Full wwPDB EM Validation Report ⓘ

Nov 19, 2022 – 08:36 pm GMT

PDB ID	:	5JPQ
EMDB ID	:	EMD-8143
Title	:	Cryo-EM structure of the 90S pre-ribosome
Authors	:	Turk, M.; Cheng, J.; Berninghausen, O.; Kornprobst, M.; Flemming, D.; Kos-Braun, I.C.; Kos, M.; Thoms, M.; Hurt, E.; Beckmann, R.
Deposited on	:	2016-05-04
Resolution	:	7.30 Å(reported)

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

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

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

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

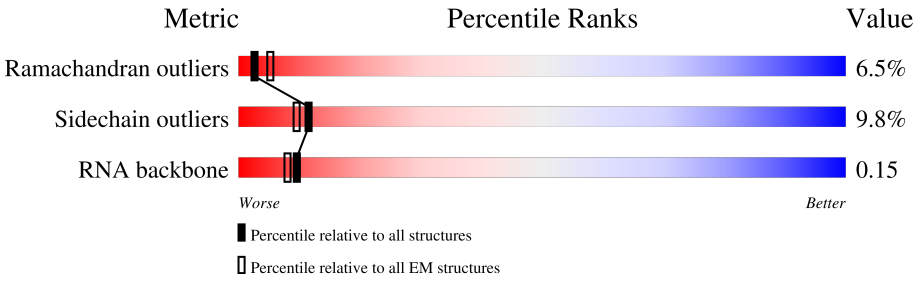
EMDB validation analysis	:	0.0.1.dev43
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.2

1 Overall quality at a glance

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

The reported resolution of this entry is 7.30 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	1290	8% 23% 77%
1	B	1290	9% 23% 77%
1	C	1290	11% 23% 77%
1	D	1290	9% 23% 77%
1	E	1290	9% 23% 77%
1	F	1290	22% 23% 77%
1	J	1290	13% 23% 77%
1	K	1290	10% 23% 77%

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Mol	Chain	Length	Quality of chain
1	L	1290	9% 23% 77%
1	N	1290	18% 23% 77%
1	P	1290	11% 23% 77%
1	l	1290	9% 23% 77%
1	n	1290	13% 23% 77%
2	G	1802	14% 15% 84%
3	H	920	19% 34% 63%
4	I	939	21% 68% 32%
5	M	870	12% 36% 64%
5	O	870	32% 36% 64%
5	m	870	16% 36% 64%
6	Q	456	32% 82% 18%
7	R	560	15% 59% 41%
8	S	412	42% 88% 11%
8	T	412	49% 89% 11%
9	U	130	62% 92% 6%
9	V	130	61% 92% 6%
10	W	232	59% 96%
10	X	232	53% 96%
11	Y	573	30% 64% 36%
12	Z	367	38% 97%
13	a	1183	5% 95%
14	b	183	45% 76% 7% 16%
15	c	297	33% 56% 6% 35%
16	d	184	35% 52% 15% 33%

