		

- Molecule 36 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	Aj	40	Total	C	N	O	P	0	0
			820	392	163	226	39		

- Molecule 37 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	Ak	38	Total	C	N	O	P	0	0
			775	371	145	222	37		

- Molecule 38 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	Al	56	Total	C	N	O	P	0	0
			1136	546	207	328	55		

- Molecule 39 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	Am	38	Total	C	N	O	P	0	0
			772	375	126	234	37		

- Molecule 40 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	An	45	Total	C	N	O	P	0	0
			912	435	168	265	44		

- Molecule 41 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	Ao	46	Total	C	N	O	P	0	0
			942	450	180	267	45		

- Molecule 42 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	Ap	48	Total 974	C 470	N 166	O 291	P 47	0	0

- Molecule 43 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	Aq	32	Total 662	C 317	N 130	O 184	P 31	0	0

- Molecule 44 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	Ar	48	Total 988	C 475	N 179	O 287	P 47	0	0

- Molecule 45 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	As	48	Total 991	C 471	N 204	O 269	P 47	0	0

- Molecule 46 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	At	54	Total 1105	C 528	N 210	O 314	P 53	0	0

- Molecule 47 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	Au	46	Total 934	C 452	N 166	O 271	P 45	0	0

- Molecule 48 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	Av	48	Total 985	C 473	N 187	O 278	P 47	0	0

- Molecule 49 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	Aw	48	Total 964	C 466	N 155	O 296	P 47	0	0

- Molecule 50 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	Ax	45	Total 917	C 439	N 179	O 255	P 44	0	0

- Molecule 51 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	Ay	31	Total 643	C 304	N 131	O 178	P 30	0	0

- Molecule 52 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	Az	30	Total 613	C 293	N 118	O 173	P 29	0	0

- Molecule 53 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	A0	32	Total 647	C 308	N 124	O 184	P 31	0	0

- Molecule 54 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	A1	48	Total 984	C 471	N 186	O 280	P 47	0	0

- Molecule 55 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	A2	46	Total 941	C 452	N 181	O 263	P 45	0	0

- Molecule 56 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	A3	30	Total 615	C 294	N 117	O 175	P 29	0	0

- Molecule 57 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	A4	45	Total 914	C 440	N 166	O 264	P 44	0	0

- Molecule 58 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	A5	45	Total 923	C 447	N 165	O 267	P 44	0	0

- Molecule 59 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	A6	48	Total 994	C 474	N 198	O 275	P 47	0	0

- Molecule 60 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	A7	48	Total 977	C 474	N 168	O 288	P 47	0	0

- Molecule 61 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	A8	60	Total 1206	C 582	N 192	O 373	P 59	0	0

- Molecule 62 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	A9	38	Total 778	C 371	N 151	O 219	P 37	0	0

- Molecule 63 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	BA	48	Total	C	N	O	P	0	0
			980	469	188	276	47		

- Molecule 64 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	BB	31	Total	C	N	O	P	0	0
			637	303	129	175	30		

- Molecule 65 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	BC	60	Total	C	N	O	P	0	0
			1223	583	224	357	59		

- Molecule 66 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	BD	53	Total	C	N	O	P	0	0
			1088	521	211	304	52		

- Molecule 67 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	BE	32	Total	C	N	O	P	0	0
			648	312	120	185	31		

- Molecule 68 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	BF	38	Total	C	N	O	P	0	0
			779	373	155	214	37		

- Molecule 69 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	BG	47	Total	C	N	O	P	0	0
			959	462	162	289	46		

- Molecule 70 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	BH	57	Total 1159	C 563	N 178	O 362	P 56	0	0

- Molecule 71 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	BI	45	Total 917	C 437	N 172	O 264	P 44	0	0

- Molecule 72 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	BJ	45	Total 927	C 442	N 179	O 262	P 44	0	0

- Molecule 73 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	BK	48	Total 981	C 470	N 178	O 286	P 47	0	0

- Molecule 74 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	BL	45	Total 918	C 441	N 165	O 268	P 44	0	0

- Molecule 75 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	BM	48	Total 990	C 475	N 188	O 280	P 47	0	0

- Molecule 76 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	BN	30	Total 618	C 296	N 118	O 175	P 29	0	0

- Molecule 77 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	BO	45	Total 914	C 438	N 165	O 267	P 44	0	0

- Molecule 78 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	BP	45	Total 920	C 440	N 178	O 258	P 44	0	0

- Molecule 79 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	BQ	45	Total 929	C 443	N 181	O 261	P 44	0	0

- Molecule 80 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	BR	38	Total 770	C 370	N 134	O 229	P 37	0	0

- Molecule 81 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	BS	48	Total 972	C 471	N 168	O 286	P 47	0	0

- Molecule 82 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	BT	52	Total 1070	C 507	N 213	O 299	P 51	0	0

- Molecule 83 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
83	BU	39	Total 784	C 375	N 138	O 233	P 38	0	0

- Molecule 84 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
84	BV	32	Total	C	N	O	P	0	0
			646	311	109	195	31		

- Molecule 85 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
85	BW	31	Total	C	N	O	P	0	0
			624	297	117	180	30		

- Molecule 86 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
86	BX	45	Total	C	N	O	P	0	0
			913	438	168	263	44		

- Molecule 87 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
87	BY	52	Total	C	N	O	P	0	0
			1065	512	196	306	51		

- Molecule 88 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
88	BZ	46	Total	C	N	O	P	0	0
			957	453	189	270	45		

- Molecule 89 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
89	Ba	46	Total	C	N	O	P	0	0
			952	452	190	265	45		

- Molecule 90 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
90	Bb	38	Total	C	N	O	P	0	0
			791	376	161	217	37		

- Molecule 91 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
91	Bc	45	Total 923	C 444	N 165	O 270	P 44	0	0

- Molecule 92 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
92	Bd	48	Total 985	C 473	N 190	O 275	P 47	0	0

- Molecule 93 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
93	Be	45	Total 908	C 432	N 174	O 258	P 44	0	0

- Molecule 94 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
94	Bf	38	Total 776	C 375	N 138	O 226	P 37	0	0

- Molecule 95 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
95	Bg	38	Total 783	C 373	N 149	O 224	P 37	0	0

- Molecule 96 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
96	Bh	40	Total 814	C 388	N 161	O 226	P 39	0	0

- Molecule 97 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
97	Bi	49	Total 993	C 483	N 159	O 303	P 48	0	0

- Molecule 98 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
98	Bj	48	Total 991	C 475	N 194	O 275	P 47	0	0

- Molecule 99 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
99	Bk	30	Total 620	C 296	N 124	O 171	P 29	0	0

- Molecule 100 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
100	Bl	40	Total 829	C 394	N 167	O 229	P 39	0	0

- Molecule 101 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
101	Bm	38	Total 773	C 370	N 149	O 217	P 37	0	0

- Molecule 102 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
102	Bn	43	Total 878	C 425	N 154	O 257	P 42	0	0

- Molecule 103 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
103	Bo	45	Total 914	C 445	N 149	O 276	P 44	0	0

- Molecule 104 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
104	Bp	47	Total 974	C 463	N 194	O 271	P 46	0	0

- Molecule 105 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
105	Bq	48	Total 984	C 474	N 165	O 298	P 47	0	0

- Molecule 106 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
106	Br	38	Total 778	C 375	N 138	O 228	P 37	0	0

- Molecule 107 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
107	Bs	30	Total 609	C 296	N 100	O 184	P 29	0	0

- Molecule 108 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
108	Bt	45	Total 919	C 445	N 155	O 275	P 44	0	0

- Molecule 109 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
109	Bu	49	Total 1004	C 487	N 167	O 302	P 48	0	0

- Molecule 110 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
110	Bv	40	Total 815	C 387	N 159	O 230	P 39	0	0

- Molecule 111 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
111	Bw	37	Total 752	C 365	N 136	O 215	P 36	0	0

- Molecule 112 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
112	Bx	52	Total	C	N	O	P	0	0
			1059	516	168	324	51		

- Molecule 113 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
113	By	30	Total	C	N	O	P	0	0
			625	297	126	173	29		

- Molecule 114 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
114	Bz	40	Total	C	N	O	P	0	0
			821	393	162	227	39		

- Molecule 115 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
115	B0	30	Total	C	N	O	P	0	0
			613	296	112	176	29		

- Molecule 116 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
116	B1	52	Total	C	N	O	P	0	0
			1065	520	170	324	51		

- Molecule 117 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
117	B2	30	Total	C	N	O	P	0	0
			614	295	116	174	29		

- Molecule 118 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
118	B3	56	Total	C	N	O	P	0	0
			1143	545	214	329	55		

- Molecule 119 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
119	B4	48	Total 988	C 468	N 195	O 278	P 47	0	0

- Molecule 120 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
120	B5	31	Total 632	C 308	N 106	O 188	P 30	0	0

- Molecule 121 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
121	B6	45	Total 929	C 444	N 171	O 270	P 44	0	0

- Molecule 122 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
122	B7	37	Total 761	C 362	N 145	O 218	P 36	0	0

- Molecule 123 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
123	B8	52	Total 1066	C 510	N 183	O 322	P 51	0	0

- Molecule 124 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
124	B9	38	Total 768	C 370	N 128	O 233	P 37	0	0

- Molecule 125 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
125	CA	32	Total 644	C 307	N 119	O 187	P 31	0	0

- Molecule 126 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
126	CB	32	Total	C	N	O	P	0	0
			656	313	122	190	31		

- Molecule 127 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
127	CC	30	Total	C	N	O	P	0	0
			624	295	125	175	29		

- Molecule 128 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
128	CD	59	Total	C	N	O	P	0	0
			1200	576	204	362	58		

- Molecule 129 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
129	CE	52	Total	C	N	O	P	0	0
			1062	511	194	306	51		

- Molecule 130 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
130	CF	40	Total	C	N	O	P	0	0
			816	387	162	228	39		

- Molecule 131 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
131	CG	31	Total	C	N	O	P	0	0
			626	296	115	185	30		

- Molecule 132 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
132	CH	53	Total	C	N	O	P	0	0
			1098	522	204	320	52		

- Molecule 133 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
133	CI	30	Total	C	N	O	P	0	0
			614	293	115	177	29		

- Molecule 134 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
134	CJ	49	Total	C	N	O	P	0	0
			988	483	144	313	48		

- Molecule 135 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
135	CK	56	Total	C	N	O	P	0	0
			1138	548	181	354	55		

- Molecule 136 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
136	CL	31	Total	C	N	O	P	0	0
			640	304	122	184	30		

- Molecule 137 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
137	CM	32	Total	C	N	O	P	0	0
			653	311	127	184	31		

- Molecule 138 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
138	CN	40	Total	C	N	O	P	0	0
			827	394	164	230	39		

- Molecule 139 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
139	CO	30	Total	C	N	O	P	0	0
			607	291	108	179	29		

- Molecule 140 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
140	CP	54	Total	C	N	O	P	0	0
			1106	527	196	330	53		

- Molecule 141 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
141	CQ	48	Total	C	N	O	P	0	0
			976	465	180	284	47		

- Molecule 142 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
142	CR	45	Total	C	N	O	P	0	0
			923	442	167	270	44		

- Molecule 143 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
143	CS	48	Total	C	N	O	P	0	0
			983	466	185	285	47		

- Molecule 144 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
144	CT	38	Total	C	N	O	P	0	0
			769	366	144	222	37		

- Molecule 145 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
145	CU	30	Total	C	N	O	P	0	0
			619	294	123	173	29		

- Molecule 146 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
146	CV	32	Total	C	N	O	P	0	0
			652	309	126	186	31		

- Molecule 147 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
147	CW	47	Total 970	C 462	N 183	O 279	P 46	0	0

- Molecule 148 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
148	CX	48	Total 974	C 472	N 158	O 297	P 47	0	0

- Molecule 149 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
149	CY	48	Total 995	C 468	N 201	O 279	P 47	0	0

- Molecule 150 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
150	CZ	46	Total 948	C 456	N 162	O 285	P 45	0	0

- Molecule 151 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
151	Ca	39	Total 798	C 380	N 157	O 223	P 38	0	0

- Molecule 152 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
152	Cb	45	Total 933	C 441	N 189	O 259	P 44	0	0

- Molecule 153 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
153	Cc	30	Total 616	C 293	N 112	O 182	P 29	0	0

- Molecule 154 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
154	Cd	38	Total 779	C 368	N 151	O 223	P 37	0	0

- Molecule 155 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
155	Ce	30	Total 603	C 288	N 105	O 181	P 29	0	0

- Molecule 156 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
156	Cf	40	Total 803	C 385	N 149	O 230	P 39	0	0

- Molecule 157 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
157	Cg	38	Total 779	C 371	N 145	O 226	P 37	0	0

- Molecule 158 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
158	Ch	45	Total 928	C 441	N 177	O 266	P 44	0	0

- Molecule 159 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
159	Ci	48	Total 977	C 469	N 158	O 303	P 47	0	0

- Molecule 160 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
160	Cj	54	Total 1107	C 525	N 207	O 322	P 53	0	0

- Molecule 161 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
161	Ck	46	Total 948	C 451	N 185	O 267	P 45	0	0

- Molecule 162 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
162	Cl	45	Total 913	C 435	N 162	O 272	P 44	0	0

- Molecule 163 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
163	Cm	38	Total 765	C 369	N 123	O 236	P 37	0	0

- Molecule 164 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
164	Cn	45	Total 916	C 437	N 178	O 257	P 44	0	0

- Molecule 165 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
165	Co	37	Total 752	C 364	N 125	O 227	P 36	0	0

- Molecule 166 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
166	Cp	37	Total 752	C 358	N 134	O 224	P 36	0	0

- Molecule 167 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
167	Cq	36	Total 731	C 350	N 127	O 219	P 35	0	0

- Molecule 168 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
168	Cr	38	Total 778	C 371	N 142	O 228	P 37	0	0

- Molecule 169 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
169	Cs	39	Total 804	C 381	N 147	O 238	P 38	0	0

- Molecule 170 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
170	Ct	38	Total 781	C 371	N 157	O 216	P 37	0	0

- Molecule 171 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
171	Cu	36	Total 736	C 355	N 125	O 221	P 35	0	0

- Molecule 172 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
172	Cv	37	Total 748	C 360	N 123	O 229	P 36	0	0

- Molecule 173 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
173	Cw	31	Total 629	C 300	N 123	O 176	P 30	0	0

- Molecule 174 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
174	Cx	37	Total 761	C 364	N 152	O 209	P 36	0	0

- Molecule 175 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
175	Cy	45	Total 917	C 436	N 167	O 270	P 44	0	0

- Molecule 176 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
176	Cz	52	Total 1061	C 510	N 180	O 320	P 51	0	0

- Molecule 177 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
177	C0	60	Total 1215	C 590	N 190	O 376	P 59	0	0

- Molecule 178 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
178	C1	47	Total 964	C 461	N 178	O 279	P 46	0	0

- Molecule 179 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
179	C2	32	Total 660	C 316	N 125	O 188	P 31	0	0

- Molecule 180 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
180	C3	37	Total 757	C 360	N 141	O 220	P 36	0	0

- Molecule 181 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
181	C4	57	Total 1159	C 561	N 189	O 353	P 56	0	0

- Molecule 182 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
182	C5	44	Total 910	C 435	N 177	O 255	P 43	0	0

- Molecule 183 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
183	C6	47	Total 959	C 458	N 181	O 274	P 46	0	0

- Molecule 184 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
184	C7	47	Total 957	C 456	N 186	O 269	P 46	0	0

- Molecule 185 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
185	C8	38	Total 771	C 368	N 139	O 227	P 37	0	0

- Molecule 186 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
186	C9	37	Total 766	C 366	N 150	O 214	P 36	0	0

- Molecule 187 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
187	DA	60	Total 1225	C 589	N 221	O 356	P 59	0	0

- Molecule 188 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
188	DB	43	Total 876	C 418	N 155	O 261	P 42	0	0

- Molecule 189 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
189	DC	46	Total 952	C 453	N 195	O 259	P 45	0	0

- Molecule 190 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
190	DD	38	Total 775	C 369	N 144	O 225	P 37	0	0

- Molecule 191 is a DNA chain called STAPLE STRAND.

Mol	Chain	Residues	Atoms					AltConf	Trace
191	DE	46	Total 940	C 446	N 181	O 268	P 45	0	0

- Molecule 192 is a DNA chain called STAPLE STRAND.

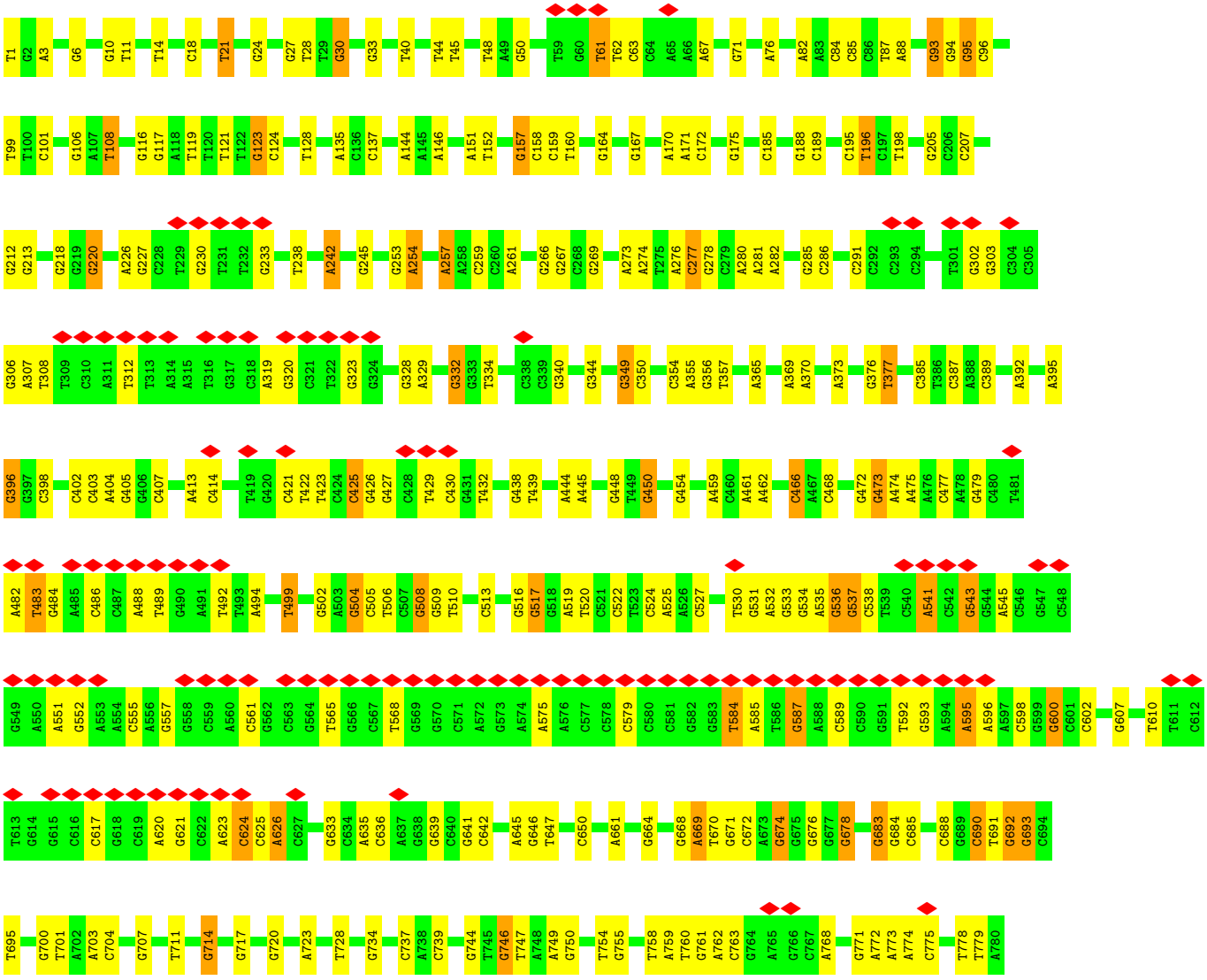
Mol	Chain	Residues	Atoms					AltConf	Trace
192	DF	31	Total 638	C 304	N 125	O 179	P 30	0	0

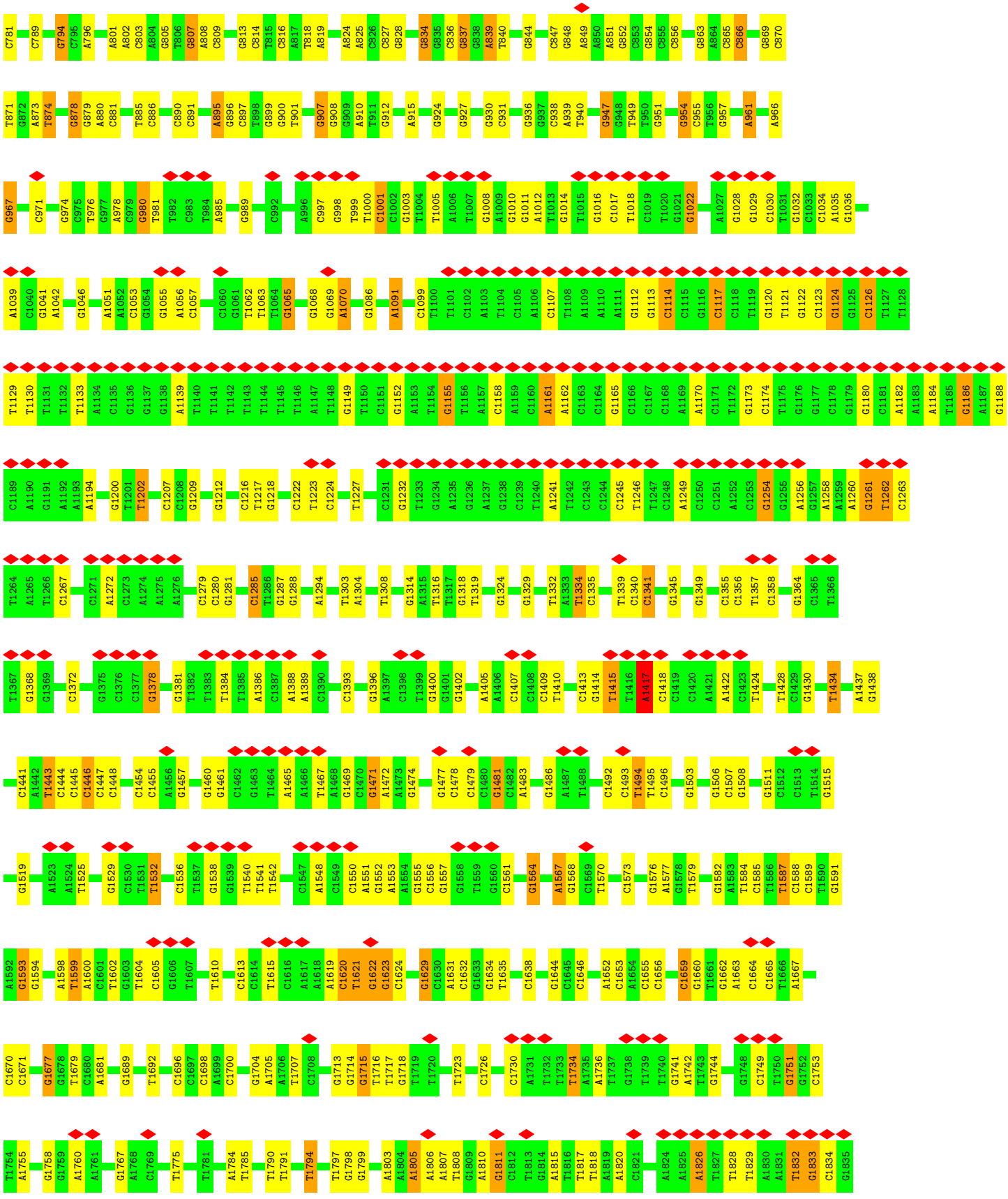
3 Residue-property plots (i)

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: SCAFFOLD STRAND

Chain AA: 

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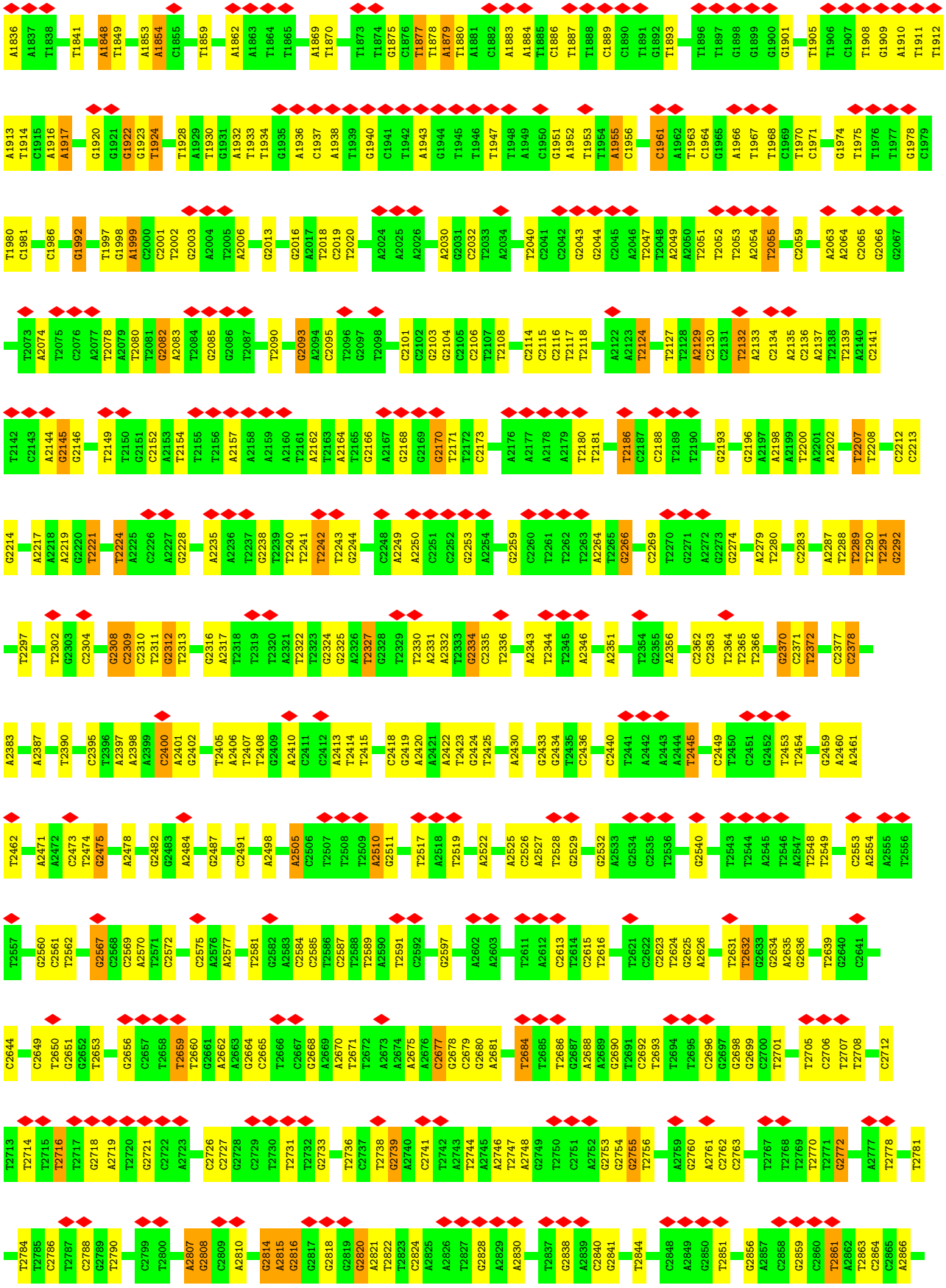
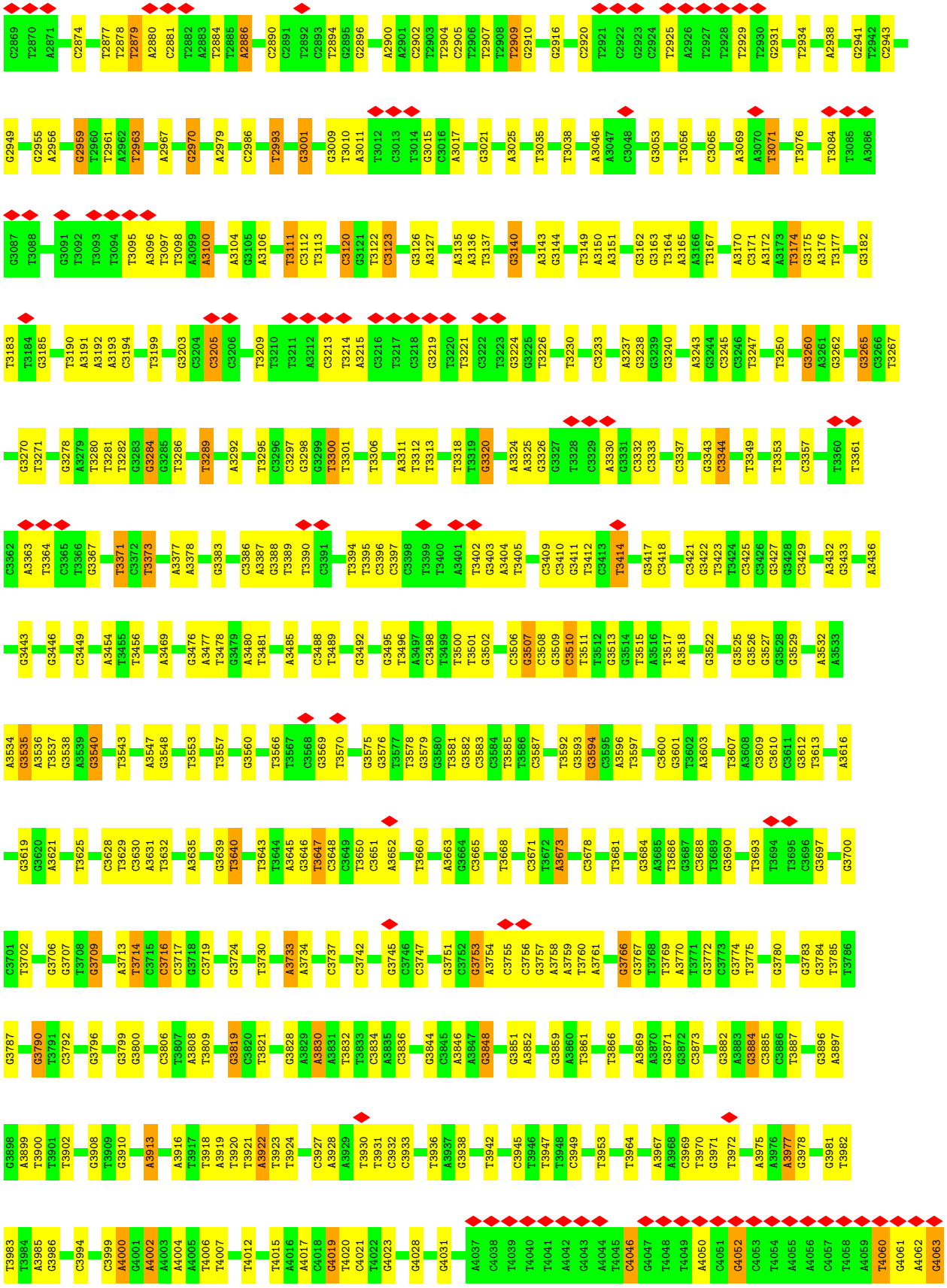
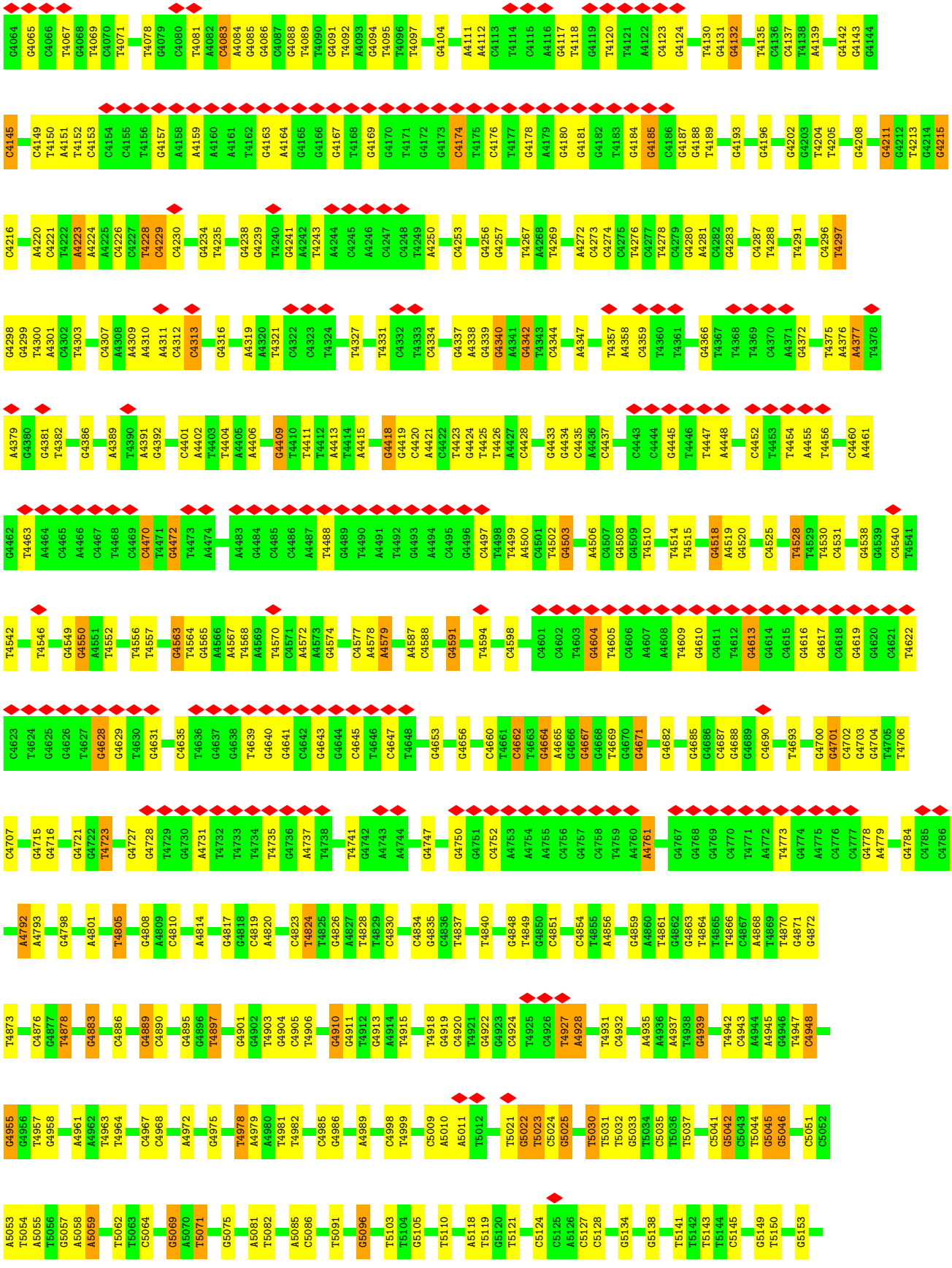
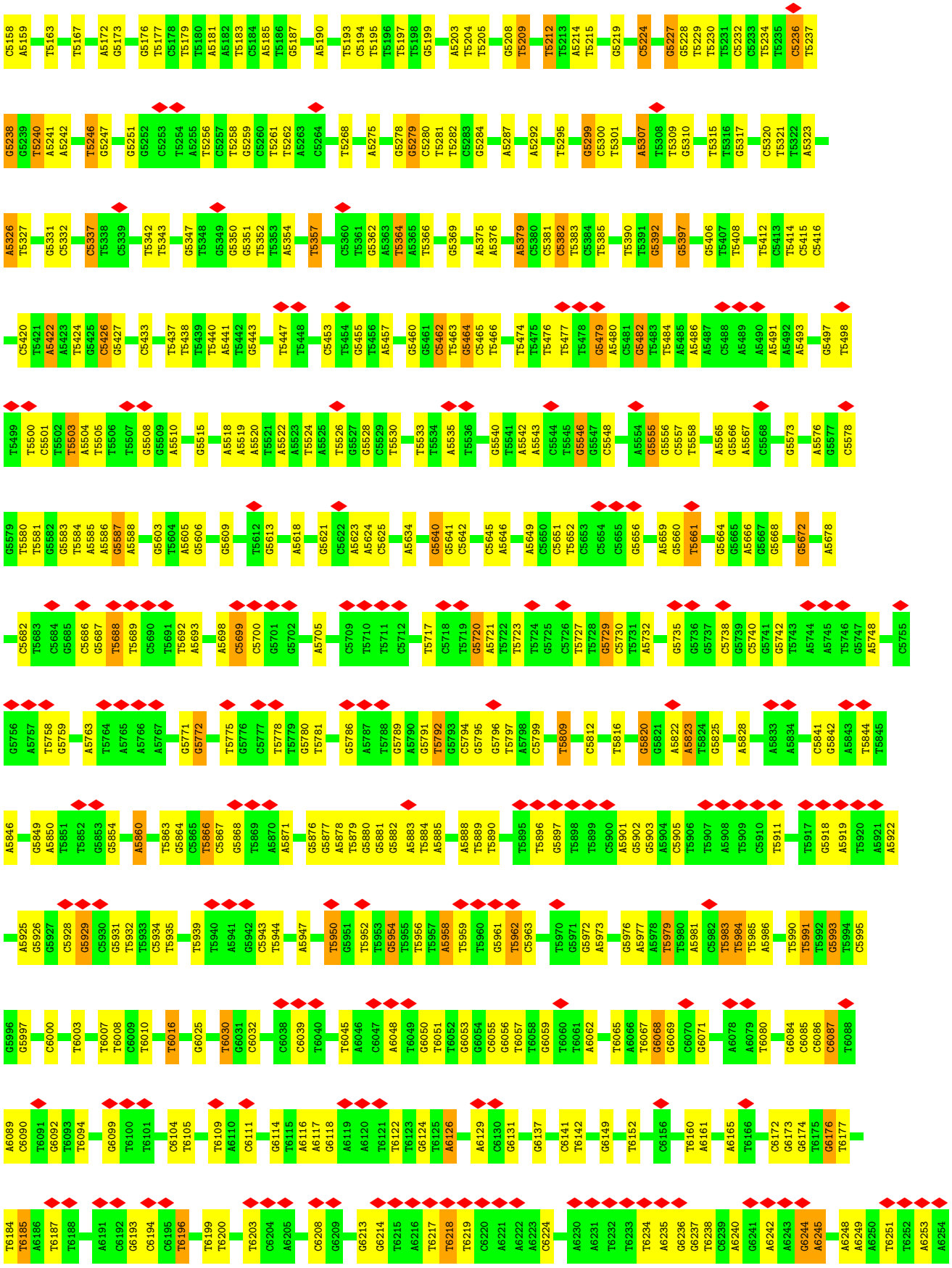
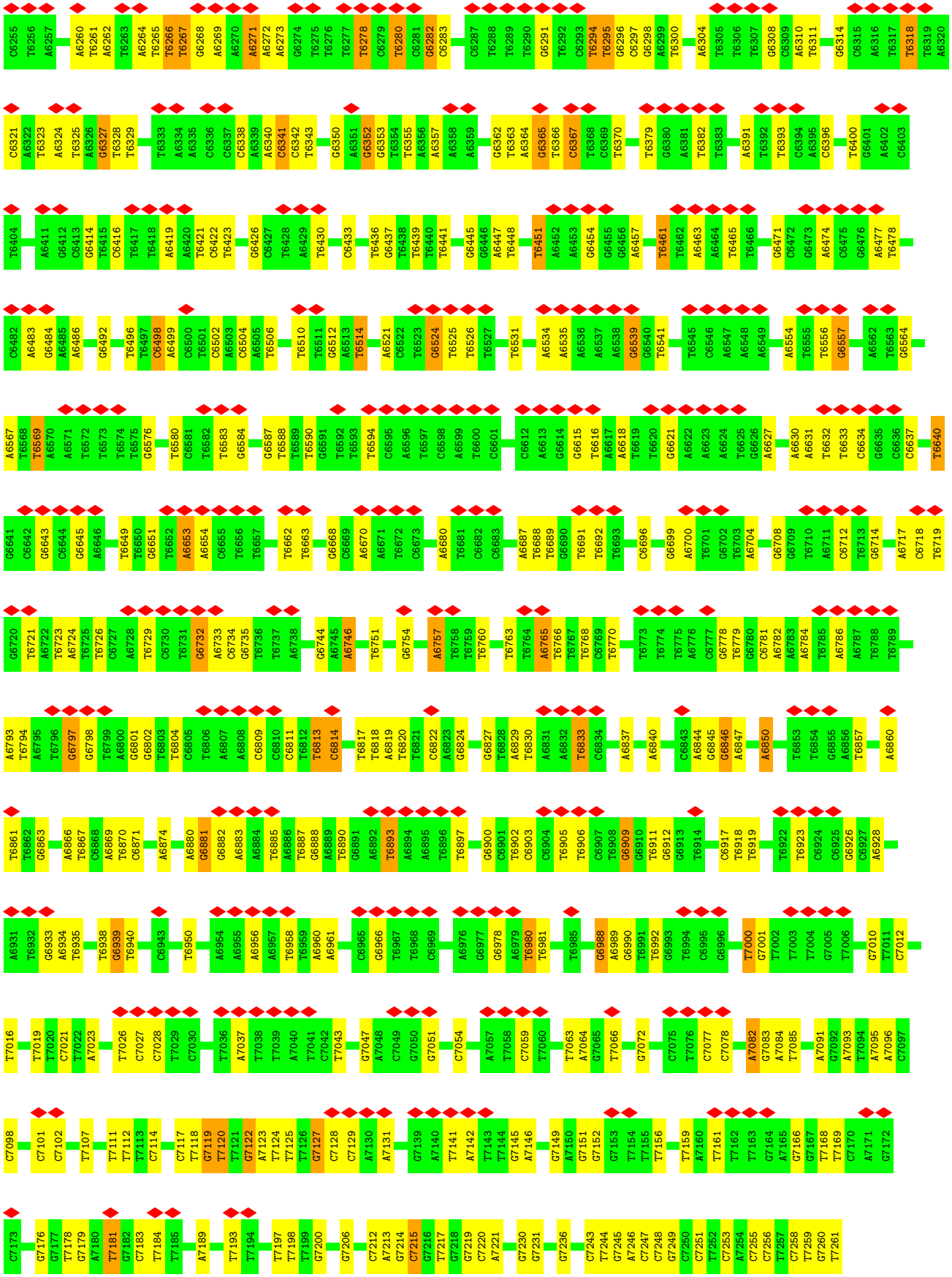
T871 G872 A873 T874 G878 G879 A880 C881 T885 C886 C890 C891 A895 G896 C897 T898 G899 G900 T901 G907 G908 G909 A910 T911 G912 A915 G924 G927 G930 C931 G936 G937 C938 A939 T940 G947 G948 T949 T950 G951 G964 C965 T956 G967 A961 A966
G967 C971 G974 C975 T976 G977 A978 C979 G980 T981 T982 C983 T984 A985 G989 C992 A996 C997 G998 T999 T1000 C1001 C1002 G1003 T1004 T1005 A1006 T1007 G1008 A1009 G1010 G1011 A1012 T1013 G1014 T1015 G1016 C1017 T1018 C1019 T1020 G1021 G1022 A1027 G1028 G1029 C1030 T1031 G1032 C1033 C1034 A1035 G1036
A1039 C1040 G1041 A1042 G1046 A1051 A1052 C1053 G1054 G1055 A1056 C1057 C1060 G1061 T1062 T1063 T1064 G1065 G1068 G1069 A1070 G1086 A1091 C1099 T1100 T1101 C1102 A1103 T1104 C1105 A1106 C1107 T1108 A1109 A1110 A1111 G1112 G1113 C1114 C1115 G1116 C1117 C1118 T1119 G1120 T1121 G1122 C1123 G1124 G1125 C1126 T1127 T1128
T1129 T1130 T1131 T1132 T1133 A1134 C1135 G1136 G1137 G1138 A1139 T1140 T1141 T1142 T1143 T1144 T1145 T1146 A1147 T1148 G1149 T1150 C1151 G1152 A1153 T1154 G1155 T1156 A1157 C1158 A1159 C1160 A1161 A1162 C1163 C1164 G1165 C1166 C1167 C1168 A1169 A1170 C1171 T1172 G1173 C1174 T1175 G1176 G1177 C1178 G1179 G1180 C1181 A1182 A1183 A1184 T1185 G1186 A1187 G1188
C1189 A1190 G1191 A1192 A1193 A1194 G1200 T1201 T1202 C1207 C1208 G1209 G1212 C1216 T1217 G1218 C1222 T1223 C1224 T1227 C1231 G1232 T1233 G1234 A1235 G1236 A1237 G1238 C1239 T1240 A1241 T1242 C1243 C1244 C1245 T1246 T1247 C1248 A1249 C1250 C1251 A1252 C1253 G1254 G1255 A1256 G1257 A1258 A1259 A1260 G1261 T1262 C1263
T1264 A1265 T1266 C1267 C1271 A1272 C1273 A1274 A1275 A1276 C1279 C1280 G1281 C1285 T1286 G1287 G1288 A1294 T1303 A1304 T1308 G1314 A1315 T1316 T1317 G1318 T1319 G1324 G1329 T1332 A1333 T1334 C1335 T1339 C1340 C1341 G1345 G1349 C1355 C1356 T1357 C1358 G1364 C1365 T1366
T1367 G1368 G1369 C1372 G1375 C1376 C1377 G1378 G1381 T1382 T1383 T1384 T1385 A1386 C1387 A1388 A1389 C1390 C1393 G1396 A1397 C1398 T1399 G1400 G1401 G1402 A1405 A1406 C1407 C1408 C1409 T1410 C1413 G1414 T1415 T1416 A1417 C1418 C1419 C1420 A1421 A1422 C1423 T1424 T1428 C1429 G1430 T1434 A1437 G1438
C1441 A1442 T1443 C1444 C1445 C1446 C1447 C1448 C1454 C1455 A1456 G1457 G1460 G1461 C1462 G1463 T1464 A1465 A1466 T1467 A1468 G1469 C1470 G1471 A1472 A1473 G1474 G1477 C1478 C1479 C1480 G1481 C1482 A1483 G1486 A1487 T1488 C1492 C1493 T1494 T1495 C1496 G1503 G1506 C1507 G1508 G1511 C1512 C1513 T1514 G1515
G1519 A1523 A1524 T1525 G1529 C1530 T1531 T1532 C1536 T1537 G1538 G1539 T1540 T1541 T1542 C1547 A1548 C1549 C1550 A1551 G1552 A1553 A1554 G1555 C1556 G1557 G1558 T1559 G1560 C1561 G1564 A1567 G1568 C1569 T1570 C1573 G1576 A1577 G1578 T1579 G1582 A1583 T1584 C1585 T1586 T1587 C1588 C1589 T1590 G1591
A1592 G1593 G1594 A1598 T1599 A1600 C1601 T1602 G1603 T1604 C1605 G1606 T1607 T1610 C1613 C1614 T1615 C1616 A1617 A1618 A1619 C1620 T1621 G1622 G1623 C1624 G1629 C1630 A1631 C1632 G1633 G1634 T1635 C1638 G1644 C1645 C1646 A1652 C1653 A1654 C1655 C1656 C1659 G1660 T1661 G1662 A1663 C1664 C1665 T1666 A1667
C1670 C1671 G1677 G1678 T1679 C1680 A1681 G1689 T1692 C1696 C1697 C1698 A1699 C1700 G1704 A1705 A1706 T1707 C1708 G1713 G1714 G1715 T1716 T1717 G1718 T1719 T1720 T1723 C1726 C1730 A1731 T1732 T1733 T1734 A1735 A1736 T1737 G1738 T1739 T1740 G1741 A1742 T1743 G1744 G1748 C1749 T1750 G1751 G1752 C1753
T1754 A1755 G1758 G1759 A1760 A1761 G1767 A1768 C1769 T1775 T1781 A1784 T1785 T1790 T1791 T1794 T1797 G1798 G1799 A1803 A1804 A1805 A1806 A1807 T1808 G1809 A1810 G1811 C1812 T1813 G1814 A1815 T1816 T1817 T1818 A1819 A1820 C1821 A1824 A1825 A1826 T1827 T1828 T1829 A1830 A1831 T1832 G1833 C1834 G1835

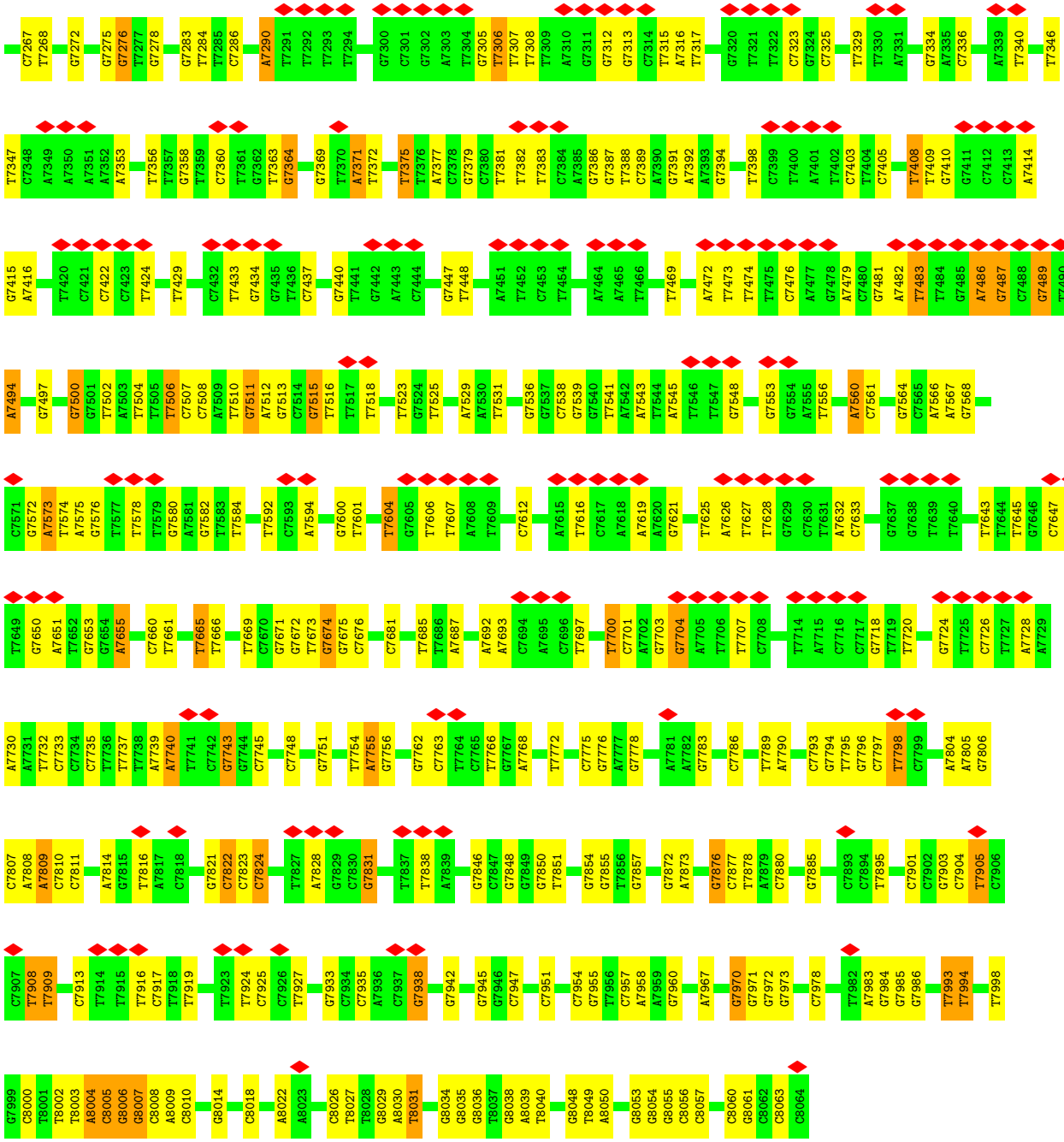






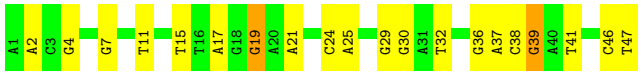






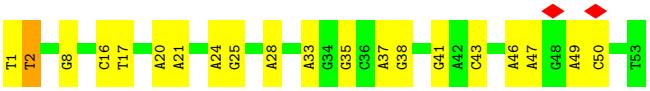
• Molecule 2: STAPLE STRAND

Chain AB:



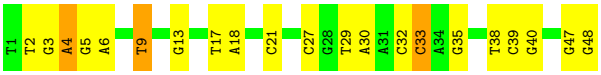
• Molecule 3: STAPLE STRAND

Chain AC:



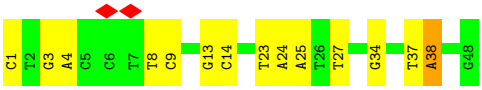
• Molecule 4: STAPLE STRAND

Chain AD:



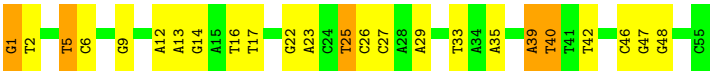
• Molecule 5: STAPLE STRAND

Chain AE:



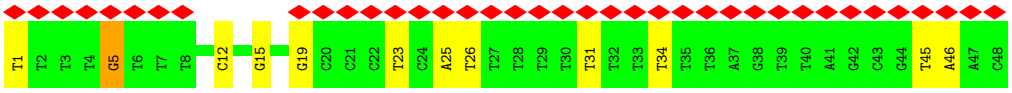
• Molecule 6: STAPLE STRAND

Chain AF:



• Molecule 7: STAPLE STRAND

Chain AG:

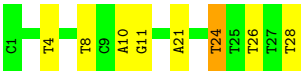


• Molecule 8: STAPLE STRAND

Chain AH:

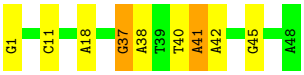
• Molecule 9: STAPLE STRAND

Chain AI:



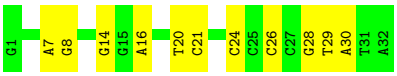
• Molecule 10: STAPLE STRAND

Chain AJ:



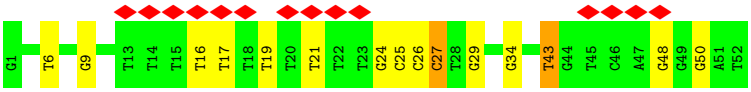
• Molecule 11: STAPLE STRAND

Chain AK:



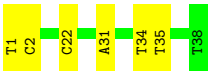
• Molecule 12: STAPLE STRAND

Chain AL:



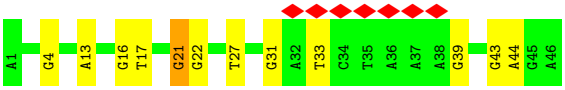
• Molecule 13: STAPLE STRAND

Chain AM:



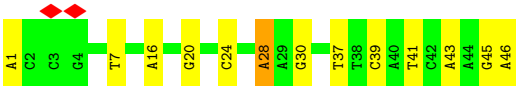
• Molecule 14: STAPLE STRAND

Chain AN:



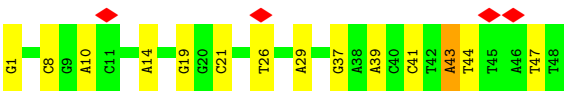
• Molecule 15: STAPLE STRAND

Chain AO:



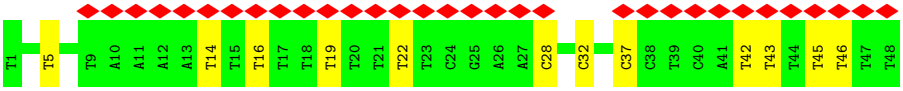
• Molecule 16: STAPLE STRAND

Chain AP:

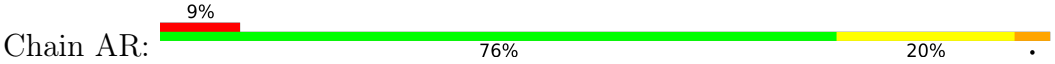


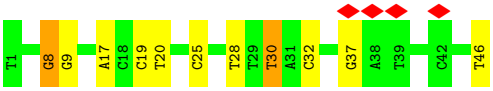
• Molecule 17: STAPLE STRAND

Chain AQ:

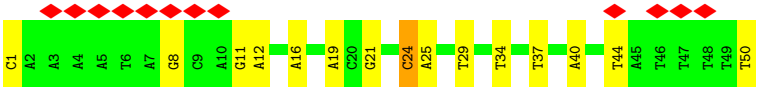


• Molecule 18: STAPLE STRAND

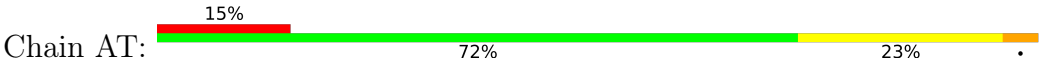


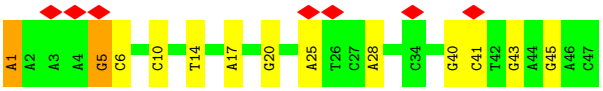


• Molecule 19: STAPLE STRAND

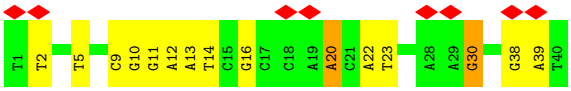


• Molecule 20: STAPLE STRAND

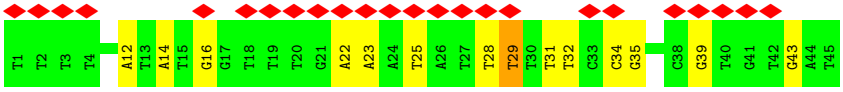




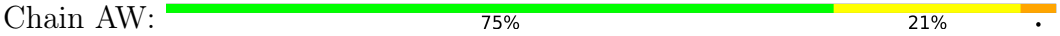
• Molecule 21: STAPLE STRAND



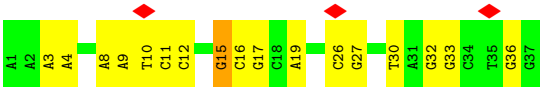
• Molecule 22: STAPLE STRAND



• Molecule 23: STAPLE STRAND

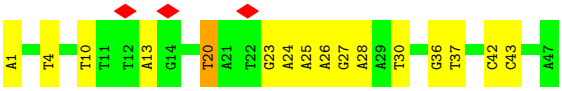


• Molecule 24: STAPLE STRAND



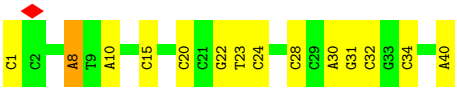
• Molecule 25: STAPLE STRAND

Chain AY:



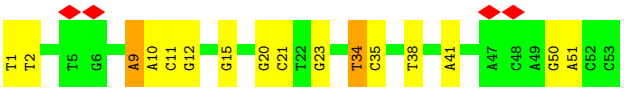
• Molecule 26: STAPLE STRAND

Chain AZ:



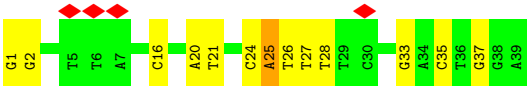
• Molecule 27: STAPLE STRAND

Chain Aa:



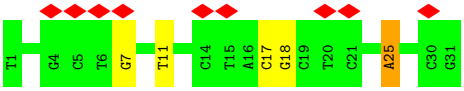
• Molecule 28: STAPLE STRAND

Chain Ab:



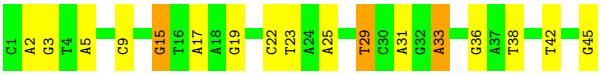
• Molecule 29: STAPLE STRAND

Chain Ac:



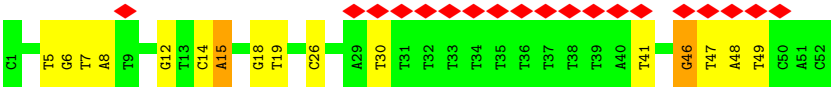
• Molecule 30: STAPLE STRAND

Chain Ad:

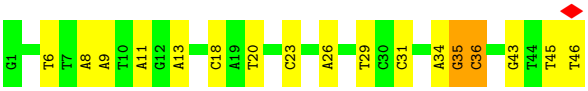


• Molecule 31: STAPLE STRAND

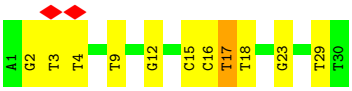
Chain Ae:



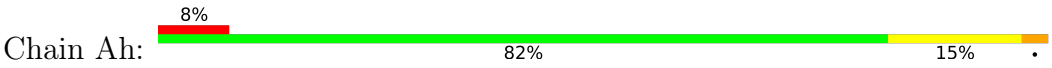
• Molecule 32: STAPLE STRAND

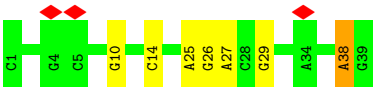


• Molecule 33: STAPLE STRAND

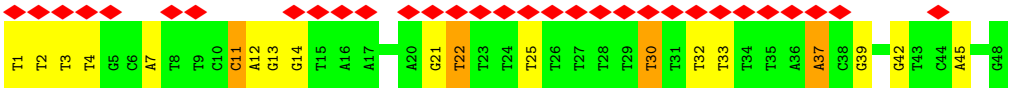


• Molecule 34: STAPLE STRAND



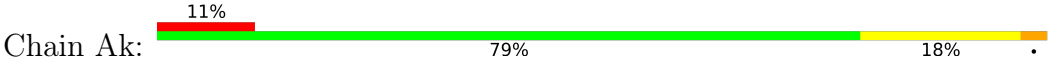


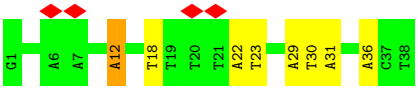
• Molecule 35: STAPLE STRAND



• Molecule 36: STAPLE STRAND

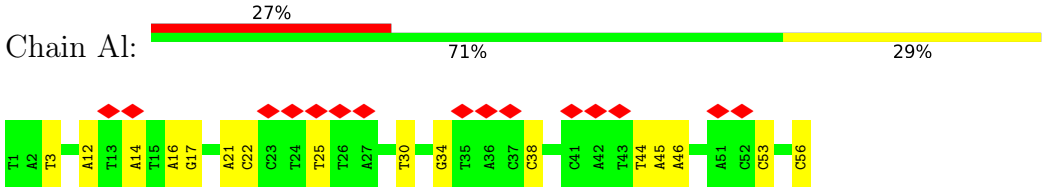
• Molecule 37: STAPLE STRAND





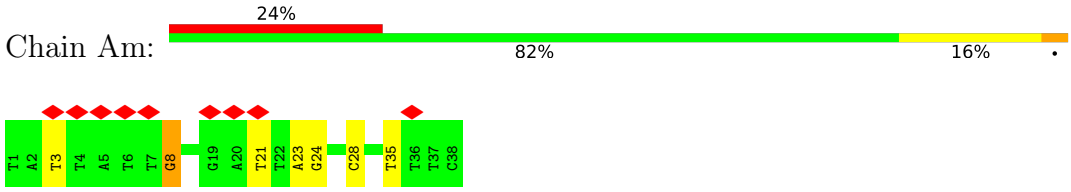
• Molecule 38: STAPLE STRAND

Chain Al:



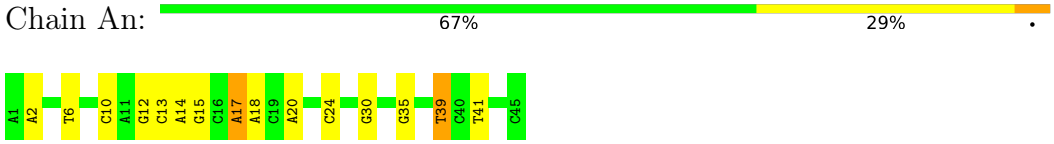
• Molecule 39: STAPLE STRAND

Chain Am:



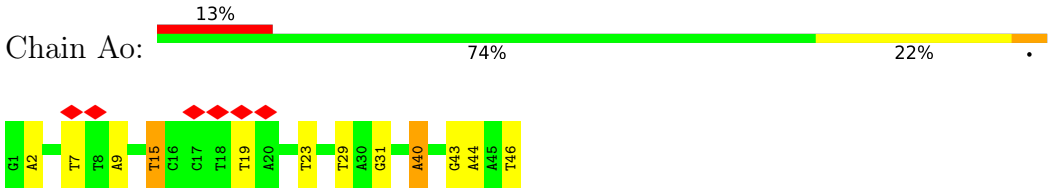
• Molecule 40: STAPLE STRAND

Chain An:



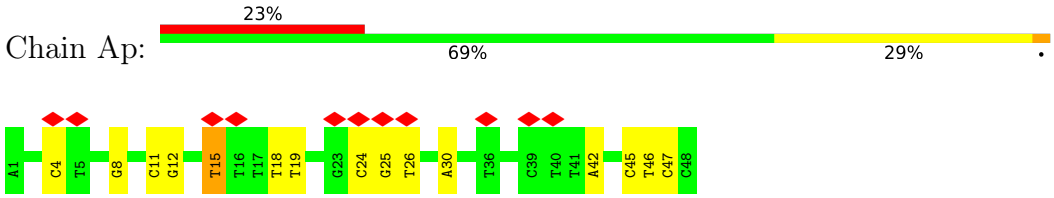
• Molecule 41: STAPLE STRAND

Chain Ao:



• Molecule 42: STAPLE STRAND

Chain Ap:

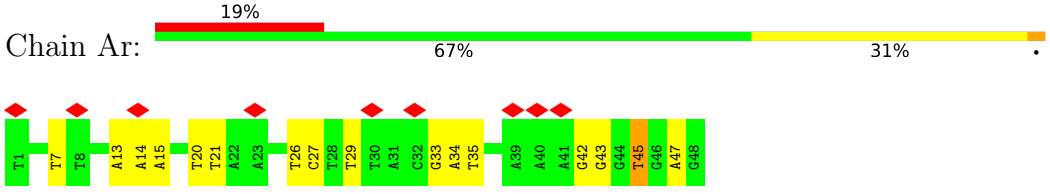


• Molecule 43: STAPLE STRAND

Chain Aq:

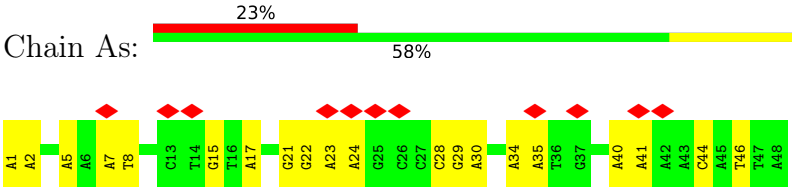
• Molecule 44: STAPLE STRAND

Chain Ar:



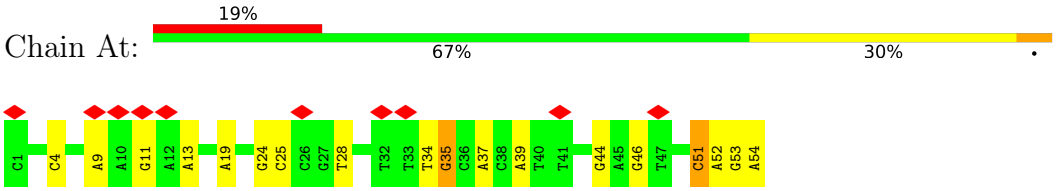
• Molecule 45: STAPLE STRAND

Chain As:



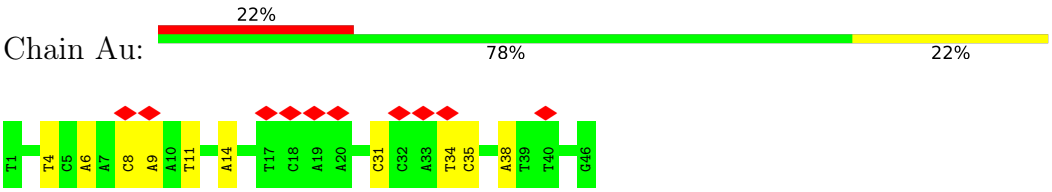
• Molecule 46: STAPLE STRAND

Chain At:



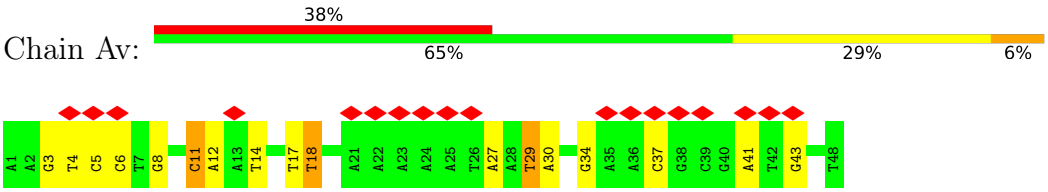
• Molecule 47: STAPLE STRAND

Chain Au:



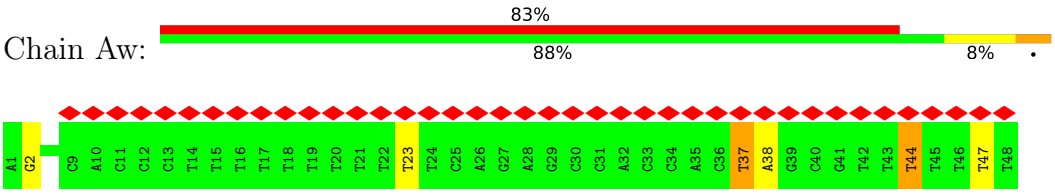
• Molecule 48: STAPLE STRAND

Chain Av:



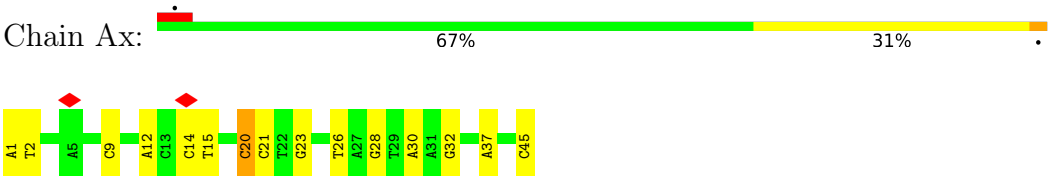
• Molecule 49: STAPLE STRAND

Chain Aw:



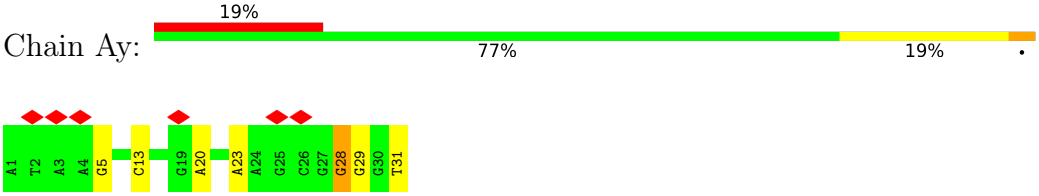
• Molecule 50: STAPLE STRAND

Chain Ax:



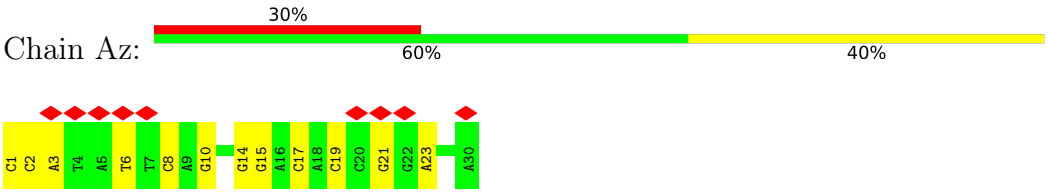
• Molecule 51: STAPLE STRAND

Chain Ay:



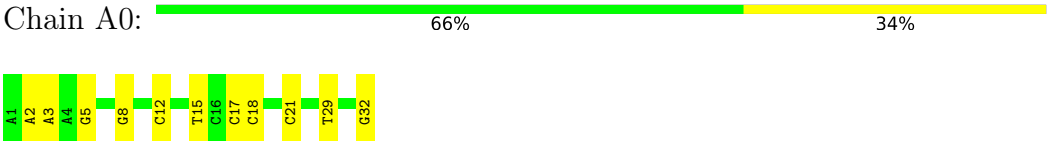
• Molecule 52: STAPLE STRAND

Chain Az:



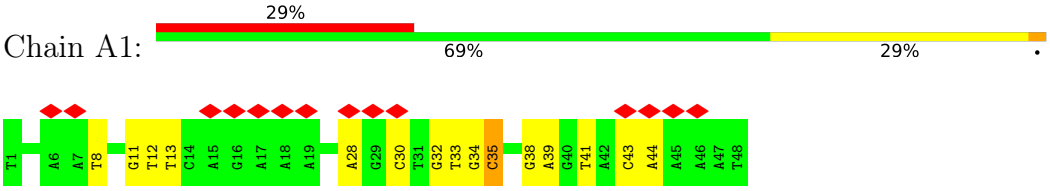
• Molecule 53: STAPLE STRAND

Chain A0:



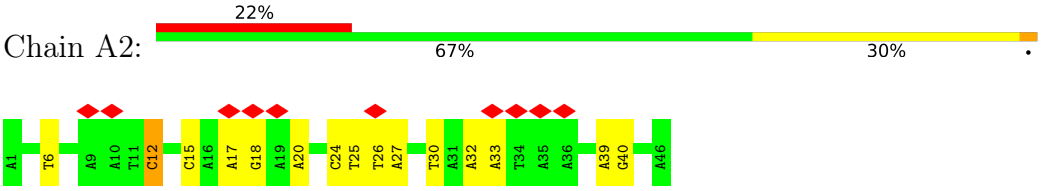
• Molecule 54: STAPLE STRAND

Chain A1:



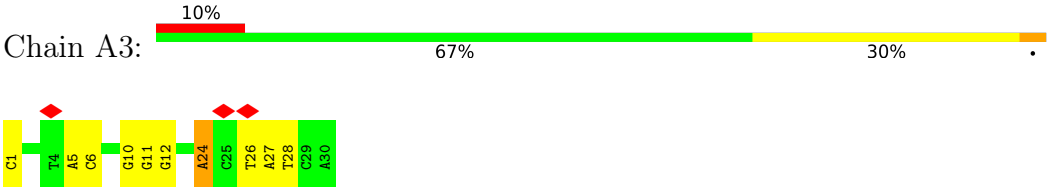
• Molecule 55: STAPLE STRAND

Chain A2:



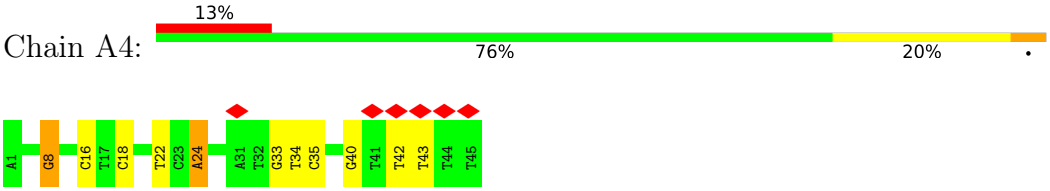
• Molecule 56: STAPLE STRAND

Chain A3:



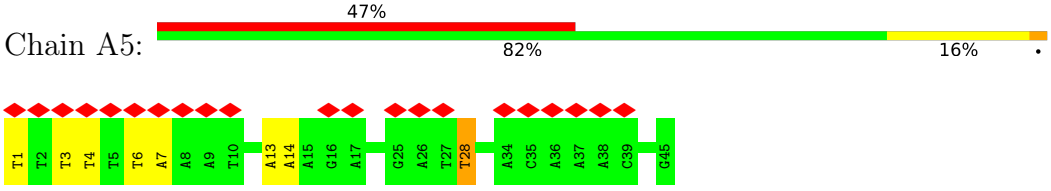
• Molecule 57: STAPLE STRAND

Chain A4:



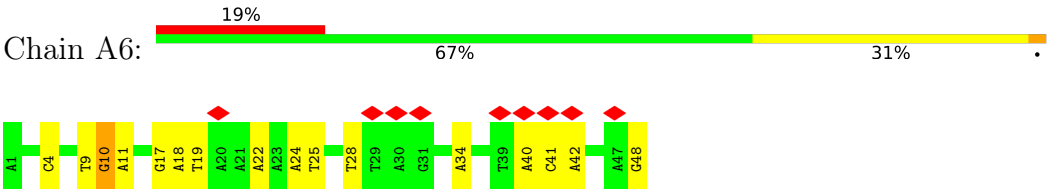
• Molecule 58: STAPLE STRAND

Chain A5:



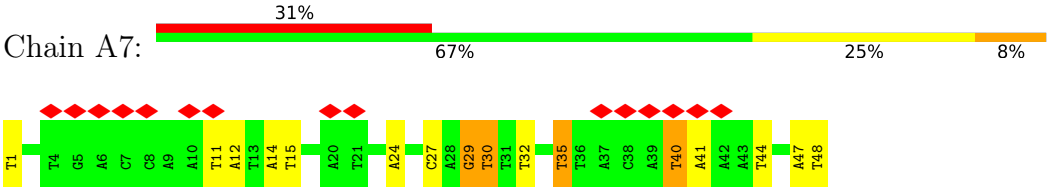
• Molecule 59: STAPLE STRAND

Chain A6:



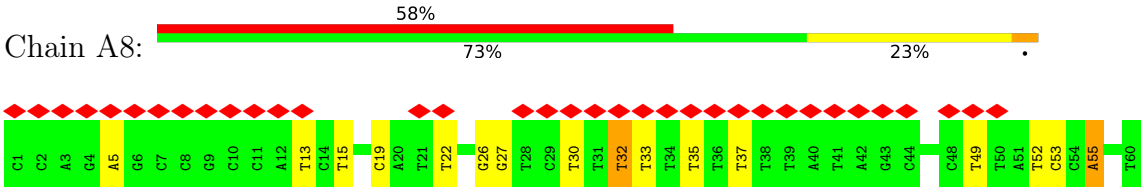
• Molecule 60: STAPLE STRAND

Chain A7:



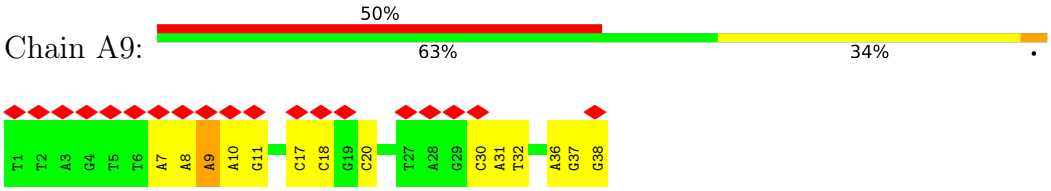
• Molecule 61: STAPLE STRAND

Chain A8:



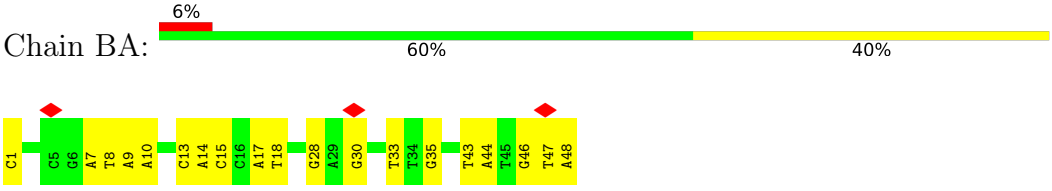
• Molecule 62: STAPLE STRAND

Chain A9:



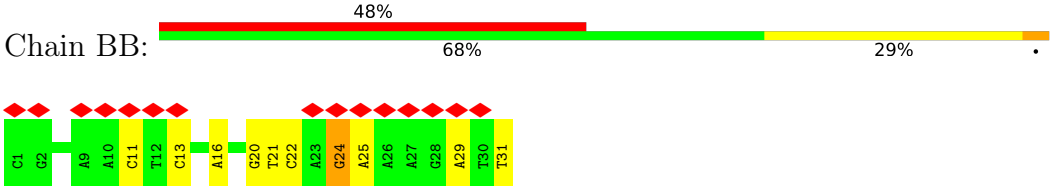
• Molecule 63: STAPLE STRAND

Chain BA:



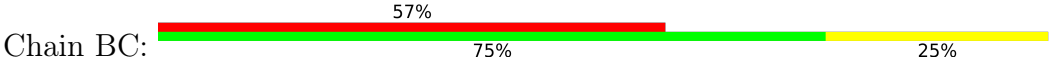
• Molecule 64: STAPLE STRAND

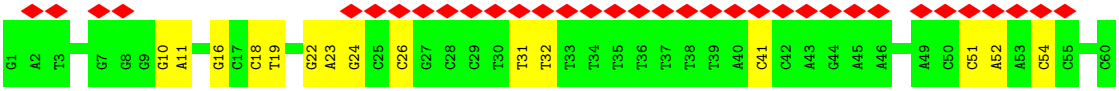
Chain BB:



• Molecule 65: STAPLE STRAND

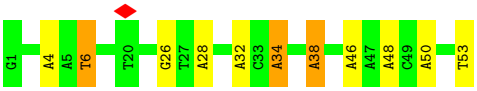
Chain BC:





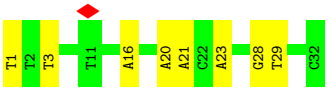
• Molecule 66: STAPLE STRAND

Chain BD:



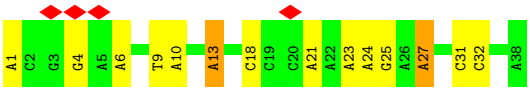
• Molecule 67: STAPLE STRAND

Chain BE:



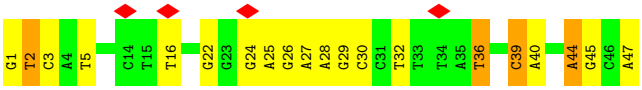
• Molecule 68: STAPLE STRAND

Chain BF:



• Molecule 69: STAPLE STRAND

Chain BG:

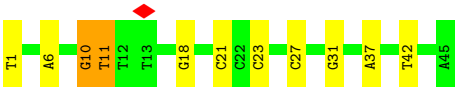


• Molecule 70: STAPLE STRAND

Chain BH:

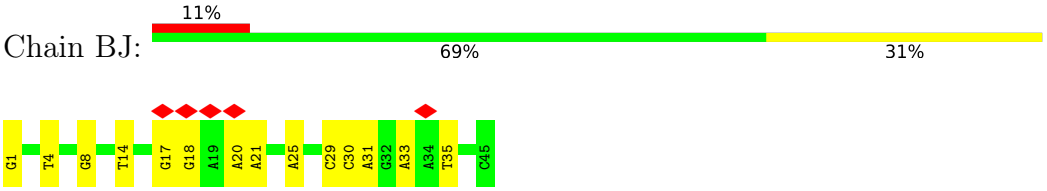
• Molecule 71: STAPLE STRAND

Chain BI:



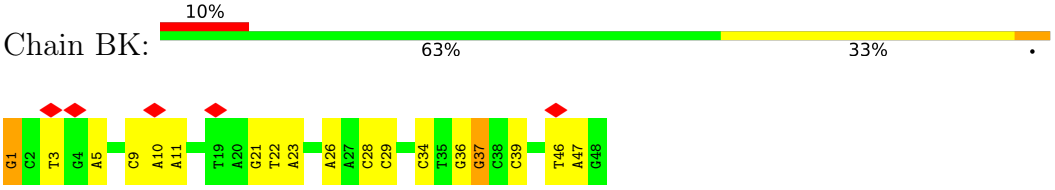
• Molecule 72: STAPLE STRAND

Chain BJ:



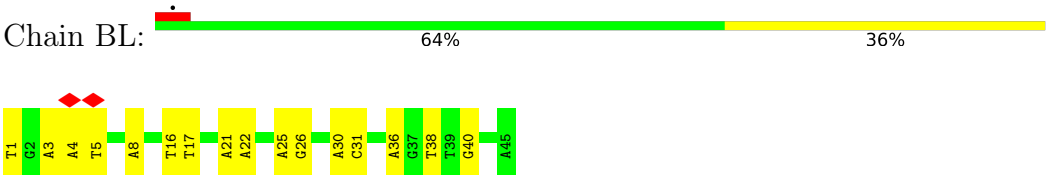
• Molecule 73: STAPLE STRAND

Chain BK:



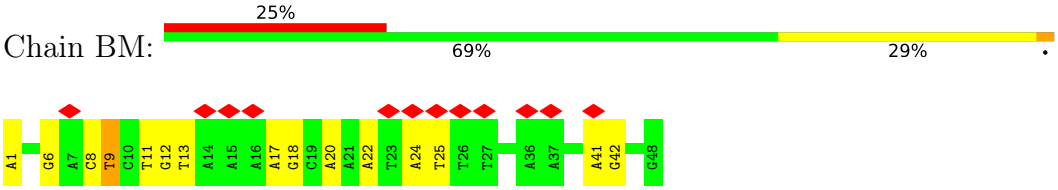
• Molecule 74: STAPLE STRAND

Chain BL:



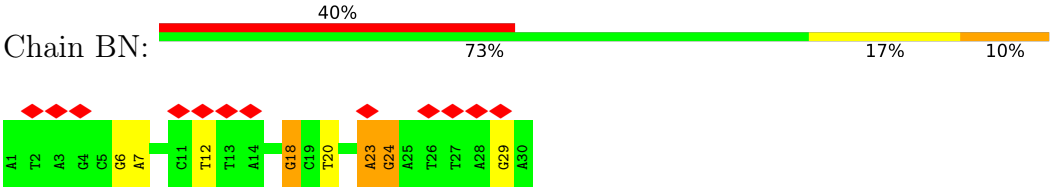
• Molecule 75: STAPLE STRAND

Chain BM:



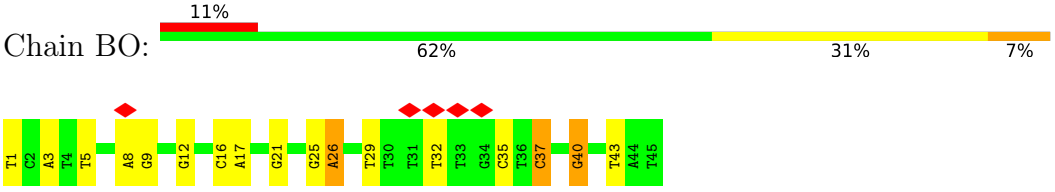
• Molecule 76: STAPLE STRAND

Chain BN:



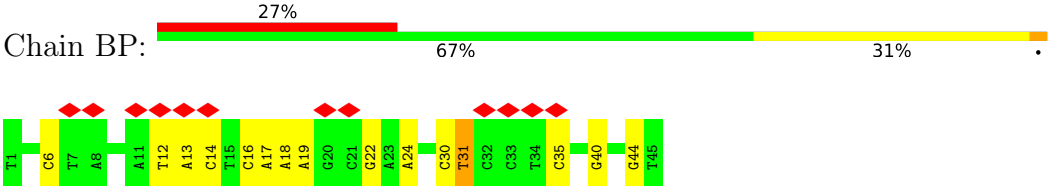
• Molecule 77: STAPLE STRAND

Chain BO:



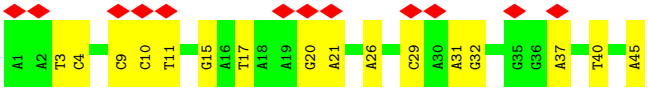
• Molecule 78: STAPLE STRAND

Chain BP:



• Molecule 79: STAPLE STRAND

Chain BQ:

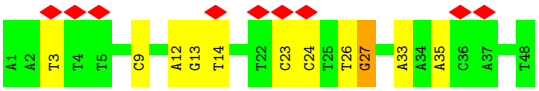


• Molecule 80: STAPLE STRAND

Chain BR:

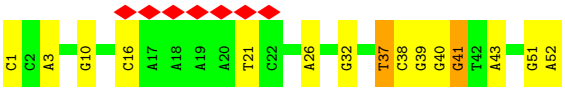
• Molecule 81: STAPLE STRAND

Chain BS:



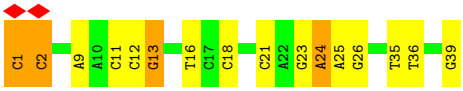
• Molecule 82: STAPLE STRAND

Chain BT:



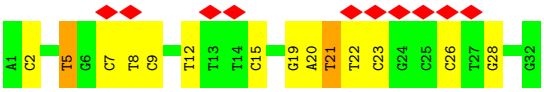
• Molecule 83: STAPLE STRAND

Chain BU:



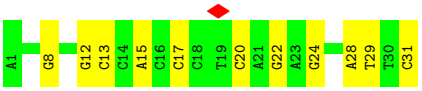
• Molecule 84: STAPLE STRAND

Chain BV:



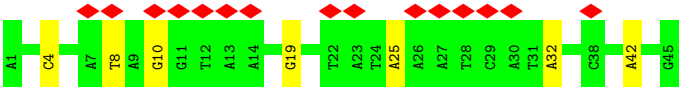
• Molecule 85: STAPLE STRAND

Chain BW:



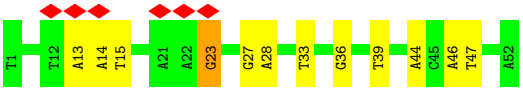
• Molecule 86: STAPLE STRAND

Chain BX:



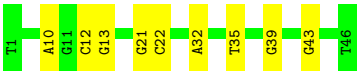
• Molecule 87: STAPLE STRAND

Chain BY:



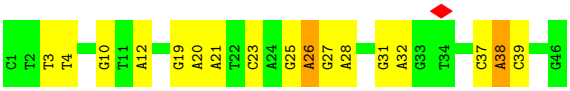
• Molecule 88: STAPLE STRAND

Chain BZ:



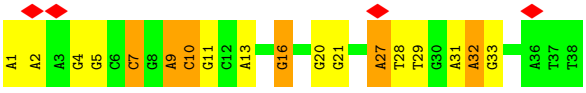
• Molecule 89: STAPLE STRAND

Chain Ba:



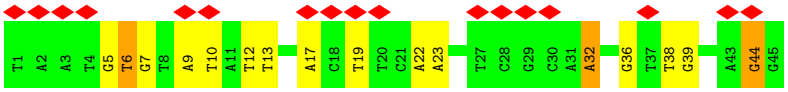
• Molecule 90: STAPLE STRAND

Chain Bb:



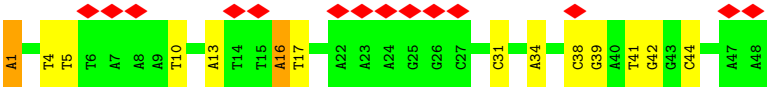
• Molecule 91: STAPLE STRAND

Chain Bc:



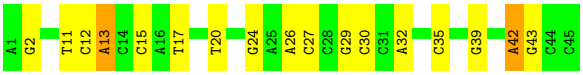
• Molecule 92: STAPLE STRAND

Chain Bd:



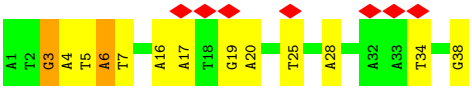
• Molecule 93: STAPLE STRAND

Chain Be:



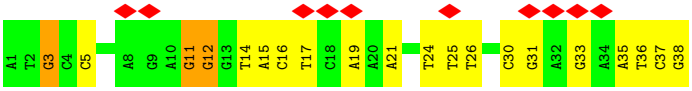
• Molecule 94: STAPLE STRAND

Chain Bf:



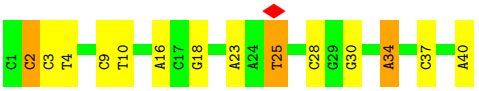
• Molecule 95: STAPLE STRAND

Chain Bg:



• Molecule 96: STAPLE STRAND

Chain Bh:

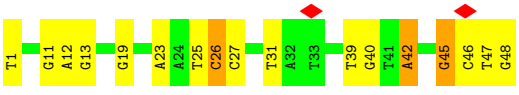


• Molecule 97: STAPLE STRAND

Chain Bi:

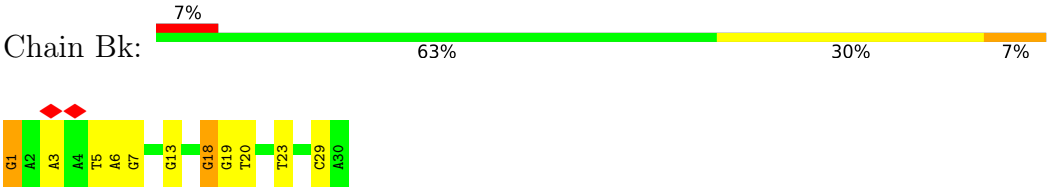
• Molecule 98: STAPLE STRAND

Chain Bj:



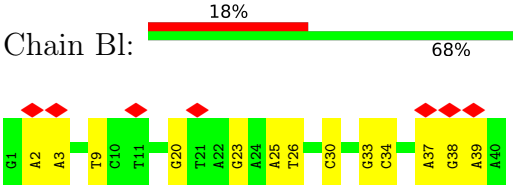
• Molecule 99: STAPLE STRAND

Chain Bk:



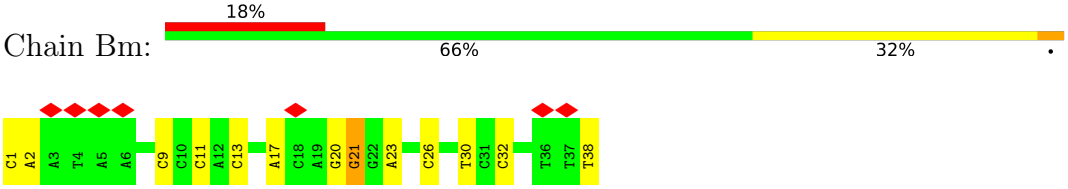
• Molecule 100: STAPLE STRAND

Chain Bl:



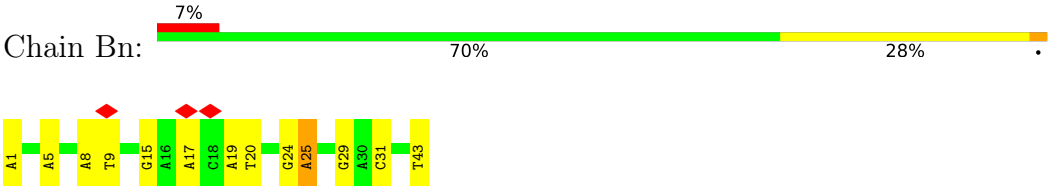
• Molecule 101: STAPLE STRAND

Chain Bm:



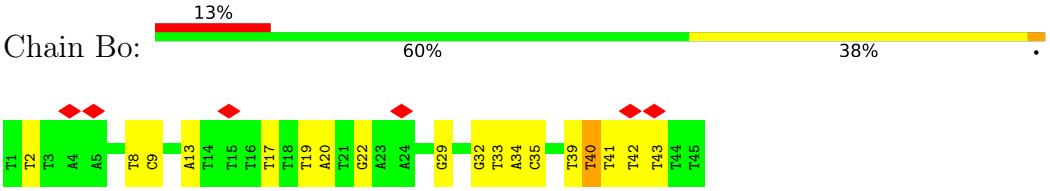
• Molecule 102: STAPLE STRAND

Chain Bn:



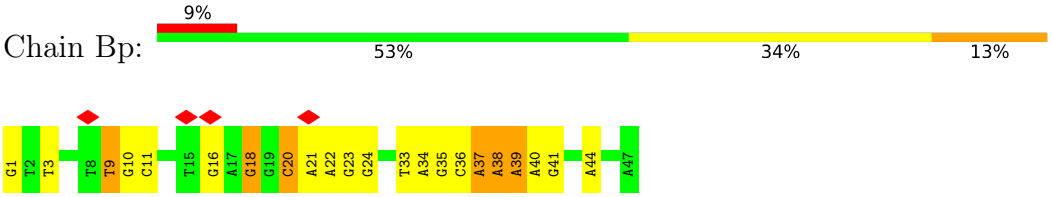
• Molecule 103: STAPLE STRAND

Chain Bo:



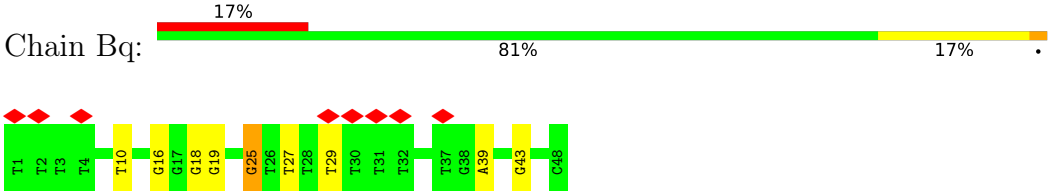
• Molecule 104: STAPLE STRAND

Chain Bp:



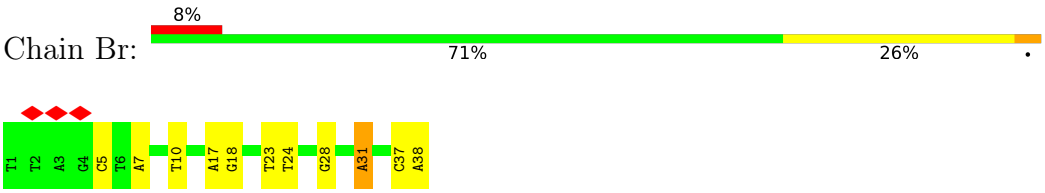
• Molecule 105: STAPLE STRAND

Chain Bq:



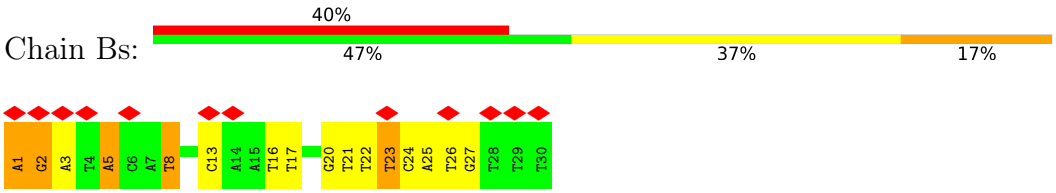
• Molecule 106: STAPLE STRAND

Chain Br:



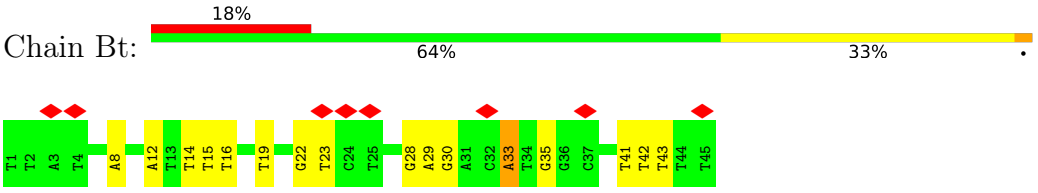
• Molecule 107: STAPLE STRAND

Chain Bs:



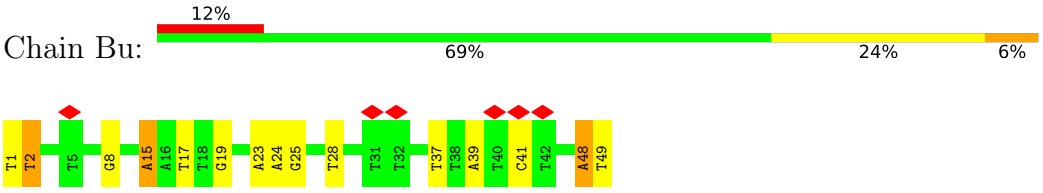
• Molecule 108: STAPLE STRAND

Chain Bt:



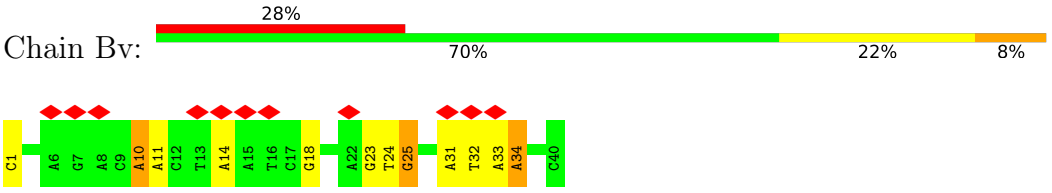
• Molecule 109: STAPLE STRAND

Chain Bu:



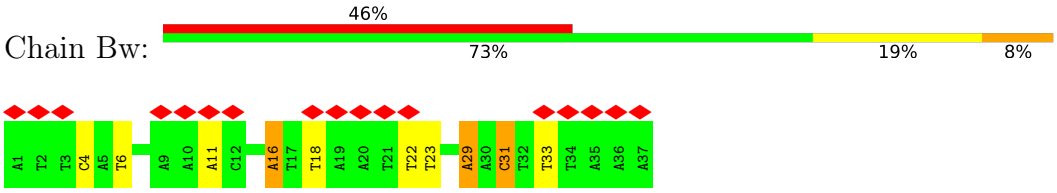
• Molecule 110: STAPLE STRAND

Chain Bv:



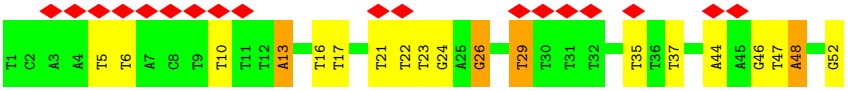
• Molecule 111: STAPLE STRAND

Chain Bw:

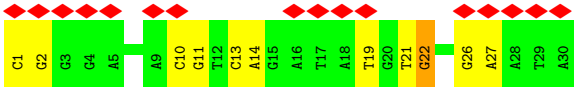


• Molecule 112: STAPLE STRAND

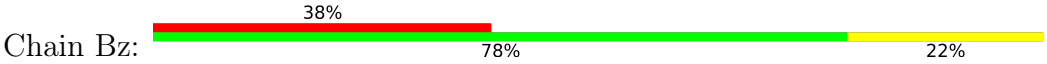
Chain Bx:

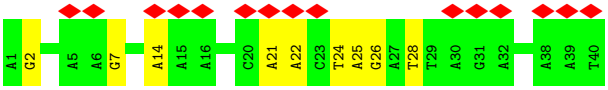


• Molecule 113: STAPLE STRAND

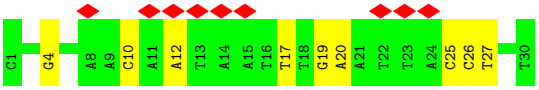


• Molecule 114: STAPLE STRAND



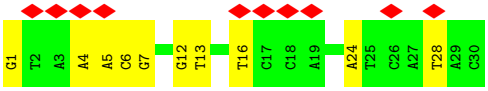


• Molecule 115: STAPLE STRAND



• Molecule 116: STAPLE STRAND

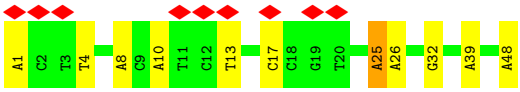
• Molecule 117: STAPLE STRAND



• Molecule 118: STAPLE STRAND

• Molecule 119: STAPLE STRAND

Chain B4:

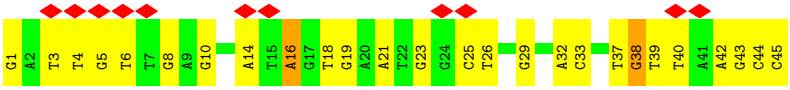


• Molecule 120: STAPLE STRAND

Chain B5:

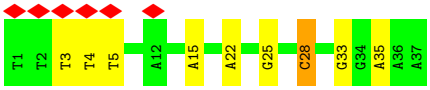
• Molecule 121: STAPLE STRAND

Chain B6:



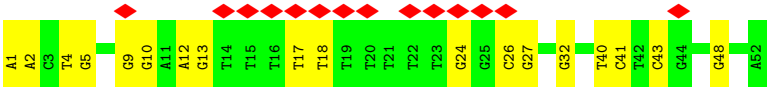
• Molecule 122: STAPLE STRAND

Chain B7:



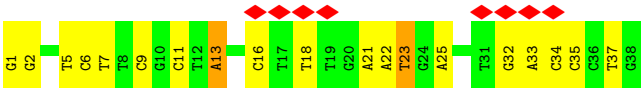
• Molecule 123: STAPLE STRAND

Chain B8:



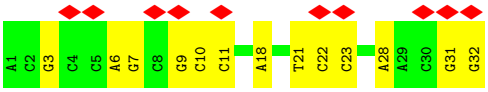
• Molecule 124: STAPLE STRAND

Chain B9:



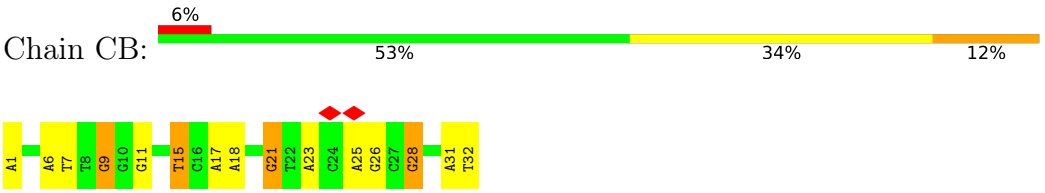
• Molecule 125: STAPLE STRAND

Chain CA:



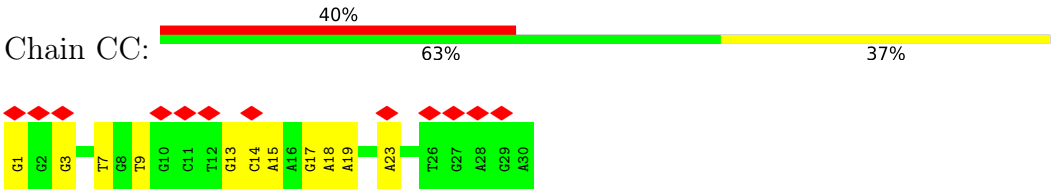
• Molecule 126: STAPLE STRAND

Chain CB:



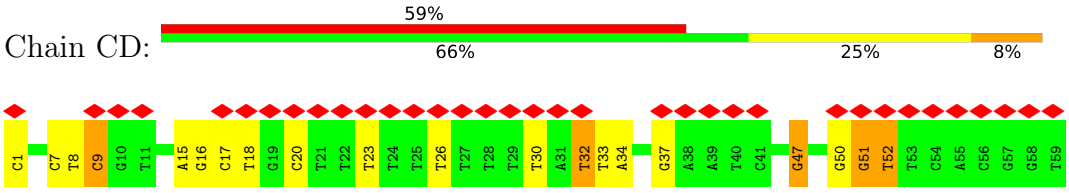
• Molecule 127: STAPLE STRAND

Chain CC:



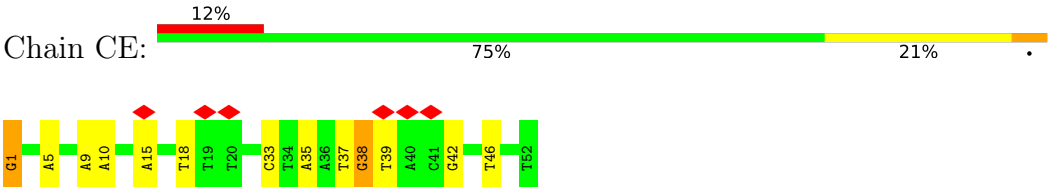
• Molecule 128: STAPLE STRAND

Chain CD:



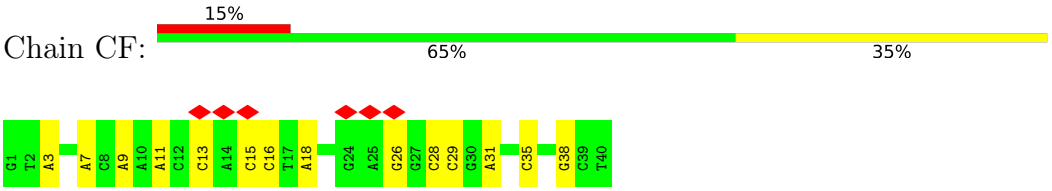
• Molecule 129: STAPLE STRAND

Chain CE:



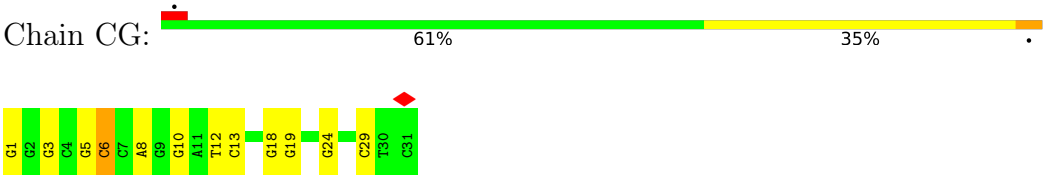
• Molecule 130: STAPLE STRAND

Chain CF:



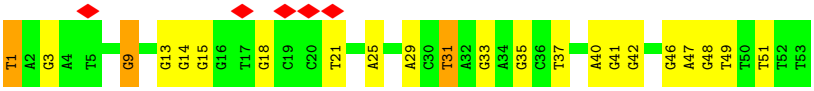
• Molecule 131: STAPLE STRAND

Chain CG:

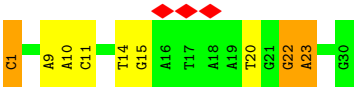


• Molecule 132: STAPLE STRAND

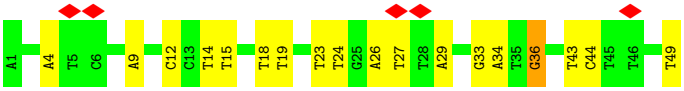
Chain CH:



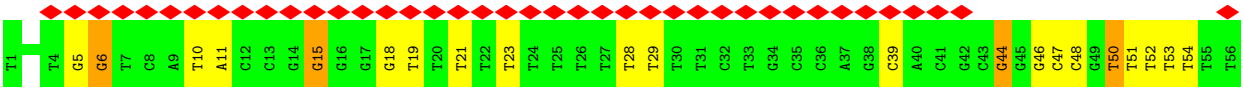
• Molecule 133: STAPLE STRAND



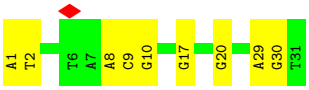
• Molecule 134: STAPLE STRAND



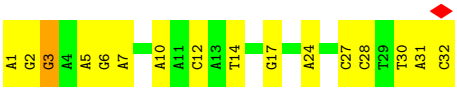
• Molecule 135: STAPLE STRAND



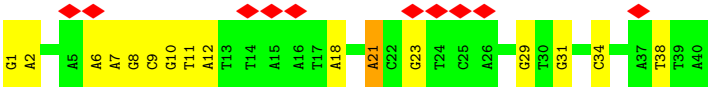
• Molecule 136: STAPLE STRAND



• Molecule 137: STAPLE STRAND

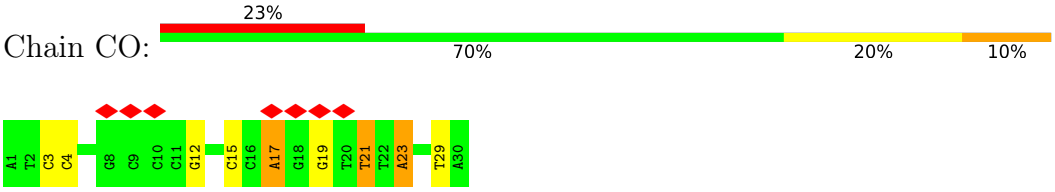


• Molecule 138: STAPLE STRAND



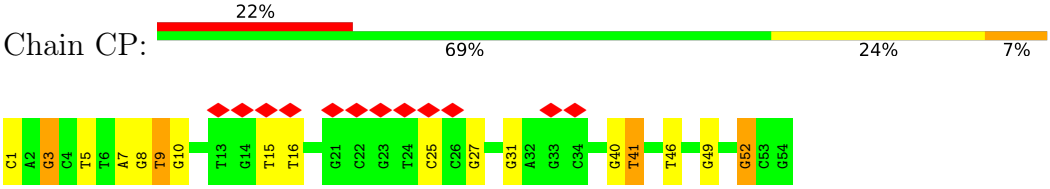
• Molecule 139: STAPLE STRAND

Chain CO:



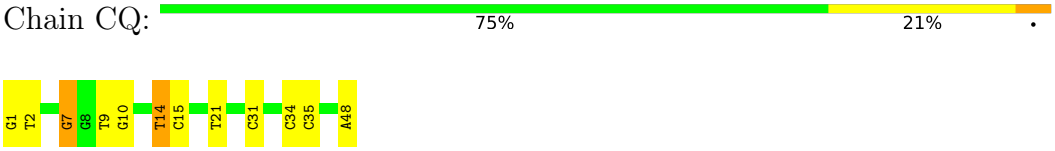
• Molecule 140: STAPLE STRAND

Chain CP:



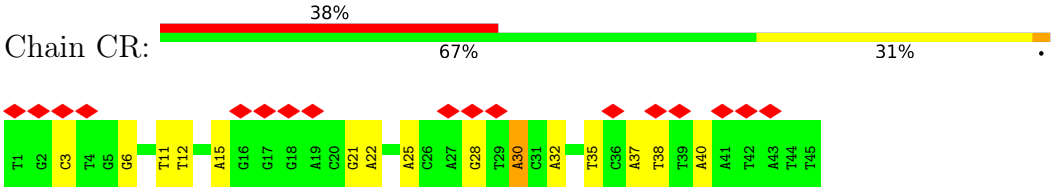
• Molecule 141: STAPLE STRAND

Chain CQ:



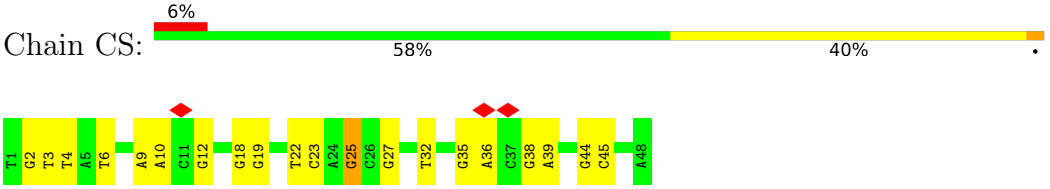
• Molecule 142: STAPLE STRAND

Chain CR:



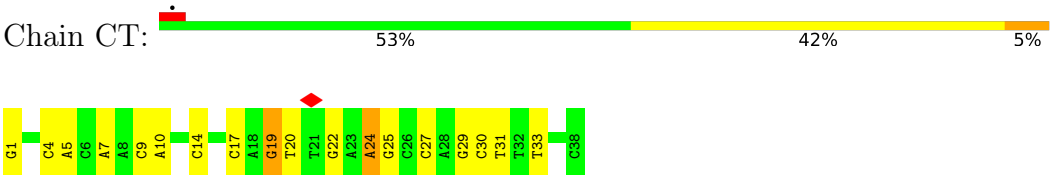
• Molecule 143: STAPLE STRAND

Chain CS:



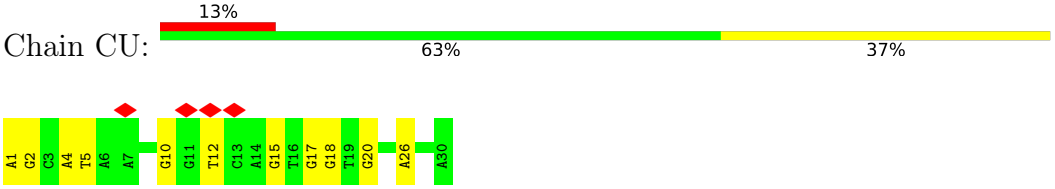
• Molecule 144: STAPLE STRAND

Chain CT:



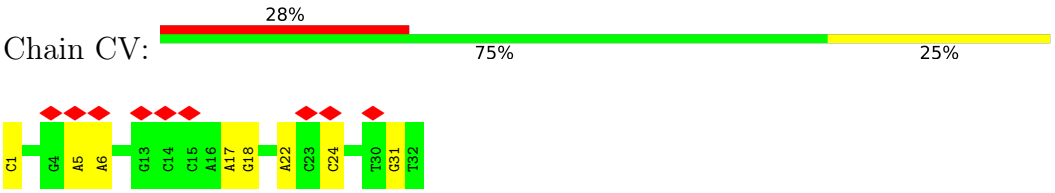
• Molecule 145: STAPLE STRAND

Chain CU:



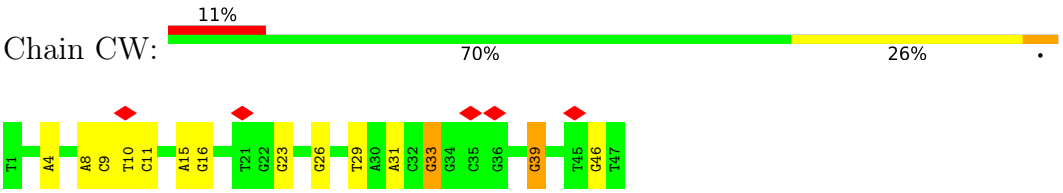
• Molecule 146: STAPLE STRAND

Chain CV:



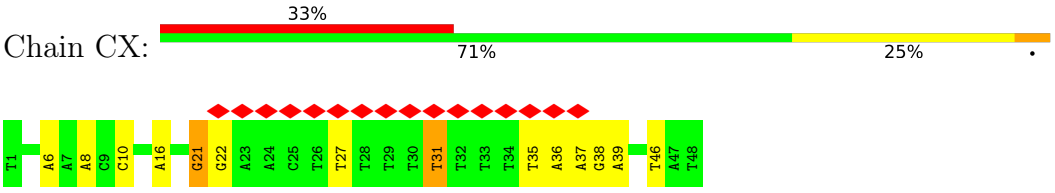
• Molecule 147: STAPLE STRAND

Chain CW:



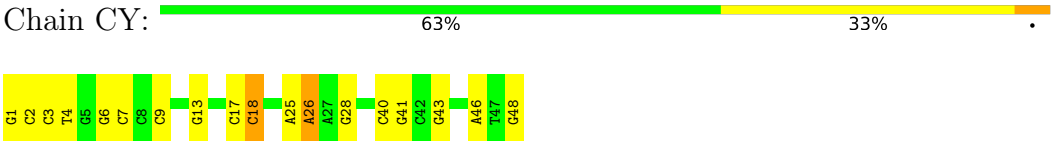
• Molecule 148: STAPLE STRAND

Chain CX:



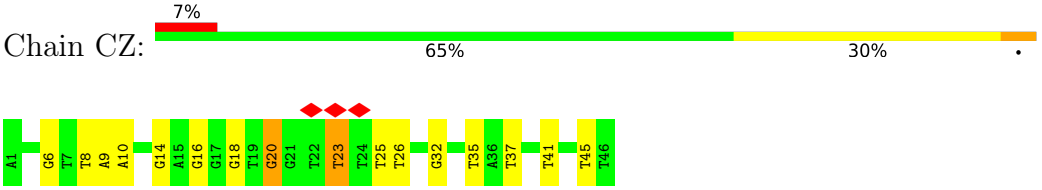
• Molecule 149: STAPLE STRAND

Chain CY:



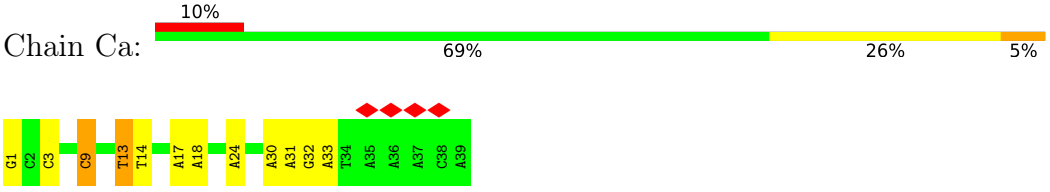
• Molecule 150: STAPLE STRAND

Chain CZ:



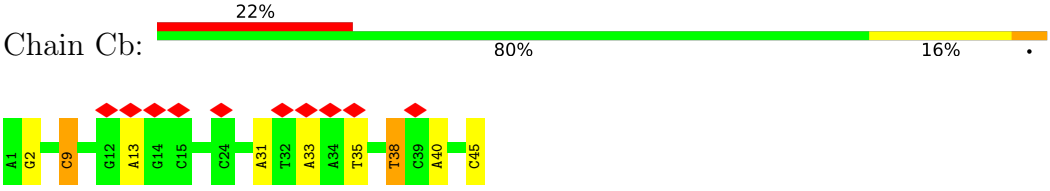
• Molecule 151: STAPLE STRAND

Chain Ca:



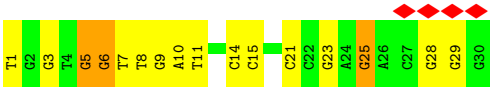
• Molecule 152: STAPLE STRAND

Chain Cb:



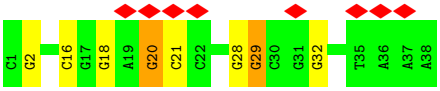
• Molecule 153: STAPLE STRAND

Chain Cc:



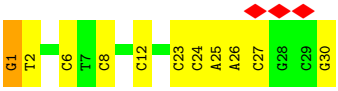
• Molecule 154: STAPLE STRAND

Chain Cd:



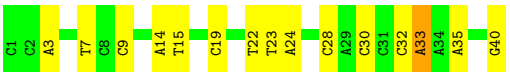
• Molecule 155: STAPLE STRAND

Chain Ce:



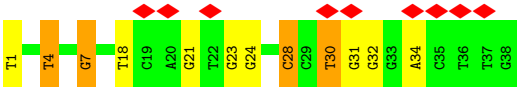
• Molecule 156: STAPLE STRAND

Chain Cf:



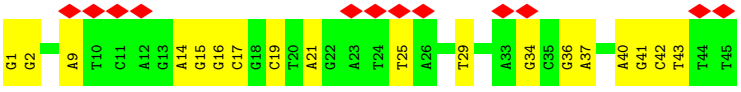
• Molecule 157: STAPLE STRAND

Chain Cg:



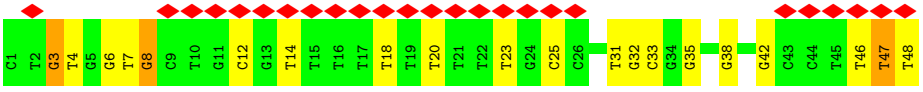
• Molecule 158: STAPLE STRAND

Chain Ch:



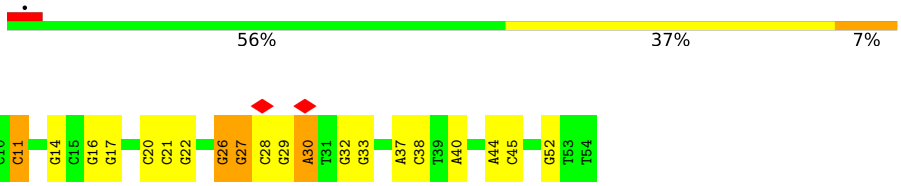
• Molecule 159: STAPLE STRAND

Chain Ci:



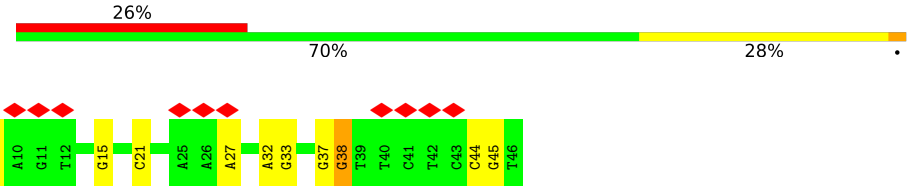
• Molecule 160: STAPLE STRAND

Chain Cj:



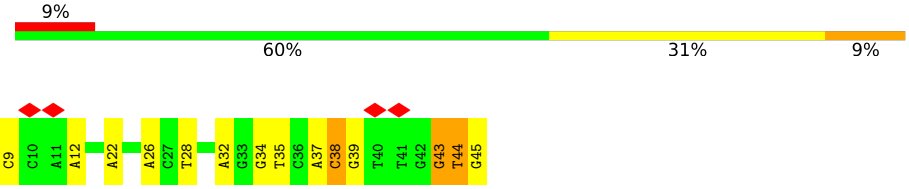
• Molecule 161: STAPLE STRAND

Chain Ck:



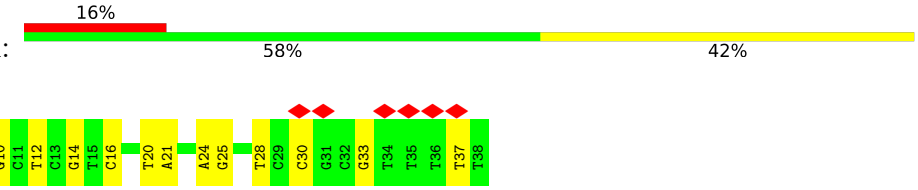
• Molecule 162: STAPLE STRAND

Chain Cl:



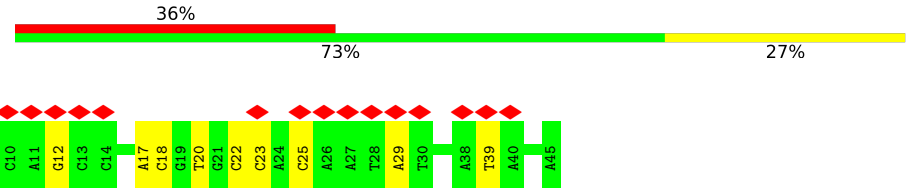
• Molecule 163: STAPLE STRAND

Chain Cm:



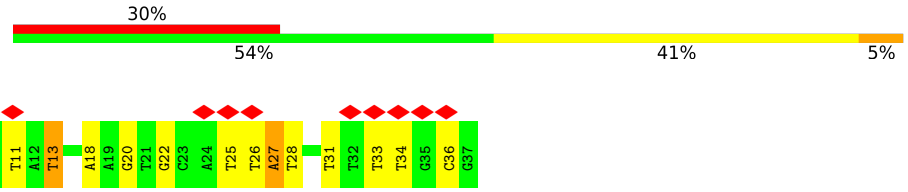
• Molecule 164: STAPLE STRAND

Chain Cn:



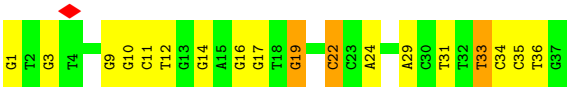
• Molecule 165: STAPLE STRAND

Chain Co:

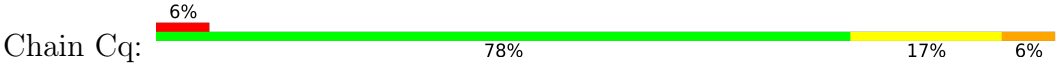


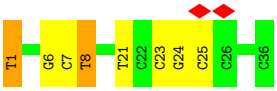
• Molecule 166: STAPLE STRAND

Chain Cp:



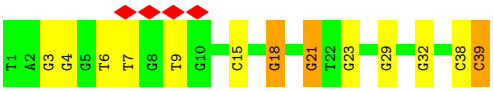
• Molecule 167: STAPLE STRAND



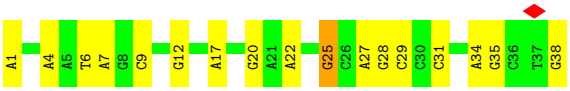


• Molecule 168: STAPLE STRAND

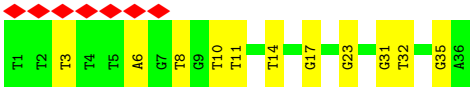
• Molecule 169: STAPLE STRAND



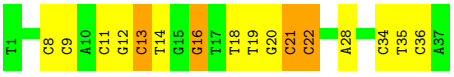
• Molecule 170: STAPLE STRAND



• Molecule 171: STAPLE STRAND

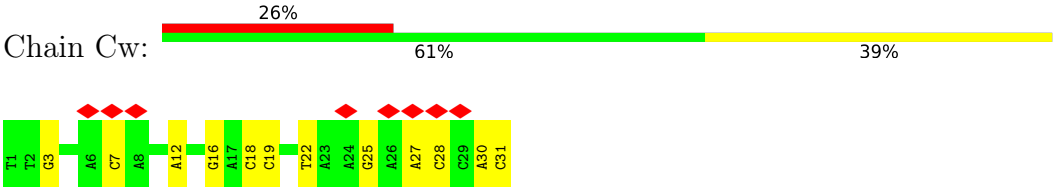


• Molecule 172: STAPLE STRAND



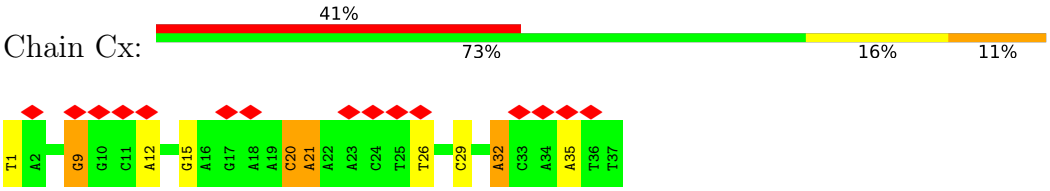
• Molecule 173: STAPLE STRAND

Chain Cw:



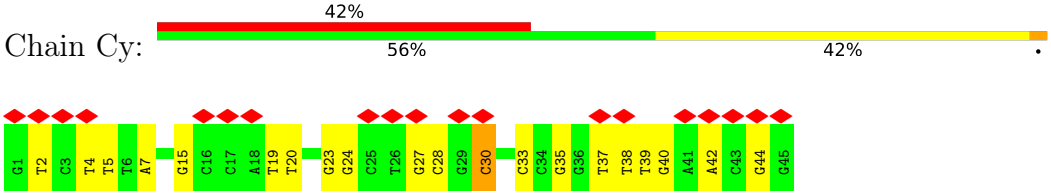
• Molecule 174: STAPLE STRAND

Chain Cx:



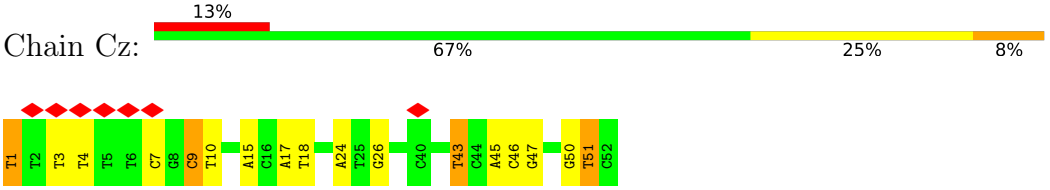
• Molecule 175: STAPLE STRAND

Chain Cy:



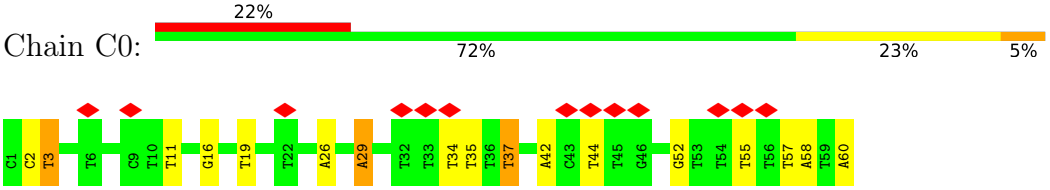
• Molecule 176: STAPLE STRAND

Chain Cz:



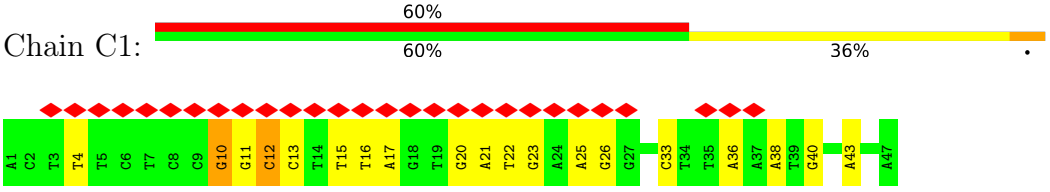
• Molecule 177: STAPLE STRAND

Chain C0:



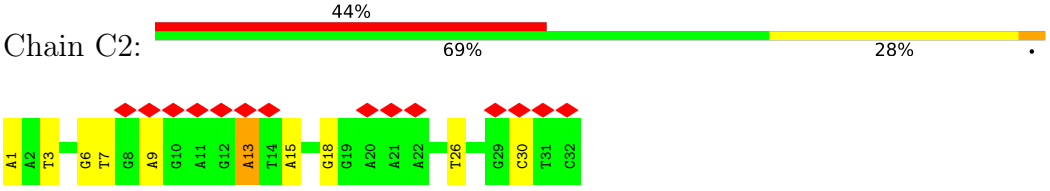
• Molecule 178: STAPLE STRAND

Chain C1:



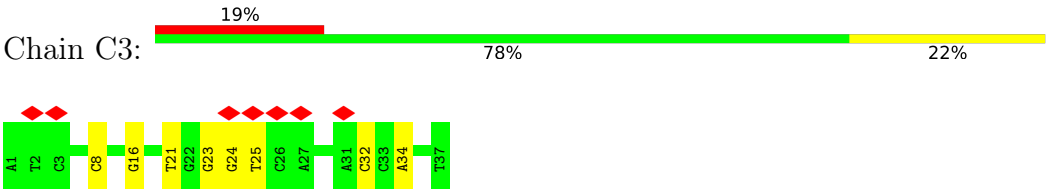
• Molecule 179: STAPLE STRAND

Chain C2:



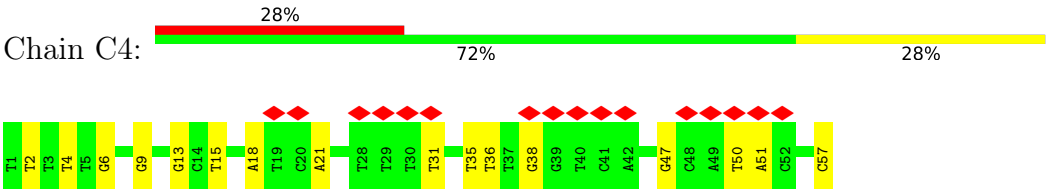
• Molecule 180: STAPLE STRAND

Chain C3:



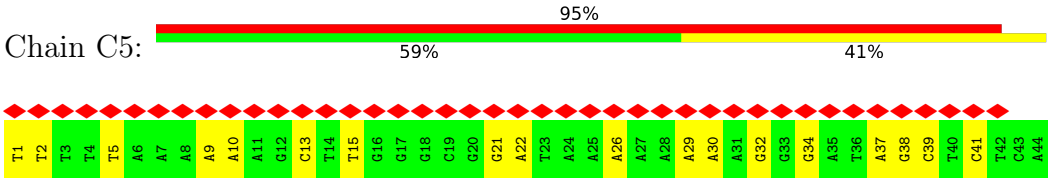
• Molecule 181: STAPLE STRAND

Chain C4:



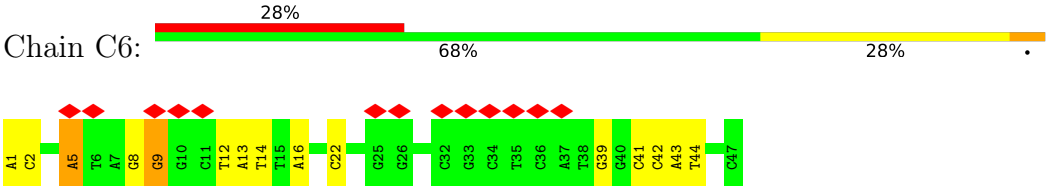
• Molecule 182: STAPLE STRAND

Chain C5:



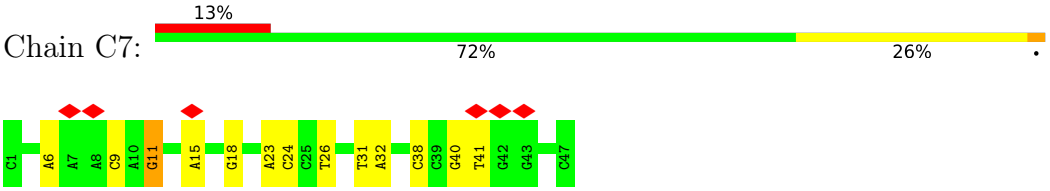
• Molecule 183: STAPLE STRAND

Chain C6:



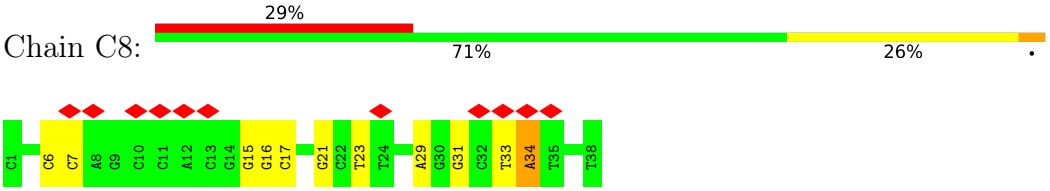
• Molecule 184: STAPLE STRAND

Chain C7:



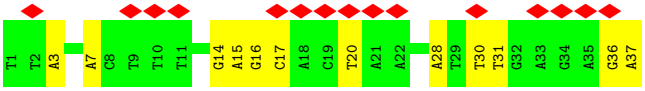
• Molecule 185: STAPLE STRAND

Chain C8:

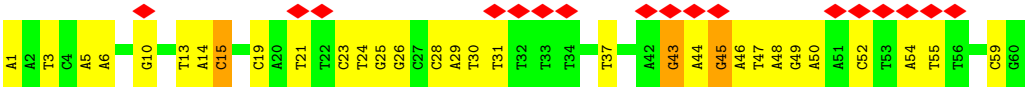


• Molecule 186: STAPLE STRAND

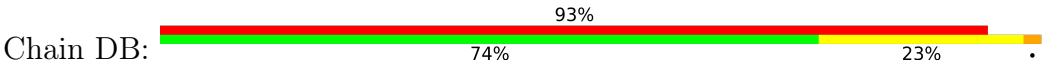
Chain C9:



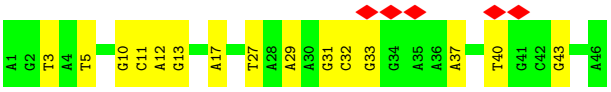
• Molecule 187: STAPLE STRAND



• Molecule 188: STAPLE STRAND

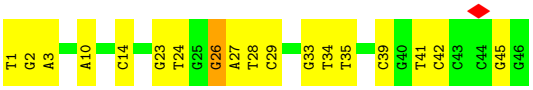


• Molecule 189: STAPLE STRAND

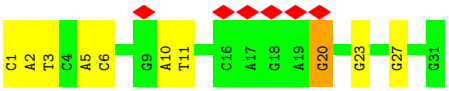


• Molecule 190: STAPLE STRAND

• Molecule 191: STAPLE STRAND



• Molecule 192: STAPLE STRAND



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	94834	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 ($e^-/Å^2$)	51	Depositor
Minimum defocus (nm)	328.5	Depositor
Maximum defocus (nm)	2444.2	Depositor
Magnification	47000	Depositor
Image detector	FEI FALCON III (4k x 4k)	Depositor
Maximum map value	0.793	Depositor
Minimum map value	-0.309	Depositor
Average map value	0.002	Depositor
Map value standard deviation	0.037	Depositor
Recommended contour level	0.11	Depositor
Map size (Å)	639.39996, 639.39996, 639.39996	wwPDB
Map dimensions	230, 230, 230	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	2.7799997, 2.7799997, 2.7799997	Depositor

5 Model quality

5.1 Standard geometry

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	AA	1.21	12/184801 (0.0%)	1.40	2511/285260 (0.9%)
2	AB	1.22	0/1095	1.44	18/1690 (1.1%)
3	AC	1.21	1/1228 (0.1%)	1.36	12/1894 (0.6%)
4	AD	1.20	0/1112	1.35	15/1716 (0.9%)
5	AE	1.24	0/1086	1.37	13/1672 (0.8%)
6	AF	1.20	0/1272	1.36	17/1962 (0.9%)
7	AG	1.17	0/1080	1.33	13/1665 (0.8%)
8	AH	1.19	0/714	1.39	11/1101 (1.0%)
9	AI	1.18	0/636	1.30	4/981 (0.4%)
10	AJ	1.19	0/1095	1.31	5/1687 (0.3%)
11	AK	1.26	0/737	1.45	10/1137 (0.9%)
12	AL	1.18	0/1193	1.38	18/1841 (1.0%)
13	AM	1.12	0/854	1.22	7/1315 (0.5%)
14	AN	1.17	0/1062	1.27	7/1639 (0.4%)
15	AO	1.20	0/1068	1.33	9/1646 (0.5%)
16	AP	1.20	0/1100	1.34	9/1697 (0.5%)
17	AQ	1.16	0/1085	1.26	8/1672 (0.5%)
18	AR	1.19	0/1056	1.24	3/1629 (0.2%)
19	AS	1.17	0/1135	1.22	7/1746 (0.4%)
20	AT	1.21	1/1078 (0.1%)	1.34	11/1660 (0.7%)
21	AU	1.22	0/927	1.28	6/1429 (0.4%)
22	AV	1.24	0/1025	1.44	15/1582 (0.9%)
23	AW	1.19	0/1103	1.24	4/1700 (0.2%)
24	AX	1.20	0/860	1.44	13/1326 (1.0%)
25	AY	1.20	0/1085	1.40	12/1674 (0.7%)
26	AZ	1.24	0/912	1.47	14/1404 (1.0%)
27	Aa	1.20	1/1220 (0.1%)	1.29	12/1881 (0.6%)
28	Ab	1.19	0/895	1.35	12/1380 (0.9%)
29	Ac	1.18	0/697	1.30	5/1072 (0.5%)
30	Ad	1.19	0/1046	1.44	19/1612 (1.2%)
31	Ae	1.18	0/1179	1.30	13/1818 (0.7%)
32	Af	1.23	0/1049	1.41	15/1616 (0.9%)
33	Ag	1.23	0/690	1.34	9/1065 (0.8%)
34	Ah	1.19	0/901	1.38	8/1389 (0.6%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
35	Ai	1.19	0/1095	1.28	12/1691 (0.7%)
36	Aj	1.20	0/924	1.43	12/1423 (0.8%)
37	Ak	1.18	0/870	1.45	11/1340 (0.8%)
38	Al	1.22	0/1274	1.38	10/1961 (0.5%)
39	Am	1.17	0/862	1.26	4/1329 (0.3%)
40	An	1.18	0/1022	1.34	7/1573 (0.4%)
41	Ao	1.19	0/1059	1.27	7/1632 (0.4%)
42	Ap	1.18	0/1089	1.42	15/1678 (0.9%)
43	Aq	1.24	0/746	1.40	8/1151 (0.7%)
44	Ar	1.23	0/1109	1.30	7/1712 (0.4%)
45	As	1.20	0/1119	1.46	24/1725 (1.4%)
46	At	1.19	0/1242	1.35	14/1914 (0.7%)
47	Au	1.11	0/1047	1.23	5/1612 (0.3%)
48	Av	1.16	0/1108	1.38	14/1708 (0.8%)
49	Aw	1.21	0/1074	1.21	6/1653 (0.4%)
50	Ax	1.18	0/1032	1.40	9/1588 (0.6%)
51	Ay	1.28	0/725	1.29	2/1119 (0.2%)
52	Az	1.20	0/689	1.36	9/1061 (0.8%)
53	A0	1.22	0/726	1.38	6/1116 (0.5%)
54	A1	1.22	0/1106	1.38	11/1705 (0.6%)
55	A2	1.15	0/1059	1.33	13/1631 (0.8%)
56	A3	1.23	0/691	1.32	8/1065 (0.8%)
57	A4	1.16	0/1025	1.32	8/1578 (0.5%)
58	A5	1.14	0/1036	1.26	6/1598 (0.4%)
59	A6	1.24	0/1121	1.47	16/1730 (0.9%)
60	A7	1.16	0/1094	1.32	14/1686 (0.8%)
61	A8	1.21	0/1343	1.47	15/2068 (0.7%)
62	A9	1.28	5/875 (0.6%)	1.32	8/1348 (0.6%)
63	BA	1.19	0/1102	1.41	15/1697 (0.9%)
64	BB	1.29	1/718 (0.1%)	1.38	10/1106 (0.9%)
65	BC	1.19	0/1371	1.30	16/2113 (0.8%)
66	BD	1.22	0/1225	1.33	7/1888 (0.4%)
67	BE	1.17	0/727	1.33	5/1118 (0.4%)
68	BF	1.21	0/878	1.37	8/1352 (0.6%)
69	BG	1.22	0/1072	1.40	15/1654 (0.9%)
70	BH	1.15	0/1291	1.26	14/1993 (0.7%)
71	BI	1.24	0/1029	1.26	4/1585 (0.3%)
72	BJ	1.20	0/1043	1.35	7/1609 (0.4%)
73	BK	1.20	0/1100	1.34	13/1696 (0.8%)
74	BL	1.20	0/1029	1.39	13/1586 (0.8%)
75	BM	1.23	0/1114	1.36	12/1719 (0.7%)
76	BN	1.20	0/695	1.38	8/1072 (0.7%)
77	BO	1.26	1/1024 (0.1%)	1.38	13/1577 (0.8%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
78	BP	1.25	0/1035	1.42	9/1594 (0.6%)
79	BQ	1.18	0/1046	1.31	6/1614 (0.4%)
80	BR	1.21	0/861	1.33	6/1326 (0.5%)
81	BS	1.11	0/1088	1.21	7/1675 (0.4%)
82	BT	1.24	0/1205	1.35	10/1858 (0.5%)
83	BU	1.23	0/876	1.51	18/1347 (1.3%)
84	BV	1.20	0/721	1.39	10/1110 (0.9%)
85	BW	1.16	0/699	1.38	8/1074 (0.7%)
86	BX	1.21	0/1024	1.31	5/1576 (0.3%)
87	BY	1.17	0/1196	1.37	10/1844 (0.5%)
88	BZ	1.20	0/1078	1.26	7/1666 (0.4%)
89	Ba	1.21	0/1073	1.35	12/1656 (0.7%)
90	Bb	1.27	0/893	1.38	13/1379 (0.9%)
91	Bc	1.23	0/1035	1.37	16/1597 (1.0%)
92	Bd	1.20	0/1109	1.31	9/1709 (0.5%)
93	Be	1.18	0/1019	1.38	15/1566 (1.0%)
94	Bf	1.20	0/870	1.34	8/1341 (0.6%)
95	Bg	1.23	0/880	1.49	18/1358 (1.3%)
96	Bh	1.20	0/916	1.35	12/1409 (0.9%)
97	Bi	1.16	0/1108	1.44	17/1708 (1.0%)
98	Bj	1.22	0/1117	1.48	16/1723 (0.9%)
99	Bk	1.21	0/699	1.43	13/1078 (1.2%)
100	Bl	1.21	0/935	1.39	11/1443 (0.8%)
101	Bm	1.18	0/869	1.37	9/1337 (0.7%)
102	Bn	1.18	0/984	1.27	10/1517 (0.7%)
103	Bo	1.21	1/1021 (0.1%)	1.36	11/1574 (0.7%)
104	Bp	1.32	3/1098 (0.3%)	1.67	28/1695 (1.7%)
105	Bq	1.19	0/1100	1.26	4/1699 (0.2%)
106	Br	1.19	0/872	1.31	8/1345 (0.6%)
107	Bs	1.18	0/680	1.46	14/1048 (1.3%)
108	Bt	1.19	0/1028	1.41	12/1586 (0.8%)
109	Bu	1.18	0/1123	1.33	11/1734 (0.6%)
110	Bv	1.22	0/916	1.39	10/1410 (0.7%)
111	Bw	1.14	0/844	1.32	10/1299 (0.8%)
112	Bx	1.14	0/1182	1.26	8/1824 (0.4%)
113	By	1.19	0/705	1.47	13/1089 (1.2%)
114	Bz	1.18	0/925	1.36	9/1425 (0.6%)
115	B0	1.18	0/688	1.23	3/1060 (0.3%)
116	B1	1.13	0/1190	1.31	13/1838 (0.7%)
117	B2	1.20	0/690	1.29	7/1063 (0.7%)
118	B3	1.19	0/1283	1.26	9/1977 (0.5%)
119	B4	1.20	0/1112	1.34	8/1715 (0.5%)
120	B5	1.17	0/707	1.30	3/1090 (0.3%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
121	B6	1.20	0/1043	1.36	14/1611 (0.9%)
122	B7	1.21	0/855	1.31	5/1319 (0.4%)
123	B8	1.23	0/1192	1.28	12/1841 (0.7%)
124	B9	1.24	0/857	1.38	11/1320 (0.8%)
125	CA	1.21	0/721	1.38	11/1108 (1.0%)
126	CB	1.20	0/736	1.47	10/1135 (0.9%)
127	CC	1.26	0/703	1.39	9/1086 (0.8%)
128	CD	1.26	5/1341 (0.4%)	1.45	21/2068 (1.0%)
129	CE	1.19	0/1192	1.32	8/1837 (0.4%)
130	CF	1.21	0/918	1.38	7/1413 (0.5%)
131	CG	1.30	0/700	1.42	10/1077 (0.9%)
132	CH	1.24	0/1233	1.49	19/1906 (1.0%)
133	CI	1.23	0/689	1.50	13/1062 (1.2%)
134	CJ	1.17	0/1098	1.33	11/1693 (0.6%)
135	CK	1.21	0/1268	1.37	21/1957 (1.1%)
136	CL	1.20	0/719	1.39	9/1110 (0.8%)
137	CM	1.24	0/734	1.46	10/1130 (0.9%)
138	CN	1.22	0/932	1.36	12/1438 (0.8%)
139	CO	1.19	0/679	1.37	9/1045 (0.9%)
140	CP	1.23	0/1238	1.39	15/1911 (0.8%)
141	CQ	1.21	0/1094	1.35	5/1685 (0.3%)
142	CR	1.21	0/1035	1.30	8/1597 (0.5%)
143	CS	1.22	0/1103	1.43	16/1701 (0.9%)
144	CT	1.21	0/862	1.55	16/1326 (1.2%)
145	CU	1.23	0/697	1.34	6/1075 (0.6%)
146	CV	1.17	0/732	1.25	1/1127 (0.1%)
147	CW	1.19	0/1090	1.30	12/1683 (0.7%)
148	CX	1.19	0/1087	1.39	14/1676 (0.8%)
149	CY	1.25	0/1121	1.42	15/1731 (0.9%)
150	CZ	1.20	0/1061	1.35	14/1640 (0.9%)
151	Ca	1.19	0/898	1.29	6/1383 (0.4%)
152	Cb	1.22	0/1052	1.28	6/1624 (0.4%)
153	Cc	1.19	0/690	1.38	7/1065 (0.7%)
154	Cd	1.22	0/875	1.44	13/1349 (1.0%)
155	Ce	1.21	0/673	1.29	3/1035 (0.3%)
156	Cf	1.20	0/900	1.47	11/1382 (0.8%)
157	Cg	1.21	0/874	1.31	6/1348 (0.4%)
158	Ch	1.20	0/1043	1.36	9/1610 (0.6%)
159	Ci	1.24	0/1089	1.55	26/1681 (1.5%)
160	Cj	1.29	0/1242	1.47	17/1916 (0.9%)
161	Ck	1.22	0/1067	1.42	21/1646 (1.3%)
162	Cl	1.24	0/1021	1.43	15/1573 (1.0%)
163	Cm	1.21	0/852	1.45	13/1312 (1.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
164	Cn	1.16	0/1030	1.28	6/1585 (0.4%)
165	Co	1.17	0/840	1.47	17/1295 (1.3%)
166	Cp	1.25	0/841	1.43	13/1296 (1.0%)
167	Cq	1.23	0/817	1.40	8/1259 (0.6%)
168	Cr	1.24	0/872	1.38	14/1345 (1.0%)
169	Cs	1.22	0/901	1.29	7/1392 (0.5%)
170	Ct	1.25	0/880	1.46	13/1356 (1.0%)
171	Cu	1.23	0/823	1.33	6/1270 (0.5%)
172	Cv	1.25	0/834	1.41	11/1285 (0.9%)
173	Cw	1.18	0/707	1.33	6/1087 (0.6%)
174	Cx	1.19	0/858	1.41	11/1322 (0.8%)
175	Cy	1.23	0/1027	1.37	8/1583 (0.5%)
176	Cz	1.21	0/1186	1.37	11/1830 (0.6%)
177	C0	1.15	0/1354	1.36	17/2088 (0.8%)
178	C1	1.18	0/1082	1.30	10/1669 (0.6%)
179	C2	1.21	0/742	1.38	7/1145 (0.6%)
180	C3	1.24	0/849	1.39	7/1309 (0.5%)
181	C4	1.16	0/1294	1.33	13/1996 (0.7%)
182	C5	1.19	0/1025	1.46	19/1582 (1.2%)
183	C6	1.20	0/1077	1.37	11/1659 (0.7%)
184	C7	1.18	0/1076	1.37	10/1656 (0.6%)
185	C8	1.18	0/863	1.30	6/1329 (0.5%)
186	C9	1.19	0/863	1.32	7/1332 (0.5%)
187	DA	1.18	0/1374	1.40	22/2118 (1.0%)
188	DB	1.23	0/980	1.43	10/1511 (0.7%)
189	DC	1.17	0/1075	1.31	11/1658 (0.7%)
190	DD	1.17	0/869	1.39	12/1339 (0.9%)
191	DE	1.21	0/1056	1.35	13/1627 (0.8%)
192	DF	1.19	0/718	1.35	9/1107 (0.8%)
All	All	1.21	31/372075 (0.0%)	1.38	4574/573956 (0.8%)

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
1	AA	26	1811
2	AB	0	10
3	AC	0	13
4	AD	0	12
5	AE	0	5

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Mol	Chain	#Chirality outliers	#Planarity outliers
6	AF	0	17
7	AG	0	5
8	AH	0	6
9	AI	0	6
10	AJ	0	7
11	AK	0	4
12	AL	0	5
13	AM	0	2
14	AN	0	8
15	AO	0	8
16	AP	0	10
17	AQ	0	7
18	AR	0	10
19	AS	0	12
20	AT	0	8
21	AU	0	12
22	AV	0	6
23	AW	0	10
24	AX	0	9
25	AY	0	9
26	AZ	0	7
27	Aa	0	12
28	Ab	0	7
29	Ac	0	4
30	Ad	0	8
31	Ae	0	10
32	Af	0	9
33	Ag	0	6
34	Ah	0	3
35	Ai	0	14
36	Aj	0	5
37	Ak	0	2
38	Al	0	9
39	Am	0	6
40	An	0	12
41	Ao	0	7
42	Ap	0	6
43	Aq	0	11
44	Ar	0	11
45	As	0	5
46	At	0	10
47	Au	0	7

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Mol	Chain	#Chirality outliers	#Planarity outliers
48	Av	0	8
49	Aw	0	5
50	Ax	0	9
51	Ay	0	6
52	Az	0	7
53	A0	0	5
54	A1	0	9
55	A2	0	8
56	A3	0	6
57	A4	0	7
58	A5	0	5
59	A6	0	9
60	A7	0	10
61	A8	0	11
62	A9	0	7
63	BA	0	7
64	BB	0	7
65	BC	0	6
66	BD	0	7
67	BE	0	5
68	BF	0	10
69	BG	0	15
70	BH	0	10
71	BI	0	9
72	BJ	0	9
73	BK	0	13
74	BL	0	8
75	BM	0	9
76	BN	0	6
77	BO	0	11
78	BP	0	12
79	BQ	0	12
80	BR	0	10
81	BS	0	8
82	BT	0	12
83	BU	0	7
84	BV	0	9
85	BW	0	5
86	BX	0	2
87	BY	0	6
88	BZ	0	4
89	Ba	0	10

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Mol	Chain	#Chirality outliers	#Planarity outliers
90	Bb	0	16
91	Bc	0	8
92	Bd	0	8
93	Be	0	9
94	Bf	0	9
95	Bg	0	11
96	Bh	0	9
97	Bi	0	11
98	Bj	0	9
99	Bk	0	5
100	Bl	0	5
101	Bm	0	9
102	Bn	0	6
103	Bo	0	11
104	Bp	0	12
105	Bq	0	7
106	Br	0	7
107	Bs	0	12
108	Bt	0	8
109	Bu	0	11
110	Bv	0	8
111	Bw	0	9
112	Bx	0	17
113	By	0	4
114	Bz	0	4
115	B0	0	6
116	B1	0	13
117	B2	0	4
118	B3	0	14
119	B4	0	5
120	B5	0	6
121	B6	0	17
122	B7	0	5
123	B8	0	12
124	B9	0	14
125	CA	0	5
126	CB	0	13
127	CC	0	6
128	CD	0	12
129	CE	0	9
130	CF	0	7
131	CG	0	7

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Mol	Chain	#Chirality outliers	#Planarity outliers
132	CH	0	14
133	CI	0	4
134	CJ	0	11
135	CK	0	11
136	CL	0	4
137	CM	0	9
138	CN	0	8
139	CO	0	7
140	CP	0	12
141	CQ	0	11
142	CR	0	9
143	CS	0	11
144	CT	0	11
145	CU	0	6
146	CV	0	7
147	CW	0	9
148	CX	0	8
149	CY	0	9
150	CZ	0	10
151	Ca	0	9
152	Cb	0	5
153	Cc	0	14
154	Cd	0	4
155	Ce	0	10
156	Cf	0	7
157	Cg	0	11
158	Ch	0	11
159	Ci	0	8
160	Cj	0	18
161	Ck	0	6
162	Cl	0	11
163	Cm	0	7
164	Cn	0	7
165	Co	0	8
166	Cp	0	11
167	Cq	0	4
168	Cr	0	11
169	Cs	0	12
170	Ct	0	9
171	Cu	0	5
172	Cv	0	11
173	Cw	0	7

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Mol	Chain	#Chirality outliers	#Planarity outliers
174	Cx	0	8
175	Cy	0	16
176	Cz	0	13
177	C0	0	11
178	C1	0	12
179	C2	0	6
180	C3	0	2
181	C4	0	8
182	C5	0	7
183	C6	0	11
184	C7	0	8
185	C8	0	9
186	C9	0	7
187	DA	0	16
188	DB	0	5
189	DC	0	6
190	DD	0	9
191	DE	0	10
192	DF	0	4
All	All	26	3449

All (31) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
128	CD	51	DG	C4'-C3'	7.13	1.60	1.53
62	A9	9	DA	C5'-C4'	6.85	1.58	1.51
128	CD	52	DT	C5'-C4'	6.70	1.58	1.51
128	CD	51	DG	C5'-C4'	6.17	1.58	1.51
104	Bp	22	DA	C5'-C4'	6.02	1.57	1.51
128	CD	52	DT	C4'-O4'	5.99	1.51	1.45
62	A9	9	DA	C4'-C3'	5.96	1.59	1.53
1	AA	4167	DG	C5'-C4'	5.80	1.57	1.51
64	BB	25	DA	C5'-C4'	5.78	1.57	1.51
103	Bo	43	DT	C5'-C4'	5.61	1.57	1.51
128	CD	52	DT	C4'-C3'	5.59	1.58	1.53
1	AA	1652	DA	C5'-C4'	5.58	1.57	1.51
1	AA	1418	DC	C5'-C4'	5.54	1.57	1.51
3	AC	24	DA	C5'-C4'	5.49	1.57	1.51
1	AA	596	DA	C4'-C3'	5.42	1.58	1.53
104	Bp	21	DA	C5'-C4'	5.40	1.57	1.51
1	AA	584	DT	C5'-C4'	5.31	1.57	1.51
1	AA	4419	DG	C2-N2	-5.31	1.29	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	7674	DG	C2-N2	-5.31	1.29	1.34
1	AA	3613	DT	C5'-C4'	5.29	1.57	1.51
27	Aa	9	DA	O3'-P	-5.20	1.54	1.61
20	AT	40	DG	C5'-C4'	5.16	1.57	1.51
62	A9	9	DA	C4'-O4'	5.12	1.50	1.45
62	A9	10	DA	C5'-C4'	5.11	1.56	1.51
1	AA	5010	DA	C5'-C4'	5.10	1.56	1.51
1	AA	7575	DA	C5'-C4'	5.10	1.56	1.51
77	BO	16	DC	C5'-C4'	5.10	1.56	1.51
62	A9	11	DG	C5'-C4'	5.10	1.56	1.51
1	AA	1155	DG	C5'-C4'	5.08	1.56	1.51
1	AA	585	DA	C5'-C4'	5.02	1.56	1.51
104	Bp	23	DG	C5'-C4'	5.01	1.56	1.51