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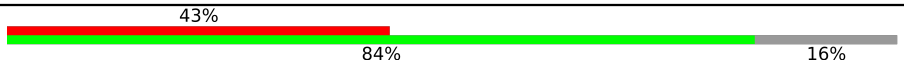
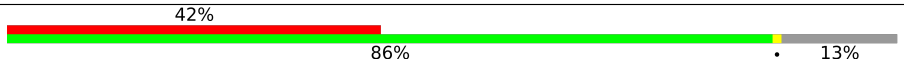
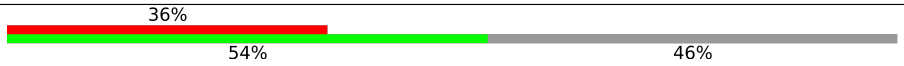
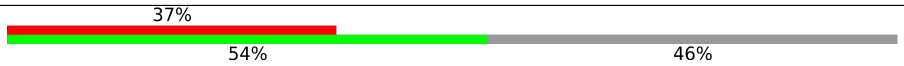
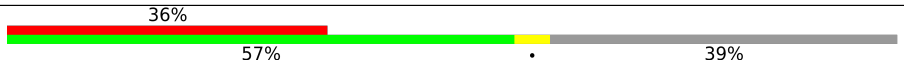
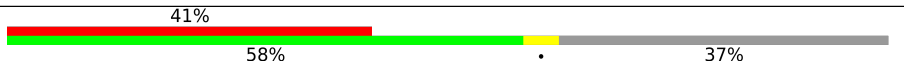
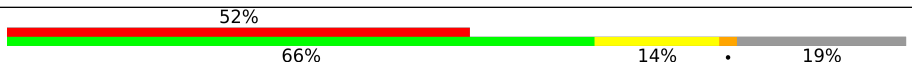
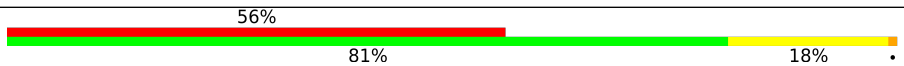
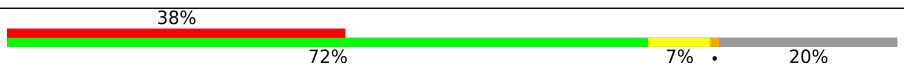
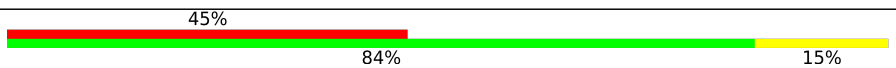
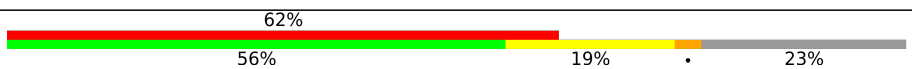
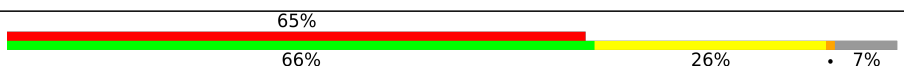
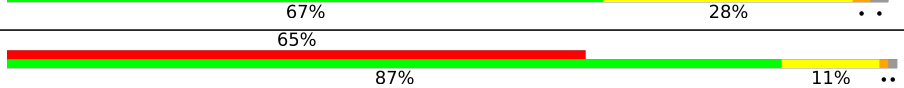
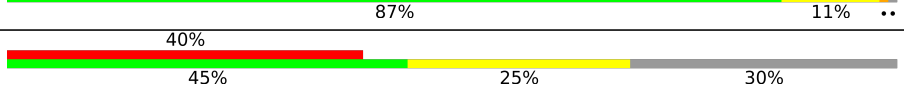
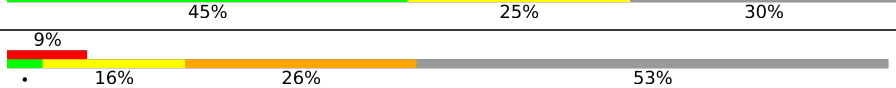
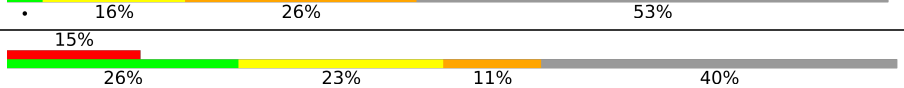
Mol	Chain	Length	Quality of chain
17	e	252	
17	f	252	
18	g	322	
18	h	322	
19	i	1073	
19	j	1073	
20	k	391	
21	o	265	
22	p	259	
23	q	225	
24	r	293	
25	s	197	
26	t	208	
27	u	197	
28	v	151	
29	w	137	
30	x	143	
31	y	157	
32	z	130	
33	0	149	
34	1	67	
35	2	1800	
36	3	274	

2 Entry composition (i)

There are 36 unique types of molecules in this entry. The entry contains 95839 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called WD40 domain proteins.

Mol	Chain	Residues	Atoms				AltConf	Trace
1	A	300	Total 1500	C 900	N 300	O 300	0	0
1	B	300	Total 1500	C 900	N 300	O 300	0	0
1	C	300	Total 1500	C 900	N 300	O 300	0	0
1	D	300	Total 1500	C 900	N 300	O 300	0	0
1	E	300	Total 1500	C 900	N 300	O 300	0	0
1	F	300	Total 1500	C 900	N 300	O 300	0	0
1	J	300	Total 1500	C 900	N 300	O 300	0	0
1	K	300	Total 1500	C 900	N 300	O 300	0	0
1	L	300	Total 1500	C 900	N 300	O 300	0	0
1	N	300	Total 1500	C 900	N 300	O 300	0	0
1	P	300	Total 1500	C 900	N 300	O 300	0	0
1	l	300	Total 1500	C 900	N 300	O 300	0	0
1	n	300	Total 1500	C 900	N 300	O 300	0	0

- Molecule 2 is a protein called UTP10.

Mol	Chain	Residues	Atoms				AltConf	Trace
2	G	283	Total 1402	C 836	N 283	O 283	0	0

- Molecule 3 is a protein called UTP-A oligomerization domain.

Mol	Chain	Residues	Atoms				AltConf	Trace
3	H	343	Total 1715	C 1029	N 343	O 343	0	0

- Molecule 4 is a protein called U3 small nucleolar RNA-associated protein 21.

Mol	Chain	Residues	Atoms				AltConf	Trace
4	I	634	Total 3124	C 1856	N 634	O 634	0	0

- Molecule 5 is a protein called WD40 domain proteins.

Mol	Chain	Residues	Atoms				AltConf	Trace
5	M	309	Total 1545	C 927	N 309	O 309	0	0
5	O	309	Total 1545	C 927	N 309	O 309	0	0
5	m	309	Total 1545	C 927	N 309	O 309	0	0

- Molecule 6 is a protein called UTP6.

Mol	Chain	Residues	Atoms				AltConf	Trace
6	Q	375	Total 1875	C 1125	N 375	O 375	0	0

- Molecule 7 is a protein called UTP-B oligomerisation domain.

Mol	Chain	Residues	Atoms				AltConf	Trace
7	R	332	Total 1660	C 996	N 332	O 332	0	0

- Molecule 8 is a protein called Pre mRNA splicing protein.

Mol	Chain	Residues	Atoms				AltConf	Trace
8	S	367	Total 1815	C 1081	N 367	O 367	0	0
8	T	367	Total 1815	C 1081	N 367	O 367	0	0

- Molecule 9 is a protein called Snu13.

Mol	Chain	Residues	Atoms				AltConf	Trace
9	U	122	Total 603	C 359	N 122	O 122	0	0
9	V	122	Total 603	C 359	N 122	O 122	0	0

- Molecule 10 is a protein called Nop1.

Mol	Chain	Residues	Atoms				AltConf	Trace
10	W	227	Total 1124	C 670	N 227	O 227	0	0
10	X	227	Total 1124	C 670	N 227	O 227	0	0

- Molecule 11 is a protein called rrp9.

Mol	Chain	Residues	Atoms				AltConf	Trace
11	Y	365	Total 1799	C 1069	N 365	O 365	0	0

- Molecule 12 is a protein called Rcl1.

Mol	Chain	Residues	Atoms				AltConf	Trace
12	Z	355	Total 1742	C 1032	N 355	O 355	0	0

- Molecule 13 is a protein called Bms1.

Mol	Chain	Residues	Atoms				AltConf	Trace
13	a	54	Total 267	C 160	N 54	O 53	0	0

- Molecule 14 is a protein called Imp3.

Mol	Chain	Residues	Atoms				AltConf	Trace
14	b	153	Total 760	C 454	N 153	O 153	0	0

- Molecule 15 is a protein called Putative U3 small nucleolar ribonucleoprotein.

Mol	Chain	Residues	Atoms				AltConf	Trace
15	c	192	Total 951	C 567	N 192	O 192	0	0

- Molecule 16 is a protein called Utp24.

Mol	Chain	Residues	Atoms				AltConf	Trace
16	d	124	Total 616	C 368	N 124	O 124	0	0

- Molecule 17 is a protein called Emg1.

Mol	Chain	Residues	Atoms				AltConf	Trace
17	e	211	Total 1047	C 625	N 211	O 211	0	0
17	f	218	Total 1081	C 645	N 218	O 218	0	0

- Molecule 18 is a protein called KRR1 small subunit processome component.

Mol	Chain	Residues	Atoms				AltConf	Trace
18	g	174	Total 861	C 513	N 174	O 174	0	0
18	h	174	Total 861	C 513	N 174	O 174	0	0

- Molecule 19 is a protein called Kre33.

Mol	Chain	Residues	Atoms				AltConf	Trace
19	i	659	Total 3254	C 1936	N 659	O 659	0	0
19	j	677	Total 3342	C 1988	N 677	O 677	0	0

- Molecule 20 is a protein called Utp30.

Mol	Chain	Residues	Atoms				AltConf	Trace
20	k	182	Total 905	C 541	N 182	O 182	0	0

- Molecule 21 is a protein called eS1.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	o	215	Total 1724	C 1090	N 314	O 316	S 4	0	0

- Molecule 22 is a protein called eS4.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	p	259	Total	C	N	O	S	0	0
			2079	1322	383	370	4		

- Molecule 23 is a protein called uS7.