All (4574) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1068	DG	P-O3'-C3'	16.13	139.06	119.70
1	AA	1599	DT	P-O3'-C3'	16.01	138.92	119.70
160	Cj	27	DG	P-O3'-C3'	15.34	138.10	119.70
1	AA	645	DA	P-O3'-C3'	14.96	137.65	119.70
1	AA	5153	DG	P-O3'-C3'	14.88	137.55	119.70
108	Bt	15	DT	P-O3'-C3'	14.82	137.49	119.70
1	AA	7508	DC	P-O3'-C3'	14.72	137.37	119.70
136	CL	29	DA	P-O3'-C3'	14.66	137.30	119.70
165	Co	28	DT	P-O3'-C3'	14.60	137.22	119.70
1	AA	7704	DG	P-O3'-C3'	14.59	137.21	119.70
1	AA	5868	DG	O4'-C4'-C3'	-14.58	97.25	106.00
1	AA	7023	DA	O4'-C4'-C3'	-14.56	97.27	106.00
22	AV	12	DA	P-O3'-C3'	14.39	136.97	119.70
1	AA	1378	DG	P-O3'-C3'	14.36	136.93	119.70
1	AA	1508	DG	P-O3'-C3'	14.17	136.70	119.70
154	Cd	18	DG	O4'-C4'-C3'	-14.16	97.50	106.00
24	AX	17	DG	P-O3'-C3'	14.16	136.69	119.70
58	A5	1	DT	O4'-C4'-C3'	-14.15	97.51	106.00
1	AA	5474	DT	O4'-C4'-C3'	-14.04	97.57	106.00
1	AA	7098	DC	P-O3'-C3'	14.02	136.52	119.70
1	AA	6327	DG	P-O3'-C3'	13.96	136.45	119.70
1	AA	2880	DA	P-O3'-C3'	13.91	136.40	119.70
1	AA	4461	DA	P-O3'-C3'	13.91	136.40	119.70
1	AA	5150	DT	P-O3'-C3'	13.90	136.38	119.70
144	CT	1	DG	O4'-C4'-C3'	-13.87	97.68	106.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
129	CE	9	DA	P-O3'-C3'	13.85	136.32	119.70
60	A7	35	DT	P-O3'-C3'	13.82	136.29	119.70
1	AA	6935	DT	P-O3'-C3'	13.79	136.25	119.70
76	BN	24	DG	P-O3'-C3'	13.78	136.24	119.70
181	C4	13	DG	O4'-C4'-C3'	-13.74	97.76	106.00
34	Ah	38	DA	P-O3'-C3'	13.72	136.16	119.70
104	Bp	38	DA	O4'-C1'-N9	13.68	117.58	108.00
1	AA	3456	DT	O4'-C4'-C3'	-13.65	97.81	106.00
104	Bp	38	DA	P-O3'-C3'	13.60	136.03	119.70
11	AK	14	DG	P-O3'-C3'	13.59	136.01	119.70
99	Bk	23	DT	O4'-C4'-C3'	-13.55	97.87	106.00
98	Bj	31	DT	P-O3'-C3'	13.54	135.95	119.70
1	AA	794	DG	P-O3'-C3'	13.49	135.89	119.70
132	CH	42	DG	P-O3'-C3'	13.41	135.80	119.70
61	A8	49	DT	P-O3'-C3'	13.39	135.77	119.70
133	CI	15	DG	O4'-C4'-C3'	-13.36	97.99	106.00
45	As	1	DA	O4'-C4'-C3'	-13.35	97.99	106.00
180	C3	32	DC	P-O3'-C3'	13.34	135.70	119.70
1	AA	6396	DC	P-O3'-C3'	13.32	135.68	119.70
1	AA	1660	DG	P-O3'-C3'	13.30	135.66	119.70
1	AA	692	DG	P-O3'-C3'	13.26	135.61	119.70
1	AA	7434	DG	P-O3'-C3'	13.24	135.59	119.70
1	AA	2043	DG	P-O3'-C3'	13.24	135.58	119.70
138	CN	9	DC	O4'-C4'-C3'	-13.22	98.06	106.00
1	AA	3830	DA	P-O3'-C3'	13.21	135.55	119.70
1	AA	3409	DC	P-O3'-C3'	13.19	135.53	119.70
6	AF	29	DA	P-O3'-C3'	13.18	135.52	119.70
37	Ak	29	DA	P-O3'-C3'	13.18	135.51	119.70
98	Bj	27	DC	P-O3'-C3'	13.18	135.51	119.70
1	AA	2235	DA	P-O3'-C3'	13.17	135.51	119.70
149	CY	18	DC	P-O3'-C3'	13.17	135.50	119.70
68	BF	1	DA	O4'-C4'-C3'	-13.15	98.11	106.00
101	Bm	30	DT	O4'-C4'-C3'	-13.15	98.11	106.00
42	Ap	11	DC	P-O3'-C3'	13.13	135.45	119.70
110	Bv	25	DG	P-O3'-C3'	13.12	135.44	119.70
141	CQ	34	DC	P-O3'-C3'	13.12	135.44	119.70
1	AA	4622	DT	P-O3'-C3'	13.11	135.44	119.70
1	AA	4470	DC	P-O3'-C3'	13.10	135.42	119.70
1	AA	1826	DA	P-O3'-C3'	13.10	135.42	119.70
159	Ci	32	DG	P-O3'-C3'	13.09	135.40	119.70
1	AA	834	DG	P-O3'-C3'	13.07	135.39	119.70
36	Aj	27	DG	P-O3'-C3'	13.07	135.38	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
108	Bt	33	DA	O4'-C4'-C3'	-13.05	98.17	106.00
1	AA	3526	DG	O4'-C4'-C3'	-13.04	98.18	106.00
1	AA	1479	DC	P-O3'-C3'	13.02	135.33	119.70
1	AA	3387	DA	P-O3'-C3'	13.01	135.31	119.70
67	BE	16	DA	O4'-C4'-C3'	-13.00	98.20	106.00
137	CM	24	DA	O4'-C4'-C3'	-12.99	98.20	106.00
1	AA	3213	DC	P-O3'-C3'	12.97	135.26	119.70
180	C3	8	DC	P-O3'-C3'	12.95	135.24	119.70
59	A6	42	DA	P-O3'-C3'	12.93	135.21	119.70
1	AA	5792	DT	P-O3'-C3'	12.92	135.21	119.70
1	AA	8036	DG	O4'-C4'-C3'	-12.89	98.26	106.00
1	AA	2807	DA	P-O3'-C3'	12.87	135.15	119.70
182	C5	2	DT	O4'-C4'-C3'	-12.87	98.28	106.00
2	AB	39	DG	O4'-C4'-C3'	-12.86	98.29	106.00
61	A8	55	DA	O4'-C4'-C3'	-12.85	98.29	106.00
83	BU	9	DA	P-O3'-C3'	12.83	135.09	119.70
1	AA	6708	DG	P-O3'-C3'	12.82	135.09	119.70
1	AA	6184	DT	P-O3'-C3'	12.81	135.07	119.70
74	BL	21	DA	P-O3'-C3'	12.80	135.06	119.70
1	AA	4897	DT	P-O3'-C3'	12.78	135.04	119.70
1	AA	3540	DG	P-O3'-C3'	12.77	135.03	119.70
1	AA	561	DC	P-O3'-C3'	12.75	135.00	119.70
1	AA	1402	DG	P-O3'-C3'	12.75	135.00	119.70
1	AA	6379	DT	O4'-C4'-C3'	-12.75	98.35	106.00
30	Ad	31	DA	O4'-C4'-C3'	-12.74	98.35	106.00
59	A6	10	DG	P-O3'-C3'	12.72	134.97	119.70
69	BG	39	DC	P-O3'-C3'	12.71	134.95	119.70
1	AA	532	DA	P-O3'-C3'	12.64	134.87	119.70
1	AA	5822	DA	P-O3'-C3'	12.63	134.86	119.70
1	AA	1679	DT	P-O3'-C3'	12.61	134.84	119.70
5	AE	34	DG	P-O3'-C3'	12.61	134.84	119.70
1	AA	4572	DA	P-O3'-C3'	12.61	134.83	119.70
14	AN	39	DG	O4'-C4'-C3'	-12.60	98.44	106.00
1	AA	6271	DA	P-O3'-C3'	12.60	134.82	119.70
1	AA	6324	DA	P-O3'-C3'	12.57	134.78	119.70
156	Cf	33	DA	O4'-C4'-C3'	-12.55	98.47	106.00
1	AA	6760	DT	O4'-C4'-C3'	-12.53	98.48	106.00
87	BY	39	DT	O4'-C4'-C3'	-12.50	98.50	106.00
8	AH	15	DG	P-O3'-C3'	12.49	134.69	119.70
1	AA	6917	DC	O4'-C4'-C3'	-12.49	98.51	106.00
1	AA	3396	DC	P-O3'-C3'	12.48	134.67	119.70
135	CK	48	DC	P-O3'-C3'	12.47	134.66	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1114	DC	P-O3'-C3'	12.46	134.66	119.70
1	AA	7972	DG	P-O3'-C3'	12.45	134.63	119.70
1	AA	4342	DG	P-O3'-C3'	12.44	134.63	119.70
1	AA	6273	DA	O4'-C4'-C3'	-12.42	98.55	106.00
80	BR	14	DT	P-O3'-C3'	12.41	134.60	119.70
1	AA	4761	DA	P-O3'-C3'	12.40	134.58	119.70
1	AA	2808	DG	O4'-C4'-C3'	-12.39	98.56	106.00
1	AA	3240	DG	P-O3'-C3'	12.38	134.56	119.70
1	AA	3526	DG	P-O3'-C3'	12.38	134.55	119.70
1	AA	5666	DA	P-O3'-C3'	12.37	134.54	119.70
1	AA	7066	DT	P-O3'-C3'	12.37	134.54	119.70
97	Bi	39	DT	O4'-C4'-C3'	-12.36	98.58	106.00
1	AA	4981	DT	O4'-C4'-C3'	-12.35	98.59	106.00
107	Bs	1	DA	O4'-C4'-C3'	-12.34	98.59	106.00
100	Bl	20	DG	O4'-C4'-C3'	-12.34	98.60	106.00
143	CS	23	DC	P-O3'-C3'	12.34	134.50	119.70
1	AA	2810	DA	P-O3'-C3'	12.26	134.41	119.70
1	AA	6989	DA	O4'-C4'-C3'	-12.25	98.65	106.00
157	Cg	30	DT	P-O3'-C3'	12.25	134.40	119.70
176	Cz	1	DT	O4'-C4'-C3'	-12.25	98.65	106.00
25	AY	27	DG	O4'-C4'-C3'	-12.23	98.66	106.00
87	BY	23	DG	O4'-C4'-C3'	-12.22	98.67	106.00
63	BA	47	DT	P-O3'-C3'	12.22	134.36	119.70
1	AA	6827	DG	O4'-C4'-C3'	-12.21	98.67	106.00
78	BP	17	DA	P-O3'-C3'	12.21	134.35	119.70
126	CB	32	DT	O4'-C4'-C3'	-12.21	98.68	106.00
1	AA	7655	DA	O4'-C4'-C3'	-12.20	98.68	106.00
169	Cs	4	DG	P-O3'-C3'	12.20	134.34	119.70
122	B7	5	DT	P-O3'-C3'	12.16	134.29	119.70
1	AA	5656	DG	O4'-C4'-C3'	-12.16	98.70	106.00
1	AA	4297	DT	P-O3'-C3'	12.15	134.28	119.70
1	AA	985	DA	O4'-C4'-C3'	-12.14	98.71	106.00
1	AA	2196	DG	O4'-C4'-C3'	-12.14	98.72	106.00
177	C0	26	DA	O4'-C4'-C3'	-12.13	98.72	106.00
1	AA	3015	DG	O4'-C4'-C3'	-12.13	98.72	106.00
30	Ad	31	DA	P-O3'-C3'	12.13	134.25	119.70
3	AC	25	DG	O4'-C4'-C3'	-12.11	98.73	106.00
1	AA	3388	DG	P-O3'-C3'	12.10	134.22	119.70
66	BD	53	DT	O4'-C4'-C3'	-12.10	98.74	106.00
1	AA	426	DG	P-O3'-C3'	12.08	134.20	119.70
1	AA	93	DG	P-O3'-C3'	12.08	134.20	119.70
1	AA	5786	DG	P-O3'-C3'	12.08	134.20	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1200	DG	O4'-C4'-C3'	-12.06	98.76	106.00
1	AA	1329	DG	P-O3'-C3'	12.06	134.17	119.70
1	AA	2334	DG	O4'-C4'-C3'	-12.04	98.77	106.00
1	AA	7391	DG	O4'-C4'-C3'	-12.03	98.78	106.00
107	Bs	5	DA	O4'-C4'-C3'	-12.03	98.78	106.00
144	CT	22	DG	O4'-C4'-C3'	-12.01	98.79	106.00
43	Aq	26	DA	O4'-C4'-C3'	-12.01	98.80	106.00
1	AA	1415	DT	O4'-C4'-C3'	-12.00	98.80	106.00
1	AA	639	DG	O4'-C4'-C3'	-11.97	98.82	106.00
1	AA	568	DT	O4'-C4'-C3'	-11.97	98.82	106.00
1	AA	7392	DA	P-O3'-C3'	11.95	134.04	119.70
1	AA	5024	DC	P-O3'-C3'	11.94	134.03	119.70
1	AA	1036	DG	P-O3'-C3'	11.92	134.01	119.70
1	AA	5187	DG	O4'-C4'-C3'	-11.92	98.85	106.00
1	AA	1304	DA	O4'-C4'-C3'	-11.89	98.86	106.00
1	AA	4702	DC	P-O3'-C3'	11.88	133.96	119.70
119	B4	25	DA	P-O3'-C3'	11.88	133.95	119.70
172	Cv	16	DG	P-O3'-C3'	11.87	133.95	119.70
10	AJ	45	DG	O4'-C4'-C3'	-11.86	98.88	106.00
142	CR	37	DA	O4'-C4'-C3'	-11.85	98.89	106.00
1	AA	7286	DC	P-O3'-C3'	11.85	133.92	119.70
174	Cx	1	DT	O4'-C4'-C3'	-11.84	98.90	106.00
1	AA	7095	DA	O4'-C4'-C3'	-11.82	98.91	106.00
1	AA	6421	DT	O4'-C4'-C3'	-11.81	98.91	106.00
128	CD	30	DT	O4'-C4'-C3'	-11.81	98.92	106.00
1	AA	2522	DA	O4'-C4'-C3'	-11.78	98.93	106.00
1	AA	2659	DT	O4'-C4'-C3'	-11.78	98.93	106.00
1	AA	568	DT	P-O3'-C3'	11.77	133.83	119.70
1	AA	4913	DG	O4'-C4'-C3'	-11.76	98.94	106.00
119	B4	10	DA	P-O3'-C3'	11.76	133.81	119.70
54	A1	43	DC	P-O3'-C3'	11.70	133.74	119.70
1	AA	4667	DG	P-O3'-C3'	11.69	133.73	119.70
1	AA	5433	DC	P-O3'-C3'	11.68	133.72	119.70
1	AA	949	DT	P-O3'-C3'	11.67	133.71	119.70
191	DE	2	DG	O4'-C4'-C3'	-11.65	99.01	106.00
1	AA	259	DC	P-O3'-C3'	11.65	133.68	119.70
174	Cx	9	DG	P-O3'-C3'	11.64	133.67	119.70
1	AA	2526	DC	O4'-C4'-C3'	-11.62	99.03	106.00
1	AA	1281	DG	P-O3'-C3'	11.61	133.63	119.70
1	AA	4520	DG	P-O3'-C3'	11.60	133.62	119.70
131	CG	18	DG	P-O3'-C3'	11.60	133.62	119.70
1	AA	2316	DG	P-O3'-C3'	11.60	133.62	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
132	CH	41	DG	P-O3'-C3'	11.60	133.62	119.70
1	AA	4006	DT	P-O3'-C3'	11.59	133.61	119.70
12	AL	24	DG	O4'-C4'-C3'	-11.57	99.06	106.00
42	Ap	47	DC	P-O3'-C3'	11.56	133.57	119.70
1	AA	82	DA	P-O3'-C3'	11.56	133.57	119.70
1	AA	3583	DC	P-O3'-C3'	11.55	133.56	119.70
97	Bi	38	DC	P-O3'-C3'	11.55	133.56	119.70
1	AA	2200	DT	P-O3'-C3'	11.54	133.54	119.70
4	AD	9	DT	O4'-C4'-C3'	-11.52	99.09	106.00
1	AA	907	DG	O4'-C4'-C3'	-11.50	99.10	106.00
1	AA	4002	DA	P-O3'-C3'	11.50	133.50	119.70
188	DB	43	DT	O4'-C4'-C3'	-11.48	99.11	106.00
1	AA	2325	DG	P-O3'-C3'	11.47	133.47	119.70
1	AA	2425	DT	P-O3'-C3'	11.47	133.46	119.70
1	AA	3280	DT	O4'-C4'-C3'	-11.46	99.12	106.00
1	AA	1345	DG	P-O3'-C3'	11.45	133.44	119.70
1	AA	7740	DA	O4'-C4'-C3'	-11.44	99.13	106.00
134	CJ	18	DT	P-O3'-C3'	11.44	133.43	119.70
48	Av	12	DA	P-O3'-C3'	11.44	133.42	119.70
160	Cj	30	DA	P-O3'-C3'	11.43	133.42	119.70
1	AA	7388	DT	P-O3'-C3'	11.41	133.40	119.70
22	AV	34	DC	P-O3'-C3'	11.41	133.39	119.70
187	DA	49	DG	O4'-C4'-C3'	-11.41	99.16	106.00
1	AA	1744	DG	O4'-C4'-C3'	-11.39	99.17	106.00
1	AA	4023	DG	O4'-C4'-C3'	-11.38	99.17	106.00
1	AA	3575	DG	P-O3'-C3'	11.38	133.36	119.70
140	CP	9	DT	P-O3'-C3'	11.35	133.32	119.70
130	CF	9	DA	O4'-C4'-C3'	-11.34	99.20	106.00
1	AA	5392	DG	O4'-C4'-C3'	-11.34	99.20	106.00
1	AA	2414	DT	O4'-C4'-C3'	-11.33	99.20	106.00
78	BP	31	DT	O4'-C4'-C3'	-11.33	99.20	106.00
1	AA	4703	DG	P-O3'-C3'	11.33	133.29	119.70
1	AA	6556	DT	P-O3'-C3'	11.32	133.29	119.70
99	Bk	29	DC	P-O3'-C3'	11.32	133.29	119.70
1	AA	4298	DG	O4'-C4'-C3'	-11.29	99.23	106.00
22	AV	16	DG	P-O3'-C3'	11.27	133.22	119.70
88	BZ	32	DA	O4'-C4'-C3'	-11.26	99.24	106.00
1	AA	425	DC	P-O3'-C3'	11.25	133.20	119.70
77	BO	8	DA	N1-C6-N6	-11.25	111.85	118.60
170	Ct	1	DA	O4'-C4'-C3'	-11.24	99.26	106.00
1	AA	1149	DG	O4'-C4'-C3'	-11.23	99.26	106.00
37	Ak	31	DA	O4'-C4'-C3'	-11.22	99.27	106.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
133	CI	22	DG	P-O3'-C3'	11.22	133.16	119.70
1	AA	167	DG	O4'-C4'-C3'	-11.21	99.27	106.00
1	AA	3284	DG	P-O3'-C3'	11.21	133.15	119.70
1	AA	7375	DT	O4'-C4'-C3'	-11.21	99.28	106.00
182	C5	15	DT	O4'-C4'-C3'	-11.21	99.28	106.00
175	Cy	38	DT	O4'-C4'-C3'	-11.20	99.28	106.00
1	AA	5797	DT	O4'-C4'-C3'	-11.19	99.29	106.00
159	Ci	33	DC	O4'-C4'-C3'	-11.19	99.29	106.00
171	Cu	8	DT	P-O3'-C3'	11.19	133.12	119.70
1	AA	690	DC	P-O3'-C3'	11.18	133.11	119.70
1	AA	6291	DG	O4'-C4'-C3'	-11.17	99.30	106.00
11	AK	26	DC	P-O3'-C3'	11.16	133.10	119.70
177	C0	37	DT	P-O3'-C3'	11.16	133.10	119.70
1	AA	5462	DC	O4'-C4'-C3'	-11.15	99.31	106.00
1	AA	4094	DG	P-O3'-C3'	11.15	133.08	119.70
1	AA	7539	DG	P-O3'-C3'	11.15	133.08	119.70
1	AA	4605	DT	O4'-C4'-C3'	-11.14	99.31	106.00
132	CH	9	DG	O4'-C4'-C3'	-11.13	99.32	106.00
1	AA	7358	DG	O4'-C4'-C3'	-11.13	99.32	106.00
1	AA	2756	DT	O4'-C4'-C3'	-11.11	99.34	106.00
1	AA	6651	DG	O4'-C4'-C3'	-11.10	99.34	106.00
1	AA	7377	DA	P-O3'-C3'	11.10	133.01	119.70
1	AA	7539	DG	O4'-C4'-C3'	-11.10	99.34	106.00
177	C0	60	DA	O4'-C4'-C3'	-11.08	99.35	106.00
1	AA	4117	DG	O4'-C4'-C3'	-11.06	99.36	106.00
179	C2	7	DT	P-O3'-C3'	11.05	132.96	119.70
2	AB	41	DT	O4'-C4'-C3'	-11.05	99.37	106.00
53	A0	29	DT	P-O3'-C3'	11.04	132.95	119.70
1	AA	1619	DA	O4'-C4'-C3'	-11.04	99.38	106.00
1	AA	1698	DC	O4'-C4'-C3'	-11.04	99.38	106.00
1	AA	7276	DG	P-O3'-C3'	11.04	132.94	119.70
1	AA	2279	DA	O4'-C4'-C3'	-11.02	99.39	106.00
72	BJ	1	DG	O4'-C4'-C3'	-11.02	99.39	106.00
1	AA	3015	DG	P-O3'-C3'	11.01	132.92	119.70
50	Ax	30	DA	O4'-C4'-C3'	-11.01	99.40	106.00
126	CB	21	DG	O4'-C4'-C3'	-11.00	99.40	106.00
1	AA	4510	DT	P-O3'-C3'	11.00	132.90	119.70
156	Cf	32	DC	P-O3'-C3'	10.99	132.89	119.70
1	AA	6065	DT	O4'-C4'-C3'	-10.99	99.40	106.00
1	AA	1620	DC	P-O3'-C3'	10.99	132.88	119.70
1	AA	7804	DA	O4'-C4'-C3'	-10.98	99.41	106.00
1	AA	2430	DA	O4'-C4'-C3'	-10.98	99.41	106.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	2678	DG	P-O3'-C3'	10.98	132.88	119.70
116	B1	28	DT	P-O3'-C3'	10.98	132.87	119.70
113	By	22	DG	O4'-C4'-C3'	-10.96	99.42	106.00
158	Ch	29	DT	O4'-C4'-C3'	-10.96	99.42	106.00
74	BL	26	DG	P-O3'-C3'	10.96	132.85	119.70
183	C6	9	DG	P-O3'-C3'	10.96	132.85	119.70
1	AA	4870	DT	O4'-C4'-C3'	-10.95	99.43	106.00
1	AA	303	DG	O4'-C4'-C3'	-10.93	99.44	106.00
1	AA	6718	DC	O4'-C4'-C3'	-10.93	99.44	106.00
1	AA	4250	DA	O4'-C4'-C3'	-10.92	99.45	106.00
1	AA	7574	DT	P-O3'-C3'	10.92	132.80	119.70
103	Bo	39	DT	P-O3'-C3'	10.90	132.78	119.70
1	AA	2243	DT	P-O3'-C3'	10.90	132.78	119.70
1	AA	8034	DG	O4'-C4'-C3'	-10.89	99.47	106.00
1	AA	2398	DA	P-O3'-C3'	10.88	132.76	119.70
1	AA	4447	DT	P-O3'-C3'	10.87	132.74	119.70
98	Bj	47	DT	P-O3'-C3'	10.86	132.73	119.70
143	CS	35	DG	P-O3'-C3'	10.86	132.73	119.70
79	BQ	17	DT	O4'-C4'-C3'	-10.83	99.50	106.00
109	Bu	24	DA	O4'-C4'-C3'	-10.81	99.51	106.00
139	CO	17	DA	P-O3'-C3'	10.80	132.66	119.70
1	AA	3930	DT	P-O3'-C3'	10.79	132.64	119.70
22	AV	16	DG	O4'-C4'-C3'	-10.78	99.53	106.00
130	CF	29	DC	P-O3'-C3'	10.78	132.63	119.70
1	AA	1854	DA	O4'-C4'-C3'	-10.77	99.54	106.00
1	AA	3560	DG	P-O3'-C3'	10.76	132.61	119.70
1	AA	7382	DT	O4'-C4'-C3'	-10.76	99.55	106.00
100	Bl	33	DG	O4'-C4'-C3'	-10.76	99.55	106.00
1	AA	3780	DG	O4'-C4'-C3'	-10.73	99.56	106.00
1	AA	5075	DG	O4'-C4'-C3'	-10.72	99.57	106.00
150	CZ	6	DG	O4'-C4'-C3'	-10.71	99.57	106.00
132	CH	31	DT	P-O3'-C3'	10.71	132.55	119.70
162	Cl	37	DA	P-O3'-C3'	10.69	132.53	119.70
30	Ad	5	DA	O4'-C4'-C3'	-10.69	99.58	106.00
1	AA	3172	DA	O4'-C4'-C3'	-10.69	99.59	106.00
1	AA	5167	DT	P-O3'-C3'	10.69	132.52	119.70
1	AA	1409	DC	P-O3'-C3'	10.68	132.52	119.70
185	C8	34	DA	O4'-C4'-C3'	-10.68	99.59	106.00
1	AA	527	DC	P-O3'-C3'	10.68	132.51	119.70
1	AA	404	DA	P-O3'-C3'	10.67	132.50	119.70
1	AA	4552	DT	O4'-C4'-C3'	-10.67	99.60	106.00
1	AA	7954	DC	P-O3'-C3'	10.66	132.49	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
91	Bc	5	DG	O4'-C4'-C3'	-10.65	99.61	106.00
1	AA	1961	DC	P-O3'-C3'	10.65	132.48	119.70
61	A8	49	DT	O4'-C1'-C2'	-10.65	97.38	105.90
1	AA	4817	DG	O4'-C4'-C3'	-10.64	99.61	106.00
1	AA	5237	DT	O4'-C4'-C3'	-10.64	99.61	106.00
1	AA	3920	DT	O4'-C4'-C3'	-10.63	99.62	106.00
1	AA	2289	DT	P-O3'-C3'	10.63	132.46	119.70
1	AA	448	DG	O4'-C4'-C3'	-10.63	99.62	106.00
94	Bf	6	DA	O4'-C4'-C3'	-10.62	99.63	106.00
1	AA	5167	DT	O4'-C4'-C3'	-10.61	99.63	106.00
1	AA	1629	DG	O4'-C4'-C3'	-10.60	99.64	106.00
94	Bf	38	DG	O4'-C4'-C3'	-10.59	99.65	106.00
1	AA	4167	DG	O4'-C4'-C3'	-10.57	99.66	106.00
1	AA	7290	DA	O4'-C4'-C3'	-10.57	99.66	106.00
95	Bg	37	DC	O4'-C4'-C3'	-10.57	99.66	106.00
1	AA	1515	DG	O4'-C4'-C3'	-10.56	99.67	106.00
1	AA	4878	DT	P-O3'-C3'	10.55	132.37	119.70
1	AA	1014	DG	O4'-C4'-C3'	-10.55	99.67	106.00
1	AA	5797	DT	P-O3'-C3'	10.55	132.35	119.70
1	AA	6200	DT	P-O3'-C3'	10.53	132.33	119.70
65	BC	51	DC	P-O3'-C3'	10.51	132.31	119.70
77	BO	16	DC	P-O3'-C3'	10.51	132.31	119.70
83	BU	23	DG	P-O3'-C3'	10.50	132.29	119.70
1	AA	1978	DG	O4'-C4'-C3'	-10.49	99.71	106.00
1	AA	6797	DG	P-O3'-C3'	10.47	132.27	119.70
1	AA	1316	DT	O4'-C4'-C3'	-10.47	99.72	106.00
1	AA	6234	DT	P-O3'-C3'	10.46	132.25	119.70
1	AA	5962	DT	P-O3'-C3'	10.46	132.25	119.70
1	AA	4943	DC	P-O3'-C3'	10.46	132.25	119.70
1	AA	5240	DT	P-O3'-C3'	10.45	132.24	119.70
1	AA	5796	DG	O4'-C4'-C3'	-10.45	99.73	106.00
1	AA	3396	DC	O4'-C1'-C2'	-10.44	97.55	105.90
130	CF	7	DA	P-O3'-C3'	10.44	132.23	119.70
1	AA	3673	DA	P-O3'-C3'	10.43	132.22	119.70
1	AA	4472	DG	O4'-C4'-C3'	-10.43	99.75	106.00
61	A8	32	DT	O4'-C1'-C2'	-10.42	97.56	105.90
184	C7	38	DC	P-O3'-C3'	10.42	132.20	119.70
1	AA	2291	DT	P-O3'-C3'	10.41	132.19	119.70
1	AA	291	DC	P-O3'-C3'	10.40	132.18	119.70
1	AA	1511	DG	O4'-C4'-C3'	-10.38	99.77	106.00
103	Bo	17	DT	P-O3'-C3'	10.37	132.15	119.70
1	AA	4609	DT	P-O3'-C3'	10.37	132.14	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	4123	DC	P-O3'-C3'	10.36	132.13	119.70
1	AA	5901	DA	P-O3'-C3'	10.35	132.12	119.70
165	Co	34	DT	P-O3'-C3'	10.34	132.11	119.70
39	Am	24	DG	P-O3'-C3'	10.34	132.11	119.70
59	A6	4	DC	P-O3'-C3'	10.34	132.11	119.70
1	AA	2335	DC	O4'-C1'-N1	10.32	115.23	108.00
1	AA	1698	DC	P-O3'-C3'	10.32	132.08	119.70
1	AA	1409	DC	O4'-C1'-C2'	-10.31	97.65	105.90
1	AA	3510	DC	P-O3'-C3'	10.31	132.08	119.70
1	AA	3071	DT	O4'-C4'-C3'	-10.30	99.82	106.00
1	AA	533	DG	O4'-C4'-C3'	-10.29	99.82	106.00
1	AA	5867	DC	O4'-C4'-C3'	-10.29	99.82	106.00
1	AA	595	DA	P-O3'-C3'	10.29	132.05	119.70
1	AA	1817	DT	P-O3'-C3'	10.29	132.05	119.70
1	AA	2716	DT	O4'-C1'-N1	10.29	115.20	108.00
28	Ab	1	DG	P-O3'-C3'	10.28	132.03	119.70
1	AA	2668	DG	O4'-C4'-C3'	-10.27	99.84	106.00
1	AA	6744	DG	O4'-C4'-C3'	-10.25	99.85	106.00
136	CL	10	DG	O4'-C4'-C3'	-10.25	99.85	106.00
121	B6	16	DA	P-O3'-C3'	10.24	131.99	119.70
159	Ci	20	DT	P-O3'-C3'	10.23	131.98	119.70
1	AA	2668	DG	P-O3'-C3'	10.23	131.98	119.70
1	AA	3281	DT	P-O3'-C3'	10.23	131.98	119.70
61	A8	32	DT	O4'-C1'-N1	10.22	115.15	108.00
176	Cz	9	DC	P-O3'-C3'	10.21	131.96	119.70
1	AA	7474	DT	P-O3'-C3'	10.20	131.94	119.70
127	CC	1	DG	O4'-C4'-C3'	-10.20	99.88	106.00
1	AA	4088	DG	O4'-C4'-C3'	-10.19	99.88	106.00
61	A8	53	DC	O4'-C4'-C3'	-10.19	99.88	106.00
133	CI	11	DC	P-O3'-C3'	10.19	131.93	119.70
135	CK	50	DT	O4'-C4'-C3'	-10.19	99.89	106.00
9	AI	10	DA	P-O3'-C3'	10.18	131.92	119.70
104	Bp	37	DA	O4'-C4'-C3'	-10.17	99.90	106.00
183	C6	22	DC	P-O3'-C3'	10.16	131.90	119.70
31	Ae	46	DG	P-O3'-C3'	10.16	131.89	119.70
40	An	41	DT	P-O3'-C3'	10.12	131.85	119.70
1	AA	8005	DC	P-O3'-C3'	10.10	131.82	119.70
104	Bp	24	DG	C5-C6-O6	-10.10	122.54	128.60
63	BA	1	DC	P-O3'-C3'	10.09	131.80	119.70
96	Bh	9	DC	O4'-C4'-C3'	-10.09	99.95	106.00
172	Cv	20	DG	P-O3'-C3'	10.07	131.79	119.70
1	AA	3373	DT	P-O3'-C3'	10.07	131.78	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	2002	DT	P-O3'-C3'	10.06	131.78	119.70
1	AA	3069	DA	O4'-C4'-C3'	-10.05	99.97	106.00
156	Cf	33	DA	P-O3'-C3'	10.05	131.77	119.70
1	AA	6881	DG	P-O3'-C3'	10.05	131.76	119.70
1	AA	587	DG	O4'-C4'-C3'	-10.05	99.97	106.00
1	AA	7804	DA	P-O3'-C3'	10.03	131.74	119.70
36	Aj	25	DT	O4'-C4'-C3'	-10.02	99.99	106.00
162	Cl	35	DT	P-O3'-C3'	10.02	131.72	119.70
1	AA	7687	DA	O4'-C4'-C3'	-10.00	100.00	106.00
1	AA	2650	DT	P-O3'-C3'	9.98	131.68	119.70
1	AA	4871	DG	O4'-C4'-C3'	-9.98	100.01	106.00
1	AA	5058	DA	P-O3'-C3'	9.98	131.68	119.70
158	Ch	1	DG	O4'-C4'-C3'	-9.98	100.01	106.00
144	CT	20	DT	P-O3'-C3'	9.97	131.66	119.70
1	AA	4957	DT	O4'-C4'-C3'	-9.95	100.03	106.00
17	AQ	45	DT	P-O3'-C3'	9.94	131.63	119.70
1	AA	6323	DT	P-O3'-C3'	9.93	131.62	119.70
1	AA	4386	DG	P-O3'-C3'	9.93	131.61	119.70
1	AA	6059	DG	O4'-C4'-C3'	-9.93	100.04	106.00
134	CJ	14	DT	P-O3'-C3'	9.92	131.60	119.70
26	AZ	10	DA	O4'-C4'-C3'	-9.90	100.06	106.00
1	AA	6094	DT	P-O3'-C3'	9.90	131.58	119.70
1	AA	6321	DC	O4'-C4'-C3'	-9.89	100.07	106.00
1	AA	1155	DG	O4'-C4'-C3'	-9.88	100.07	106.00
1	AA	5022	DG	O4'-C4'-C3'	-9.89	100.07	106.00
134	CJ	9	DA	O4'-C4'-C3'	-9.88	100.07	106.00
1	AA	30	DG	O4'-C4'-C3'	-9.88	100.08	106.00
1	AA	5867	DC	O4'-C1'-C2'	-9.87	98.00	105.90
1	AA	4060	DT	O4'-C4'-C3'	-9.85	100.09	106.00
1	AA	6939	DG	O4'-C4'-C3'	-9.85	100.09	106.00
188	DB	5	DG	C5-C6-O6	-9.84	122.70	128.60
50	Ax	20	DC	P-O3'-C3'	9.82	131.48	119.70
1	AA	2130	DC	P-O3'-C3'	9.81	131.48	119.70
60	A7	1	DT	O4'-C1'-C2'	-9.81	98.06	105.90
1	AA	1878	DT	P-O3'-C3'	9.80	131.46	119.70
48	Av	18	DT	P-O3'-C3'	9.79	131.44	119.70
35	Ai	37	DA	P-O3'-C3'	9.79	131.44	119.70
132	CH	48	DG	P-O3'-C3'	9.77	131.43	119.70
1	AA	426	DG	O4'-C4'-C3'	-9.77	100.14	106.00
1	AA	2406	DA	O4'-C4'-C3'	-9.77	100.14	106.00
85	BW	17	DC	O4'-C4'-C3'	-9.75	100.15	106.00
95	Bg	21	DA	P-O3'-C3'	9.74	131.39	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
186	C9	31	DT	P-O3'-C3'	9.74	131.39	119.70
1	AA	6818	DT	P-O3'-C3'	9.73	131.37	119.70
189	DC	32	DC	P-O3'-C3'	9.72	131.37	119.70
1	AA	5124	DC	P-O3'-C3'	9.71	131.35	119.70
179	C2	7	DT	O4'-C1'-C2'	-9.70	98.14	105.90
187	DA	13	DT	P-O3'-C3'	9.70	131.34	119.70
1	AA	4886	DC	P-O3'-C3'	9.69	131.33	119.70
87	BY	46	DA	O4'-C4'-C3'	-9.68	100.19	106.00
1	AA	3120	DC	O4'-C4'-C3'	-9.67	100.20	106.00
1	AA	7476	DC	P-O3'-C3'	9.67	131.31	119.70
56	A3	6	DC	P-O3'-C3'	9.67	131.31	119.70
1	AA	3630	DC	O4'-C4'-C3'	-9.66	100.20	106.00
1	AA	6735	DG	O4'-C4'-C3'	-9.66	100.20	106.00
76	BN	23	DA	P-O3'-C3'	9.66	131.29	119.70
1	AA	3610	DC	O4'-C1'-C2'	-9.66	98.18	105.90
1	AA	513	DC	P-O3'-C3'	9.65	131.28	119.70
1	AA	3928	DA	P-O3'-C3'	9.63	131.26	119.70
113	By	19	DT	P-O3'-C3'	9.63	131.26	119.70
1	AA	5796	DG	P-O3'-C3'	9.60	131.22	119.70
159	Ci	38	DG	O4'-C4'-C3'	-9.60	100.24	106.00
1	AA	7487	DG	P-O3'-C3'	9.60	131.22	119.70
1	AA	2401	DA	O4'-C4'-C3'	-9.59	100.25	106.00
46	At	51	DC	P-O3'-C3'	9.59	131.21	119.70
111	Bw	31	DC	P-O3'-C3'	9.59	131.21	119.70
1	AA	5672	DG	P-O3'-C3'	9.58	131.19	119.70
69	BG	2	DT	P-O3'-C3'	9.58	131.20	119.70
80	BR	33	DC	P-O3'-C3'	9.57	131.18	119.70
52	Az	1	DC	O4'-C4'-C3'	-9.56	100.26	106.00
170	Ct	1	DA	P-O3'-C3'	9.56	131.17	119.70
128	CD	52	DT	O4'-C1'-N1	9.54	114.68	108.00
188	DB	25	DG	P-O3'-C3'	9.52	131.12	119.70
22	AV	31	DT	P-O3'-C3'	9.51	131.11	119.70
1	AA	3630	DC	P-O3'-C3'	9.49	131.09	119.70
1	AA	2706	DC	P-O3'-C3'	9.48	131.08	119.70
6	AF	16	DT	O4'-C4'-C3'	-9.48	100.31	106.00
64	BB	22	DC	O4'-C4'-C3'	-9.47	100.32	106.00
83	BU	23	DG	O4'-C4'-C3'	-9.46	100.32	106.00
1	AA	537	DG	P-O3'-C3'	9.46	131.05	119.70
1	AA	8018	DC	O4'-C4'-C3'	-9.46	100.32	106.00
24	AX	11	DC	O4'-C4'-C3'	-9.45	100.33	106.00
1	AA	1576	DG	P-O3'-C3'	9.45	131.04	119.70
1	AA	7096	DA	P-O3'-C3'	9.44	131.03	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1980	DT	P-O3'-C3'	9.44	131.03	119.70
1	AA	7360	DC	P-O3'-C3'	9.44	131.03	119.70
178	C1	10	DG	P-O3'-C3'	9.43	131.02	119.70
1	AA	2214	DG	P-O3'-C3'	9.43	131.01	119.70
140	CP	46	DT	P-O3'-C3'	9.42	131.00	119.70
43	Aq	1	DG	O4'-C4'-C3'	-9.40	100.36	106.00
1	AA	949	DT	O4'-C1'-C2'	-9.40	98.38	105.90
1	AA	365	DA	P-O3'-C3'	9.39	130.97	119.70
133	CI	1	DC	O4'-C4'-C3'	-9.38	100.37	106.00
1	AA	4510	DT	O4'-C1'-C2'	-9.38	98.40	105.90
187	DA	37	DT	P-O3'-C3'	9.38	130.95	119.70
82	BT	1	DC	O4'-C4'-C3'	-9.36	100.38	106.00
1	AA	3104	DA	O4'-C4'-C3'	-9.36	100.39	106.00
1	AA	8057	DC	P-O3'-C3'	9.34	130.91	119.70
87	BY	14	DA	P-O3'-C3'	9.34	130.91	119.70
1	AA	7510	DT	O4'-C4'-C3'	-9.33	100.40	106.00
4	AD	33	DC	P-O3'-C3'	9.32	130.89	119.70
36	Aj	38	DT	P-O3'-C3'	9.32	130.89	119.70
1	AA	1457	DG	O4'-C1'-C2'	-9.32	98.44	105.90
1	AA	7778	DG	O4'-C1'-C2'	-9.31	98.45	105.90
1	AA	2291	DT	O4'-C1'-C2'	-9.30	98.46	105.90
1	AA	5699	DC	P-O3'-C3'	9.30	130.87	119.70
1	AA	3999	DC	P-O3'-C3'	9.30	130.86	119.70
1	AA	4948	DC	P-O3'-C3'	9.30	130.86	119.70
1	AA	7665	DT	P-O3'-C3'	9.30	130.86	119.70
111	Bw	29	DA	P-O3'-C3'	9.28	130.83	119.70
1	AA	5315	DT	P-O3'-C3'	9.27	130.82	119.70
49	Aw	37	DT	O4'-C1'-N1	9.25	114.48	108.00
1	AA	2931	DG	P-O3'-C3'	9.25	130.79	119.70
128	CD	32	DT	O4'-C4'-C3'	-9.25	100.45	106.00
1	AA	7909	DT	P-O3'-C3'	9.24	130.79	119.70
1	AA	7482	DA	P-O3'-C3'	9.24	130.78	119.70
1	AA	1454	DC	P-O3'-C3'	9.23	130.78	119.70
101	Bm	9	DC	P-O3'-C3'	9.23	130.78	119.70
1	AA	2425	DT	O4'-C1'-C2'	-9.23	98.52	105.90
1	AA	6251	DT	O4'-C1'-C2'	-9.22	98.52	105.90
128	CD	33	DT	P-O3'-C3'	9.22	130.76	119.70
127	CC	13	DG	O4'-C4'-C3'	-9.22	100.47	106.00
1	AA	2335	DC	C2-N1-C1'	9.20	128.92	118.80
1	AA	4230	DC	P-O3'-C3'	9.21	130.75	119.70
160	Cj	11	DC	P-O3'-C3'	9.20	130.74	119.70
45	As	7	DA	O4'-C4'-C3'	-9.20	100.48	106.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	6266	DT	O4'-C4'-C3'	-9.20	100.48	106.00
1	AA	4824	DT	O4'-C4'-C3'	-9.20	100.48	106.00
1	AA	6746	DA	P-O3'-C3'	9.18	130.72	119.70
74	BL	17	DT	O4'-C1'-C2'	-9.18	98.56	105.90
93	Be	2	DG	P-O3'-C3'	9.18	130.72	119.70
1	AA	5954	DG	O4'-C4'-C3'	-9.17	100.50	106.00
62	A9	9	DA	O4'-C1'-N9	9.17	114.42	108.00
143	CS	35	DG	O4'-C1'-C2'	-9.15	98.58	105.90
1	AA	2292	DG	O4'-C1'-C2'	-9.14	98.58	105.90
1	AA	6297	DC	P-O3'-C3'	9.14	130.67	119.70
169	Cs	18	DG	P-O3'-C3'	9.14	130.67	119.70
1	AA	4848	DG	O4'-C1'-C2'	-9.14	98.59	105.90
1	AA	2762	DC	P-O3'-C3'	9.13	130.66	119.70
1	AA	541	DA	P-O3'-C3'	9.13	130.66	119.70
107	Bs	16	DT	P-O3'-C3'	9.13	130.66	119.70
1	AA	4901	DG	O4'-C4'-C3'	-9.13	100.52	106.00
1	AA	5022	DG	C4'-C3'-C2'	-9.12	94.89	103.10
48	Av	11	DC	P-O3'-C3'	9.11	130.63	119.70
1	AA	557	DG	O4'-C4'-C3'	-9.10	100.54	106.00
1	AA	2292	DG	O4'-C4'-C3'	-9.10	100.54	106.00
2	AB	2	DA	P-O3'-C3'	9.10	130.61	119.70
1	AA	3402	DT	O4'-C4'-C3'	-9.09	100.55	106.00
1	AA	6365	DG	O4'-C1'-C2'	-9.09	98.63	105.90
1	AA	3297	DC	C4'-C3'-C2'	-9.09	94.92	103.10
1	AA	4927	DT	P-O3'-C3'	9.08	130.59	119.70
60	A7	30	DT	P-O3'-C3'	9.07	130.59	119.70
113	By	27	DA	P-O3'-C3'	9.07	130.58	119.70
75	BM	9	DT	O4'-C1'-C2'	-9.04	98.66	105.90
1	AA	4587	DA	O4'-C4'-C3'	-9.04	100.58	106.00
186	C9	20	DT	P-O3'-C3'	9.04	130.55	119.70
1	AA	6640	DT	P-O3'-C3'	9.04	130.54	119.70
1	AA	1917	DA	P-O3'-C3'	9.03	130.54	119.70
1	AA	1971	DC	P-O3'-C3'	9.03	130.53	119.70
1	AA	1070	DA	O4'-C4'-C3'	-9.02	100.59	106.00
1	AA	6903	DC	P-O3'-C3'	9.02	130.52	119.70
1	AA	1930	DT	P-O3'-C3'	9.02	130.52	119.70
17	AQ	19	DT	P-O3'-C3'	9.01	130.52	119.70
110	Bv	32	DT	O4'-C4'-C3'	-9.01	100.59	106.00
42	Ap	11	DC	O4'-C4'-C3'	-9.00	100.60	106.00
117	B2	13	DT	P-O3'-C3'	9.00	130.50	119.70
129	CE	1	DG	O4'-C4'-C3'	-9.00	100.60	106.00
39	Am	8	DG	P-O3'-C3'	8.99	130.49	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
159	Ci	42	DG	P-O3'-C3'	8.99	130.49	119.70
1	AA	3076	DT	P-O3'-C3'	8.99	130.49	119.70
1	AA	7098	DC	O4'-C1'-C2'	-8.99	98.71	105.90
1	AA	430	DC	P-O3'-C3'	8.99	130.48	119.70
148	CX	10	DC	P-O3'-C3'	8.99	130.48	119.70
1	AA	5055	DA	P-O3'-C3'	8.98	130.48	119.70
1	AA	3357	DC	O4'-C4'-C3'	-8.98	100.61	106.00
1	AA	2291	DT	O4'-C4'-C3'	-8.97	100.62	106.00
1	AA	1879	DA	P-O3'-C3'	8.96	130.45	119.70
1	AA	1677	DG	P-O3'-C3'	8.96	130.45	119.70
1	AA	3213	DC	C2-N1-C1'	8.95	128.65	118.80
98	Bj	1	DT	O4'-C4'-C3'	-8.95	100.63	106.00
1	AA	6084	DG	O4'-C1'-C2'	-8.95	98.74	105.90
188	DB	5	DG	N1-C6-O6	8.95	125.27	119.90
1	AA	517	DG	P-O3'-C3'	8.94	130.43	119.70
1	AA	7872	DG	P-O3'-C3'	8.94	130.43	119.70
179	C2	7	DT	O4'-C4'-C3'	-8.93	100.64	106.00
7	AG	46	DA	P-O3'-C3'	8.93	130.41	119.70
1	AA	6185	DT	O4'-C4'-C3'	-8.91	100.66	106.00
15	AO	28	DA	P-O3'-C3'	8.91	130.39	119.70
1	AA	2879	DT	P-O3'-C3'	8.90	130.38	119.70
59	A6	10	DG	O4'-C4'-C3'	-8.90	100.66	106.00
68	BF	13	DA	P-O3'-C3'	8.90	130.38	119.70
1	AA	3324	DA	N1-C6-N6	-8.89	113.26	118.60
69	BG	1	DG	O4'-C4'-C3'	-8.89	100.67	106.00
1	AA	4915	DT	P-O3'-C3'	8.88	130.35	119.70
19	AS	8	DG	O4'-C4'-C3'	-8.88	100.67	106.00
25	AY	30	DT	O4'-C4'-C3'	-8.88	100.67	106.00
1	AA	404	DA	O4'-C1'-C2'	-8.86	98.81	105.90
20	AT	40	DG	O4'-C1'-C2'	-8.86	98.82	105.90
165	Co	1	DT	P-O3'-C3'	8.86	130.33	119.70
1	AA	2623	DC	O4'-C4'-C3'	-8.84	100.69	106.00
104	Bp	24	DG	N1-C6-O6	8.84	125.20	119.90
98	Bj	31	DT	O4'-C1'-C2'	-8.84	98.83	105.90
70	BH	1	DT	O4'-C4'-C3'	-8.84	100.70	106.00
1	AA	2146	DG	C5-C6-O6	-8.83	123.30	128.60
1	AA	1589	DC	P-O3'-C3'	8.83	130.30	119.70
17	AQ	37	DC	O4'-C1'-C2'	-8.82	98.85	105.90
27	Aa	9	DA	P-O3'-C3'	8.82	130.28	119.70
1	AA	1679	DT	O4'-C1'-C2'	-8.81	98.85	105.90
1	AA	2925	DT	O4'-C4'-C3'	-8.81	100.72	106.00
1	AA	3226	DT	O4'-C4'-C3'	-8.80	100.72	106.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
162	Cl	38	DC	O4'-C1'-C2'	-8.80	98.86	105.90
1	AA	4870	DT	P-O3'-C3'	8.80	130.25	119.70
1	AA	7703	DG	O4'-C4'-C3'	-8.78	100.73	106.00
25	AY	23	DG	P-O3'-C3'	8.77	130.23	119.70
22	AV	35	DG	P-O3'-C3'	8.77	130.22	119.70
1	AA	2816	DG	P-O3'-C3'	8.76	130.22	119.70
1	AA	3174	DT	O4'-C1'-C2'	-8.76	98.89	105.90
1	AA	3373	DT	O4'-C1'-C2'	-8.76	98.89	105.90
188	DB	39	DT	P-O3'-C3'	8.76	130.21	119.70
104	Bp	9	DT	P-O3'-C3'	8.74	130.19	119.70
114	Bz	25	DA	O4'-C4'-C3'	-8.74	100.76	106.00
128	CD	20	DC	P-O3'-C3'	8.74	130.19	119.70
84	BV	23	DC	P-O3'-C3'	8.73	130.17	119.70
1	AA	5138	DG	O4'-C4'-C3'	-8.69	100.78	106.00
1	AA	1422	DA	O4'-C4'-C3'	-8.67	100.80	106.00
1	AA	5581	DT	P-O3'-C3'	8.67	130.11	119.70
33	Ag	15	DC	O4'-C4'-C3'	-8.67	100.80	106.00
150	CZ	16	DG	O4'-C4'-C3'	-8.65	100.81	106.00
1	AA	5720	DG	O4'-C1'-C2'	-8.65	98.98	105.90
1	AA	6717	DA	P-O3'-C3'	8.64	130.07	119.70
1	AA	1493	DC	P-O3'-C3'	8.64	130.07	119.70
1	AA	2938	DA	O4'-C4'-C3'	-8.64	100.81	106.00
1	AA	267	DG	P-O3'-C3'	8.64	130.06	119.70
76	BN	24	DG	C5-C6-O6	-8.63	123.42	128.60
95	Bg	16	DC	P-O3'-C3'	8.63	130.05	119.70
1	AA	1124	DG	O4'-C1'-N9	8.61	114.03	108.00
124	B9	22	DA	O4'-C4'-C3'	-8.60	100.84	106.00
31	Ae	26	DC	O4'-C1'-C2'	-8.60	99.02	105.90
104	Bp	39	DA	O4'-C1'-C2'	-8.59	99.03	105.90
37	Ak	31	DA	C4'-C3'-C2'	-8.59	95.37	103.10
38	Al	38	DC	P-O3'-C3'	8.58	130.00	119.70
45	As	7	DA	P-O3'-C3'	8.58	129.99	119.70
63	BA	17	DA	O4'-C4'-C3'	-8.58	100.85	106.00
1	AA	3343	DG	O4'-C1'-C2'	-8.57	99.04	105.90
1	AA	1621	DT	P-O3'-C3'	8.56	129.97	119.70
1	AA	4379	DA	O4'-C4'-C3'	-8.56	100.86	106.00
1	AA	7811	DC	P-O3'-C3'	8.56	129.97	119.70
11	AK	21	DC	P-O3'-C3'	8.56	129.97	119.70
190	DD	5	DC	O4'-C1'-C2'	-8.56	99.06	105.90
1	AA	759	DA	O4'-C4'-C3'	-8.55	100.87	106.00
46	At	39	DA	O4'-C4'-C3'	-8.55	100.87	106.00
163	Cm	30	DC	P-O3'-C3'	8.55	129.96	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
161	Ck	1	DG	O4'-C1'-C2'	-8.55	99.06	105.90
163	Cm	1	DG	O4'-C4'-C3'	-8.53	100.88	106.00
1	AA	1848	DA	P-O3'-C3'	8.51	129.92	119.70
1	AA	575	DA	O4'-C4'-C3'	-8.51	100.89	106.00
61	A8	37	DT	P-O3'-C3'	8.51	129.91	119.70
1	AA	5993	DG	O4'-C4'-C3'	-8.50	100.90	106.00
41	Ao	15	DT	O4'-C4'-C3'	-8.50	100.90	106.00
1	AA	5866	DT	O4'-C1'-C2'	-8.49	99.10	105.90
1	AA	971	DC	P-O3'-C3'	8.49	129.89	119.70
1	AA	2164	DA	O4'-C4'-C3'	-8.49	100.91	106.00
1	AA	7919	DT	O4'-C4'-C3'	-8.48	100.91	106.00
1	AA	1655	DC	O4'-C1'-C2'	-8.48	99.12	105.90
1	AA	2425	DT	O4'-C4'-C3'	-8.47	100.92	106.00
1	AA	3297	DC	O4'-C4'-C3'	-8.46	100.92	106.00
1	AA	3799	DG	O4'-C1'-C2'	-8.46	99.13	105.90
1	AA	8055	DG	O4'-C1'-C2'	-8.46	99.13	105.90
1	AA	7955	DG	O4'-C1'-C2'	-8.44	99.15	105.90
190	DD	38	DT	O4'-C4'-C3'	-8.43	100.94	106.00
1	AA	2312	DG	C5-C6-O6	-8.43	123.54	128.60
153	Cc	6	DG	C1'-O4'-C4'	-8.43	101.67	110.10
1	AA	5902	DG	O4'-C1'-C2'	-8.43	99.16	105.90
1	AA	4878	DT	O4'-C1'-C2'	-8.42	99.16	105.90
1	AA	6524	DG	O4'-C4'-C3'	-8.42	100.95	106.00
136	CL	8	DA	O4'-C4'-C3'	-8.42	100.95	106.00
1	AA	5150	DT	O4'-C1'-C2'	-8.41	99.17	105.90
95	Bg	36	DT	P-O3'-C3'	8.40	129.78	119.70
1	AA	7575	DA	O4'-C4'-C3'	-8.40	100.96	106.00
1	AA	2336	DT	P-O3'-C3'	8.39	129.77	119.70
1	AA	3761	DA	P-O3'-C3'	8.39	129.77	119.70
1	AA	4386	DG	O4'-C4'-C3'	-8.39	100.97	106.00
75	BM	42	DG	O4'-C1'-C2'	-8.39	99.19	105.90
1	AA	2753	DG	O4'-C1'-C2'	-8.38	99.19	105.90
1	AA	3927	DC	O4'-C1'-C2'	-8.38	99.20	105.90
36	Aj	11	DT	C4'-C3'-C2'	-8.37	95.56	103.10
163	Cm	16	DC	O4'-C1'-C2'	-8.37	99.20	105.90
167	Cq	21	DT	O4'-C4'-C3'	-8.37	100.98	106.00
1	AA	7626	DA	O4'-C4'-C3'	-8.37	100.98	106.00
1	AA	5278	DG	P-O3'-C3'	8.37	129.74	119.70
140	CP	9	DT	O4'-C1'-C2'	-8.37	99.21	105.90
1	AA	6735	DG	C1'-O4'-C4'	-8.36	101.74	110.10
168	Cr	33	DG	O4'-C1'-C2'	-8.35	99.22	105.90
55	A2	17	DA	O4'-C1'-C2'	-8.35	99.22	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
124	B9	1	DG	O4'-C1'-C2'	-8.35	99.22	105.90
1	AA	3938	DG	O4'-C1'-C2'	-8.35	99.22	105.90
1	AA	5021	DT	P-O3'-C3'	8.34	129.71	119.70
1	AA	6280	DT	O4'-C4'-C3'	-8.34	101.00	106.00
154	Cd	16	DC	O4'-C1'-C2'	-8.34	99.23	105.90
131	CG	5	DG	P-O3'-C3'	8.33	129.70	119.70
1	AA	2044	DG	O4'-C4'-C3'	-8.31	101.01	106.00
1	AA	4139	DA	O4'-C4'-C3'	-8.31	101.01	106.00
81	BS	26	DT	C6-C5-C7	-8.30	117.92	122.90
59	A6	42	DA	O4'-C1'-C2'	-8.30	99.26	105.90
1	AA	6244	DG	P-O3'-C3'	8.29	129.65	119.70
1	AA	7213	DA	O4'-C1'-C2'	-8.29	99.27	105.90
1	AA	1113	DG	O4'-C1'-C2'	-8.29	99.27	105.90
30	Ad	22	DC	O4'-C4'-C3'	-8.29	101.03	106.00
1	AA	2430	DA	C1'-O4'-C4'	-8.28	101.82	110.10
175	Cy	30	DC	O4'-C1'-C2'	-8.28	99.28	105.90
75	BM	9	DT	O4'-C1'-N1	8.27	113.79	108.00
25	AY	23	DG	O4'-C1'-C2'	-8.26	99.29	105.90
1	AA	3920	DT	P-O3'-C3'	8.26	129.61	119.70
1	AA	4671	DG	C5-C6-O6	-8.26	123.65	128.60
1	AA	7434	DG	O4'-C1'-C2'	-8.26	99.30	105.90
148	CX	8	DA	O4'-C4'-C3'	-8.26	101.05	106.00
1	AA	1660	DG	O4'-C1'-C2'	-8.25	99.30	105.90
1	AA	4381	DG	O4'-C1'-C2'	-8.25	99.30	105.90
1	AA	5721	DA	O4'-C1'-C2'	-8.25	99.30	105.90
139	CO	15	DC	P-O3'-C3'	8.25	129.60	119.70
1	AA	533	DG	C1'-O4'-C4'	-8.24	101.86	110.10
32	Af	43	DG	O4'-C1'-C2'	-8.24	99.31	105.90
38	Al	46	DA	P-O3'-C3'	8.23	129.58	119.70
116	B1	49	DG	O4'-C4'-C3'	-8.23	101.06	106.00
1	AA	2762	DC	O4'-C4'-C3'	-8.22	101.07	106.00
1	AA	8018	DC	C4'-C3'-C2'	-8.22	95.70	103.10
97	Bi	35	DT	O4'-C1'-C2'	-8.21	99.33	105.90
166	Cp	11	DC	P-O3'-C3'	8.20	129.54	119.70
182	C5	1	DT	O4'-C4'-C3'	-8.20	101.08	106.00
26	AZ	8	DA	O4'-C4'-C3'	-8.19	101.08	106.00
1	AA	1646	DC	P-O3'-C3'	8.19	129.53	119.70
1	AA	3120	DC	C4'-C3'-C2'	-8.19	95.73	103.10
1	AA	3270	DG	O4'-C1'-C2'	-8.19	99.35	105.90
157	Cg	31	DG	O4'-C4'-C3'	-8.19	101.09	106.00
166	Cp	24	DA	P-O3'-C3'	8.19	129.52	119.70
1	AA	88	DA	O4'-C4'-C3'	-8.18	101.09	106.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	3866	DT	P-O3'-C3'	8.18	129.52	119.70
82	BT	1	DC	O4'-C1'-C2'	-8.18	99.36	105.90
92	Bd	1	DA	P-O3'-C3'	8.18	129.51	119.70
22	AV	29	DT	O4'-C1'-C2'	-8.17	99.36	105.90
1	AA	6708	DG	C5-C6-O6	-8.17	123.70	128.60
61	A8	19	DC	O4'-C1'-C2'	-8.17	99.37	105.90
190	DD	12	DA	O4'-C4'-C3'	-8.17	101.10	106.00
112	Bx	10	DT	O4'-C4'-C3'	-8.15	101.11	106.00
1	AA	1494	DT	O4'-C4'-C3'	-8.14	101.12	106.00
1	AA	3433	DG	O4'-C4'-C3'	-8.14	101.11	106.00
139	CO	17	DA	O4'-C1'-C2'	-8.14	99.39	105.90
1	AA	1646	DC	O4'-C4'-C3'	-8.14	101.12	106.00
141	CQ	14	DT	P-O3'-C3'	8.13	129.46	119.70
1	AA	3213	DC	C6-N1-C1'	-8.12	111.05	120.80
1	AA	7000	DT	P-O3'-C3'	8.12	129.45	119.70
42	Ap	11	DC	O4'-C1'-C2'	-8.12	99.40	105.90
159	Ci	18	DT	P-O3'-C3'	8.12	129.44	119.70
111	Bw	29	DA	O4'-C1'-C2'	-8.12	99.41	105.90
12	AL	25	DC	P-O3'-C3'	8.11	129.43	119.70
1	AA	2335	DC	C6-N1-C1'	-8.11	111.07	120.80
61	A8	49	DT	O4'-C4'-C3'	-8.11	101.14	106.00
1	AA	4510	DT	O4'-C4'-C3'	-8.10	101.14	106.00
1	AA	7383	DT	O4'-C1'-C2'	-8.10	99.42	105.90
84	BV	12	DT	O4'-C1'-C2'	-8.10	99.42	105.90
1	AA	1409	DC	O4'-C4'-C3'	-8.10	101.14	106.00
45	As	17	DA	O4'-C4'-C3'	-8.09	101.14	106.00
55	A2	40	DG	O4'-C1'-C2'	-8.09	99.43	105.90
1	AA	6355	DT	O4'-C4'-C3'	-8.09	101.15	106.00
124	B9	13	DA	O4'-C4'-C3'	-8.09	101.15	106.00
158	Ch	1	DG	O4'-C1'-C2'	-8.09	99.43	105.90
1	AA	5351	DG	O4'-C1'-C2'	-8.08	99.43	105.90
22	AV	43	DG	P-O3'-C3'	8.08	129.40	119.70
1	AA	2074	DA	O4'-C4'-C3'	-8.08	101.15	106.00
174	Cx	32	DA	O4'-C4'-C3'	-8.08	101.15	106.00
1	AA	6882	DG	O4'-C1'-C2'	-8.07	99.44	105.90
1	AA	4250	DA	C4'-C3'-C2'	-8.07	95.84	103.10
1	AA	4667	DG	O4'-C1'-C2'	-8.07	99.44	105.90
57	A4	8	DG	O4'-C1'-C2'	-8.07	99.45	105.90
104	Bp	38	DA	C1'-O4'-C4'	-8.07	102.03	110.10
1	AA	4375	DT	O4'-C4'-C3'	-8.06	101.16	106.00
42	Ap	18	DT	P-O3'-C3'	8.04	129.35	119.70
1	AA	7127	DG	P-O3'-C3'	8.04	129.35	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	4342	DG	O4'-C1'-C2'	-8.04	99.47	105.90
1	AA	5993	DG	C1'-O4'-C4'	-8.03	102.07	110.10
1	AA	6721	DT	P-O3'-C3'	8.03	129.33	119.70
59	A6	10	DG	O4'-C1'-C2'	-8.03	99.48	105.90
83	BU	1	DC	P-O3'-C3'	8.02	129.32	119.70
36	Aj	25	DT	C4'-C3'-C2'	-8.02	95.88	103.10
161	Ck	3	DG	O4'-C1'-C2'	-8.02	99.49	105.90
116	B1	26	DT	O4'-C1'-C2'	-8.01	99.49	105.90
1	AA	2406	DA	C4'-C3'-C2'	-8.01	95.89	103.10
148	CX	37	DA	N1-C6-N6	-8.01	113.80	118.60
1	AA	7408	DT	O4'-C4'-C3'	-8.00	101.20	106.00
1	AA	4617	DG	O4'-C1'-C2'	-8.00	99.50	105.90
125	CA	18	DA	P-O3'-C3'	8.00	129.30	119.70
1	AA	1619	DA	P-O3'-C3'	7.99	129.29	119.70
1	AA	6844	DA	O4'-C1'-C2'	-7.99	99.51	105.90
1	AA	2316	DG	O4'-C1'-C2'	-7.99	99.51	105.90
160	Cj	26	DG	O4'-C4'-C3'	-7.98	101.21	106.00
81	BS	26	DT	C4-C5-C7	7.98	123.79	119.00
182	C5	22	DA	P-O3'-C3'	7.98	129.28	119.70
1	AA	1124	DG	O4'-C1'-C2'	-7.98	99.52	105.90
49	Aw	37	DT	O4'-C1'-C2'	-7.98	99.52	105.90
1	AA	3612	DG	N1-C6-O6	7.97	124.68	119.90
6	AF	40	DT	P-O3'-C3'	7.97	129.26	119.70
137	CM	1	DA	O4'-C1'-C2'	-7.97	99.53	105.90
1	AA	2639	DT	P-O3'-C3'	7.96	129.25	119.70
128	CD	51	DG	O4'-C1'-N9	7.96	113.57	108.00
54	A1	11	DG	O4'-C1'-C2'	-7.96	99.54	105.90
150	CZ	14	DG	O4'-C1'-C2'	-7.96	99.54	105.90
33	Ag	4	DT	P-O3'-C3'	7.95	129.24	119.70
1	AA	1324	DG	O4'-C1'-C2'	-7.95	99.54	105.90
64	BB	22	DC	P-O3'-C3'	7.95	129.24	119.70
98	Bj	31	DT	O4'-C4'-C3'	-7.95	101.23	106.00
128	CD	52	DT	O4'-C1'-C2'	-7.95	99.54	105.90
161	Ck	33	DG	O4'-C1'-C2'	-7.95	99.54	105.90
191	DE	1	DT	O4'-C1'-C2'	-7.94	99.55	105.90
1	AA	303	DG	O4'-C1'-C2'	-7.94	99.55	105.90
1	AA	6918	DT	O4'-C1'-C2'	-7.94	99.55	105.90
1	AA	8010	DC	P-O3'-C3'	7.93	129.21	119.70
1	AA	703	DA	C4'-C3'-C2'	-7.93	95.96	103.10
1	AA	4728	DG	C5-C6-O6	-7.93	123.84	128.60
61	A8	32	DT	C1'-O4'-C4'	-7.92	102.18	110.10
183	C6	9	DG	O4'-C4'-C3'	-7.92	101.25	106.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
154	Cd	16	DC	C1'-O4'-C4'	-7.92	102.18	110.10
161	Ck	8	DA	O4'-C4'-C3'	-7.92	101.25	106.00
1	AA	2656	DG	N1-C6-O6	7.92	124.65	119.90
1	AA	5042	DG	C5-C6-O6	-7.92	123.85	128.60
1	AA	7284	DT	P-O3'-C3'	7.91	129.19	119.70
1	AA	3203	DG	O4'-C1'-C2'	-7.90	99.58	105.90
114	Bz	25	DA	O4'-C1'-C2'	-7.90	99.58	105.90
127	CC	1	DG	O4'-C1'-C2'	-7.90	99.58	105.90
163	Cm	1	DG	O4'-C1'-C2'	-7.90	99.58	105.90
1	AA	2200	DT	O4'-C1'-C2'	-7.89	99.59	105.90
75	BM	17	DA	O4'-C1'-C2'	-7.89	99.59	105.90
1	AA	4502	DT	O4'-C1'-C2'	-7.88	99.60	105.90
8	AH	15	DG	C1'-O4'-C4'	-7.88	102.22	110.10
135	CK	50	DT	C4'-C3'-C2'	-7.88	96.01	103.10
1	AA	479	DG	O4'-C1'-C2'	-7.88	99.60	105.90
1	AA	3364	DT	O4'-C1'-C2'	-7.87	99.60	105.90
1	AA	1069	DG	O4'-C1'-C2'	-7.87	99.60	105.90
1	AA	7972	DG	O4'-C1'-C2'	-7.87	99.60	105.90
112	Bx	5	DT	O4'-C1'-C2'	-7.87	99.61	105.90
1	AA	1924	DT	P-O3'-C3'	7.87	129.14	119.70
1	AA	2235	DA	O4'-C1'-C2'	-7.86	99.61	105.90
133	CI	15	DG	C4'-C3'-C2'	-7.85	96.03	103.10
1	AA	3790	DG	P-O3'-C3'	7.85	129.12	119.70
154	Cd	28	DG	O4'-C1'-C2'	-7.85	99.62	105.90
50	Ax	37	DA	O4'-C1'-C2'	-7.85	99.62	105.90
1	AA	1943	DA	P-O3'-C3'	7.85	129.12	119.70
97	Bi	30	DT	P-O3'-C3'	7.84	129.11	119.70
103	Bo	40	DT	C6-C5-C7	-7.84	118.19	122.90
183	C6	9	DG	O4'-C1'-C2'	-7.84	99.63	105.90
154	Cd	16	DC	O4'-C1'-N1	7.84	113.49	108.00
1	AA	1186	DG	P-O3'-C3'	7.84	129.10	119.70
27	Aa	41	DA	O4'-C4'-C3'	-7.83	101.30	106.00
1	AA	3172	DA	P-O3'-C3'	7.83	129.09	119.70
45	As	22	DG	P-O3'-C3'	7.83	129.09	119.70
1	AA	3284	DG	O4'-C1'-C2'	-7.82	99.64	105.90
184	C7	40	DG	O4'-C1'-C2'	-7.82	99.64	105.90
1	AA	3394	DT	O4'-C1'-C2'	-7.82	99.64	105.90
1	AA	4556	DT	O4'-C1'-C2'	-7.82	99.64	105.90
1	AA	1806	DA	O4'-C1'-C2'	-7.82	99.64	105.90
1	AA	7152	DG	O4'-C1'-C2'	-7.82	99.65	105.90
1	AA	3651	DC	O4'-C4'-C3'	-7.81	101.31	106.00
1	AA	3594	DG	C5-C6-O6	-7.81	123.91	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
125	CA	9	DG	O4'-C1'-C2'	-7.80	99.66	105.90
1	AA	3143	DA	O4'-C1'-C2'	-7.80	99.66	105.90
1	AA	3651	DC	P-O3'-C3'	7.80	129.06	119.70
3	AC	2	DT	O4'-C1'-C2'	-7.80	99.66	105.90
81	BS	27	DG	O4'-C4'-C3'	-7.80	101.32	106.00
111	Bw	29	DA	O4'-C4'-C3'	-7.80	101.32	106.00
1	AA	3913	DA	O4'-C1'-C2'	-7.79	99.67	105.90
1	AA	3425	DC	O4'-C1'-C2'	-7.79	99.67	105.90
1	AA	645	DA	O4'-C1'-C2'	-7.78	99.67	105.90
1	AA	1715	DG	O4'-C4'-C3'	-7.78	101.33	106.00
1	AA	5931	DG	O4'-C1'-C2'	-7.78	99.67	105.90
35	Ai	11	DC	P-O3'-C3'	7.78	129.03	119.70
1	AA	6126	DA	O4'-C4'-C3'	-7.78	101.33	106.00
1	AA	7010	DG	O4'-C1'-C2'	-7.77	99.68	105.90
188	DB	15	DG	C5-C6-O6	-7.77	123.94	128.60
1	AA	3135	DA	O4'-C4'-C3'	-7.77	101.34	106.00
16	AP	43	DA	O4'-C4'-C3'	-7.77	101.34	106.00
158	Ch	1	DG	C1'-O4'-C4'	-7.77	102.33	110.10
1	AA	4002	DA	O4'-C1'-C2'	-7.76	99.69	105.90
27	Aa	50	DG	O4'-C1'-C2'	-7.76	99.69	105.90
1	AA	6724	DA	O4'-C4'-C3'	-7.75	101.35	106.00
1	AA	4159	DA	O4'-C1'-C2'	-7.75	99.70	105.90
116	B1	34	DT	O4'-C4'-C3'	-7.75	101.35	106.00
1	AA	4628	DG	O4'-C1'-C2'	-7.75	99.70	105.90
1	AA	5342	DT	O4'-C1'-C2'	-7.75	99.70	105.90
62	A9	31	DA	O4'-C4'-C3'	-7.75	101.35	106.00
132	CH	41	DG	O4'-C1'-C2'	-7.75	99.70	105.90
65	BC	16	DG	O4'-C1'-C2'	-7.75	99.70	105.90
118	B3	9	DT	O4'-C4'-C3'	-7.74	101.35	106.00
1	AA	1046	DG	O4'-C1'-C2'	-7.74	99.71	105.90
1	AA	3300	DT	O4'-C1'-C2'	-7.74	99.71	105.90
139	CO	17	DA	O4'-C4'-C3'	-7.74	101.36	106.00
1	AA	7855	DG	O4'-C4'-C3'	-7.74	101.36	106.00
1	AA	6355	DT	C4'-C3'-C2'	-7.74	96.14	103.10
58	A5	14	DA	N1-C6-N6	-7.74	113.96	118.60
177	C0	52	DG	C4'-C3'-C2'	-7.74	96.14	103.10
1	AA	6718	DC	C1'-O4'-C4'	-7.74	102.36	110.10
101	Bm	21	DG	O4'-C1'-C2'	-7.74	99.71	105.90
143	CS	35	DG	O4'-C1'-N9	7.73	113.41	108.00
1	AA	2818	DG	O4'-C1'-C2'	-7.73	99.71	105.90
1	AA	8007	DG	C5-C6-O6	-7.73	123.96	128.60
89	Ba	31	DG	O4'-C4'-C3'	-7.73	101.36	106.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
189	DC	33	DG	O4'-C1'-C2'	-7.73	99.72	105.90
1	AA	6007	DT	O4'-C4'-C3'	-7.72	101.37	106.00
165	Co	27	DA	O4'-C4'-C3'	-7.72	101.36	106.00
1	AA	6329	DT	O4'-C1'-C2'	-7.72	99.73	105.90
16	AP	10	DA	O4'-C1'-C2'	-7.72	99.73	105.90
1	AA	2925	DT	O4'-C1'-C2'	-7.72	99.73	105.90
50	Ax	1	DA	O4'-C1'-C2'	-7.71	99.73	105.90
111	Bw	18	DT	P-O3'-C3'	7.71	128.95	119.70
1	AA	5867	DC	C2-N1-C1'	7.71	127.28	118.80
9	AI	24	DT	O4'-C1'-C2'	-7.71	99.73	105.90
1	AA	61	DT	P-O3'-C3'	7.70	128.94	119.70
177	C0	52	DG	O4'-C4'-C3'	-7.70	101.38	106.00
1	AA	2335	DC	O4'-C1'-C2'	-7.70	99.74	105.90
28	Ab	1	DG	O4'-C1'-C2'	-7.70	99.74	105.90
1	AA	4046	DC	P-O3'-C3'	7.70	128.94	119.70
129	CE	1	DG	O4'-C1'-C2'	-7.70	99.74	105.90
182	C5	26	DA	O4'-C1'-C2'	-7.69	99.75	105.90
1	AA	2656	DG	C5-C6-O6	-7.69	123.99	128.60
84	BV	7	DC	P-O3'-C3'	7.69	128.93	119.70
1	AA	4752	DC	P-O3'-C3'	7.69	128.93	119.70
1	AA	6781	DC	P-O3'-C3'	7.69	128.93	119.70
1	AA	82	DA	O4'-C1'-C2'	-7.68	99.76	105.90
1	AA	4784	DG	O4'-C1'-C2'	-7.68	99.76	105.90
1	AA	2816	DG	O4'-C4'-C3'	-7.67	101.39	106.00
1	AA	3612	DG	C5-C6-O6	-7.67	124.00	128.60
1	AA	4296	DC	O4'-C1'-C2'	-7.67	99.76	105.90
1	AA	7621	DG	O4'-C1'-C2'	-7.67	99.76	105.90
107	Bs	23	DT	O4'-C4'-C3'	-7.67	101.40	106.00
177	C0	11	DT	O4'-C4'-C3'	-7.67	101.39	106.00
1	AA	7798	DT	O4'-C4'-C3'	-7.67	101.40	106.00
97	Bi	2	DT	O4'-C1'-C2'	-7.67	99.76	105.90
1	AA	878	DG	O4'-C1'-C2'	-7.67	99.76	105.90
1	AA	5759	DG	O4'-C1'-C2'	-7.67	99.76	105.90
134	CJ	19	DT	O4'-C1'-C2'	-7.67	99.76	105.90
1	AA	2398	DA	O4'-C4'-C3'	-7.66	101.40	106.00
166	Cp	31	DT	O4'-C1'-C2'	-7.66	99.77	105.90
187	DA	1	DA	O4'-C1'-C2'	-7.66	99.77	105.90
1	AA	1303	DT	P-O3'-C3'	7.66	128.89	119.70
82	BT	41	DG	O4'-C1'-C2'	-7.66	99.77	105.90
12	AL	9	DG	O4'-C1'-C2'	-7.66	99.78	105.90
1	AA	4986	DG	O4'-C4'-C3'	-7.66	101.41	106.00
1	AA	5055	DA	C4'-C3'-C2'	-7.65	96.21	103.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
192	DF	1	DC	O4'-C4'-C3'	-7.65	101.41	106.00
59	A6	42	DA	O4'-C4'-C3'	-7.65	101.41	106.00
1	AA	779	DT	P-O3'-C3'	7.65	128.88	119.70
2	AB	19	DG	O4'-C1'-C2'	-7.65	99.78	105.90
135	CK	5	DG	O4'-C1'-C2'	-7.65	99.78	105.90
1	AA	989	DG	O4'-C1'-C2'	-7.64	99.78	105.90
1	AA	5455	DG	O4'-C1'-C2'	-7.64	99.78	105.90
1	AA	1241	DA	O4'-C4'-C3'	-7.64	101.42	106.00
16	AP	1	DG	O4'-C4'-C3'	-7.64	101.42	106.00
82	BT	41	DG	C1'-O4'-C4'	-7.64	102.46	110.10
1	AA	1402	DG	O4'-C1'-C2'	-7.64	99.79	105.90
124	B9	22	DA	P-O3'-C3'	7.64	128.87	119.70
1	AA	6314	DG	O4'-C1'-C2'	-7.63	99.79	105.90
12	AL	25	DC	O4'-C4'-C3'	-7.63	101.42	106.00
15	AO	43	DA	P-O3'-C3'	7.63	128.86	119.70
1	AA	2959	DG	O4'-C1'-C2'	-7.63	99.79	105.90
1	AA	5666	DA	O4'-C1'-C2'	-7.63	99.80	105.90
1	AA	5693	DA	O4'-C4'-C3'	-7.63	101.42	106.00
1	AA	328	DG	P-O3'-C3'	7.62	128.84	119.70
1	AA	1319	DT	P-O3'-C3'	7.62	128.84	119.70
1	AA	3449	DC	C4'-C3'-C2'	-7.62	96.24	103.10
1	AA	6797	DG	O4'-C1'-C2'	-7.62	99.81	105.90
2	AB	19	DG	P-O3'-C3'	7.62	128.84	119.70
1	AA	3373	DT	O4'-C1'-N1	7.62	113.33	108.00
1	AA	4031	DG	O4'-C1'-C2'	-7.62	99.81	105.90
97	Bi	35	DT	C1'-O4'-C4'	-7.62	102.48	110.10
73	BK	10	DA	P-O3'-C3'	7.61	128.83	119.70
1	AA	7230	DG	O4'-C1'-C2'	-7.61	99.81	105.90
12	AL	50	DG	P-O3'-C3'	7.61	128.82	119.70
1	AA	2186	DT	P-O3'-C3'	7.60	128.82	119.70
1	AA	6324	DA	O4'-C1'-C2'	-7.60	99.82	105.90
1	AA	5640	DG	O4'-C1'-C2'	-7.60	99.82	105.90
1	AA	6185	DT	O4'-C1'-C2'	-7.60	99.82	105.90
11	AK	26	DC	O4'-C1'-C2'	-7.60	99.82	105.90
1	AA	4572	DA	O4'-C1'-C2'	-7.59	99.83	105.90
142	CR	37	DA	P-O3'-C3'	7.59	128.81	119.70
181	C4	9	DG	O4'-C1'-C2'	-7.59	99.83	105.90
1	AA	1069	DG	O4'-C1'-N9	7.59	113.31	108.00
1	AA	285	DG	P-O3'-C3'	7.58	128.80	119.70
1	AA	3628	DC	C4'-C3'-C2'	-7.58	96.28	103.10
1	AA	2164	DA	O4'-C1'-C2'	-7.58	99.84	105.90
1	AA	4243	DT	C4'-C3'-C2'	-7.58	96.28	103.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
74	BL	21	DA	O4'-C1'-C2'	-7.58	99.84	105.90
1	AA	899	DG	O4'-C1'-C2'	-7.58	99.84	105.90
1	AA	3502	DG	O4'-C4'-C3'	-7.58	101.45	106.00
90	Bb	9	DA	N1-C6-N6	-7.58	114.06	118.60
46	At	34	DT	C4'-C3'-C2'	-7.57	96.28	103.10
1	AA	3213	DC	O4'-C1'-N1	7.57	113.30	108.00
1	AA	7776	DG	O4'-C1'-C2'	-7.57	99.84	105.90
75	BM	17	DA	C1'-O4'-C4'	-7.57	102.53	110.10
5	AE	25	DA	P-O3'-C3'	7.57	128.78	119.70
1	AA	404	DA	O4'-C4'-C3'	-7.56	101.46	106.00
1	AA	3215	DA	O4'-C1'-C2'	-7.56	99.85	105.90
1	AA	5096	DG	P-O3'-C3'	7.56	128.77	119.70
1	AA	1070	DA	O4'-C1'-C2'	-7.55	99.86	105.90
1	AA	1955	DA	P-O3'-C3'	7.55	128.77	119.70
128	CD	1	DC	O4'-C4'-C3'	-7.55	101.47	106.00
137	CM	1	DA	C1'-O4'-C4'	-7.54	102.56	110.10
1	AA	88	DA	C4'-C3'-C2'	-7.54	96.31	103.10
1	AA	3714	DT	C1'-O4'-C4'	-7.54	102.56	110.10
153	Cc	6	DG	O4'-C1'-C2'	-7.54	99.87	105.90
7	AG	12	DC	P-O3'-C3'	7.54	128.74	119.70
1	AA	5103	DT	O4'-C1'-C2'	-7.54	99.87	105.90
1	AA	2095	DC	P-O3'-C3'	7.53	128.74	119.70
159	Ci	6	DG	C5-C6-O6	-7.53	124.08	128.60
1	AA	483	DT	C1'-O4'-C4'	-7.52	102.58	110.10
1	AA	759	DA	P-O3'-C3'	7.52	128.73	119.70
1	AA	4910	DG	O4'-C1'-C2'	-7.52	99.88	105.90
70	BH	25	DT	O4'-C1'-C2'	-7.52	99.88	105.90
1	AA	5603	DG	O4'-C1'-C2'	-7.52	99.89	105.90
127	CC	1	DG	C1'-O4'-C4'	-7.52	102.58	110.10
1	AA	3214	DT	O4'-C1'-C2'	-7.51	99.89	105.90
1	AA	3800	DG	P-O3'-C3'	7.51	128.71	119.70
184	C7	11	DG	O4'-C4'-C3'	-7.50	101.50	106.00
109	Bu	25	DG	P-O3'-C3'	7.50	128.70	119.70
1	AA	1901	DG	O4'-C4'-C3'	-7.50	101.50	104.50
1	AA	2164	DA	C1'-O4'-C4'	-7.50	102.60	110.10
3	AC	1	DT	O4'-C4'-C3'	-7.50	101.50	104.50
1	AA	1901	DG	C4'-C3'-C2'	-7.49	96.36	103.10
104	Bp	39	DA	C1'-O4'-C4'	-7.49	102.61	110.10
174	Cx	9	DG	O4'-C1'-C2'	-7.49	99.91	105.90
156	Cf	30	DC	P-O3'-C3'	7.48	128.67	119.70
176	Cz	51	DT	P-O3'-C3'	7.48	128.67	119.70
66	BD	38	DA	O4'-C1'-C2'	-7.47	99.92	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
72	BJ	25	DA	P-O3'-C3'	7.47	128.66	119.70
1	AA	3919	DA	N1-C6-N6	-7.47	114.12	118.60
1	AA	1281	DG	O4'-C1'-C2'	-7.46	99.93	105.90
1	AA	2240	DT	O4'-C4'-C3'	-7.46	101.52	104.50
1	AA	4520	DG	O4'-C1'-C2'	-7.46	99.93	105.90
145	CU	10	DG	O4'-C1'-C2'	-7.46	99.93	105.90
1	AA	4701	DG	P-O3'-C3'	7.46	128.65	119.70
168	Cr	10	DA	N1-C6-N6	-7.46	114.12	118.60
69	BG	26	DG	P-O3'-C3'	7.46	128.65	119.70
47	Au	6	DA	P-O3'-C3'	7.46	128.65	119.70
128	CD	1	DC	O4'-C1'-C2'	-7.45	99.94	105.90
1	AA	5698	DA	P-O3'-C3'	7.45	128.64	119.70
126	CB	9	DG	O4'-C1'-C2'	-7.45	99.94	105.90
1	AA	5961	DG	O4'-C1'-C2'	-7.45	99.94	105.90
1	AA	6881	DG	O4'-C4'-C3'	-7.45	101.52	104.50
128	CD	30	DT	C4'-C3'-C2'	-7.45	96.40	103.10
63	BA	1	DC	O4'-C4'-C3'	-7.45	101.52	104.50
38	Al	17	DG	C1'-O4'-C4'	-7.44	102.66	110.10
1	AA	837	DG	O4'-C1'-C2'	-7.44	99.95	105.90
177	C0	42	DA	N1-C6-N6	7.43	123.06	118.60
95	Bg	15	DA	O4'-C1'-C2'	-7.43	99.95	105.90
97	Bi	25	DG	O4'-C4'-C3'	-7.43	101.53	104.50
1	AA	4856	DA	O4'-C4'-C3'	-7.43	101.53	104.50
1	AA	6340	DA	O4'-C1'-C2'	-7.42	99.96	105.90
136	CL	10	DG	C1'-O4'-C4'	-7.42	102.68	110.10
165	Co	27	DA	O4'-C1'-C2'	-7.42	99.96	105.90
177	C0	37	DT	O4'-C4'-C3'	-7.42	101.53	104.50
1	AA	6564	DG	O4'-C1'-C2'	-7.42	99.97	105.90
131	CG	1	DG	O4'-C1'-C2'	-7.42	99.97	105.90
1	AA	4357	DT	O4'-C1'-C2'	-7.41	99.97	105.90
116	B1	36	DT	O4'-C1'-C2'	-7.41	99.97	105.90
140	CP	46	DT	O4'-C4'-C3'	-7.41	101.53	104.50
1	AA	1605	DC	P-O3'-C3'	7.41	128.59	119.70
159	Ci	12	DC	O4'-C1'-C2'	-7.41	99.97	105.90
42	Ap	11	DC	C1'-O4'-C4'	-7.41	102.69	110.10
1	AA	3922	DA	O4'-C4'-C3'	-7.40	101.54	104.50
1	AA	3986	DG	O4'-C1'-C2'	-7.40	99.98	105.90
1	AA	5510	DA	O4'-C1'-C2'	-7.40	99.98	105.90
1	AA	5661	DT	O4'-C4'-C3'	-7.40	101.54	104.50
170	Ct	20	DG	O4'-C1'-C2'	-7.40	99.98	105.90
1	AA	5732	DA	O4'-C4'-C3'	-7.40	101.54	104.50
1	AA	6173	DG	O4'-C1'-C2'	-7.40	99.98	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	3390	DT	P-O3'-C3'	7.39	128.57	119.70
1	AA	1114	DC	O4'-C1'-C2'	-7.39	99.99	105.90
1	AA	4563	DG	O4'-C1'-C2'	-7.39	99.99	105.90
1	AA	4572	DA	O4'-C4'-C3'	-7.39	101.54	104.50
64	BB	22	DC	C2-N1-C1'	7.39	126.93	118.80
91	Bc	38	DT	O4'-C1'-C2'	-7.38	99.99	105.90
90	Bb	5	DG	O4'-C1'-C2'	-7.38	99.99	105.90
138	CN	9	DC	O4'-C1'-N1	7.38	113.16	108.00
48	Av	3	DG	O4'-C1'-C2'	-7.38	100.00	105.90
7	AG	15	DG	C5-C6-O6	-7.37	124.18	128.60
185	C8	31	DG	O4'-C1'-C2'	-7.37	100.01	105.90
1	AA	749	DA	O4'-C1'-C2'	-7.36	100.01	105.90
34	Ah	10	DG	P-O3'-C3'	7.36	128.54	119.70
102	Bn	1	DA	O4'-C1'-C2'	-7.36	100.02	105.90
1	AA	2815	DA	P-O3'-C3'	7.35	128.52	119.70
1	AA	376	DG	O4'-C1'-C2'	-7.35	100.02	105.90
1	AA	2264	DA	O4'-C4'-C3'	-7.35	101.56	104.50
181	C4	50	DT	O4'-C1'-C2'	-7.35	100.02	105.90
12	AL	16	DT	P-O3'-C3'	7.35	128.51	119.70
119	B4	32	DG	O4'-C1'-C2'	-7.34	100.02	105.90
1	AA	195	DC	O4'-C1'-C2'	-7.34	100.03	105.90
1	AA	949	DT	O4'-C4'-C3'	-7.34	101.56	104.50
1	AA	1924	DT	O4'-C1'-C2'	-7.34	100.03	105.90
73	BK	37	DG	O4'-C1'-C2'	-7.34	100.03	105.90
1	AA	7492	DA	P-O3'-C3'	7.34	128.51	119.70
183	C6	43	DA	O4'-C1'-C2'	-7.33	100.03	105.90
65	BC	51	DC	O4'-C1'-C2'	-7.33	100.03	105.90
1	AA	6539	DG	P-O3'-C3'	7.33	128.50	119.70
167	Cq	6	DG	P-O3'-C3'	7.33	128.50	119.70
1	AA	218	DG	O4'-C1'-C2'	-7.32	100.04	105.90
144	CT	4	DC	C4'-C3'-C2'	-7.32	96.52	103.10
178	C1	17	DA	O4'-C1'-C2'	-7.31	100.05	105.90
1	AA	1180	DG	O4'-C1'-C2'	-7.31	100.05	105.90
1	AA	1679	DT	O4'-C4'-C3'	-7.30	101.58	104.50
1	AA	2597	DG	O4'-C1'-C2'	-7.30	100.06	105.90
1	AA	5096	DG	O4'-C1'-N9	7.30	113.11	108.00
185	C8	17	DC	P-O3'-C3'	7.30	128.46	119.70
52	Az	1	DC	C1'-O4'-C4'	-7.30	102.80	110.10
1	AA	6357	DA	P-O3'-C3'	7.30	128.46	119.70
1	AA	6966	DG	O4'-C1'-C2'	-7.29	100.06	105.90
4	AD	35	DG	P-O3'-C3'	7.29	128.45	119.70
1	AA	2526	DC	C1'-O4'-C4'	-7.29	102.81	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1016	DG	O4'-C1'-C2'	-7.29	100.07	105.90
37	Ak	31	DA	N1-C6-N6	-7.29	114.23	118.60
1	AA	1933	DT	P-O3'-C3'	7.29	128.44	119.70
85	BW	28	DA	O4'-C1'-C2'	-7.29	100.07	105.90
165	Co	28	DT	O4'-C1'-C2'	-7.29	100.07	105.90
1	AA	2810	DA	O4'-C1'-C2'	-7.28	100.07	105.90
68	BF	1	DA	C1'-O4'-C4'	-7.28	102.82	110.10
28	Ab	1	DG	O4'-C4'-C3'	-7.28	101.59	104.50
1	AA	4083	DC	O4'-C1'-C2'	-7.28	100.08	105.90
12	AL	25	DC	C4'-C3'-C2'	-7.28	96.55	103.10
1	AA	6988	DG	O4'-C1'-C2'	-7.28	100.08	105.90
48	Av	30	DA	C4'-C3'-C2'	-7.27	96.55	103.10
1	AA	2288	DT	P-O3'-C3'	7.27	128.43	119.70
1	AA	5580	DT	O4'-C4'-C3'	-7.27	101.59	104.50
1	AA	2746	DA	O4'-C1'-C2'	-7.27	100.08	105.90
175	Cy	30	DC	O4'-C4'-C3'	-7.27	101.59	104.50
1	AA	5555	DG	O4'-C1'-C2'	-7.27	100.08	105.90
1	AA	5578	DC	P-O3'-C3'	7.27	128.42	119.70
1	AA	4243	DT	O4'-C4'-C3'	-7.26	101.60	104.50
177	C0	37	DT	O4'-C1'-C2'	-7.26	100.09	105.90
1	AA	6261	DT	O4'-C1'-C2'	-7.26	100.09	105.90
14	AN	39	DG	C1'-O4'-C4'	-7.26	102.84	110.10
1	AA	3610	DC	O4'-C4'-C3'	-7.25	101.60	104.50
1	AA	7506	DT	C4'-C3'-C2'	-7.25	96.57	103.10
104	Bp	36	DC	O4'-C4'-C3'	-7.25	101.60	104.50
1	AA	2938	DA	C4'-C3'-C2'	-7.25	96.58	103.10
1	AA	759	DA	C4'-C3'-C2'	-7.25	96.58	103.10
105	Bq	29	DT	C4'-C3'-C2'	-7.24	96.58	103.10
1	AA	4664	DG	P-O3'-C3'	7.24	128.39	119.70
1	AA	3922	DA	O4'-C1'-C2'	-7.24	100.11	105.90
45	As	41	DA	N1-C6-N6	-7.24	114.26	118.60
1	AA	1922	DG	O4'-C1'-C2'	-7.24	100.11	105.90
1	AA	4801	DA	O4'-C4'-C3'	-7.23	101.61	104.50
35	Ai	39	DG	P-O3'-C3'	7.23	128.38	119.70
155	Ce	25	DA	P-O3'-C3'	7.23	128.38	119.70
46	At	52	DA	O4'-C1'-C2'	-7.23	100.12	105.90
1	AA	3136	DA	N1-C6-N6	-7.23	114.26	118.60
1	AA	5618	DA	O4'-C4'-C3'	-7.22	101.61	104.50
48	Av	37	DC	O4'-C1'-C2'	-7.22	100.12	105.90
1	AA	6844	DA	P-O3'-C3'	7.22	128.36	119.70
73	BK	37	DG	O4'-C4'-C3'	-7.22	101.61	104.50
126	CB	11	DG	C5-C6-O6	-7.22	124.27	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
154	Cd	18	DG	C1'-O4'-C4'	-7.22	102.88	110.10
1	AA	5416	DC	P-O3'-C3'	7.22	128.36	119.70
1	AA	1262	DT	O4'-C1'-C2'	-7.22	100.13	105.90
148	CX	8	DA	C1'-O4'-C4'	-7.22	102.88	110.10
148	CX	8	DA	O4'-C1'-C2'	-7.22	100.13	105.90
1	AA	3920	DT	C1'-O4'-C4'	-7.21	102.89	110.10
191	DE	2	DG	C1'-O4'-C4'	-7.21	102.89	110.10
46	At	24	DG	O4'-C1'-C2'	-7.21	100.13	105.90
1	AA	819	DA	O4'-C1'-C2'	-7.21	100.13	105.90
63	BA	17	DA	C4'-C3'-C2'	-7.21	96.61	103.10
1	AA	1716	DT	O4'-C1'-C2'	-7.21	100.13	105.90
1	AA	6634	DC	C4'-C3'-C2'	-7.21	96.61	103.10
1	AA	7379	DG	O4'-C1'-C2'	-7.21	100.14	105.90
113	By	11	DG	C4'-C3'-C2'	-7.21	96.61	103.10
92	Bd	38	DC	O4'-C1'-C2'	-7.20	100.14	105.90
1	AA	5786	DG	O4'-C1'-C2'	-7.20	100.14	105.90
1	AA	7220	DC	O4'-C1'-C2'	-7.20	100.14	105.90
43	Aq	13	DG	O4'-C1'-C2'	-7.20	100.14	105.90
1	AA	2716	DT	O4'-C1'-C2'	-7.20	100.14	105.90
1	AA	4667	DG	O4'-C4'-C3'	-7.20	101.62	104.50
104	Bp	23	DG	C5-C6-O6	-7.19	124.29	128.60
1	AA	1124	DG	P-O3'-C3'	7.18	128.32	119.70
1	AA	6457	DA	P-O3'-C3'	7.18	128.32	119.70
1	AA	4981	DT	C1'-O4'-C4'	-7.18	102.92	110.10
188	DB	15	DG	N1-C6-O6	7.18	124.21	119.90
1	AA	1329	DG	O4'-C1'-C2'	-7.18	100.16	105.90
1	AA	7568	DG	O4'-C1'-C2'	-7.18	100.16	105.90
1	AA	2124	DT	O4'-C1'-C2'	-7.17	100.16	105.90
25	AY	27	DG	C1'-O4'-C4'	-7.17	102.93	110.10
150	CZ	14	DG	O4'-C4'-C3'	-7.17	101.63	104.50
93	Be	17	DT	O4'-C1'-C2'	-7.16	100.17	105.90
1	AA	714	DG	O4'-C1'-C2'	-7.16	100.17	105.90
1	AA	807	DG	P-O3'-C3'	7.16	128.29	119.70
1	AA	1599	DT	O4'-C1'-C2'	-7.16	100.17	105.90
1	AA	5172	DA	O4'-C1'-C2'	-7.16	100.17	105.90
1	AA	5279	DG	O4'-C1'-C2'	-7.16	100.17	105.90
149	CY	41	DG	O4'-C1'-C2'	-7.16	100.17	105.90
1	AA	7762	DG	O4'-C1'-C2'	-7.15	100.18	105.90
38	Al	17	DG	O4'-C1'-C2'	-7.15	100.18	105.90
1	AA	7545	DA	O4'-C1'-C2'	-7.14	100.18	105.90
1	AA	737	DC	O4'-C1'-C2'	-7.14	100.19	105.90
124	B9	22	DA	C4'-C3'-C2'	-7.14	96.67	103.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	7159	DT	O4'-C4'-C3'	-7.14	101.64	104.50
162	Cl	9	DC	P-O3'-C3'	7.14	128.27	119.70
1	AA	5118	DA	O4'-C1'-C2'	-7.14	100.19	105.90
1	AA	5096	DG	O4'-C1'-C2'	-7.13	100.19	105.90
1	AA	7692	DA	O4'-C1'-C2'	-7.13	100.19	105.90
1	AA	2292	DG	C5-C6-O6	-7.13	124.32	128.60
108	Bt	22	DG	P-O3'-C3'	7.13	128.26	119.70
1	AA	7804	DA	O4'-C1'-C2'	-7.13	100.19	105.90
103	Bo	34	DA	O4'-C1'-C2'	-7.13	100.19	105.90
1	AA	6311	DT	O4'-C1'-C2'	-7.13	100.20	105.90
1	AA	2146	DG	N1-C6-O6	7.13	124.18	119.90
104	Bp	37	DA	C4'-C3'-C2'	-7.13	96.69	103.10
1	AA	4420	DC	O4'-C1'-C2'	-7.13	100.20	105.90
11	AK	26	DC	O4'-C4'-C3'	-7.13	101.65	104.50
1	AA	2224	DT	C4'-C3'-C2'	-7.12	96.69	103.10
1	AA	3243	DA	O4'-C1'-C2'	-7.12	100.20	105.90
182	C5	32	DG	O4'-C1'-C2'	-7.12	100.21	105.90
1	AA	5954	DG	C1'-O4'-C4'	-7.12	102.98	110.10
1	AA	5557	DC	O4'-C1'-C2'	-7.11	100.21	105.90
1	AA	4549	DG	O4'-C4'-C3'	-7.11	101.66	104.50
1	AA	4006	DT	O4'-C1'-C2'	-7.11	100.21	105.90
7	AG	1	DT	O4'-C4'-C3'	-7.11	101.66	104.50
1	AA	4728	DG	N1-C6-O6	7.10	124.16	119.90
47	Au	6	DA	O4'-C1'-C2'	-7.10	100.22	105.90
1	AA	5918	DG	O4'-C1'-C2'	-7.10	100.22	105.90
1	AA	6724	DA	C4'-C3'-C2'	-7.09	96.72	103.10
1	AA	450	DG	P-O3'-C3'	7.09	128.20	119.70
1	AA	5587	DG	O4'-C1'-C2'	-7.09	100.23	105.90
1	AA	989	DG	C1'-O4'-C4'	-7.08	103.02	110.10
25	AY	30	DT	C4'-C3'-C2'	-7.08	96.72	103.10
1	AA	6888	DG	O4'-C1'-C2'	-7.08	100.23	105.90
96	Bh	28	DC	O4'-C1'-C2'	-7.08	100.23	105.90
1	AA	2748	DA	P-O3'-C3'	7.08	128.20	119.70
53	A0	21	DC	P-O3'-C3'	7.08	128.20	119.70
129	CE	1	DG	C1'-O4'-C4'	-7.08	103.02	110.10
15	AO	7	DT	C4'-C3'-C2'	-7.08	96.73	103.10
17	AQ	37	DC	O4'-C1'-N1	7.08	112.95	108.00
1	AA	4848	DG	C1'-O4'-C4'	-7.08	103.02	110.10
45	As	21	DG	O4'-C1'-C2'	-7.08	100.24	105.90
178	C1	23	DG	O4'-C1'-C2'	-7.08	100.24	105.90
1	AA	4552	DT	C1'-O4'-C4'	-7.07	103.03	110.10
1	AA	6846	DG	P-O3'-C3'	7.07	128.19	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
41	Ao	31	DG	O4'-C1'-C2'	-7.07	100.24	105.90
87	BY	47	DT	O4'-C1'-C2'	-7.07	100.24	105.90
97	Bi	39	DT	C1'-O4'-C4'	-7.07	103.03	110.10
1	AA	2362	DC	O4'-C4'-C3'	-7.07	101.67	104.50
1	AA	5666	DA	O4'-C4'-C3'	-7.07	101.67	104.50
93	Be	39	DG	C5-C6-O6	-7.07	124.36	128.60
1	AA	6797	DG	O4'-C4'-C3'	-7.06	101.67	104.50
1	AA	1261	DG	N1-C6-O6	7.06	124.14	119.90
1	AA	5729	DG	O4'-C1'-C2'	-7.06	100.25	105.90
159	Ci	7	DT	O4'-C4'-C3'	-7.06	101.67	104.50
91	Bc	39	DG	P-O3'-C3'	7.06	128.17	119.70
187	DA	24	DT	P-O3'-C3'	7.06	128.17	119.70
8	AH	15	DG	O4'-C1'-C2'	-7.06	100.25	105.90
1	AA	2818	DG	O4'-C4'-C3'	-7.05	101.68	104.50
1	AA	5379	DA	P-O3'-C3'	7.05	128.17	119.70
1	AA	2708	DT	O4'-C4'-C3'	-7.05	101.68	104.50
1	AA	6881	DG	O4'-C1'-C2'	-7.05	100.26	105.90
26	AZ	10	DA	C1'-O4'-C4'	-7.05	103.05	110.10
132	CH	41	DG	O4'-C4'-C3'	-7.05	101.68	104.50
1	AA	4004	DA	P-O3'-C3'	7.05	128.16	119.70
1	AA	587	DG	C1'-O4'-C4'	-7.05	103.05	110.10
149	CY	46	DA	O4'-C1'-C2'	-7.04	100.27	105.90
1	AA	3135	DA	C4'-C3'-C2'	-7.04	96.76	103.10
1	AA	4928	DA	P-O3'-C3'	7.04	128.15	119.70
112	Bx	10	DT	C4'-C3'-C2'	-7.04	96.76	103.10
124	B9	23	DT	P-O3'-C3'	7.04	128.14	119.70
170	Ct	38	DG	O4'-C4'-C3'	-7.04	101.69	104.50
1	AA	5465	DC	P-O3'-C3'	7.03	128.14	119.70
1	AA	5219	DG	O4'-C4'-C3'	-7.03	101.69	104.50
1	AA	6451	DT	O4'-C1'-C2'	-7.03	100.28	105.90
1	AA	3526	DG	C1'-O4'-C4'	-7.03	103.07	110.10
1	AA	4063	DG	O4'-C1'-C2'	-7.03	100.28	105.90
1	AA	4805	DT	O4'-C1'-C2'	-7.03	100.28	105.90
103	Bo	33	DT	O4'-C1'-C2'	-7.03	100.28	105.90
1	AA	1807	DA	N1-C6-N6	-7.02	114.39	118.60
1	AA	5528	DG	O4'-C1'-C2'	-7.02	100.28	105.90
1	AA	2414	DT	C1'-O4'-C4'	-7.02	103.08	110.10
70	BH	57	DT	O4'-C1'-C2'	-7.02	100.28	105.90
1	AA	195	DC	C1'-O4'-C4'	-7.02	103.08	110.10
1	AA	6504	DC	P-O3'-C3'	7.02	128.12	119.70
103	Bo	29	DG	O4'-C1'-C2'	-7.02	100.28	105.90
143	CS	25	DG	P-O3'-C3'	7.02	128.13	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	980	DG	O4'-C1'-C2'	-7.02	100.28	105.90
1	AA	2577	DA	O4'-C1'-C2'	-7.02	100.28	105.90
1	AA	6524	DG	C4'-C3'-C2'	-7.02	96.78	103.10
1	AA	1124	DG	C1'-O4'-C4'	-7.02	103.08	110.10
1	AA	4972	DA	O4'-C1'-C2'	-7.02	100.29	105.90
135	CK	39	DC	P-O3'-C3'	7.02	128.12	119.70
123	B8	1	DA	O4'-C1'-C2'	-7.01	100.29	105.90
1	AA	4445	DG	N1-C6-O6	7.01	124.11	119.90
95	Bg	36	DT	C1'-O4'-C4'	-7.01	103.09	110.10
98	Bj	39	DT	P-O3'-C3'	7.01	128.11	119.70
30	Ad	36	DG	O4'-C1'-C2'	-7.01	100.29	105.90
1	AA	1853	DA	O4'-C4'-C3'	-7.01	101.70	104.50
164	Cn	18	DC	O4'-C4'-C3'	-7.01	101.70	104.50
188	DB	28	DG	P-O3'-C3'	7.00	128.11	119.70
1	AA	340	DG	O4'-C1'-C2'	-7.00	100.30	105.90
1	AA	7483	DT	O4'-C4'-C3'	-7.00	101.70	104.50
1	AA	3071	DT	C4'-C3'-C2'	-7.00	96.80	103.10
27	Aa	9	DA	O4'-C1'-N9	7.00	112.90	108.00
70	BH	1	DT	C4'-C3'-C2'	-7.00	96.80	103.10
148	CX	31	DT	O4'-C1'-C2'	-7.00	100.30	105.90
1	AA	4613	DG	O4'-C1'-C2'	-7.00	100.30	105.90
1	AA	7935	DC	P-O3'-C3'	7.00	128.10	119.70
48	Av	30	DA	O4'-C4'-C3'	-7.00	101.70	104.50
123	B8	48	DG	N1-C6-O6	7.00	124.10	119.90
124	B9	13	DA	C4'-C3'-C2'	-7.00	96.80	103.10
111	Bw	16	DA	O4'-C1'-C2'	-6.99	100.31	105.90
138	CN	9	DC	C1'-O4'-C4'	-6.99	103.11	110.10
1	AA	6240	DA	O4'-C1'-C2'	-6.99	100.31	105.90
174	Cx	32	DA	O4'-C1'-C2'	-6.99	100.31	105.90
1	AA	4605	DT	C1'-O4'-C4'	-6.99	103.11	110.10
60	A7	27	DC	O4'-C1'-C2'	-6.99	100.31	105.90
1	AA	3123	DC	O4'-C4'-C3'	-6.98	101.71	104.50
134	CJ	36	DG	O4'-C1'-C2'	-6.98	100.31	105.90
187	DA	26	DG	O4'-C1'-C2'	-6.98	100.31	105.90
1	AA	2114	DC	P-O3'-C3'	6.98	128.08	119.70
1	AA	2856	DG	P-O3'-C3'	6.98	128.08	119.70
1	AA	8036	DG	C1'-O4'-C4'	-6.98	103.12	110.10
88	BZ	39	DG	C5-C6-O6	-6.98	124.41	128.60
1	AA	3532	DA	O4'-C1'-C2'	-6.97	100.32	105.90
1	AA	6268	DG	O4'-C1'-C2'	-6.97	100.32	105.90
126	CB	9	DG	C1'-O4'-C4'	-6.97	103.13	110.10
132	CH	48	DG	C4'-C3'-C2'	-6.97	96.82	103.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
174	Cx	9	DG	O4'-C4'-C3'	-6.97	101.71	104.50
1	AA	7510	DT	C4'-C3'-C2'	-6.97	96.83	103.10
107	Bs	1	DA	C1'-O4'-C4'	-6.97	103.13	110.10
1	AA	3772	DG	O4'-C1'-C2'	-6.96	100.33	105.90
83	BU	11	DC	O4'-C1'-C2'	-6.96	100.33	105.90
162	Cl	38	DC	C1'-O4'-C4'	-6.96	103.14	110.10
189	DC	13	DG	N1-C6-O6	6.96	124.08	119.90
1	AA	2331	DA	O4'-C4'-C3'	-6.96	101.72	104.50
32	Af	8	DA	O4'-C1'-C2'	-6.96	100.34	105.90
3	AC	25	DG	C1'-O4'-C4'	-6.96	103.14	110.10
1	AA	3783	DG	O4'-C1'-C2'	-6.95	100.34	105.90
1	AA	8055	DG	O4'-C4'-C3'	-6.95	101.72	104.50
1	AA	4435	DC	O4'-C1'-C2'	-6.95	100.34	105.90
121	B6	18	DT	P-O3'-C3'	6.95	128.04	119.70
1	AA	2677	DC	C4'-C3'-C2'	-6.95	96.85	103.10
1	AA	5867	DC	C6-N1-C1'	-6.95	112.46	120.80
1	AA	7469	DT	C4'-C3'-C2'	-6.95	96.85	103.10
167	Cq	23	DC	O4'-C1'-C2'	-6.95	100.34	105.90
1	AA	4861	DT	O4'-C1'-C2'	-6.94	100.34	105.90
1	AA	3502	DG	C4'-C3'-C2'	-6.94	96.85	103.10
1	AA	6939	DG	C1'-O4'-C4'	-6.94	103.16	110.10
171	Cu	3	DT	O4'-C1'-C2'	-6.94	100.35	105.90
167	Cq	8	DT	P-O3'-C3'	6.94	128.03	119.70
1	AA	2844	DT	C4'-C3'-C2'	-6.94	96.86	103.10
1	AA	1477	DG	P-O3'-C3'	6.93	128.02	119.70
1	AA	3433	DG	O4'-C1'-C2'	-6.93	100.35	105.90
106	Br	17	DA	P-O3'-C3'	6.93	128.02	119.70
121	B6	8	DG	O4'-C1'-C2'	-6.93	100.35	105.90
1	AA	3389	DT	P-O3'-C3'	6.93	128.01	119.70
1	AA	863	DG	C5-C6-O6	-6.93	124.44	128.60
16	AP	43	DA	C4'-C3'-C2'	-6.92	96.87	103.10
1	AA	1445	DC	P-O3'-C3'	6.92	128.01	119.70
1	AA	7676	DC	O4'-C1'-N1	6.92	112.84	108.00
1	AA	7206	DG	O4'-C1'-C2'	-6.92	100.36	105.90
1	AA	7487	DG	C5-C6-O6	-6.92	124.45	128.60
1	AA	7632	DA	O4'-C4'-C3'	-6.92	101.73	104.50
1	AA	7666	DT	C4'-C3'-C2'	-6.92	96.88	103.10
1	AA	6365	DG	O4'-C1'-N9	6.91	112.84	108.00
59	A6	48	DG	O4'-C1'-C2'	-6.91	100.37	105.90
174	Cx	20	DC	O4'-C1'-C2'	-6.91	100.37	105.90
15	AO	7	DT	O4'-C4'-C3'	-6.91	101.74	104.50
16	AP	10	DA	P-O3'-C3'	6.91	127.99	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1715	DG	C1'-O4'-C4'	-6.91	103.19	110.10
1	AA	3697	DG	O4'-C1'-C2'	-6.90	100.38	105.90
1	AA	1232	DG	O4'-C1'-C2'	-6.90	100.38	105.90
1	AA	5045	DG	C5-C6-O6	-6.90	124.46	128.60
1	AA	5954	DG	O4'-C1'-C2'	-6.90	100.38	105.90
181	C4	15	DT	O4'-C1'-C2'	-6.90	100.38	105.90
1	AA	7346	DT	C4'-C3'-C2'	-6.90	96.89	103.10
136	CL	20	DG	P-O3'-C3'	6.90	127.98	119.70
1	AA	2016	DG	O4'-C1'-C2'	-6.90	100.38	105.90
60	A7	44	DT	O4'-C4'-C3'	-6.90	101.74	104.50
1	AA	3714	DT	O4'-C1'-C2'	-6.89	100.38	105.90
1	AA	4955	DG	O4'-C1'-C2'	-6.89	100.38	105.90
1	AA	7213	DA	P-O3'-C3'	6.89	127.97	119.70
1	AA	137	DC	O4'-C1'-C2'	-6.89	100.39	105.90
72	BJ	1	DG	C4'-C3'-C2'	-6.89	96.90	103.10
176	Cz	7	DC	O4'-C1'-C2'	-6.89	100.39	105.90
163	Cm	20	DT	O4'-C1'-C2'	-6.88	100.39	105.90
1	AA	6185	DT	C1'-O4'-C4'	-6.88	103.22	110.10
1	AA	6770	DT	O4'-C4'-C3'	-6.88	101.75	104.50
2	AB	29	DG	O4'-C1'-C2'	-6.88	100.40	105.90
8	AH	23	DT	O4'-C1'-C2'	-6.88	100.40	105.90
1	AA	7408	DT	C4'-C3'-C2'	-6.87	96.91	103.10
77	BO	16	DC	C2-N1-C1'	6.87	126.36	118.80
1	AA	6268	DG	O4'-C1'-N9	6.87	112.81	108.00
1	AA	7805	DA	O4'-C1'-C2'	-6.87	100.40	105.90
1	AA	2188	DC	C4'-C3'-C2'	-6.87	96.92	103.10
1	AA	3884	DG	O4'-C1'-C2'	-6.87	100.40	105.90
1	AA	6196	DT	O4'-C1'-C2'	-6.87	100.40	105.90
1	AA	7857	DG	O4'-C1'-C2'	-6.87	100.40	105.90
1	AA	6699	DG	O4'-C1'-C2'	-6.87	100.41	105.90
1	AA	2433	DG	O4'-C1'-C2'	-6.86	100.41	105.90
1	AA	3456	DT	P-O3'-C3'	6.86	127.93	119.70
1	AA	7993	DT	O4'-C1'-C2'	-6.86	100.41	105.90
1	AA	2569	DC	O4'-C1'-C2'	-6.86	100.41	105.90
181	C4	38	DG	O4'-C1'-C2'	-6.86	100.41	105.90
144	CT	24	DA	P-O3'-C3'	6.86	127.93	119.70
69	BG	2	DT	O4'-C4'-C3'	-6.86	101.76	104.50
1	AA	7594	DA	O4'-C1'-C2'	-6.85	100.42	105.90
31	Ae	48	DA	O4'-C4'-C3'	-6.85	101.76	104.50
150	CZ	18	DG	O4'-C4'-C3'	-6.85	101.76	104.50
1	AA	543	DG	O4'-C1'-C2'	-6.85	100.42	105.90
28	Ab	16	DC	O4'-C1'-C2'	-6.85	100.42	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1916	DA	O4'-C1'-C2'	-6.85	100.42	105.90
101	Bm	30	DT	P-O3'-C3'	6.84	127.91	119.70
1	AA	6	DG	O4'-C1'-C2'	-6.84	100.43	105.90
1	AA	2967	DA	O4'-C1'-C2'	-6.84	100.43	105.90
1	AA	5075	DG	C1'-O4'-C4'	-6.84	103.26	110.10
175	Cy	35	DG	O4'-C1'-C2'	-6.84	100.43	105.90
1	AA	7824	DC	C6-N1-C2	-6.83	117.57	120.30
1	AA	3753	DG	P-O3'-C3'	6.83	127.90	119.70
99	Bk	1	DG	O4'-C1'-C2'	-6.83	100.43	105.90
158	Ch	2	DG	P-O3'-C3'	6.83	127.90	119.70
18	AR	30	DT	C4'-C3'-C2'	-6.83	96.95	103.10
69	BG	29	DG	P-O3'-C3'	6.83	127.90	119.70
1	AA	4139	DA	C4'-C3'-C2'	-6.83	96.95	103.10
1	AA	6196	DT	P-O3'-C3'	6.83	127.89	119.70
1	AA	1324	DG	C1'-O4'-C4'	-6.83	103.28	110.10
1	AA	3927	DC	C1'-O4'-C4'	-6.83	103.27	110.10
1	AA	4640	DG	O4'-C1'-C2'	-6.83	100.44	105.90
1	AA	3953	DT	C4'-C3'-C2'	-6.82	96.96	103.10
116	B1	26	DT	C1'-O4'-C4'	-6.82	103.28	110.10
1	AA	4499	DT	C4'-C3'-C2'	-6.82	96.96	103.10
91	Bc	6	DT	P-O3'-C3'	6.82	127.89	119.70
143	CS	9	DA	O4'-C1'-C2'	-6.82	100.45	105.90
1	AA	6621	DG	O4'-C1'-C2'	-6.82	100.45	105.90
1	AA	869	DG	N1-C6-O6	6.81	123.99	119.90
1	AA	4052	DG	P-O3'-C3'	6.81	127.87	119.70
85	BW	17	DC	O4'-C1'-C2'	-6.81	100.45	105.90
3	AC	25	DG	O4'-C1'-C2'	-6.81	100.45	105.90
127	CC	13	DG	O4'-C1'-C2'	-6.80	100.46	105.90
184	C7	11	DG	C4'-C3'-C2'	-6.80	96.98	103.10
1	AA	4445	DG	C5-C6-O6	-6.80	124.52	128.60
1	AA	7958	DA	P-O3'-C3'	6.80	127.86	119.70
1	AA	954	DG	O4'-C1'-C2'	-6.80	100.46	105.90
182	C5	22	DA	O4'-C1'-C2'	-6.80	100.46	105.90
1	AA	2886	DA	O4'-C4'-C3'	-6.80	101.78	104.50
177	C0	11	DT	C4'-C3'-C2'	-6.80	96.98	103.10
83	BU	39	DG	O4'-C1'-C2'	-6.80	100.46	105.90
9	AI	11	DG	O4'-C1'-C2'	-6.79	100.46	105.90
65	BC	26	DC	O4'-C1'-C2'	-6.79	100.47	105.90
66	BD	50	DA	N1-C6-N6	-6.79	114.53	118.60
1	AA	2690	DG	O4'-C1'-C2'	-6.79	100.47	105.90
1	AA	7539	DG	C1'-O4'-C4'	-6.79	103.31	110.10
1	AA	8034	DG	C1'-O4'-C4'	-6.79	103.31	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
91	Bc	17	DA	P-O3'-C3'	6.79	127.85	119.70
1	AA	2696	DC	O4'-C4'-C3'	-6.79	101.79	104.50
1	AA	6084	DG	C1'-O4'-C4'	-6.78	103.32	110.10
1	AA	7236	DG	O4'-C1'-C2'	-6.78	100.47	105.90
37	Ak	12	DA	O4'-C1'-C2'	-6.78	100.47	105.90
1	AA	2291	DT	C1'-O4'-C4'	-6.78	103.32	110.10
1	AA	4426	DT	C4'-C3'-C2'	-6.78	97.00	103.10
1	AA	7919	DT	P-O3'-C3'	6.78	127.84	119.70
183	C6	9	DG	C1'-O4'-C4'	-6.78	103.32	110.10
1	AA	1065	DG	C4'-C3'-C2'	-6.78	97.00	103.10
1	AA	5889	DT	O4'-C1'-C2'	-6.78	100.48	105.90
61	A8	32	DT	O4'-C4'-C3'	-6.78	101.79	104.50
1	AA	2955	DG	O4'-C1'-C2'	-6.78	100.48	105.90
1	AA	4418	DG	O4'-C1'-C2'	-6.77	100.48	105.90
1	AA	2044	DG	C4'-C3'-C2'	-6.77	97.00	103.10
1	AA	7278	DG	O4'-C1'-C2'	-6.77	100.48	105.90
168	Cr	33	DG	O4'-C4'-C3'	-6.77	101.79	104.50
1	AA	568	DT	C1'-O4'-C4'	-6.77	103.33	110.10
1	AA	1304	DA	P-O3'-C3'	6.77	127.82	119.70
1	AA	1414	DG	O4'-C1'-C2'	-6.77	100.49	105.90
1	AA	5758	DT	O4'-C1'-C2'	-6.77	100.49	105.90
1	AA	7494	DA	P-O3'-C3'	6.77	127.82	119.70
164	Cn	12	DG	O4'-C1'-C2'	-6.77	100.49	105.90
1	AA	1924	DT	C1'-O4'-C4'	-6.76	103.33	110.10
1	AA	6770	DT	C4'-C3'-C2'	-6.76	97.01	103.10
45	As	17	DA	C4'-C3'-C2'	-6.76	97.01	103.10
135	CK	15	DG	P-O3'-C3'	6.76	127.82	119.70
144	CT	1	DG	C1'-O4'-C4'	-6.76	103.34	110.10
82	BT	16	DC	O4'-C1'-N1	6.76	112.73	108.00
1	AA	1999	DA	C4'-C3'-C2'	-6.76	97.02	103.10
1	AA	3884	DG	P-O3'-C3'	6.76	127.81	119.70
32	Af	11	DA	O4'-C1'-C2'	-6.76	100.49	105.90
133	CI	1	DC	C1'-O4'-C4'	-6.76	103.34	110.10
1	AA	5351	DG	O4'-C4'-C3'	-6.76	101.80	104.50
1	AA	468	DC	P-O3'-C3'	6.76	127.81	119.70
1	AA	6352	DG	O4'-C1'-C2'	-6.76	100.50	105.90
121	B6	38	DG	O4'-C1'-C2'	-6.76	100.50	105.90
161	Ck	1	DG	C1'-O4'-C4'	-6.76	103.34	110.10
1	AA	7798	DT	C4'-C3'-C2'	-6.75	97.02	103.10
24	AX	11	DC	C4'-C3'-C2'	-6.75	97.02	103.10
1	AA	5698	DA	O4'-C1'-C2'	-6.75	100.50	105.90
1	AA	3123	DC	C4'-C3'-C2'	-6.74	97.03	103.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	3724	DG	O4'-C1'-C2'	-6.74	100.51	105.90
18	AR	8	DG	P-O3'-C3'	6.74	127.79	119.70
165	Co	20	DG	O4'-C4'-C3'	-6.74	101.80	104.50
1	AA	3652	DA	O4'-C1'-C2'	-6.74	100.51	105.90
91	Bc	38	DT	O4'-C4'-C3'	-6.74	101.81	104.50
1	AA	522	DC	P-O3'-C3'	6.74	127.78	119.70
1	AA	2659	DT	C1'-O4'-C4'	-6.74	103.36	110.10
168	Cr	33	DG	C1'-O4'-C4'	-6.74	103.36	110.10
1	AA	1165	DG	O4'-C1'-C2'	-6.73	100.51	105.90
1	AA	4568	DT	C4'-C3'-C2'	-6.73	97.04	103.10
1	AA	5775	DT	C4'-C3'-C2'	-6.73	97.04	103.10
135	CK	52	DT	P-O3'-C3'	6.73	127.77	119.70
128	CD	51	DG	O4'-C1'-C2'	-6.72	100.52	105.90
1	AA	2334	DG	P-O3'-C3'	6.72	127.77	119.70
4	AD	29	DT	P-O3'-C3'	6.72	127.77	119.70
1	AA	6007	DT	C4'-C3'-C2'	-6.72	97.05	103.10
1	AA	2188	DC	O4'-C4'-C3'	-6.72	101.81	104.50
108	Bt	43	DT	C6-C5-C7	-6.72	118.87	122.90
1	AA	3613	DT	C4'-C3'-C2'	-6.72	97.05	103.10
1	AA	5105	DG	P-O3'-C3'	6.72	127.76	119.70
1	AA	5096	DG	C1'-O4'-C4'	-6.71	103.39	110.10
1	AA	5219	DG	C4'-C3'-C2'	-6.71	97.06	103.10
1	AA	2370	DG	C5-C6-O6	-6.71	124.58	128.60
1	AA	6261	DT	C1'-O4'-C4'	-6.71	103.39	110.10
1	AA	6829	DA	O4'-C1'-C2'	-6.71	100.53	105.90
1	AA	7808	DA	O4'-C1'-C2'	-6.71	100.53	105.90
95	Bg	38	DG	C5-C6-O6	-6.71	124.58	128.60
1	AA	5573	DG	C4'-C3'-C2'	-6.70	97.07	103.10
1	AA	1000	DT	O4'-C1'-C2'	-6.70	100.54	105.90
164	Cn	18	DC	C4'-C3'-C2'	-6.70	97.07	103.10
88	BZ	39	DG	N1-C6-O6	6.70	123.92	119.90
1	AA	2484	DA	O4'-C1'-C2'	-6.70	100.54	105.90
178	C1	10	DG	O4'-C1'-C2'	-6.69	100.55	105.90
1	AA	3592	DT	O4'-C4'-C3'	-6.69	101.82	104.50
113	By	1	DC	O4'-C1'-C2'	-6.69	100.55	105.90
142	CR	30	DA	O4'-C1'-C2'	-6.69	100.55	105.90
1	AA	5055	DA	O4'-C4'-C3'	-6.69	101.82	104.50
1	AA	7082	DA	P-O3'-C3'	6.68	127.72	119.70
39	Am	24	DG	O4'-C4'-C3'	-6.68	101.83	104.50
1	AA	870	DC	O4'-C1'-C2'	-6.68	100.55	105.90
37	Ak	36	DA	O4'-C1'-C2'	-6.68	100.55	105.90
67	BE	3	DT	C4'-C3'-C2'	-6.68	97.08	103.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
91	Bc	44	DG	P-O3'-C3'	6.68	127.72	119.70
161	Ck	21	DC	P-O3'-C3'	6.68	127.72	119.70
92	Bd	10	DT	O4'-C1'-C2'	-6.67	100.56	105.90
1	AA	3417	DG	O4'-C1'-C2'	-6.67	100.56	105.90
65	BC	18	DC	O4'-C1'-C2'	-6.67	100.56	105.90
1	AA	7213	DA	C1'-O4'-C4'	-6.67	103.43	110.10
1	AA	7120	DT	O4'-C1'-C2'	-6.67	100.56	105.90
1	AA	5474	DT	C1'-O4'-C4'	-6.67	103.43	110.10
1	AA	2242	DT	O4'-C1'-C2'	-6.66	100.57	105.90
1	AA	2540	DG	O4'-C4'-C3'	-6.66	101.83	104.50
1	AA	6734	DC	O4'-C1'-C2'	-6.66	100.57	105.90
1	AA	5463	DT	P-O3'-C3'	6.66	127.69	119.70
22	AV	29	DT	P-O3'-C3'	6.66	127.69	119.70
112	Bx	48	DA	O4'-C4'-C3'	-6.66	101.84	104.50
24	AX	26	DC	P-O3'-C3'	6.66	127.69	119.70
60	A7	29	DG	O4'-C1'-N9	6.66	112.66	108.00
1	AA	3284	DG	O4'-C4'-C3'	-6.66	101.84	104.50
55	A2	15	DC	P-O3'-C3'	6.66	127.69	119.70
91	Bc	22	DA	N1-C6-N6	-6.65	114.61	118.60
143	CS	35	DG	O4'-C4'-C3'	-6.65	101.84	104.50
165	Co	18	DA	P-O3'-C3'	6.65	127.68	119.70
1	AA	1799	DG	C4'-C3'-C2'	-6.65	97.11	103.10
1	AA	4023	DG	C1'-O4'-C4'	-6.65	103.45	110.10
54	A1	28	DA	O4'-C1'-C2'	-6.65	100.58	105.90
1	AA	1511	DG	C1'-O4'-C4'	-6.65	103.45	110.10
1	AA	1202	DT	O4'-C4'-C3'	-6.65	101.84	104.50
1	AA	6032	DC	P-O3'-C3'	6.65	127.68	119.70
1	AA	1318	DG	O4'-C1'-C2'	-6.64	100.58	105.90
121	B6	44	DC	P-O3'-C3'	6.64	127.67	119.70
1	AA	4669	DT	O4'-C4'-C3'	-6.64	101.84	104.50
1	AA	7440	DG	O4'-C1'-C2'	-6.64	100.59	105.90
34	Ah	29	DG	P-O3'-C3'	6.64	127.67	119.70
1	AA	7506	DT	O4'-C4'-C3'	-6.64	101.84	104.50
1	AA	3830	DA	O4'-C1'-C2'	-6.64	100.59	105.90
65	BC	54	DC	P-O3'-C3'	6.63	127.66	119.70
150	CZ	18	DG	C4'-C3'-C2'	-6.63	97.14	103.10
1	AA	5364	DT	C4'-C3'-C2'	-6.63	97.14	103.10
10	AJ	37	DG	O4'-C1'-C2'	-6.63	100.60	105.90
1	AA	508	DG	O4'-C1'-C2'	-6.62	100.60	105.90
1	AA	3278	DG	O4'-C1'-C2'	-6.62	100.60	105.90
1	AA	3977	DA	O4'-C1'-C2'	-6.62	100.60	105.90
181	C4	13	DG	C1'-O4'-C4'	-6.62	103.47	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	2830	DA	O4'-C4'-C3'	-6.62	101.85	104.50
1	AA	7492	DA	O4'-C1'-C2'	-6.62	100.60	105.90
1	AA	5729	DG	O4'-C1'-N9	6.62	112.64	108.00
5	AE	24	DA	P-O3'-C3'	6.62	127.64	119.70
1	AA	4910	DG	O4'-C1'-N9	6.62	112.63	108.00
176	Cz	43	DT	C4-C5-C7	-6.62	115.03	119.00
182	C5	29	DA	O4'-C1'-C2'	-6.62	100.61	105.90
1	AA	2587	DC	P-O5'-C5'	6.62	131.49	120.90
117	B2	12	DG	O4'-C4'-C3'	-6.62	101.85	104.50
1	AA	5868	DG	C1'-O4'-C4'	-6.62	103.48	110.10
20	AT	20	DG	O4'-C1'-C2'	-6.62	100.61	105.90
106	Br	31	DA	O4'-C1'-C2'	-6.62	100.61	105.90
28	Ab	21	DT	O4'-C1'-C2'	-6.61	100.61	105.90
2	AB	25	DA	O4'-C1'-C2'	-6.61	100.61	105.90
1	AA	4375	DT	C4'-C3'-C2'	-6.61	97.15	103.10
139	CO	23	DA	O4'-C1'-N9	-6.61	103.37	108.00
187	DA	29	DA	N1-C6-N6	-6.61	114.63	118.60
1	AA	6174	DG	P-O3'-C3'	6.61	127.63	119.70
15	AO	20	DG	O4'-C1'-C2'	-6.61	100.61	105.90
93	Be	15	DC	O4'-C1'-C2'	-6.61	100.61	105.90
132	CH	9	DG	C1'-O4'-C4'	-6.61	103.49	110.10
1	AA	2287	DA	O4'-C1'-C2'	-6.61	100.61	105.90
1	AA	3373	DT	C1'-O4'-C4'	-6.61	103.50	110.10
1	AA	4587	DA	C4'-C3'-C2'	-6.61	97.16	103.10
104	Bp	40	DA	N1-C6-N6	-6.60	114.64	118.60
1	AA	3630	DC	O4'-C1'-C2'	-6.60	100.62	105.90
1	AA	6318	DT	O4'-C4'-C3'	-6.60	101.86	104.50
20	AT	20	DG	P-O3'-C3'	6.60	127.62	119.70
127	CC	7	DT	C4'-C3'-C2'	-6.60	97.16	103.10
192	DF	5	DA	N1-C6-N6	-6.60	114.64	118.60
1	AA	3396	DC	O4'-C4'-C3'	-6.59	101.86	104.50
1	AA	6708	DG	N1-C6-O6	6.59	123.86	119.90
167	Cq	6	DG	O4'-C1'-C2'	-6.59	100.63	105.90
1	AA	623	DA	C4'-C3'-C2'	-6.59	97.17	103.10
113	By	26	DG	O4'-C1'-C2'	-6.59	100.63	105.90
171	Cu	6	DA	P-O3'-C3'	6.59	127.61	119.70
65	BC	10	DG	C5-C6-O6	-6.58	124.65	128.60
1	AA	3632	DT	O4'-C4'-C3'	-6.58	101.87	104.50
41	Ao	29	DT	O4'-C1'-C2'	-6.58	100.63	105.90
137	CM	14	DT	C4'-C3'-C2'	-6.58	97.18	103.10
144	CT	10	DA	P-O3'-C3'	6.58	127.60	119.70
1	AA	3603	DA	P-O3'-C3'	6.58	127.60	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
190	DD	5	DC	C1'-O4'-C4'	-6.58	103.52	110.10
112	Bx	48	DA	C4'-C3'-C2'	-6.58	97.18	103.10
1	AA	2249	DA	O4'-C1'-C2'	-6.58	100.64	105.90
161	Ck	8	DA	O4'-C1'-C2'	-6.58	100.64	105.90
1	AA	1853	DA	O4'-C1'-C2'	-6.58	100.64	105.90
1	AA	4226	DC	O4'-C1'-C2'	-6.58	100.64	105.90
1	AA	7482	DA	N1-C6-N6	-6.58	114.65	118.60
97	Bi	25	DG	O4'-C1'-C2'	-6.58	100.64	105.90
153	Cc	5	DG	O4'-C1'-C2'	-6.58	100.64	105.90
1	AA	3394	DT	C1'-O4'-C4'	-6.57	103.53	110.10
1	AA	426	DG	C1'-O4'-C4'	-6.57	103.53	110.10
1	AA	4118	DT	O4'-C4'-C3'	-6.57	101.87	104.50
182	C5	1	DT	C1'-O4'-C4'	-6.57	103.53	110.10
1	AA	3844	DG	O4'-C1'-C2'	-6.57	100.64	105.90
59	A6	42	DA	C1'-O4'-C4'	-6.57	103.53	110.10
1	AA	6923	DT	C4'-C3'-C2'	-6.57	97.19	103.10
1	AA	7808	DA	P-O3'-C3'	6.57	127.58	119.70
56	A3	27	DA	O4'-C1'-C2'	-6.57	100.64	105.90
1	AA	3639	DG	O4'-C1'-C2'	-6.57	100.65	105.90
104	Bp	20	DC	P-O3'-C3'	6.57	127.58	119.70
1	AA	4913	DG	C1'-O4'-C4'	-6.56	103.54	110.10
71	BI	18	DG	O4'-C1'-C2'	-6.56	100.65	105.90
1	AA	4423	DT	C4'-C3'-C2'	-6.56	97.20	103.10
1	AA	7037	DA	P-O3'-C3'	6.56	127.57	119.70
1	AA	1261	DG	C5-C6-O6	-6.56	124.67	128.60
26	AZ	8	DA	C4'-C3'-C2'	-6.56	97.20	103.10
1	AA	2548	DT	O4'-C1'-C2'	-6.55	100.66	105.90
1	AA	4337	DG	P-O3'-C3'	6.55	127.56	119.70
1	AA	5351	DG	C1'-O4'-C4'	-6.55	103.55	110.10
140	CP	9	DT	O4'-C4'-C3'	-6.55	101.88	104.50
1	AA	1940	DG	O4'-C1'-C2'	-6.55	100.66	105.90
1	AA	1281	DG	C5-C6-O6	-6.55	124.67	128.60
1	AA	3647	DT	P-O3'-C3'	6.55	127.56	119.70
1	AA	6893	DT	O4'-C1'-C2'	-6.55	100.66	105.90
1	AA	7560	DA	O4'-C1'-C2'	-6.55	100.66	105.90
120	B5	25	DT	O4'-C1'-C2'	-6.55	100.66	105.90
1	AA	6379	DT	C1'-O4'-C4'	-6.55	103.55	110.10
63	BA	10	DA	P-O3'-C3'	6.55	127.56	119.70
1	AA	5462	DC	O4'-C1'-C2'	-6.54	100.67	105.90
1	AA	7305	DG	O4'-C1'-C2'	-6.54	100.67	105.90
32	Af	11	DA	O4'-C4'-C3'	-6.54	101.88	104.50
33	Ag	17	DT	O4'-C1'-N1	6.54	112.58	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	2051	DT	O4'-C1'-C2'	-6.54	100.67	105.90
1	AA	4978	DT	P-O3'-C3'	6.54	127.55	119.70
121	B6	38	DG	C5-C6-O6	-6.54	124.67	128.60
1	AA	3100	DA	C5-C6-N6	-6.54	118.47	123.70
1	AA	5059	DA	C4'-C3'-C2'	-6.54	97.22	103.10
1	AA	8007	DG	N1-C6-O6	6.54	123.82	119.90
1	AA	5127	DC	O4'-C1'-C2'	-6.54	100.67	105.90
1	AA	6324	DA	C1'-O4'-C4'	-6.54	103.56	110.10
1	AA	7253	DC	P-O3'-C3'	6.54	127.54	119.70
1	AA	3343	DG	P-O3'-C3'	6.53	127.54	119.70
1	AA	6445	DG	P-O3'-C3'	6.53	127.54	119.70
1	AA	7594	DA	O4'-C4'-C3'	-6.53	101.89	104.50
187	DA	49	DG	C1'-O4'-C4'	-6.53	103.57	110.10
1	AA	6278	DT	O4'-C1'-C2'	-6.53	100.68	105.90
1	AA	4420	DC	P-O3'-C3'	6.53	127.53	119.70
1	AA	3766	DG	O4'-C1'-C2'	-6.53	100.68	105.90
1	AA	7023	DA	C1'-O4'-C4'	-6.53	103.57	110.10
30	Ad	22	DC	O4'-C1'-C2'	-6.53	100.68	105.90
1	AA	4671	DG	N1-C6-O6	6.52	123.81	119.90
1	AA	7149	DG	O4'-C1'-C2'	-6.52	100.68	105.90
88	BZ	32	DA	C4'-C3'-C2'	-6.52	97.23	103.10
1	AA	7492	DA	C1'-O4'-C4'	-6.52	103.58	110.10
1	AA	1056	DA	P-O3'-C3'	6.52	127.52	119.70
98	Bj	25	DT	O4'-C1'-C2'	-6.52	100.69	105.90
182	C5	1	DT	O4'-C1'-C2'	-6.52	100.69	105.90
8	AH	14	DT	O4'-C1'-C2'	-6.52	100.69	105.90
162	Cl	44	DT	P-O3'-C3'	6.52	127.52	119.70
1	AA	84	DC	O4'-C1'-C2'	-6.51	100.69	105.90
1	AA	2398	DA	O4'-C1'-C2'	-6.51	100.69	105.90
1	AA	5203	DA	O4'-C1'-C2'	-6.51	100.69	105.90
1	AA	2136	DC	P-O3'-C3'	6.51	127.52	119.70
1	AA	4280	DG	O4'-C1'-C2'	-6.51	100.69	105.90
1	AA	5153	DG	O4'-C1'-N9	6.51	112.56	108.00
1	AA	6820	DT	C4'-C3'-C2'	-6.51	97.24	103.10
1	AA	5357	DT	O4'-C1'-C2'	-6.51	100.69	105.90
10	AJ	45	DG	C1'-O4'-C4'	-6.51	103.59	110.10
135	CK	51	DT	C4'-C3'-C2'	-6.51	97.24	103.10
160	Cj	26	DG	C1'-O4'-C4'	-6.51	103.59	110.10
22	AV	16	DG	C1'-O4'-C4'	-6.51	103.59	110.10
89	Ba	12	DA	O4'-C1'-C2'	-6.51	100.69	105.90
174	Cx	21	DA	N1-C6-N6	-6.51	114.70	118.60
1	AA	2387	DA	C4'-C3'-C2'	-6.50	97.25	103.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
52	Az	3	DA	P-O3'-C3'	6.50	127.51	119.70
73	BK	23	DA	O4'-C4'-C3'	-6.50	101.90	104.50
1	AA	5958	DA	O4'-C1'-C2'	-6.50	100.70	105.90
1	AA	6131	DG	O4'-C1'-C2'	-6.50	100.70	105.90
1	AA	5323	DA	O4'-C1'-C2'	-6.50	100.70	105.90
1	AA	5828	DA	O4'-C1'-C2'	-6.50	100.70	105.90
1	AA	2670	DA	O4'-C1'-C2'	-6.49	100.70	105.90
1	AA	4837	DT	C4'-C3'-C2'	-6.49	97.26	103.10
13	AM	1	DT	O4'-C1'-C2'	-6.49	100.71	105.90
82	BT	41	DG	O4'-C1'-N9	6.49	112.55	108.00
1	AA	5981	DA	O4'-C4'-C3'	-6.49	101.90	104.50
1	AA	24	DG	O4'-C1'-C2'	-6.49	100.71	105.90
1	AA	7628	DT	C4'-C3'-C2'	-6.49	97.26	103.10
1	AA	30	DG	C1'-O4'-C4'	-6.49	103.61	110.10
1	AA	3651	DC	C4'-C3'-C2'	-6.49	97.26	103.10
1	AA	4060	DT	C1'-O4'-C4'	-6.49	103.61	110.10
86	BX	10	DG	O4'-C1'-C2'	-6.49	100.71	105.90
1	AA	6844	DA	C1'-O4'-C4'	-6.48	103.62	110.10
1	AA	233	DG	P-O3'-C3'	6.48	127.48	119.70
181	C4	6	DG	C5-C6-O6	-6.48	124.71	128.60
1	AA	1767	DG	O4'-C1'-C2'	-6.48	100.72	105.90
1	AA	7789	DT	C4'-C3'-C2'	-6.48	97.27	103.10
109	Bu	8	DG	O4'-C1'-C2'	-6.48	100.72	105.90
14	AN	27	DT	O4'-C4'-C3'	-6.48	101.91	104.50
1	AA	7178	DT	C4'-C3'-C2'	-6.48	97.27	103.10
1	AA	7855	DG	C4'-C3'-C2'	-6.48	97.27	103.10
1	AA	4848	DG	P-O3'-C3'	6.48	127.47	119.70
184	C7	32	DA	O4'-C4'-C3'	-6.48	101.91	104.50
123	B8	1	DA	C1'-O4'-C4'	-6.47	103.62	110.10
165	Co	11	DT	O4'-C1'-C2'	-6.47	100.72	105.90
62	A9	9	DA	O4'-C1'-C2'	-6.47	100.72	105.90
1	AA	5922	DA	O4'-C1'-C2'	-6.47	100.72	105.90
37	Ak	30	DT	O4'-C4'-C3'	-6.47	101.91	104.50
99	Bk	3	DA	O4'-C1'-C2'	-6.47	100.72	105.90
1	AA	1629	DG	C4'-C3'-C2'	-6.47	97.28	103.10
1	AA	7340	DT	C4'-C3'-C2'	-6.47	97.28	103.10
104	Bp	39	DA	O4'-C1'-N9	6.47	112.53	108.00
1	AA	2696	DC	C4'-C3'-C2'	-6.46	97.28	103.10
1	AA	5866	DT	O4'-C4'-C3'	-6.46	101.92	104.50
6	AF	13	DA	O4'-C1'-C2'	-6.46	100.73	105.90
1	AA	196	DT	C4-C5-C7	-6.46	115.12	119.00
40	An	17	DA	O4'-C1'-C2'	-6.46	100.73	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	3790	DG	O4'-C1'-C2'	-6.46	100.73	105.90
1	AA	5984	DT	O4'-C1'-C2'	-6.46	100.73	105.90
93	Be	39	DG	N1-C6-O6	6.46	123.77	119.90
48	Av	29	DT	O4'-C1'-C2'	-6.46	100.74	105.90
1	AA	48	DT	C4'-C3'-C2'	-6.45	97.29	103.10
1	AA	1281	DG	N1-C6-O6	6.45	123.77	119.90
1	AA	1622	DG	C5-C6-O6	-6.45	124.73	128.60
1	AA	2362	DC	C4'-C3'-C2'	-6.45	97.29	103.10
1	AA	4635	DC	O4'-C1'-C2'	-6.45	100.74	105.90
190	DD	9	DG	C4'-C3'-C2'	-6.45	97.29	103.10
1	AA	6514	DT	P-O3'-C3'	6.45	127.44	119.70
149	CY	26	DA	O4'-C1'-C2'	-6.45	100.74	105.90
7	AG	5	DG	O4'-C1'-C2'	-6.45	100.74	105.90
104	Bp	16	DG	P-O3'-C3'	6.45	127.44	119.70
113	By	2	DG	C1'-O4'-C4'	-6.45	103.65	110.10
170	Ct	1	DA	C1'-O4'-C4'	-6.45	103.65	110.10
1	AA	5732	DA	C4'-C3'-C2'	-6.45	97.30	103.10
114	Bz	25	DA	C1'-O4'-C4'	-6.45	103.65	110.10
1	AA	2312	DG	N1-C6-O6	6.45	123.77	119.90
176	Cz	51	DT	O4'-C1'-C2'	-6.45	100.74	105.90
1	AA	1564	DG	P-O3'-C3'	6.44	127.43	119.70
113	By	11	DG	O4'-C4'-C3'	-6.44	101.92	104.50
1	AA	5573	DG	O4'-C4'-C3'	-6.44	101.92	104.50
5	AE	9	DC	O4'-C1'-C2'	-6.44	100.75	105.90
104	Bp	23	DG	N1-C6-O6	6.44	123.77	119.90
172	Cv	14	DT	C4'-C3'-C2'	-6.44	97.30	103.10
2	AB	41	DT	C1'-O4'-C4'	-6.44	103.66	110.10
111	Bw	31	DC	O4'-C1'-C2'	-6.44	100.75	105.90
118	B3	55	DA	O4'-C1'-C2'	-6.44	100.75	105.90
1	AA	1200	DG	C1'-O4'-C4'	-6.44	103.66	110.10
113	By	22	DG	C1'-O4'-C4'	-6.44	103.66	110.10
154	Cd	16	DC	P-O3'-C3'	6.43	127.42	119.70
31	Ae	15	DA	P-O3'-C3'	6.43	127.42	119.70
1	AA	2264	DA	C4'-C3'-C2'	-6.43	97.31	103.10
1	AA	4910	DG	P-O3'-C3'	6.43	127.42	119.70
144	CT	24	DA	O4'-C1'-C2'	-6.43	100.76	105.90
176	Cz	26	DG	O4'-C1'-C2'	-6.43	100.76	105.90
1	AA	1418	DC	P-O3'-C3'	6.42	127.41	119.70
1	AA	3517	DT	O4'-C1'-C2'	-6.42	100.76	105.90
149	CY	46	DA	P-O3'-C3'	6.42	127.41	119.70
1	AA	1875	DG	O4'-C1'-C2'	-6.42	100.76	105.90
64	BB	25	DA	O4'-C1'-C2'	-6.42	100.76	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
89	Ba	31	DG	O4'-C1'-C2'	-6.42	100.76	105.90
1	AA	1755	DA	O4'-C1'-C2'	-6.42	100.76	105.90
1	AA	3640	DT	C4-C5-C7	-6.42	115.15	119.00
1	AA	6283	DC	O4'-C1'-C2'	-6.42	100.77	105.90
68	BF	13	DA	C4'-C3'-C2'	-6.42	97.32	103.10
104	Bp	41	DG	O4'-C4'-C3'	-6.42	101.93	104.50
1	AA	4472	DG	C4'-C3'-C2'	-6.42	97.32	103.10
1	AA	5609	DG	O4'-C1'-C2'	-6.42	100.77	105.90
46	At	24	DG	P-O3'-C3'	6.41	127.40	119.70
1	AA	3243	DA	O4'-C4'-C3'	-6.41	101.94	104.50
1	AA	4208	DG	O4'-C1'-C2'	-6.41	100.77	105.90
72	BJ	8	DG	C5-C6-O6	-6.41	124.75	128.60
169	Cs	4	DG	O4'-C1'-C2'	-6.41	100.77	105.90
1	AA	669	DA	O4'-C1'-C2'	-6.41	100.77	105.90
1	AA	5693	DA	C4'-C3'-C2'	-6.41	97.33	103.10
2	AB	39	DG	C1'-O4'-C4'	-6.41	103.69	110.10
1	AA	7383	DT	O4'-C4'-C3'	-6.41	101.94	104.50
61	A8	49	DT	C1'-O4'-C4'	-6.41	103.69	110.10
1	AA	4848	DG	O4'-C4'-C3'	-6.41	101.94	104.50
147	CW	15	DA	N1-C6-N6	-6.41	114.76	118.60
1	AA	6735	DG	P-O3'-C3'	6.40	127.38	119.70
1	AA	7878	DT	C4'-C3'-C2'	-6.40	97.34	103.10
179	C2	15	DA	O4'-C1'-C2'	-6.40	100.78	105.90
1	AA	3575	DG	O4'-C1'-C2'	-6.40	100.78	105.90
1	AA	1744	DG	C1'-O4'-C4'	-6.40	103.70	110.10
79	BQ	32	DG	O4'-C1'-C2'	-6.40	100.78	105.90
1	AA	7592	DT	P-O3'-C3'	6.40	127.38	119.70
136	CL	20	DG	O4'-C1'-C2'	-6.40	100.78	105.90
1	AA	7159	DT	C4'-C3'-C2'	-6.39	97.35	103.10
1	AA	6989	DA	O4'-C1'-C2'	-6.39	100.79	105.90
1	AA	7511	DG	P-O3'-C3'	6.39	127.37	119.70
1	AA	242	DA	N1-C6-N6	-6.39	114.77	118.60
1	AA	1345	DG	O4'-C1'-C2'	-6.39	100.79	105.90
2	AB	21	DA	C4'-C3'-C2'	-6.39	97.35	103.10
123	B8	48	DG	C5-C6-O6	-6.39	124.77	128.60
1	AA	6053	DG	O4'-C1'-C2'	-6.39	100.79	105.90
1	AA	6809	DC	C4'-C3'-C2'	-6.39	97.35	103.10
107	Bs	25	DA	O4'-C1'-C2'	-6.39	100.79	105.90
1	AA	8055	DG	C1'-O4'-C4'	-6.39	103.71	110.10
16	AP	26	DT	O4'-C1'-C2'	-6.39	100.79	105.90
89	Ba	25	DG	O4'-C1'-C2'	-6.39	100.79	105.90
1	AA	2074	DA	C4'-C3'-C2'	-6.38	97.35	103.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	3300	DT	C1'-O4'-C4'	-6.38	103.72	110.10
77	BO	8	DA	C5-C6-N6	6.38	128.81	123.70
135	CK	44	DG	C5-C6-O6	-6.38	124.77	128.60
1	AA	6352	DG	C1'-O4'-C4'	-6.38	103.72	110.10
1	AA	7312	DG	O4'-C1'-C2'	-6.38	100.79	105.90
21	AU	23	DT	C1'-O4'-C4'	-6.38	103.72	110.10
91	Bc	9	DA	O4'-C1'-C2'	-6.38	100.80	105.90
147	CW	33	DG	O4'-C1'-C2'	-6.38	100.80	105.90
1	AA	7221	DA	O4'-C1'-C2'	-6.38	100.80	105.90
1	AA	1413	DC	O4'-C1'-C2'	-6.38	100.80	105.90
1	AA	5045	DG	N1-C6-O6	6.38	123.72	119.90
31	Ae	15	DA	N1-C6-N6	-6.38	114.78	118.60
6	AF	39	DA	N1-C6-N6	-6.38	114.78	118.60
1	AA	479	DG	O4'-C4'-C3'	-6.37	101.95	104.50
1	AA	2240	DT	C4'-C3'-C2'	-6.37	97.36	103.10
6	AF	22	DG	N1-C6-O6	6.37	123.72	119.90
89	Ba	25	DG	C5-C6-O6	-6.37	124.78	128.60
1	AA	1794	DT	C4'-C3'-C2'	-6.37	97.37	103.10
1	AA	4616	DG	O4'-C1'-C2'	-6.37	100.80	105.90
1	AA	4918	DT	O4'-C1'-C2'	-6.37	100.80	105.90
1	AA	7231	DG	C5-C6-O6	-6.37	124.78	128.60
12	AL	25	DC	O4'-C1'-N1	6.37	112.46	108.00
1	AA	863	DG	P-O3'-C3'	6.37	127.34	119.70
1	AA	2487	DG	O4'-C1'-C2'	-6.37	100.81	105.90
1	AA	3343	DG	C1'-O4'-C4'	-6.37	103.73	110.10
1	AA	3884	DG	O4'-C1'-N9	6.36	112.45	108.00
30	Ad	19	DG	O4'-C1'-C2'	-6.36	100.81	105.90
95	Bg	12	DG	C5-C6-O6	-6.36	124.78	128.60
125	CA	28	DA	O4'-C1'-C2'	-6.36	100.81	105.90
160	Cj	44	DA	O4'-C1'-C2'	-6.36	100.81	105.90
187	DA	1	DA	C1'-O4'-C4'	-6.36	103.74	110.10
77	BO	9	DG	O4'-C1'-C2'	-6.36	100.81	105.90
172	Cv	22	DC	C2-N1-C1'	6.36	125.80	118.80
1	AA	7127	DG	O4'-C1'-N9	6.36	112.45	108.00
1	AA	8061	DG	O4'-C1'-C2'	-6.36	100.81	105.90
28	Ab	25	DA	O4'-C1'-C2'	-6.36	100.81	105.90
1	AA	4342	DG	O4'-C1'-N9	6.36	112.45	108.00
1	AA	5279	DG	O4'-C4'-C3'	-6.36	101.96	104.50
1	AA	7120	DT	C1'-O4'-C4'	-6.36	103.74	110.10
111	Bw	18	DT	C4'-C3'-C2'	-6.36	97.38	103.10
1	AA	1329	DG	C1'-O4'-C4'	-6.35	103.75	110.10
1	AA	2193	DG	O4'-C4'-C3'	-6.35	101.96	104.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	4386	DG	O4'-C1'-C2'	-6.35	100.82	105.90
1	AA	4752	DC	C4'-C3'-C2'	-6.35	97.38	103.10
1	AA	5659	DA	O4'-C1'-C2'	-6.35	100.82	105.90
97	Bi	35	DT	O4'-C1'-N1	6.35	112.44	108.00
121	B6	29	DG	O4'-C4'-C3'	-6.35	101.96	104.50
1	AA	7831	DG	O4'-C1'-C2'	-6.34	100.82	105.90
1	AA	6454	DG	O4'-C1'-C2'	-6.34	100.83	105.90
1	AA	6939	DG	O4'-C1'-C2'	-6.34	100.83	105.90
36	Aj	23	DG	O4'-C1'-C2'	-6.34	100.83	105.90
65	BC	51	DC	O4'-C4'-C3'	-6.34	101.96	104.50
159	Ci	20	DT	O4'-C4'-C3'	-6.34	101.96	104.50
69	BG	39	DC	O4'-C1'-C2'	-6.34	100.83	105.90
108	Bt	12	DA	N1-C6-N6	-6.34	114.80	118.60
1	AA	1767	DG	P-O3'-C3'	6.34	127.31	119.70
1	AA	6882	DG	C1'-O4'-C4'	-6.34	103.76	110.10
1	AA	881	DC	O4'-C1'-C2'	-6.34	100.83	105.90
1	AA	1784	DA	O4'-C4'-C3'	-6.34	101.97	104.50
1	AA	2692	DC	C4'-C3'-C2'	-6.34	97.40	103.10
1	AA	6251	DT	O4'-C4'-C3'	-6.34	101.97	104.50
6	AF	22	DG	C5-C6-O6	-6.34	124.80	128.60
55	A2	25	DT	O4'-C1'-C2'	-6.34	100.83	105.90
1	AA	3001	DG	O4'-C1'-C2'	-6.33	100.83	105.90
1	AA	3897	DA	N1-C6-N6	-6.33	114.80	118.60
1	AA	3609	DC	C4'-C3'-C2'	-6.33	97.40	103.10
1	AA	7246	DA	N1-C6-N6	6.33	122.40	118.60
1	AA	3214	DT	O4'-C4'-C3'	-6.33	101.97	104.50
5	AE	34	DG	O4'-C1'-C2'	-6.33	100.84	105.90
52	Az	1	DC	O4'-C1'-C2'	-6.33	100.84	105.90
59	A6	34	DA	O4'-C1'-C2'	-6.33	100.84	105.90
1	AA	2331	DA	C4'-C3'-C2'	-6.33	97.41	103.10
1	AA	3100	DA	N1-C6-N6	6.33	122.40	118.60
1	AA	5642	DC	O4'-C1'-C2'	-6.33	100.84	105.90
2	AB	19	DG	C1'-O4'-C4'	-6.33	103.77	110.10
1	AA	2013	DG	O4'-C1'-C2'	-6.33	100.84	105.90
1	AA	2134	DC	O4'-C1'-C2'	-6.33	100.84	105.90
1	AA	7111	DT	O4'-C1'-C2'	-6.32	100.84	105.90
168	Cr	30	DA	O4'-C1'-N9	-6.32	103.57	108.00
1	AA	6822	DC	P-O3'-C3'	6.32	127.29	119.70
1	AA	1589	DC	O4'-C4'-C3'	-6.32	101.97	104.50
1	AA	2624	DT	O4'-C1'-C2'	-6.32	100.84	105.90
1	AA	3104	DA	C1'-O4'-C4'	-6.32	103.78	110.10
1	AA	2114	DC	O4'-C1'-C2'	-6.32	100.85	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	3140	DG	P-O3'-C3'	6.32	127.28	119.70
1	AA	5392	DG	C1'-O4'-C4'	-6.32	103.78	110.10
116	B1	49	DG	C4'-C3'-C2'	-6.32	97.41	103.10
1	AA	7718	DG	O4'-C1'-C2'	-6.32	100.85	105.90
182	C5	37	DA	O4'-C1'-C2'	-6.32	100.85	105.90
1	AA	6280	DT	C4'-C3'-C2'	-6.31	97.42	103.10
19	AS	25	DA	P-O3'-C3'	6.31	127.27	119.70
31	Ae	6	DG	C5-C6-O6	-6.31	124.81	128.60
52	Az	10	DG	O4'-C1'-C2'	-6.31	100.85	105.90
102	Bn	5	DA	P-O3'-C3'	6.31	127.27	119.70
131	CG	5	DG	O4'-C1'-C2'	-6.31	100.85	105.90
1	AA	123	DG	P-O3'-C3'	6.31	127.27	119.70
1	AA	1438	DG	O4'-C1'-C2'	-6.31	100.85	105.90
90	Bb	7	DC	P-O3'-C3'	6.31	127.27	119.70
1	AA	4883	DG	P-O3'-C3'	6.31	127.27	119.70
170	Ct	25	DG	C4'-C3'-C2'	-6.31	97.42	103.10
189	DC	13	DG	C5-C6-O6	-6.31	124.81	128.60
1	AA	4552	DT	O4'-C1'-C2'	-6.31	100.85	105.90
7	AG	23	DT	C6-C5-C7	-6.31	119.12	122.90
182	C5	13	DC	O4'-C1'-C2'	-6.31	100.85	105.90
173	Cw	27	DA	O4'-C1'-C2'	-6.31	100.86	105.90
1	AA	2149	DT	O4'-C1'-C2'	-6.30	100.86	105.90
156	Cf	24	DA	C4'-C3'-C2'	-6.30	97.42	103.10
1	AA	7181	DT	O4'-C1'-C2'	-6.30	100.86	105.90
56	A3	10	DG	O4'-C1'-C2'	-6.30	100.86	105.90
1	AA	1186	DG	O4'-C1'-C2'	-6.30	100.86	105.90
1	AA	3652	DA	O4'-C1'-N9	6.30	112.41	108.00
1	AA	5555	DG	O4'-C1'-N9	6.30	112.41	108.00
139	CO	15	DC	O4'-C4'-C3'	-6.30	101.98	104.50
1	AA	3873	DC	O4'-C1'-C2'	-6.30	100.86	105.90
1	AA	6498	DC	P-O3'-C3'	6.30	127.26	119.70
1	AA	5854	DG	C5-C6-O6	-6.30	124.82	128.60
1	AA	3594	DG	N1-C6-O6	6.29	123.68	119.90
1	AA	6341	DC	O4'-C1'-N1	6.29	112.40	108.00
143	CS	35	DG	C1'-O4'-C4'	-6.29	103.81	110.10
1	AA	3162	DG	O4'-C1'-C2'	-6.29	100.87	105.90
104	Bp	34	DA	N1-C6-N6	6.29	122.37	118.60
1	AA	4871	DG	C1'-O4'-C4'	-6.29	103.81	110.10
40	An	30	DG	O4'-C4'-C3'	-6.29	101.98	104.50
1	AA	2196	DG	C1'-O4'-C4'	-6.29	103.81	110.10
70	BH	19	DG	C5-C6-O6	-6.29	124.83	128.60
1	AA	1492	DC	P-O3'-C3'	6.28	127.24	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1880	DT	P-O3'-C3'	6.28	127.24	119.70
1	AA	7776	DG	P-O3'-C3'	6.28	127.24	119.70
141	CQ	34	DC	O4'-C1'-C2'	-6.28	100.87	105.90
1	AA	6084	DG	P-O3'-C3'	6.28	127.24	119.70
1	AA	6492	DG	C5-C6-O6	-6.28	124.83	128.60
7	AG	25	DA	O4'-C4'-C3'	-6.28	101.99	104.50
40	An	39	DT	O4'-C1'-C2'	-6.28	100.88	105.90
1	AA	1184	DA	C4'-C3'-C2'	-6.28	97.45	103.10
1	AA	6958	DT	O4'-C4'-C3'	-6.28	101.99	104.50
160	Cj	37	DA	N1-C6-N6	-6.28	114.83	118.60
12	AL	24	DG	C1'-O4'-C4'	-6.28	103.83	110.10
136	CL	8	DA	C4'-C3'-C2'	-6.28	97.45	103.10
1	AA	6735	DG	O4'-C1'-C2'	-6.27	100.88	105.90
1	AA	504	DG	O4'-C1'-C2'	-6.27	100.88	105.90
1	AA	1324	DG	C5-C6-O6	-6.27	124.84	128.60
1	AA	5876	DG	P-O3'-C3'	6.27	127.23	119.70
1	AA	6833	DT	O4'-C1'-C2'	-6.27	100.88	105.90
91	Bc	5	DG	O4'-C1'-C2'	-6.27	100.88	105.90
1	AA	1008	DG	O4'-C1'-C2'	-6.27	100.89	105.90
160	Cj	26	DG	O4'-C1'-C2'	-6.27	100.88	105.90
1	AA	6885	DT	C4'-C3'-C2'	-6.27	97.46	103.10
1	AA	7778	DG	O4'-C4'-C3'	-6.27	101.99	104.50
101	Bm	9	DC	O4'-C1'-C2'	-6.27	100.89	105.90
180	C3	24	DG	P-O3'-C3'	6.27	127.22	119.70
1	AA	2677	DC	O4'-C4'-C3'	-6.26	101.99	104.50
1	AA	4461	DA	O4'-C1'-C2'	-6.26	100.89	105.90
85	BW	24	DG	P-O3'-C3'	6.26	127.22	119.70
1	AA	1805	DA	O4'-C1'-N9	-6.26	103.62	108.00
1	AA	7437	DC	O4'-C4'-C3'	-6.26	102.00	104.50
1	AA	4316	DG	N1-C6-O6	6.26	123.66	119.90
1	AA	7487	DG	N1-C6-O6	6.26	123.66	119.90
1	AA	7671	DG	O4'-C1'-C2'	-6.26	100.90	105.90
177	C0	42	DA	C5-C6-N6	-6.26	118.69	123.70
1	AA	220	DG	C5-C6-O6	-6.25	124.85	128.60
1	AA	5981	DA	C4'-C3'-C2'	-6.25	97.47	103.10
1	AA	5993	DG	O4'-C1'-C2'	-6.25	100.90	105.90
38	Al	45	DA	P-O3'-C3'	6.25	127.20	119.70
79	BQ	9	DC	P-O3'-C3'	6.25	127.20	119.70
1	AA	1409	DC	C1'-O4'-C4'	-6.25	103.85	110.10
1	AA	1493	DC	C4'-C3'-C2'	-6.25	97.47	103.10
82	BT	1	DC	C2-N1-C1'	6.25	125.68	118.80
56	A3	5	DA	O4'-C1'-C2'	-6.25	100.90	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
189	DC	10	DG	O4'-C1'-C2'	-6.25	100.90	105.90
1	AA	486	DC	O4'-C1'-C2'	-6.25	100.90	105.90
1	AA	1494	DT	C4'-C3'-C2'	-6.25	97.48	103.10
1	AA	3495	DG	O4'-C1'-C2'	-6.25	100.90	105.90
1	AA	7494	DA	O4'-C1'-C2'	-6.25	100.90	105.90
100	Bl	33	DG	C1'-O4'-C4'	-6.25	103.85	110.10
1	AA	891	DC	O4'-C1'-C2'	-6.24	100.91	105.90
1	AA	5605	DA	O4'-C1'-C2'	-6.24	100.91	105.90
152	Cb	35	DT	O4'-C1'-C2'	-6.24	100.91	105.90
154	Cd	16	DC	O4'-C4'-C3'	-6.24	102.00	104.50
1	AA	6436	DT	O4'-C1'-C2'	-6.24	100.91	105.90
99	Bk	13	DG	O4'-C1'-C2'	-6.24	100.91	105.90
1	AA	4028	DG	O4'-C1'-C2'	-6.24	100.91	105.90
167	Cq	24	DG	C5-C6-O6	-6.24	124.86	128.60
104	Bp	9	DT	O4'-C1'-N1	6.24	112.37	108.00
1	AA	152	DT	C4'-C3'-C2'	-6.24	97.49	103.10
1	AA	2993	DT	C4'-C3'-C2'	-6.24	97.49	103.10
1	AA	7409	DT	P-O3'-C3'	6.24	127.18	119.70
109	Bu	25	DG	N1-C6-O6	6.24	123.64	119.90
163	Cm	25	DG	P-O3'-C3'	6.24	127.18	119.70
165	Co	20	DG	O4'-C1'-C2'	-6.23	100.91	105.90
172	Cv	11	DC	O4'-C4'-C3'	-6.23	102.01	104.50
1	AA	2553	DC	C4'-C3'-C2'	-6.23	97.49	103.10
1	AA	3506	DC	C4'-C3'-C2'	-6.23	97.49	103.10
67	BE	21	DA	P-O3'-C3'	6.23	127.18	119.70
143	CS	18	DG	O4'-C1'-C2'	-6.23	100.92	105.90
180	C3	24	DG	O4'-C1'-N9	6.23	112.36	108.00
1	AA	885	DT	C4'-C3'-C2'	-6.23	97.50	103.10
1	AA	1875	DG	O4'-C4'-C3'	-6.23	102.01	104.50
1	AA	3478	DT	O4'-C1'-C2'	-6.23	100.92	105.90
1	AA	7880	DC	P-O3'-C3'	6.23	127.17	119.70
113	By	2	DG	O4'-C1'-C2'	-6.23	100.92	105.90
1	AA	7500	DG	O4'-C1'-C2'	-6.23	100.92	105.90
66	BD	28	DA	O4'-C1'-C2'	-6.23	100.92	105.90
1	AA	277	DC	C4'-C3'-C2'	-6.22	97.50	103.10
40	An	14	DA	P-O3'-C3'	6.22	127.17	119.70
1	AA	761	DG	O4'-C1'-C2'	-6.22	100.92	105.90
1	AA	1557	DG	O4'-C1'-C2'	-6.22	100.92	105.90
12	AL	48	DG	C5-C6-O6	-6.22	124.87	128.60
39	Am	24	DG	C4'-C3'-C2'	-6.22	97.50	103.10
152	Cb	38	DT	P-O3'-C3'	6.22	127.17	119.70
1	AA	340	DG	C1'-O4'-C4'	-6.22	103.88	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	2259	DG	C4'-C3'-C2'	-6.22	97.50	103.10
1	AA	3569	DG	O4'-C1'-C2'	-6.22	100.93	105.90
1	AA	5640	DG	P-O3'-C3'	6.22	127.16	119.70
1	AA	7231	DG	N1-C6-O6	6.22	123.63	119.90
150	CZ	14	DG	C1'-O4'-C4'	-6.22	103.88	110.10
159	Ci	38	DG	C4'-C3'-C2'	-6.22	97.50	103.10
1	AA	1655	DC	C1'-O4'-C4'	-6.21	103.89	110.10
1	AA	3330	DA	O4'-C1'-C2'	-6.21	100.93	105.90
1	AA	6933	DG	O4'-C1'-C2'	-6.21	100.93	105.90
132	CH	1	DT	O4'-C4'-C3'	-6.21	102.01	104.50
186	C9	36	DG	P-O3'-C3'	6.21	127.16	119.70
1	AA	4910	DG	C1'-O4'-C4'	-6.21	103.89	110.10
1	AA	477	DC	O4'-C1'-C2'	-6.21	100.93	105.90
3	AC	38	DG	O4'-C1'-C2'	-6.21	100.93	105.90
52	Az	1	DC	C2-N1-C1'	6.21	125.63	118.80
129	CE	10	DA	P-O3'-C3'	6.21	127.15	119.70
131	CG	1	DG	C1'-O4'-C4'	-6.21	103.89	110.10
1	AA	1803	DA	C4'-C3'-C2'	-6.21	97.51	103.10
1	AA	4810	DC	O4'-C1'-C2'	-6.21	100.93	105.90
1	AA	4939	DG	O4'-C1'-C2'	-6.21	100.93	105.90
1	AA	6909	DG	O4'-C1'-C2'	-6.21	100.93	105.90
27	Aa	41	DA	C4'-C3'-C2'	-6.21	97.51	103.10
135	CK	46	DG	C5-C6-O6	-6.21	124.88	128.60
163	Cm	1	DG	C1'-O4'-C4'	-6.21	103.89	110.10
1	AA	438	DG	O4'-C1'-C2'	-6.21	100.94	105.90
1	AA	1978	DG	C1'-O4'-C4'	-6.21	103.89	110.10
1	AA	7214	DG	N1-C6-O6	6.21	123.62	119.90
76	BN	24	DG	O4'-C1'-C2'	-6.21	100.94	105.90
83	BU	18	DC	P-O3'-C3'	6.21	127.15	119.70
156	Cf	15	DT	O4'-C1'-C2'	-6.21	100.93	105.90
161	Ck	33	DG	P-O3'-C3'	6.21	127.15	119.70
1	AA	3001	DG	O4'-C1'-N9	6.21	112.34	108.00
40	An	30	DG	C4'-C3'-C2'	-6.21	97.52	103.10
1	AA	2626	DA	O4'-C1'-C2'	-6.20	100.94	105.90
1	AA	5453	DC	P-O3'-C3'	6.20	127.14	119.70
116	B1	34	DT	C4'-C3'-C2'	-6.20	97.52	103.10
150	CZ	32	DG	O4'-C1'-C2'	-6.20	100.94	105.90
1	AA	623	DA	N1-C6-N6	-6.20	114.88	118.60
144	CT	22	DG	C1'-O4'-C4'	-6.20	103.90	110.10
151	Ca	32	DG	O4'-C1'-C2'	-6.20	100.94	105.90
1	AA	4095	DT	C6-C5-C7	-6.20	119.18	122.90
1	AA	5580	DT	C4'-C3'-C2'	-6.20	97.52	103.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	2104	DG	C5-C6-O6	-6.20	124.88	128.60
1	AA	5046	DG	O4'-C1'-C2'	-6.19	100.95	105.90
175	Cy	30	DC	C1'-O4'-C4'	-6.19	103.91	110.10
1	AA	587	DG	P-O3'-C3'	6.19	127.13	119.70
1	AA	7692	DA	P-O3'-C3'	6.19	127.13	119.70
97	Bi	2	DT	C1'-O4'-C4'	-6.19	103.91	110.10
53	A0	18	DC	O4'-C1'-C2'	-6.19	100.95	105.90
1	AA	878	DG	O4'-C1'-N9	6.19	112.33	108.00
1	AA	1188	DG	C5-C6-O6	-6.19	124.89	128.60
192	DF	5	DA	O4'-C1'-C2'	-6.19	100.95	105.90
4	AD	27	DC	C4'-C3'-C2'	-6.19	97.53	103.10
6	AF	1	DG	O4'-C4'-C3'	-6.19	102.03	104.50
1	AA	3363	DA	O4'-C1'-C2'	-6.18	100.95	105.90
1	AA	6989	DA	C1'-O4'-C4'	-6.18	103.92	110.10
30	Ad	22	DC	P-O3'-C3'	6.18	127.12	119.70
64	BB	22	DC	C6-N1-C1'	-6.18	113.38	120.80
159	Ci	6	DG	N1-C6-O6	6.18	123.61	119.90
1	AA	878	DG	C1'-O4'-C4'	-6.18	103.92	110.10
1	AA	3205	DC	C4'-C3'-C2'	-6.18	97.54	103.10
132	CH	21	DT	O4'-C4'-C3'	-6.18	102.03	104.50
1	AA	7986	DG	O4'-C1'-C2'	-6.18	100.96	105.90
1	AA	8048	DG	C4'-C3'-C2'	-6.18	97.54	103.10
75	BM	9	DT	C1'-O4'-C4'	-6.18	103.92	110.10
13	AM	1	DT	C1'-O4'-C4'	-6.17	103.92	110.10
84	BV	9	DC	O4'-C1'-C2'	-6.17	100.96	105.90
1	AA	1117	DC	C6-N1-C2	-6.17	117.83	120.30
63	BA	1	DC	C4'-C3'-C2'	-6.17	97.54	103.10
188	DB	25	DG	O4'-C1'-C2'	-6.17	100.96	105.90
1	AA	5640	DG	C1'-O4'-C4'	-6.17	103.93	110.10
1	AA	7607	DT	C4'-C3'-C2'	-6.17	97.55	103.10
1	AA	8010	DC	O4'-C4'-C3'	-6.17	102.03	104.50
115	B0	25	DC	P-O3'-C3'	6.17	127.11	119.70
1	AA	2166	DG	O4'-C1'-C2'	-6.17	100.96	105.90
1	AA	6928	DA	P-O3'-C3'	6.17	127.10	119.70
1	AA	7243	DC	C4'-C3'-C2'	-6.17	97.55	103.10
1	AA	1955	DA	O4'-C1'-C2'	-6.17	100.97	105.90
1	AA	6291	DG	C1'-O4'-C4'	-6.17	103.93	110.10
1	AA	1241	DA	C4'-C3'-C2'	-6.16	97.55	103.10
1	AA	7877	DC	O4'-C1'-C2'	-6.16	100.97	105.90
1	AA	692	DG	O4'-C1'-C2'	-6.16	100.97	105.90
1	AA	5462	DC	C6-N1-C2	-6.16	117.83	120.30
1	AA	238	DT	C4'-C3'-C2'	-6.16	97.56	103.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	596	DA	O4'-C1'-C2'	-6.16	100.97	105.90
1	AA	1065	DG	C5-C6-O6	-6.16	124.90	128.60
1	AA	6310	DA	O4'-C1'-C2'	-6.16	100.97	105.90
24	AX	12	DC	P-O5'-C5'	6.16	130.76	120.90
1	AA	421	DC	O4'-C1'-C2'	-6.16	100.97	105.90
1	AA	3286	DT	O4'-C4'-C3'	-6.16	102.04	104.50
1	AA	5565	DA	O4'-C1'-C2'	-6.16	100.97	105.90
1	AA	5618	DA	C4'-C3'-C2'	-6.16	97.56	103.10
69	BG	2	DT	C4'-C3'-C2'	-6.16	97.56	103.10
1	AA	7072	DG	O4'-C1'-C2'	-6.16	100.97	105.90
42	Ap	15	DT	O4'-C4'-C3'	-6.16	102.04	104.50
132	CH	48	DG	O4'-C4'-C3'	-6.15	102.04	104.50
1	AA	2171	DT	O4'-C4'-C3'	-6.15	102.04	104.50
1	AA	2430	DA	O4'-C1'-C2'	-6.15	100.98	105.90
61	A8	19	DC	C1'-O4'-C4'	-6.15	103.95	110.10
123	B8	48	DG	O4'-C1'-C2'	-6.15	100.98	105.90
47	Au	11	DT	C4'-C3'-C2'	-6.15	97.57	103.10
1	AA	2475	DG	O4'-C1'-C2'	-6.15	100.98	105.90
60	A7	1	DT	C1'-O4'-C4'	-6.15	103.95	110.10
1	AA	159	DC	P-O3'-C3'	6.15	127.08	119.70
1	AA	2095	DC	O4'-C1'-C2'	-6.15	100.98	105.90
1	AA	5721	DA	N1-C6-N6	-6.15	114.91	118.60
133	CI	1	DC	O4'-C1'-C2'	-6.15	100.98	105.90
1	AA	6813	DT	C4'-C3'-C2'	-6.14	97.57	103.10
1	AA	7215	DC	P-O3'-C3'	6.14	127.07	119.70
1	AA	7489	DG	C4-N9-C1'	6.14	134.49	126.50
1	AA	2567	DG	O4'-C1'-N9	6.14	112.30	108.00
1	AA	5181	DA	O4'-C1'-C2'	-6.14	100.99	105.90
7	AG	15	DG	N1-C6-O6	6.14	123.58	119.90
76	BN	24	DG	N1-C6-O6	6.14	123.58	119.90
95	Bg	37	DC	O4'-C1'-C2'	-6.14	100.99	105.90
1	AA	1355	DC	P-O3'-C3'	6.14	127.07	119.70
1	AA	7183	DC	O4'-C1'-C2'	-6.14	100.99	105.90
16	AP	1	DG	C4-N9-C1'	6.14	134.48	126.50
103	Bo	40	DT	C4-C5-C7	6.14	122.68	119.00
148	CX	37	DA	O4'-C1'-C2'	-6.14	100.99	105.90
109	Bu	25	DG	C5-C6-O6	-6.14	124.92	128.60
1	AA	3790	DG	O4'-C1'-N9	6.14	112.30	108.00
1	AA	5227	DG	O4'-C1'-C2'	-6.14	100.99	105.90
1	AA	7122	DG	C5-C6-O6	-6.14	124.92	128.60
1	AA	8003	DT	C6-C5-C7	-6.14	119.22	122.90
161	Ck	1	DG	O4'-C4'-C3'	-6.14	102.05	104.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
190	DD	24	DG	C5-C6-O6	-6.14	124.92	128.60
1	AA	1405	DA	P-O3'-C3'	6.13	127.06	119.70
1	AA	5379	DA	O4'-C1'-N9	6.13	112.29	108.00
60	A7	1	DT	P-O3'-C3'	6.13	127.06	119.70
32	Af	43	DG	C1'-O4'-C4'	-6.13	103.97	110.10
1	AA	624	DC	C2-N1-C1'	6.13	125.55	118.80
160	Cj	11	DC	C6-N1-C2	-6.13	117.85	120.30
140	CP	7	DA	O4'-C1'-C2'	-6.13	101.00	105.90
1	AA	557	DG	C1'-O4'-C4'	-6.13	103.97	110.10
1	AA	4629	DG	C5-C6-O6	-6.13	124.92	128.60
1	AA	7098	DC	C1'-O4'-C4'	-6.13	103.97	110.10
1	AA	4617	DG	O4'-C4'-C3'	-6.12	102.05	104.50
7	AG	12	DC	O4'-C4'-C3'	-6.12	102.05	104.50
38	Al	14	DA	O4'-C4'-C3'	-6.12	102.05	104.50
126	CB	15	DT	C4'-C3'-C2'	-6.12	97.59	103.10
121	B6	38	DG	N1-C6-O6	6.12	123.57	119.90
1	AA	4287	DC	C4'-C3'-C2'	-6.12	97.59	103.10
133	CI	10	DA	P-O3'-C3'	6.12	127.04	119.70
1	AA	600	DG	C4'-C3'-C2'	-6.12	97.60	103.10
1	AA	6236	DG	C5-C6-O6	-6.12	124.93	128.60
83	BU	2	DC	C6-N1-C2	-6.11	117.86	120.30
135	CK	44	DG	N1-C6-O6	6.11	123.57	119.90
35	Ai	45	DA	P-O3'-C3'	6.11	127.03	119.70
1	AA	392	DA	O4'-C1'-C2'	-6.11	101.01	105.90
1	AA	6324	DA	O4'-C1'-N9	6.11	112.28	108.00
125	CA	22	DC	P-O5'-C5'	6.11	130.68	120.90
1	AA	3632	DT	C4'-C3'-C2'	-6.11	97.61	103.10
1	AA	5889	DT	C1'-O4'-C4'	-6.11	104.00	110.10
73	BK	23	DA	C4'-C3'-C2'	-6.11	97.61	103.10
149	CY	26	DA	C1'-O4'-C4'	-6.11	103.99	110.10
172	Cv	11	DC	C4'-C3'-C2'	-6.11	97.61	103.10
1	AA	3150	DA	O4'-C1'-C2'	-6.10	101.02	105.90
1	AA	6268	DG	C1'-O4'-C4'	-6.10	104.00	110.10
1	AA	6421	DT	C1'-O4'-C4'	-6.10	104.00	110.10
1	AA	7674	DG	C4'-C3'-C2'	-6.10	97.61	103.10
144	CT	19	DG	C5-C6-O6	-6.10	124.94	128.60
158	Ch	9	DA	O4'-C1'-C2'	-6.10	101.02	105.90
13	AM	31	DA	O4'-C1'-C2'	-6.10	101.02	105.90
50	Ax	1	DA	O4'-C4'-C3'	-6.10	102.06	104.50
93	Be	2	DG	C5-C6-O6	-6.10	124.94	128.60
167	Cq	21	DT	C4'-C3'-C2'	-6.10	97.61	103.10
1	AA	95	DG	O4'-C1'-N9	6.10	112.27	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1916	DA	N1-C6-N6	-6.10	114.94	118.60
1	AA	4386	DG	C1'-O4'-C4'	-6.10	104.00	110.10
32	Af	43	DG	O4'-C4'-C3'	-6.10	102.06	104.50
1	AA	4617	DG	C1'-O4'-C4'	-6.10	104.00	110.10
91	Bc	5	DG	C1'-O4'-C4'	-6.10	104.00	110.10
135	CK	18	DG	O4'-C4'-C3'	-6.10	102.06	104.50
121	B6	32	DA	P-O3'-C3'	6.09	127.01	119.70
128	CD	9	DC	O4'-C1'-C2'	-6.09	101.03	105.90
1	AA	5240	DT	O4'-C1'-C2'	-6.09	101.03	105.90
1	AA	3193	DA	P-O3'-C3'	6.09	127.01	119.70
15	AO	39	DC	C2-N1-C1'	6.09	125.50	118.80
140	CP	40	DG	O4'-C1'-C2'	-6.09	101.03	105.90
148	CX	16	DA	P-O3'-C3'	6.09	127.01	119.70
10	AJ	41	DA	O4'-C1'-C2'	-6.09	101.03	105.90
1	AA	3536	DA	N1-C6-N6	-6.09	114.95	118.60
1	AA	344	DG	O4'-C1'-C2'	-6.09	101.03	105.90
1	AA	5825	DG	O4'-C1'-C2'	-6.09	101.03	105.90
1	AA	7382	DT	C4'-C3'-C2'	-6.09	97.62	103.10
45	As	40	DA	N1-C6-N6	-6.09	114.95	118.60
138	CN	7	DA	O4'-C1'-C2'	-6.09	101.03	105.90
1	AA	907	DG	C1'-O4'-C4'	-6.08	104.02	110.10
1	AA	8022	DA	O4'-C1'-C2'	-6.08	101.03	105.90
33	Ag	2	DG	O4'-C1'-C2'	-6.08	101.03	105.90
1	AA	6447	DA	N1-C6-N6	-6.08	114.95	118.60
2	AB	11	DT	P-O3'-C3'	6.08	127.00	119.70
83	BU	13	DG	C5-C6-O6	-6.08	124.95	128.60
1	AA	2372	DT	O4'-C1'-C2'	-6.08	101.03	105.90
82	BT	37	DT	P-O3'-C3'	6.08	127.00	119.70
114	Bz	7	DG	C5-C6-O6	-6.08	124.95	128.60
1	AA	3313	DT	C4'-C3'-C2'	-6.08	97.63	103.10
2	AB	19	DG	O4'-C1'-N9	6.08	112.25	108.00
6	AF	29	DA	O4'-C1'-C2'	-6.08	101.04	105.90
1	AA	482	DA	N1-C6-N6	-6.08	114.95	118.60
1	AA	2510	DA	O4'-C1'-C2'	-6.08	101.04	105.90
1	AA	6557	DG	O4'-C1'-C2'	-6.08	101.04	105.90
160	Cj	16	DG	C5-C6-O6	-6.08	124.95	128.60
54	A1	11	DG	C1'-O4'-C4'	-6.07	104.03	110.10
183	C6	42	DC	O4'-C1'-C2'	-6.07	101.04	105.90
1	AA	6827	DG	C1'-O4'-C4'	-6.07	104.03	110.10
1	AA	773	DA	P-O3'-C3'	6.07	126.99	119.70
1	AA	2788	DC	O4'-C4'-C3'	-6.07	102.07	104.50
1	AA	6880	DA	O4'-C1'-C2'	-6.07	101.04	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
44	Ar	45	DT	C4'-C3'-C2'	-6.07	97.64	103.10
1	AA	3230	DT	C4'-C3'-C2'	-6.07	97.64	103.10
1	AA	4669	DT	C4'-C3'-C2'	-6.07	97.64	103.10
20	AT	40	DG	O4'-C4'-C3'	-6.07	102.07	104.50
1	AA	2078	DT	O4'-C1'-C2'	-6.07	101.05	105.90
155	Ce	1	DG	C5-C6-O6	-6.07	124.96	128.60
1	AA	2372	DT	P-O3'-C3'	6.07	126.98	119.70
1	AA	4737	DA	O4'-C1'-C2'	-6.07	101.05	105.90
1	AA	6451	DT	C1'-O4'-C4'	-6.07	104.03	110.10
1	AA	763	DC	C4'-C3'-C2'	-6.06	97.64	103.10
1	AA	3046	DA	O4'-C1'-C2'	-6.06	101.05	105.90
70	BH	19	DG	N1-C6-O6	6.06	123.54	119.90
75	BM	24	DA	O4'-C1'-C2'	-6.06	101.05	105.90
110	Bv	10	DA	O4'-C1'-C2'	-6.06	101.05	105.90
130	CF	13	DC	C4'-C3'-C2'	-6.06	97.64	103.10
1	AA	869	DG	C5-C6-O6	-6.06	124.96	128.60
1	AA	320	DG	C5-C6-O6	-6.06	124.96	128.60
1	AA	3597	DT	C4'-C3'-C2'	-6.06	97.65	103.10
1	AA	5932	DT	P-O3'-C3'	6.06	126.97	119.70
76	BN	18	DG	C4'-C3'-C2'	-6.06	97.65	103.10
1	AA	1091	DA	C4'-C3'-C2'	-6.05	97.65	103.10
32	Af	45	DT	P-O3'-C3'	6.05	126.96	119.70
104	Bp	38	DA	O4'-C1'-C2'	-6.05	101.06	105.90
144	CT	24	DA	O4'-C1'-N9	6.05	112.24	108.00
1	AA	4339	DG	O4'-C1'-C2'	-6.05	101.06	105.90
21	AU	23	DT	O4'-C1'-C2'	-6.05	101.06	105.90
74	BL	31	DC	C6-N1-C2	-6.05	117.88	120.30
172	Cv	36	DC	P-O3'-C3'	6.05	126.96	119.70
1	AA	2567	DG	P-O3'-C3'	6.05	126.96	119.70
1	AA	707	DG	O4'-C1'-C2'	-6.05	101.06	105.90
1	AA	6448	DT	O4'-C4'-C3'	-6.05	102.08	104.50
1	AA	7905	DT	P-O3'-C3'	6.05	126.95	119.70
99	Bk	23	DT	P-O3'-C3'	6.05	126.95	119.70
95	Bg	36	DT	O4'-C1'-C2'	-6.04	101.06	105.90
64	BB	22	DC	C1'-O4'-C4'	-6.04	104.06	110.10
1	AA	6729	DT	O4'-C1'-C2'	-6.04	101.07	105.90
94	Bf	3	DG	O4'-C1'-C2'	-6.04	101.07	105.90
1	AA	3402	DT	C1'-O4'-C4'	-6.04	104.06	110.10
1	AA	6797	DG	C1'-O4'-C4'	-6.04	104.06	110.10
41	Ao	46	DT	O4'-C1'-C2'	-6.04	101.07	105.90
1	AA	2171	DT	C4'-C3'-C2'	-6.04	97.67	103.10
1	AA	195	DC	P-O3'-C3'	6.04	126.94	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	AK	21	DC	P-O5'-C5'	6.04	130.56	120.90
28	Ab	21	DT	P-O3'-C3'	6.04	126.94	119.70
90	Bb	32	DA	P-O3'-C3'	6.04	126.94	119.70
1	AA	245	DG	O4'-C1'-C2'	-6.03	101.07	105.90
191	DE	33	DG	O4'-C1'-C2'	-6.03	101.07	105.90
1	AA	6269	DA	O4'-C1'-C2'	-6.03	101.08	105.90
1	AA	7846	DG	O4'-C1'-C2'	-6.03	101.07	105.90
1	AA	7084	DA	O4'-C1'-C2'	-6.03	101.08	105.90
1	AA	4081	DT	O4'-C1'-C2'	-6.03	101.08	105.90
46	At	39	DA	C4'-C3'-C2'	-6.03	97.67	103.10
148	CX	6	DA	N1-C6-N6	-6.03	114.98	118.60
1	AA	728	DT	C4'-C3'-C2'	-6.03	97.68	103.10
1	AA	1992	DG	O4'-C1'-C2'	-6.03	101.08	105.90
1	AA	5588	DA	N1-C6-N6	-6.03	114.98	118.60
1	AA	171	DA	P-O3'-C3'	6.03	126.93	119.70
1	AA	3737	DC	C4'-C3'-C2'	-6.03	97.68	103.10
1	AA	7703	DG	O4'-C1'-C2'	-6.03	101.08	105.90
104	Bp	34	DA	C5-C6-N6	-6.03	118.88	123.70
1	AA	2103	DG	C5-C6-O6	-6.02	124.99	128.60
1	AA	2670	DA	N1-C6-N6	-6.02	114.99	118.60
108	Bt	42	DT	C6-C5-C7	-6.02	119.29	122.90
154	Cd	2	DG	C5-C6-O6	-6.02	124.99	128.60
191	DE	10	DA	O4'-C1'-C2'	-6.02	101.08	105.90
2	AB	7	DG	N1-C6-O6	6.02	123.51	119.90
63	BA	9	DA	O4'-C1'-C2'	-6.02	101.08	105.90
90	Bb	32	DA	C1'-O4'-C4'	-6.02	104.08	110.10
102	Bn	1	DA	C1'-O4'-C4'	-6.02	104.08	110.10
145	CU	26	DA	O4'-C1'-C2'	-6.02	101.08	105.90
1	AA	865	DC	P-O3'-C3'	6.02	126.92	119.70
1	AA	7650	DG	O4'-C1'-C2'	-6.02	101.08	105.90
63	BA	15	DC	C4'-C3'-C2'	-6.02	97.68	103.10
123	B8	18	DT	P-O3'-C3'	6.02	126.92	119.70
145	CU	10	DG	C1'-O4'-C4'	-6.02	104.08	110.10
1	AA	4310	DA	O4'-C1'-C2'	-6.02	101.09	105.90
1	AA	5167	DT	C1'-O4'-C4'	-6.02	104.08	110.10
12	AL	26	DC	O4'-C1'-N1	6.02	112.21	108.00
1	AA	5241	DA	P-O3'-C3'	6.02	126.92	119.70
54	A1	38	DG	O4'-C1'-C2'	-6.02	101.09	105.90
1	AA	2401	DA	C1'-O4'-C4'	-6.01	104.09	110.10
1	AA	7363	DT	C4'-C3'-C2'	-6.01	97.69	103.10
1	AA	5983	DT	O4'-C4'-C3'	-6.01	102.09	104.50
25	AY	10	DT	P-O3'-C3'	6.01	126.92	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	2202	DA	P-O3'-C3'	6.01	126.91	119.70
45	As	35	DA	O4'-C4'-C3'	-6.01	102.09	104.50
162	Cl	7	DG	O4'-C1'-C2'	-6.01	101.09	105.90
1	AA	3260	DG	O4'-C1'-C2'	-6.01	101.09	105.90
1	AA	3767	DG	C4'-C3'-C2'	-6.01	97.69	103.10
26	AZ	10	DA	O4'-C1'-C2'	-6.01	101.09	105.90
88	BZ	10	DA	O4'-C1'-C2'	-6.01	101.09	105.90
128	CD	1	DC	C1'-O4'-C4'	-6.01	104.09	110.10
1	AA	4793	DA	N1-C6-N6	-6.01	115.00	118.60
1	AA	7806	DG	C5-C6-O6	-6.01	125.00	128.60
114	Bz	7	DG	N1-C6-O6	6.01	123.50	119.90
1	AA	5375	DA	O4'-C1'-C2'	-6.00	101.10	105.90
22	AV	35	DG	O4'-C1'-C2'	-6.00	101.10	105.90
70	BH	49	DT	C4'-C3'-C2'	-6.00	97.70	103.10
1	AA	3403	DG	C5-C6-O6	-6.00	125.00	128.60
1	AA	6463	DA	O4'-C1'-C2'	-6.00	101.10	105.90
98	Bj	45	DG	O4'-C1'-C2'	-6.00	101.10	105.90
168	Cr	22	DC	P-O3'-C3'	6.00	126.91	119.70
1	AA	1287	DG	O4'-C1'-C2'	-6.00	101.10	105.90
1	AA	4752	DC	O4'-C4'-C3'	-6.00	102.10	104.50
1	AA	5023	DT	C4-C5-C7	-6.00	115.40	119.00
1	AA	5956	DT	C4'-C3'-C2'	-6.00	97.70	103.10
1	AA	3324	DA	C5-C6-N6	6.00	128.50	123.70
1	AA	4779	DA	P-O3'-C3'	6.00	126.90	119.70
136	CL	17	DG	O4'-C1'-C2'	-6.00	101.10	105.90
186	C9	17	DC	P-O3'-C3'	6.00	126.90	119.70
1	AA	3286	DT	C4'-C3'-C2'	-6.00	97.70	103.10
1	AA	3425	DC	C1'-O4'-C4'	-6.00	104.10	110.10
41	Ao	23	DT	O4'-C1'-C2'	-6.00	101.10	105.90
104	Bp	9	DT	O4'-C1'-C2'	-6.00	101.10	105.90
1	AA	5183	DT	O4'-C4'-C3'	-6.00	102.10	104.50
98	Bj	31	DT	C1'-O4'-C4'	-6.00	104.11	110.10
1	AA	5337	DC	O4'-C1'-C2'	-5.99	101.10	105.90
1	AA	6514	DT	O4'-C1'-C2'	-5.99	101.11	105.90
52	Az	17	DC	O4'-C1'-C2'	-5.99	101.11	105.90
53	A0	5	DG	O4'-C1'-C2'	-5.99	101.11	105.90
176	Cz	43	DT	C6-C5-C7	5.99	126.50	122.90
1	AA	5686	DC	O4'-C1'-C2'	-5.99	101.11	105.90
95	Bg	11	DG	C5-C6-O6	-5.99	125.00	128.60
1	AA	226	DA	O4'-C1'-C2'	-5.99	101.11	105.90
1	AA	2335	DC	C1'-O4'-C4'	-5.99	104.11	110.10
1	AA	7796	DG	C5-C6-O6	-5.99	125.01	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
186	C9	7	DA	O4'-C1'-C2'	-5.99	101.11	105.90
157	Cg	7	DG	O4'-C1'-C2'	-5.99	101.11	105.90
1	AA	2082	DG	O4'-C1'-C2'	-5.99	101.11	105.90
1	AA	2134	DC	P-O3'-C3'	5.99	126.89	119.70
97	Bi	12	DA	O4'-C1'-C2'	-5.99	101.11	105.90
156	Cf	33	DA	C1'-O4'-C4'	-5.99	104.11	110.10
181	C4	50	DT	C1'-O4'-C4'	-5.98	104.12	110.10
56	A3	24	DA	O4'-C1'-N9	5.98	112.19	108.00
74	BL	17	DT	C1'-O4'-C4'	-5.98	104.12	110.10
1	AA	5820	DG	O4'-C1'-C2'	-5.98	101.12	105.90
1	AA	6352	DG	O4'-C1'-N9	5.98	112.19	108.00
78	BP	40	DG	O4'-C1'-C2'	-5.98	101.12	105.90
80	BR	34	DA	P-O3'-C3'	5.98	126.88	119.70
109	Bu	48	DA	O4'-C1'-C2'	-5.98	101.11	105.90
184	C7	32	DA	C4'-C3'-C2'	-5.98	97.72	103.10
44	Ar	35	DT	C4'-C3'-C2'	-5.98	97.72	103.10
60	A7	1	DT	O4'-C4'-C3'	-5.98	102.11	104.50
150	CZ	16	DG	O4'-C1'-C2'	-5.98	101.12	105.90
1	AA	1314	DG	P-O3'-C3'	5.98	126.87	119.70
5	AE	25	DA	O4'-C1'-C2'	-5.98	101.12	105.90
103	Bo	40	DT	C4'-C3'-C2'	-5.98	97.72	103.10
1	AA	5051	DC	P-O3'-C3'	5.98	126.87	119.70
1	AA	5236	DC	P-O3'-C3'	5.97	126.87	119.70
1	AA	2830	DA	C4'-C3'-C2'	-5.97	97.72	103.10
6	AF	35	DA	P-O3'-C3'	5.97	126.87	119.70
187	DA	15	DC	P-O3'-C3'	5.97	126.87	119.70
1	AA	475	DA	P-O3'-C3'	5.97	126.86	119.70
1	AA	5251	DG	O4'-C1'-C2'	-5.97	101.12	105.90
1	AA	6245	DA	N1-C6-N6	-5.97	115.02	118.60
60	A7	40	DT	P-O3'-C3'	5.97	126.86	119.70
156	Cf	14	DA	O4'-C1'-C2'	-5.97	101.12	105.90
1	AA	1334	DT	C4'-C3'-C2'	-5.97	97.73	103.10
1	AA	1610	DT	P-O3'-C3'	5.97	126.86	119.70
1	AA	261	DA	O4'-C1'-C2'	-5.96	101.13	105.90
1	AA	720	DG	O4'-C1'-C2'	-5.96	101.13	105.90
1	AA	7437	DC	C4'-C3'-C2'	-5.96	97.73	103.10
1	AA	7983	DA	O4'-C4'-C3'	-5.96	102.11	104.50
60	A7	14	DA	O4'-C1'-C2'	-5.96	101.13	105.90
27	Aa	34	DT	O4'-C1'-C2'	-5.96	101.14	105.90
100	Bl	20	DG	C1'-O4'-C4'	-5.96	104.14	110.10
1	AA	2807	DA	O4'-C1'-C2'	-5.95	101.14	105.90
1	AA	4662	DC	P-O5'-C5'	5.95	130.42	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	6016	DT	C4'-C3'-C2'	-5.95	97.75	103.10
1	AA	1836	DA	O4'-C1'-C2'	-5.95	101.14	105.90
1	AA	7283	DG	C4'-C3'-C2'	-5.95	97.75	103.10
45	As	28	DC	O4'-C4'-C3'	-5.95	102.12	104.50
123	B8	48	DG	P-O3'-C3'	5.95	126.84	119.70
124	B9	34	DC	O4'-C1'-C2'	-5.95	101.14	105.90
191	DE	26	DG	O4'-C1'-C2'	-5.95	101.14	105.90
1	AA	7023	DA	O4'-C1'-C2'	-5.95	101.14	105.90
92	Bd	16	DA	O4'-C1'-C2'	-5.95	101.14	105.90
1	AA	874	DT	P-O3'-C3'	5.95	126.83	119.70
1	AA	5214	DA	O4'-C1'-C2'	-5.95	101.14	105.90
1	AA	6786	DA	O4'-C1'-C2'	-5.94	101.14	105.90
1	AA	1212	DG	C4'-C3'-C2'	-5.94	97.75	103.10
1	AA	3859	DG	O4'-C1'-C2'	-5.94	101.15	105.90
1	AA	4928	DA	O4'-C1'-C2'	-5.94	101.15	105.90
1	AA	7214	DG	C5-C6-O6	-5.94	125.03	128.60
1	AA	7375	DT	C4'-C3'-C2'	-5.94	97.75	103.10
3	AC	49	DA	N1-C6-N6	5.94	122.17	118.60
1	AA	196	DT	C6-C5-C7	5.94	126.46	122.90
1	AA	723	DA	O4'-C1'-C2'	-5.94	101.15	105.90
1	AA	1775	DT	C4'-C3'-C2'	-5.94	97.75	103.10
1	AA	3396	DC	C2-N1-C1'	5.94	125.33	118.80
1	AA	5518	DA	O4'-C1'-C2'	-5.94	101.15	105.90
118	B3	15	DA	O4'-C4'-C3'	-5.94	102.12	104.50
1	AA	2343	DA	O4'-C1'-C2'	-5.94	101.15	105.90
1	AA	4418	DG	O4'-C1'-N9	5.94	112.16	108.00
1	AA	4824	DT	C1'-O4'-C4'	-5.94	104.16	110.10
1	AA	536	DG	O4'-C1'-C2'	-5.93	101.16	105.90
1	AA	6448	DT	C4'-C3'-C2'	-5.93	97.76	103.10
35	Ai	21	DG	O4'-C1'-C2'	-5.93	101.15	105.90
159	Ci	20	DT	O4'-C1'-C2'	-5.93	101.15	105.90
1	AA	5185	DA	O4'-C1'-C2'	-5.93	101.16	105.90
1	AA	6535	DA	O4'-C1'-C2'	-5.93	101.16	105.90
22	AV	39	DG	P-O3'-C3'	5.93	126.81	119.70
1	AA	128	DT	C4'-C3'-C2'	-5.93	97.77	103.10
1	AA	5659	DA	N1-C6-N6	-5.93	115.04	118.60
29	Ac	25	DA	P-O3'-C3'	5.93	126.81	119.70
162	Cl	38	DC	O4'-C4'-C3'	-5.93	102.13	104.50
7	AG	23	DT	C4-C5-C7	5.92	122.56	119.00
26	AZ	32	DC	C2-N1-C1'	5.92	125.32	118.80
1	AA	2241	DT	P-O3'-C3'	-5.92	112.59	119.70
1	AA	7181	DT	C1'-O4'-C4'	-5.92	104.18	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	4830	DC	P-O5'-C5'	5.92	130.38	120.90
1	AA	7604	DT	P-O3'-C3'	5.92	126.81	119.70
95	Bg	3	DG	C5-C6-O6	-5.92	125.05	128.60
111	Bw	29	DA	C1'-O4'-C4'	-5.92	104.18	110.10
1	AA	273	DA	O4'-C1'-C2'	-5.92	101.16	105.90
1	AA	7486	DA	P-O3'-C3'	5.92	126.80	119.70
12	AL	43	DT	C4'-C3'-C2'	-5.92	97.77	103.10
30	Ad	45	DG	C5-C6-O6	-5.92	125.05	128.60
90	Bb	10	DC	C4'-C3'-C2'	-5.92	97.77	103.10
176	Cz	26	DG	O4'-C1'-N9	5.92	112.14	108.00
1	AA	7200	DG	N1-C6-O6	5.92	123.45	119.90
58	A5	28	DT	C4'-C3'-C2'	-5.92	97.78	103.10
1	AA	1340	DC	P-O5'-C5'	5.91	130.36	120.90
1	AA	1751	DG	O4'-C1'-C2'	-5.91	101.17	105.90
1	AA	3532	DA	P-O3'-C3'	5.91	126.80	119.70
1	AA	3640	DT	C6-C5-C7	5.91	126.45	122.90
1	AA	6704	DA	P-O3'-C3'	5.91	126.80	119.70
1	AA	7808	DA	N1-C6-N6	-5.91	115.05	118.60
88	BZ	35	DT	O4'-C1'-C2'	-5.91	101.17	105.90
1	AA	5479	DG	O4'-C1'-C2'	-5.91	101.17	105.90
1	AA	6989	DA	O4'-C1'-N9	5.91	112.14	108.00
1	AA	1030	DC	P-O3'-C3'	5.91	126.79	119.70
1	AA	7272	DG	O4'-C4'-C3'	-5.91	102.14	104.50
33	Ag	17	DT	O4'-C1'-C2'	-5.91	101.17	105.90
1	AA	1506	DG	O4'-C1'-C2'	-5.91	101.17	105.90
1	AA	6486	DA	N1-C6-N6	-5.91	115.06	118.60
104	Bp	18	DG	N1-C6-O6	5.91	123.44	119.90
175	Cy	38	DT	P-O3'-C3'	5.91	126.79	119.70
1	AA	2931	DG	O4'-C1'-C2'	-5.91	101.18	105.90
1	AA	2970	DG	O4'-C1'-C2'	-5.91	101.18	105.90
102	Bn	15	DG	O4'-C1'-C2'	-5.90	101.18	105.90
1	AA	2756	DT	C1'-O4'-C4'	-5.90	104.20	110.10
152	Cb	31	DA	O4'-C4'-C3'	-5.90	102.14	104.50
1	AA	4372	DG	O4'-C1'-C2'	-5.90	101.18	105.90
93	Be	2	DG	N1-C6-O6	5.90	123.44	119.90
122	B7	3	DT	P-O3'-C3'	5.90	126.78	119.70
1	AA	1113	DG	O4'-C4'-C3'	-5.90	102.14	104.50
1	AA	7246	DA	C5-C6-N6	-5.90	118.98	123.70
189	DC	3	DT	C4'-C3'-C2'	-5.90	97.79	103.10
1	AA	7372	DT	C4'-C3'-C2'	-5.89	97.80	103.10
2	AB	15	DT	O4'-C1'-C2'	-5.89	101.18	105.90
59	A6	10	DG	C1'-O4'-C4'	-5.89	104.21	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	3053	DG	O4'-C1'-C2'	-5.89	101.19	105.90
1	AA	3123	DC	O4'-C1'-N1	5.89	112.12	108.00
155	Ce	1	DG	N1-C6-O6	5.89	123.44	119.90
166	Cp	31	DT	C1'-O4'-C4'	-5.89	104.21	110.10
1	AA	2266	DG	O4'-C1'-N9	5.89	112.12	108.00
1	AA	6032	DC	O4'-C1'-C2'	-5.89	101.19	105.90
1	AA	1400	DG	O4'-C1'-C2'	-5.89	101.19	105.90
1	AA	2219	DA	O4'-C1'-C2'	-5.89	101.19	105.90
1	AA	2814	DG	O4'-C1'-C2'	-5.89	101.19	105.90
58	A5	1	DT	C1'-O4'-C4'	-5.89	104.21	110.10
1	AA	1811	DG	P-O3'-C3'	5.88	126.76	119.70
1	AA	2207	DT	C4'-C3'-C2'	-5.88	97.80	103.10
107	Bs	20	DG	C4'-C3'-C2'	-5.88	97.81	103.10
1	AA	5242	DA	O4'-C1'-C2'	-5.88	101.19	105.90
96	Bh	9	DC	C4'-C3'-C2'	-5.88	97.81	103.10
102	Bn	25	DA	P-O3'-C3'	5.88	126.76	119.70
1	AA	6583	DT	C4'-C3'-C2'	-5.88	97.81	103.10
1	AA	7703	DG	C1'-O4'-C4'	-5.88	104.22	110.10
1	AA	4989	DA	N1-C6-N6	-5.88	115.07	118.60
34	Ah	26	DG	O4'-C1'-C2'	-5.88	101.20	105.90
147	CW	39	DG	P-O3'-C3'	5.88	126.75	119.70
172	Cv	14	DT	O4'-C4'-C3'	-5.88	102.15	104.50
74	BL	21	DA	O4'-C4'-C3'	-5.88	102.15	104.50
1	AA	3143	DA	C1'-O4'-C4'	-5.87	104.23	110.10
1	AA	3425	DC	P-O3'-C3'	5.87	126.75	119.70
1	AA	5880	DG	C5-C6-O6	-5.87	125.08	128.60
36	Aj	21	DA	O4'-C1'-C2'	-5.87	101.20	105.90
1	AA	1667	DA	O4'-C1'-C2'	-5.87	101.20	105.90
1	AA	7626	DA	C4'-C3'-C2'	-5.87	97.82	103.10
48	Av	41	DA	O4'-C1'-C2'	-5.87	101.20	105.90
1	AA	1803	DA	O4'-C4'-C3'	-5.87	102.15	104.50
1	AA	4118	DT	C4'-C3'-C2'	-5.87	97.82	103.10
24	AX	9	DA	O4'-C1'-C2'	-5.87	101.21	105.90
1	AA	405	DG	C5-C6-O6	-5.87	125.08	128.60
1	AA	4643	DG	O4'-C1'-C2'	-5.87	101.21	105.90
1	AA	5823	DA	O4'-C4'-C3'	-5.87	102.15	104.50
1	AA	6213	DG	C5-C6-O6	-5.87	125.08	128.60
160	Cj	27	DG	O4'-C1'-N9	5.87	112.11	108.00
1	AA	4848	DG	O4'-C1'-N9	5.87	112.11	108.00
1	AA	6238	DT	C4'-C3'-C2'	-5.87	97.82	103.10
1	AA	6328	DT	P-O3'-C3'	5.87	126.74	119.70
1	AA	7358	DG	C1'-O4'-C4'	-5.87	104.23	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	3714	DT	P-O3'-C3'	5.86	126.74	119.70
1	AA	5057	DG	O4'-C1'-C2'	-5.86	101.21	105.90
185	C8	34	DA	C1'-O4'-C4'	-5.86	104.24	110.10
27	Aa	34	DT	C1'-O4'-C4'	-5.86	104.24	110.10
1	AA	1999	DA	O4'-C4'-C3'	-5.86	102.16	104.50
1	AA	5275	DA	O4'-C1'-C2'	-5.86	101.21	105.90
1	AA	7145	DG	O4'-C1'-C2'	-5.86	101.21	105.90
173	Cw	12	DA	P-O3'-C3'	5.86	126.73	119.70
34	Ah	10	DG	O4'-C1'-C2'	-5.86	101.21	105.90
191	DE	1	DT	C1'-O4'-C4'	-5.86	104.24	110.10
73	BK	26	DA	O4'-C1'-C2'	-5.86	101.21	105.90
140	CP	52	DG	O4'-C1'-C2'	-5.86	101.21	105.90
166	Cp	33	DT	P-O3'-C3'	5.86	126.73	119.70
1	AA	320	DG	N1-C6-O6	5.86	123.41	119.90
116	B1	17	DG	N1-C6-O6	5.86	123.41	119.90
117	B2	4	DA	O4'-C1'-C2'	-5.86	101.22	105.90
77	BO	26	DA	P-O3'-C3'	5.85	126.72	119.70
1	AA	2861	DT	C4'-C3'-C2'	-5.85	97.83	103.10
1	AA	3780	DG	C1'-O4'-C4'	-5.85	104.25	110.10
1	AA	6814	DC	O4'-C1'-N1	5.85	112.10	108.00
25	AY	36	DG	O4'-C1'-C2'	-5.85	101.22	105.90
35	Ai	13	DG	O4'-C1'-C2'	-5.85	101.22	105.90
135	CK	46	DG	N1-C6-O6	5.85	123.41	119.90
1	AA	1378	DG	O4'-C1'-N9	5.85	112.10	108.00
84	BV	7	DC	O4'-C4'-C3'	-5.85	102.16	104.50
8	AH	17	DA	O4'-C1'-C2'	-5.85	101.22	105.90
133	CI	1	DC	O4'-C1'-N1	5.85	112.09	108.00
1	AA	3015	DG	C1'-O4'-C4'	-5.85	104.25	110.10
1	AA	3610	DC	C1'-O4'-C4'	-5.85	104.25	110.10
1	AA	4787	DG	C5-C6-O6	-5.85	125.09	128.60
37	Ak	30	DT	O4'-C1'-C2'	-5.85	101.22	105.90
1	AA	5508	DG	P-O3'-C3'	5.85	126.72	119.70
1	AA	6477	DA	O4'-C1'-C2'	-5.84	101.22	105.90
1	AA	3104	DA	O4'-C1'-C2'	-5.84	101.23	105.90
1	AA	1254	DG	O4'-C1'-C2'	-5.84	101.23	105.90
35	Ai	32	DT	O4'-C1'-C2'	-5.84	101.23	105.90
42	Ap	8	DG	O4'-C1'-C2'	-5.84	101.23	105.90
55	A2	40	DG	C1'-O4'-C4'	-5.84	104.26	110.10
95	Bg	24	DT	C6-C5-C7	-5.84	119.40	122.90
110	Bv	14	DA	N1-C6-N6	-5.84	115.09	118.60
1	AA	754	DT	C4'-C3'-C2'	-5.84	97.84	103.10
2	AB	7	DG	C5-C6-O6	-5.84	125.10	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	737	DC	C1'-O4'-C4'	-5.84	104.26	110.10
1	AA	1070	DA	C1'-O4'-C4'	-5.84	104.26	110.10
1	AA	7854	DG	O4'-C1'-C2'	-5.84	101.23	105.90
1	AA	940	DT	O4'-C4'-C3'	-5.83	102.17	104.50
1	AA	1434	DT	C4'-C3'-C2'	-5.83	97.85	103.10
1	AA	1460	DG	O4'-C1'-C2'	-5.83	101.23	105.90
52	Az	14	DG	P-O3'-C3'	5.83	126.70	119.70
1	AA	1911	DT	C4'-C3'-C2'	-5.83	97.85	103.10
1	AA	3884	DG	C1'-O4'-C4'	-5.83	104.27	110.10
1	AA	6662	DT	P-O3'-C3'	5.83	126.70	119.70
161	Ck	8	DA	C1'-O4'-C4'	-5.83	104.27	110.10
84	BV	5	DT	C4'-C3'-C2'	-5.83	97.85	103.10
1	AA	688	DC	C4'-C3'-C2'	-5.83	97.85	103.10
1	AA	3174	DT	C1'-O4'-C4'	-5.83	104.27	110.10
1	AA	5397	DG	C5-C6-O6	-5.83	125.10	128.60
1	AA	6760	DT	C1'-O4'-C4'	-5.83	104.27	110.10
107	Bs	2	DG	N1-C6-O6	5.83	123.40	119.90
132	CH	3	DG	P-O3'-C3'	5.83	126.69	119.70
177	C0	60	DA	C1'-O4'-C4'	-5.83	104.27	110.10
1	AA	3525	DG	O4'-C1'-C2'	-5.83	101.24	105.90
1	AA	5237	DT	C1'-O4'-C4'	-5.83	104.27	110.10
1	AA	6850	DA	O4'-C4'-C3'	-5.83	102.17	104.50
64	BB	22	DC	O4'-C1'-C2'	-5.83	101.24	105.90
191	DE	33	DG	P-O3'-C3'	5.83	126.69	119.70
1	AA	3427	DG	C5-C6-O6	-5.82	125.11	128.60
1	AA	5867	DC	C1'-O4'-C4'	-5.82	104.28	110.10
1	AA	7751	DG	O4'-C1'-C2'	-5.82	101.24	105.90
65	BC	41	DC	P-O3'-C3'	5.82	126.69	119.70
72	BJ	8	DG	N1-C6-O6	5.82	123.39	119.90
81	BS	27	DG	C4'-C3'-C2'	-5.82	97.86	103.10
55	A2	25	DT	P-O3'-C3'	5.82	126.69	119.70
1	AA	852	DG	N1-C6-O6	5.82	123.39	119.90
177	C0	26	DA	C1'-O4'-C4'	-5.82	104.28	110.10
73	BK	1	DG	C5-C6-O6	-5.82	125.11	128.60
1	AA	332	DG	O4'-C1'-C2'	-5.82	101.25	105.90
1	AA	907	DG	C4'-C3'-C2'	-5.82	97.86	103.10
1	AA	1557	DG	C1'-O4'-C4'	-5.82	104.28	110.10
1	AA	5443	DG	O4'-C1'-C2'	-5.82	101.25	105.90
8	AH	15	DG	O4'-C1'-N9	5.82	112.07	108.00
35	Ai	22	DT	P-O3'-C3'	5.82	126.68	119.70
144	CT	24	DA	C1'-O4'-C4'	-5.82	104.28	110.10
162	Cl	1	DG	N1-C6-O6	5.82	123.39	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
184	C7	40	DG	C1'-O4'-C4'	-5.82	104.28	110.10
1	AA	323	DG	O4'-C1'-C2'	-5.82	101.25	105.90
1	AA	373	DA	O4'-C1'-C2'	-5.82	101.25	105.90
1	AA	1508	DG	O4'-C1'-C2'	-5.82	101.25	105.90
1	AA	4257	DG	N1-C6-O6	5.82	123.39	119.90
128	CD	15	DA	O4'-C1'-C2'	-5.82	101.25	105.90
150	CZ	16	DG	C1'-O4'-C4'	-5.82	104.28	110.10
162	Cl	43	DG	P-O3'-C3'	5.81	126.68	119.70
1	AA	985	DA	C1'-O4'-C4'	-5.81	104.29	110.10
1	AA	5482	DG	O4'-C1'-C2'	-5.81	101.25	105.90
1	AA	6273	DA	C1'-O4'-C4'	-5.81	104.29	110.10
21	AU	20	DA	P-O3'-C3'	5.81	126.67	119.70
54	A1	34	DG	O4'-C1'-N9	5.81	112.07	108.00
84	BV	7	DC	C4'-C3'-C2'	-5.81	97.87	103.10
140	CP	3	DG	N1-C6-O6	5.81	123.39	119.90
106	Br	24	DT	P-O3'-C3'	5.81	126.67	119.70
1	AA	3270	DG	O4'-C4'-C3'	-5.81	102.18	104.50
1	AA	1443	DT	O4'-C1'-C2'	-5.81	101.25	105.90
4	AD	32	DC	C2-N1-C1'	5.81	125.19	118.80
134	CJ	44	DC	C4'-C3'-C2'	-5.81	97.88	103.10
192	DF	23	DG	O4'-C1'-C2'	-5.81	101.25	105.90
1	AA	61	DT	O4'-C1'-C2'	-5.80	101.26	105.90
1	AA	1003	DG	O4'-C1'-C2'	-5.80	101.26	105.90
1	AA	1486	DG	O4'-C1'-C2'	-5.80	101.26	105.90
1	AA	3543	DT	C4'-C3'-C2'	-5.80	97.88	103.10
1	AA	6126	DA	C4'-C3'-C2'	-5.80	97.88	103.10
90	Bb	16	DG	C4'-C3'-C2'	-5.80	97.88	103.10
1	AA	6911	DT	O4'-C1'-C2'	-5.80	101.26	105.90
159	Ci	7	DT	C4'-C3'-C2'	-5.80	97.88	103.10
1	AA	1032	DG	O4'-C1'-C2'	-5.80	101.26	105.90
1	AA	1324	DG	P-O3'-C3'	5.80	126.66	119.70
126	CB	21	DG	C1'-O4'-C4'	-5.80	104.30	110.10
32	Af	34	DA	O4'-C1'-C2'	-5.80	101.26	105.90
1	AA	7221	DA	C1'-O4'-C4'	-5.80	104.30	110.10
145	CU	20	DG	O4'-C1'-C2'	-5.80	101.26	105.90
1	AA	6362	DG	C5-C6-O6	-5.80	125.12	128.60
14	AN	27	DT	C4'-C3'-C2'	-5.80	97.88	103.10
22	AV	23	DA	N1-C6-N6	-5.80	115.12	118.60
168	Cr	23	DA	O4'-C1'-N9	-5.80	103.94	108.00
1	AA	48	DT	O4'-C4'-C3'	-5.79	102.18	104.50
1	AA	1587	DT	P-O5'-C5'	5.79	130.17	120.90
1	AA	2708	DT	C4'-C3'-C2'	-5.79	97.89	103.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	5354	DA	C4'-C3'-C2'	-5.79	97.89	103.10
1	AA	552	DG	O4'-C1'-C2'	-5.79	101.27	105.90
1	AA	1056	DA	O4'-C1'-N9	5.79	112.05	108.00
1	AA	4312	DC	O4'-C1'-C2'	-5.79	101.27	105.90
1	AA	6992	DT	C4'-C3'-C2'	-5.79	97.89	103.10
11	AK	16	DA	C4'-C3'-C2'	-5.79	97.89	103.10
28	Ab	2	DG	C4'-C3'-C2'	-5.79	97.89	103.10
1	AA	1224	DC	C4'-C3'-C2'	-5.79	97.89	103.10
1	AA	4824	DT	O4'-C1'-C2'	-5.79	101.27	105.90
1	AA	5688	DT	O4'-C1'-C2'	-5.79	101.27	105.90
58	A5	14	DA	O4'-C1'-C2'	-5.79	101.27	105.90
138	CN	21	DA	C4'-C3'-C2'	-5.79	97.89	103.10
7	AG	25	DA	C4'-C3'-C2'	-5.79	97.89	103.10
107	Bs	20	DG	O4'-C4'-C3'	-5.79	102.19	104.50
117	B2	12	DG	C4'-C3'-C2'	-5.79	97.89	103.10
1	AA	1188	DG	N1-C6-O6	5.78	123.37	119.90
1	AA	3112	DC	P-O5'-C5'	5.78	130.15	120.90
1	AA	5666	DA	C1'-O4'-C4'	-5.78	104.32	110.10
1	AA	3414	DT	C4'-C3'-C2'	-5.78	97.90	103.10
1	AA	7217	DT	C4'-C3'-C2'	-5.78	97.90	103.10
100	Bl	26	DT	O4'-C1'-C2'	-5.78	101.28	105.90
1	AA	396	DG	P-O3'-C3'	5.78	126.64	119.70
1	AA	4801	DA	C4'-C3'-C2'	-5.78	97.90	103.10
1	AA	1415	DT	C1'-O4'-C4'	-5.78	104.32	110.10
1	AA	1659	DC	P-O3'-C3'	5.78	126.64	119.70
1	AA	5950	DT	C4'-C3'-C2'	-5.78	97.90	103.10
32	Af	8	DA	C1'-O4'-C4'	-5.78	104.32	110.10
83	BU	12	DC	C2-N1-C1'	5.78	125.16	118.80
1	AA	1496	DC	O4'-C1'-C2'	-5.78	101.28	105.90
1	AA	625	DC	C6-N1-C2	-5.78	117.99	120.30
1	AA	778	DT	C6-C5-C7	-5.78	119.44	122.90
1	AA	2772	DG	C5-C6-O6	-5.78	125.14	128.60
1	AA	2788	DC	C4'-C3'-C2'	-5.78	97.90	103.10
1	AA	3280	DT	C1'-O4'-C4'	-5.78	104.32	110.10
1	AA	3977	DA	C1'-O4'-C4'	-5.78	104.33	110.10
1	AA	4503	DG	O4'-C1'-C2'	-5.78	101.28	105.90
1	AA	6068	DG	P-O3'-C3'	5.78	126.63	119.70
42	Ap	45	DC	P-O5'-C5'	5.77	130.14	120.90
92	Bd	17	DT	O4'-C1'-C2'	-5.77	101.28	105.90
162	Cl	1	DG	C5-C6-O6	-5.77	125.14	128.60
173	Cw	27	DA	P-O3'-C3'	5.77	126.63	119.70
1	AA	479	DG	C1'-O4'-C4'	-5.77	104.33	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	Aw	44	DT	O4'-C1'-C2'	-5.77	101.28	105.90
1	AA	2139	DT	P-O3'-C3'	5.77	126.62	119.70
1	AA	3733	DA	O4'-C1'-C2'	-5.77	101.29	105.90
1	AA	2461	DA	O4'-C1'-C2'	-5.76	101.29	105.90
1	AA	4196	DG	O4'-C1'-C2'	-5.76	101.29	105.90
1	AA	6342	DC	O4'-C1'-C2'	-5.76	101.29	105.90
62	A9	31	DA	C4'-C3'-C2'	-5.76	97.91	103.10
102	Bn	9	DT	C4'-C3'-C2'	-5.76	97.91	103.10
1	AA	1582	DG	O4'-C1'-C2'	-5.76	101.29	105.90
1	AA	3509	DG	N1-C6-O6	5.76	123.36	119.90
1	AA	6757	DA	C4'-C3'-C2'	-5.76	97.91	103.10
1	AA	7142	DA	O4'-C1'-C2'	-5.76	101.29	105.90
175	Cy	42	DA	C4'-C3'-C2'	-5.76	97.91	103.10
1	AA	5880	DG	N1-C6-O6	5.76	123.36	119.90
87	BY	13	DA	O4'-C1'-C2'	-5.76	101.29	105.90
96	Bh	16	DA	N1-C6-N6	-5.76	115.14	118.60
116	B1	17	DG	C5-C6-O6	-5.76	125.14	128.60
178	C1	11	DG	O4'-C1'-C2'	-5.76	101.29	105.90
182	C5	2	DT	C1'-O4'-C4'	-5.76	104.34	110.10
1	AA	3578	DT	C4'-C3'-C2'	-5.76	97.92	103.10
1	AA	3848	DG	P-O3'-C3'	5.76	126.61	119.70
30	Ad	31	DA	C1'-O4'-C4'	-5.76	104.34	110.10
1	AA	8002	DT	O4'-C1'-C2'	-5.76	101.30	105.90
1	AA	2400	DC	O4'-C1'-N1	-5.75	103.97	108.00
1	AA	3566	DT	C4'-C3'-C2'	-5.75	97.92	103.10
100	Bl	30	DC	O4'-C1'-C2'	-5.75	101.30	105.90
143	CS	32	DT	C4'-C3'-C2'	-5.75	97.92	103.10
1	AA	6311	DT	C1'-O4'-C4'	-5.75	104.35	110.10
72	BJ	20	DA	O4'-C1'-C2'	-5.75	101.30	105.90
154	Cd	20	DG	O4'-C1'-C2'	-5.75	101.30	105.90
1	AA	4135	DT	C4'-C3'-C2'	-5.75	97.93	103.10
15	AO	24	DC	P-O5'-C5'	5.75	130.10	120.90
1	AA	4792	DA	P-O3'-C3'	5.75	126.59	119.70
1	AA	7120	DT	O4'-C1'-N1	5.75	112.02	108.00
1	AA	7740	DA	C1'-O4'-C4'	-5.75	104.35	110.10
12	AL	48	DG	N1-C6-O6	5.75	123.35	119.90
1	AA	2292	DG	N1-C6-O6	5.75	123.35	119.90
179	C2	18	DG	O4'-C1'-C2'	-5.75	101.30	105.90
1	AA	4549	DG	C4'-C3'-C2'	-5.74	97.93	103.10
1	AA	6820	DT	O4'-C4'-C3'	-5.74	102.20	104.50
31	Ae	26	DC	C1'-O4'-C4'	-5.74	104.36	110.10
108	Bt	42	DT	C4-C5-C7	5.74	122.45	119.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	4000	DA	P-O3'-C3'	5.74	126.59	119.70
70	BH	54	DC	C4'-C3'-C2'	-5.74	97.93	103.10
143	CS	2	DG	O4'-C1'-C2'	-5.74	101.31	105.90
4	AD	35	DG	O4'-C1'-C2'	-5.74	101.31	105.90
12	AL	27	DC	C6-N1-C2	-5.74	118.00	120.30
12	AL	34	DG	O4'-C1'-C2'	-5.74	101.31	105.90
85	BW	20	DC	C4'-C3'-C2'	-5.74	97.93	103.10
1	AA	3507	DG	C5-C6-O6	-5.74	125.16	128.60
1	AA	3511	DT	O4'-C4'-C3'	-5.74	102.20	104.50
1	AA	4856	DA	C4'-C3'-C2'	-5.74	97.94	103.10
1	AA	626	DA	C4'-C3'-C2'	-5.74	97.94	103.10
1	AA	5990	DT	O4'-C1'-C2'	-5.74	101.31	105.90
1	AA	445	DA	O4'-C4'-C3'	-5.74	102.21	104.50
1	AA	1715	DG	O4'-C1'-C2'	-5.74	101.31	105.90
1	AA	3425	DC	O4'-C4'-C3'	-5.74	102.21	104.50
147	CW	11	DC	C4'-C3'-C2'	-5.74	97.94	103.10
1	AA	267	DG	C5-C6-O6	-5.73	125.16	128.60
161	Ck	45	DG	N1-C6-O6	5.73	123.34	119.90
1	AA	267	DG	N1-C6-O6	5.73	123.34	119.90
1	AA	448	DG	C1'-O4'-C4'	-5.73	104.37	110.10
1	AA	3716	DC	C6-N1-C2	-5.73	118.01	120.30
162	Cl	38	DC	O4'-C1'-N1	5.73	112.01	108.00
1	AA	278	DG	N1-C6-O6	5.73	123.34	119.90
1	AA	863	DG	N1-C6-O6	5.73	123.34	119.90
1	AA	4723	DT	C4'-C3'-C2'	-5.73	97.94	103.10
1	AA	8038	DG	O4'-C1'-C2'	-5.73	101.31	105.90
4	AD	9	DT	C1'-O4'-C4'	-5.73	104.37	110.10
31	Ae	19	DT	P-O3'-C3'	5.73	126.58	119.70
76	BN	29	DG	O4'-C1'-C2'	-5.73	101.31	105.90
1	AA	6587	DG	O4'-C1'-C2'	-5.73	101.32	105.90
103	Bo	39	DT	C4'-C3'-C2'	-5.73	97.94	103.10
1	AA	768	DA	O4'-C1'-C2'	-5.73	101.32	105.90
1	AA	5993	DG	O4'-C1'-N9	5.73	112.01	108.00
181	C4	57	DC	O4'-C1'-C2'	-5.73	101.32	105.90
1	AA	7371	DA	O4'-C1'-C2'	-5.73	101.32	105.90
1	AA	7508	DC	O4'-C1'-C2'	-5.73	101.32	105.90
53	A0	2	DA	O4'-C1'-C2'	-5.73	101.32	105.90
1	AA	4117	DG	C1'-O4'-C4'	-5.72	104.38	110.10
1	AA	7391	DG	C1'-O4'-C4'	-5.72	104.38	110.10
62	A9	8	DA	O4'-C1'-N9	5.72	112.01	108.00
116	B1	11	DG	O4'-C1'-C2'	-5.72	101.32	105.90
19	AS	24	DC	O4'-C1'-C2'	-5.72	101.32	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
116	B1	26	DT	O4'-C4'-C3'	-5.72	102.21	104.50
1	AA	7122	DG	N1-C6-O6	5.72	123.33	119.90
1	AA	8003	DT	C4-C5-C7	5.72	122.43	119.00
8	AH	15	DG	O4'-C4'-C3'	-5.72	102.21	104.50
105	Bq	25	DG	O4'-C1'-C2'	-5.72	101.32	105.90
60	A7	44	DT	C4'-C3'-C2'	-5.72	97.95	103.10
1	AA	1552	DG	O4'-C1'-C2'	-5.72	101.33	105.90
1	AA	5885	DA	C4'-C3'-C2'	-5.72	97.95	103.10
3	AC	24	DA	P-O3'-C3'	5.72	126.56	119.70
125	CA	21	DT	C4'-C3'-C2'	-5.72	97.96	103.10
131	CG	19	DG	C4'-C3'-C2'	-5.72	97.95	103.10
1	AA	254	DA	O4'-C1'-N9	-5.71	104.00	108.00
1	AA	4613	DG	C1'-O4'-C4'	-5.71	104.39	110.10
1	AA	6025	DG	C5-C6-O6	-5.71	125.17	128.60
1	AA	924	DG	O4'-C1'-C2'	-5.71	101.33	105.90
1	AA	1730	DC	C4'-C3'-C2'	-5.71	97.96	103.10
1	AA	3981	DG	O4'-C1'-C2'	-5.71	101.33	105.90
1	AA	4159	DA	O4'-C4'-C3'	-5.71	102.22	104.50
1	AA	5134	DG	O4'-C1'-C2'	-5.71	101.33	105.90
1	AA	7938	DG	O4'-C1'-C2'	-5.71	101.33	105.90
32	Af	36	DC	C6-N1-C2	-5.71	118.02	120.30
45	As	35	DA	C4'-C3'-C2'	-5.71	97.96	103.10
62	A9	30	DC	O4'-C1'-C2'	-5.71	101.33	105.90
1	AA	2755	DG	P-O3'-C3'	5.71	126.55	119.70
1	AA	3427	DG	O4'-C1'-C2'	-5.71	101.33	105.90
1	AA	2235	DA	O4'-C1'-N9	5.71	112.00	108.00
24	AX	15	DG	O4'-C1'-C2'	-5.71	101.33	105.90
91	Bc	12	DT	O4'-C1'-C2'	-5.71	101.33	105.90
1	AA	7489	DG	C8-N9-C1'	-5.71	119.58	127.00
16	AP	1	DG	C8-N9-C1'	-5.71	119.58	127.00
46	At	28	DT	O4'-C1'-C2'	-5.71	101.33	105.90
108	Bt	23	DT	C4-C5-C7	-5.71	115.58	119.00
1	AA	2170	DG	C5-C6-O6	-5.71	125.18	128.60
42	Ap	42	DA	P-O3'-C3'	5.71	126.55	119.70
1	AA	1170	DA	O4'-C1'-C2'	-5.70	101.34	105.90
118	B3	9	DT	C4'-C3'-C2'	-5.70	97.97	103.10
1	AA	422	DT	C4'-C3'-C2'	-5.70	97.97	103.10
1	AA	1113	DG	C1'-O4'-C4'	-5.70	104.40	110.10
1	AA	1829	DT	P-O3'-C3'	5.70	126.54	119.70
145	CU	17	DG	O4'-C1'-C2'	-5.70	101.34	105.90
1	AA	1698	DC	O4'-C1'-C2'	-5.70	101.34	105.90
1	AA	2006	DA	O4'-C1'-C2'	-5.70	101.34	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
99	Bk	23	DT	C1'-O4'-C4'	-5.70	104.40	110.10
168	Cr	10	DA	O4'-C1'-C2'	-5.70	101.34	105.90
1	AA	575	DA	C4'-C3'-C2'	-5.70	97.97	103.10
1	AA	4978	DT	O4'-C1'-C2'	-5.70	101.34	105.90
1	AA	1854	DA	C1'-O4'-C4'	-5.69	104.41	110.10
1	AA	483	DT	O4'-C1'-C2'	-5.69	101.35	105.90
28	Ab	1	DG	C1'-O4'-C4'	-5.69	104.41	110.10
1	AA	7951	DC	O4'-C4'-C3'	-5.69	102.22	104.50
1	AA	593	DG	P-O5'-C5'	5.69	130.00	120.90
1	AA	5414	DT	O4'-C1'-C2'	-5.69	101.35	105.90
76	BN	6	DG	O4'-C1'-C2'	-5.69	101.35	105.90
1	AA	3192	DA	O4'-C1'-C2'	-5.69	101.35	105.90
1	AA	3537	DT	O4'-C4'-C3'	-5.69	102.22	104.50
1	AA	4241	DG	C5-C6-O6	-5.69	125.19	128.60
1	AA	5926	DG	O4'-C1'-C2'	-5.69	101.35	105.90
28	Ab	21	DT	C1'-O4'-C4'	-5.69	104.41	110.10
12	AL	17	DT	C4'-C3'-C2'	-5.69	97.98	103.10
55	A2	17	DA	C1'-O4'-C4'	-5.69	104.41	110.10
1	AA	1308	DT	C4'-C3'-C2'	-5.68	97.98	103.10
1	AA	4939	DG	P-O3'-C3'	5.68	126.52	119.70
1	AA	5315	DT	O4'-C4'-C3'	-5.68	102.23	104.50
1	AA	6282	DG	N1-C6-O6	5.68	123.31	119.90
182	C5	30	DA	N1-C6-N6	-5.68	115.19	118.60
1	AA	2196	DG	O4'-C1'-C2'	-5.68	101.35	105.90
85	BW	17	DC	C1'-O4'-C4'	-5.68	104.42	110.10
1	AA	3126	DG	O4'-C1'-C2'	-5.68	101.36	105.90
1	AA	3592	DT	O4'-C1'-C2'	-5.68	101.36	105.90
1	AA	4377	DA	C4'-C3'-C2'	-5.68	97.99	103.10
151	Ca	33	DA	O4'-C1'-C2'	-5.68	101.36	105.90
1	AA	4591	DG	P-O3'-C3'	5.68	126.51	119.70
1	AA	257	DA	O4'-C1'-C2'	-5.68	101.36	105.90
1	AA	7111	DT	P-O3'-C3'	5.68	126.51	119.70
132	CH	1	DT	C4'-C3'-C2'	-5.68	97.99	103.10
1	AA	685	DC	O4'-C1'-C2'	-5.67	101.36	105.90
1	AA	3548	DG	O4'-C1'-C2'	-5.67	101.36	105.90
1	AA	2317	DA	P-O3'-C3'	5.67	126.51	119.70
1	AA	7994	DT	O4'-C4'-C3'	-5.67	102.23	104.50
80	BR	32	DA	P-O3'-C3'	5.67	126.51	119.70
1	AA	2124	DT	P-O3'-C3'	5.67	126.51	119.70
1	AA	6235	DA	N1-C6-N6	-5.67	115.20	118.60
1	AA	1051	DA	C4'-C3'-C2'	-5.67	98.00	103.10
1	AA	1457	DG	C5-C6-O6	-5.67	125.20	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1619	DA	C1'-O4'-C4'	-5.67	104.43	110.10
147	CW	31	DA	O4'-C1'-C2'	-5.67	101.36	105.90
1	AA	1999	DA	N1-C6-N6	-5.67	115.20	118.60
1	AA	4716	DG	C5-C6-O6	-5.67	125.20	128.60
176	Cz	46	DC	P-O3'-C3'	5.67	126.50	119.70
56	A3	24	DA	P-O3'-C3'	5.67	126.50	119.70
1	AA	2567	DG	O4'-C1'-C2'	-5.66	101.37	105.90
1	AA	3609	DC	O4'-C4'-C3'	-5.66	102.23	104.50
96	Bh	18	DG	O4'-C1'-C2'	-5.66	101.37	105.90
104	Bp	44	DA	O4'-C1'-C2'	-5.66	101.37	105.90
132	CH	21	DT	C4'-C3'-C2'	-5.66	98.00	103.10
169	Cs	18	DG	N1-C6-O6	5.66	123.30	119.90
187	DA	6	DA	C4'-C3'-C2'	-5.66	98.00	103.10
1	AA	2615	DC	C4'-C3'-C2'	-5.66	98.00	103.10
1	AA	4502	DT	O4'-C4'-C3'	-5.66	102.23	104.50
1	AA	7077	DC	P-O5'-C5'	5.66	129.96	120.90
48	Av	8	DG	C5-C6-O6	-5.66	125.20	128.60
1	AA	6099	DG	O4'-C1'-C2'	-5.66	101.37	105.90
138	CN	23	DG	O4'-C1'-C2'	-5.66	101.37	105.90
184	C7	9	DC	C4'-C3'-C2'	-5.66	98.01	103.10
31	Ae	48	DA	C4'-C3'-C2'	-5.66	98.01	103.10
192	DF	11	DT	C4'-C3'-C2'	-5.66	98.01	103.10
133	CI	23	DA	O4'-C1'-C2'	-5.66	101.38	105.90
1	AA	27	DG	O4'-C1'-C2'	-5.65	101.38	105.90
1	AA	4223	DA	P-O3'-C3'	5.65	126.48	119.70
97	Bi	35	DT	P-O3'-C3'	5.65	126.48	119.70
118	B3	19	DG	O4'-C1'-C2'	-5.65	101.38	105.90
1	AA	2818	DG	C1'-O4'-C4'	-5.65	104.45	110.10
65	BC	51	DC	C1'-O4'-C4'	-5.65	104.45	110.10
140	CP	49	DG	O4'-C1'-C2'	-5.65	101.38	105.90
179	C2	26	DT	O4'-C1'-C2'	-5.65	101.38	105.90
187	DA	19	DC	O4'-C1'-C2'	-5.65	101.38	105.90
1	AA	895	DA	O4'-C1'-C2'	-5.65	101.38	105.90
65	BC	24	DG	C5-C6-O6	-5.65	125.21	128.60
84	BV	28	DG	O4'-C1'-C2'	-5.65	101.38	105.90
159	Ci	12	DC	C1'-O4'-C4'	-5.65	104.45	110.10
1	AA	650	DC	P-O3'-C3'	5.65	126.47	119.70
144	CT	19	DG	N1-C6-O6	5.65	123.29	119.90
159	Ci	46	DT	C6-C5-C7	-5.65	119.51	122.90
1	AA	1022	DG	O4'-C1'-C2'	-5.64	101.39	105.90
1	AA	5780	DG	O4'-C1'-C2'	-5.64	101.39	105.90
1	AA	6699	DG	C1'-O4'-C4'	-5.64	104.45	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
169	Cs	39	DC	O4'-C1'-N1	-5.64	104.05	108.00
1	AA	537	DG	C4'-C3'-C2'	-5.64	98.02	103.10
1	AA	2104	DG	N1-C6-O6	5.64	123.29	119.90
1	AA	6224	DC	P-O3'-C3'	5.64	126.47	119.70
45	As	2	DA	C4'-C3'-C2'	-5.64	98.02	103.10
98	Bj	39	DT	O4'-C1'-C2'	-5.64	101.39	105.90
1	AA	7548	DG	C4'-C3'-C2'	-5.64	98.02	103.10
1	AA	4084	DA	N1-C6-N6	-5.64	115.22	118.60
1	AA	4185	DG	C5-C6-O6	-5.64	125.22	128.60
1	AA	5310	DG	O4'-C1'-C2'	-5.64	101.39	105.90
1	AA	7118	DT	C4'-C3'-C2'	-5.64	98.03	103.10
141	CQ	7	DG	P-O3'-C3'	5.64	126.47	119.70
1	AA	579	DC	C4'-C3'-C2'	-5.64	98.03	103.10
1	AA	1909	DG	O4'-C1'-C2'	-5.64	101.39	105.90
1	AA	3203	DG	C1'-O4'-C4'	-5.64	104.46	110.10
1	AA	3405	DT	O4'-C4'-C3'	-5.64	102.25	104.50
1	AA	5299	DG	O4'-C1'-N9	5.64	111.94	108.00
65	BC	10	DG	N1-C6-O6	5.64	123.28	119.90
1	AA	2055	DT	P-O3'-C3'	5.63	126.46	119.70
68	BF	18	DC	O4'-C1'-C2'	-5.63	101.39	105.90
1	AA	230	DG	N1-C6-O6	5.63	123.28	119.90
107	Bs	2	DG	C5-C6-O6	-5.63	125.22	128.60
1	AA	3243	DA	C1'-O4'-C4'	-5.63	104.47	110.10
1	AA	6917	DC	O4'-C1'-N1	5.63	111.94	108.00
33	Ag	23	DG	O4'-C1'-C2'	-5.63	101.39	105.90
170	Ct	34	DA	O4'-C1'-C2'	-5.63	101.39	105.90
1	AA	230	DG	C5-C6-O6	-5.63	125.22	128.60
1	AA	3643	DT	C4'-C3'-C2'	-5.63	98.03	103.10
1	AA	7383	DT	C1'-O4'-C4'	-5.63	104.47	110.10
42	Ap	15	DT	C4'-C3'-C2'	-5.63	98.03	103.10
1	AA	2283	DC	C4'-C3'-C2'	-5.63	98.03	103.10
1	AA	5486	DA	P-O3'-C3'	5.63	126.45	119.70
1	AA	5659	DA	O4'-C1'-N9	5.63	111.94	108.00
83	BU	12	DC	C6-N1-C2	-5.63	118.05	120.30
161	Ck	45	DG	C5-C6-O6	-5.63	125.22	128.60
1	AA	2308	DG	P-O5'-C5'	5.63	129.90	120.90
1	AA	4878	DT	O4'-C4'-C3'	-5.63	102.25	104.50
1	AA	7647	DC	P-O3'-C3'	5.63	126.45	119.70
187	DA	54	DA	O4'-C1'-C2'	-5.63	101.40	105.90
1	AA	2904	DT	C4'-C3'-C2'	-5.62	98.04	103.10
1	AA	5455	DG	C5-C6-O6	-5.62	125.22	128.60
1	AA	7415	DG	C5-C6-O6	-5.62	125.22	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	6653	DA	O4'-C1'-C2'	-5.62	101.40	105.90
1	AA	6833	DT	P-O3'-C3'	5.62	126.45	119.70
74	BL	17	DT	O4'-C1'-N1	5.62	111.94	108.00
90	Bb	27	DA	O4'-C4'-C3'	-5.62	102.25	104.50
132	CH	9	DG	O4'-C1'-C2'	-5.62	101.40	105.90
1	AA	645	DA	C1'-O4'-C4'	-5.62	104.48	110.10
1	AA	1992	DG	P-O3'-C3'	5.62	126.44	119.70
1	AA	2346	DA	O4'-C1'-C2'	-5.62	101.41	105.90
1	AA	3182	DG	O4'-C1'-C2'	-5.62	101.41	105.90
1	AA	6465	DT	C4'-C3'-C2'	-5.62	98.04	103.10
1	AA	7176	DG	O4'-C1'-C2'	-5.62	101.41	105.90
59	A6	18	DA	C1'-O4'-C4'	-5.62	104.48	110.10
158	Ch	40	DA	O4'-C1'-C2'	-5.62	101.41	105.90
1	AA	5540	DG	O4'-C1'-C2'	-5.62	101.41	105.90
1	AA	6492	DG	N1-C6-O6	5.62	123.27	119.90
20	AT	40	DG	O4'-C1'-N9	5.62	111.93	108.00
172	Cv	13	DC	P-O3'-C3'	5.62	126.44	119.70
1	AA	852	DG	C5-C6-O6	-5.62	125.23	128.60
1	AA	4159	DA	C1'-O4'-C4'	-5.62	104.48	110.10
1	AA	4272	DA	O4'-C1'-C2'	-5.62	101.41	105.90
1	AA	4579	DA	O4'-C1'-C2'	-5.62	101.41	105.90
1	AA	4737	DA	N1-C6-N6	-5.62	115.23	118.60
1	AA	6329	DT	C1'-O4'-C4'	-5.62	104.48	110.10
1	AA	1784	DA	C4'-C3'-C2'	-5.61	98.05	103.10
1	AA	2330	DT	C4'-C3'-C2'	-5.61	98.05	103.10
1	AA	2560	DG	O4'-C1'-C2'	-5.61	101.41	105.90
1	AA	4019	DG	C5-C6-O6	-5.61	125.23	128.60
1	AA	4215	DG	O4'-C1'-C2'	-5.61	101.41	105.90
1	AA	5510	DA	O4'-C4'-C3'	-5.61	102.25	104.50
1	AA	6283	DC	C1'-O4'-C4'	-5.61	104.49	110.10
1	AA	7119	DG	C5-C6-O6	-5.61	125.23	128.60
23	AW	18	DT	O4'-C1'-C2'	-5.61	101.41	105.90
1	AA	2213	DC	P-O3'-C3'	5.61	126.43	119.70
1	AA	1623	DG	C5-C6-O6	-5.61	125.23	128.60
1	AA	5464	DG	N1-C6-O6	5.61	123.27	119.90
94	Bf	6	DA	C1'-O4'-C4'	-5.61	104.49	110.10
184	C7	38	DC	O4'-C4'-C3'	-5.61	102.26	104.50
1	AA	880	DA	P-O3'-C3'	5.61	126.43	119.70
1	AA	6897	DT	C4'-C3'-C2'	-5.61	98.05	103.10
1	AA	7951	DC	C4'-C3'-C2'	-5.61	98.06	103.10
70	BH	53	DG	O4'-C1'-C2'	-5.61	101.42	105.90
1	AA	4316	DG	C5-C6-O6	-5.60	125.24	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	3834	DC	C2-N1-C1'	5.60	124.96	118.80
93	Be	30	DC	C2-N1-C1'	5.60	124.96	118.80
1	AA	2905	DC	P-O5'-C5'	5.60	129.86	120.90
5	AE	27	DT	C4'-C3'-C2'	-5.60	98.06	103.10
190	DD	30	DG	C5-C6-O6	-5.60	125.24	128.60
1	AA	7789	DT	O4'-C4'-C3'	-5.60	102.26	104.50
31	Ae	41	DT	C4'-C3'-C2'	-5.60	98.06	103.10
102	Bn	1	DA	P-O3'-C3'	5.60	126.42	119.70
1	AA	2814	DG	O4'-C1'-N9	5.60	111.92	108.00
1	AA	4610	DG	O4'-C1'-C2'	-5.60	101.42	105.90
131	CG	29	DC	P-O5'-C5'	5.60	129.86	120.90
1	AA	1114	DC	O4'-C4'-C3'	-5.59	102.26	104.50
1	AA	1662	DG	C5-C6-O6	-5.59	125.24	128.60
1	AA	2726	DC	C2-N1-C1'	5.59	124.95	118.80
1	AA	3921	DT	O4'-C1'-C2'	-5.59	101.42	105.90
1	AA	6902	DT	C4'-C3'-C2'	-5.59	98.07	103.10
140	CP	27	DG	C5-C6-O6	-5.59	125.24	128.60
1	AA	1057	DC	O4'-C1'-N1	5.59	111.92	108.00
1	AA	4591	DG	O4'-C1'-N9	5.59	111.91	108.00
1	AA	5030	DT	P-O3'-C3'	5.59	126.41	119.70
69	BG	26	DG	C5-C6-O6	-5.59	125.25	128.60
1	AA	1386	DA	O4'-C1'-C2'	-5.59	101.43	105.90
1	AA	1585	DC	P-O5'-C5'	5.59	129.84	120.90
1	AA	3522	DG	P-O3'-C3'	5.59	126.41	119.70
71	BI	10	DG	O4'-C1'-C2'	-5.59	101.43	105.90
158	Ch	37	DA	P-O3'-C3'	5.59	126.41	119.70
161	Ck	15	DG	N1-C6-O6	5.59	123.25	119.90
1	AA	1515	DG	O4'-C1'-C2'	-5.59	101.43	105.90
1	AA	6637	DC	C4'-C3'-C2'	-5.59	98.07	103.10
1	AA	7796	DG	N1-C6-O6	5.59	123.25	119.90
123	B8	1	DA	O4'-C1'-N9	5.59	111.91	108.00
126	CB	11	DG	N1-C6-O6	5.59	123.25	119.90
1	AA	645	DA	O4'-C4'-C3'	-5.58	102.27	104.50
1	AA	1548	DA	P-O3'-C3'	5.58	126.40	119.70
1	AA	3719	DC	O4'-C1'-C2'	-5.58	101.43	105.90
60	A7	12	DA	O4'-C4'-C3'	-5.58	102.27	104.50
131	CG	1	DG	O4'-C4'-C3'	-5.58	102.27	104.50
1	AA	459	DA	P-O3'-C3'	5.58	126.40	119.70
1	AA	2410	DA	C4'-C3'-C2'	-5.58	98.08	103.10
1	AA	3215	DA	P-O3'-C3'	5.58	126.40	119.70
1	AA	7809	DA	N1-C6-N6	-5.58	115.25	118.60
30	Ad	3	DG	O4'-C1'-C2'	-5.58	101.43	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
64	BB	24	DG	C4-N9-C1'	5.58	133.76	126.50
112	Bx	13	DA	N1-C6-N6	-5.58	115.25	118.60
127	CC	1	DG	P-O3'-C3'	5.58	126.40	119.70
128	CD	37	DG	O4'-C1'-C2'	-5.58	101.44	105.90
170	Ct	17	DA	O4'-C1'-C2'	-5.58	101.44	105.90
63	BA	35	DG	O4'-C1'-C2'	-5.58	101.44	105.90
89	Ba	26	DA	O4'-C1'-N9	-5.58	104.09	108.00
156	Cf	19	DC	C4'-C3'-C2'	-5.58	98.08	103.10
5	AE	23	DT	C4'-C3'-C2'	-5.58	98.08	103.10
26	AZ	31	DG	C5-C6-O6	-5.58	125.25	128.60
36	Aj	11	DT	O4'-C4'-C3'	-5.58	102.27	104.50
57	A4	40	DG	C4'-C3'-C2'	-5.58	98.08	103.10
82	BT	16	DC	O4'-C1'-C2'	-5.58	101.44	105.90
86	BX	32	DA	O4'-C1'-C2'	-5.58	101.44	105.90
149	CY	28	DG	O4'-C1'-C2'	-5.58	101.44	105.90
159	Ci	33	DC	C1'-O4'-C4'	-5.58	104.52	110.10
1	AA	4715	DG	O4'-C1'-C2'	-5.58	101.44	105.90
1	AA	5023	DT	C6-C5-C7	5.58	126.25	122.90
13	AM	2	DC	C4'-C3'-C2'	-5.58	98.08	103.10
86	BX	19	DG	C5-C6-O6	-5.58	125.25	128.60
1	AA	4945	DA	C4'-C3'-C2'	-5.57	98.08	103.10
51	Ay	5	DG	O4'-C1'-C2'	-5.57	101.44	105.90
95	Bg	11	DG	N1-C6-O6	5.57	123.24	119.90
1	AA	4629	DG	N1-C6-O6	5.57	123.24	119.90
1	AA	6282	DG	C5-C6-O6	-5.57	125.26	128.60
48	Av	8	DG	N1-C6-O6	5.57	123.24	119.90
1	AA	1689	DG	P-O3'-C3'	5.57	126.38	119.70
1	AA	4342	DG	O4'-C4'-C3'	-5.57	102.27	104.50
21	AU	30	DG	C5-C6-O6	-5.57	125.26	128.60
82	BT	43	DA	O4'-C1'-C2'	-5.57	101.44	105.90
1	AA	1161	DA	N1-C6-N6	-5.57	115.26	118.60
1	AA	4915	DT	C4'-C3'-C2'	-5.57	98.09	103.10
34	Ah	38	DA	O4'-C1'-N9	5.57	111.90	108.00
150	CZ	20	DG	P-O5'-C5'	5.57	129.81	120.90
1	AA	157	DG	O4'-C1'-C2'	-5.57	101.44	105.90
1	AA	6244	DG	O4'-C1'-C2'	-5.57	101.45	105.90
4	AD	38	DT	C4'-C3'-C2'	-5.57	98.09	103.10
85	BW	12	DG	P-O3'-C3'	5.57	126.38	119.70
1	AA	3433	DG	C1'-O4'-C4'	-5.57	104.53	110.10
1	AA	6850	DA	C4'-C3'-C2'	-5.57	98.09	103.10
1	AA	7745	DC	P-O3'-C3'	5.56	126.38	119.70
41	Ao	43	DG	O4'-C1'-C2'	-5.56	101.45	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
87	BY	14	DA	C4'-C3'-C2'	-5.56	98.09	103.10
1	AA	220	DG	N1-C6-O6	5.56	123.24	119.90
1	AA	693	DG	P-O3'-C3'	5.56	126.38	119.70
1	AA	1324	DG	O4'-C1'-N9	5.56	111.89	108.00
1	AA	6909	DG	P-O3'-C3'	5.56	126.38	119.70
1	AA	7908	DT	C4'-C3'-C2'	-5.56	98.09	103.10
44	Ar	35	DT	O4'-C4'-C3'	-5.56	102.28	104.50
97	Bi	2	DT	O4'-C1'-N1	5.56	111.89	108.00
108	Bt	16	DT	P-O3'-C3'	5.56	126.38	119.70
1	AA	2243	DT	C4'-C3'-C2'	-5.56	98.09	103.10
1	AA	4413	DA	O4'-C4'-C3'	-5.56	102.28	104.50
1	AA	4975	DG	O4'-C1'-C2'	-5.56	101.45	105.90
77	BO	25	DG	O4'-C1'-C2'	-5.56	101.45	105.90
1	AA	1396	DG	O4'-C1'-C2'	-5.56	101.45	105.90
1	AA	2916	DG	C5-C6-O6	-5.56	125.27	128.60
1	AA	4167	DG	C4'-C3'-C2'	-5.56	98.10	103.10
63	BA	13	DC	O4'-C1'-C2'	-5.56	101.45	105.90
162	Cl	4	DT	C4'-C3'-C2'	-5.56	98.10	103.10
187	DA	10	DG	O4'-C1'-C2'	-5.56	101.45	105.90
1	AA	242	DA	O4'-C1'-C2'	-5.56	101.45	105.90
20	AT	1	DA	O4'-C4'-C3'	-5.56	102.28	104.50
142	CR	40	DA	O4'-C1'-C2'	-5.56	101.45	105.90
1	AA	2371	DC	O4'-C1'-C2'	-5.55	101.46	105.90
125	CA	23	DC	P-O5'-C5'	5.55	129.79	120.90
181	C4	6	DG	N1-C6-O6	5.55	123.23	119.90
1	AA	1938	DA	C4'-C3'-C2'	-5.55	98.10	103.10
128	CD	52	DT	O4'-C4'-C3'	-5.55	102.28	104.50
166	Cp	19	DG	C4'-C3'-C2'	-5.55	98.10	103.10
1	AA	639	DG	C1'-O4'-C4'	-5.55	104.55	110.10
1	AA	642	DC	O4'-C1'-C2'	-5.55	101.46	105.90
1	AA	4185	DG	N1-C6-O6	5.55	123.23	119.90
1	AA	4939	DG	C1'-O4'-C4'	-5.55	104.55	110.10
1	AA	5042	DG	N1-C6-O6	5.55	123.23	119.90
129	CE	46	DT	P-O3'-C3'	5.55	126.36	119.70
180	C3	21	DT	C4'-C3'-C2'	-5.55	98.10	103.10
190	DD	24	DG	N1-C6-O6	5.55	123.23	119.90
100	Bl	9	DT	C4'-C3'-C2'	-5.55	98.11	103.10
106	Br	7	DA	C4'-C3'-C2'	-5.55	98.11	103.10
1	AA	1304	DA	C1'-O4'-C4'	-5.55	104.55	110.10
1	AA	1447	DC	P-O3'-C3'	5.55	126.36	119.70
1	AA	2198	DA	O4'-C1'-C2'	-5.55	101.46	105.90
1	AA	2880	DA	O4'-C1'-N9	5.55	111.88	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	3678	DC	C4'-C3'-C2'	-5.55	98.11	103.10
1	AA	6445	DG	C5-C6-O6	-5.55	125.27	128.60
1	AA	8050	DA	O4'-C1'-C2'	-5.55	101.46	105.90
1	AA	5284	DG	O4'-C1'-C2'	-5.54	101.46	105.90
1	AA	7776	DG	C1'-O4'-C4'	-5.54	104.56	110.10
83	BU	13	DG	N1-C6-O6	5.54	123.23	119.90
169	Cs	18	DG	C5-C6-O6	-5.54	125.27	128.60
1	AA	2049	DA	O4'-C1'-C2'	-5.54	101.47	105.90
1	AA	1567	DA	O4'-C1'-C2'	-5.54	101.47	105.90
1	AA	4185	DG	P-O3'-C3'	5.54	126.35	119.70
1	AA	5640	DG	O4'-C1'-N9	5.54	111.88	108.00
1	AA	6554	DA	C4'-C3'-C2'	-5.54	98.11	103.10
73	BK	37	DG	C1'-O4'-C4'	-5.54	104.56	110.10
81	BS	24	DC	O4'-C4'-C3'	-5.54	102.28	104.50
132	CH	18	DG	O4'-C1'-C2'	-5.54	101.47	105.90
149	CY	1	DG	C5-C6-O6	-5.54	125.28	128.60
1	AA	1540	DT	C4'-C3'-C2'	-5.54	98.11	103.10
1	AA	2684	DT	C4'-C3'-C2'	-5.54	98.11	103.10
27	Aa	50	DG	O4'-C4'-C3'	-5.54	102.28	104.50
56	A3	24	DA	O4'-C1'-C2'	-5.54	101.47	105.90
86	BX	25	DA	P-O3'-C3'	5.54	126.35	119.70
87	BY	47	DT	C1'-O4'-C4'	-5.54	104.56	110.10
124	B9	32	DG	O4'-C1'-C2'	-5.54	101.47	105.90
170	Ct	1	DA	O4'-C1'-C2'	-5.54	101.47	105.90
191	DE	1	DT	O4'-C4'-C3'	-5.54	102.28	104.50
1	AA	4784	DG	C1'-O4'-C4'	-5.54	104.56	110.10
1	AA	5555	DG	C1'-O4'-C4'	-5.54	104.56	110.10
1	AA	6521	DA	O4'-C1'-C2'	-5.54	101.47	105.90
1	AA	7724	DG	O4'-C1'-C2'	-5.54	101.47	105.90
9	AI	11	DG	C1'-O4'-C4'	-5.54	104.56	110.10
23	AW	21	DG	O4'-C1'-C2'	-5.54	101.47	105.90
24	AX	36	DG	P-O3'-C3'	5.54	126.34	119.70
99	Bk	18	DG	P-O3'-C3'	5.54	126.34	119.70
1	AA	1324	DG	N1-C6-O6	5.53	123.22	119.90
1	AA	2290	DT	O4'-C4'-C3'	-5.53	102.29	104.50
1	AA	4223	DA	O4'-C1'-C2'	-5.53	101.47	105.90
7	AG	45	DT	O4'-C1'-C2'	-5.53	101.47	105.90
1	AA	4968	DC	P-O3'-C3'	5.53	126.34	119.70
1	AA	794	DG	O4'-C1'-C2'	-5.53	101.47	105.90
1	AA	2309	DC	P-O3'-C3'	5.53	126.34	119.70
1	AA	4704	DG	C4'-C3'-C2'	-5.53	98.12	103.10
1	AA	6117	DA	P-O3'-C3'	5.53	126.34	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	AF	14	DG	O4'-C1'-C2'	-5.53	101.47	105.90
57	A4	40	DG	C5-C6-O6	-5.53	125.28	128.60
134	CJ	19	DT	C1'-O4'-C4'	-5.53	104.57	110.10
1	AA	739	DC	O4'-C1'-C2'	-5.53	101.48	105.90
1	AA	2526	DC	O4'-C1'-N1	5.53	111.87	108.00
1	AA	7515	DG	O4'-C1'-C2'	-5.53	101.48	105.90
1	AA	1646	DC	C4'-C3'-C2'	-5.53	98.13	103.10
1	AA	7743	DG	O4'-C1'-N9	5.53	111.87	108.00
148	CX	31	DT	C1'-O4'-C4'	-5.53	104.57	110.10
1	AA	2221	DT	C4'-C3'-C2'	-5.53	98.13	103.10
1	AA	3832	DT	O4'-C4'-C3'	-5.53	102.29	104.50
1	AA	4510	DT	C1'-O4'-C4'	-5.53	104.57	110.10
12	AL	29	DG	C5-C6-O6	-5.53	125.28	128.60
65	BC	52	DA	N1-C6-N6	-5.53	115.28	118.60
1	AA	7379	DG	C1'-O4'-C4'	-5.52	104.58	110.10
1	AA	816	DC	C4'-C3'-C2'	-5.52	98.13	103.10
1	AA	1734	DT	C4'-C3'-C2'	-5.52	98.13	103.10
1	AA	2316	DG	C1'-O4'-C4'	-5.52	104.58	110.10
1	AA	3913	DA	C1'-O4'-C4'	-5.52	104.58	110.10
17	AQ	37	DC	O4'-C4'-C3'	-5.52	102.29	104.50
87	BY	23	DG	C1'-O4'-C4'	-5.52	104.58	110.10
1	AA	212	DG	O4'-C1'-C2'	-5.52	101.48	105.90
1	AA	4883	DG	O4'-C1'-C2'	-5.52	101.48	105.90
59	A6	18	DA	P-O3'-C3'	5.52	126.33	119.70
83	BU	24	DA	N1-C6-N6	-5.52	115.29	118.60
159	Ci	32	DG	O4'-C1'-C2'	-5.52	101.48	105.90
1	AA	4721	DG	O4'-C1'-C2'	-5.52	101.48	105.90
1	AA	5385	DT	O4'-C1'-C2'	-5.52	101.48	105.90
1	AA	6819	DA	O4'-C1'-C2'	-5.52	101.48	105.90
1	AA	7082	DA	O4'-C1'-C2'	-5.52	101.48	105.90
66	BD	6	DT	O4'-C1'-C2'	-5.52	101.48	105.90
70	BH	30	DT	C4'-C3'-C2'	-5.52	98.13	103.10
1	AA	5420	DC	C4'-C3'-C2'	-5.52	98.13	103.10
43	Aq	26	DA	C1'-O4'-C4'	-5.52	104.58	110.10
106	Br	7	DA	O4'-C4'-C3'	-5.52	102.29	104.50
144	CT	27	DC	P-O5'-C5'	5.52	129.73	120.90
123	B8	5	DG	C5-C6-O6	-5.52	125.29	128.60
44	Ar	42	DG	O4'-C1'-C2'	-5.51	101.49	105.90
78	BP	40	DG	P-O3'-C3'	5.51	126.32	119.70
140	CP	41	DT	C4'-C3'-C2'	-5.51	98.14	103.10
190	DD	36	DC	O4'-C1'-C2'	-5.51	101.49	105.90
45	As	1	DA	C1'-O4'-C4'	-5.51	104.59	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	2625	DG	O4'-C4'-C3'	-5.51	102.30	104.50
1	AA	3753	DG	O4'-C1'-C2'	-5.51	101.49	105.90
1	AA	5846	DA	O4'-C1'-C2'	-5.51	101.49	105.90
1	AA	8004	DA	O4'-C1'-C2'	-5.51	101.49	105.90
75	BM	13	DT	P-O3'-C3'	5.51	126.31	119.70
97	Bi	48	DA	P-O3'-C3'	5.51	126.31	119.70
168	Cr	31	DG	O4'-C1'-C2'	-5.51	101.49	105.90
1	AA	5069	DG	O4'-C1'-C2'	-5.51	101.49	105.90
1	AA	5462	DC	C1'-O4'-C4'	-5.51	104.59	110.10
138	CN	12	DA	C4'-C3'-C2'	-5.51	98.14	103.10
1	AA	5668	DG	C5-C6-O6	-5.51	125.30	128.60
1	AA	1622	DG	N1-C6-O6	5.51	123.20	119.90
1	AA	2522	DA	C1'-O4'-C4'	-5.51	104.59	110.10
1	AA	3706	DG	O4'-C1'-C2'	-5.51	101.50	105.90
1	AA	4313	DC	O4'-C4'-C3'	-5.51	102.30	104.50
125	CA	18	DA	O4'-C1'-C2'	-5.51	101.49	105.90
60	A7	48	DT	O4'-C4'-C3'	-5.50	102.30	104.50
166	Cp	10	DG	C5-C6-O6	-5.50	125.30	128.60
1	AA	1481	DG	N1-C6-O6	5.50	123.20	119.90
1	AA	2772	DG	N1-C6-O6	5.50	123.20	119.90
1	AA	5385	DT	C1'-O4'-C4'	-5.50	104.60	110.10
1	AA	6030	DT	O4'-C1'-C2'	-5.50	101.50	105.90
1	AA	6445	DG	N1-C6-O6	5.50	123.20	119.90
1	AA	7822	DC	P-O3'-C3'	5.50	126.30	119.70
33	Ag	12	DG	O4'-C1'-C2'	-5.50	101.50	105.90
1	AA	1258	DA	C4'-C3'-C2'	-5.50	98.15	103.10
1	AA	3652	DA	C1'-O4'-C4'	-5.50	104.60	110.10
1	AA	4178	DG	O4'-C1'-C2'	-5.50	101.50	105.90
1	AA	6630	DA	O4'-C1'-C2'	-5.50	101.50	105.90
120	B5	11	DT	C4'-C3'-C2'	-5.50	98.15	103.10
69	BG	3	DC	P-O3'-C3'	5.50	126.30	119.70
177	C0	19	DT	C4'-C3'-C2'	-5.50	98.15	103.10
1	AA	801	DA	O4'-C1'-C2'	-5.50	101.50	105.90
46	At	52	DA	C1'-O4'-C4'	-5.50	104.60	110.10
153	Cc	25	DG	O4'-C1'-C2'	-5.50	101.50	105.90
1	AA	7632	DA	C4'-C3'-C2'	-5.50	98.15	103.10
1	AA	195	DC	O4'-C1'-N1	5.50	111.85	108.00
15	AO	43	DA	O4'-C1'-C2'	-5.50	101.50	105.90
123	B8	5	DG	N1-C6-O6	5.49	123.20	119.90
1	AA	1267	DC	P-O5'-C5'	5.49	129.69	120.90
10	AJ	18	DA	O4'-C1'-C2'	-5.49	101.51	105.90
1	AA	4520	DG	C1'-O4'-C4'	-5.49	104.61	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	6116	DA	O4'-C1'-C2'	-5.49	101.51	105.90
33	Ag	17	DT	C1'-O4'-C4'	-5.49	104.61	110.10
90	Bb	27	DA	N1-C6-N6	-5.49	115.31	118.60
166	Cp	16	DG	O4'-C1'-C2'	-5.49	101.51	105.90
168	Cr	17	DT	O4'-C1'-C2'	-5.49	101.51	105.90
1	AA	1615	DT	C4'-C3'-C2'	-5.49	98.16	103.10
1	AA	2718	DG	O4'-C1'-C2'	-5.49	101.51	105.90
1	AA	4428	DC	O4'-C1'-C2'	-5.49	101.51	105.90
1	AA	6643	DG	N1-C6-O6	5.49	123.19	119.90
1	AA	7231	DG	O4'-C1'-C2'	-5.49	101.51	105.90
98	Bj	26	DC	P-O3'-C3'	5.49	126.29	119.70
149	CY	48	DG	O4'-C1'-C2'	-5.49	101.51	105.90
1	AA	3498	DC	C4'-C3'-C2'	-5.49	98.16	103.10
153	Cc	7	DT	C4'-C3'-C2'	-5.49	98.16	103.10
190	DD	20	DA	O4'-C1'-C2'	-5.49	101.51	105.90
1	AA	11	DT	C4'-C3'-C2'	-5.49	98.16	103.10
1	AA	1249	DA	O4'-C1'-C2'	-5.49	101.51	105.90
1	AA	2292	DG	C1'-O4'-C4'	-5.49	104.61	110.10
1	AA	3836	DC	O4'-C1'-C2'	-5.49	101.51	105.90
1	AA	6906	DT	C4'-C3'-C2'	-5.49	98.16	103.10
1	AA	6521	DA	P-O3'-C3'	5.48	126.28	119.70
95	Bg	33	DG	O4'-C1'-C2'	-5.48	101.52	105.90
1	AA	286	DC	O4'-C1'-N1	5.48	111.84	108.00
1	AA	2103	DG	N1-C6-O6	5.48	123.19	119.90
1	AA	369	DA	O4'-C1'-C2'	-5.48	101.52	105.90
1	AA	2390	DT	C4'-C3'-C2'	-5.48	98.17	103.10
192	DF	20	DG	O4'-C1'-C2'	-5.48	101.52	105.90
1	AA	3900	DT	C6-C5-C7	-5.48	119.61	122.90
89	Ba	21	DA	O4'-C1'-C2'	-5.48	101.52	105.90
109	Bu	19	DG	C5-C6-O6	-5.48	125.31	128.60
1	AA	1010	DG	O4'-C1'-C2'	-5.48	101.52	105.90
1	AA	1417	DA	C4'-C3'-C2'	-5.48	98.17	103.10
57	A4	8	DG	C1'-O4'-C4'	-5.48	104.62	110.10
1	AA	2164	DA	N1-C6-N6	-5.47	115.32	118.60
1	AA	4340	DG	O4'-C1'-C2'	-5.47	101.52	105.90
1	AA	5759	DG	C1'-O4'-C4'	-5.47	104.63	110.10
1	AA	7448	DT	C4'-C3'-C2'	-5.47	98.17	103.10
44	Ar	13	DA	O4'-C1'-C2'	-5.47	101.52	105.90
74	BL	40	DG	O4'-C1'-C2'	-5.47	101.52	105.90
77	BO	32	DT	O4'-C1'-C2'	-5.47	101.52	105.90
92	Bd	44	DC	C4'-C3'-C2'	-5.47	98.17	103.10
1	AA	3443	DG	C5-C6-O6	-5.47	125.32	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	7998	DT	C4'-C3'-C2'	-5.47	98.17	103.10
89	Ba	23	DC	O4'-C4'-C3'	-5.47	102.31	104.50
147	CW	39	DG	C1'-O4'-C4'	-5.47	104.63	110.10
151	Ca	9	DC	P-O3'-C3'	5.47	126.27	119.70
1	AA	1589	DC	C4'-C3'-C2'	-5.47	98.18	103.10
1	AA	5854	DG	N1-C6-O6	5.47	123.18	119.90
1	AA	6294	DT	O4'-C4'-C3'	-5.47	102.31	104.50
20	AT	40	DG	C1'-O4'-C4'	-5.47	104.63	110.10
181	C4	15	DT	P-O3'-C3'	5.47	126.27	119.70
1	AA	1005	DT	C4'-C3'-C2'	-5.47	98.18	103.10
1	AA	1123	DC	O4'-C1'-C2'	-5.47	101.52	105.90
1	AA	5860	DA	C4'-C3'-C2'	-5.47	98.18	103.10
121	B6	42	DA	O4'-C1'-C2'	-5.47	101.52	105.90
161	Ck	38	DG	N1-C6-O6	5.47	123.18	119.90
170	Ct	7	DA	O4'-C1'-C2'	-5.47	101.53	105.90
32	Af	11	DA	C1'-O4'-C4'	-5.47	104.63	110.10
1	AA	557	DG	O4'-C1'-C2'	-5.47	101.53	105.90
1	AA	3537	DT	C4'-C3'-C2'	-5.47	98.18	103.10
31	Ae	8	DA	O4'-C4'-C3'	-5.47	102.31	104.50
128	CD	32	DT	C4'-C3'-C2'	-5.47	98.18	103.10
79	BQ	9	DC	O4'-C1'-C2'	-5.46	101.53	105.90
182	C5	15	DT	O4'-C1'-C2'	-5.46	101.53	105.90
1	AA	3417	DG	P-O3'-C3'	5.46	126.25	119.70
1	AA	3443	DG	C4'-C3'-C2'	-5.46	98.18	103.10
1	AA	4805	DT	O4'-C1'-N1	5.46	111.82	108.00
18	AR	17	DA	O4'-C1'-C2'	-5.46	101.53	105.90
106	Br	17	DA	C1'-O4'-C4'	-5.46	104.64	110.10
38	Al	14	DA	C4'-C3'-C2'	-5.46	98.19	103.10
138	CN	31	DG	O4'-C1'-C2'	-5.46	101.53	105.90
1	AA	1623	DG	N1-C6-O6	5.46	123.18	119.90
1	AA	5738	DC	P-O3'-C3'	5.46	126.25	119.70
70	BH	54	DC	P-O3'-C3'	-5.46	113.15	119.70
114	Bz	28	DT	C4'-C3'-C2'	-5.46	98.19	103.10
1	AA	4196	DG	P-O3'-C3'	5.46	126.25	119.70
1	AA	4605	DT	O4'-C1'-C2'	-5.46	101.53	105.90
1	AA	5183	DT	C4'-C3'-C2'	-5.46	98.19	103.10
1	AA	5772	DG	C5-C6-O6	-5.46	125.33	128.60
1	AA	6882	DG	O4'-C4'-C3'	-5.46	102.32	104.50
19	AS	8	DG	C4'-C3'-C2'	-5.46	98.19	103.10
1	AA	5809	DT	O4'-C1'-C2'	-5.46	101.54	105.90
108	Bt	22	DG	O4'-C1'-C2'	-5.46	101.54	105.90
110	Bv	14	DA	O4'-C1'-C2'	-5.46	101.54	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	414	DC	C2-N1-C1'	5.45	124.80	118.80
1	AA	739	DC	P-O3'-C3'	5.45	126.25	119.70
1	AA	5118	DA	O4'-C4'-C3'	-5.45	102.32	104.50
5	AE	3	DG	P-O3'-C3'	5.45	126.25	119.70
54	A1	34	DG	P-O3'-C3'	5.45	126.25	119.70
75	BM	41	DA	N1-C6-N6	-5.45	115.33	118.60
191	DE	45	DG	P-O3'-C3'	5.45	126.25	119.70
1	AA	5533	DT	O4'-C1'-C2'	-5.45	101.54	105.90
1	AA	587	DG	O4'-C1'-C2'	-5.45	101.54	105.90
1	AA	3927	DC	O4'-C1'-N1	5.45	111.82	108.00
1	AA	5689	DT	C4'-C3'-C2'	-5.45	98.20	103.10
105	Bq	29	DT	O4'-C4'-C3'	-5.45	102.32	104.50
126	CB	32	DT	C1'-O4'-C4'	-5.45	104.65	110.10
1	AA	5497	DG	O4'-C1'-C2'	-5.45	101.54	105.90
1	AA	6696	DC	P-O5'-C5'	5.45	129.62	120.90
134	CJ	9	DA	C1'-O4'-C4'	-5.45	104.65	110.10
1	AA	967	DG	N1-C6-O6	5.45	123.17	119.90
1	AA	1086	DG	O4'-C1'-C2'	-5.45	101.54	105.90
1	AA	6471	DG	O4'-C1'-C2'	-5.45	101.54	105.90
1	AA	7290	DA	C1'-O4'-C4'	-5.45	104.66	110.10
1	AA	2877	DT	C4'-C3'-C2'	-5.44	98.20	103.10
1	AA	4567	DA	O4'-C1'-C2'	-5.44	101.54	105.90
8	AH	17	DA	N1-C6-N6	-5.44	115.33	118.60
1	AA	472	DG	O4'-C1'-C2'	-5.44	101.55	105.90
1	AA	954	DG	O4'-C1'-N9	5.44	111.81	108.00
1	AA	2238	DG	O4'-C1'-C2'	-5.44	101.55	105.90
1	AA	7983	DA	C4'-C3'-C2'	-5.44	98.20	103.10
93	Be	43	DG	N1-C6-O6	5.44	123.17	119.90
1	AA	5382	DC	C4'-C3'-C2'	-5.44	98.20	103.10
107	Bs	5	DA	C1'-O4'-C4'	-5.44	104.66	110.10
110	Bv	18	DG	P-O3'-C3'	5.44	126.23	119.70
151	Ca	13	DT	C4'-C3'-C2'	-5.44	98.20	103.10
159	Ci	14	DT	C4'-C3'-C2'	-5.44	98.20	103.10
1	AA	672	DC	P-O3'-C3'	5.44	126.22	119.70
1	AA	3492	DG	N1-C6-O6	5.44	123.16	119.90
1	AA	8034	DG	O4'-C1'-C2'	-5.44	101.55	105.90
100	Bl	9	DT	O4'-C4'-C3'	-5.44	102.33	104.50
134	CJ	24	DT	P-O3'-C3'	5.44	126.22	119.70
1	AA	678	DG	C5-C6-O6	-5.43	125.34	128.60
1	AA	2433	DG	P-O3'-C3'	5.43	126.22	119.70
13	AM	34	DT	C4'-C3'-C2'	-5.43	98.21	103.10
137	CM	2	DG	O4'-C1'-C2'	-5.43	101.55	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
138	CN	34	DC	O4'-C1'-C2'	-5.43	101.55	105.90
1	AA	466	DC	O4'-C1'-C2'	-5.43	101.55	105.90
35	Ai	45	DA	O4'-C1'-C2'	-5.43	101.55	105.90
42	Ap	26	DT	C4'-C3'-C2'	-5.43	98.21	103.10
96	Bh	23	DA	O4'-C1'-C2'	-5.43	101.55	105.90
135	CK	5	DG	O4'-C4'-C3'	-5.43	102.33	104.50
183	C6	43	DA	O4'-C4'-C3'	-5.43	102.33	104.50
1	AA	1481	DG	C5-C6-O6	-5.43	125.34	128.60
1	AA	5262	DT	C4'-C3'-C2'	-5.43	98.21	103.10
1	AA	7219	DG	P-O3'-C3'	5.43	126.22	119.70
1	AA	7415	DG	N1-C6-O6	5.43	123.16	119.90
7	AG	15	DG	P-O3'-C3'	5.43	126.22	119.70
183	C6	12	DT	C4'-C3'-C2'	-5.43	98.21	103.10
1	AA	6632	DT	O4'-C4'-C3'	-5.43	102.33	104.50
42	Ap	24	DC	P-O3'-C3'	5.43	126.21	119.70
107	Bs	5	DA	O4'-C1'-C2'	-5.43	101.56	105.90
1	AA	376	DG	C1'-O4'-C4'	-5.43	104.67	110.10
1	AA	5535	DA	O4'-C1'-C2'	-5.43	101.56	105.90
91	Bc	9	DA	C3'-C2'-C1'	-5.43	95.99	102.50
137	CM	10	DA	O4'-C1'-C2'	-5.43	101.56	105.90
1	AA	1622	DG	O4'-C1'-C2'	-5.42	101.56	105.90
1	AA	2132	DT	P-O3'-C3'	5.42	126.21	119.70
1	AA	6242	DA	O4'-C1'-C2'	-5.42	101.56	105.90
1	AA	7685	DT	C4'-C3'-C2'	-5.42	98.22	103.10
1	AA	7919	DT	C4'-C3'-C2'	-5.42	98.22	103.10
26	AZ	22	DG	O4'-C1'-C2'	-5.42	101.56	105.90
148	CX	8	DA	P-O3'-C3'	5.42	126.21	119.70
149	CY	1	DG	N1-C6-O6	5.42	123.16	119.90
174	Cx	9	DG	C1'-O4'-C4'	-5.42	104.68	110.10
1	AA	7621	DG	P-O3'-C3'	5.42	126.21	119.70
1	AA	1407	DC	O4'-C1'-C2'	-5.42	101.56	105.90
1	AA	4241	DG	N1-C6-O6	5.42	123.15	119.90
50	Ax	20	DC	O4'-C4'-C3'	-5.42	102.33	104.50
113	By	19	DT	O4'-C1'-C2'	-5.42	101.56	105.90
154	Cd	29	DG	N1-C6-O6	5.42	123.15	119.90
1	AA	2808	DG	C5-C6-O6	-5.42	125.35	128.60
1	AA	4095	DT	C4-C5-C7	5.42	122.25	119.00
1	AA	6219	DT	O4'-C4'-C3'	-5.42	102.33	104.50
57	A4	22	DT	O4'-C1'-C2'	-5.42	101.56	105.90
190	DD	9	DG	O4'-C4'-C3'	-5.42	102.33	104.50
1	AA	2721	DG	O4'-C1'-C2'	-5.42	101.57	105.90
1	AA	5292	DA	O4'-C1'-C2'	-5.42	101.57	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	6328	DT	O4'-C1'-C2'	-5.42	101.56	105.90
1	AA	8029	DG	C5-C6-O6	-5.42	125.35	128.60
189	DC	33	DG	C1'-O4'-C4'	-5.42	104.68	110.10
1	AA	504	DG	O4'-C1'-N9	5.42	111.79	108.00
1	AA	2459	DG	P-O3'-C3'	5.42	126.20	119.70
1	AA	2886	DA	C4'-C3'-C2'	-5.42	98.22	103.10
1	AA	4187	DG	N1-C6-O6	5.42	123.15	119.90
126	CB	28	DG	O4'-C1'-C2'	-5.42	101.57	105.90
160	Cj	21	DC	P-O5'-C5'	5.42	129.56	120.90
32	Af	13	DA	P-O3'-C3'	5.42	126.20	119.70
38	Al	21	DA	N1-C6-N6	-5.42	115.35	118.60
66	BD	34	DA	N1-C6-N6	-5.42	115.35	118.60
107	Bs	27	DG	C4'-C3'-C2'	-5.42	98.23	103.10
170	Ct	34	DA	P-O3'-C3'	5.42	126.20	119.70
1	AA	377	DT	O4'-C1'-N1	-5.41	104.21	108.00
1	AA	839	DA	C4'-C3'-C2'	-5.41	98.23	103.10
1	AA	2878	DT	C4'-C3'-C2'	-5.41	98.23	103.10
1	AA	5187	DG	C1'-O4'-C4'	-5.41	104.69	110.10
35	Ai	39	DG	O4'-C1'-C2'	-5.41	101.57	105.90
1	AA	1471	DG	P-O3'-C3'	5.41	126.19	119.70
1	AA	947	DG	P-O3'-C3'	5.41	126.19	119.70
1	AA	7766	DT	C4'-C3'-C2'	-5.41	98.23	103.10
46	At	25	DC	C2-N1-C1'	5.41	124.75	118.80
1	AA	3265	DG	N1-C6-O6	5.41	123.14	119.90
1	AA	6266	DT	C4'-C3'-C2'	-5.41	98.23	103.10
147	CW	39	DG	O4'-C1'-C2'	-5.41	101.57	105.90
166	Cp	10	DG	N1-C6-O6	5.41	123.15	119.90
67	BE	16	DA	C1'-O4'-C4'	-5.41	104.69	110.10
1	AA	5498	DT	C4'-C3'-C2'	-5.41	98.24	103.10
1	AA	5844	DT	C4'-C3'-C2'	-5.41	98.23	103.10
1	AA	6765	DA	N1-C6-N6	-5.41	115.36	118.60
45	As	40	DA	P-O3'-C3'	-5.41	113.21	119.70
80	BR	32	DA	O4'-C1'-C2'	-5.41	101.58	105.90
1	AA	7429	DT	C4'-C3'-C2'	-5.40	98.24	103.10
1	AA	8018	DC	P-O3'-C3'	-5.40	113.22	119.70
31	Ae	6	DG	N1-C6-O6	5.40	123.14	119.90
69	BG	36	DT	C4'-C3'-C2'	-5.40	98.24	103.10
1	AA	1126	DC	O4'-C1'-C2'	-5.40	101.58	105.90
13	AM	2	DC	O4'-C4'-C3'	-5.40	102.34	104.50
90	Bb	32	DA	O4'-C1'-N9	5.40	111.78	108.00
93	Be	13	DA	N1-C6-N6	-5.40	115.36	118.60
189	DC	31	DG	O4'-C1'-C2'	-5.40	101.58	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1341	DC	C6-N1-C2	-5.40	118.14	120.30
1	AA	3199	DT	P-O3'-C3'	5.40	126.18	119.70
27	Aa	50	DG	C1'-O4'-C4'	-5.40	104.70	110.10
152	Cb	33	DA	O4'-C1'-C2'	-5.40	101.58	105.90
1	AA	1591	DG	O4'-C1'-C2'	-5.40	101.58	105.90
1	AA	1758	DG	O4'-C1'-C2'	-5.40	101.58	105.90
1	AA	6165	DA	O4'-C1'-C2'	-5.40	101.58	105.90
1	AA	5963	DC	O4'-C1'-N1	5.40	111.78	108.00
107	Bs	8	DT	C4'-C3'-C2'	-5.40	98.24	103.10
1	AA	106	DG	O4'-C1'-C2'	-5.40	101.58	105.90
26	AZ	40	DA	C5-C6-N6	-5.40	119.38	123.70
90	Bb	32	DA	O4'-C1'-C2'	-5.39	101.58	105.90
154	Cd	29	DG	C5-C6-O6	-5.39	125.36	128.60
178	C1	26	DG	O4'-C1'-C2'	-5.39	101.58	105.90
1	AA	3756	DC	C4'-C3'-C2'	-5.39	98.25	103.10
1	AA	3809	DT	O4'-C1'-C2'	-5.39	101.59	105.90
1	AA	7353	DA	O4'-C1'-C2'	-5.39	101.58	105.90
1	AA	6989	DA	N1-C6-N6	-5.39	115.37	118.60
87	BY	36	DG	O4'-C1'-C2'	-5.39	101.59	105.90
1	AA	504	DG	C1'-O4'-C4'	-5.39	104.71	110.10
1	AA	1638	DC	P-O3'-C3'	5.39	126.17	119.70
1	AA	5069	DG	O4'-C1'-N9	5.39	111.77	108.00
1	AA	6086	DC	C4'-C3'-C2'	-5.39	98.25	103.10
1	AA	7358	DG	O4'-C1'-C2'	-5.39	101.59	105.90
1	AA	7804	DA	C1'-O4'-C4'	-5.39	104.71	110.10
50	Ax	45	DC	C2-N1-C1'	5.39	124.73	118.80
160	Cj	22	DG	P-O3'-C3'	5.39	126.17	119.70
177	C0	37	DT	C1'-O4'-C4'	-5.39	104.71	110.10
1	AA	3174	DT	O4'-C4'-C3'	-5.39	102.34	104.50
1	AA	5503	DT	C4'-C3'-C2'	-5.39	98.25	103.10
135	CK	6	DG	O4'-C1'-N9	5.39	111.77	108.00
163	Cm	14	DG	O4'-C1'-N9	5.39	111.77	108.00
1	AA	2686	DT	C4'-C3'-C2'	-5.39	98.25	103.10
1	AA	5729	DG	C1'-O4'-C4'	-5.39	104.71	110.10
1	AA	6903	DC	O4'-C4'-C3'	-5.39	102.34	104.50
55	A2	18	DG	N1-C6-O6	5.39	123.13	119.90
1	AA	989	DG	O4'-C1'-N9	5.38	111.77	108.00
1	AA	2170	DG	N1-C6-O6	5.38	123.13	119.90
1	AA	2540	DG	C4'-C3'-C2'	-5.38	98.25	103.10
1	AA	4143	DG	O4'-C1'-C2'	-5.38	101.59	105.90
3	AC	25	DG	C5-C6-O6	-5.38	125.37	128.60
43	Aq	1	DG	C5-C6-O6	-5.38	125.37	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	3405	DT	C4'-C3'-C2'	-5.38	98.25	103.10
1	AA	7283	DG	O4'-C4'-C3'	-5.38	102.35	104.50
1	AA	1319	DT	O4'-C1'-C2'	-5.38	101.60	105.90
1	AA	1584	DT	C4'-C3'-C2'	-5.38	98.26	103.10
1	AA	2716	DT	C1'-O4'-C4'	-5.38	104.72	110.10
1	AA	3111	DT	C4'-C3'-C2'	-5.38	98.26	103.10
1	AA	3635	DA	P-O3'-C3'	5.38	126.16	119.70
1	AA	3851	DG	C5-C6-O6	-5.38	125.37	128.60
1	AA	4187	DG	C5-C6-O6	-5.38	125.37	128.60
1	AA	4424	DG	N1-C6-O6	5.38	123.13	119.90
30	Ad	17	DA	O4'-C1'-C2'	-5.38	101.59	105.90
70	BH	54	DC	O4'-C4'-C3'	-5.38	102.35	104.50
117	B2	5	DA	N1-C6-N6	-5.38	115.37	118.60
1	AA	781	DC	P-O3'-C3'	5.38	126.16	119.70
1	AA	6294	DT	C4'-C3'-C2'	-5.38	98.26	103.10
119	B4	17	DC	P-O3'-C3'	5.38	126.16	119.70
121	B6	10	DG	C4'-C3'-C2'	-5.38	98.26	103.10
130	CF	35	DC	C4'-C3'-C2'	-5.38	98.26	103.10
141	CQ	14	DT	O4'-C1'-C2'	-5.38	101.60	105.90
153	Cc	9	DG	O4'-C1'-C2'	-5.38	101.60	105.90
185	C8	31	DG	O4'-C4'-C3'	-5.38	102.35	104.50
117	B2	16	DT	P-O3'-C3'	5.38	126.15	119.70
127	CC	15	DA	P-O3'-C3'	-5.38	113.25	119.70
142	CR	12	DT	C4'-C3'-C2'	-5.38	98.26	103.10
1	AA	646	DG	C5-C6-O6	-5.38	125.38	128.60
1	AA	2841	DG	O4'-C1'-N9	5.38	111.76	108.00
1	AA	4859	DG	N1-C6-O6	5.38	123.12	119.90
1	AA	4895	DG	O4'-C1'-C2'	-5.38	101.60	105.90
1	AA	5634	DA	C4'-C3'-C2'	-5.38	98.26	103.10
15	AO	39	DC	O4'-C1'-C2'	-5.38	101.60	105.90
1	AA	1422	DA	C4'-C3'-C2'	-5.37	98.26	103.10
1	AA	2259	DG	O4'-C4'-C3'	-5.37	102.35	104.50
1	AA	2894	DT	O4'-C1'-N1	-5.37	104.24	108.00
1	AA	5362	DG	C5-C6-O6	-5.37	125.38	128.60
4	AD	5	DG	P-O3'-C3'	5.37	126.15	119.70
20	AT	25	DA	O4'-C1'-C2'	-5.37	101.60	105.90
32	Af	46	DT	O4'-C1'-C2'	-5.37	101.60	105.90
1	AA	3456	DT	C1'-O4'-C4'	-5.37	104.73	110.10
1	AA	4928	DA	C1'-O4'-C4'	-5.37	104.73	110.10
1	AA	7389	DC	O4'-C1'-N1	5.37	111.76	108.00
55	A2	12	DC	C6-N1-C2	-5.37	118.15	120.30
110	Bv	34	DA	P-O3'-C3'	5.37	126.15	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
135	CK	47	DC	O4'-C1'-C2'	-5.37	101.60	105.90
175	Cy	40	DG	O4'-C1'-C2'	-5.37	101.60	105.90
182	C5	9	DA	P-O3'-C3'	5.37	126.15	119.70
1	AA	915	DA	C4'-C3'-C2'	-5.37	98.27	103.10
1	AA	1917	DA	O4'-C4'-C3'	-5.37	102.35	104.50
1	AA	4220	DA	N1-C6-N6	-5.37	115.38	118.60
149	CY	2	DC	O4'-C1'-N1	5.37	111.76	108.00
1	AA	171	DA	O4'-C1'-C2'	-5.37	101.61	105.90
1	AA	749	DA	C1'-O4'-C4'	-5.37	104.73	110.10
45	As	41	DA	O4'-C1'-N9	5.37	111.76	108.00
101	Bm	30	DT	C1'-O4'-C4'	-5.37	104.73	110.10
1	AA	4550	DG	P-O3'-C3'	5.37	126.14	119.70
1	AA	4563	DG	C1'-O4'-C4'	-5.37	104.73	110.10
1	AA	6273	DA	O4'-C1'-C2'	-5.37	101.61	105.90
53	A0	12	DC	C4'-C3'-C2'	-5.37	98.27	103.10
1	AA	6208	DC	O4'-C1'-C2'	-5.37	101.61	105.90
1	AA	7733	DC	O4'-C1'-C2'	-5.37	101.61	105.90
166	Cp	24	DA	O4'-C1'-C2'	-5.37	101.61	105.90
1	AA	1854	DA	N1-C6-N6	-5.36	115.38	118.60
1	AA	2449	DC	C4'-C3'-C2'	-5.36	98.27	103.10
1	AA	3386	DC	C4'-C3'-C2'	-5.36	98.27	103.10
1	AA	5279	DG	C1'-O4'-C4'	-5.36	104.74	110.10
27	Aa	38	DT	O4'-C1'-C2'	-5.36	101.61	105.90
131	CG	5	DG	C1'-O4'-C4'	-5.36	104.74	110.10
122	B7	33	DG	O4'-C1'-C2'	-5.36	101.61	105.90
1	AA	674	DG	P-O3'-C3'	5.36	126.13	119.70
1	AA	4085	DG	C5-C6-O6	-5.36	125.38	128.60
94	Bf	17	DA	P-O3'-C3'	5.36	126.13	119.70
161	Ck	15	DG	C5-C6-O6	-5.36	125.38	128.60
189	DC	11	DC	O4'-C1'-C2'	-5.36	101.61	105.90
1	AA	7256	DC	O4'-C1'-N1	5.36	111.75	108.00
29	Ac	25	DA	O4'-C1'-N9	5.36	111.75	108.00
73	BK	47	DA	P-O3'-C3'	5.36	126.13	119.70
91	Bc	36	DG	O4'-C1'-C2'	-5.36	101.61	105.90
1	AA	683	DG	P-O3'-C3'	5.36	126.13	119.70
1	AA	938	DC	O4'-C1'-C2'	-5.36	101.62	105.90
1	AA	5932	DT	O4'-C1'-C2'	-5.36	101.61	105.90
6	AF	22	DG	P-O3'-C3'	5.36	126.13	119.70
20	AT	5	DG	O4'-C1'-C2'	-5.36	101.62	105.90
81	BS	12	DA	N1-C6-N6	-5.36	115.39	118.60
166	Cp	35	DC	P-O3'-C3'	5.36	126.13	119.70
1	AA	116	DG	P-O3'-C3'	5.35	126.12	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	2003	DG	P-O3'-C3'	5.35	126.12	119.70
1	AA	2866	DA	O4'-C1'-C2'	-5.35	101.62	105.90
1	AA	3753	DG	O4'-C1'-N9	5.35	111.75	108.00
1	AA	4379	DA	C1'-O4'-C4'	-5.35	104.75	110.10
98	Bj	13	DG	O4'-C1'-C2'	-5.35	101.62	105.90
142	CR	32	DA	O4'-C1'-C2'	-5.35	101.62	105.90
159	Ci	3	DG	N1-C6-O6	5.35	123.11	119.90
1	AA	7245	DG	O4'-C1'-C2'	-5.35	101.62	105.90
62	A9	37	DG	O4'-C1'-C2'	-5.35	101.62	105.90
98	Bj	42	DA	O4'-C1'-C2'	-5.35	101.62	105.90
135	CK	18	DG	C4'-C3'-C2'	-5.35	98.28	103.10
157	Cg	28	DC	P-O5'-C5'	5.35	129.46	120.90
1	AA	445	DA	C4'-C3'-C2'	-5.35	98.28	103.10
1	AA	1913	DA	O4'-C1'-C2'	-5.35	101.62	105.90
1	AA	6461	DT	C4'-C3'-C2'	-5.35	98.28	103.10
129	CE	42	DG	O4'-C1'-C2'	-5.35	101.62	105.90
1	AA	3289	DT	C4'-C3'-C2'	-5.35	98.29	103.10
128	CD	7	DC	C4'-C3'-C2'	-5.35	98.29	103.10
172	Cv	21	DC	P-O3'-C3'	5.35	126.12	119.70
13	AM	31	DA	P-O3'-C3'	5.35	126.11	119.70
130	CF	3	DA	O4'-C1'-C2'	-5.35	101.62	105.90
1	AA	95	DG	O4'-C1'-C2'	-5.34	101.62	105.90
19	AS	11	DG	P-O3'-C3'	5.34	126.11	119.70
71	BI	11	DT	C4'-C3'-C2'	-5.34	98.29	103.10
101	Bm	17	DA	O4'-C4'-C3'	-5.34	102.36	104.50
143	CS	22	DT	C4'-C3'-C2'	-5.34	98.29	103.10
1	AA	5224	DC	P-O5'-C5'	5.34	129.45	120.90
1	AA	7251	DC	C4'-C3'-C2'	-5.34	98.29	103.10
1	AA	7633	DC	P-O5'-C5'	5.34	129.45	120.90
1	AA	2054	DA	C4'-C3'-C2'	-5.34	98.29	103.10
1	AA	2739	DG	O4'-C1'-C2'	-5.34	101.63	105.90
1	AA	4139	DA	N1-C6-N6	-5.34	115.40	118.60
1	AA	5299	DG	O4'-C1'-C2'	-5.34	101.63	105.90
29	Ac	7	DG	O4'-C1'-C2'	-5.34	101.63	105.90
58	A5	7	DA	N1-C6-N6	-5.34	115.40	118.60
70	BH	12	DC	C4'-C3'-C2'	-5.34	98.30	103.10
1	AA	4787	DG	N1-C6-O6	5.34	123.10	119.90
70	BH	51	DT	P-O3'-C3'	5.34	126.11	119.70
1	AA	3377	DA	N1-C6-N6	-5.34	115.40	118.60
1	AA	7267	DC	C4'-C3'-C2'	-5.34	98.30	103.10
1	AA	8048	DG	O4'-C4'-C3'	-5.34	102.37	104.50
36	Aj	34	DT	O4'-C1'-C2'	-5.34	101.63	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	3136	DA	C5-C6-N6	5.33	127.97	123.70
118	B3	15	DA	C4'-C3'-C2'	-5.33	98.30	103.10
167	Cq	1	DT	O4'-C1'-N1	5.33	111.73	108.00
1	AA	499	DT	C4'-C3'-C2'	-5.33	98.30	103.10
1	AA	1202	DT	C4'-C3'-C2'	-5.33	98.30	103.10
89	Ba	31	DG	C1'-O4'-C4'	-5.33	104.77	110.10
165	Co	6	DT	C4'-C3'-C2'	-5.33	98.30	103.10
182	C5	26	DA	C1'-O4'-C4'	-5.33	104.77	110.10
1	AA	3569	DG	C1'-O4'-C4'	-5.33	104.77	110.10
1	AA	5931	DG	C1'-O4'-C4'	-5.33	104.77	110.10
1	AA	2941	DG	O4'-C1'-C2'	-5.33	101.64	105.90
6	AF	5	DT	C4'-C3'-C2'	-5.33	98.30	103.10
68	BF	10	DA	O4'-C1'-C2'	-5.33	101.64	105.90
104	Bp	23	DG	P-O3'-C3'	5.33	126.10	119.70
1	AA	5929	DG	O4'-C1'-C2'	-5.33	101.64	105.90
8	AH	8	DA	O4'-C1'-C2'	-5.33	101.64	105.90
92	Bd	1	DA	C4'-C3'-C2'	-5.33	98.31	103.10
109	Bu	24	DA	C1'-O4'-C4'	-5.33	104.77	110.10
165	Co	1	DT	C4'-C3'-C2'	-5.33	98.31	103.10
1	AA	2664	DG	O4'-C1'-C2'	-5.33	101.64	105.90
1	AA	3851	DG	N1-C6-O6	5.33	123.09	119.90
1	AA	7529	DA	O4'-C1'-C2'	-5.33	101.64	105.90
159	Ci	8	DG	P-O3'-C3'	5.33	126.09	119.70
1	AA	3096	DA	O4'-C1'-C2'	-5.32	101.64	105.90
1	AA	3485	DA	O4'-C1'-C2'	-5.32	101.64	105.90
1	AA	5918	DG	C1'-O4'-C4'	-5.32	104.78	110.10
1	AA	6214	DG	C5-C6-O6	-5.32	125.41	128.60
1	AA	7972	DG	O4'-C4'-C3'	-5.32	102.37	104.50
1	AA	8006	DG	C5-C6-O6	-5.32	125.41	128.60
62	A9	20	DC	P-O3'-C3'	5.32	126.09	119.70
185	C8	17	DC	O4'-C1'-C2'	-5.32	101.64	105.90
1	AA	3569	DG	O4'-C1'-N9	5.32	111.72	108.00
45	As	7	DA	C4'-C3'-C2'	-5.32	98.31	103.10
1	AA	454	DG	O4'-C1'-C2'	-5.32	101.64	105.90
1	AA	5173	DG	O4'-C1'-C2'	-5.32	101.65	105.90
1	AA	6272	DA	P-O3'-C3'	5.32	126.08	119.70
98	Bj	19	DG	O4'-C1'-C2'	-5.32	101.65	105.90
102	Bn	31	DC	O4'-C1'-N1	5.32	111.72	108.00
111	Bw	16	DA	N1-C6-N6	-5.32	115.41	118.60
182	C5	15	DT	C1'-O4'-C4'	-5.32	104.78	110.10
1	AA	3056	DT	O4'-C1'-C2'	-5.32	101.65	105.90
24	AX	9	DA	N1-C6-N6	-5.32	115.41	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	AY	20	DT	O4'-C1'-C2'	-5.32	101.65	105.90
144	CT	17	DC	O4'-C1'-C2'	-5.32	101.65	105.90
165	Co	6	DT	O4'-C4'-C3'	-5.32	102.37	104.50
1	AA	5011	DA	O4'-C4'-C3'	-5.31	102.38	104.50
161	Ck	33	DG	C1'-O4'-C4'	-5.31	104.79	110.10
179	C2	13	DA	P-O3'-C3'	5.31	126.08	119.70
1	AA	3709	DG	P-O3'-C3'	5.31	126.08	119.70
1	AA	5025	DG	O4'-C1'-N9	5.31	111.72	108.00
1	AA	6712	DC	C4'-C3'-C2'	-5.31	98.32	103.10
30	Ad	45	DG	N1-C6-O6	5.31	123.09	119.90
114	Bz	28	DT	O4'-C4'-C3'	-5.31	102.38	104.50
186	C9	31	DT	O4'-C4'-C3'	-5.31	102.38	104.50
1	AA	1924	DT	O4'-C1'-N1	5.31	111.72	108.00
6	AF	1	DG	C4'-C3'-C2'	-5.31	98.32	103.10
28	Ab	28	DT	C4'-C3'-C2'	-5.31	98.32	103.10
89	Ba	38	DA	O4'-C1'-C2'	-5.31	101.65	105.90
132	CH	15	DG	O4'-C1'-C2'	-5.31	101.65	105.90
1	AA	1249	DA	C1'-O4'-C4'	-5.31	104.79	110.10
1	AA	3585	DT	C4'-C3'-C2'	-5.31	98.32	103.10
1	AA	4883	DG	C1'-O4'-C4'	-5.31	104.79	110.10
1	AA	6809	DC	O4'-C4'-C3'	-5.31	102.38	104.50
1	AA	7576	DG	O4'-C4'-C3'	-5.31	102.38	104.50
1	AA	1285	DC	C4'-C3'-C2'	-5.31	98.32	103.10
1	AA	2387	DA	O4'-C4'-C3'	-5.31	102.38	104.50
1	AA	4142	DG	O4'-C1'-C2'	-5.31	101.65	105.90
1	AA	5433	DC	O4'-C4'-C3'	-5.31	102.38	104.50
1	AA	5772	DG	N1-C6-O6	5.31	123.08	119.90
1	AA	6176	DG	C5-C6-O6	-5.31	125.42	128.60
1	AA	7200	DG	C5-C6-O6	-5.31	125.42	128.60
1	AA	5976	DG	O4'-C1'-C2'	-5.31	101.66	105.90
93	Be	17	DT	C1'-O4'-C4'	-5.31	104.79	110.10
170	Ct	12	DG	O4'-C1'-C2'	-5.31	101.66	105.90
1	AA	1162	DA	C4'-C3'-C2'	-5.30	98.33	103.10
1	AA	4406	DA	O4'-C1'-C2'	-5.30	101.66	105.90
37	Ak	22	DA	O4'-C1'-C2'	-5.30	101.66	105.90
45	As	15	DG	C4'-C3'-C2'	-5.30	98.33	103.10
73	BK	1	DG	N1-C6-O6	5.30	123.08	119.90
96	Bh	28	DC	C1'-O4'-C4'	-5.30	104.80	110.10
131	CG	6	DC	O4'-C1'-N1	5.30	111.71	108.00
130	CF	18	DA	O4'-C1'-C2'	-5.30	101.66	105.90
1	AA	1465	DA	O4'-C1'-C2'	-5.30	101.66	105.90
37	Ak	18	DT	C4'-C3'-C2'	-5.30	98.33	103.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
64	BB	25	DA	O4'-C1'-N9	5.30	111.71	108.00
1	AA	848	DG	O4'-C1'-C2'	-5.30	101.66	105.90
1	AA	7848	DG	O4'-C1'-C2'	-5.30	101.66	105.90
11	AK	24	DC	O4'-C1'-C2'	-5.30	101.66	105.90
150	CZ	23	DT	C4'-C3'-C2'	-5.30	98.33	103.10
1	AA	589	DC	O4'-C1'-C2'	-5.29	101.66	105.90
1	AA	2714	DT	C4'-C3'-C2'	-5.29	98.33	103.10
1	AA	6618	DA	C4'-C3'-C2'	-5.29	98.33	103.10
1	AA	890	DC	O4'-C1'-C2'	-5.29	101.67	105.90
1	AA	6025	DG	N1-C6-O6	5.29	123.08	119.90
1	AA	7317	DT	C4'-C3'-C2'	-5.29	98.34	103.10
2	AB	4	DG	O4'-C1'-C2'	-5.29	101.67	105.90
89	Ba	27	DG	O4'-C1'-C2'	-5.29	101.67	105.90
92	Bd	34	DA	O4'-C1'-C2'	-5.29	101.67	105.90
1	AA	1158	DC	C4'-C3'-C2'	-5.29	98.34	103.10
1	AA	6732	DG	O4'-C1'-C2'	-5.29	101.67	105.90
148	CX	27	DT	C4'-C3'-C2'	-5.29	98.34	103.10
1	AA	596	DA	O4'-C1'-N9	5.29	111.70	108.00
1	AA	6988	DG	O4'-C4'-C3'	-5.29	102.38	104.50
113	By	13	DC	C2-N1-C1'	5.29	124.62	118.80
74	BL	17	DT	P-O3'-C3'	5.29	126.05	119.70
163	Cm	14	DG	O4'-C1'-C2'	-5.29	101.67	105.90
27	Aa	9	DA	C1'-O4'-C4'	-5.29	104.81	110.10
113	By	27	DA	C4'-C3'-C2'	-5.29	98.34	103.10
1	AA	3509	DG	C5-C6-O6	-5.29	125.43	128.60
1	AA	3953	DT	O4'-C4'-C3'	-5.29	102.39	104.50
1	AA	4376	DA	P-O5'-C5'	5.29	129.36	120.90
1	AA	7364	DG	C4'-C3'-C2'	-5.29	98.34	103.10
55	A2	25	DT	C1'-O4'-C4'	-5.29	104.81	110.10
1	AA	1955	DA	C1'-O4'-C4'	-5.28	104.82	110.10
1	AA	6196	DT	C1'-O4'-C4'	-5.28	104.82	110.10
1	AA	6837	DA	O4'-C1'-C2'	-5.28	101.67	105.90
116	B1	24	DA	C4'-C3'-C2'	-5.28	98.34	103.10
1	AA	2157	DA	O4'-C1'-C2'	-5.28	101.67	105.90
1	AA	6382	DT	C4'-C3'-C2'	-5.28	98.35	103.10
1	AA	1124	DG	C3'-C2'-C1'	-5.28	96.16	102.50
1	AA	4031	DG	C5-C6-O6	-5.28	125.43	128.60
1	AA	6900	DG	N1-C6-O6	5.28	123.07	119.90
140	CP	46	DT	C4'-C3'-C2'	-5.28	98.35	103.10
164	Cn	39	DT	C4'-C3'-C2'	-5.28	98.35	103.10
151	Ca	18	DA	O4'-C1'-C2'	-5.28	101.68	105.90
1	AA	3084	DT	C4'-C3'-C2'	-5.28	98.35	103.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	4889	DG	O4'-C1'-C2'	-5.28	101.68	105.90
1	AA	5542	DA	P-O3'-C3'	5.28	126.03	119.70
1	AA	7255	DC	C4'-C3'-C2'	-5.28	98.35	103.10
1	AA	7518	DT	C4'-C3'-C2'	-5.28	98.35	103.10
49	Aw	2	DG	C5-C6-O6	-5.28	125.43	128.60
57	A4	24	DA	P-O3'-C3'	5.28	126.03	119.70
1	AA	778	DT	C4-C5-C7	5.28	122.17	119.00
1	AA	6436	DT	O4'-C4'-C3'	-5.28	102.39	104.50
59	A6	24	DA	O4'-C1'-C2'	-5.28	101.68	105.90
100	Bl	34	DC	P-O3'-C3'	5.28	126.03	119.70
1	AA	749	DA	P-O3'-C3'	5.27	126.03	119.70
1	AA	4859	DG	C5-C6-O6	-5.27	125.44	128.60
187	DA	48	DA	O4'-C1'-C2'	-5.27	101.68	105.90
1	AA	1525	DT	O4'-C1'-C2'	-5.27	101.68	105.90
1	AA	6414	DG	O4'-C1'-C2'	-5.27	101.68	105.90
32	Af	23	DC	O4'-C1'-C2'	-5.27	101.68	105.90
51	Ay	28	DG	O4'-C1'-C2'	-5.27	101.68	105.90
1	AA	954	DG	P-O3'-C3'	5.27	126.03	119.70
1	AA	2413	DA	O4'-C1'-C2'	-5.27	101.68	105.90
1	AA	3312	DT	C4'-C3'-C2'	-5.27	98.36	103.10
1	AA	4256	DG	O4'-C1'-C2'	-5.27	101.68	105.90
1	AA	7885	DG	O4'-C1'-C2'	-5.27	101.68	105.90
1	AA	2162	DA	O4'-C1'-C2'	-5.27	101.69	105.90
1	AA	4716	DG	N1-C6-O6	5.27	123.06	119.90
1	AA	1486	DG	P-O3'-C3'	5.27	126.02	119.70
1	AA	4518	DG	P-O3'-C3'	5.27	126.02	119.70
132	CH	47	DA	O4'-C1'-C2'	-5.27	101.69	105.90
1	AA	2820	DG	P-O3'-C3'	5.27	126.02	119.70
1	AA	3226	DT	C4'-C3'-C2'	-5.27	98.36	103.10
1	AA	3790	DG	C1'-O4'-C4'	-5.27	104.83	110.10
1	AA	4313	DC	C6-N1-C2	-5.27	118.19	120.30
1	AA	4319	DA	O4'-C1'-C2'	-5.27	101.69	105.90
1	AA	5476	DT	P-O3'-C3'	5.27	126.02	119.70
1	AA	6124	DG	O4'-C1'-C2'	-5.27	101.69	105.90
1	AA	7938	DG	O4'-C1'-N9	5.27	111.69	108.00
93	Be	29	DG	C4'-C3'-C2'	-5.27	98.36	103.10
174	Cx	1	DT	C1'-O4'-C4'	-5.27	104.83	110.10
1	AA	242	DA	C5-C6-N6	5.26	127.91	123.70
1	AA	462	DA	O4'-C1'-C2'	-5.26	101.69	105.90
1	AA	3320	DG	C5-C6-O6	-5.26	125.44	128.60
1	AA	5789	DG	O4'-C1'-C2'	-5.26	101.69	105.90
1	AA	3647	DT	O4'-C1'-C2'	-5.26	101.69	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	3774	DG	O4'-C1'-C2'	-5.26	101.69	105.90
1	AA	6956	DA	O4'-C1'-C2'	-5.26	101.69	105.90
59	A6	18	DA	O4'-C1'-C2'	-5.26	101.69	105.90
74	BL	22	DA	C4'-C3'-C2'	-5.26	98.36	103.10
95	Bg	24	DT	C4-C5-C7	5.26	122.16	119.00
43	Aq	1	DG	C4-N9-C1'	5.26	133.34	126.50
137	CM	31	DA	O4'-C1'-C2'	-5.26	101.69	105.90
168	Cr	28	DT	C4'-C3'-C2'	-5.26	98.37	103.10
1	AA	1593	DG	P-O3'-C3'	5.26	126.01	119.70
1	AA	6000	DC	C4'-C3'-C2'	-5.26	98.37	103.10
78	BP	31	DT	C2-N1-C1'	5.26	126.61	118.20
1	AA	5212	DT	C4'-C3'-C2'	-5.26	98.37	103.10
1	AA	5259	DG	N1-C6-O6	5.26	123.05	119.90
34	Ah	26	DG	C1'-O4'-C4'	-5.26	104.84	110.10
1	AA	1515	DG	C1'-O4'-C4'	-5.25	104.84	110.10
69	BG	26	DG	N1-C6-O6	5.25	123.05	119.90
135	CK	11	DA	P-O3'-C3'	5.25	126.01	119.70
148	CX	37	DA	C5-C6-N6	5.25	127.90	123.70
168	Cr	10	DA	C5-C6-N6	5.25	127.90	123.70
1	AA	7286	DC	O4'-C4'-C3'	-5.25	102.40	104.50
45	As	44	DC	O4'-C1'-C2'	-5.25	101.70	105.90
154	Cd	28	DG	C1'-O4'-C4'	-5.25	104.85	110.10
160	Cj	16	DG	N1-C6-O6	5.25	123.05	119.90
1	AA	356	DG	O4'-C1'-C2'	-5.25	101.70	105.90
1	AA	426	DG	O4'-C1'-C2'	-5.25	101.70	105.90
1	AA	6059	DG	C1'-O4'-C4'	-5.25	104.85	110.10
1	AA	8014	DG	O4'-C1'-C2'	-5.25	101.70	105.90
169	Cs	21	DG	C5-C6-O6	-5.25	125.45	128.60
1	AA	5138	DG	C4'-C3'-C2'	-5.25	98.38	103.10
183	C6	5	DA	C4'-C3'-C2'	-5.25	98.38	103.10
1	AA	1515	DG	P-O3'-C3'	5.25	126.00	119.70
1	AA	2916	DG	N1-C6-O6	5.25	123.05	119.90
1	AA	3015	DG	O4'-C1'-C2'	-5.25	101.70	105.90
1	AA	4905	DC	O4'-C1'-N1	5.25	111.67	108.00
1	AA	6881	DG	C1'-O4'-C4'	-5.25	104.85	110.10
44	Ar	34	DA	P-O3'-C3'	5.25	126.00	119.70
156	Cf	35	DA	C4'-C3'-C2'	-5.25	98.38	103.10
1	AA	536	DG	C5-C6-O6	-5.25	125.45	128.60
30	Ad	33	DA	P-O3'-C3'	5.25	126.00	119.70
118	B3	26	DC	O4'-C1'-C2'	-5.25	101.70	105.90
160	Cj	16	DG	C4-N9-C1'	5.25	133.32	126.50
1	AA	734	DG	P-O3'-C3'	5.24	125.99	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	2963	DT	C4'-C3'-C2'	-5.24	98.38	103.10
1	AA	4868	DA	N1-C6-N6	-5.24	115.45	118.60
1	AA	6484	DG	O4'-C4'-C3'	-5.24	102.40	104.50
19	AS	8	DG	C5-C6-O6	-5.24	125.45	128.60
36	Aj	38	DT	C4'-C3'-C2'	-5.24	98.38	103.10
163	Cm	25	DG	O4'-C1'-C2'	-5.24	101.70	105.90
170	Ct	29	DC	P-O3'-C3'	5.24	125.99	119.70
1	AA	538	DC	C4'-C3'-C2'	-5.24	98.38	103.10
65	BC	18	DC	C1'-O4'-C4'	-5.24	104.86	110.10
1	AA	1339	DT	C4'-C3'-C2'	-5.24	98.38	103.10
1	AA	7814	DA	O4'-C1'-C2'	-5.24	101.71	105.90
77	BO	40	DG	P-O3'-C3'	5.24	125.99	119.70
81	BS	24	DC	C4'-C3'-C2'	-5.24	98.38	103.10
191	DE	41	DT	P-O3'-C3'	5.24	125.99	119.70
1	AA	3938	DG	C1'-O4'-C4'	-5.24	104.86	110.10
1	AA	4085	DG	N1-C6-O6	5.24	123.04	119.90
1	AA	5902	DG	C1'-O4'-C4'	-5.24	104.86	110.10
110	Bv	23	DG	O4'-C1'-C2'	-5.24	101.71	105.90
1	AA	1511	DG	O4'-C1'-C2'	-5.24	101.71	105.90
41	Ao	40	DA	N1-C6-N6	-5.24	115.46	118.60
161	Ck	37	DG	C5-C6-O6	-5.24	125.46	128.60
1	AA	2659	DT	O4'-C1'-C2'	-5.24	101.71	105.90
1	AA	3489	DT	P-O3'-C3'	5.24	125.98	119.70
45	As	41	DA	O4'-C1'-C2'	-5.24	101.71	105.90
125	CA	22	DC	C6-N1-C2	-5.24	118.21	120.30
143	CS	44	DG	C4'-C3'-C2'	-5.24	98.39	103.10
46	At	35	DG	C5-C6-O6	-5.23	125.46	128.60
188	DB	8	DG	O4'-C1'-C2'	-5.23	101.71	105.90
122	B7	28	DC	O4'-C1'-N1	-5.23	104.34	108.00
133	CI	15	DG	P-O3'-C3'	-5.23	113.42	119.70
1	AA	278	DG	C5-C6-O6	-5.23	125.46	128.60
1	AA	4391	DA	O4'-C1'-C2'	-5.23	101.72	105.90
63	BA	48	DA	N1-C6-N6	-5.23	115.46	118.60
140	CP	3	DG	C5-C6-O6	-5.23	125.46	128.60
166	Cp	22	DC	C2-N1-C1'	5.23	124.56	118.80
1	AA	7513	DG	O4'-C1'-C2'	-5.23	101.72	105.90
46	At	9	DA	O4'-C1'-C2'	-5.23	101.72	105.90
102	Bn	17	DA	N1-C6-N6	-5.23	115.46	118.60
1	AA	502	DG	O4'-C1'-C2'	-5.23	101.72	105.90
1	AA	1974	DG	O4'-C1'-C2'	-5.23	101.72	105.90
1	AA	2433	DG	C1'-O4'-C4'	-5.23	104.87	110.10
1	AA	4229	DC	P-O3'-C3'	5.23	125.97	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	4296	DC	C1'-O4'-C4'	-5.23	104.87	110.10
1	AA	4986	DG	C4'-C3'-C2'	-5.23	98.39	103.10
1	AA	7994	DT	C4'-C3'-C2'	-5.23	98.39	103.10
73	BK	21	DG	C5-C6-O6	-5.23	125.46	128.60
101	Bm	21	DG	O4'-C1'-N9	5.23	111.66	108.00
153	Cc	6	DG	O4'-C4'-C3'	-5.23	102.41	104.50
75	BM	42	DG	C1'-O4'-C4'	-5.23	104.87	110.10
147	CW	29	DT	C4'-C3'-C2'	-5.23	98.40	103.10
1	AA	5326	DA	O4'-C1'-C2'	-5.22	101.72	105.90
1	AA	7047	DG	O4'-C1'-C2'	-5.22	101.72	105.90
161	Ck	21	DC	C6-N1-C2	-5.22	118.21	120.30
1	AA	2505	DA	O4'-C1'-C2'	-5.22	101.72	105.90
30	Ad	22	DC	C1'-O4'-C4'	-5.22	104.88	110.10
105	Bq	19	DG	O4'-C1'-C2'	-5.22	101.72	105.90
1	AA	2279	DA	C1'-O4'-C4'	-5.22	104.88	110.10
1	AA	5362	DG	N1-C6-O6	5.22	123.03	119.90
1	AA	6416	DC	C4'-C3'-C2'	-5.22	98.40	103.10
65	BC	24	DG	N1-C6-O6	5.22	123.03	119.90
1	AA	108	DT	C4'-C3'-C2'	-5.22	98.40	103.10
1	AA	1508	DG	C1'-O4'-C4'	-5.22	104.88	110.10
1	AA	7247	DC	C4'-C3'-C2'	-5.22	98.40	103.10
14	AN	43	DG	C5-C6-O6	-5.22	125.47	128.60
78	BP	31	DT	C4'-C3'-C2'	-5.22	98.40	103.10
1	AA	809	DC	O4'-C1'-C2'	-5.22	101.73	105.90
152	Cb	2	DG	O4'-C1'-C2'	-5.22	101.73	105.90
1	AA	2943	DC	C4'-C3'-C2'	-5.22	98.41	103.10
24	AX	8	DA	O4'-C1'-C2'	-5.22	101.73	105.90
30	Ad	15	DG	N1-C6-O6	5.22	123.03	119.90
73	BK	10	DA	O4'-C1'-C2'	-5.22	101.73	105.90
77	BO	12	DG	C5-C6-O6	-5.22	125.47	128.60
101	Bm	11	DC	O4'-C1'-C2'	-5.22	101.73	105.90
1	AA	119	DT	C4'-C3'-C2'	-5.21	98.41	103.10
1	AA	207	DC	P-O3'-C3'	5.21	125.96	119.70
1	AA	3869	DA	P-O3'-C3'	5.21	125.96	119.70
1	AA	5705	DA	O4'-C1'-C2'	-5.21	101.73	105.90
1	AA	6087	DC	P-O5'-C5'	5.21	129.25	120.90
1	AA	7249	DG	N1-C6-O6	5.21	123.03	119.90
96	Bh	9	DC	O4'-C1'-N1	5.21	111.65	108.00
115	B0	19	DG	P-O3'-C3'	5.21	125.96	119.70
187	DA	29	DA	C5-C6-N6	5.21	127.87	123.70
93	Be	35	DC	P-O5'-C5'	5.21	129.24	120.90
1	AA	7125	DT	P-O3'-C3'	-5.21	113.45	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	7275	DG	O4'-C1'-C2'	-5.21	101.73	105.90
93	Be	42	DA	C4'-C3'-C2'	-5.21	98.41	103.10
96	Bh	18	DG	C1'-O4'-C4'	-5.21	104.89	110.10
121	B6	8	DG	C1'-O4'-C4'	-5.21	104.89	110.10
125	CA	11	DC	P-O3'-C3'	5.21	125.95	119.70
160	Cj	52	DG	N1-C6-O6	5.21	123.03	119.90
1	AA	4004	DA	O4'-C1'-C2'	-5.21	101.73	105.90
28	Ab	37	DG	O4'-C1'-C2'	-5.21	101.73	105.90
1	AA	647	DT	P-O3'-C3'	5.21	125.95	119.70
1	AA	3213	DC	O4'-C1'-C2'	-5.21	101.73	105.90
1	AA	3344	DC	C6-N1-C2	-5.21	118.22	120.30
21	AU	2	DT	C4'-C3'-C2'	-5.21	98.41	103.10
54	A1	35	DC	C6-N1-C2	-5.21	118.22	120.30
83	BU	16	DT	C4'-C3'-C2'	-5.21	98.41	103.10
93	Be	43	DG	C5-C6-O6	-5.21	125.47	128.60
1	AA	2082	DG	O4'-C1'-N9	5.21	111.64	108.00
1	AA	3628	DC	O4'-C1'-N1	5.21	111.64	108.00
31	Ae	46	DG	C5-C6-O6	-5.21	125.48	128.60
1	AA	4313	DC	C4'-C3'-C2'	-5.21	98.42	103.10
1	AA	5208	DG	O4'-C1'-C2'	-5.21	101.74	105.90
1	AA	5238	DG	P-O3'-C3'	5.21	125.95	119.70
47	Au	35	DC	C2-N1-C1'	5.21	124.53	118.80
95	Bg	38	DG	N1-C6-O6	5.21	123.02	119.90
109	Bu	15	DA	P-O3'-C3'	5.21	125.95	119.70
118	B3	50	DG	O4'-C1'-C2'	-5.21	101.74	105.90
1	AA	1911	DT	O4'-C4'-C3'	-5.20	102.42	104.50
1	AA	2063	DA	O4'-C1'-C2'	-5.20	101.74	105.90
1	AA	4052	DG	P-O5'-C5'	5.20	129.23	120.90
1	AA	5071	DT	O4'-C1'-C2'	-5.20	101.74	105.90
1	AA	6111	DC	O4'-C1'-C2'	-5.20	101.74	105.90
11	AK	20	DT	C4'-C3'-C2'	-5.20	98.42	103.10
35	Ai	30	DT	C4'-C3'-C2'	-5.20	98.42	103.10
40	An	17	DA	C1'-O4'-C4'	-5.20	104.90	110.10
46	At	35	DG	N1-C6-O6	5.20	123.02	119.90
92	Bd	4	DT	O4'-C1'-C2'	-5.20	101.74	105.90
110	Bv	18	DG	O4'-C1'-C2'	-5.20	101.74	105.90
115	B0	17	DT	C4'-C3'-C2'	-5.20	98.42	103.10
149	CY	13	DG	O4'-C1'-C2'	-5.20	101.74	105.90
109	Bu	2	DT	C6-C5-C7	-5.20	119.78	122.90
1	AA	3755	DC	O4'-C1'-C2'	-5.20	101.74	105.90
1	AA	4455	DA	O4'-C1'-C2'	-5.20	101.74	105.90
5	AE	38	DA	O4'-C1'-C2'	-5.20	101.74	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
99	Bk	18	DG	O4'-C1'-C2'	-5.20	101.74	105.90
124	B9	13	DA	N1-C6-N6	-5.20	115.48	118.60
143	CS	9	DA	C1'-O4'-C4'	-5.20	104.90	110.10
144	CT	17	DC	O4'-C1'-N1	5.20	111.64	108.00
159	Ci	47	DT	P-O3'-C3'	5.20	125.94	119.70
1	AA	749	DA	O4'-C1'-N9	5.20	111.64	108.00
1	AA	3518	DA	P-O3'-C3'	-5.20	113.46	119.70
1	AA	5199	DG	O4'-C1'-C2'	-5.20	101.74	105.90
1	AA	6768	DT	C4'-C3'-C2'	-5.20	98.42	103.10
121	B6	40	DT	C4'-C3'-C2'	-5.20	98.42	103.10
137	CM	3	DG	C5-C6-O6	-5.20	125.48	128.60
1	AA	365	DA	O4'-C4'-C3'	-5.20	102.42	104.50
1	AA	2065	DC	O4'-C1'-C2'	-5.20	101.74	105.90
102	Bn	20	DT	O4'-C1'-C2'	-5.20	101.74	105.90
1	AA	1698	DC	C1'-O4'-C4'	-5.20	104.90	110.10
1	AA	2324	DG	C5-C6-O6	-5.20	125.48	128.60
1	AA	3714	DT	O4'-C1'-N1	5.20	111.64	108.00
1	AA	4525	DC	P-O3'-C3'	5.20	125.94	119.70
1	AA	1992	DG	C1'-O4'-C4'	-5.19	104.91	110.10
1	AA	3919	DA	C5-C6-N6	5.19	127.86	123.70
1	AA	2445	DT	C4'-C3'-C2'	-5.19	98.43	103.10
1	AA	6025	DG	P-O3'-C3'	5.19	125.93	119.70
123	B8	10	DG	P-O3'-C3'	5.19	125.93	119.70
139	CO	3	DC	C6-N1-C2	-5.19	118.22	120.30
1	AA	711	DT	O4'-C4'-C3'	-5.19	102.42	104.50
1	AA	5934	DC	P-O5'-C5'	5.19	129.21	120.90
69	BG	39	DC	O4'-C1'-N1	5.19	111.63	108.00
74	BL	25	DA	P-O3'-C3'	5.19	125.93	119.70
139	CO	21	DT	C4'-C3'-C2'	-5.19	98.43	103.10
1	AA	6	DG	C1'-O4'-C4'	-5.19	104.91	110.10
1	AA	837	DG	C1'-O4'-C4'	-5.19	104.91	110.10
1	AA	4145	DC	C4'-C3'-C2'	-5.19	98.43	103.10
1	AA	8031	DT	C4'-C3'-C2'	-5.19	98.43	103.10
173	Cw	16	DG	O4'-C1'-C2'	-5.19	101.75	105.90
191	DE	39	DC	C2-N1-C1'	5.19	124.51	118.80
1	AA	4257	DG	C5-C6-O6	-5.19	125.49	128.60
1	AA	6569	DT	C4-C5-C7	5.19	122.11	119.00
137	CM	3	DG	P-O3'-C3'	5.19	125.92	119.70
181	C4	9	DG	C1'-O4'-C4'	-5.19	104.91	110.10
1	AA	737	DC	O4'-C1'-N1	5.18	111.63	108.00
1	AA	3446	DG	P-O3'-C3'	5.18	125.92	119.70
1	AA	3601	DG	N1-C6-O6	5.18	123.01	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	5546	DG	N1-C6-O6	5.18	123.01	119.90
1	AA	5962	DT	C4'-C3'-C2'	-5.18	98.43	103.10
1	AA	7831	DG	C1'-O4'-C4'	-5.18	104.92	110.10
136	CL	10	DG	O4'-C1'-C2'	-5.18	101.75	105.90
145	CU	15	DG	C5-C6-O6	-5.18	125.49	128.60
190	DD	30	DG	N1-C6-O6	5.18	123.01	119.90
1	AA	1186	DG	C1'-O4'-C4'	-5.18	104.92	110.10
1	AA	2525	DA	O4'-C1'-C2'	-5.18	101.75	105.90
1	AA	3120	DC	O4'-C1'-N1	5.18	111.63	108.00
1	AA	4086	DG	O4'-C1'-C2'	-5.18	101.75	105.90
5	AE	14	DC	P-O3'-C3'	5.18	125.92	119.70
17	AQ	22	DT	C4'-C3'-C2'	-5.18	98.44	103.10
26	AZ	20	DC	P-O3'-C3'	5.18	125.92	119.70
26	AZ	32	DC	C6-N1-C1'	-5.18	114.58	120.80
84	BV	23	DC	C4'-C3'-C2'	-5.18	98.44	103.10
108	Bt	43	DT	C4-C5-C7	5.18	122.11	119.00
1	AA	4424	DG	C5-C6-O6	-5.18	125.49	128.60
21	AU	13	DA	O4'-C1'-C2'	-5.18	101.75	105.90
147	CW	26	DG	O4'-C1'-C2'	-5.18	101.75	105.90
1	AA	2363	DC	P-O5'-C5'	5.18	129.19	120.90
1	AA	3177	DT	C4'-C3'-C2'	-5.18	98.44	103.10
1	AA	7647	DC	O4'-C1'-C2'	-5.18	101.76	105.90
16	AP	19	DG	O4'-C1'-C2'	-5.18	101.76	105.90
30	Ad	22	DC	O4'-C1'-N1	5.18	111.62	108.00
47	Au	6	DA	C1'-O4'-C4'	-5.18	104.92	110.10
1	AA	2761	DA	O4'-C1'-C2'	-5.18	101.76	105.90
1	AA	7917	DC	C4'-C3'-C2'	-5.18	98.44	103.10
97	Bi	25	DG	C5-C6-O6	-5.18	125.49	128.60
1	AA	3511	DT	C4'-C3'-C2'	-5.18	98.44	103.10
54	A1	28	DA	O4'-C4'-C3'	-5.18	102.43	104.50
73	BK	21	DG	N1-C6-O6	5.18	123.01	119.90
95	Bg	19	DA	O4'-C1'-C2'	-5.18	101.76	105.90
106	Br	17	DA	O4'-C1'-C2'	-5.18	101.76	105.90
138	CN	9	DC	O4'-C1'-C2'	-5.18	101.76	105.90
1	AA	704	DC	O4'-C1'-N1	5.17	111.62	108.00
1	AA	1173	DG	N1-C6-O6	5.17	123.00	119.90
22	AV	29	DT	C1'-O4'-C4'	-5.17	104.92	110.10
68	BF	27	DA	P-O3'-C3'	5.17	125.91	119.70
85	BW	15	DA	O4'-C1'-C2'	-5.17	101.76	105.90
100	Bl	37	DA	N1-C6-N6	-5.17	115.50	118.60
128	CD	47	DG	C5-C6-O6	-5.17	125.50	128.60
135	CK	11	DA	C4'-C3'-C2'	-5.17	98.44	103.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	703	DA	O4'-C4'-C3'	-5.17	102.43	104.50
1	AA	6988	DG	C1'-O4'-C4'	-5.17	104.93	110.10
48	Av	17	DT	C4'-C3'-C2'	-5.17	98.44	103.10
150	CZ	6	DG	C1'-O4'-C4'	-5.17	104.93	110.10
187	DA	45	DG	C5-C6-O6	-5.17	125.50	128.60
1	AA	7755	DA	O4'-C1'-C2'	-5.17	101.76	105.90
35	Ai	11	DC	O4'-C1'-C2'	-5.17	101.76	105.90
75	BM	8	DC	C6-N1-C2	-5.17	118.23	120.30
75	BM	42	DG	C5-C6-O6	-5.17	125.50	128.60
77	BO	12	DG	N1-C6-O6	5.17	123.00	119.90
112	Bx	26	DG	C5-C6-O6	-5.17	125.50	128.60
157	Cg	7	DG	O4'-C1'-N9	5.17	111.62	108.00
161	Ck	37	DG	O4'-C1'-C2'	-5.17	101.76	105.90
12	AL	29	DG	N1-C6-O6	5.17	123.00	119.90
96	Bh	25	DT	O4'-C1'-C2'	-5.17	101.76	105.90
1	AA	7970	DG	O4'-C1'-C2'	-5.17	101.77	105.90
29	Ac	25	DA	O4'-C1'-C2'	-5.17	101.77	105.90
183	C6	9	DG	O4'-C1'-N9	5.17	111.62	108.00
187	DA	28	DC	O4'-C1'-C2'	-5.17	101.77	105.90
1	AA	746	DG	O4'-C1'-C2'	-5.17	101.77	105.90
1	AA	1069	DG	C1'-O4'-C4'	-5.17	104.93	110.10
1	AA	2144	DA	O4'-C1'-C2'	-5.17	101.77	105.90
1	AA	5721	DA	O4'-C1'-N9	5.17	111.62	108.00
1	AA	6298	DG	C4'-C3'-C2'	-5.17	98.45	103.10
5	AE	13	DG	O4'-C1'-C2'	-5.17	101.77	105.90
77	BO	37	DC	O4'-C1'-N1	-5.17	104.38	108.00
135	CK	50	DT	P-O3'-C3'	-5.17	113.50	119.70
189	DC	17	DA	C4'-C3'-C2'	-5.17	98.45	103.10
1	AA	1849	DT	P-O3'-C3'	5.17	125.90	119.70
1	AA	2212	DC	C4'-C3'-C2'	-5.17	98.45	103.10
1	AA	6194	DC	C4'-C3'-C2'	-5.17	98.45	103.10
26	AZ	31	DG	N1-C6-O6	5.17	123.00	119.90
83	BU	11	DC	C1'-O4'-C4'	-5.17	104.94	110.10
138	CN	29	DG	O4'-C1'-C2'	-5.17	101.77	105.90
1	AA	3971	DG	O4'-C1'-C2'	-5.16	101.77	105.90
1	AA	4228	DT	P-O3'-C3'	5.16	125.89	119.70
1	AA	7306	DT	C4-C5-C7	-5.16	115.90	119.00
14	AN	21	DG	P-O3'-C3'	5.16	125.90	119.70
96	Bh	2	DC	C6-N1-C2	-5.16	118.23	120.30
1	AA	957	DG	O4'-C1'-C2'	-5.16	101.77	105.90
1	AA	3846	DA	O4'-C1'-C2'	-5.16	101.77	105.90
52	Az	1	DC	C6-N1-C1'	-5.16	114.61	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
140	CP	27	DG	N1-C6-O6	5.16	123.00	119.90
1	AA	398	DC	P-O3'-C3'	5.16	125.89	119.70
1	AA	3665	DC	O4'-C1'-C2'	-5.16	101.77	105.90
165	Co	22	DG	O4'-C1'-C2'	-5.16	101.77	105.90
1	AA	376	DG	O4'-C4'-C3'	-5.16	102.44	104.50
1	AA	1557	DG	O4'-C1'-N9	5.16	111.61	108.00
1	AA	4826	DG	P-O3'-C3'	5.16	125.89	119.70
1	AA	6264	DA	O4'-C1'-C2'	-5.16	101.77	105.90
104	Bp	24	DG	C4-N9-C1'	5.16	133.21	126.50
177	C0	3	DT	C4'-C3'-C2'	-5.16	98.46	103.10
1	AA	1832	DT	C4-C5-C7	-5.16	115.91	119.00
1	AA	5735	DG	P-O3'-C3'	5.16	125.89	119.70
1	AA	6272	DA	N1-C6-N6	-5.16	115.51	118.60
1	AA	7621	DG	C1'-O4'-C4'	-5.16	104.94	110.10
26	AZ	40	DA	N1-C6-N6	5.16	121.69	118.60
182	C5	22	DA	C1'-O4'-C4'	-5.16	104.94	110.10
1	AA	1833	DG	C5-C6-O6	-5.15	125.51	128.60
192	DF	1	DC	C4'-C3'-C2'	-5.15	98.46	103.10
1	AA	1070	DA	N1-C6-N6	-5.15	115.51	118.60
1	AA	6869	DA	O4'-C1'-C2'	-5.15	101.78	105.90
1	AA	344	DG	C5-C6-O6	-5.15	125.51	128.60
1	AA	1910	DA	O4'-C1'-C2'	-5.15	101.78	105.90
171	Cu	35	DG	O4'-C1'-C2'	-5.15	101.78	105.90
42	Ap	42	DA	O4'-C1'-C2'	-5.15	101.78	105.90
1	AA	423	DT	C4'-C3'-C2'	-5.15	98.47	103.10
84	BV	21	DT	C4'-C3'-C2'	-5.15	98.47	103.10
91	Bc	32	DA	P-O3'-C3'	5.15	125.88	119.70
121	B6	25	DC	O4'-C1'-C2'	-5.15	101.78	105.90
184	C7	18	DG	O4'-C1'-C2'	-5.15	101.78	105.90
1	AA	915	DA	O4'-C4'-C3'	-5.14	102.44	104.50
1	AA	2378	DC	C6-N1-C2	-5.14	118.24	120.30
1	AA	954	DG	C1'-O4'-C4'	-5.14	104.96	110.10
1	AA	2154	DT	C4'-C3'-C2'	-5.14	98.47	103.10
1	AA	2269	DC	P-O5'-C5'	5.14	129.13	120.90
1	AA	3449	DC	O4'-C4'-C3'	-5.14	102.44	104.50
30	Ad	42	DT	C4'-C3'-C2'	-5.14	98.47	103.10
1	AA	3292	DA	C4'-C3'-C2'	-5.14	98.47	103.10
1	AA	5524	DT	O4'-C1'-C2'	-5.14	101.79	105.90
1	AA	7494	DA	O4'-C1'-N9	5.14	111.60	108.00
43	Aq	1	DG	C8-N9-C1'	-5.14	120.32	127.00
1	AA	4137	DC	C4'-C3'-C2'	-5.14	98.47	103.10
1	AA	4631	DG	C5-C6-O6	-5.14	125.52	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	5282	DT	C4'-C3'-C2'	-5.14	98.47	103.10
24	AX	3	DA	P-O3'-C3'	5.14	125.87	119.70
77	BO	16	DC	C6-N1-C1'	-5.14	114.63	120.80
180	C3	34	DA	O4'-C1'-C2'	-5.14	101.79	105.90
26	AZ	28	DC	C6-N1-C2	-5.14	118.25	120.30
42	Ap	30	DA	O4'-C1'-C2'	-5.14	101.79	105.90
163	Cm	24	DA	N1-C6-N6	-5.14	115.52	118.60
1	AA	473	DG	P-O3'-C3'	5.14	125.86	119.70
1	AA	6980	DT	C4'-C3'-C2'	-5.14	98.48	103.10
6	AF	16	DT	C1'-O4'-C4'	-5.14	104.96	110.10
50	Ax	32	DG	O4'-C1'-C2'	-5.14	101.79	105.90
63	BA	8	DT	P-O3'-C3'	-5.14	113.54	119.70
157	Cg	4	DT	O4'-C1'-C2'	-5.14	101.79	105.90
173	Cw	19	DC	C2-N1-C1'	5.14	124.45	118.80
1	AA	825	DA	C4'-C3'-C2'	-5.13	98.48	103.10
1	AA	1200	DG	O4'-C1'-C2'	-5.13	101.79	105.90
1	AA	5979	DT	C4'-C3'-C2'	-5.13	98.48	103.10
1	AA	7258	DC	O4'-C1'-C2'	-5.13	101.79	105.90
1	AA	7325	DC	O4'-C1'-C2'	-5.13	101.79	105.90
1	AA	7851	DT	C4'-C3'-C2'	-5.13	98.48	103.10
50	Ax	28	DG	C5-C6-O6	-5.13	125.52	128.60
148	CX	21	DG	O4'-C1'-C2'	-5.13	101.79	105.90
1	AA	6643	DG	C5-C6-O6	-5.13	125.52	128.60
1	AA	1853	DA	C1'-O4'-C4'	-5.13	104.97	110.10
1	AA	2145	DG	P-O3'-C3'	5.13	125.86	119.70
1	AA	3318	DT	C4'-C3'-C2'	-5.13	98.48	103.10
1	AA	3353	DT	O4'-C1'-C2'	-5.13	101.80	105.90
1	AA	4091	DG	O4'-C1'-C2'	-5.13	101.79	105.90
1	AA	7364	DG	O4'-C1'-N9	5.13	111.59	108.00
1	AA	7572	DG	C5-C6-O6	-5.13	125.52	128.60
1	AA	7778	DG	C1'-O4'-C4'	-5.13	104.97	110.10
88	BZ	21	DG	O4'-C1'-C2'	-5.13	101.80	105.90
94	Bf	3	DG	C1'-O4'-C4'	-5.13	104.97	110.10
168	Cr	13	DG	C4'-C3'-C2'	-5.13	98.48	103.10
178	C1	12	DC	O4'-C1'-C2'	-5.13	101.80	105.90
1	AA	4157	DG	N1-C6-O6	5.13	122.98	119.90
1	AA	5510	DA	C1'-O4'-C4'	-5.13	104.97	110.10
54	A1	41	DT	O4'-C1'-C2'	-5.13	101.80	105.90
104	Bp	41	DG	C4'-C3'-C2'	-5.13	98.48	103.10
191	DE	29	DC	P-O5'-C5'	5.13	129.11	120.90
1	AA	3144	DG	N1-C6-O6	5.13	122.98	119.90
1	AA	6217	DT	P-O3'-C3'	5.13	125.86	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	AC	8	DG	N1-C6-O6	5.13	122.98	119.90
79	BQ	40	DT	O4'-C1'-C2'	-5.13	101.80	105.90
1	AA	1664	DC	O4'-C1'-C2'	-5.13	101.80	105.90
1	AA	4205	DT	C4'-C3'-C2'	-5.13	98.49	103.10
1	AA	7260	DG	C5-C6-O6	-5.13	125.52	128.60
158	Ch	17	DC	P-O3'-C3'	5.13	125.85	119.70
1	AA	4886	DC	C4'-C3'-C2'	-5.12	98.49	103.10
135	CK	28	DT	O4'-C1'-C2'	-5.12	101.80	105.90
8	AH	20	DG	C5-C6-O6	-5.12	125.53	128.60
1	AA	1035	DA	O4'-C1'-C2'	-5.12	101.80	105.90
1	AA	7027	DC	P-O3'-C3'	5.12	125.85	119.70
1	AA	4331	DT	C4'-C3'-C2'	-5.12	98.49	103.10
1	AA	2828	DG	O4'-C1'-C2'	-5.12	101.81	105.90
1	AA	4538	DG	O4'-C1'-C2'	-5.12	101.81	105.90
37	Ak	12	DA	C1'-O4'-C4'	-5.12	104.98	110.10
55	A2	24	DC	O4'-C1'-C2'	-5.12	101.81	105.90
161	Ck	38	DG	C5-C6-O6	-5.12	125.53	128.60
165	Co	13	DT	C4'-C3'-C2'	-5.12	98.49	103.10
181	C4	2	DT	O4'-C1'-C2'	-5.12	101.81	105.90
1	AA	3001	DG	C1'-O4'-C4'	-5.12	104.98	110.10
1	AA	3535	DG	O4'-C1'-C2'	-5.12	101.81	105.90
3	AC	25	DG	N1-C6-O6	5.12	122.97	119.90
48	Av	4	DT	P-O3'-C3'	5.12	125.84	119.70
69	BG	28	DA	O4'-C1'-C2'	-5.12	101.81	105.90
178	C1	36	DA	O4'-C1'-C2'	-5.12	101.81	105.90
1	AA	5280	DC	O4'-C1'-C2'	-5.12	101.81	105.90
1	AA	7616	DT	C4'-C3'-C2'	-5.12	98.50	103.10
4	AD	9	DT	O4'-C1'-C2'	-5.12	101.81	105.90
1	AA	2569	DC	C1'-O4'-C4'	-5.11	104.99	110.10
1	AA	4604	DG	C4'-C3'-C2'	-5.11	98.50	103.10
90	Bb	9	DA	O4'-C1'-C2'	-5.11	101.81	105.90
1	AA	164	DG	O4'-C1'-C2'	-5.11	101.81	105.90
20	AT	43	DG	O4'-C1'-C2'	-5.11	101.81	105.90
61	A8	13	DT	C4'-C3'-C2'	-5.11	98.50	103.10
66	BD	4	DA	O4'-C1'-C2'	-5.11	101.81	105.90
1	AA	349	DG	O4'-C1'-C2'	-5.11	101.81	105.90
1	AA	1997	DT	O4'-C4'-C3'	-5.11	102.46	104.50
1	AA	2085	DG	O4'-C1'-C2'	-5.11	101.81	105.90
1	AA	4132	DG	N1-C6-O6	5.11	122.97	119.90
1	AA	5991	DT	O4'-C1'-N1	-5.11	104.42	108.00
1	AA	7312	DG	P-O3'-C3'	5.11	125.83	119.70
25	AY	13	DA	O4'-C1'-C2'	-5.11	101.81	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
68	BF	24	DA	O4'-C1'-C2'	-5.11	101.81	105.90
137	CM	5	DA	O4'-C1'-C2'	-5.11	101.81	105.90
1	AA	1696	DC	P-O5'-C5'	5.11	129.07	120.90
1	AA	2242	DT	P-O5'-C5'	-5.11	112.73	120.90
1	AA	3547	DA	P-O3'-C3'	5.11	125.83	119.70
1	AA	4528	DT	C4'-C3'-C2'	-5.11	98.50	103.10
1	AA	7674	DG	O4'-C4'-C3'	-5.11	102.46	104.50
17	AQ	16	DT	C4-C5-C7	5.11	122.06	119.00
48	Av	34	DG	O4'-C1'-C2'	-5.11	101.81	105.90
78	BP	12	DT	O4'-C1'-C2'	-5.11	101.81	105.90
86	BX	42	DA	O4'-C1'-C2'	-5.11	101.81	105.90
168	Cr	17	DT	C1'-O4'-C4'	-5.11	104.99	110.10
1	AA	533	DG	O4'-C1'-C2'	-5.11	101.82	105.90
1	AA	671	DG	P-O3'-C3'	5.11	125.83	119.70
1	AA	1173	DG	C5-C6-O6	-5.11	125.54	128.60
1	AA	2430	DA	O4'-C1'-N9	5.11	111.57	108.00
1	AA	5688	DT	P-O3'-C3'	5.11	125.83	119.70
1	AA	6090	DC	C2-N1-C1'	5.11	124.42	118.80
1	AA	7584	DT	C4'-C3'-C2'	-5.11	98.50	103.10
65	BC	52	DA	O4'-C1'-C2'	-5.11	101.82	105.90
78	BP	17	DA	N1-C6-N6	-5.11	115.54	118.60
1	AA	1529	DG	C5-C6-O6	-5.10	125.54	128.60
1	AA	3772	DG	C1'-O4'-C4'	-5.10	105.00	110.10
1	AA	763	DC	O4'-C4'-C3'	-5.10	102.46	104.50
1	AA	2786	DC	P-O5'-C5'	5.10	129.06	120.90
1	AA	5424	DT	O4'-C1'-C2'	-5.10	101.82	105.90
142	CR	21	DG	P-O3'-C3'	5.10	125.82	119.70
147	CW	39	DG	O4'-C1'-N9	5.10	111.57	108.00
143	CS	19	DG	P-O3'-C3'	5.10	125.82	119.70
1	AA	1133	DT	P-O3'-C3'	5.10	125.82	119.70
1	AA	3371	DT	O4'-C1'-C2'	-5.10	101.82	105.90
1	AA	3709	DG	O4'-C1'-N9	5.10	111.57	108.00
1	AA	4019	DG	N1-C6-O6	5.10	122.96	119.90
149	CY	43	DG	O4'-C1'-C2'	-5.10	101.82	105.90
151	Ca	33	DA	O4'-C1'-N9	5.10	111.57	108.00
159	Ci	35	DG	O4'-C1'-C2'	-5.10	101.82	105.90
1	AA	2324	DG	O4'-C1'-C2'	-5.10	101.82	105.90
1	AA	7876	DG	N1-C6-O6	5.10	122.96	119.90
4	AD	48	DG	O4'-C1'-C2'	-5.10	101.82	105.90
45	As	34	DA	O4'-C1'-C2'	-5.10	101.82	105.90
99	Bk	3	DA	P-O3'-C3'	5.10	125.82	119.70
138	CN	18	DA	O4'-C1'-C2'	-5.10	101.82	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
149	CY	2	DC	C6-N1-C2	-5.10	118.26	120.30
187	DA	5	DA	N1-C6-N6	-5.10	115.54	118.60
1	AA	7700	DT	C4'-C3'-C2'	-5.10	98.51	103.10
33	Ag	15	DC	C1'-O4'-C4'	-5.10	105.00	110.10
1	AA	2093	DG	P-O3'-C3'	5.09	125.81	119.70
1	AA	5426	DC	O4'-C1'-N1	5.09	111.57	108.00
34	Ah	25	DA	O4'-C1'-C2'	-5.09	101.82	105.90
55	A2	18	DG	C5-C6-O6	-5.09	125.54	128.60
71	BI	23	DC	C2-N1-C1'	5.09	124.40	118.80
189	DC	40	DT	O4'-C1'-C2'	-5.09	101.83	105.90
1	AA	3361	DT	O4'-C1'-C2'	-5.09	101.83	105.90
1	AA	4883	DG	O4'-C1'-N9	5.09	111.56	108.00
1	AA	7312	DG	C1'-O4'-C4'	-5.09	105.01	110.10
1	AA	3619	DG	O4'-C1'-C2'	-5.09	101.83	105.90
1	AA	4392	DG	P-O3'-C3'	5.09	125.81	119.70
24	AX	11	DC	P-O3'-C3'	-5.09	113.59	119.70
59	A6	22	DA	O4'-C1'-C2'	-5.09	101.83	105.90
187	DA	49	DG	O4'-C1'-C2'	-5.09	101.83	105.90
1	AA	1877	DT	C4'-C3'-C2'	-5.09	98.52	103.10
99	Bk	20	DT	C4'-C3'-C2'	-5.09	98.52	103.10
114	Bz	2	DG	P-O3'-C3'	5.09	125.81	119.70
125	CA	9	DG	C5-C6-O6	-5.09	125.55	128.60
1	AA	405	DG	N1-C6-O6	5.09	122.95	119.90
1	AA	2129	DA	O4'-C1'-C2'	-5.09	101.83	105.90
1	AA	2327	DT	C4'-C3'-C2'	-5.09	98.52	103.10
1	AA	3230	DT	O4'-C4'-C3'	-5.09	102.47	104.50
1	AA	1126	DC	P-O3'-C3'	5.09	125.80	119.70
1	AA	4094	DG	C5-C6-O6	-5.09	125.55	128.60
1	AA	4253	DC	P-O3'-C3'	5.09	125.81	119.70
1	AA	5661	DT	C4'-C3'-C2'	-5.09	98.52	103.10
1	AA	6213	DG	N1-C6-O6	5.09	122.95	119.90
1	AA	6651	DG	C1'-O4'-C4'	-5.09	105.01	110.10
1	AA	7078	DC	P-O5'-C5'	5.09	129.04	120.90
1	AA	7416	DA	P-O3'-C3'	5.09	125.80	119.70
114	Bz	21	DA	P-O3'-C3'	5.09	125.80	119.70
152	Cb	9	DC	P-O3'-C3'	5.09	125.80	119.70
192	DF	27	DG	P-O3'-C3'	5.09	125.80	119.70
1	AA	1335	DC	O4'-C1'-N1	5.08	111.56	108.00
1	AA	4409	DG	O4'-C1'-C2'	-5.08	101.83	105.90
1	AA	6362	DG	N1-C6-O6	5.08	122.95	119.90
3	AC	47	DA	O4'-C1'-C2'	-5.08	101.83	105.90
45	As	24	DA	O4'-C1'-C2'	-5.08	101.83	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	A2	32	DA	P-O3'-C3'	5.08	125.80	119.70
1	AA	1287	DG	C5-C6-O6	-5.08	125.55	128.60
94	Bf	28	DA	O4'-C1'-C2'	-5.08	101.83	105.90
147	CW	11	DC	O4'-C4'-C3'	-5.08	102.47	104.50
174	Cx	35	DA	C4'-C3'-C2'	-5.08	98.52	103.10
1	AA	1922	DG	C1'-O4'-C4'	-5.08	105.02	110.10
1	AA	5427	DG	N1-C6-O6	5.08	122.95	119.90
43	Aq	20	DG	P-O3'-C3'	5.08	125.80	119.70
45	As	5	DA	P-O3'-C3'	5.08	125.80	119.70
64	BB	31	DT	O4'-C1'-N1	-5.08	104.44	108.00
171	Cu	17	DG	O4'-C1'-C2'	-5.08	101.83	105.90
38	Al	34	DG	O4'-C1'-C2'	-5.08	101.84	105.90
1	AA	1519	DG	O4'-C1'-C2'	-5.08	101.84	105.90
1	AA	1599	DT	O4'-C1'-N1	5.08	111.56	108.00
1	AA	7491	DC	O4'-C1'-N1	5.08	111.56	108.00
67	BE	3	DT	O4'-C4'-C3'	-5.08	102.47	104.50
172	Cv	8	DC	P-O5'-C5'	5.08	129.03	120.90
1	AA	2047	DT	C4'-C3'-C2'	-5.08	98.53	103.10
1	AA	2632	DT	O4'-C1'-N1	-5.08	104.45	108.00
45	As	28	DC	C4'-C3'-C2'	-5.08	98.53	103.10
46	At	19	DA	O4'-C1'-C2'	-5.08	101.84	105.90
99	Bk	1	DG	C1'-O4'-C4'	-5.08	105.02	110.10
171	Cu	23	DG	O4'-C1'-C2'	-5.08	101.84	105.90
1	AA	395	DA	O4'-C1'-C2'	-5.08	101.84	105.90
1	AA	899	DG	C1'-O4'-C4'	-5.08	105.02	110.10
1	AA	3507	DG	N1-C6-O6	5.08	122.94	119.90
1	AA	3819	DG	N1-C6-O6	5.08	122.94	119.90
25	AY	28	DA	P-O3'-C3'	5.08	125.79	119.70
63	BA	14	DA	P-O3'-C3'	5.08	125.79	119.70
83	BU	23	DG	C4'-C3'-C2'	-5.08	98.53	103.10
1	AA	1446	DC	C6-N1-C2	-5.07	118.27	120.30
1	AA	2370	DG	N1-C6-O6	5.07	122.94	119.90
1	AA	6056	DG	O4'-C1'-C2'	-5.07	101.84	105.90
97	Bi	27	DT	C4'-C3'-C2'	-5.07	98.53	103.10
178	C1	20	DG	O4'-C1'-C2'	-5.07	101.84	105.90
180	C3	16	DG	O4'-C1'-C2'	-5.07	101.84	105.90
1	AA	508	DG	C5-C6-O6	-5.07	125.56	128.60
1	AA	1550	DC	P-O3'-C3'	5.07	125.79	119.70
1	AA	6030	DT	P-O3'-C3'	5.07	125.79	119.70
142	CR	28	DG	C5-C6-O6	-5.07	125.56	128.60
1	AA	188	DG	O4'-C1'-C2'	-5.07	101.84	105.90
1	AA	961	DA	O4'-C1'-C2'	-5.07	101.84	105.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	4366	DG	O4'-C1'-C2'	-5.07	101.84	105.90
120	B5	20	DT	C4'-C3'-C2'	-5.07	98.54	103.10
139	CO	23	DA	P-O3'-C3'	-5.07	113.62	119.70
160	Cj	52	DG	O4'-C1'-C2'	-5.07	101.84	105.90
187	DA	43	DG	N1-C6-O6	5.07	122.94	119.90
1	AA	545	DA	O4'-C1'-C2'	-5.07	101.84	105.90
1	AA	1707	DT	C4'-C3'-C2'	-5.07	98.54	103.10
1	AA	5422	DA	O4'-C1'-C2'	-5.07	101.84	105.90
164	Cn	29	DA	O4'-C1'-C2'	-5.07	101.84	105.90
1	AA	7728	DA	O4'-C1'-C2'	-5.07	101.85	105.90
5	AE	13	DG	O4'-C1'-N9	5.07	111.55	108.00
23	AW	42	DC	O4'-C1'-C2'	-5.07	101.85	105.90
61	A8	55	DA	C1'-O4'-C4'	-5.07	105.03	110.10
83	BU	26	DG	P-O3'-C3'	5.07	125.78	119.70
159	Ci	46	DT	C4'-C3'-C2'	-5.07	98.54	103.10
1	AA	5209	DT	C4-C5-C7	-5.07	115.96	119.00
1	AA	6492	DG	C4'-C3'-C2'	-5.07	98.54	103.10
1	AA	7272	DG	C4'-C3'-C2'	-5.07	98.54	103.10
27	Aa	2	DT	C4'-C3'-C2'	-5.07	98.54	103.10
72	BJ	17	DG	O4'-C1'-C2'	-5.07	101.85	105.90
163	Cm	12	DT	P-O3'-C3'	5.07	125.78	119.70
1	AA	6870	DT	O4'-C1'-C2'	-5.06	101.85	105.90
103	Bo	2	DT	C4'-C3'-C2'	-5.06	98.54	103.10
1	AA	1249	DA	O4'-C1'-N9	5.06	111.54	108.00
1	AA	1663	DA	O4'-C1'-C2'	-5.06	101.85	105.90
1	AA	4401	DC	P-O3'-C3'	5.06	125.77	119.70
1	AA	5069	DG	C1'-O4'-C4'	-5.06	105.04	110.10
1	AA	6262	DA	C4'-C3'-C2'	-5.06	98.54	103.10
1	AA	1677	DG	O4'-C1'-N9	5.06	111.54	108.00
1	AA	7334	DG	O4'-C1'-C2'	-5.06	101.85	105.90
143	CS	22	DT	O4'-C4'-C3'	-5.06	102.48	104.50
161	Ck	33	DG	O4'-C4'-C3'	-5.06	102.48	104.50
1	AA	1430	DG	O4'-C1'-C2'	-5.06	101.85	105.90
1	AA	1878	DT	C4'-C3'-C2'	-5.06	98.55	103.10
1	AA	3364	DT	C1'-O4'-C4'	-5.06	105.04	110.10
1	AA	5307	DA	C4'-C3'-C2'	-5.06	98.55	103.10
19	AS	11	DG	C5-C6-O6	-5.06	125.56	128.60
91	Bc	9	DA	C1'-O4'-C4'	-5.06	105.04	110.10
1	AA	2377	DC	O4'-C1'-C2'	-5.06	101.85	105.90
1	AA	2900	DA	P-O3'-C3'	5.06	125.77	119.70
1	AA	4613	DG	O4'-C1'-N9	5.06	111.54	108.00
1	AA	6176	DG	N1-C6-O6	5.06	122.93	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	6367	DC	C6-N1-C2	-5.06	118.28	120.30
1	AA	7037	DA	O4'-C1'-C2'	-5.06	101.85	105.90
23	AW	12	DC	O4'-C1'-C2'	-5.06	101.86	105.90
94	Bf	34	DT	C4'-C3'-C2'	-5.06	98.55	103.10
128	CD	16	DG	C5-C6-O6	-5.06	125.57	128.60
1	AA	5457	DA	P-O3'-C3'	5.06	125.77	119.70
163	Cm	33	DG	O4'-C1'-C2'	-5.06	101.86	105.90
177	C0	29	DA	C4'-C3'-C2'	-5.06	98.55	103.10
1	AA	2955	DG	P-O3'-C3'	5.05	125.77	119.70
1	AA	3429	DC	C4'-C3'-C2'	-5.05	98.55	103.10
1	AA	4157	DG	C5-C6-O6	-5.05	125.57	128.60
56	A3	24	DA	C1'-O4'-C4'	-5.05	105.05	110.10
118	B3	55	DA	C1'-O4'-C4'	-5.05	105.05	110.10
149	CY	40	DC	C2-N1-C1'	5.05	124.36	118.80
1	AA	3172	DA	O4'-C1'-N9	-5.05	104.46	108.00
1	AA	4939	DG	O4'-C1'-N9	5.05	111.54	108.00
38	Al	21	DA	O4'-C1'-C2'	-5.05	101.86	105.90
162	Cl	34	DG	C4'-C3'-C2'	-5.05	98.55	103.10
192	DF	3	DT	C4'-C3'-C2'	-5.05	98.55	103.10
1	AA	1001	DC	P-O3'-C3'	5.05	125.76	119.70
1	AA	1916	DA	C1'-O4'-C4'	-5.05	105.05	110.10
11	AK	28	DG	O4'-C1'-C2'	-5.05	101.86	105.90
125	CA	31	DG	O4'-C1'-C2'	-5.05	101.86	105.90
127	CC	17	DG	O4'-C1'-C2'	-5.05	101.86	105.90
150	CZ	9	DA	O4'-C1'-C2'	-5.05	101.86	105.90
1	AA	6365	DG	O4'-C4'-C3'	-5.05	102.48	104.50
49	Aw	2	DG	N1-C6-O6	5.05	122.93	119.90
110	Bv	32	DT	O4'-C1'-C2'	-5.05	101.86	105.90
186	C9	31	DT	C4'-C3'-C2'	-5.05	98.56	103.10
1	AA	21	DT	C4'-C3'-C2'	-5.05	98.56	103.10
1	AA	1388	DA	O4'-C1'-C2'	-5.05	101.86	105.90
1	AA	6092	DG	C4'-C3'-C2'	-5.05	98.56	103.10
4	AD	4	DA	O4'-C1'-N9	-5.05	104.47	108.00
6	AF	9	DG	O4'-C1'-C2'	-5.05	101.86	105.90
80	BR	3	DG	N1-C6-O6	5.05	122.93	119.90
119	B4	10	DA	N1-C6-N6	-5.05	115.57	118.60
119	B4	26	DA	O4'-C1'-C2'	-5.05	101.86	105.90
133	CI	14	DT	O4'-C1'-C2'	-5.05	101.86	105.90
1	AA	4808	DG	P-O3'-C3'	5.04	125.75	119.70
1	AA	4972	DA	C1'-O4'-C4'	-5.04	105.06	110.10
1	AA	6283	DC	O4'-C1'-N1	5.04	111.53	108.00
1	AA	7129	DC	P-O3'-C3'	5.04	125.75	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	7213	DA	O4'-C4'-C3'	-5.04	102.48	104.50
69	BG	44	DA	O4'-C1'-C2'	-5.04	101.86	105.90
89	Ba	3	DT	C4-C5-C7	5.04	122.03	119.00
103	Bo	33	DT	O4'-C1'-N1	5.04	111.53	108.00
106	Br	37	DC	P-O3'-C3'	5.04	125.75	119.70
1	AA	7572	DG	N1-C6-O6	5.04	122.92	119.90
2	AB	38	DC	P-O3'-C3'	5.04	125.75	119.70
100	Bl	23	DG	P-O3'-C3'	5.04	125.75	119.70
112	Bx	29	DT	C4'-C3'-C2'	-5.04	98.56	103.10
164	Cn	17	DA	N1-C6-N6	-5.04	115.58	118.60
1	AA	8029	DG	N1-C6-O6	5.04	122.92	119.90
119	B4	1	DA	O4'-C1'-C2'	-5.04	101.87	105.90
1	AA	543	DG	C1'-O4'-C4'	-5.04	105.06	110.10
1	AA	1381	DG	O4'-C4'-C3'	-5.04	102.48	104.50
1	AA	3515	DT	C4'-C3'-C2'	-5.04	98.57	103.10
1	AA	5246	DT	C4'-C3'-C2'	-5.04	98.56	103.10
49	Aw	37	DT	C1'-O4'-C4'	-5.04	105.06	110.10
173	Cw	30	DA	P-O3'-C3'	5.04	125.75	119.70
1	AA	1532	DT	C4'-C3'-C2'	-5.04	98.57	103.10
1	AA	3265	DG	P-O3'-C3'	5.04	125.75	119.70
1	AA	7091	DA	O4'-C1'-C2'	-5.04	101.87	105.90
1	AA	607	DG	N1-C6-O6	5.04	122.92	119.90
1	AA	2878	DT	C6-C5-C7	-5.04	119.88	122.90
1	AA	6062	DA	O4'-C1'-C2'	-5.04	101.87	105.90
1	AA	8005	DC	C6-N1-C2	-5.04	118.29	120.30
24	AX	11	DC	O4'-C1'-N1	5.04	111.53	108.00
122	B7	25	DG	O4'-C1'-C2'	-5.04	101.87	105.90
1	AA	1294	DA	O4'-C1'-C2'	-5.03	101.87	105.90
1	AA	1393	DC	C4'-C3'-C2'	-5.03	98.57	103.10
14	AN	4	DG	O4'-C1'-C2'	-5.03	101.87	105.90
36	Aj	15	DT	O4'-C1'-C2'	-5.03	101.87	105.90
78	BP	40	DG	C5-C6-O6	-5.03	125.58	128.60
1	AA	2228	DG	O4'-C1'-C2'	-5.03	101.87	105.90
63	BA	28	DG	O4'-C1'-C2'	-5.03	101.87	105.90
96	Bh	34	DA	O4'-C1'-N9	-5.03	104.48	108.00
98	Bj	1	DT	C4'-C3'-C2'	-5.03	98.57	103.10
176	Cz	47	DG	N1-C6-O6	5.03	122.92	119.90
1	AA	2838	DG	C5-C6-O6	-5.03	125.58	128.60
1	AA	6844	DA	O4'-C1'-N9	5.03	111.52	108.00
1	AA	8006	DG	N1-C6-O6	5.03	122.92	119.90
22	AV	16	DG	O4'-C1'-C2'	-5.03	101.88	105.90
30	Ad	29	DT	C4'-C3'-C2'	-5.03	98.57	103.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
117	B2	6	DC	O4'-C1'-C2'	-5.03	101.88	105.90
1	AA	4174	DC	P-O3'-C3'	5.03	125.73	119.70
134	CJ	12	DC	O4'-C1'-C2'	-5.03	101.88	105.90
1	AA	1629	DG	P-O3'-C3'	-5.03	113.67	119.70
1	AA	5961	DG	C1'-O4'-C4'	-5.03	105.07	110.10
17	AQ	16	DT	C6-C5-C7	-5.03	119.88	122.90
57	A4	42	DT	C4'-C3'-C2'	-5.03	98.58	103.10
1	AA	2478	DA	O4'-C4'-C3'	-5.03	102.49	104.50
1	AA	6161	DA	O4'-C1'-C2'	-5.03	101.88	105.90
1	AA	6295	DT	O4'-C1'-N1	-5.03	104.48	108.00
1	AA	7502	DT	C4'-C3'-C2'	-5.03	98.58	103.10
4	AD	2	DT	C4'-C3'-C2'	-5.03	98.58	103.10
29	Ac	25	DA	C1'-O4'-C4'	-5.03	105.08	110.10
156	Cf	3	DA	O4'-C1'-C2'	-5.03	101.88	105.90
147	CW	26	DG	C5-C6-O6	-5.02	125.58	128.60
1	AA	2909	DT	O4'-C1'-C2'	-5.02	101.88	105.90
1	AA	3098	DT	C4'-C3'-C2'	-5.02	98.58	103.10
165	Co	28	DT	O4'-C4'-C3'	-5.02	102.49	104.50
1	AA	2310	DC	C4'-C3'-C2'	-5.02	98.58	103.10
1	AA	6089	DA	C4'-C3'-C2'	-5.02	98.58	103.10
1	AA	6218	DT	C4'-C3'-C2'	-5.02	98.58	103.10
1	AA	7117	DC	C4'-C3'-C2'	-5.02	98.58	103.10
1	AA	7701	DC	P-O5'-C5'	5.02	128.93	120.90
4	AD	39	DC	P-O5'-C5'	5.02	128.93	120.90
36	Aj	25	DT	O4'-C1'-N1	5.02	111.52	108.00
1	AA	63	DC	O4'-C1'-N1	5.02	111.51	108.00
1	AA	323	DG	P-O3'-C3'	5.02	125.72	119.70
1	AA	866	DC	C6-N1-C2	-5.02	118.29	120.30
1	AA	3848	DG	C5-C6-O6	-5.02	125.59	128.60
1	AA	5232	DC	C2-N1-C1'	5.02	124.32	118.80
109	Bu	2	DT	C4'-C3'-C2'	-5.02	98.58	103.10
128	CD	47	DG	N1-C6-O6	5.02	122.91	119.90
129	CE	38	DG	O4'-C1'-C2'	-5.02	101.88	105.90
1	AA	3144	DG	C5-C6-O6	-5.02	125.59	128.60
1	AA	3260	DG	C1'-O4'-C4'	-5.02	105.08	110.10
1	AA	5871	DA	P-O3'-C3'	5.02	125.72	119.70
1	AA	6576	DG	O4'-C1'-C2'	-5.02	101.89	105.90
32	Af	35	DG	O4'-C1'-C2'	-5.02	101.89	105.90
1	AA	1953	DT	C4'-C3'-C2'	-5.02	98.59	103.10
1	AA	3684	DG	O4'-C1'-C2'	-5.02	101.89	105.90
1	AA	1316	DT	C1'-O4'-C4'	-5.01	105.08	110.10
1	AA	2217	DA	P-O3'-C3'	5.01	125.72	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	2440	DC	C4'-C3'-C2'	-5.01	98.59	103.10
1	AA	3185	DG	O4'-C1'-C2'	-5.01	101.89	105.90
1	AA	4955	DG	C1'-O4'-C4'	-5.01	105.09	110.10
20	AT	17	DA	P-O3'-C3'	5.01	125.72	119.70
90	Bb	20	DG	O4'-C1'-C2'	-5.01	101.89	105.90
99	Bk	6	DA	O4'-C1'-C2'	-5.01	101.89	105.90
108	Bt	8	DA	N1-C6-N6	-5.01	115.59	118.60
123	B8	12	DA	O4'-C1'-C2'	-5.01	101.89	105.90
165	Co	9	DA	O4'-C1'-C2'	-5.01	101.89	105.90
25	AY	10	DT	O4'-C1'-C2'	-5.01	101.89	105.90
159	Ci	3	DG	C5-C6-O6	-5.01	125.59	128.60
1	AA	1859	DT	C4'-C3'-C2'	-5.01	98.59	103.10
1	AA	2093	DG	O4'-C1'-C2'	-5.01	101.89	105.90
1	AA	2401	DA	P-O3'-C3'	5.01	125.72	119.70
1	AA	2979	DA	C4'-C3'-C2'	-5.01	98.59	103.10
1	AA	4176	DC	P-O5'-C5'	5.01	128.92	120.90
1	AA	4298	DG	O4'-C1'-C2'	-5.01	101.89	105.90
1	AA	5150	DT	O4'-C4'-C3'	-5.01	102.50	104.50
1	AA	6735	DG	O4'-C1'-N9	5.01	111.51	108.00
1	AA	7700	DT	O4'-C4'-C3'	-5.01	102.50	104.50
54	A1	43	DC	O4'-C1'-C2'	-5.01	101.89	105.90
57	A4	18	DC	O4'-C1'-C2'	-5.01	101.89	105.90
79	BQ	17	DT	C1'-O4'-C4'	-5.01	105.09	110.10
187	DA	30	DT	C4'-C3'-C2'	-5.01	98.59	103.10
1	AA	33	DG	O4'-C1'-C2'	-5.01	101.89	105.90
1	AA	2006	DA	P-O3'-C3'	5.01	125.71	119.70
6	AF	25	DT	P-O3'-C3'	5.01	125.71	119.70
74	BL	16	DT	C6-C5-C7	-5.01	119.89	122.90
124	B9	11	DC	O4'-C1'-N1	-5.01	104.49	108.00
1	AA	1287	DG	N1-C6-O6	5.01	122.91	119.90
1	AA	7573	DA	P-O3'-C3'	5.01	125.71	119.70
146	CV	31	DG	O4'-C1'-C2'	-5.01	101.89	105.90
166	Cp	9	DG	O4'-C1'-C2'	-5.01	101.89	105.90
1	AA	62	DT	P-O3'-C3'	5.01	125.71	119.70
1	AA	2656	DG	P-O3'-C3'	5.01	125.71	119.70
1	AA	6900	DG	C5-C6-O6	-5.01	125.60	128.60
133	CI	20	DT	O4'-C1'-C2'	-5.01	101.89	105.90
134	CJ	9	DA	O4'-C1'-C2'	-5.01	101.89	105.90
1	AA	7541	DT	C4'-C3'-C2'	-5.00	98.60	103.10
1	AA	2955	DG	C1'-O4'-C4'	-5.00	105.10	110.10
1	AA	4211	DG	C4'-C3'-C2'	-5.00	98.60	103.10
1	AA	4342	DG	C1'-O4'-C4'	-5.00	105.10	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	4924	DC	O4'-C1'-C2'	-5.00	101.90	105.90
1	AA	6917	DC	C6-N1-C2	-5.00	118.30	120.30
1	AA	7556	DT	O4'-C1'-C2'	-5.00	101.90	105.90
44	Ar	15	DA	O4'-C1'-C2'	-5.00	101.90	105.90
159	Ci	42	DG	N1-C6-O6	5.00	122.90	119.90
162	Cl	32	DA	O4'-C1'-N9	-5.00	104.50	108.00
1	AA	3492	DG	C5-C6-O6	-5.00	125.60	128.60
1	AA	3681	DT	C4'-C3'-C2'	-5.00	98.60	103.10
1	AA	6267	DT	O4'-C1'-C2'	-5.00	101.90	105.90
1	AA	6379	DT	O4'-C1'-C2'	-5.00	101.90	105.90
83	BU	21	DC	P-O3'-C3'	5.00	125.70	119.70
119	B4	8	DA	C4'-C3'-C2'	-5.00	98.60	103.10
178	C1	13	DC	O4'-C1'-N1	5.00	111.50	108.00