Mol	Chain	Residues	Atoms				AltConf	Trace
23	q	169	Total	C	N	O	0	0
			836	498	169	169		

- Molecule 24 is a protein called eS6.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	r	235	Total	C	N	O	S	0	0
			1868	1184	347	326	11		

- Molecule 25 is a protein called eS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	s	186	Total	C	N	O	S	0	0
			1539	989	271	278	1		

- Molecule 26 is a protein called eS8.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	t	207	Total	C	N	O	S	0	0
			1693	1057	336	296	4		

- Molecule 27 is a protein called uS4.

Mol	Chain	Residues	Atoms				AltConf	Trace
27	u	157	Total	C	N	O	0	0
			777	463	157	157		

- Molecule 28 is a protein called uS15.

Mol	Chain	Residues	Atoms				AltConf	Trace
28	v	117	Total	C	N	O	0	0
			580	346	117	117		

- Molecule 29 is a protein called uS11.

Mol	Chain	Residues	Atoms				AltConf	Trace
29	w	128	Total 627	C 371	N 128	O 128	0	0

- Molecule 30 is a protein called uS9.

Mol	Chain	Residues	Atoms				AltConf	Trace
30	x	134	Total 658	C 390	N 134	O 134	0	0

- Molecule 31 is a protein called uS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	y	157	Total 1275	C 818	N 235	O 217	S 5	0	0

- Molecule 32 is a protein called uS8.

Mol	Chain	Residues	Atoms				AltConf	Trace
32	z	127	Total 622	C 368	N 127	O 127	0	0

- Molecule 33 is a protein called eS24.

Mol	Chain	Residues	Atoms				AltConf	Trace
33	0	148	Total 1197	C 763	N 221	O 213	0	0

- Molecule 34 is a protein called eS28.

Mol	Chain	Residues	Atoms				AltConf	Trace
34	1	47	Total 230	C 136	N 47	O 47	0	0

- Molecule 35 is a RNA chain called 18S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	2	852	Total 18149	C 8120	N 3229	O 5948	P 852	0	0

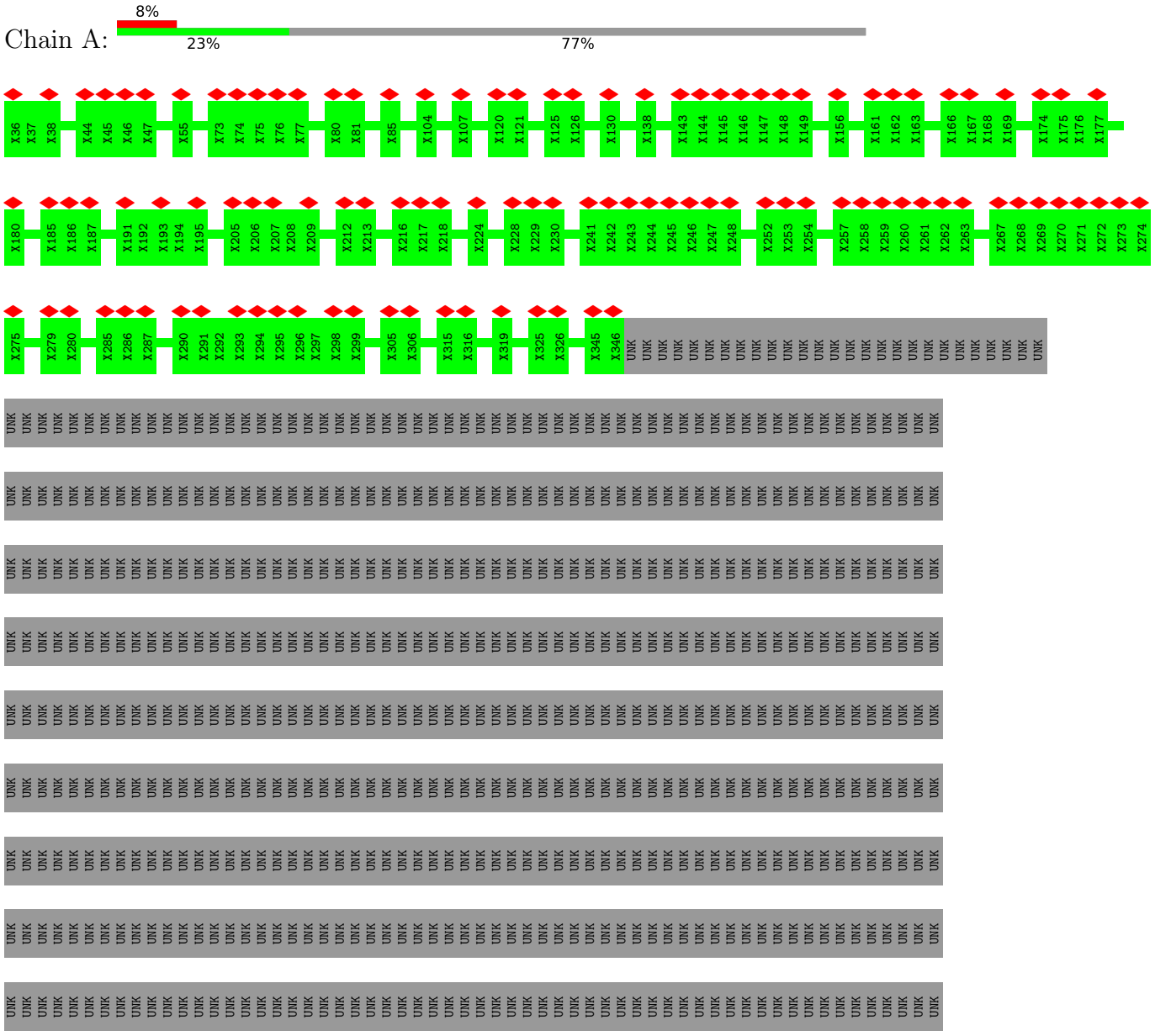
- Molecule 36 is a RNA chain called U3 RNA.