All (26) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	AA	1155	DG	C3'
1	AA	1417	DA	C4',C3'
1	AA	3394	DT	C3'
1	AA	3534	DA	C4',C3'
1	AA	3922	DA	C4',C3'
1	AA	5656	DG	C4'
1	AA	5657	DC	C4'
1	AA	5866	DT	C4'
1	AA	5867	DC	C4'
1	AA	6273	DA	C4'
1	AA	6318	DT	C4'
1	AA	6319	DT	C4'
1	AA	6714	DG	C4'
1	AA	6715	DT	C4'
1	AA	6759	DT	C4'
1	AA	6760	DT	C4'
1	AA	7381	DT	C4',C1'
1	AA	7382	DT	C4'
1	AA	7483	DT	C4',C3'
1	AA	7575	DA	C4'
1	AA	7801	DT	C3'

All (3449) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
53	A0	15	DT	Sidechain
53	A0	17	DC	Sidechain
53	A0	3	DA	Sidechain
53	A0	32	DG	Sidechain
53	A0	8	DG	Sidechain
54	A1	12	DT	Sidechain
54	A1	13	DT	Sidechain
54	A1	30	DC	Sidechain
54	A1	32	DG	Sidechain
54	A1	33	DT	Sidechain
54	A1	35	DC	Sidechain
54	A1	39	DA	Sidechain
54	A1	44	DA	Sidechain
54	A1	8	DT	Sidechain
55	A2	12	DC	Sidechain
55	A2	20	DA	Sidechain
55	A2	26	DT	Sidechain
55	A2	27	DA	Sidechain
55	A2	30	DT	Sidechain
55	A2	33	DA	Sidechain
55	A2	39	DA	Sidechain
55	A2	6	DT	Sidechain
56	A3	1	DC	Sidechain
56	A3	11	DG	Sidechain
56	A3	12	DG	Sidechain
56	A3	24	DA	Sidechain
56	A3	26	DT	Sidechain
56	A3	28	DT	Sidechain
57	A4	16	DC	Sidechain
57	A4	24	DA	Sidechain
57	A4	33	DG	Sidechain
57	A4	34	DT	Sidechain
57	A4	35	DC	Sidechain
57	A4	43	DT	Sidechain
57	A4	8	DG	Sidechain
58	A5	13	DA	Sidechain
58	A5	28	DT	Sidechain
58	A5	3	DT	Sidechain
58	A5	4	DT	Sidechain
58	A5	6	DT	Sidechain
59	A6	10	DG	Sidechain
59	A6	11	DA	Sidechain
59	A6	17	DG	Sidechain