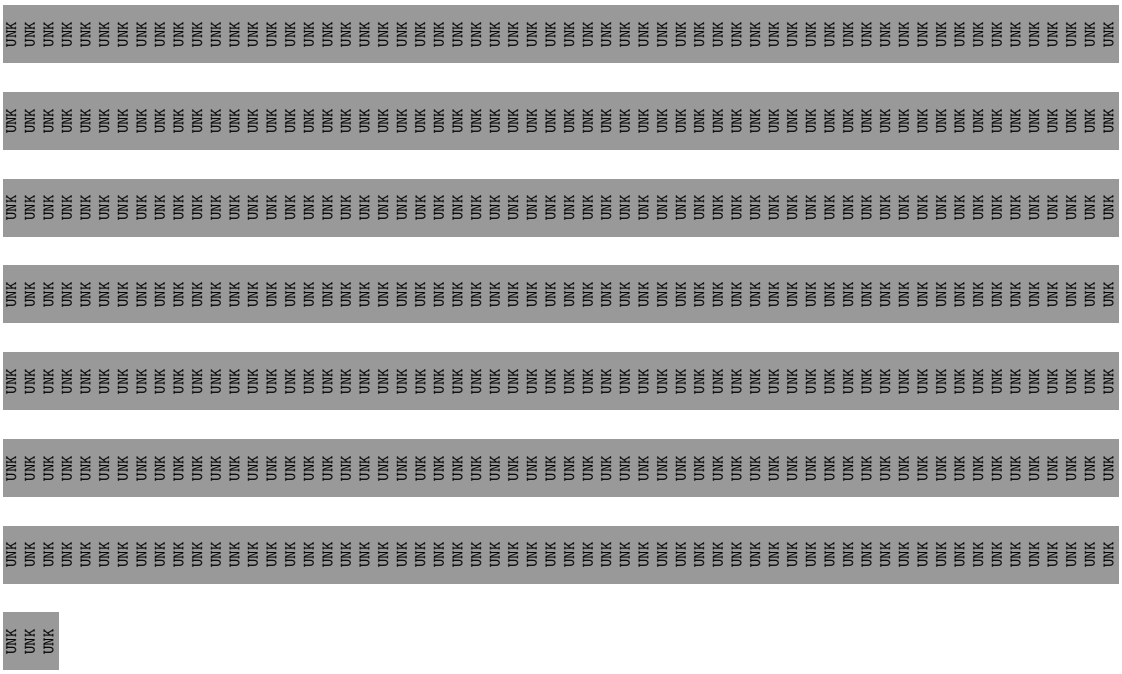
Mol	Chain	Residues	Atoms					AltConf	Trace
36	3	164	Total 3504	C 1560	N 626	O 1154	P 164	0	0

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.