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Mol	Chain	Res	Type	Group
59	A6	19	DT	Sidechain
59	A6	25	DT	Sidechain
59	A6	28	DT	Sidechain
59	A6	40	DA	Sidechain
59	A6	41	DC	Sidechain
59	A6	9	DT	Sidechain
60	A7	11	DT	Sidechain
60	A7	15	DT	Sidechain
60	A7	24	DA	Sidechain
60	A7	29	DG	Sidechain
60	A7	30	DT	Sidechain
60	A7	32	DT	Sidechain
60	A7	35	DT	Sidechain
60	A7	40	DT	Sidechain
60	A7	41	DA	Sidechain
60	A7	47	DA	Sidechain
61	A8	15	DT	Sidechain
61	A8	22	DT	Sidechain
61	A8	26	DG	Sidechain
61	A8	27	DG	Sidechain
61	A8	30	DT	Sidechain
61	A8	32	DT	Sidechain
61	A8	33	DT	Sidechain
61	A8	35	DT	Sidechain
61	A8	5	DA	Sidechain
61	A8	52	DT	Sidechain
61	A8	55	DA	Sidechain
62	A9	17	DC	Sidechain
62	A9	18	DC	Sidechain
62	A9	32	DT	Sidechain
62	A9	36	DA	Sidechain
62	A9	38	DG	Sidechain
62	A9	7	DA	Sidechain
62	A9	9	DA	Sidechain
1	AA	1	DT	Sidechain
1	AA	10	DG	Sidechain
1	AA	1001	DC	Sidechain
1	AA	101	DC	Sidechain
1	AA	1011	DG	Sidechain
1	AA	1012	DA	Sidechain
1	AA	1017	DC	Sidechain
1	AA	1018	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1022	DG	Sidechain
1	AA	1028	DG	Sidechain
1	AA	1029	DG	Sidechain
1	AA	1034	DC	Sidechain
1	AA	1039	DA	Sidechain
1	AA	1041	DG	Sidechain
1	AA	1042	DA	Sidechain
1	AA	1053	DC	Sidechain
1	AA	1055	DG	Sidechain
1	AA	1062	DT	Sidechain
1	AA	1063	DT	Sidechain
1	AA	1065	DG	Sidechain
1	AA	1070	DA	Sidechain
1	AA	108	DT	Sidechain
1	AA	1091	DA	Sidechain
1	AA	1099	DC	Sidechain
1	AA	1107	DC	Sidechain
1	AA	1112	DG	Sidechain
1	AA	1114	DC	Sidechain
1	AA	1117	DC	Sidechain
1	AA	1120	DG	Sidechain
1	AA	1121	DT	Sidechain
1	AA	1122	DG	Sidechain
1	AA	1124	DG	Sidechain
1	AA	1126	DC	Sidechain
1	AA	1129	DT	Sidechain
1	AA	1130	DT	Sidechain
1	AA	1139	DA	Sidechain
1	AA	1152	DG	Sidechain
1	AA	1155	DG	Sidechain
1	AA	1161	DA	Sidechain
1	AA	117	DG	Sidechain
1	AA	1174	DC	Sidechain
1	AA	1182	DA	Sidechain
1	AA	1186	DG	Sidechain
1	AA	1194	DA	Sidechain
1	AA	1202	DT	Sidechain
1	AA	1207	DC	Sidechain
1	AA	1209	DG	Sidechain
1	AA	121	DT	Sidechain
1	AA	1216	DC	Sidechain
1	AA	1217	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1218	DG	Sidechain
1	AA	1222	DC	Sidechain
1	AA	1223	DT	Sidechain
1	AA	1227	DT	Sidechain
1	AA	123	DG	Sidechain
1	AA	124	DC	Sidechain
1	AA	1245	DC	Sidechain
1	AA	1246	DT	Sidechain
1	AA	1254	DG	Sidechain
1	AA	1256	DA	Sidechain
1	AA	1260	DA	Sidechain
1	AA	1261	DG	Sidechain
1	AA	1262	DT	Sidechain
1	AA	1263	DC	Sidechain
1	AA	1272	DA	Sidechain
1	AA	1279	DC	Sidechain
1	AA	1280	DC	Sidechain
1	AA	1285	DC	Sidechain
1	AA	1288	DG	Sidechain
1	AA	1332	DT	Sidechain
1	AA	1334	DT	Sidechain
1	AA	1341	DC	Sidechain
1	AA	1349	DG	Sidechain
1	AA	135	DA	Sidechain
1	AA	1356	DC	Sidechain
1	AA	1357	DT	Sidechain
1	AA	1358	DC	Sidechain
1	AA	1364	DG	Sidechain
1	AA	1368	DG	Sidechain
1	AA	1372	DC	Sidechain
1	AA	1378	DG	Sidechain
1	AA	1384	DT	Sidechain
1	AA	1389	DA	Sidechain
1	AA	14	DT	Sidechain
1	AA	1410	DT	Sidechain
1	AA	1415	DT	Sidechain
1	AA	1417	DA	Sidechain
1	AA	1424	DT	Sidechain
1	AA	1428	DT	Sidechain
1	AA	1434	DT	Sidechain
1	AA	1437	DA	Sidechain
1	AA	144	DA	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1441	DC	Sidechain
1	AA	1443	DT	Sidechain
1	AA	1444	DC	Sidechain
1	AA	1446	DC	Sidechain
1	AA	1448	DC	Sidechain
1	AA	1455	DC	Sidechain
1	AA	146	DA	Sidechain
1	AA	1461	DG	Sidechain
1	AA	1467	DT	Sidechain
1	AA	1469	DG	Sidechain
1	AA	1471	DG	Sidechain
1	AA	1472	DA	Sidechain
1	AA	1474	DG	Sidechain
1	AA	1478	DC	Sidechain
1	AA	1481	DG	Sidechain
1	AA	1483	DA	Sidechain
1	AA	1494	DT	Sidechain
1	AA	1495	DT	Sidechain
1	AA	1503	DG	Sidechain
1	AA	1507	DC	Sidechain
1	AA	151	DA	Sidechain
1	AA	1532	DT	Sidechain
1	AA	1536	DC	Sidechain
1	AA	1538	DG	Sidechain
1	AA	1541	DT	Sidechain
1	AA	1542	DT	Sidechain
1	AA	1551	DA	Sidechain
1	AA	1553	DA	Sidechain
1	AA	1555	DG	Sidechain
1	AA	1556	DC	Sidechain
1	AA	1561	DC	Sidechain
1	AA	1564	DG	Sidechain
1	AA	1567	DA	Sidechain
1	AA	1568	DG	Sidechain
1	AA	157	DG	Sidechain
1	AA	1570	DT	Sidechain
1	AA	1573	DC	Sidechain
1	AA	1577	DA	Sidechain
1	AA	1579	DT	Sidechain
1	AA	158	DC	Sidechain
1	AA	1587	DT	Sidechain
1	AA	1588	DC	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1593	DG	Sidechain
1	AA	1594	DG	Sidechain
1	AA	1598	DA	Sidechain
1	AA	1599	DT	Sidechain
1	AA	160	DT	Sidechain
1	AA	1600	DA	Sidechain
1	AA	1602	DT	Sidechain
1	AA	1604	DT	Sidechain
1	AA	1613	DC	Sidechain
1	AA	1620	DC	Sidechain
1	AA	1621	DT	Sidechain
1	AA	1622	DG	Sidechain
1	AA	1623	DG	Sidechain
1	AA	1624	DC	Sidechain
1	AA	1629	DG	Sidechain
1	AA	1631	DA	Sidechain
1	AA	1632	DC	Sidechain
1	AA	1634	DG	Sidechain
1	AA	1635	DT	Sidechain
1	AA	1644	DG	Sidechain
1	AA	1653	DC	Sidechain
1	AA	1656	DC	Sidechain
1	AA	1659	DC	Sidechain
1	AA	1665	DC	Sidechain
1	AA	1670	DC	Sidechain
1	AA	1671	DC	Sidechain
1	AA	1677	DG	Sidechain
1	AA	1681	DA	Sidechain
1	AA	1692	DT	Sidechain
1	AA	170	DA	Sidechain
1	AA	1700	DC	Sidechain
1	AA	1704	DG	Sidechain
1	AA	1705	DA	Sidechain
1	AA	1713	DG	Sidechain
1	AA	1714	DG	Sidechain
1	AA	1715	DG	Sidechain
1	AA	1717	DT	Sidechain
1	AA	1718	DG	Sidechain
1	AA	172	DC	Sidechain
1	AA	1723	DT	Sidechain
1	AA	1726	DC	Sidechain
1	AA	1734	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1736	DA	Sidechain
1	AA	1741	DG	Sidechain
1	AA	1742	DA	Sidechain
1	AA	1749	DC	Sidechain
1	AA	175	DG	Sidechain
1	AA	1751	DG	Sidechain
1	AA	1753	DC	Sidechain
1	AA	1760	DA	Sidechain
1	AA	1785	DT	Sidechain
1	AA	1790	DT	Sidechain
1	AA	1791	DT	Sidechain
1	AA	1794	DT	Sidechain
1	AA	1797	DT	Sidechain
1	AA	1798	DG	Sidechain
1	AA	18	DC	Sidechain
1	AA	1805	DA	Sidechain
1	AA	1808	DT	Sidechain
1	AA	1810	DA	Sidechain
1	AA	1811	DG	Sidechain
1	AA	1815	DA	Sidechain
1	AA	1818	DT	Sidechain
1	AA	1820	DA	Sidechain
1	AA	1826	DA	Sidechain
1	AA	1828	DT	Sidechain
1	AA	1832	DT	Sidechain
1	AA	1833	DG	Sidechain
1	AA	1834	DC	Sidechain
1	AA	1841	DT	Sidechain
1	AA	1848	DA	Sidechain
1	AA	185	DC	Sidechain
1	AA	1854	DA	Sidechain
1	AA	1862	DA	Sidechain
1	AA	1869	DA	Sidechain
1	AA	1870	DT	Sidechain
1	AA	1877	DT	Sidechain
1	AA	1879	DA	Sidechain
1	AA	1883	DA	Sidechain
1	AA	1884	DA	Sidechain
1	AA	1886	DC	Sidechain
1	AA	1887	DT	Sidechain
1	AA	1889	DC	Sidechain
1	AA	189	DC	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1893	DT	Sidechain
1	AA	1905	DT	Sidechain
1	AA	1908	DT	Sidechain
1	AA	1912	DT	Sidechain
1	AA	1914	DT	Sidechain
1	AA	1917	DA	Sidechain
1	AA	1920	DG	Sidechain
1	AA	1922	DG	Sidechain
1	AA	1923	DG	Sidechain
1	AA	1924	DT	Sidechain
1	AA	1928	DT	Sidechain
1	AA	1932	DA	Sidechain
1	AA	1934	DT	Sidechain
1	AA	1936	DA	Sidechain
1	AA	1937	DC	Sidechain
1	AA	1947	DT	Sidechain
1	AA	1951	DG	Sidechain
1	AA	1952	DA	Sidechain
1	AA	1955	DA	Sidechain
1	AA	1956	DC	Sidechain
1	AA	196	DT	Sidechain
1	AA	1961	DC	Sidechain
1	AA	1963	DT	Sidechain
1	AA	1964	DC	Sidechain
1	AA	1966	DA	Sidechain
1	AA	1967	DT	Sidechain
1	AA	1968	DT	Sidechain
1	AA	1970	DT	Sidechain
1	AA	1975	DT	Sidechain
1	AA	198	DT	Sidechain
1	AA	1981	DC	Sidechain
1	AA	1986	DC	Sidechain
1	AA	1992	DG	Sidechain
1	AA	1998	DG	Sidechain
1	AA	1999	DA	Sidechain
1	AA	2001	DC	Sidechain
1	AA	2018	DT	Sidechain
1	AA	2019	DC	Sidechain
1	AA	2020	DT	Sidechain
1	AA	2030	DA	Sidechain
1	AA	2032	DC	Sidechain
1	AA	2040	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	205	DG	Sidechain
1	AA	2052	DT	Sidechain
1	AA	2053	DT	Sidechain
1	AA	2055	DT	Sidechain
1	AA	2059	DC	Sidechain
1	AA	2064	DA	Sidechain
1	AA	2066	DG	Sidechain
1	AA	2080	DT	Sidechain
1	AA	2082	DG	Sidechain
1	AA	2083	DA	Sidechain
1	AA	2090	DT	Sidechain
1	AA	2093	DG	Sidechain
1	AA	21	DT	Sidechain
1	AA	2101	DC	Sidechain
1	AA	2106	DC	Sidechain
1	AA	2108	DT	Sidechain
1	AA	2115	DC	Sidechain
1	AA	2116	DC	Sidechain
1	AA	2117	DT	Sidechain
1	AA	2118	DT	Sidechain
1	AA	2124	DT	Sidechain
1	AA	2127	DT	Sidechain
1	AA	2129	DA	Sidechain
1	AA	213	DG	Sidechain
1	AA	2132	DT	Sidechain
1	AA	2133	DA	Sidechain
1	AA	2135	DA	Sidechain
1	AA	2137	DA	Sidechain
1	AA	2141	DC	Sidechain
1	AA	2145	DG	Sidechain
1	AA	2152	DC	Sidechain
1	AA	2168	DG	Sidechain
1	AA	2170	DG	Sidechain
1	AA	2173	DC	Sidechain
1	AA	2180	DT	Sidechain
1	AA	2181	DT	Sidechain
1	AA	2186	DT	Sidechain
1	AA	220	DG	Sidechain
1	AA	2207	DT	Sidechain
1	AA	2208	DT	Sidechain
1	AA	2221	DT	Sidechain
1	AA	2224	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	2242	DT	Sidechain
1	AA	2244	DG	Sidechain
1	AA	2250	DA	Sidechain
1	AA	2253	DG	Sidechain
1	AA	2266	DG	Sidechain
1	AA	227	DG	Sidechain
1	AA	2274	DG	Sidechain
1	AA	2280	DT	Sidechain
1	AA	2289	DT	Sidechain
1	AA	2291	DT	Sidechain
1	AA	2292	DG	Sidechain
1	AA	2297	DT	Sidechain
1	AA	2302	DT	Sidechain
1	AA	2304	DC	Sidechain
1	AA	2308	DG	Sidechain
1	AA	2309	DC	Sidechain
1	AA	2311	DT	Sidechain
1	AA	2312	DG	Sidechain
1	AA	2313	DT	Sidechain
1	AA	2322	DT	Sidechain
1	AA	2327	DT	Sidechain
1	AA	2332	DA	Sidechain
1	AA	2334	DG	Sidechain
1	AA	2344	DT	Sidechain
1	AA	2351	DA	Sidechain
1	AA	2356	DA	Sidechain
1	AA	2364	DT	Sidechain
1	AA	2365	DT	Sidechain
1	AA	2366	DT	Sidechain
1	AA	2370	DG	Sidechain
1	AA	2372	DT	Sidechain
1	AA	2378	DC	Sidechain
1	AA	2383	DA	Sidechain
1	AA	2395	DC	Sidechain
1	AA	2397	DA	Sidechain
1	AA	2400	DC	Sidechain
1	AA	2402	DG	Sidechain
1	AA	2405	DT	Sidechain
1	AA	2407	DT	Sidechain
1	AA	2408	DT	Sidechain
1	AA	2415	DT	Sidechain
1	AA	2418	DC	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	2419	DG	Sidechain
1	AA	242	DA	Sidechain
1	AA	2420	DA	Sidechain
1	AA	2422	DA	Sidechain
1	AA	2423	DT	Sidechain
1	AA	2424	DG	Sidechain
1	AA	2434	DG	Sidechain
1	AA	2436	DC	Sidechain
1	AA	2445	DT	Sidechain
1	AA	2453	DT	Sidechain
1	AA	2454	DT	Sidechain
1	AA	2460	DA	Sidechain
1	AA	2462	DT	Sidechain
1	AA	2471	DA	Sidechain
1	AA	2473	DC	Sidechain
1	AA	2474	DT	Sidechain
1	AA	2475	DG	Sidechain
1	AA	2482	DG	Sidechain
1	AA	2491	DC	Sidechain
1	AA	2498	DA	Sidechain
1	AA	2505	DA	Sidechain
1	AA	2510	DA	Sidechain
1	AA	2511	DG	Sidechain
1	AA	2517	DT	Sidechain
1	AA	2519	DT	Sidechain
1	AA	2527	DA	Sidechain
1	AA	2528	DT	Sidechain
1	AA	2529	DG	Sidechain
1	AA	253	DG	Sidechain
1	AA	2532	DG	Sidechain
1	AA	254	DA	Sidechain
1	AA	2549	DT	Sidechain
1	AA	2554	DA	Sidechain
1	AA	2561	DC	Sidechain
1	AA	2562	DT	Sidechain
1	AA	2567	DG	Sidechain
1	AA	257	DA	Sidechain
1	AA	2570	DA	Sidechain
1	AA	2572	DC	Sidechain
1	AA	2575	DC	Sidechain
1	AA	2581	DT	Sidechain
1	AA	2584	DC	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	2585	DC	Sidechain
1	AA	2589	DT	Sidechain
1	AA	2591	DT	Sidechain
1	AA	2613	DC	Sidechain
1	AA	2616	DT	Sidechain
1	AA	2631	DT	Sidechain
1	AA	2632	DT	Sidechain
1	AA	2634	DG	Sidechain
1	AA	2635	DA	Sidechain
1	AA	2636	DG	Sidechain
1	AA	2644	DC	Sidechain
1	AA	2649	DC	Sidechain
1	AA	2651	DG	Sidechain
1	AA	2653	DT	Sidechain
1	AA	2659	DT	Sidechain
1	AA	266	DG	Sidechain
1	AA	2660	DT	Sidechain
1	AA	2662	DA	Sidechain
1	AA	2665	DC	Sidechain
1	AA	2671	DT	Sidechain
1	AA	2675	DA	Sidechain
1	AA	2677	DC	Sidechain
1	AA	2679	DC	Sidechain
1	AA	2680	DG	Sidechain
1	AA	2681	DA	Sidechain
1	AA	2684	DT	Sidechain
1	AA	2688	DA	Sidechain
1	AA	269	DG	Sidechain
1	AA	2693	DT	Sidechain
1	AA	2698	DG	Sidechain
1	AA	2699	DG	Sidechain
1	AA	2701	DT	Sidechain
1	AA	2705	DT	Sidechain
1	AA	2707	DT	Sidechain
1	AA	2712	DC	Sidechain
1	AA	2716	DT	Sidechain
1	AA	2719	DA	Sidechain
1	AA	2727	DC	Sidechain
1	AA	2731	DT	Sidechain
1	AA	2733	DG	Sidechain
1	AA	2736	DT	Sidechain
1	AA	2738	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	2739	DG	Sidechain
1	AA	274	DA	Sidechain
1	AA	2741	DC	Sidechain
1	AA	2744	DT	Sidechain
1	AA	2747	DT	Sidechain
1	AA	2754	DG	Sidechain
1	AA	2755	DG	Sidechain
1	AA	276	DA	Sidechain
1	AA	2760	DG	Sidechain
1	AA	2763	DC	Sidechain
1	AA	277	DC	Sidechain
1	AA	2770	DT	Sidechain
1	AA	2772	DG	Sidechain
1	AA	2778	DT	Sidechain
1	AA	2781	DT	Sidechain
1	AA	2784	DT	Sidechain
1	AA	2790	DT	Sidechain
1	AA	28	DT	Sidechain
1	AA	280	DA	Sidechain
1	AA	2807	DA	Sidechain
1	AA	2808	DG	Sidechain
1	AA	281	DA	Sidechain
1	AA	2814	DG	Sidechain
1	AA	2815	DA	Sidechain
1	AA	2816	DG	Sidechain
1	AA	282	DA	Sidechain
1	AA	2820	DG	Sidechain
1	AA	2821	DA	Sidechain
1	AA	2822	DT	Sidechain
1	AA	2824	DC	Sidechain
1	AA	2840	DC	Sidechain
1	AA	2851	DT	Sidechain
1	AA	2859	DG	Sidechain
1	AA	2861	DT	Sidechain
1	AA	2863	DT	Sidechain
1	AA	2864	DC	Sidechain
1	AA	2874	DC	Sidechain
1	AA	2879	DT	Sidechain
1	AA	2881	DC	Sidechain
1	AA	2884	DT	Sidechain
1	AA	2886	DA	Sidechain
1	AA	2890	DC	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	2896	DG	Sidechain
1	AA	2902	DC	Sidechain
1	AA	2907	DT	Sidechain
1	AA	2909	DT	Sidechain
1	AA	2910	DG	Sidechain
1	AA	2920	DC	Sidechain
1	AA	2929	DT	Sidechain
1	AA	2934	DT	Sidechain
1	AA	2949	DG	Sidechain
1	AA	2956	DA	Sidechain
1	AA	2959	DG	Sidechain
1	AA	2961	DT	Sidechain
1	AA	2963	DT	Sidechain
1	AA	2970	DG	Sidechain
1	AA	2986	DC	Sidechain
1	AA	2993	DT	Sidechain
1	AA	3	DA	Sidechain
1	AA	30	DG	Sidechain
1	AA	3001	DG	Sidechain
1	AA	3009	DG	Sidechain
1	AA	3010	DT	Sidechain
1	AA	3011	DA	Sidechain
1	AA	3017	DA	Sidechain
1	AA	302	DG	Sidechain
1	AA	3021	DG	Sidechain
1	AA	3025	DA	Sidechain
1	AA	3035	DT	Sidechain
1	AA	3038	DT	Sidechain
1	AA	306	DG	Sidechain
1	AA	3065	DC	Sidechain
1	AA	307	DA	Sidechain
1	AA	3071	DT	Sidechain
1	AA	308	DT	Sidechain
1	AA	3095	DT	Sidechain
1	AA	3097	DT	Sidechain
1	AA	3100	DA	Sidechain
1	AA	3106	DA	Sidechain
1	AA	3111	DT	Sidechain
1	AA	3113	DT	Sidechain
1	AA	312	DT	Sidechain
1	AA	3120	DC	Sidechain
1	AA	3122	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	3123	DC	Sidechain
1	AA	3127	DA	Sidechain
1	AA	3137	DT	Sidechain
1	AA	3140	DG	Sidechain
1	AA	3149	DT	Sidechain
1	AA	3151	DA	Sidechain
1	AA	3163	DG	Sidechain
1	AA	3164	DT	Sidechain
1	AA	3165	DA	Sidechain
1	AA	3167	DT	Sidechain
1	AA	3170	DA	Sidechain
1	AA	3171	DC	Sidechain
1	AA	3174	DT	Sidechain
1	AA	3175	DG	Sidechain
1	AA	3176	DA	Sidechain
1	AA	3183	DT	Sidechain
1	AA	319	DA	Sidechain
1	AA	3190	DT	Sidechain
1	AA	3191	DA	Sidechain
1	AA	3194	DC	Sidechain
1	AA	3205	DC	Sidechain
1	AA	3209	DT	Sidechain
1	AA	3219	DG	Sidechain
1	AA	3221	DT	Sidechain
1	AA	3224	DG	Sidechain
1	AA	3233	DC	Sidechain
1	AA	3237	DA	Sidechain
1	AA	3238	DG	Sidechain
1	AA	3245	DC	Sidechain
1	AA	3247	DT	Sidechain
1	AA	3250	DT	Sidechain
1	AA	3260	DG	Sidechain
1	AA	3262	DG	Sidechain
1	AA	3265	DG	Sidechain
1	AA	3267	DT	Sidechain
1	AA	3271	DT	Sidechain
1	AA	3282	DT	Sidechain
1	AA	3284	DG	Sidechain
1	AA	3289	DT	Sidechain
1	AA	329	DA	Sidechain
1	AA	3295	DT	Sidechain
1	AA	3298	DG	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	3300	DT	Sidechain
1	AA	3301	DT	Sidechain
1	AA	3306	DT	Sidechain
1	AA	3311	DA	Sidechain
1	AA	332	DG	Sidechain
1	AA	3320	DG	Sidechain
1	AA	3325	DA	Sidechain
1	AA	3326	DG	Sidechain
1	AA	3332	DC	Sidechain
1	AA	3333	DC	Sidechain
1	AA	3337	DC	Sidechain
1	AA	334	DT	Sidechain
1	AA	3344	DC	Sidechain
1	AA	3349	DT	Sidechain
1	AA	3367	DG	Sidechain
1	AA	3371	DT	Sidechain
1	AA	3373	DT	Sidechain
1	AA	3378	DA	Sidechain
1	AA	3383	DG	Sidechain
1	AA	3395	DT	Sidechain
1	AA	3397	DC	Sidechain
1	AA	3404	DA	Sidechain
1	AA	3410	DC	Sidechain
1	AA	3411	DG	Sidechain
1	AA	3412	DT	Sidechain
1	AA	3414	DT	Sidechain
1	AA	3418	DC	Sidechain
1	AA	3421	DC	Sidechain
1	AA	3422	DG	Sidechain
1	AA	3423	DT	Sidechain
1	AA	3432	DA	Sidechain
1	AA	3436	DA	Sidechain
1	AA	3454	DA	Sidechain
1	AA	3469	DA	Sidechain
1	AA	3476	DG	Sidechain
1	AA	3477	DA	Sidechain
1	AA	3480	DA	Sidechain
1	AA	3481	DT	Sidechain
1	AA	3488	DC	Sidechain
1	AA	349	DG	Sidechain
1	AA	3496	DT	Sidechain
1	AA	350	DC	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	3500	DT	Sidechain
1	AA	3501	DT	Sidechain
1	AA	3507	DG	Sidechain
1	AA	3508	DC	Sidechain
1	AA	3510	DC	Sidechain
1	AA	3513	DG	Sidechain
1	AA	3527	DG	Sidechain
1	AA	3529	DG	Sidechain
1	AA	3535	DG	Sidechain
1	AA	3538	DG	Sidechain
1	AA	354	DC	Sidechain
1	AA	3540	DG	Sidechain
1	AA	355	DA	Sidechain
1	AA	3553	DT	Sidechain
1	AA	3557	DT	Sidechain
1	AA	357	DT	Sidechain
1	AA	3570	DT	Sidechain
1	AA	3576	DG	Sidechain
1	AA	3579	DG	Sidechain
1	AA	3581	DT	Sidechain
1	AA	3582	DG	Sidechain
1	AA	3587	DC	Sidechain
1	AA	3593	DG	Sidechain
1	AA	3594	DG	Sidechain
1	AA	3596	DA	Sidechain
1	AA	3600	DC	Sidechain
1	AA	3607	DT	Sidechain
1	AA	3616	DA	Sidechain
1	AA	3621	DA	Sidechain
1	AA	3625	DT	Sidechain
1	AA	3629	DT	Sidechain
1	AA	3631	DA	Sidechain
1	AA	3640	DT	Sidechain
1	AA	3645	DA	Sidechain
1	AA	3646	DG	Sidechain
1	AA	3647	DT	Sidechain
1	AA	3648	DC	Sidechain
1	AA	3650	DT	Sidechain
1	AA	3660	DT	Sidechain
1	AA	3663	DA	Sidechain
1	AA	3668	DT	Sidechain
1	AA	3671	DC	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	3673	DA	Sidechain
1	AA	3686	DT	Sidechain
1	AA	3688	DC	Sidechain
1	AA	3690	DG	Sidechain
1	AA	3693	DT	Sidechain
1	AA	370	DA	Sidechain
1	AA	3700	DG	Sidechain
1	AA	3702	DT	Sidechain
1	AA	3707	DG	Sidechain
1	AA	3709	DG	Sidechain
1	AA	3713	DA	Sidechain
1	AA	3714	DT	Sidechain
1	AA	3716	DC	Sidechain
1	AA	3717	DC	Sidechain
1	AA	3730	DT	Sidechain
1	AA	3733	DA	Sidechain
1	AA	3734	DA	Sidechain
1	AA	3742	DC	Sidechain
1	AA	3745	DG	Sidechain
1	AA	3747	DC	Sidechain
1	AA	3751	DG	Sidechain
1	AA	3753	DG	Sidechain
1	AA	3754	DA	Sidechain
1	AA	3757	DG	Sidechain
1	AA	3758	DA	Sidechain
1	AA	3759	DA	Sidechain
1	AA	3760	DT	Sidechain
1	AA	3766	DG	Sidechain
1	AA	3769	DT	Sidechain
1	AA	377	DT	Sidechain
1	AA	3770	DA	Sidechain
1	AA	3775	DT	Sidechain
1	AA	3784	DG	Sidechain
1	AA	3785	DT	Sidechain
1	AA	3787	DG	Sidechain
1	AA	3790	DG	Sidechain
1	AA	3792	DC	Sidechain
1	AA	3796	DG	Sidechain
1	AA	3806	DC	Sidechain
1	AA	3808	DA	Sidechain
1	AA	3819	DG	Sidechain
1	AA	3821	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	3828	DG	Sidechain
1	AA	3830	DA	Sidechain
1	AA	3848	DG	Sidechain
1	AA	385	DC	Sidechain
1	AA	3852	DA	Sidechain
1	AA	3861	DT	Sidechain
1	AA	387	DC	Sidechain
1	AA	3871	DG	Sidechain
1	AA	3882	DG	Sidechain
1	AA	3884	DG	Sidechain
1	AA	3885	DC	Sidechain
1	AA	3887	DT	Sidechain
1	AA	389	DC	Sidechain
1	AA	3896	DG	Sidechain
1	AA	3899	DA	Sidechain
1	AA	3902	DT	Sidechain
1	AA	3908	DG	Sidechain
1	AA	3910	DG	Sidechain
1	AA	3913	DA	Sidechain
1	AA	3916	DA	Sidechain
1	AA	3918	DT	Sidechain
1	AA	3923	DT	Sidechain
1	AA	3924	DT	Sidechain
1	AA	3931	DT	Sidechain
1	AA	3932	DC	Sidechain
1	AA	3933	DC	Sidechain
1	AA	3936	DT	Sidechain
1	AA	3942	DT	Sidechain
1	AA	3945	DC	Sidechain
1	AA	3947	DT	Sidechain
1	AA	3949	DC	Sidechain
1	AA	396	DG	Sidechain
1	AA	3964	DT	Sidechain
1	AA	3967	DA	Sidechain
1	AA	3969	DC	Sidechain
1	AA	3970	DT	Sidechain
1	AA	3972	DT	Sidechain
1	AA	3975	DA	Sidechain
1	AA	3977	DA	Sidechain
1	AA	3978	DG	Sidechain
1	AA	3982	DT	Sidechain
1	AA	3983	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	3985	DA	Sidechain
1	AA	3994	DC	Sidechain
1	AA	40	DT	Sidechain
1	AA	4000	DA	Sidechain
1	AA	4002	DA	Sidechain
1	AA	4007	DT	Sidechain
1	AA	4012	DT	Sidechain
1	AA	4015	DT	Sidechain
1	AA	4017	DA	Sidechain
1	AA	4019	DG	Sidechain
1	AA	402	DC	Sidechain
1	AA	4020	DT	Sidechain
1	AA	4021	DC	Sidechain
1	AA	403	DC	Sidechain
1	AA	4046	DC	Sidechain
1	AA	4050	DA	Sidechain
1	AA	4052	DG	Sidechain
1	AA	4060	DT	Sidechain
1	AA	4061	DG	Sidechain
1	AA	4062	DA	Sidechain
1	AA	4063	DG	Sidechain
1	AA	4065	DG	Sidechain
1	AA	4067	DT	Sidechain
1	AA	4069	DT	Sidechain
1	AA	407	DC	Sidechain
1	AA	4071	DT	Sidechain
1	AA	4078	DT	Sidechain
1	AA	4083	DC	Sidechain
1	AA	4089	DT	Sidechain
1	AA	4092	DT	Sidechain
1	AA	4097	DT	Sidechain
1	AA	4104	DG	Sidechain
1	AA	4111	DA	Sidechain
1	AA	4112	DA	Sidechain
1	AA	4120	DT	Sidechain
1	AA	4124	DG	Sidechain
1	AA	413	DA	Sidechain
1	AA	4130	DT	Sidechain
1	AA	4131	DG	Sidechain
1	AA	4132	DG	Sidechain
1	AA	4145	DC	Sidechain
1	AA	4149	DC	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	4150	DT	Sidechain
1	AA	4151	DA	Sidechain
1	AA	4152	DT	Sidechain
1	AA	4153	DC	Sidechain
1	AA	4163	DG	Sidechain
1	AA	4164	DA	Sidechain
1	AA	4169	DG	Sidechain
1	AA	4174	DC	Sidechain
1	AA	4180	DG	Sidechain
1	AA	4181	DG	Sidechain
1	AA	4184	DG	Sidechain
1	AA	4185	DG	Sidechain
1	AA	4188	DG	Sidechain
1	AA	4189	DT	Sidechain
1	AA	4193	DG	Sidechain
1	AA	4202	DG	Sidechain
1	AA	4204	DT	Sidechain
1	AA	4211	DG	Sidechain
1	AA	4213	DT	Sidechain
1	AA	4215	DG	Sidechain
1	AA	4216	DC	Sidechain
1	AA	4221	DC	Sidechain
1	AA	4223	DA	Sidechain
1	AA	4224	DA	Sidechain
1	AA	4228	DT	Sidechain
1	AA	4229	DC	Sidechain
1	AA	4234	DG	Sidechain
1	AA	4235	DT	Sidechain
1	AA	4238	DG	Sidechain
1	AA	4239	DG	Sidechain
1	AA	425	DC	Sidechain
1	AA	4267	DT	Sidechain
1	AA	4269	DT	Sidechain
1	AA	427	DG	Sidechain
1	AA	4273	DC	Sidechain
1	AA	4274	DC	Sidechain
1	AA	4276	DT	Sidechain
1	AA	4278	DT	Sidechain
1	AA	4281	DA	Sidechain
1	AA	4283	DG	Sidechain
1	AA	4288	DT	Sidechain
1	AA	429	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	4291	DT	Sidechain
1	AA	4297	DT	Sidechain
1	AA	4299	DG	Sidechain
1	AA	4300	DT	Sidechain
1	AA	4301	DA	Sidechain
1	AA	4303	DT	Sidechain
1	AA	4307	DC	Sidechain
1	AA	4309	DA	Sidechain
1	AA	4311	DA	Sidechain
1	AA	4313	DC	Sidechain
1	AA	432	DT	Sidechain
1	AA	4321	DT	Sidechain
1	AA	4327	DT	Sidechain
1	AA	4334	DC	Sidechain
1	AA	4338	DA	Sidechain
1	AA	4340	DG	Sidechain
1	AA	4342	DG	Sidechain
1	AA	4344	DC	Sidechain
1	AA	4347	DA	Sidechain
1	AA	4358	DA	Sidechain
1	AA	4359	DC	Sidechain
1	AA	4377	DA	Sidechain
1	AA	4382	DT	Sidechain
1	AA	4389	DA	Sidechain
1	AA	439	DT	Sidechain
1	AA	44	DT	Sidechain
1	AA	4402	DA	Sidechain
1	AA	4404	DT	Sidechain
1	AA	4409	DG	Sidechain
1	AA	4411	DT	Sidechain
1	AA	4415	DA	Sidechain
1	AA	4418	DG	Sidechain
1	AA	4421	DA	Sidechain
1	AA	4425	DT	Sidechain
1	AA	4433	DG	Sidechain
1	AA	4434	DG	Sidechain
1	AA	4437	DC	Sidechain
1	AA	444	DA	Sidechain
1	AA	4448	DA	Sidechain
1	AA	4452	DC	Sidechain
1	AA	4454	DT	Sidechain
1	AA	4456	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	4460	DC	Sidechain
1	AA	4463	DT	Sidechain
1	AA	4470	DC	Sidechain
1	AA	4472	DG	Sidechain
1	AA	4488	DT	Sidechain
1	AA	4497	DC	Sidechain
1	AA	45	DT	Sidechain
1	AA	450	DG	Sidechain
1	AA	4500	DA	Sidechain
1	AA	4503	DG	Sidechain
1	AA	4506	DA	Sidechain
1	AA	4508	DG	Sidechain
1	AA	4514	DT	Sidechain
1	AA	4515	DT	Sidechain
1	AA	4518	DG	Sidechain
1	AA	4519	DA	Sidechain
1	AA	4528	DT	Sidechain
1	AA	4530	DT	Sidechain
1	AA	4531	DC	Sidechain
1	AA	4540	DC	Sidechain
1	AA	4542	DT	Sidechain
1	AA	4546	DT	Sidechain
1	AA	4550	DG	Sidechain
1	AA	4557	DT	Sidechain
1	AA	4563	DG	Sidechain
1	AA	4564	DT	Sidechain
1	AA	4565	DG	Sidechain
1	AA	4570	DT	Sidechain
1	AA	4574	DG	Sidechain
1	AA	4577	DC	Sidechain
1	AA	4578	DA	Sidechain
1	AA	4579	DA	Sidechain
1	AA	4588	DC	Sidechain
1	AA	4591	DG	Sidechain
1	AA	4594	DT	Sidechain
1	AA	4598	DC	Sidechain
1	AA	4604	DG	Sidechain
1	AA	461	DA	Sidechain
1	AA	4613	DG	Sidechain
1	AA	4619	DG	Sidechain
1	AA	4628	DG	Sidechain
1	AA	4639	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	4641	DG	Sidechain
1	AA	4645	DC	Sidechain
1	AA	4647	DC	Sidechain
1	AA	4653	DG	Sidechain
1	AA	4656	DG	Sidechain
1	AA	466	DC	Sidechain
1	AA	4660	DC	Sidechain
1	AA	4662	DC	Sidechain
1	AA	4664	DG	Sidechain
1	AA	4665	DA	Sidechain
1	AA	4667	DG	Sidechain
1	AA	4671	DG	Sidechain
1	AA	4682	DG	Sidechain
1	AA	4685	DG	Sidechain
1	AA	4687	DC	Sidechain
1	AA	4688	DG	Sidechain
1	AA	4690	DC	Sidechain
1	AA	4693	DT	Sidechain
1	AA	4700	DG	Sidechain
1	AA	4701	DG	Sidechain
1	AA	4706	DT	Sidechain
1	AA	4707	DC	Sidechain
1	AA	4723	DT	Sidechain
1	AA	4727	DG	Sidechain
1	AA	473	DG	Sidechain
1	AA	4731	DA	Sidechain
1	AA	4735	DT	Sidechain
1	AA	474	DA	Sidechain
1	AA	4741	DT	Sidechain
1	AA	4747	DG	Sidechain
1	AA	4750	DG	Sidechain
1	AA	4761	DA	Sidechain
1	AA	4773	DT	Sidechain
1	AA	4778	DG	Sidechain
1	AA	4792	DA	Sidechain
1	AA	4798	DG	Sidechain
1	AA	4805	DT	Sidechain
1	AA	4814	DA	Sidechain
1	AA	4819	DC	Sidechain
1	AA	4820	DA	Sidechain
1	AA	4823	DC	Sidechain
1	AA	4824	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	4828	DT	Sidechain
1	AA	483	DT	Sidechain
1	AA	4834	DC	Sidechain
1	AA	4835	DG	Sidechain
1	AA	484	DG	Sidechain
1	AA	4840	DT	Sidechain
1	AA	4849	DT	Sidechain
1	AA	4851	DC	Sidechain
1	AA	4854	DC	Sidechain
1	AA	4863	DG	Sidechain
1	AA	4864	DT	Sidechain
1	AA	4866	DT	Sidechain
1	AA	4872	DG	Sidechain
1	AA	4873	DT	Sidechain
1	AA	4876	DC	Sidechain
1	AA	4878	DT	Sidechain
1	AA	488	DA	Sidechain
1	AA	4883	DG	Sidechain
1	AA	4889	DG	Sidechain
1	AA	489	DT	Sidechain
1	AA	4890	DC	Sidechain
1	AA	4897	DT	Sidechain
1	AA	4903	DT	Sidechain
1	AA	4904	DG	Sidechain
1	AA	4906	DT	Sidechain
1	AA	4910	DG	Sidechain
1	AA	4911	DG	Sidechain
1	AA	4919	DG	Sidechain
1	AA	492	DT	Sidechain
1	AA	4920	DC	Sidechain
1	AA	4922	DG	Sidechain
1	AA	4927	DT	Sidechain
1	AA	4928	DA	Sidechain
1	AA	4931	DT	Sidechain
1	AA	4932	DC	Sidechain
1	AA	4935	DA	Sidechain
1	AA	4937	DA	Sidechain
1	AA	4939	DG	Sidechain
1	AA	494	DA	Sidechain
1	AA	4942	DT	Sidechain
1	AA	4947	DT	Sidechain
1	AA	4948	DC	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	4955	DG	Sidechain
1	AA	4958	DG	Sidechain
1	AA	4961	DA	Sidechain
1	AA	4963	DT	Sidechain
1	AA	4964	DT	Sidechain
1	AA	4967	DC	Sidechain
1	AA	4978	DT	Sidechain
1	AA	4979	DA	Sidechain
1	AA	4982	DT	Sidechain
1	AA	4985	DC	Sidechain
1	AA	499	DT	Sidechain
1	AA	4998	DC	Sidechain
1	AA	4999	DT	Sidechain
1	AA	50	DG	Sidechain
1	AA	5009	DC	Sidechain
1	AA	5022	DG	Sidechain
1	AA	5023	DT	Sidechain
1	AA	5025	DG	Sidechain
1	AA	5030	DT	Sidechain
1	AA	5031	DT	Sidechain
1	AA	5032	DT	Sidechain
1	AA	5033	DG	Sidechain
1	AA	5035	DC	Sidechain
1	AA	5037	DT	Sidechain
1	AA	504	DG	Sidechain
1	AA	5041	DC	Sidechain
1	AA	5042	DG	Sidechain
1	AA	5044	DT	Sidechain
1	AA	5045	DG	Sidechain
1	AA	5046	DG	Sidechain
1	AA	505	DC	Sidechain
1	AA	5053	DA	Sidechain
1	AA	5054	DT	Sidechain
1	AA	5059	DA	Sidechain
1	AA	506	DT	Sidechain
1	AA	5062	DT	Sidechain
1	AA	5064	DC	Sidechain
1	AA	5069	DG	Sidechain
1	AA	5071	DT	Sidechain
1	AA	508	DG	Sidechain
1	AA	5081	DA	Sidechain
1	AA	5082	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	5085	DA	Sidechain
1	AA	5086	DC	Sidechain
1	AA	509	DG	Sidechain
1	AA	5091	DT	Sidechain
1	AA	5096	DG	Sidechain
1	AA	510	DT	Sidechain
1	AA	5110	DT	Sidechain
1	AA	5119	DT	Sidechain
1	AA	5121	DT	Sidechain
1	AA	5128	DC	Sidechain
1	AA	5141	DT	Sidechain
1	AA	5143	DT	Sidechain
1	AA	5145	DC	Sidechain
1	AA	5149	DG	Sidechain
1	AA	5158	DC	Sidechain
1	AA	5159	DA	Sidechain
1	AA	516	DG	Sidechain
1	AA	5163	DT	Sidechain
1	AA	517	DG	Sidechain
1	AA	5176	DG	Sidechain
1	AA	5177	DT	Sidechain
1	AA	5179	DT	Sidechain
1	AA	519	DA	Sidechain
1	AA	5190	DA	Sidechain
1	AA	5193	DT	Sidechain
1	AA	5194	DC	Sidechain
1	AA	5195	DT	Sidechain
1	AA	5197	DT	Sidechain
1	AA	520	DT	Sidechain
1	AA	5204	DT	Sidechain
1	AA	5205	DT	Sidechain
1	AA	5209	DT	Sidechain
1	AA	5212	DT	Sidechain
1	AA	5215	DT	Sidechain
1	AA	5224	DC	Sidechain
1	AA	5227	DG	Sidechain
1	AA	5228	DG	Sidechain
1	AA	5229	DT	Sidechain
1	AA	5230	DT	Sidechain
1	AA	5234	DT	Sidechain
1	AA	5236	DC	Sidechain
1	AA	5238	DG	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	524	DC	Sidechain
1	AA	5240	DT	Sidechain
1	AA	5246	DT	Sidechain
1	AA	5247	DG	Sidechain
1	AA	525	DA	Sidechain
1	AA	5256	DT	Sidechain
1	AA	5258	DT	Sidechain
1	AA	5261	DT	Sidechain
1	AA	5268	DT	Sidechain
1	AA	5279	DG	Sidechain
1	AA	5281	DT	Sidechain
1	AA	5287	DA	Sidechain
1	AA	5295	DT	Sidechain
1	AA	5299	DG	Sidechain
1	AA	530	DT	Sidechain
1	AA	5300	DC	Sidechain
1	AA	5301	DT	Sidechain
1	AA	5307	DA	Sidechain
1	AA	5309	DT	Sidechain
1	AA	531	DG	Sidechain
1	AA	5317	DG	Sidechain
1	AA	5320	DC	Sidechain
1	AA	5321	DT	Sidechain
1	AA	5326	DA	Sidechain
1	AA	5327	DT	Sidechain
1	AA	5331	DG	Sidechain
1	AA	5332	DC	Sidechain
1	AA	5337	DC	Sidechain
1	AA	534	DG	Sidechain
1	AA	5343	DT	Sidechain
1	AA	5347	DG	Sidechain
1	AA	535	DA	Sidechain
1	AA	5350	DG	Sidechain
1	AA	5352	DT	Sidechain
1	AA	5357	DT	Sidechain
1	AA	536	DG	Sidechain
1	AA	5364	DT	Sidechain
1	AA	5366	DT	Sidechain
1	AA	5369	DG	Sidechain
1	AA	537	DG	Sidechain
1	AA	5376	DA	Sidechain
1	AA	5379	DA	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	5381	DC	Sidechain
1	AA	5382	DC	Sidechain
1	AA	5383	DT	Sidechain
1	AA	5390	DT	Sidechain
1	AA	5392	DG	Sidechain
1	AA	5397	DG	Sidechain
1	AA	5406	DG	Sidechain
1	AA	5408	DT	Sidechain
1	AA	541	DA	Sidechain
1	AA	5412	DT	Sidechain
1	AA	5415	DC	Sidechain
1	AA	5422	DA	Sidechain
1	AA	5426	DC	Sidechain
1	AA	543	DG	Sidechain
1	AA	5437	DT	Sidechain
1	AA	5438	DT	Sidechain
1	AA	5440	DT	Sidechain
1	AA	5441	DA	Sidechain
1	AA	5447	DT	Sidechain
1	AA	5460	DG	Sidechain
1	AA	5462	DC	Sidechain
1	AA	5464	DG	Sidechain
1	AA	5466	DT	Sidechain
1	AA	5477	DT	Sidechain
1	AA	5479	DG	Sidechain
1	AA	5480	DA	Sidechain
1	AA	5482	DG	Sidechain
1	AA	5484	DT	Sidechain
1	AA	5491	DA	Sidechain
1	AA	5493	DA	Sidechain
1	AA	5500	DT	Sidechain
1	AA	5501	DC	Sidechain
1	AA	5503	DT	Sidechain
1	AA	5504	DA	Sidechain
1	AA	5505	DT	Sidechain
1	AA	551	DA	Sidechain
1	AA	5515	DG	Sidechain
1	AA	5519	DA	Sidechain
1	AA	5520	DA	Sidechain
1	AA	5522	DA	Sidechain
1	AA	5526	DT	Sidechain
1	AA	5530	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	5543	DA	Sidechain
1	AA	5546	DG	Sidechain
1	AA	5548	DC	Sidechain
1	AA	555	DC	Sidechain
1	AA	5555	DG	Sidechain
1	AA	5556	DG	Sidechain
1	AA	5558	DT	Sidechain
1	AA	5566	DG	Sidechain
1	AA	5567	DA	Sidechain
1	AA	5576	DA	Sidechain
1	AA	5583	DG	Sidechain
1	AA	5584	DT	Sidechain
1	AA	5585	DA	Sidechain
1	AA	5586	DA	Sidechain
1	AA	5587	DG	Sidechain
1	AA	5606	DG	Sidechain
1	AA	5613	DG	Sidechain
1	AA	5621	DG	Sidechain
1	AA	5623	DA	Sidechain
1	AA	5624	DA	Sidechain
1	AA	5625	DC	Sidechain
1	AA	5640	DG	Sidechain
1	AA	5641	DG	Sidechain
1	AA	5645	DC	Sidechain
1	AA	5646	DA	Sidechain
1	AA	5649	DA	Sidechain
1	AA	565	DT	Sidechain
1	AA	5651	DC	Sidechain
1	AA	5652	DT	Sidechain
1	AA	5660	DG	Sidechain
1	AA	5661	DT	Sidechain
1	AA	5664	DG	Sidechain
1	AA	5672	DG	Sidechain
1	AA	5678	DA	Sidechain
1	AA	5682	DC	Sidechain
1	AA	5687	DG	Sidechain
1	AA	5688	DT	Sidechain
1	AA	5692	DT	Sidechain
1	AA	5699	DC	Sidechain
1	AA	5700	DC	Sidechain
1	AA	5717	DT	Sidechain
1	AA	5720	DG	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	5723	DT	Sidechain
1	AA	5727	DT	Sidechain
1	AA	5729	DG	Sidechain
1	AA	5730	DC	Sidechain
1	AA	5740	DC	Sidechain
1	AA	5742	DG	Sidechain
1	AA	5748	DA	Sidechain
1	AA	5763	DA	Sidechain
1	AA	5771	DG	Sidechain
1	AA	5772	DG	Sidechain
1	AA	5778	DT	Sidechain
1	AA	5781	DT	Sidechain
1	AA	5791	DG	Sidechain
1	AA	5792	DT	Sidechain
1	AA	5794	DC	Sidechain
1	AA	5795	DG	Sidechain
1	AA	5799	DC	Sidechain
1	AA	5809	DT	Sidechain
1	AA	5812	DC	Sidechain
1	AA	5816	DT	Sidechain
1	AA	5820	DG	Sidechain
1	AA	5823	DA	Sidechain
1	AA	584	DT	Sidechain
1	AA	5841	DC	Sidechain
1	AA	5842	DG	Sidechain
1	AA	5849	DG	Sidechain
1	AA	5850	DA	Sidechain
1	AA	5860	DA	Sidechain
1	AA	5863	DT	Sidechain
1	AA	5864	DG	Sidechain
1	AA	5866	DT	Sidechain
1	AA	587	DG	Sidechain
1	AA	5877	DG	Sidechain
1	AA	5878	DA	Sidechain
1	AA	5879	DT	Sidechain
1	AA	5881	DG	Sidechain
1	AA	5882	DG	Sidechain
1	AA	5883	DA	Sidechain
1	AA	5884	DT	Sidechain
1	AA	5888	DA	Sidechain
1	AA	5890	DT	Sidechain
1	AA	5896	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	5897	DG	Sidechain
1	AA	5903	DG	Sidechain
1	AA	5905	DC	Sidechain
1	AA	5911	DT	Sidechain
1	AA	5919	DA	Sidechain
1	AA	592	DT	Sidechain
1	AA	5925	DA	Sidechain
1	AA	5928	DC	Sidechain
1	AA	5929	DG	Sidechain
1	AA	5935	DT	Sidechain
1	AA	5939	DT	Sidechain
1	AA	5943	DC	Sidechain
1	AA	5944	DT	Sidechain
1	AA	5947	DA	Sidechain
1	AA	595	DA	Sidechain
1	AA	5950	DT	Sidechain
1	AA	5952	DT	Sidechain
1	AA	5954	DG	Sidechain
1	AA	5958	DA	Sidechain
1	AA	5959	DT	Sidechain
1	AA	5962	DT	Sidechain
1	AA	5972	DG	Sidechain
1	AA	5973	DA	Sidechain
1	AA	5977	DA	Sidechain
1	AA	5979	DT	Sidechain
1	AA	598	DC	Sidechain
1	AA	5983	DT	Sidechain
1	AA	5984	DT	Sidechain
1	AA	5985	DT	Sidechain
1	AA	5986	DA	Sidechain
1	AA	5991	DT	Sidechain
1	AA	5993	DG	Sidechain
1	AA	5995	DC	Sidechain
1	AA	5997	DG	Sidechain
1	AA	600	DG	Sidechain
1	AA	6003	DT	Sidechain
1	AA	6008	DT	Sidechain
1	AA	6010	DT	Sidechain
1	AA	6016	DT	Sidechain
1	AA	602	DC	Sidechain
1	AA	6030	DT	Sidechain
1	AA	6039	DC	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	6045	DT	Sidechain
1	AA	6048	DA	Sidechain
1	AA	6050	DG	Sidechain
1	AA	6051	DT	Sidechain
1	AA	6055	DC	Sidechain
1	AA	6057	DT	Sidechain
1	AA	6067	DT	Sidechain
1	AA	6068	DG	Sidechain
1	AA	6069	DG	Sidechain
1	AA	6071	DG	Sidechain
1	AA	6080	DT	Sidechain
1	AA	6085	DC	Sidechain
1	AA	6087	DC	Sidechain
1	AA	61	DT	Sidechain
1	AA	610	DT	Sidechain
1	AA	6104	DC	Sidechain
1	AA	6105	DT	Sidechain
1	AA	6109	DT	Sidechain
1	AA	6114	DG	Sidechain
1	AA	6118	DG	Sidechain
1	AA	6122	DT	Sidechain
1	AA	6126	DA	Sidechain
1	AA	6129	DA	Sidechain
1	AA	6137	DG	Sidechain
1	AA	6141	DC	Sidechain
1	AA	6142	DT	Sidechain
1	AA	6149	DG	Sidechain
1	AA	6152	DT	Sidechain
1	AA	6160	DT	Sidechain
1	AA	617	DC	Sidechain
1	AA	6172	DC	Sidechain
1	AA	6176	DG	Sidechain
1	AA	6177	DT	Sidechain
1	AA	6185	DT	Sidechain
1	AA	6187	DT	Sidechain
1	AA	6193	DG	Sidechain
1	AA	6196	DT	Sidechain
1	AA	6199	DT	Sidechain
1	AA	620	DA	Sidechain
1	AA	6203	DT	Sidechain
1	AA	621	DG	Sidechain
1	AA	6218	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	6237	DG	Sidechain
1	AA	624	DC	Sidechain
1	AA	6244	DG	Sidechain
1	AA	6245	DA	Sidechain
1	AA	6248	DA	Sidechain
1	AA	6249	DA	Sidechain
1	AA	6253	DA	Sidechain
1	AA	626	DA	Sidechain
1	AA	6260	DA	Sidechain
1	AA	6265	DT	Sidechain
1	AA	6266	DT	Sidechain
1	AA	6267	DT	Sidechain
1	AA	6271	DA	Sidechain
1	AA	6278	DT	Sidechain
1	AA	6280	DT	Sidechain
1	AA	6282	DG	Sidechain
1	AA	6294	DT	Sidechain
1	AA	6295	DT	Sidechain
1	AA	6296	DG	Sidechain
1	AA	6300	DT	Sidechain
1	AA	6304	DA	Sidechain
1	AA	6308	DG	Sidechain
1	AA	6318	DT	Sidechain
1	AA	6325	DT	Sidechain
1	AA	6327	DG	Sidechain
1	AA	633	DG	Sidechain
1	AA	6338	DC	Sidechain
1	AA	6341	DC	Sidechain
1	AA	6343	DT	Sidechain
1	AA	635	DA	Sidechain
1	AA	6350	DG	Sidechain
1	AA	6352	DG	Sidechain
1	AA	6353	DG	Sidechain
1	AA	636	DC	Sidechain
1	AA	6363	DT	Sidechain
1	AA	6364	DA	Sidechain
1	AA	6365	DG	Sidechain
1	AA	6366	DT	Sidechain
1	AA	6367	DC	Sidechain
1	AA	6370	DT	Sidechain
1	AA	6391	DA	Sidechain
1	AA	6393	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	6400	DT	Sidechain
1	AA	641	DG	Sidechain
1	AA	6419	DA	Sidechain
1	AA	6422	DC	Sidechain
1	AA	6423	DT	Sidechain
1	AA	6426	DG	Sidechain
1	AA	6430	DT	Sidechain
1	AA	6433	DC	Sidechain
1	AA	6437	DG	Sidechain
1	AA	6439	DT	Sidechain
1	AA	6441	DT	Sidechain
1	AA	6451	DT	Sidechain
1	AA	6461	DT	Sidechain
1	AA	6474	DA	Sidechain
1	AA	6478	DT	Sidechain
1	AA	6483	DA	Sidechain
1	AA	6496	DT	Sidechain
1	AA	6498	DC	Sidechain
1	AA	6499	DA	Sidechain
1	AA	6502	DC	Sidechain
1	AA	6506	DT	Sidechain
1	AA	6510	DT	Sidechain
1	AA	6512	DG	Sidechain
1	AA	6514	DT	Sidechain
1	AA	6524	DG	Sidechain
1	AA	6525	DT	Sidechain
1	AA	6526	DT	Sidechain
1	AA	6531	DT	Sidechain
1	AA	6534	DA	Sidechain
1	AA	6539	DG	Sidechain
1	AA	6541	DT	Sidechain
1	AA	6557	DG	Sidechain
1	AA	6567	DA	Sidechain
1	AA	6569	DT	Sidechain
1	AA	6580	DT	Sidechain
1	AA	6584	DG	Sidechain
1	AA	6588	DT	Sidechain
1	AA	6590	DT	Sidechain
1	AA	6594	DT	Sidechain
1	AA	661	DA	Sidechain
1	AA	6615	DG	Sidechain
1	AA	6616	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	6627	DA	Sidechain
1	AA	6631	DA	Sidechain
1	AA	6633	DT	Sidechain
1	AA	664	DG	Sidechain
1	AA	6640	DT	Sidechain
1	AA	6645	DG	Sidechain
1	AA	6649	DT	Sidechain
1	AA	6653	DA	Sidechain
1	AA	6654	DA	Sidechain
1	AA	6663	DT	Sidechain
1	AA	6668	DG	Sidechain
1	AA	6670	DA	Sidechain
1	AA	668	DG	Sidechain
1	AA	6680	DA	Sidechain
1	AA	6687	DA	Sidechain
1	AA	6688	DT	Sidechain
1	AA	6689	DT	Sidechain
1	AA	669	DA	Sidechain
1	AA	6691	DT	Sidechain
1	AA	6692	DT	Sidechain
1	AA	67	DA	Sidechain
1	AA	670	DT	Sidechain
1	AA	6700	DA	Sidechain
1	AA	6714	DG	Sidechain
1	AA	6719	DT	Sidechain
1	AA	6723	DT	Sidechain
1	AA	6726	DT	Sidechain
1	AA	6732	DG	Sidechain
1	AA	6733	DA	Sidechain
1	AA	674	DG	Sidechain
1	AA	6746	DA	Sidechain
1	AA	6751	DT	Sidechain
1	AA	6754	DG	Sidechain
1	AA	6757	DA	Sidechain
1	AA	676	DG	Sidechain
1	AA	6763	DT	Sidechain
1	AA	6765	DA	Sidechain
1	AA	6766	DT	Sidechain
1	AA	6778	DG	Sidechain
1	AA	6779	DT	Sidechain
1	AA	678	DG	Sidechain
1	AA	6782	DA	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	6784	DA	Sidechain
1	AA	6793	DA	Sidechain
1	AA	6794	DT	Sidechain
1	AA	6797	DG	Sidechain
1	AA	6798	DG	Sidechain
1	AA	6801	DG	Sidechain
1	AA	6802	DG	Sidechain
1	AA	6804	DT	Sidechain
1	AA	6811	DC	Sidechain
1	AA	6813	DT	Sidechain
1	AA	6814	DC	Sidechain
1	AA	6817	DT	Sidechain
1	AA	6824	DG	Sidechain
1	AA	683	DG	Sidechain
1	AA	6830	DT	Sidechain
1	AA	6833	DT	Sidechain
1	AA	684	DG	Sidechain
1	AA	6840	DA	Sidechain
1	AA	6845	DG	Sidechain
1	AA	6846	DG	Sidechain
1	AA	6847	DA	Sidechain
1	AA	6850	DA	Sidechain
1	AA	6857	DT	Sidechain
1	AA	6860	DA	Sidechain
1	AA	6861	DT	Sidechain
1	AA	6863	DG	Sidechain
1	AA	6866	DA	Sidechain
1	AA	6867	DT	Sidechain
1	AA	6871	DC	Sidechain
1	AA	6874	DA	Sidechain
1	AA	6881	DG	Sidechain
1	AA	6883	DA	Sidechain
1	AA	6887	DT	Sidechain
1	AA	6890	DT	Sidechain
1	AA	6893	DT	Sidechain
1	AA	690	DC	Sidechain
1	AA	6905	DT	Sidechain
1	AA	6909	DG	Sidechain
1	AA	691	DT	Sidechain
1	AA	6912	DG	Sidechain
1	AA	6919	DT	Sidechain
1	AA	692	DG	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	6926	DG	Sidechain
1	AA	693	DG	Sidechain
1	AA	6934	DA	Sidechain
1	AA	6938	DT	Sidechain
1	AA	6939	DG	Sidechain
1	AA	6940	DT	Sidechain
1	AA	695	DT	Sidechain
1	AA	6950	DT	Sidechain
1	AA	6960	DA	Sidechain
1	AA	6961	DA	Sidechain
1	AA	6978	DG	Sidechain
1	AA	6980	DT	Sidechain
1	AA	6981	DT	Sidechain
1	AA	6988	DG	Sidechain
1	AA	6990	DG	Sidechain
1	AA	700	DG	Sidechain
1	AA	7000	DT	Sidechain
1	AA	7001	DG	Sidechain
1	AA	701	DT	Sidechain
1	AA	7012	DC	Sidechain
1	AA	7016	DT	Sidechain
1	AA	7019	DT	Sidechain
1	AA	7021	DC	Sidechain
1	AA	7026	DT	Sidechain
1	AA	7028	DC	Sidechain
1	AA	7043	DT	Sidechain
1	AA	7051	DG	Sidechain
1	AA	7054	DC	Sidechain
1	AA	7059	DC	Sidechain
1	AA	7063	DT	Sidechain
1	AA	7064	DA	Sidechain
1	AA	7082	DA	Sidechain
1	AA	7083	DG	Sidechain
1	AA	7085	DT	Sidechain
1	AA	7093	DA	Sidechain
1	AA	71	DG	Sidechain
1	AA	7101	DC	Sidechain
1	AA	7102	DC	Sidechain
1	AA	7107	DT	Sidechain
1	AA	7112	DT	Sidechain
1	AA	7114	DC	Sidechain
1	AA	7119	DG	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	7120	DT	Sidechain
1	AA	7122	DG	Sidechain
1	AA	7123	DA	Sidechain
1	AA	7124	DT	Sidechain
1	AA	7127	DG	Sidechain
1	AA	7128	DC	Sidechain
1	AA	7131	DA	Sidechain
1	AA	714	DG	Sidechain
1	AA	7141	DT	Sidechain
1	AA	7146	DA	Sidechain
1	AA	7151	DG	Sidechain
1	AA	7156	DT	Sidechain
1	AA	7161	DT	Sidechain
1	AA	7166	DG	Sidechain
1	AA	7168	DT	Sidechain
1	AA	7169	DT	Sidechain
1	AA	717	DG	Sidechain
1	AA	7179	DG	Sidechain
1	AA	7181	DT	Sidechain
1	AA	7184	DT	Sidechain
1	AA	7189	DA	Sidechain
1	AA	7193	DT	Sidechain
1	AA	7197	DT	Sidechain
1	AA	7198	DT	Sidechain
1	AA	7212	DC	Sidechain
1	AA	7215	DC	Sidechain
1	AA	7244	DT	Sidechain
1	AA	7248	DC	Sidechain
1	AA	7259	DT	Sidechain
1	AA	7261	DT	Sidechain
1	AA	7268	DT	Sidechain
1	AA	7276	DG	Sidechain
1	AA	7290	DA	Sidechain
1	AA	7306	DT	Sidechain
1	AA	7307	DT	Sidechain
1	AA	7308	DT	Sidechain
1	AA	7313	DG	Sidechain
1	AA	7315	DT	Sidechain
1	AA	7316	DA	Sidechain
1	AA	7323	DC	Sidechain
1	AA	7329	DT	Sidechain
1	AA	7336	DC	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	7347	DT	Sidechain
1	AA	7356	DT	Sidechain
1	AA	7364	DG	Sidechain
1	AA	7369	DG	Sidechain
1	AA	7371	DA	Sidechain
1	AA	7375	DT	Sidechain
1	AA	7386	DG	Sidechain
1	AA	7387	DG	Sidechain
1	AA	7394	DG	Sidechain
1	AA	7398	DT	Sidechain
1	AA	7403	DC	Sidechain
1	AA	7405	DC	Sidechain
1	AA	7408	DT	Sidechain
1	AA	7410	DG	Sidechain
1	AA	7414	DA	Sidechain
1	AA	7422	DC	Sidechain
1	AA	7424	DT	Sidechain
1	AA	7433	DT	Sidechain
1	AA	744	DG	Sidechain
1	AA	7447	DG	Sidechain
1	AA	746	DG	Sidechain
1	AA	747	DT	Sidechain
1	AA	7472	DA	Sidechain
1	AA	7473	DT	Sidechain
1	AA	7479	DA	Sidechain
1	AA	7481	DG	Sidechain
1	AA	7486	DA	Sidechain
1	AA	7487	DG	Sidechain
1	AA	7489	DG	Sidechain
1	AA	7492	DA	Sidechain
1	AA	7494	DA	Sidechain
1	AA	7497	DG	Sidechain
1	AA	750	DG	Sidechain
1	AA	7500	DG	Sidechain
1	AA	7504	DT	Sidechain
1	AA	7506	DT	Sidechain
1	AA	7507	DC	Sidechain
1	AA	7511	DG	Sidechain
1	AA	7512	DA	Sidechain
1	AA	7515	DG	Sidechain
1	AA	7516	DT	Sidechain
1	AA	7523	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	7525	DT	Sidechain
1	AA	7531	DT	Sidechain
1	AA	7536	DG	Sidechain
1	AA	7538	DC	Sidechain
1	AA	7543	DA	Sidechain
1	AA	755	DG	Sidechain
1	AA	7553	DG	Sidechain
1	AA	7560	DA	Sidechain
1	AA	7561	DC	Sidechain
1	AA	7564	DG	Sidechain
1	AA	7566	DA	Sidechain
1	AA	7567	DA	Sidechain
1	AA	7573	DA	Sidechain
1	AA	7578	DT	Sidechain
1	AA	758	DT	Sidechain
1	AA	7580	DG	Sidechain
1	AA	7582	DG	Sidechain
1	AA	76	DA	Sidechain
1	AA	760	DT	Sidechain
1	AA	7600	DG	Sidechain
1	AA	7601	DT	Sidechain
1	AA	7604	DT	Sidechain
1	AA	7606	DT	Sidechain
1	AA	7612	DC	Sidechain
1	AA	7619	DA	Sidechain
1	AA	762	DA	Sidechain
1	AA	7625	DT	Sidechain
1	AA	7627	DT	Sidechain
1	AA	7643	DT	Sidechain
1	AA	7645	DT	Sidechain
1	AA	7648	DG	Sidechain
1	AA	7651	DA	Sidechain
1	AA	7653	DG	Sidechain
1	AA	7655	DA	Sidechain
1	AA	7660	DC	Sidechain
1	AA	7661	DT	Sidechain
1	AA	7665	DT	Sidechain
1	AA	7669	DT	Sidechain
1	AA	7672	DG	Sidechain
1	AA	7673	DT	Sidechain
1	AA	7674	DG	Sidechain
1	AA	7675	DG	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	7681	DC	Sidechain
1	AA	7693	DA	Sidechain
1	AA	7697	DT	Sidechain
1	AA	7700	DT	Sidechain
1	AA	7704	DG	Sidechain
1	AA	7707	DT	Sidechain
1	AA	771	DG	Sidechain
1	AA	772	DA	Sidechain
1	AA	7720	DT	Sidechain
1	AA	7726	DC	Sidechain
1	AA	7730	DA	Sidechain
1	AA	7732	DT	Sidechain
1	AA	7735	DC	Sidechain
1	AA	7737	DT	Sidechain
1	AA	7739	DA	Sidechain
1	AA	774	DA	Sidechain
1	AA	7740	DA	Sidechain
1	AA	7743	DG	Sidechain
1	AA	7748	DC	Sidechain
1	AA	775	DC	Sidechain
1	AA	7754	DT	Sidechain
1	AA	7755	DA	Sidechain
1	AA	7756	DG	Sidechain
1	AA	7763	DC	Sidechain
1	AA	7768	DA	Sidechain
1	AA	7772	DT	Sidechain
1	AA	7775	DC	Sidechain
1	AA	7783	DG	Sidechain
1	AA	7786	DC	Sidechain
1	AA	7790	DA	Sidechain
1	AA	7793	DC	Sidechain
1	AA	7794	DG	Sidechain
1	AA	7795	DT	Sidechain
1	AA	7797	DC	Sidechain
1	AA	7798	DT	Sidechain
1	AA	7807	DC	Sidechain
1	AA	7809	DA	Sidechain
1	AA	7810	DC	Sidechain
1	AA	7816	DT	Sidechain
1	AA	7821	DG	Sidechain
1	AA	7822	DC	Sidechain
1	AA	7823	DC	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	7824	DC	Sidechain
1	AA	7828	DA	Sidechain
1	AA	7831	DG	Sidechain
1	AA	7838	DT	Sidechain
1	AA	7850	DG	Sidechain
1	AA	7873	DA	Sidechain
1	AA	7876	DG	Sidechain
1	AA	789	DC	Sidechain
1	AA	7895	DT	Sidechain
1	AA	7901	DC	Sidechain
1	AA	7903	DG	Sidechain
1	AA	7904	DC	Sidechain
1	AA	7905	DT	Sidechain
1	AA	7908	DT	Sidechain
1	AA	7909	DT	Sidechain
1	AA	7913	DC	Sidechain
1	AA	7916	DT	Sidechain
1	AA	7924	DT	Sidechain
1	AA	7925	DC	Sidechain
1	AA	7927	DT	Sidechain
1	AA	7933	DG	Sidechain
1	AA	7938	DG	Sidechain
1	AA	794	DG	Sidechain
1	AA	7942	DG	Sidechain
1	AA	7945	DG	Sidechain
1	AA	7947	DC	Sidechain
1	AA	7957	DC	Sidechain
1	AA	796	DA	Sidechain
1	AA	7960	DG	Sidechain
1	AA	7967	DA	Sidechain
1	AA	7970	DG	Sidechain
1	AA	7971	DG	Sidechain
1	AA	7973	DG	Sidechain
1	AA	7978	DC	Sidechain
1	AA	7984	DG	Sidechain
1	AA	7985	DG	Sidechain
1	AA	7993	DT	Sidechain
1	AA	7994	DT	Sidechain
1	AA	8000	DC	Sidechain
1	AA	8004	DA	Sidechain
1	AA	8005	DC	Sidechain
1	AA	8006	DG	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	8007	DG	Sidechain
1	AA	8008	DC	Sidechain
1	AA	8009	DA	Sidechain
1	AA	802	DA	Sidechain
1	AA	8026	DC	Sidechain
1	AA	8027	DT	Sidechain
1	AA	803	DC	Sidechain
1	AA	8030	DA	Sidechain
1	AA	8031	DT	Sidechain
1	AA	8035	DG	Sidechain
1	AA	8039	DA	Sidechain
1	AA	8040	DT	Sidechain
1	AA	8049	DT	Sidechain
1	AA	805	DG	Sidechain
1	AA	8053	DG	Sidechain
1	AA	8054	DG	Sidechain
1	AA	8056	DC	Sidechain
1	AA	8060	DC	Sidechain
1	AA	8063	DC	Sidechain
1	AA	807	DG	Sidechain
1	AA	808	DA	Sidechain
1	AA	813	DG	Sidechain
1	AA	814	DC	Sidechain
1	AA	818	DT	Sidechain
1	AA	824	DA	Sidechain
1	AA	827	DC	Sidechain
1	AA	828	DG	Sidechain
1	AA	834	DG	Sidechain
1	AA	836	DC	Sidechain
1	AA	837	DG	Sidechain
1	AA	839	DA	Sidechain
1	AA	840	DT	Sidechain
1	AA	844	DG	Sidechain
1	AA	847	DC	Sidechain
1	AA	849	DA	Sidechain
1	AA	85	DC	Sidechain
1	AA	851	DA	Sidechain
1	AA	854	DG	Sidechain
1	AA	856	DC	Sidechain
1	AA	866	DC	Sidechain
1	AA	87	DT	Sidechain
1	AA	871	DT	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	873	DA	Sidechain
1	AA	874	DT	Sidechain
1	AA	878	DG	Sidechain
1	AA	879	DG	Sidechain
1	AA	886	DC	Sidechain
1	AA	895	DA	Sidechain
1	AA	896	DG	Sidechain
1	AA	897	DC	Sidechain
1	AA	900	DG	Sidechain
1	AA	901	DT	Sidechain
1	AA	907	DG	Sidechain
1	AA	908	DG	Sidechain
1	AA	910	DA	Sidechain
1	AA	912	DG	Sidechain
1	AA	927	DG	Sidechain
1	AA	93	DG	Sidechain
1	AA	930	DG	Sidechain
1	AA	931	DC	Sidechain
1	AA	936	DG	Sidechain
1	AA	939	DA	Sidechain
1	AA	94	DG	Sidechain
1	AA	947	DG	Sidechain
1	AA	95	DG	Sidechain
1	AA	951	DG	Sidechain
1	AA	954	DG	Sidechain
1	AA	955	DC	Sidechain
1	AA	96	DC	Sidechain
1	AA	961	DA	Sidechain
1	AA	966	DA	Sidechain
1	AA	967	DG	Sidechain
1	AA	974	DG	Sidechain
1	AA	976	DT	Sidechain
1	AA	978	DA	Sidechain
1	AA	980	DG	Sidechain
1	AA	981	DT	Sidechain
1	AA	99	DT	Sidechain
1	AA	997	DC	Sidechain
1	AA	998	DG	Sidechain
1	AA	999	DT	Sidechain
2	AB	17	DA	Sidechain
2	AB	19	DG	Sidechain
2	AB	24	DC	Sidechain

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Mol	Chain	Res	Type	Group
2	AB	30	DG	Sidechain
2	AB	32	DT	Sidechain
2	AB	36	DG	Sidechain
2	AB	37	DA	Sidechain
2	AB	39	DG	Sidechain
2	AB	46	DC	Sidechain
2	AB	47	DT	Sidechain
3	AC	16	DC	Sidechain
3	AC	17	DT	Sidechain
3	AC	2	DT	Sidechain
3	AC	20	DA	Sidechain
3	AC	21	DA	Sidechain
3	AC	28	DA	Sidechain
3	AC	33	DA	Sidechain
3	AC	35	DG	Sidechain
3	AC	37	DA	Sidechain
3	AC	41	DG	Sidechain
3	AC	43	DC	Sidechain
3	AC	46	DA	Sidechain
3	AC	50	DC	Sidechain
4	AD	13	DG	Sidechain
4	AD	17	DT	Sidechain
4	AD	18	DA	Sidechain
4	AD	21	DC	Sidechain
4	AD	3	DG	Sidechain
4	AD	30	DA	Sidechain
4	AD	33	DC	Sidechain
4	AD	4	DA	Sidechain
4	AD	40	DG	Sidechain
4	AD	47	DG	Sidechain
4	AD	6	DA	Sidechain
4	AD	9	DT	Sidechain
5	AE	1	DC	Sidechain
5	AE	37	DT	Sidechain
5	AE	38	DA	Sidechain
5	AE	4	DA	Sidechain
5	AE	8	DT	Sidechain
6	AF	1	DG	Sidechain
6	AF	12	DA	Sidechain
6	AF	17	DT	Sidechain
6	AF	2	DT	Sidechain
6	AF	23	DA	Sidechain

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Mol	Chain	Res	Type	Group
6	AF	25	DT	Sidechain
6	AF	26	DC	Sidechain
6	AF	27	DC	Sidechain
6	AF	33	DT	Sidechain
6	AF	39	DA	Sidechain
6	AF	40	DT	Sidechain
6	AF	42	DT	Sidechain
6	AF	46	DC	Sidechain
6	AF	47	DG	Sidechain
6	AF	48	DG	Sidechain
6	AF	5	DT	Sidechain
6	AF	6	DC	Sidechain
7	AG	19	DG	Sidechain
7	AG	26	DT	Sidechain
7	AG	31	DT	Sidechain
7	AG	34	DT	Sidechain
7	AG	5	DG	Sidechain
8	AH	1	DA	Sidechain
8	AH	2	DG	Sidechain
8	AH	23	DT	Sidechain
8	AH	7	DT	Sidechain
8	AH	8	DA	Sidechain
8	AH	9	DG	Sidechain
9	AI	21	DA	Sidechain
9	AI	24	DT	Sidechain
9	AI	26	DT	Sidechain
9	AI	28	DT	Sidechain
9	AI	4	DT	Sidechain
9	AI	8	DT	Sidechain
10	AJ	1	DG	Sidechain
10	AJ	11	DC	Sidechain
10	AJ	37	DG	Sidechain
10	AJ	38	DA	Sidechain
10	AJ	40	DT	Sidechain
10	AJ	41	DA	Sidechain
10	AJ	42	DA	Sidechain
11	AK	29	DT	Sidechain
11	AK	30	DA	Sidechain
11	AK	7	DA	Sidechain
11	AK	8	DG	Sidechain
12	AL	19	DT	Sidechain
12	AL	21	DT	Sidechain

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Mol	Chain	Res	Type	Group
12	AL	27	DC	Sidechain
12	AL	43	DT	Sidechain
12	AL	6	DT	Sidechain
13	AM	22	DC	Sidechain
13	AM	35	DT	Sidechain
14	AN	13	DA	Sidechain
14	AN	16	DG	Sidechain
14	AN	17	DT	Sidechain
14	AN	21	DG	Sidechain
14	AN	22	DG	Sidechain
14	AN	31	DG	Sidechain
14	AN	33	DT	Sidechain
14	AN	44	DA	Sidechain
15	AO	1	DA	Sidechain
15	AO	16	DA	Sidechain
15	AO	28	DA	Sidechain
15	AO	30	DG	Sidechain
15	AO	37	DT	Sidechain
15	AO	41	DT	Sidechain
15	AO	45	DG	Sidechain
15	AO	46	DA	Sidechain
16	AP	14	DA	Sidechain
16	AP	21	DC	Sidechain
16	AP	29	DA	Sidechain
16	AP	37	DG	Sidechain
16	AP	39	DA	Sidechain
16	AP	41	DC	Sidechain
16	AP	43	DA	Sidechain
16	AP	44	DT	Sidechain
16	AP	47	DT	Sidechain
16	AP	8	DC	Sidechain
17	AQ	14	DT	Sidechain
17	AQ	28	DC	Sidechain
17	AQ	32	DC	Sidechain
17	AQ	42	DT	Sidechain
17	AQ	43	DT	Sidechain
17	AQ	46	DT	Sidechain
17	AQ	5	DT	Sidechain
18	AR	19	DC	Sidechain
18	AR	20	DT	Sidechain
18	AR	25	DC	Sidechain
18	AR	28	DT	Sidechain

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Mol	Chain	Res	Type	Group
18	AR	30	DT	Sidechain
18	AR	32	DC	Sidechain
18	AR	37	DG	Sidechain
18	AR	46	DT	Sidechain
18	AR	8	DG	Sidechain
18	AR	9	DG	Sidechain
19	AS	1	DC	Sidechain
19	AS	12	DA	Sidechain
19	AS	16	DA	Sidechain
19	AS	19	DA	Sidechain
19	AS	21	DG	Sidechain
19	AS	24	DC	Sidechain
19	AS	29	DT	Sidechain
19	AS	34	DT	Sidechain
19	AS	37	DT	Sidechain
19	AS	40	DA	Sidechain
19	AS	44	DT	Sidechain
19	AS	50	DT	Sidechain
20	AT	1	DA	Sidechain
20	AT	10	DC	Sidechain
20	AT	14	DT	Sidechain
20	AT	28	DA	Sidechain
20	AT	41	DC	Sidechain
20	AT	45	DG	Sidechain
20	AT	5	DG	Sidechain
20	AT	6	DC	Sidechain
21	AU	10	DG	Sidechain
21	AU	11	DG	Sidechain
21	AU	12	DA	Sidechain
21	AU	14	DT	Sidechain
21	AU	16	DG	Sidechain
21	AU	20	DA	Sidechain
21	AU	22	DA	Sidechain
21	AU	30	DG	Sidechain
21	AU	38	DG	Sidechain
21	AU	39	DA	Sidechain
21	AU	5	DT	Sidechain
21	AU	9	DC	Sidechain
22	AV	14	DA	Sidechain
22	AV	22	DA	Sidechain
22	AV	25	DT	Sidechain
22	AV	28	DT	Sidechain

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Mol	Chain	Res	Type	Group
22	AV	29	DT	Sidechain
22	AV	32	DT	Sidechain
23	AW	1	DA	Sidechain
23	AW	11	DA	Sidechain
23	AW	19	DT	Sidechain
23	AW	21	DG	Sidechain
23	AW	38	DG	Sidechain
23	AW	39	DA	Sidechain
23	AW	42	DC	Sidechain
23	AW	46	DA	Sidechain
23	AW	6	DG	Sidechain
23	AW	9	DG	Sidechain
24	AX	10	DT	Sidechain
24	AX	15	DG	Sidechain
24	AX	16	DC	Sidechain
24	AX	19	DA	Sidechain
24	AX	27	DG	Sidechain
24	AX	30	DT	Sidechain
24	AX	32	DG	Sidechain
24	AX	33	DG	Sidechain
24	AX	4	DA	Sidechain
25	AY	1	DA	Sidechain
25	AY	20	DT	Sidechain
25	AY	24	DA	Sidechain
25	AY	25	DA	Sidechain
25	AY	26	DA	Sidechain
25	AY	37	DT	Sidechain
25	AY	4	DT	Sidechain
25	AY	42	DC	Sidechain
25	AY	43	DC	Sidechain
26	AZ	1	DC	Sidechain
26	AZ	15	DC	Sidechain
26	AZ	23	DT	Sidechain
26	AZ	24	DC	Sidechain
26	AZ	30	DA	Sidechain
26	AZ	34	DC	Sidechain
26	AZ	8	DA	Sidechain
27	Aa	1	DT	Sidechain
27	Aa	10	DA	Sidechain
27	Aa	11	DC	Sidechain
27	Aa	12	DG	Sidechain
27	Aa	15	DG	Sidechain

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Mol	Chain	Res	Type	Group
27	Aa	20	DG	Sidechain
27	Aa	21	DC	Sidechain
27	Aa	23	DG	Sidechain
27	Aa	34	DT	Sidechain
27	Aa	35	DC	Sidechain
27	Aa	51	DA	Sidechain
27	Aa	9	DA	Sidechain
28	Ab	20	DA	Sidechain
28	Ab	24	DC	Sidechain
28	Ab	25	DA	Sidechain
28	Ab	26	DT	Sidechain
28	Ab	27	DT	Sidechain
28	Ab	33	DG	Sidechain
28	Ab	35	DC	Sidechain
29	Ac	11	DT	Sidechain
29	Ac	17	DC	Sidechain
29	Ac	18	DG	Sidechain
29	Ac	25	DA	Sidechain
30	Ad	15	DG	Sidechain
30	Ad	2	DA	Sidechain
30	Ad	23	DT	Sidechain
30	Ad	25	DA	Sidechain
30	Ad	29	DT	Sidechain
30	Ad	33	DA	Sidechain
30	Ad	38	DT	Sidechain
30	Ad	9	DC	Sidechain
31	Ae	12	DG	Sidechain
31	Ae	14	DC	Sidechain
31	Ae	15	DA	Sidechain
31	Ae	18	DG	Sidechain
31	Ae	30	DT	Sidechain
31	Ae	46	DG	Sidechain
31	Ae	47	DT	Sidechain
31	Ae	49	DT	Sidechain
31	Ae	5	DT	Sidechain
31	Ae	7	DT	Sidechain
32	Af	18	DC	Sidechain
32	Af	20	DT	Sidechain
32	Af	26	DA	Sidechain
32	Af	29	DT	Sidechain
32	Af	31	DC	Sidechain
32	Af	35	DG	Sidechain

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Mol	Chain	Res	Type	Group
32	Af	36	DC	Sidechain
32	Af	6	DT	Sidechain
32	Af	9	DA	Sidechain
33	Ag	16	DC	Sidechain
33	Ag	17	DT	Sidechain
33	Ag	18	DT	Sidechain
33	Ag	29	DT	Sidechain
33	Ag	3	DT	Sidechain
33	Ag	9	DT	Sidechain
34	Ah	14	DC	Sidechain
34	Ah	27	DA	Sidechain
34	Ah	38	DA	Sidechain
35	Ai	1	DT	Sidechain
35	Ai	11	DC	Sidechain
35	Ai	12	DA	Sidechain
35	Ai	14	DG	Sidechain
35	Ai	2	DT	Sidechain
35	Ai	22	DT	Sidechain
35	Ai	25	DT	Sidechain
35	Ai	3	DT	Sidechain
35	Ai	30	DT	Sidechain
35	Ai	33	DT	Sidechain
35	Ai	37	DA	Sidechain
35	Ai	4	DT	Sidechain
35	Ai	42	DG	Sidechain
35	Ai	7	DA	Sidechain
36	Aj	15	DT	Sidechain
36	Aj	27	DG	Sidechain
36	Aj	31	DG	Sidechain
36	Aj	37	DA	Sidechain
36	Aj	8	DC	Sidechain
37	Ak	12	DA	Sidechain
37	Ak	23	DT	Sidechain
38	Al	12	DA	Sidechain
38	Al	16	DA	Sidechain
38	Al	22	DC	Sidechain
38	Al	25	DT	Sidechain
38	Al	3	DT	Sidechain
38	Al	30	DT	Sidechain
38	Al	44	DT	Sidechain
38	Al	53	DC	Sidechain
38	Al	56	DC	Sidechain

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Mol	Chain	Res	Type	Group
39	Am	21	DT	Sidechain
39	Am	23	DA	Sidechain
39	Am	28	DC	Sidechain
39	Am	3	DT	Sidechain
39	Am	35	DT	Sidechain
39	Am	8	DG	Sidechain
40	An	10	DC	Sidechain
40	An	12	DG	Sidechain
40	An	13	DC	Sidechain
40	An	15	DG	Sidechain
40	An	17	DA	Sidechain
40	An	18	DA	Sidechain
40	An	2	DA	Sidechain
40	An	20	DA	Sidechain
40	An	24	DC	Sidechain
40	An	35	DG	Sidechain
40	An	39	DT	Sidechain
40	An	6	DT	Sidechain
41	Ao	15	DT	Sidechain
41	Ao	19	DT	Sidechain
41	Ao	2	DA	Sidechain
41	Ao	40	DA	Sidechain
41	Ao	44	DA	Sidechain
41	Ao	7	DT	Sidechain
41	Ao	9	DA	Sidechain
42	Ap	12	DG	Sidechain
42	Ap	15	DT	Sidechain
42	Ap	19	DT	Sidechain
42	Ap	25	DG	Sidechain
42	Ap	4	DC	Sidechain
42	Ap	46	DT	Sidechain
43	Aq	13	DG	Sidechain
43	Aq	18	DC	Sidechain
43	Aq	20	DG	Sidechain
43	Aq	21	DA	Sidechain
43	Aq	24	DT	Sidechain
43	Aq	27	DT	Sidechain
43	Aq	3	DG	Sidechain
43	Aq	30	DA	Sidechain
43	Aq	5	DA	Sidechain
43	Aq	6	DT	Sidechain
43	Aq	9	DA	Sidechain

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Mol	Chain	Res	Type	Group
44	Ar	14	DA	Sidechain
44	Ar	20	DT	Sidechain
44	Ar	21	DT	Sidechain
44	Ar	26	DT	Sidechain
44	Ar	27	DC	Sidechain
44	Ar	29	DT	Sidechain
44	Ar	33	DG	Sidechain
44	Ar	43	DG	Sidechain
44	Ar	45	DT	Sidechain
44	Ar	47	DA	Sidechain
44	Ar	7	DT	Sidechain
45	As	23	DA	Sidechain
45	As	29	DG	Sidechain
45	As	30	DA	Sidechain
45	As	46	DT	Sidechain
45	As	8	DT	Sidechain
46	At	11	DG	Sidechain
46	At	13	DA	Sidechain
46	At	35	DG	Sidechain
46	At	37	DA	Sidechain
46	At	4	DC	Sidechain
46	At	44	DG	Sidechain
46	At	46	DG	Sidechain
46	At	51	DC	Sidechain
46	At	53	DG	Sidechain
46	At	54	DA	Sidechain
47	Au	14	DA	Sidechain
47	Au	31	DC	Sidechain
47	Au	34	DT	Sidechain
47	Au	38	DA	Sidechain
47	Au	4	DT	Sidechain
47	Au	8	DC	Sidechain
47	Au	9	DA	Sidechain
48	Av	11	DC	Sidechain
48	Av	14	DT	Sidechain
48	Av	18	DT	Sidechain
48	Av	27	DA	Sidechain
48	Av	29	DT	Sidechain
48	Av	43	DG	Sidechain
48	Av	5	DC	Sidechain
48	Av	6	DC	Sidechain
49	Aw	23	DT	Sidechain

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Mol	Chain	Res	Type	Group
49	Aw	37	DT	Sidechain
49	Aw	38	DA	Sidechain
49	Aw	44	DT	Sidechain
49	Aw	47	DT	Sidechain
50	Ax	12	DA	Sidechain
50	Ax	14	DC	Sidechain
50	Ax	15	DT	Sidechain
50	Ax	2	DT	Sidechain
50	Ax	20	DC	Sidechain
50	Ax	21	DC	Sidechain
50	Ax	23	DG	Sidechain
50	Ax	26	DT	Sidechain
50	Ax	9	DC	Sidechain
51	Ay	13	DC	Sidechain
51	Ay	20	DA	Sidechain
51	Ay	23	DA	Sidechain
51	Ay	28	DG	Sidechain
51	Ay	29	DG	Sidechain
51	Ay	31	DT	Sidechain
52	Az	15	DG	Sidechain
52	Az	19	DC	Sidechain
52	Az	2	DC	Sidechain
52	Az	21	DG	Sidechain
52	Az	23	DA	Sidechain
52	Az	6	DT	Sidechain
52	Az	8	DC	Sidechain
115	B0	10	DC	Sidechain
115	B0	12	DA	Sidechain
115	B0	20	DA	Sidechain
115	B0	26	DC	Sidechain
115	B0	27	DT	Sidechain
115	B0	4	DG	Sidechain
116	B1	1	DA	Sidechain
116	B1	10	DA	Sidechain
116	B1	13	DT	Sidechain
116	B1	14	DT	Sidechain
116	B1	22	DT	Sidechain
116	B1	27	DT	Sidechain
116	B1	29	DA	Sidechain
116	B1	30	DT	Sidechain
116	B1	32	DT	Sidechain
116	B1	36	DT	Sidechain