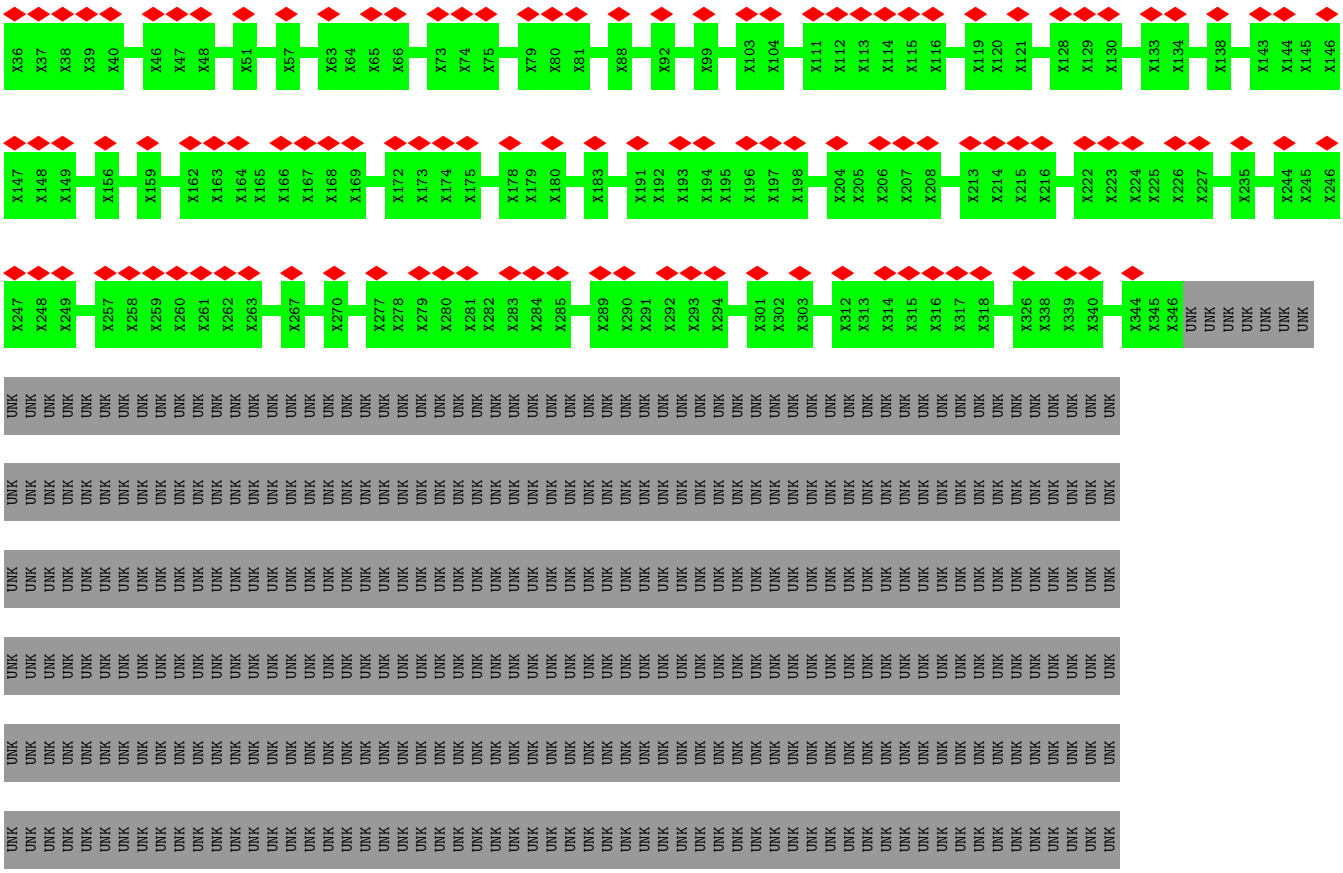
- Molecule 1: WD40 domain proteins

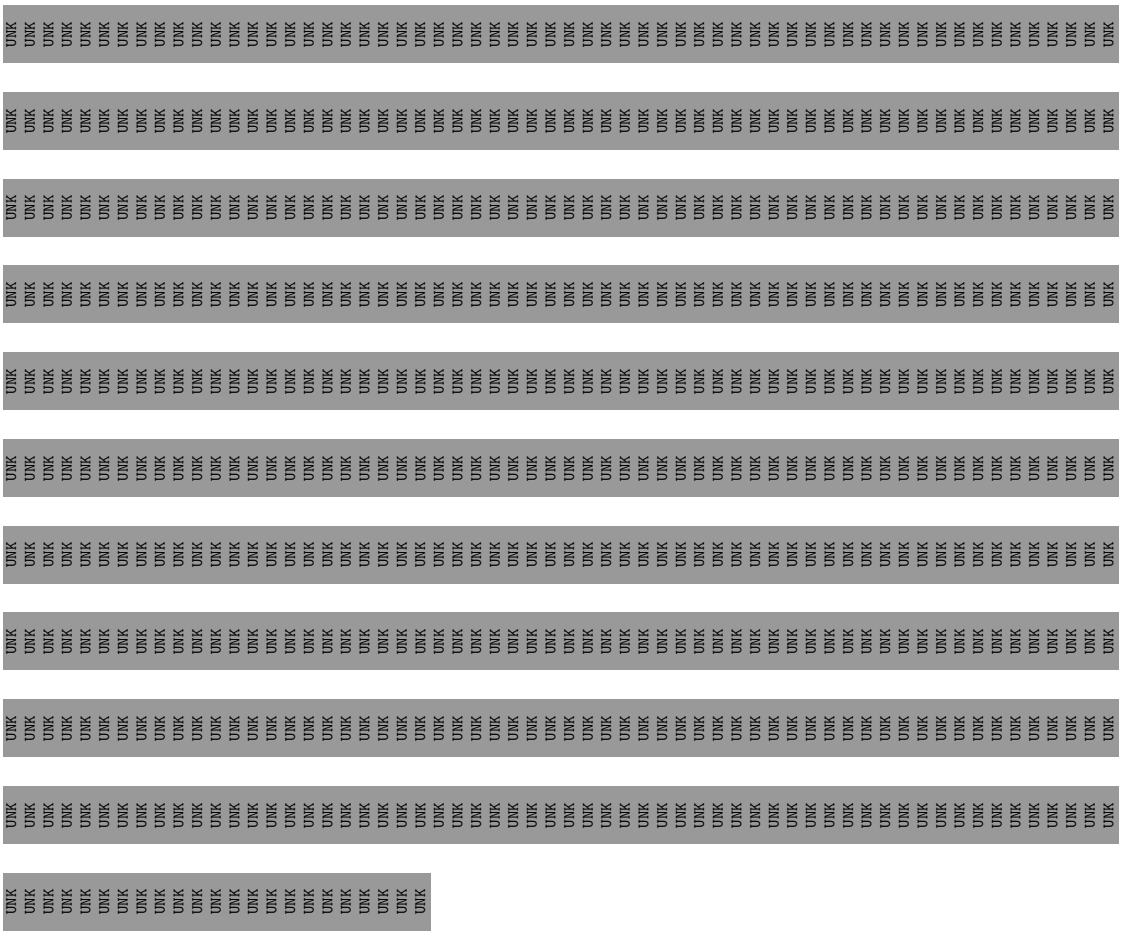