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Mol	Chain	Res	Type	Group
116	B1	37	DT	Sidechain
116	B1	39	DT	Sidechain
116	B1	9	DT	Sidechain
117	B2	1	DG	Sidechain
117	B2	24	DA	Sidechain
117	B2	28	DT	Sidechain
117	B2	7	DG	Sidechain
118	B3	1	DC	Sidechain
118	B3	11	DT	Sidechain
118	B3	12	DT	Sidechain
118	B3	22	DC	Sidechain
118	B3	23	DT	Sidechain
118	B3	25	DA	Sidechain
118	B3	28	DG	Sidechain
118	B3	30	DT	Sidechain
118	B3	35	DG	Sidechain
118	B3	4	DA	Sidechain
118	B3	46	DA	Sidechain
118	B3	47	DA	Sidechain
118	B3	55	DA	Sidechain
118	B3	9	DT	Sidechain
119	B4	13	DT	Sidechain
119	B4	25	DA	Sidechain
119	B4	39	DA	Sidechain
119	B4	4	DT	Sidechain
119	B4	48	DA	Sidechain
120	B5	19	DT	Sidechain
120	B5	22	DT	Sidechain
120	B5	23	DT	Sidechain
120	B5	26	DT	Sidechain
120	B5	3	DG	Sidechain
120	B5	31	DA	Sidechain
121	B6	1	DG	Sidechain
121	B6	14	DA	Sidechain
121	B6	16	DA	Sidechain
121	B6	19	DG	Sidechain
121	B6	21	DA	Sidechain
121	B6	23	DG	Sidechain
121	B6	26	DT	Sidechain
121	B6	3	DT	Sidechain
121	B6	33	DC	Sidechain
121	B6	37	DT	Sidechain

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Mol	Chain	Res	Type	Group
121	B6	38	DG	Sidechain
121	B6	39	DT	Sidechain
121	B6	4	DT	Sidechain
121	B6	43	DG	Sidechain
121	B6	45	DC	Sidechain
121	B6	5	DG	Sidechain
121	B6	6	DT	Sidechain
122	B7	15	DA	Sidechain
122	B7	22	DA	Sidechain
122	B7	28	DC	Sidechain
122	B7	35	DA	Sidechain
122	B7	4	DT	Sidechain
123	B8	13	DG	Sidechain
123	B8	17	DT	Sidechain
123	B8	2	DA	Sidechain
123	B8	24	DG	Sidechain
123	B8	26	DC	Sidechain
123	B8	27	DG	Sidechain
123	B8	32	DG	Sidechain
123	B8	4	DT	Sidechain
123	B8	40	DT	Sidechain
123	B8	41	DC	Sidechain
123	B8	43	DC	Sidechain
123	B8	9	DG	Sidechain
124	B9	13	DA	Sidechain
124	B9	16	DC	Sidechain
124	B9	18	DT	Sidechain
124	B9	2	DG	Sidechain
124	B9	21	DA	Sidechain
124	B9	23	DT	Sidechain
124	B9	25	DA	Sidechain
124	B9	33	DA	Sidechain
124	B9	35	DC	Sidechain
124	B9	37	DT	Sidechain
124	B9	5	DT	Sidechain
124	B9	6	DC	Sidechain
124	B9	7	DT	Sidechain
124	B9	9	DC	Sidechain
63	BA	18	DT	Sidechain
63	BA	30	DG	Sidechain
63	BA	33	DT	Sidechain
63	BA	43	DT	Sidechain

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Mol	Chain	Res	Type	Group
63	BA	44	DA	Sidechain
63	BA	46	DG	Sidechain
63	BA	7	DA	Sidechain
64	BB	11	DC	Sidechain
64	BB	13	DC	Sidechain
64	BB	16	DA	Sidechain
64	BB	20	DG	Sidechain
64	BB	21	DT	Sidechain
64	BB	24	DG	Sidechain
64	BB	29	DA	Sidechain
65	BC	11	DA	Sidechain
65	BC	19	DT	Sidechain
65	BC	22	DG	Sidechain
65	BC	23	DA	Sidechain
65	BC	31	DT	Sidechain
65	BC	32	DT	Sidechain
66	BD	26	DG	Sidechain
66	BD	32	DA	Sidechain
66	BD	34	DA	Sidechain
66	BD	38	DA	Sidechain
66	BD	46	DA	Sidechain
66	BD	48	DA	Sidechain
66	BD	6	DT	Sidechain
67	BE	1	DT	Sidechain
67	BE	20	DA	Sidechain
67	BE	23	DA	Sidechain
67	BE	28	DG	Sidechain
67	BE	29	DT	Sidechain
68	BF	13	DA	Sidechain
68	BF	21	DA	Sidechain
68	BF	23	DA	Sidechain
68	BF	25	DG	Sidechain
68	BF	27	DA	Sidechain
68	BF	31	DC	Sidechain
68	BF	32	DC	Sidechain
68	BF	4	DG	Sidechain
68	BF	6	DA	Sidechain
68	BF	9	DT	Sidechain
69	BG	16	DT	Sidechain
69	BG	2	DT	Sidechain
69	BG	22	DG	Sidechain
69	BG	24	DG	Sidechain

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Mol	Chain	Res	Type	Group
69	BG	25	DA	Sidechain
69	BG	27	DA	Sidechain
69	BG	30	DC	Sidechain
69	BG	32	DT	Sidechain
69	BG	36	DT	Sidechain
69	BG	39	DC	Sidechain
69	BG	40	DA	Sidechain
69	BG	44	DA	Sidechain
69	BG	45	DG	Sidechain
69	BG	47	DA	Sidechain
69	BG	5	DT	Sidechain
70	BH	13	DT	Sidechain
70	BH	19	DG	Sidechain
70	BH	26	DA	Sidechain
70	BH	28	DT	Sidechain
70	BH	36	DT	Sidechain
70	BH	42	DC	Sidechain
70	BH	44	DT	Sidechain
70	BH	51	DT	Sidechain
70	BH	7	DG	Sidechain
70	BH	9	DG	Sidechain
71	BI	1	DT	Sidechain
71	BI	10	DG	Sidechain
71	BI	11	DT	Sidechain
71	BI	21	DC	Sidechain
71	BI	27	DC	Sidechain
71	BI	31	DG	Sidechain
71	BI	37	DA	Sidechain
71	BI	42	DT	Sidechain
71	BI	6	DA	Sidechain
72	BJ	14	DT	Sidechain
72	BJ	18	DG	Sidechain
72	BJ	21	DA	Sidechain
72	BJ	29	DC	Sidechain
72	BJ	30	DC	Sidechain
72	BJ	31	DA	Sidechain
72	BJ	33	DA	Sidechain
72	BJ	35	DT	Sidechain
72	BJ	4	DT	Sidechain
73	BK	1	DG	Sidechain
73	BK	11	DA	Sidechain
73	BK	22	DT	Sidechain

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Mol	Chain	Res	Type	Group
73	BK	28	DC	Sidechain
73	BK	29	DC	Sidechain
73	BK	3	DT	Sidechain
73	BK	34	DC	Sidechain
73	BK	36	DG	Sidechain
73	BK	37	DG	Sidechain
73	BK	39	DC	Sidechain
73	BK	46	DT	Sidechain
73	BK	5	DA	Sidechain
73	BK	9	DC	Sidechain
74	BL	1	DT	Sidechain
74	BL	3	DA	Sidechain
74	BL	30	DA	Sidechain
74	BL	36	DA	Sidechain
74	BL	38	DT	Sidechain
74	BL	4	DA	Sidechain
74	BL	5	DT	Sidechain
74	BL	8	DA	Sidechain
75	BM	1	DA	Sidechain
75	BM	11	DT	Sidechain
75	BM	12	DG	Sidechain
75	BM	18	DG	Sidechain
75	BM	20	DA	Sidechain
75	BM	22	DA	Sidechain
75	BM	25	DT	Sidechain
75	BM	6	DG	Sidechain
75	BM	9	DT	Sidechain
76	BN	12	DT	Sidechain
76	BN	18	DG	Sidechain
76	BN	20	DT	Sidechain
76	BN	23	DA	Sidechain
76	BN	24	DG	Sidechain
76	BN	7	DA	Sidechain
77	BO	1	DT	Sidechain
77	BO	17	DA	Sidechain
77	BO	21	DG	Sidechain
77	BO	26	DA	Sidechain
77	BO	29	DT	Sidechain
77	BO	3	DA	Sidechain
77	BO	35	DC	Sidechain
77	BO	37	DC	Sidechain
77	BO	40	DG	Sidechain

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Mol	Chain	Res	Type	Group
77	BO	43	DT	Sidechain
77	BO	5	DT	Sidechain
78	BP	13	DA	Sidechain
78	BP	14	DC	Sidechain
78	BP	16	DC	Sidechain
78	BP	18	DA	Sidechain
78	BP	19	DA	Sidechain
78	BP	22	DG	Sidechain
78	BP	24	DA	Sidechain
78	BP	30	DC	Sidechain
78	BP	31	DT	Sidechain
78	BP	35	DC	Sidechain
78	BP	44	DG	Sidechain
78	BP	6	DC	Sidechain
79	BQ	10	DC	Sidechain
79	BQ	11	DT	Sidechain
79	BQ	15	DG	Sidechain
79	BQ	20	DG	Sidechain
79	BQ	21	DA	Sidechain
79	BQ	26	DA	Sidechain
79	BQ	29	DC	Sidechain
79	BQ	3	DT	Sidechain
79	BQ	31	DA	Sidechain
79	BQ	37	DA	Sidechain
79	BQ	4	DC	Sidechain
79	BQ	45	DA	Sidechain
80	BR	10	DT	Sidechain
80	BR	13	DA	Sidechain
80	BR	15	DT	Sidechain
80	BR	23	DC	Sidechain
80	BR	28	DG	Sidechain
80	BR	29	DT	Sidechain
80	BR	31	DA	Sidechain
80	BR	33	DC	Sidechain
80	BR	34	DA	Sidechain
80	BR	4	DT	Sidechain
81	BS	13	DG	Sidechain
81	BS	14	DT	Sidechain
81	BS	23	DC	Sidechain
81	BS	27	DG	Sidechain
81	BS	3	DT	Sidechain
81	BS	33	DA	Sidechain

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Mol	Chain	Res	Type	Group
81	BS	35	DA	Sidechain
81	BS	9	DC	Sidechain
82	BT	10	DG	Sidechain
82	BT	21	DT	Sidechain
82	BT	26	DA	Sidechain
82	BT	3	DA	Sidechain
82	BT	32	DG	Sidechain
82	BT	37	DT	Sidechain
82	BT	38	DC	Sidechain
82	BT	39	DG	Sidechain
82	BT	40	DG	Sidechain
82	BT	41	DG	Sidechain
82	BT	51	DG	Sidechain
82	BT	52	DA	Sidechain
83	BU	1	DC	Sidechain
83	BU	13	DG	Sidechain
83	BU	2	DC	Sidechain
83	BU	24	DA	Sidechain
83	BU	25	DA	Sidechain
83	BU	35	DT	Sidechain
83	BU	36	DT	Sidechain
84	BV	15	DC	Sidechain
84	BV	19	DG	Sidechain
84	BV	2	DC	Sidechain
84	BV	20	DA	Sidechain
84	BV	21	DT	Sidechain
84	BV	22	DT	Sidechain
84	BV	26	DC	Sidechain
84	BV	5	DT	Sidechain
84	BV	8	DT	Sidechain
85	BW	13	DC	Sidechain
85	BW	22	DG	Sidechain
85	BW	29	DT	Sidechain
85	BW	31	DC	Sidechain
85	BW	8	DG	Sidechain
86	BX	4	DC	Sidechain
86	BX	8	DT	Sidechain
87	BY	15	DT	Sidechain
87	BY	23	DG	Sidechain
87	BY	27	DG	Sidechain
87	BY	28	DA	Sidechain
87	BY	33	DT	Sidechain

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Mol	Chain	Res	Type	Group
87	BY	44	DA	Sidechain
88	BZ	12	DC	Sidechain
88	BZ	13	DG	Sidechain
88	BZ	22	DC	Sidechain
88	BZ	43	DG	Sidechain
89	Ba	10	DG	Sidechain
89	Ba	19	DG	Sidechain
89	Ba	20	DA	Sidechain
89	Ba	26	DA	Sidechain
89	Ba	28	DA	Sidechain
89	Ba	32	DA	Sidechain
89	Ba	37	DC	Sidechain
89	Ba	38	DA	Sidechain
89	Ba	39	DC	Sidechain
89	Ba	4	DT	Sidechain
90	Bb	1	DA	Sidechain
90	Bb	10	DC	Sidechain
90	Bb	11	DG	Sidechain
90	Bb	13	DA	Sidechain
90	Bb	16	DG	Sidechain
90	Bb	2	DA	Sidechain
90	Bb	21	DG	Sidechain
90	Bb	27	DA	Sidechain
90	Bb	28	DT	Sidechain
90	Bb	29	DT	Sidechain
90	Bb	31	DA	Sidechain
90	Bb	32	DA	Sidechain
90	Bb	33	DG	Sidechain
90	Bb	4	DG	Sidechain
90	Bb	7	DC	Sidechain
90	Bb	9	DA	Sidechain
91	Bc	10	DT	Sidechain
91	Bc	13	DT	Sidechain
91	Bc	19	DT	Sidechain
91	Bc	23	DA	Sidechain
91	Bc	32	DA	Sidechain
91	Bc	44	DG	Sidechain
91	Bc	6	DT	Sidechain
91	Bc	7	DG	Sidechain
92	Bd	1	DA	Sidechain
92	Bd	13	DA	Sidechain
92	Bd	16	DA	Sidechain

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Mol	Chain	Res	Type	Group
92	Bd	31	DC	Sidechain
92	Bd	39	DG	Sidechain
92	Bd	41	DT	Sidechain
92	Bd	42	DG	Sidechain
92	Bd	5	DT	Sidechain
93	Be	11	DT	Sidechain
93	Be	12	DC	Sidechain
93	Be	13	DA	Sidechain
93	Be	20	DT	Sidechain
93	Be	24	DG	Sidechain
93	Be	26	DA	Sidechain
93	Be	27	DC	Sidechain
93	Be	32	DA	Sidechain
93	Be	42	DA	Sidechain
94	Bf	16	DA	Sidechain
94	Bf	19	DG	Sidechain
94	Bf	20	DA	Sidechain
94	Bf	25	DT	Sidechain
94	Bf	3	DG	Sidechain
94	Bf	4	DA	Sidechain
94	Bf	5	DT	Sidechain
94	Bf	6	DA	Sidechain
94	Bf	7	DT	Sidechain
95	Bg	11	DG	Sidechain
95	Bg	12	DG	Sidechain
95	Bg	14	DT	Sidechain
95	Bg	17	DT	Sidechain
95	Bg	25	DT	Sidechain
95	Bg	26	DT	Sidechain
95	Bg	3	DG	Sidechain
95	Bg	30	DC	Sidechain
95	Bg	31	DG	Sidechain
95	Bg	35	DA	Sidechain
95	Bg	5	DC	Sidechain
96	Bh	10	DT	Sidechain
96	Bh	2	DC	Sidechain
96	Bh	25	DT	Sidechain
96	Bh	3	DC	Sidechain
96	Bh	30	DG	Sidechain
96	Bh	34	DA	Sidechain
96	Bh	37	DC	Sidechain
96	Bh	4	DT	Sidechain

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Mol	Chain	Res	Type	Group
96	Bh	40	DA	Sidechain
97	Bi	11	DC	Sidechain
97	Bi	17	DT	Sidechain
97	Bi	2	DT	Sidechain
97	Bi	22	DG	Sidechain
97	Bi	28	DT	Sidechain
97	Bi	29	DT	Sidechain
97	Bi	33	DT	Sidechain
97	Bi	34	DT	Sidechain
97	Bi	39	DT	Sidechain
97	Bi	46	DG	Sidechain
97	Bi	8	DA	Sidechain
98	Bj	11	DG	Sidechain
98	Bj	12	DA	Sidechain
98	Bj	23	DA	Sidechain
98	Bj	26	DC	Sidechain
98	Bj	40	DG	Sidechain
98	Bj	42	DA	Sidechain
98	Bj	45	DG	Sidechain
98	Bj	46	DC	Sidechain
98	Bj	48	DG	Sidechain
99	Bk	1	DG	Sidechain
99	Bk	18	DG	Sidechain
99	Bk	19	DG	Sidechain
99	Bk	5	DT	Sidechain
99	Bk	7	DG	Sidechain
100	Bl	2	DA	Sidechain
100	Bl	25	DA	Sidechain
100	Bl	3	DA	Sidechain
100	Bl	38	DG	Sidechain
100	Bl	39	DA	Sidechain
101	Bm	1	DC	Sidechain
101	Bm	13	DC	Sidechain
101	Bm	2	DA	Sidechain
101	Bm	20	DG	Sidechain
101	Bm	21	DG	Sidechain
101	Bm	23	DA	Sidechain
101	Bm	26	DC	Sidechain
101	Bm	32	DC	Sidechain
101	Bm	38	DT	Sidechain
102	Bn	19	DA	Sidechain
102	Bn	24	DG	Sidechain

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Mol	Chain	Res	Type	Group
102	Bn	25	DA	Sidechain
102	Bn	29	DG	Sidechain
102	Bn	43	DT	Sidechain
102	Bn	8	DA	Sidechain
103	Bo	13	DA	Sidechain
103	Bo	19	DT	Sidechain
103	Bo	20	DA	Sidechain
103	Bo	22	DG	Sidechain
103	Bo	32	DG	Sidechain
103	Bo	35	DC	Sidechain
103	Bo	40	DT	Sidechain
103	Bo	41	DT	Sidechain
103	Bo	42	DT	Sidechain
103	Bo	8	DT	Sidechain
103	Bo	9	DC	Sidechain
104	Bp	1	DG	Sidechain
104	Bp	10	DG	Sidechain
104	Bp	11	DC	Sidechain
104	Bp	18	DG	Sidechain
104	Bp	20	DC	Sidechain
104	Bp	3	DT	Sidechain
104	Bp	33	DT	Sidechain
104	Bp	35	DG	Sidechain
104	Bp	37	DA	Sidechain
104	Bp	38	DA	Sidechain
104	Bp	39	DA	Sidechain
104	Bp	9	DT	Sidechain
105	Bq	10	DT	Sidechain
105	Bq	16	DG	Sidechain
105	Bq	18	DG	Sidechain
105	Bq	25	DG	Sidechain
105	Bq	27	DT	Sidechain
105	Bq	39	DA	Sidechain
105	Bq	43	DG	Sidechain
106	Br	10	DT	Sidechain
106	Br	18	DG	Sidechain
106	Br	23	DT	Sidechain
106	Br	28	DG	Sidechain
106	Br	31	DA	Sidechain
106	Br	38	DA	Sidechain
106	Br	5	DC	Sidechain
107	Bs	1	DA	Sidechain

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Mol	Chain	Res	Type	Group
107	Bs	13	DC	Sidechain
107	Bs	17	DT	Sidechain
107	Bs	2	DG	Sidechain
107	Bs	21	DT	Sidechain
107	Bs	22	DT	Sidechain
107	Bs	23	DT	Sidechain
107	Bs	24	DC	Sidechain
107	Bs	26	DT	Sidechain
107	Bs	3	DA	Sidechain
107	Bs	5	DA	Sidechain
107	Bs	8	DT	Sidechain
108	Bt	14	DT	Sidechain
108	Bt	19	DT	Sidechain
108	Bt	28	DG	Sidechain
108	Bt	29	DA	Sidechain
108	Bt	30	DG	Sidechain
108	Bt	33	DA	Sidechain
108	Bt	35	DG	Sidechain
108	Bt	41	DT	Sidechain
109	Bu	1	DT	Sidechain
109	Bu	15	DA	Sidechain
109	Bu	17	DT	Sidechain
109	Bu	2	DT	Sidechain
109	Bu	23	DA	Sidechain
109	Bu	28	DT	Sidechain
109	Bu	37	DT	Sidechain
109	Bu	39	DA	Sidechain
109	Bu	41	DC	Sidechain
109	Bu	48	DA	Sidechain
109	Bu	49	DT	Sidechain
110	Bv	1	DC	Sidechain
110	Bv	10	DA	Sidechain
110	Bv	11	DA	Sidechain
110	Bv	24	DT	Sidechain
110	Bv	25	DG	Sidechain
110	Bv	31	DA	Sidechain
110	Bv	33	DA	Sidechain
110	Bv	34	DA	Sidechain
111	Bw	11	DA	Sidechain
111	Bw	16	DA	Sidechain
111	Bw	22	DT	Sidechain
111	Bw	23	DT	Sidechain

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Mol	Chain	Res	Type	Group
111	Bw	29	DA	Sidechain
111	Bw	31	DC	Sidechain
111	Bw	33	DT	Sidechain
111	Bw	4	DC	Sidechain
111	Bw	6	DT	Sidechain
112	Bx	13	DA	Sidechain
112	Bx	16	DT	Sidechain
112	Bx	17	DT	Sidechain
112	Bx	21	DT	Sidechain
112	Bx	22	DT	Sidechain
112	Bx	23	DT	Sidechain
112	Bx	24	DG	Sidechain
112	Bx	26	DG	Sidechain
112	Bx	29	DT	Sidechain
112	Bx	35	DT	Sidechain
112	Bx	37	DT	Sidechain
112	Bx	44	DA	Sidechain
112	Bx	46	DG	Sidechain
112	Bx	47	DT	Sidechain
112	Bx	48	DA	Sidechain
112	Bx	52	DG	Sidechain
112	Bx	6	DT	Sidechain
113	By	10	DC	Sidechain
113	By	14	DA	Sidechain
113	By	21	DT	Sidechain
113	By	22	DG	Sidechain
114	Bz	14	DA	Sidechain
114	Bz	22	DA	Sidechain
114	Bz	24	DT	Sidechain
114	Bz	26	DG	Sidechain
177	C0	16	DG	Sidechain
177	C0	2	DC	Sidechain
177	C0	29	DA	Sidechain
177	C0	3	DT	Sidechain
177	C0	34	DT	Sidechain
177	C0	35	DT	Sidechain
177	C0	37	DT	Sidechain
177	C0	44	DT	Sidechain
177	C0	55	DT	Sidechain
177	C0	57	DT	Sidechain
177	C0	58	DA	Sidechain
178	C1	10	DG	Sidechain

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Mol	Chain	Res	Type	Group
178	C1	12	DC	Sidechain
178	C1	15	DT	Sidechain
178	C1	16	DT	Sidechain
178	C1	21	DA	Sidechain
178	C1	22	DT	Sidechain
178	C1	25	DA	Sidechain
178	C1	33	DC	Sidechain
178	C1	38	DA	Sidechain
178	C1	4	DT	Sidechain
178	C1	40	DG	Sidechain
178	C1	43	DA	Sidechain
179	C2	1	DA	Sidechain
179	C2	13	DA	Sidechain
179	C2	3	DT	Sidechain
179	C2	30	DC	Sidechain
179	C2	6	DG	Sidechain
179	C2	9	DA	Sidechain
180	C3	23	DG	Sidechain
180	C3	25	DT	Sidechain
181	C4	18	DA	Sidechain
181	C4	21	DA	Sidechain
181	C4	31	DT	Sidechain
181	C4	35	DT	Sidechain
181	C4	36	DT	Sidechain
181	C4	4	DT	Sidechain
181	C4	47	DG	Sidechain
181	C4	51	DA	Sidechain
182	C5	10	DA	Sidechain
182	C5	21	DG	Sidechain
182	C5	34	DG	Sidechain
182	C5	38	DG	Sidechain
182	C5	39	DC	Sidechain
182	C5	41	DC	Sidechain
182	C5	5	DT	Sidechain
183	C6	1	DA	Sidechain
183	C6	13	DA	Sidechain
183	C6	14	DT	Sidechain
183	C6	16	DA	Sidechain
183	C6	2	DC	Sidechain
183	C6	39	DG	Sidechain
183	C6	41	DC	Sidechain
183	C6	44	DT	Sidechain

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Mol	Chain	Res	Type	Group
183	C6	5	DA	Sidechain
183	C6	8	DG	Sidechain
183	C6	9	DG	Sidechain
184	C7	11	DG	Sidechain
184	C7	15	DA	Sidechain
184	C7	23	DA	Sidechain
184	C7	24	DC	Sidechain
184	C7	26	DT	Sidechain
184	C7	31	DT	Sidechain
184	C7	41	DT	Sidechain
184	C7	6	DA	Sidechain
185	C8	15	DG	Sidechain
185	C8	16	DG	Sidechain
185	C8	21	DG	Sidechain
185	C8	23	DT	Sidechain
185	C8	29	DA	Sidechain
185	C8	33	DT	Sidechain
185	C8	34	DA	Sidechain
185	C8	6	DC	Sidechain
185	C8	7	DC	Sidechain
186	C9	14	DG	Sidechain
186	C9	15	DA	Sidechain
186	C9	16	DG	Sidechain
186	C9	28	DA	Sidechain
186	C9	3	DA	Sidechain
186	C9	30	DT	Sidechain
186	C9	37	DA	Sidechain
125	CA	10	DC	Sidechain
125	CA	3	DG	Sidechain
125	CA	32	DG	Sidechain
125	CA	6	DA	Sidechain
125	CA	7	DG	Sidechain
126	CB	1	DA	Sidechain
126	CB	15	DT	Sidechain
126	CB	17	DA	Sidechain
126	CB	18	DA	Sidechain
126	CB	21	DG	Sidechain
126	CB	23	DA	Sidechain
126	CB	25	DA	Sidechain
126	CB	26	DG	Sidechain
126	CB	28	DG	Sidechain
126	CB	31	DA	Sidechain

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Mol	Chain	Res	Type	Group
126	CB	6	DA	Sidechain
126	CB	7	DT	Sidechain
126	CB	9	DG	Sidechain
127	CC	14	DC	Sidechain
127	CC	18	DA	Sidechain
127	CC	19	DA	Sidechain
127	CC	23	DA	Sidechain
127	CC	3	DG	Sidechain
127	CC	9	DT	Sidechain
128	CD	17	DC	Sidechain
128	CD	18	DT	Sidechain
128	CD	23	DT	Sidechain
128	CD	26	DT	Sidechain
128	CD	32	DT	Sidechain
128	CD	34	DA	Sidechain
128	CD	47	DG	Sidechain
128	CD	50	DG	Sidechain
128	CD	51	DG	Sidechain
128	CD	52	DT	Sidechain
128	CD	8	DT	Sidechain
128	CD	9	DC	Sidechain
129	CE	1	DG	Sidechain
129	CE	15	DA	Sidechain
129	CE	18	DT	Sidechain
129	CE	33	DC	Sidechain
129	CE	35	DA	Sidechain
129	CE	37	DT	Sidechain
129	CE	38	DG	Sidechain
129	CE	39	DT	Sidechain
129	CE	5	DA	Sidechain
130	CF	11	DA	Sidechain
130	CF	15	DC	Sidechain
130	CF	16	DC	Sidechain
130	CF	26	DG	Sidechain
130	CF	28	DC	Sidechain
130	CF	31	DA	Sidechain
130	CF	38	DG	Sidechain
131	CG	10	DG	Sidechain
131	CG	12	DT	Sidechain
131	CG	13	DC	Sidechain
131	CG	24	DG	Sidechain
131	CG	3	DG	Sidechain

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Mol	Chain	Res	Type	Group
131	CG	6	DC	Sidechain
131	CG	8	DA	Sidechain
132	CH	1	DT	Sidechain
132	CH	13	DG	Sidechain
132	CH	14	DG	Sidechain
132	CH	25	DA	Sidechain
132	CH	29	DA	Sidechain
132	CH	31	DT	Sidechain
132	CH	33	DG	Sidechain
132	CH	35	DG	Sidechain
132	CH	37	DT	Sidechain
132	CH	40	DA	Sidechain
132	CH	46	DG	Sidechain
132	CH	49	DT	Sidechain
132	CH	51	DT	Sidechain
132	CH	9	DG	Sidechain
133	CI	1	DC	Sidechain
133	CI	22	DG	Sidechain
133	CI	23	DA	Sidechain
133	CI	9	DA	Sidechain
134	CJ	15	DT	Sidechain
134	CJ	23	DT	Sidechain
134	CJ	26	DA	Sidechain
134	CJ	27	DT	Sidechain
134	CJ	29	DA	Sidechain
134	CJ	33	DG	Sidechain
134	CJ	34	DA	Sidechain
134	CJ	36	DG	Sidechain
134	CJ	4	DA	Sidechain
134	CJ	43	DT	Sidechain
134	CJ	49	DT	Sidechain
135	CK	10	DT	Sidechain
135	CK	15	DG	Sidechain
135	CK	19	DT	Sidechain
135	CK	21	DT	Sidechain
135	CK	23	DT	Sidechain
135	CK	29	DT	Sidechain
135	CK	44	DG	Sidechain
135	CK	50	DT	Sidechain
135	CK	53	DT	Sidechain
135	CK	54	DT	Sidechain
135	CK	6	DG	Sidechain

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Mol	Chain	Res	Type	Group
136	CL	1	DA	Sidechain
136	CL	2	DT	Sidechain
136	CL	30	DG	Sidechain
136	CL	9	DC	Sidechain
137	CM	12	DC	Sidechain
137	CM	17	DG	Sidechain
137	CM	27	DC	Sidechain
137	CM	28	DC	Sidechain
137	CM	3	DG	Sidechain
137	CM	30	DT	Sidechain
137	CM	32	DC	Sidechain
137	CM	6	DG	Sidechain
137	CM	7	DA	Sidechain
138	CN	1	DG	Sidechain
138	CN	10	DG	Sidechain
138	CN	11	DT	Sidechain
138	CN	2	DA	Sidechain
138	CN	21	DA	Sidechain
138	CN	38	DT	Sidechain
138	CN	6	DA	Sidechain
138	CN	8	DG	Sidechain
139	CO	12	DG	Sidechain
139	CO	17	DA	Sidechain
139	CO	19	DG	Sidechain
139	CO	21	DT	Sidechain
139	CO	23	DA	Sidechain
139	CO	29	DT	Sidechain
139	CO	4	DC	Sidechain
140	CP	1	DC	Sidechain
140	CP	10	DG	Sidechain
140	CP	15	DT	Sidechain
140	CP	16	DT	Sidechain
140	CP	25	DC	Sidechain
140	CP	3	DG	Sidechain
140	CP	31	DG	Sidechain
140	CP	41	DT	Sidechain
140	CP	5	DT	Sidechain
140	CP	52	DG	Sidechain
140	CP	8	DG	Sidechain
140	CP	9	DT	Sidechain
141	CQ	1	DG	Sidechain
141	CQ	10	DG	Sidechain

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Mol	Chain	Res	Type	Group
141	CQ	14	DT	Sidechain
141	CQ	15	DC	Sidechain
141	CQ	2	DT	Sidechain
141	CQ	21	DT	Sidechain
141	CQ	31	DC	Sidechain
141	CQ	35	DC	Sidechain
141	CQ	48	DA	Sidechain
141	CQ	7	DG	Sidechain
141	CQ	9	DT	Sidechain
142	CR	11	DT	Sidechain
142	CR	15	DA	Sidechain
142	CR	22	DA	Sidechain
142	CR	25	DA	Sidechain
142	CR	3	DC	Sidechain
142	CR	30	DA	Sidechain
142	CR	35	DT	Sidechain
142	CR	38	DT	Sidechain
142	CR	6	DG	Sidechain
143	CS	10	DA	Sidechain
143	CS	12	DG	Sidechain
143	CS	25	DG	Sidechain
143	CS	27	DG	Sidechain
143	CS	3	DT	Sidechain
143	CS	36	DA	Sidechain
143	CS	38	DG	Sidechain
143	CS	39	DA	Sidechain
143	CS	4	DT	Sidechain
143	CS	45	DC	Sidechain
143	CS	6	DT	Sidechain
144	CT	14	DC	Sidechain
144	CT	19	DG	Sidechain
144	CT	24	DA	Sidechain
144	CT	25	DG	Sidechain
144	CT	29	DG	Sidechain
144	CT	30	DC	Sidechain
144	CT	31	DT	Sidechain
144	CT	33	DT	Sidechain
144	CT	5	DA	Sidechain
144	CT	7	DA	Sidechain
144	CT	9	DC	Sidechain
145	CU	1	DA	Sidechain
145	CU	12	DT	Sidechain

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Mol	Chain	Res	Type	Group
145	CU	18	DG	Sidechain
145	CU	2	DG	Sidechain
145	CU	4	DA	Sidechain
145	CU	5	DT	Sidechain
146	CV	1	DC	Sidechain
146	CV	17	DA	Sidechain
146	CV	18	DG	Sidechain
146	CV	22	DA	Sidechain
146	CV	24	DC	Sidechain
146	CV	5	DA	Sidechain
146	CV	6	DA	Sidechain
147	CW	10	DT	Sidechain
147	CW	16	DG	Sidechain
147	CW	23	DG	Sidechain
147	CW	33	DG	Sidechain
147	CW	39	DG	Sidechain
147	CW	4	DA	Sidechain
147	CW	46	DG	Sidechain
147	CW	8	DA	Sidechain
147	CW	9	DC	Sidechain
148	CX	21	DG	Sidechain
148	CX	22	DG	Sidechain
148	CX	31	DT	Sidechain
148	CX	35	DT	Sidechain
148	CX	36	DA	Sidechain
148	CX	38	DG	Sidechain
148	CX	39	DA	Sidechain
148	CX	46	DT	Sidechain
149	CY	17	DC	Sidechain
149	CY	18	DC	Sidechain
149	CY	25	DA	Sidechain
149	CY	26	DA	Sidechain
149	CY	3	DC	Sidechain
149	CY	4	DT	Sidechain
149	CY	6	DG	Sidechain
149	CY	7	DC	Sidechain
149	CY	9	DC	Sidechain
150	CZ	10	DA	Sidechain
150	CZ	20	DG	Sidechain
150	CZ	23	DT	Sidechain
150	CZ	25	DT	Sidechain
150	CZ	26	DT	Sidechain

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Mol	Chain	Res	Type	Group
150	CZ	35	DT	Sidechain
150	CZ	37	DT	Sidechain
150	CZ	41	DT	Sidechain
150	CZ	45	DT	Sidechain
150	CZ	8	DT	Sidechain
151	Ca	1	DG	Sidechain
151	Ca	13	DT	Sidechain
151	Ca	14	DT	Sidechain
151	Ca	17	DA	Sidechain
151	Ca	24	DA	Sidechain
151	Ca	3	DC	Sidechain
151	Ca	30	DA	Sidechain
151	Ca	31	DA	Sidechain
151	Ca	9	DC	Sidechain
152	Cb	13	DA	Sidechain
152	Cb	38	DT	Sidechain
152	Cb	40	DA	Sidechain
152	Cb	45	DC	Sidechain
152	Cb	9	DC	Sidechain
153	Cc	1	DT	Sidechain
153	Cc	10	DA	Sidechain
153	Cc	11	DT	Sidechain
153	Cc	14	DC	Sidechain
153	Cc	15	DC	Sidechain
153	Cc	21	DC	Sidechain
153	Cc	23	DG	Sidechain
153	Cc	25	DG	Sidechain
153	Cc	28	DG	Sidechain
153	Cc	29	DG	Sidechain
153	Cc	3	DG	Sidechain
153	Cc	5	DG	Sidechain
153	Cc	6	DG	Sidechain
153	Cc	8	DT	Sidechain
154	Cd	20	DG	Sidechain
154	Cd	21	DC	Sidechain
154	Cd	29	DG	Sidechain
154	Cd	32	DG	Sidechain
155	Ce	1	DG	Sidechain
155	Ce	12	DC	Sidechain
155	Ce	2	DT	Sidechain
155	Ce	23	DC	Sidechain
155	Ce	24	DC	Sidechain

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Mol	Chain	Res	Type	Group
155	Ce	26	DA	Sidechain
155	Ce	27	DC	Sidechain
155	Ce	30	DG	Sidechain
155	Ce	6	DC	Sidechain
155	Ce	8	DC	Sidechain
156	Cf	22	DT	Sidechain
156	Cf	23	DT	Sidechain
156	Cf	28	DC	Sidechain
156	Cf	33	DA	Sidechain
156	Cf	40	DG	Sidechain
156	Cf	7	DT	Sidechain
156	Cf	9	DC	Sidechain
157	Cg	1	DT	Sidechain
157	Cg	18	DT	Sidechain
157	Cg	21	DG	Sidechain
157	Cg	23	DG	Sidechain
157	Cg	24	DG	Sidechain
157	Cg	28	DC	Sidechain
157	Cg	30	DT	Sidechain
157	Cg	32	DG	Sidechain
157	Cg	34	DA	Sidechain
157	Cg	4	DT	Sidechain
157	Cg	7	DG	Sidechain
158	Ch	14	DA	Sidechain
158	Ch	15	DG	Sidechain
158	Ch	16	DG	Sidechain
158	Ch	19	DC	Sidechain
158	Ch	21	DA	Sidechain
158	Ch	25	DT	Sidechain
158	Ch	34	DG	Sidechain
158	Ch	36	DG	Sidechain
158	Ch	41	DG	Sidechain
158	Ch	42	DC	Sidechain
158	Ch	43	DT	Sidechain
159	Ci	23	DT	Sidechain
159	Ci	25	DC	Sidechain
159	Ci	3	DG	Sidechain
159	Ci	31	DT	Sidechain
159	Ci	4	DT	Sidechain
159	Ci	47	DT	Sidechain
159	Ci	48	DT	Sidechain
159	Ci	8	DG	Sidechain

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Mol	Chain	Res	Type	Group
160	Cj	1	DA	Sidechain
160	Cj	11	DC	Sidechain
160	Cj	14	DG	Sidechain
160	Cj	17	DG	Sidechain
160	Cj	20	DC	Sidechain
160	Cj	26	DG	Sidechain
160	Cj	27	DG	Sidechain
160	Cj	28	DC	Sidechain
160	Cj	29	DG	Sidechain
160	Cj	30	DA	Sidechain
160	Cj	32	DG	Sidechain
160	Cj	33	DG	Sidechain
160	Cj	38	DC	Sidechain
160	Cj	4	DG	Sidechain
160	Cj	40	DA	Sidechain
160	Cj	45	DC	Sidechain
160	Cj	7	DG	Sidechain
160	Cj	9	DG	Sidechain
161	Ck	27	DA	Sidechain
161	Ck	32	DA	Sidechain
161	Ck	38	DG	Sidechain
161	Ck	4	DT	Sidechain
161	Ck	44	DC	Sidechain
161	Ck	9	DG	Sidechain
162	Cl	1	DG	Sidechain
162	Cl	12	DA	Sidechain
162	Cl	22	DA	Sidechain
162	Cl	26	DA	Sidechain
162	Cl	28	DT	Sidechain
162	Cl	38	DC	Sidechain
162	Cl	39	DG	Sidechain
162	Cl	43	DG	Sidechain
162	Cl	44	DT	Sidechain
162	Cl	45	DG	Sidechain
162	Cl	6	DC	Sidechain
163	Cm	10	DG	Sidechain
163	Cm	21	DA	Sidechain
163	Cm	28	DT	Sidechain
163	Cm	3	DT	Sidechain
163	Cm	37	DT	Sidechain
163	Cm	5	DT	Sidechain
163	Cm	6	DC	Sidechain

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Mol	Chain	Res	Type	Group
164	Cn	1	DA	Sidechain
164	Cn	2	DG	Sidechain
164	Cn	20	DT	Sidechain
164	Cn	22	DC	Sidechain
164	Cn	23	DC	Sidechain
164	Cn	25	DC	Sidechain
164	Cn	6	DT	Sidechain
165	Co	13	DT	Sidechain
165	Co	25	DT	Sidechain
165	Co	26	DT	Sidechain
165	Co	27	DA	Sidechain
165	Co	31	DT	Sidechain
165	Co	33	DT	Sidechain
165	Co	36	DC	Sidechain
165	Co	8	DT	Sidechain
166	Cp	1	DG	Sidechain
166	Cp	12	DT	Sidechain
166	Cp	14	DG	Sidechain
166	Cp	17	DG	Sidechain
166	Cp	19	DG	Sidechain
166	Cp	22	DC	Sidechain
166	Cp	29	DA	Sidechain
166	Cp	3	DG	Sidechain
166	Cp	33	DT	Sidechain
166	Cp	34	DC	Sidechain
166	Cp	36	DT	Sidechain
167	Cq	1	DT	Sidechain
167	Cq	25	DC	Sidechain
167	Cq	7	DC	Sidechain
167	Cq	8	DT	Sidechain
168	Cr	14	DT	Sidechain
168	Cr	25	DC	Sidechain
168	Cr	26	DT	Sidechain
168	Cr	28	DT	Sidechain
168	Cr	30	DA	Sidechain
168	Cr	31	DG	Sidechain
168	Cr	34	DT	Sidechain
168	Cr	36	DA	Sidechain
168	Cr	37	DG	Sidechain
168	Cr	38	DC	Sidechain
168	Cr	4	DC	Sidechain
169	Cs	15	DC	Sidechain

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Mol	Chain	Res	Type	Group
169	Cs	18	DG	Sidechain
169	Cs	21	DG	Sidechain
169	Cs	23	DG	Sidechain
169	Cs	29	DG	Sidechain
169	Cs	3	DG	Sidechain
169	Cs	32	DG	Sidechain
169	Cs	38	DC	Sidechain
169	Cs	39	DC	Sidechain
169	Cs	6	DT	Sidechain
169	Cs	7	DT	Sidechain
169	Cs	9	DT	Sidechain
170	Ct	22	DA	Sidechain
170	Ct	25	DG	Sidechain
170	Ct	27	DA	Sidechain
170	Ct	28	DG	Sidechain
170	Ct	31	DC	Sidechain
170	Ct	35	DG	Sidechain
170	Ct	4	DA	Sidechain
170	Ct	6	DT	Sidechain
170	Ct	9	DC	Sidechain
171	Cu	10	DT	Sidechain
171	Cu	11	DT	Sidechain
171	Cu	14	DT	Sidechain
171	Cu	31	DG	Sidechain
171	Cu	32	DT	Sidechain
172	Cv	12	DG	Sidechain
172	Cv	13	DC	Sidechain
172	Cv	16	DG	Sidechain
172	Cv	18	DT	Sidechain
172	Cv	19	DT	Sidechain
172	Cv	21	DC	Sidechain
172	Cv	22	DC	Sidechain
172	Cv	28	DA	Sidechain
172	Cv	34	DC	Sidechain
172	Cv	35	DT	Sidechain
172	Cv	9	DC	Sidechain
173	Cw	18	DC	Sidechain
173	Cw	22	DT	Sidechain
173	Cw	25	DG	Sidechain
173	Cw	28	DC	Sidechain
173	Cw	3	DG	Sidechain
173	Cw	31	DC	Sidechain

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Mol	Chain	Res	Type	Group
173	Cw	7	DC	Sidechain
174	Cx	12	DA	Sidechain
174	Cx	15	DG	Sidechain
174	Cx	20	DC	Sidechain
174	Cx	21	DA	Sidechain
174	Cx	26	DT	Sidechain
174	Cx	29	DC	Sidechain
174	Cx	32	DA	Sidechain
174	Cx	9	DG	Sidechain
175	Cy	15	DG	Sidechain
175	Cy	19	DT	Sidechain
175	Cy	2	DT	Sidechain
175	Cy	20	DT	Sidechain
175	Cy	23	DG	Sidechain
175	Cy	24	DG	Sidechain
175	Cy	27	DG	Sidechain
175	Cy	28	DC	Sidechain
175	Cy	30	DC	Sidechain
175	Cy	33	DC	Sidechain
175	Cy	37	DT	Sidechain
175	Cy	39	DT	Sidechain
175	Cy	4	DT	Sidechain
175	Cy	44	DG	Sidechain
175	Cy	5	DT	Sidechain
175	Cy	7	DA	Sidechain
176	Cz	1	DT	Sidechain
176	Cz	10	DT	Sidechain
176	Cz	15	DA	Sidechain
176	Cz	17	DA	Sidechain
176	Cz	18	DT	Sidechain
176	Cz	24	DA	Sidechain
176	Cz	3	DT	Sidechain
176	Cz	4	DT	Sidechain
176	Cz	43	DT	Sidechain
176	Cz	45	DA	Sidechain
176	Cz	50	DG	Sidechain
176	Cz	51	DT	Sidechain
176	Cz	9	DC	Sidechain
187	DA	14	DA	Sidechain
187	DA	15	DC	Sidechain
187	DA	21	DT	Sidechain
187	DA	23	DC	Sidechain

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Mol	Chain	Res	Type	Group
187	DA	25	DG	Sidechain
187	DA	3	DT	Sidechain
187	DA	31	DT	Sidechain
187	DA	43	DG	Sidechain
187	DA	44	DA	Sidechain
187	DA	45	DG	Sidechain
187	DA	46	DA	Sidechain
187	DA	47	DT	Sidechain
187	DA	50	DA	Sidechain
187	DA	52	DC	Sidechain
187	DA	55	DT	Sidechain
187	DA	59	DC	Sidechain
188	DB	12	DG	Sidechain
188	DB	31	DA	Sidechain
188	DB	33	DC	Sidechain
188	DB	39	DT	Sidechain
188	DB	9	DC	Sidechain
189	DC	12	DA	Sidechain
189	DC	27	DT	Sidechain
189	DC	29	DA	Sidechain
189	DC	37	DA	Sidechain
189	DC	43	DG	Sidechain
189	DC	5	DT	Sidechain
190	DD	1	DG	Sidechain
190	DD	14	DG	Sidechain
190	DD	18	DT	Sidechain
190	DD	26	DT	Sidechain
190	DD	27	DG	Sidechain
190	DD	3	DA	Sidechain
190	DD	32	DT	Sidechain
190	DD	4	DA	Sidechain
190	DD	9	DG	Sidechain
191	DE	14	DC	Sidechain
191	DE	23	DG	Sidechain
191	DE	24	DT	Sidechain
191	DE	26	DG	Sidechain
191	DE	27	DA	Sidechain
191	DE	28	DT	Sidechain
191	DE	3	DA	Sidechain
191	DE	34	DT	Sidechain
191	DE	35	DT	Sidechain
191	DE	42	DC	Sidechain

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Mol	Chain	Res	Type	Group
192	DF	10	DA	Sidechain
192	DF	2	DA	Sidechain
192	DF	20	DG	Sidechain
192	DF	6	DC	Sidechain

5.2 Too-close contacts (i)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	164972	0	91297	0	0
2	AB	972	0	529	0	0
3	AC	1091	0	596	0	0
4	AD	989	0	542	0	0
5	AE	971	0	543	0	0
6	AF	1131	0	620	0	0
7	AG	970	0	554	0	0
8	AH	636	0	354	0	0
9	AI	570	0	324	0	0
10	AJ	977	0	543	0	0
11	AK	657	0	361	0	0
12	AL	1065	0	592	0	0
13	AM	766	0	439	0	0
14	AN	946	0	522	0	0
15	AO	947	0	514	0	0
16	AP	982	0	545	0	0
17	AQ	972	0	553	0	0
18	AR	942	0	522	0	0
19	AS	1012	0	566	0	0
20	AT	959	0	528	0	0
21	AU	823	0	448	0	0
22	AV	918	0	519	0	0
23	AW	982	0	539	0	0
24	AX	763	0	412	0	0
25	AY	966	0	536	0	0
26	AZ	813	0	450	0	0
27	Aa	1086	0	598	0	0
28	Ab	798	0	443	0	0
29	Ac	624	0	352	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
30	Ad	927	0	505	0	0
31	Ae	1056	0	595	0	0
32	Af	936	0	521	0	0
33	Ag	616	0	343	0	0
34	Ah	801	0	437	0	0
35	Ai	981	0	554	0	0
36	Aj	820	0	449	0	0
37	Ak	775	0	429	0	0
38	Al	1136	0	633	0	0
39	Am	772	0	438	0	0
40	An	912	0	506	0	0
41	Ao	942	0	518	0	0
42	Ap	974	0	548	0	0
43	Aq	662	0	362	0	0
44	Ar	988	0	547	0	0
45	As	991	0	536	0	0
46	At	1105	0	608	0	0
47	Au	934	0	524	0	0
48	Av	985	0	543	0	0
49	Aw	964	0	549	0	0
50	Ax	917	0	505	0	0
51	Ay	643	0	347	0	0
52	Az	613	0	338	0	0
53	A0	647	0	358	0	0
54	A1	984	0	542	0	0
55	A2	941	0	519	0	0
56	A3	615	0	339	0	0
57	A4	914	0	510	0	0
58	A5	923	0	515	0	0
59	A6	994	0	540	0	0
60	A7	977	0	550	0	0
61	A8	1206	0	686	0	0
62	A9	778	0	427	0	0
63	BA	980	0	540	0	0
64	BB	637	0	347	0	0
65	BC	1223	0	676	0	0
66	BD	1088	0	597	0	0
67	BE	648	0	362	0	0
68	BF	779	0	427	0	0
69	BG	959	0	538	0	0
70	BH	1159	0	660	0	0
71	BI	917	0	506	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
72	BJ	927	0	507	0	0
73	BK	981	0	544	0	0
74	BL	918	0	511	0	0
75	BM	990	0	544	0	0
76	BN	618	0	340	0	0
77	BO	914	0	509	0	0
78	BP	920	0	506	0	0
79	BQ	929	0	507	0	0
80	BR	770	0	432	0	0
81	BS	972	0	548	0	0
82	BT	1070	0	581	0	0
83	BU	784	0	440	0	0
84	BV	646	0	365	0	0
85	BW	624	0	347	0	0
86	BX	913	0	508	0	0
87	BY	1065	0	590	0	0
88	BZ	957	0	517	0	0
89	Ba	952	0	516	0	0
90	Bb	791	0	427	0	0
91	Bc	923	0	513	0	0
92	Bd	985	0	542	0	0
93	Be	908	0	502	0	0
94	Bf	776	0	434	0	0
95	Bg	783	0	429	0	0
96	Bh	814	0	447	0	0
97	Bi	993	0	565	0	0
98	Bj	991	0	542	0	0
99	Bk	620	0	338	0	0
100	Bl	829	0	449	0	0
101	Bm	773	0	427	0	0
102	Bn	878	0	492	0	0
103	Bo	914	0	519	0	0
104	Bp	974	0	528	0	0
105	Bq	984	0	551	0	0
106	Br	778	0	434	0	0
107	Bs	609	0	346	0	0
108	Bt	919	0	517	0	0
109	Bu	1004	0	565	0	0
110	Bv	815	0	447	0	0
111	Bw	752	0	422	0	0
112	Bx	1059	0	602	0	0
113	By	625	0	338	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
114	Bz	821	0	450	0	0
115	B0	613	0	342	0	0
116	B1	1065	0	604	0	0
117	B2	614	0	340	0	0
118	B3	1143	0	630	0	0
119	B4	988	0	537	0	0
120	B5	632	0	358	0	0
121	B6	929	0	511	0	0
122	B7	761	0	417	0	0
123	B8	1066	0	593	0	0
124	B9	768	0	434	0	0
125	CA	644	0	359	0	0
126	CB	656	0	362	0	0
127	CC	624	0	337	0	0
128	CD	1200	0	672	0	0
129	CE	1062	0	590	0	0
130	CF	816	0	446	0	0
131	CG	626	0	347	0	0
132	CH	1098	0	600	0	0
133	CI	614	0	339	0	0
134	CJ	988	0	570	0	0
135	CK	1138	0	643	0	0
136	CL	640	0	350	0	0
137	CM	653	0	359	0	0
138	CN	827	0	450	0	0
139	CO	607	0	340	0	0
140	CP	1106	0	612	0	0
141	CQ	976	0	540	0	0
142	CR	923	0	511	0	0
143	CS	983	0	539	0	0
144	CT	769	0	426	0	0
145	CU	619	0	337	0	0
146	CV	652	0	358	0	0
147	CW	970	0	531	0	0
148	CX	974	0	552	0	0
149	CY	995	0	535	0	0
150	CZ	948	0	528	0	0
151	Ca	798	0	437	0	0
152	Cb	933	0	503	0	0
153	Cc	616	0	340	0	0
154	Cd	779	0	425	0	0
155	Ce	603	0	339	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
156	Cf	803	0	449	0	0
157	Cg	779	0	429	0	0
158	Ch	928	0	507	0	0
159	Ci	977	0	550	0	0
160	Cj	1107	0	607	0	0
161	Ck	948	0	517	0	0
162	Cl	913	0	508	0	0
163	Cm	765	0	435	0	0
164	Cn	916	0	504	0	0
165	Co	752	0	425	0	0
166	Cp	752	0	418	0	0
167	Cq	731	0	409	0	0
168	Cr	778	0	430	0	0
169	Cs	804	0	441	0	0
170	Ct	781	0	425	0	0
171	Cu	736	0	413	0	0
172	Cv	748	0	423	0	0
173	Cw	629	0	347	0	0
174	Cx	761	0	416	0	0
175	Cy	917	0	507	0	0
176	Cz	1061	0	594	0	0
177	C0	1215	0	692	0	0
178	C1	964	0	532	0	0
179	C2	660	0	363	0	0
180	C3	757	0	417	0	0
181	C4	1159	0	655	0	0
182	C5	910	0	497	0	0
183	C6	959	0	529	0	0
184	C7	957	0	526	0	0
185	C8	771	0	429	0	0
186	C9	766	0	418	0	0
187	DA	1225	0	681	0	0
188	DB	876	0	487	0	0
189	DC	952	0	515	0	0
190	DD	775	0	428	0	0
191	DE	940	0	515	0	0
192	DF	638	0	349	0	0
All	All	331913	0	183783	0	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). Clashscore could not be calculated for this entry.

There are no clashes within the asymmetric unit.

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

There are no protein molecules in this entry.

5.3.2 Protein sidechains

There are no protein molecules in this entry.

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

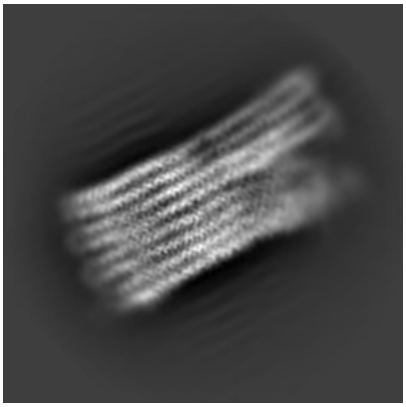
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-11378. These allow visual inspection of the internal detail of the map and identification of artifacts.

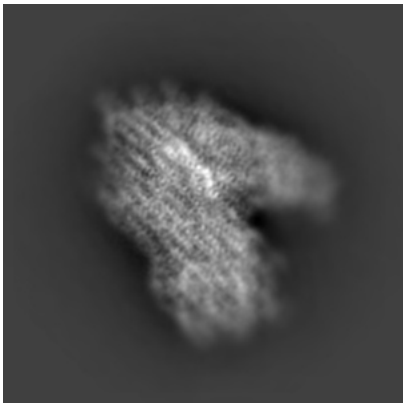
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

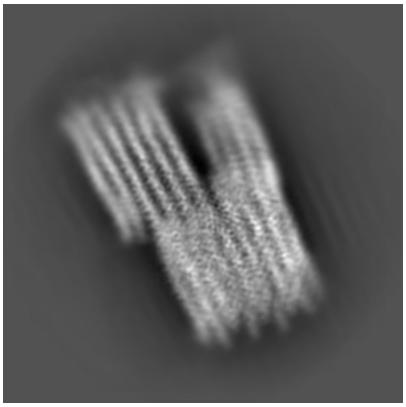
6.1.1 Primary map



X



Y

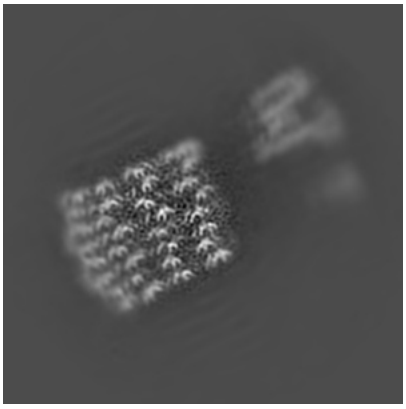


Z

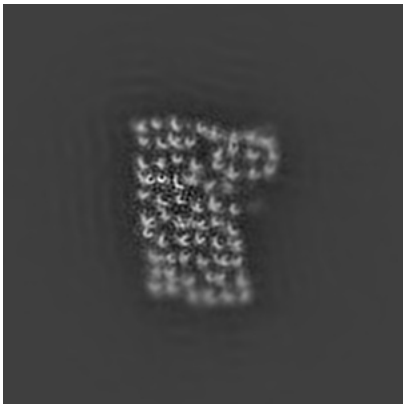
The images above show the map projected in three orthogonal directions.

6.2 Central slices

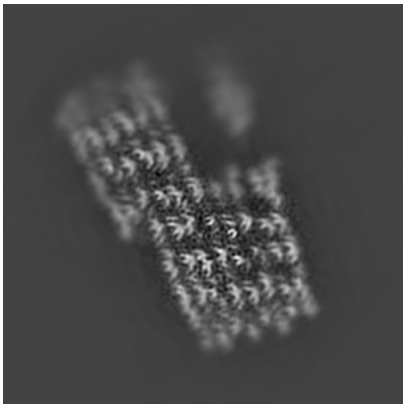
6.2.1 Primary map



X Index: 115



Y Index: 115

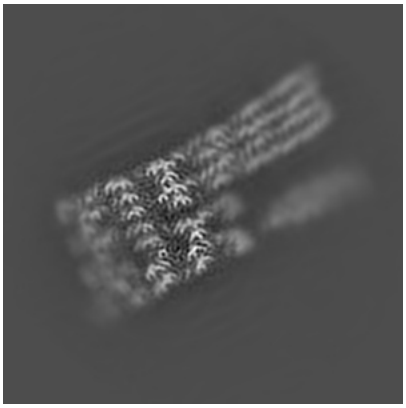


Z Index: 115

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

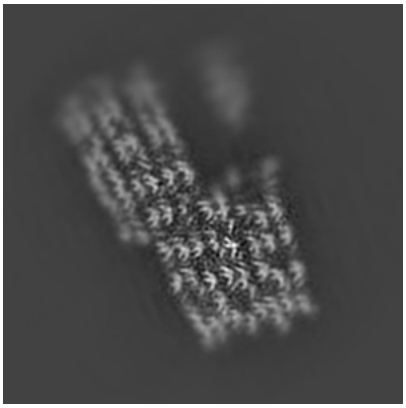
6.3 Largest variance slices (i)

6.3.1 Primary map



X Index: 130

Y Index: 97

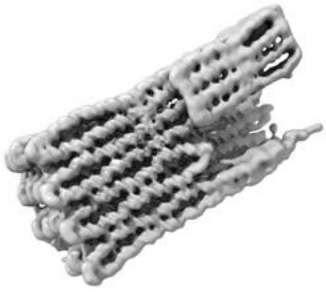


Z Index: 119

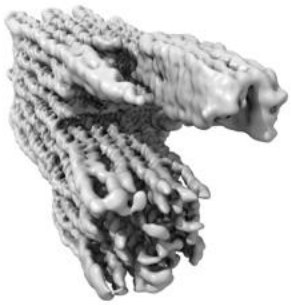
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views (i)

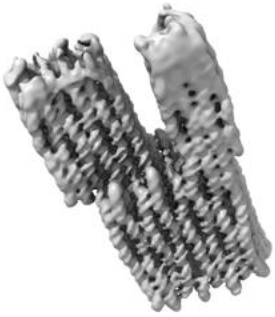
6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.11. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

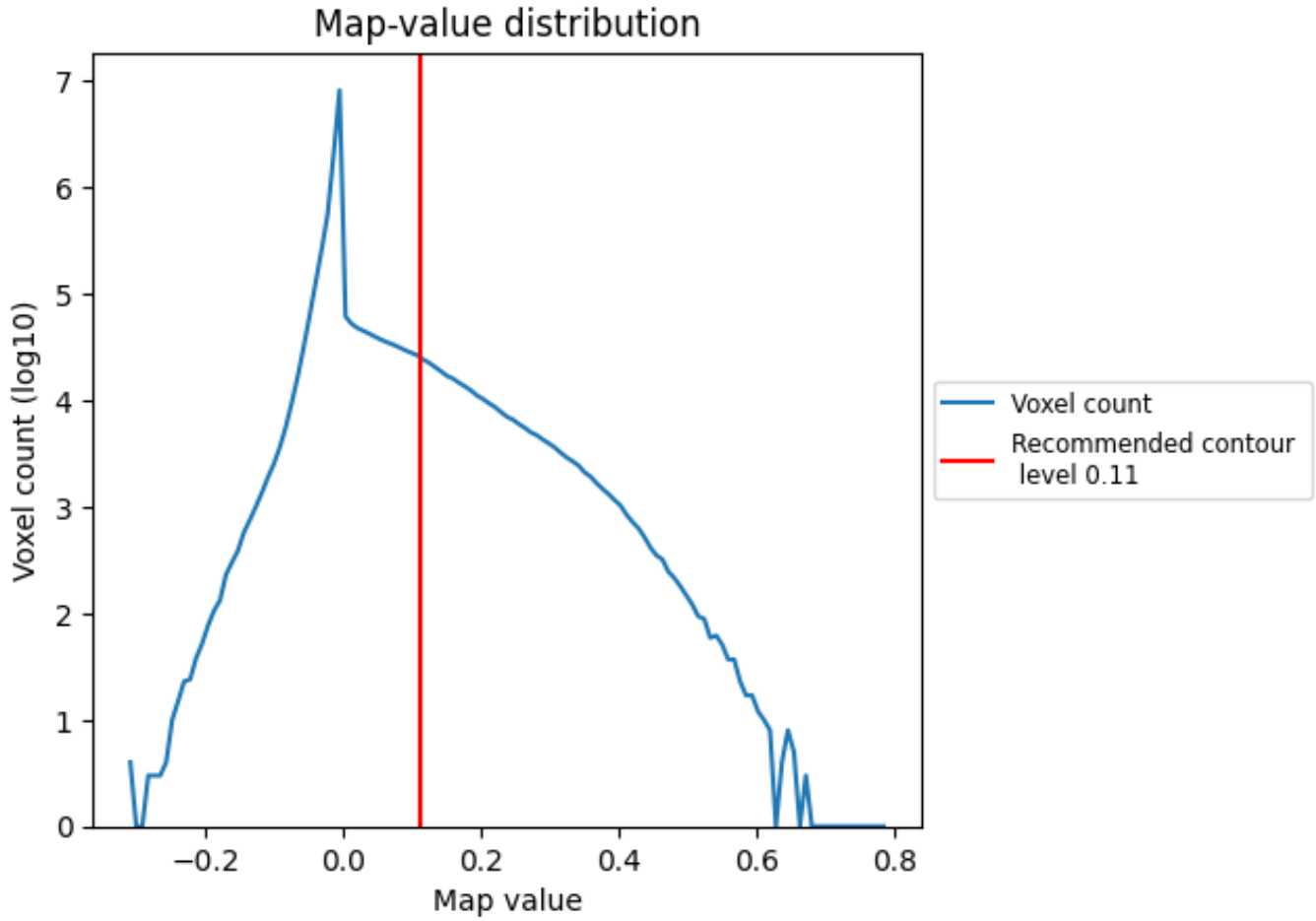
6.5 Mask visualisation (i)

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

7 Map analysis

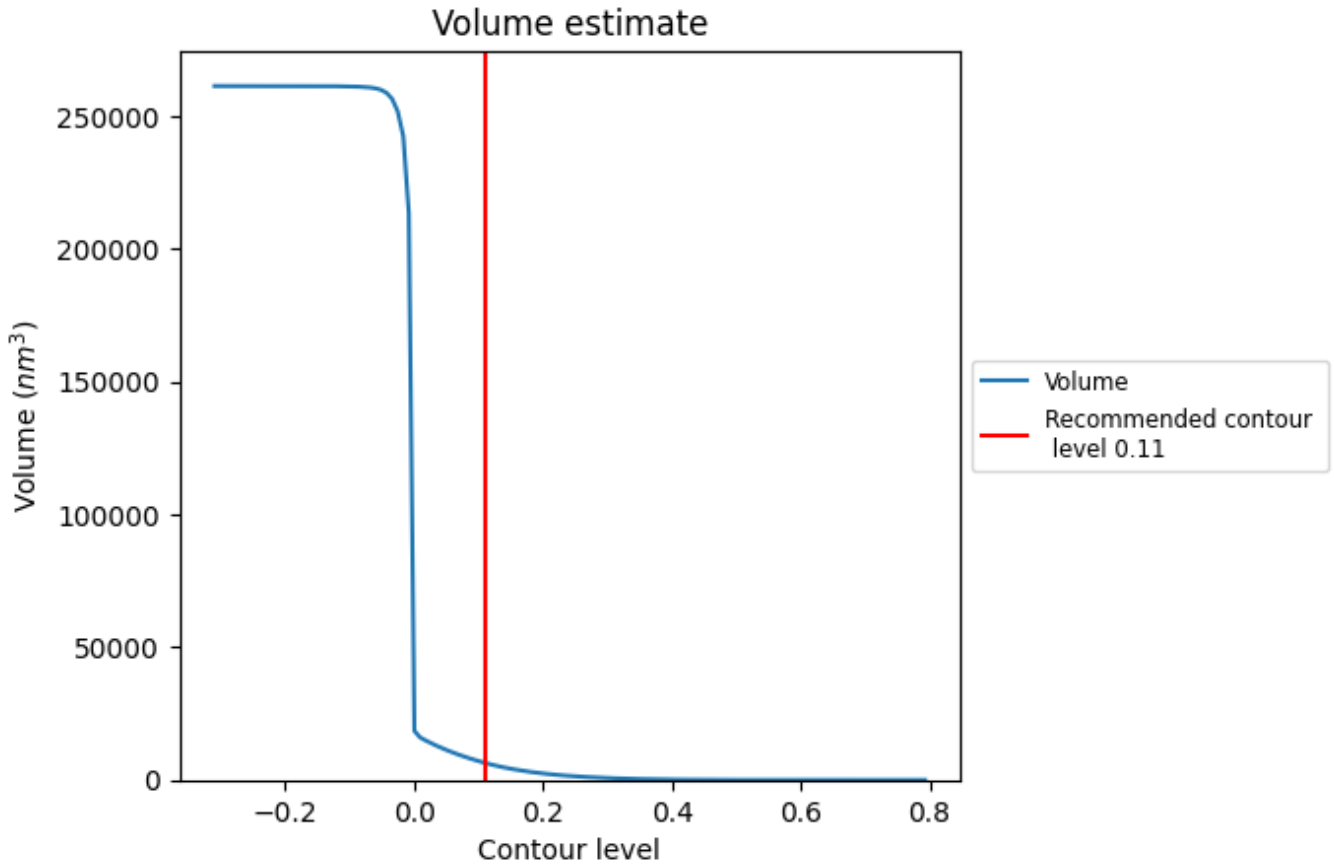
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

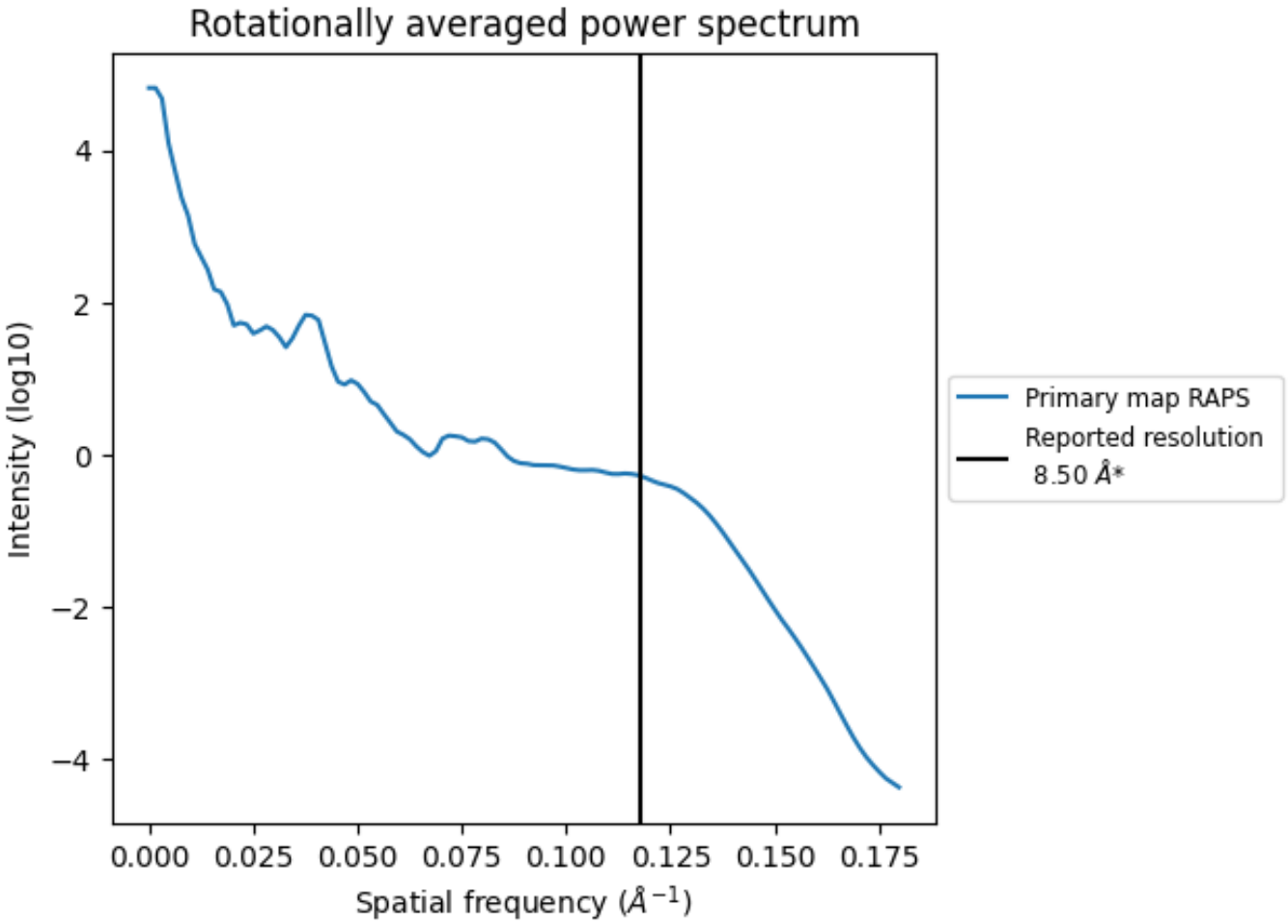
7.2 Volume estimate



The volume at the recommended contour level is 6439 nm^3; this corresponds to an approximate mass of 5817 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)

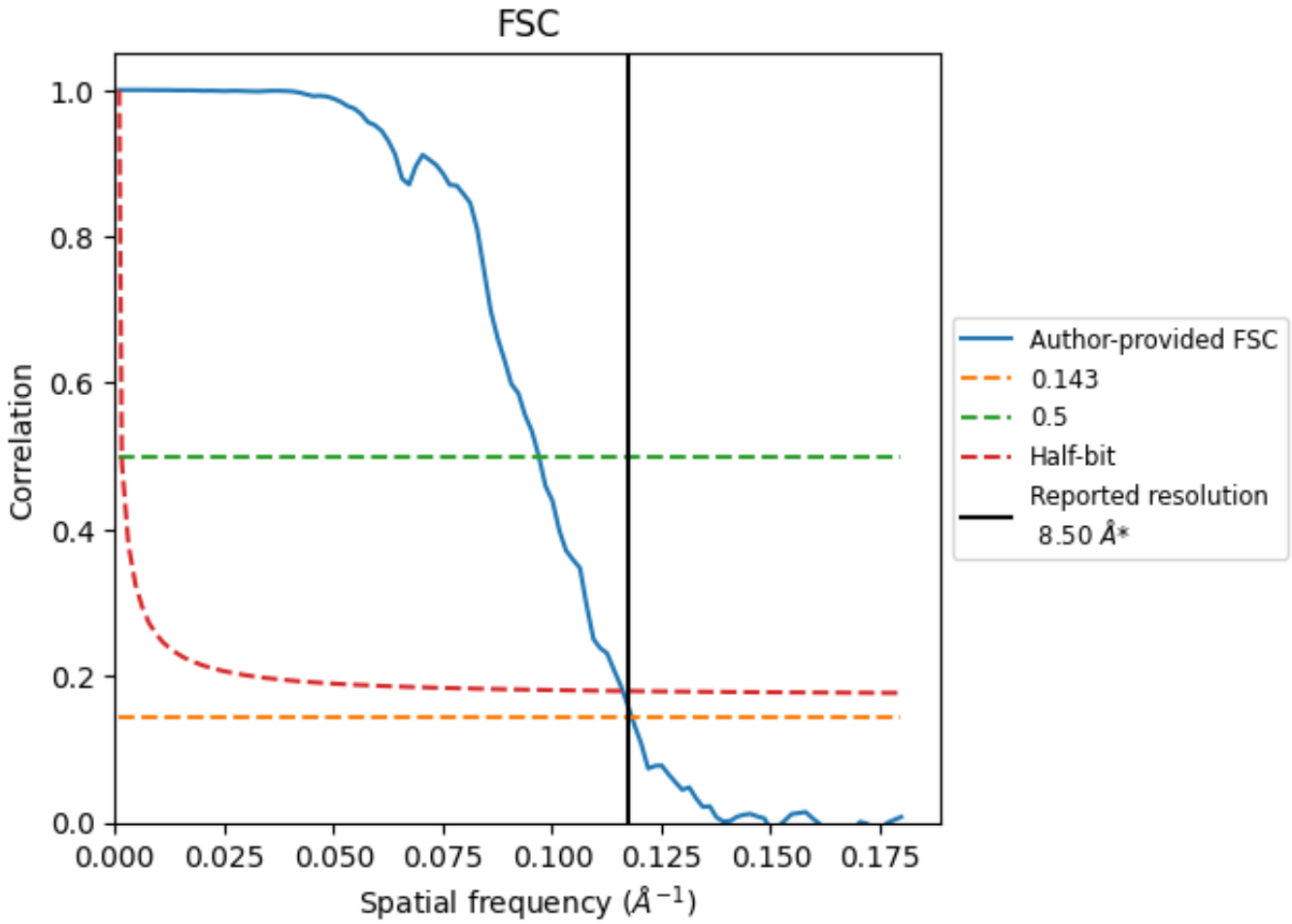


*Reported resolution corresponds to spatial frequency of 0.118 Å^{-1}

8 Fourier-Shell correlation

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

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.118 Å^{-1}

8.2 Resolution estimates (i)

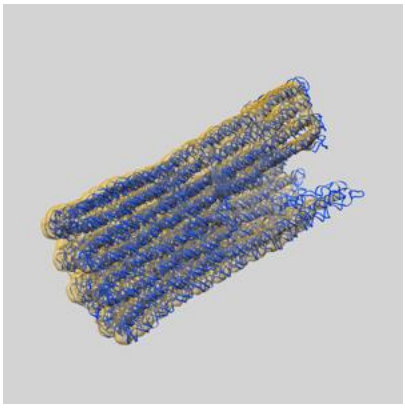
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	8.50	-	-
Author-provided FSC curve	8.45	10.32	8.61
Unmasked-calculated*	-	-	-

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

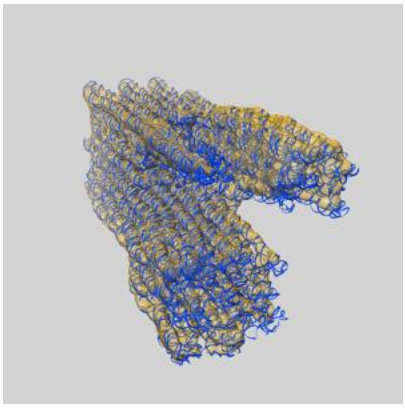
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-11378 and PDB model 7ARY. Per-residue inclusion information can be found in section 3 on page 38.

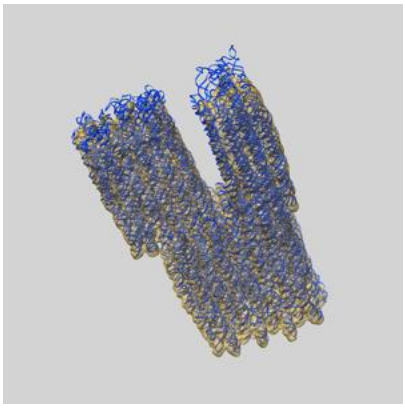
9.1 Map-model overlay



X



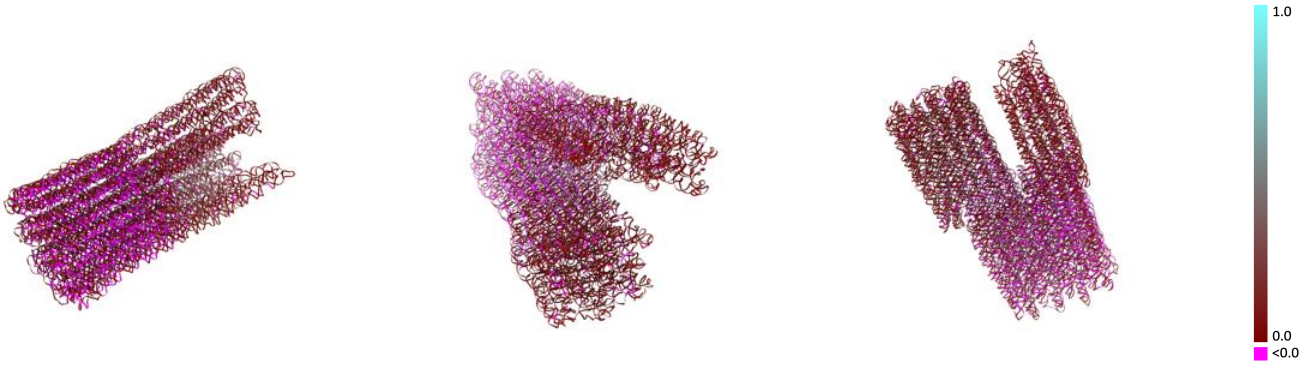
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.11 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.

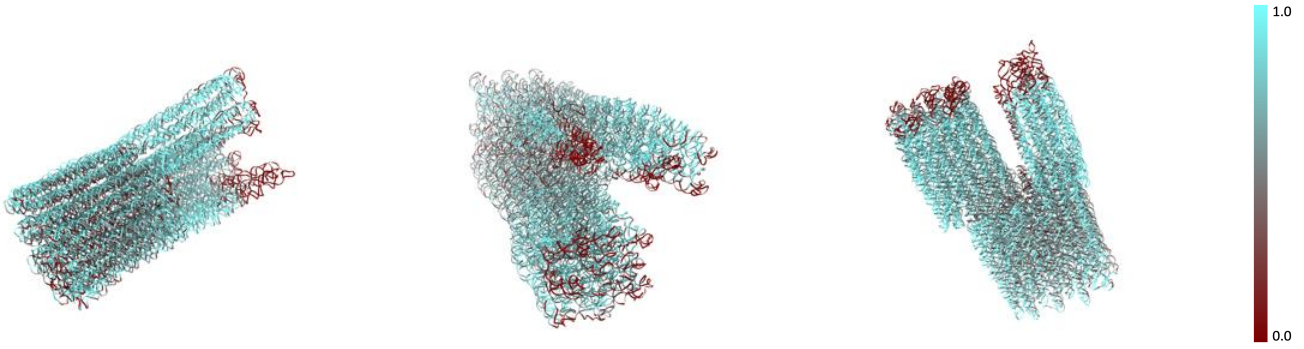
9.2 Q-score mapped to coordinate model (i)



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.

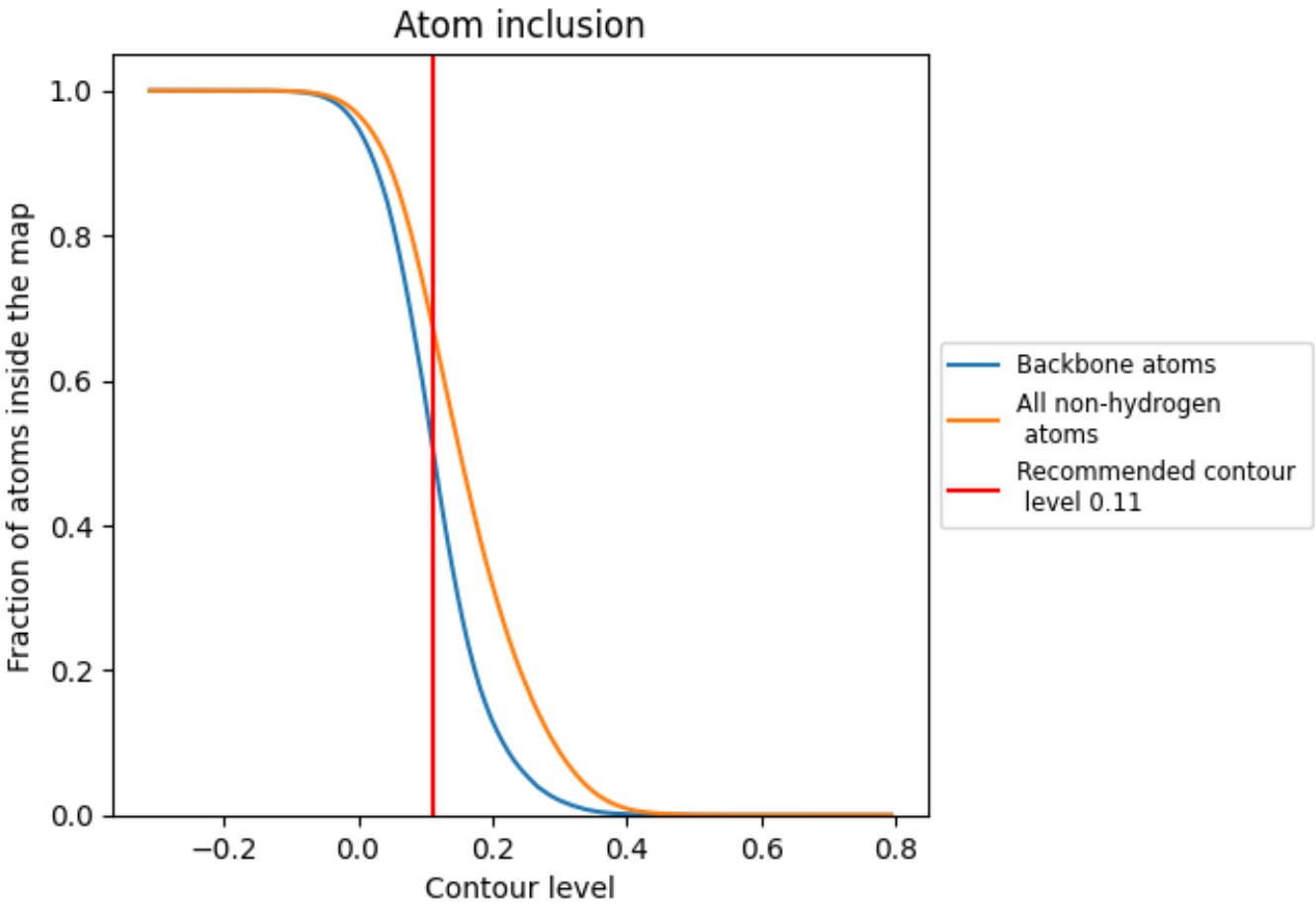
9.3 Atom inclusion mapped to coordinate model (i)



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 (0.11).

9.4 Atom inclusion (i)



At the recommended contour level, 51% of all backbone atoms, 68% 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 (0.11) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6784	0.0580
A0	0.8547	0.1060
A1	0.5976	0.0140
A2	0.7396	0.0490
A3	0.7593	0.0710
A4	0.6685	0.0520
A5	0.4756	0.0360
A6	0.6167	-0.0000
A7	0.6121	0.0430
A8	0.3731	0.0690
A9	0.4447	0.0240
AA	0.6844	0.0600
AB	0.8704	0.1090
AC	0.8139	0.0630
AD	0.8059	0.1160
AE	0.8548	0.1230
AF	0.8895	0.1220
AG	0.2021	0.0360
AH	0.9009	0.1400
AI	0.9649	0.1160
AJ	0.8649	0.1110
AK	0.8219	0.1140
AL	0.6629	0.1040
AM	0.8185	0.1220
AN	0.6670	0.1010
AO	0.8395	0.1190
AP	0.7230	0.0610
AQ	0.2901	0.0590
AR	0.7686	0.1110
AS	0.6650	0.0970
AT	0.6809	0.0330
AU	0.6574	0.0050
AV	0.4063	0.0420
AW	0.8462	0.1020
AX	0.7654	0.0960

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Chain	Atom inclusion	Q-score
AY	0.7919	0.0770
AZ	0.7724	0.0920
Aa	0.8573	0.1100
Ab	0.7469	0.0480
Ac	0.6442	0.0640
Ad	0.8447	0.1220
Ae	0.5218	0.0940
Af	0.8066	0.1280
Ag	0.8149	0.0990
Ah	0.7228	0.0650
Ai	0.3435	0.0860
Aj	0.8500	0.0930
Ak	0.7058	0.0570
Al	0.6083	0.0240
Am	0.6541	0.0500
An	0.8783	0.1200
Ao	0.7962	0.0750
Ap	0.7105	0.0560
Aq	0.7477	0.0800
Ar	0.6366	0.0290
As	0.6337	0.0240
At	0.6833	0.0410
Au	0.7259	0.0430
Av	0.6041	0.0430
Aw	0.1162	0.0240
Ax	0.8092	0.1020
Ay	0.6563	0.0470
Az	0.5661	0.0260
B0	0.6313	0.0080
B1	0.6582	0.0520
B2	0.5554	-0.0010
B3	0.6763	0.0380
B4	0.6680	0.0010
B5	0.5538	0.0290
B6	0.6437	0.0150
B7	0.6873	0.0860
B8	0.5610	0.0620
B9	0.5846	-0.0160
BA	0.6612	0.0170
BB	0.4647	0.0220
BC	0.3794	0.0820
BD	0.8557	0.1140

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Chain	Atom inclusion	Q-score
BE	0.7901	0.0670
BF	0.7754	0.0750
BG	0.6569	0.0320
BH	0.4029	0.0890
BI	0.7503	0.0860
BJ	0.7465	0.0600
BK	0.6901	0.0400
BL	0.8214	0.1110
BM	0.5828	0.0170
BN	0.5000	-0.0140
BO	0.7243	0.0630
BP	0.5728	0.0050
BQ	0.6017	0.0110
BR	0.7325	0.0380
BS	0.6749	0.0550
BT	0.7308	0.1090
BU	0.7245	0.0500
BV	0.5619	0.0100
BW	0.7548	0.0920
BX	0.6068	0.0120
BY	0.7174	0.1210
BZ	0.7806	0.0910
Ba	0.8435	0.0950
Bb	0.7143	0.0280
Bc	0.5623	0.0020
Bd	0.6416	0.0350
Be	0.8579	0.1080
Bf	0.6598	0.0200
Bg	0.6360	0.0320
Bh	0.7592	0.0940
Bi	0.7059	0.1080
Bj	0.7427	0.0600
Bk	0.8113	0.1160
Bl	0.6707	0.0280
Bm	0.7141	0.0460
Bn	0.7882	0.0590
Bo	0.7473	0.0690
Bp	0.7495	0.0380
Bq	0.6972	0.0910
Br	0.7352	0.0600
Bs	0.5156	-0.0120
Bt	0.7029	0.0520

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Chain	Atom inclusion	Q-score
Bu	0.7739	0.0540
Bv	0.6172	0.0200
Bw	0.5066	-0.0270
Bx	0.6072	0.0450
By	0.4672	0.0030
Bz	0.5250	-0.0130
C0	0.6626	0.0450
C1	0.3828	0.0790
C2	0.4500	0.0660
C3	0.6301	-0.0260
C4	0.6764	0.0480
C5	0.0363	0.0450
C6	0.5933	-0.0190
C7	0.7189	0.0550
C8	0.6706	0.0330
C9	0.5470	0.0090
CA	0.5497	-0.0200
CB	0.8338	0.0750
CC	0.5417	-0.0490
CD	0.3683	0.0680
CE	0.7232	0.0340
CF	0.6765	0.0180
CG	0.8067	0.0820
CH	0.7796	0.0720
CI	0.6384	0.0110
CJ	0.8117	0.0470
CK	0.2557	0.0630
CL	0.7875	0.0990
CM	0.7152	0.0240
CN	0.5937	0.0070
CO	0.6853	0.0170
CP	0.6962	0.0910
CQ	0.8156	0.0860
CR	0.5298	-0.0430
CS	0.7650	0.0690
CT	0.7698	0.0710
CU	0.6688	-0.0130
CV	0.6166	-0.0110
CW	0.7567	0.0300
CX	0.6181	0.0940
CY	0.8874	0.1010
CZ	0.8154	0.0750

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Chain	Atom inclusion	Q-score
Ca	0.7356	0.0130
Cb	0.6817	0.0370
Cc	0.8084	0.1150
Cd	0.6983	0.0180
Ce	0.8226	0.0970
Cf	0.8966	0.1070
Cg	0.6277	0.0170
Ch	0.6983	0.0180
Ci	0.4545	0.0710
Cj	0.7986	0.0630
Ck	0.6741	0.0020
Cl	0.8215	0.0660
Cm	0.7111	0.0120
Cn	0.6059	-0.0180
Co	0.5904	-0.0170
Cp	0.8511	0.0740
Cq	0.7989	0.0680
Cr	0.7931	0.0530
Cs	0.7898	0.0800
Ct	0.8412	0.0970
Cu	0.7473	0.0940
Cv	0.8543	0.0820
Cw	0.6153	0.0080
Cx	0.5296	-0.0350
Cy	0.5060	-0.0220
Cz	0.6927	0.0410
DA	0.6506	0.0330
DB	0.0434	0.0530
DC	0.7868	0.0510
DD	0.9084	0.1270
DE	0.8670	0.1060
DF	0.6630	0.0020