• Molecule 1: WD40 domain proteins

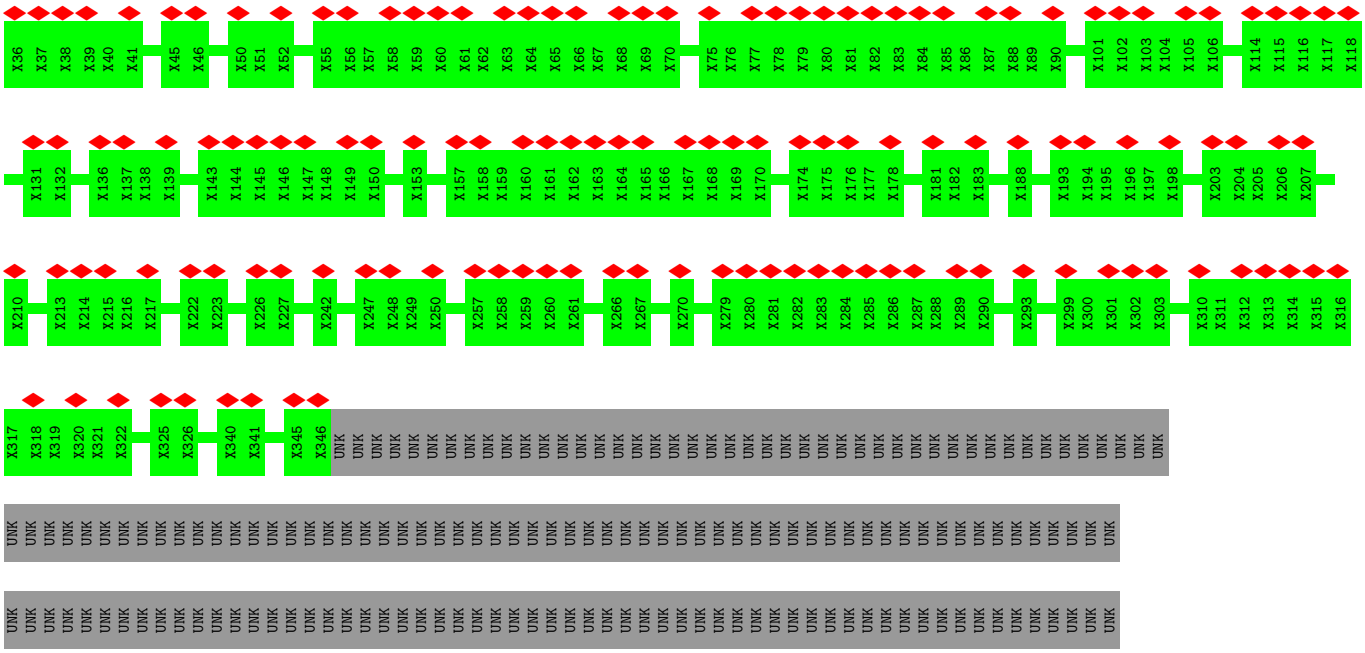
Chain B:

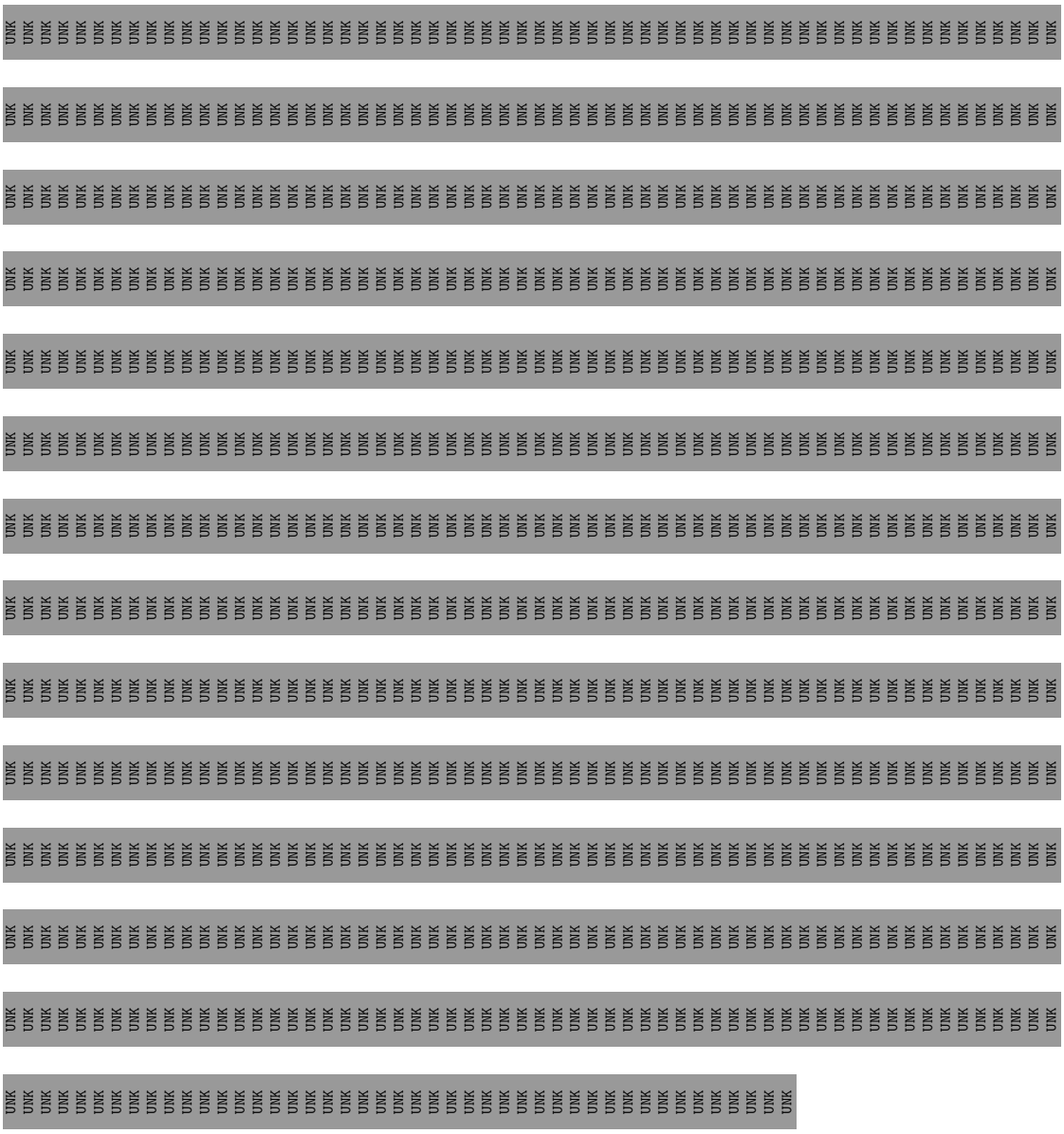




• Molecule 1: WD40 domain proteins

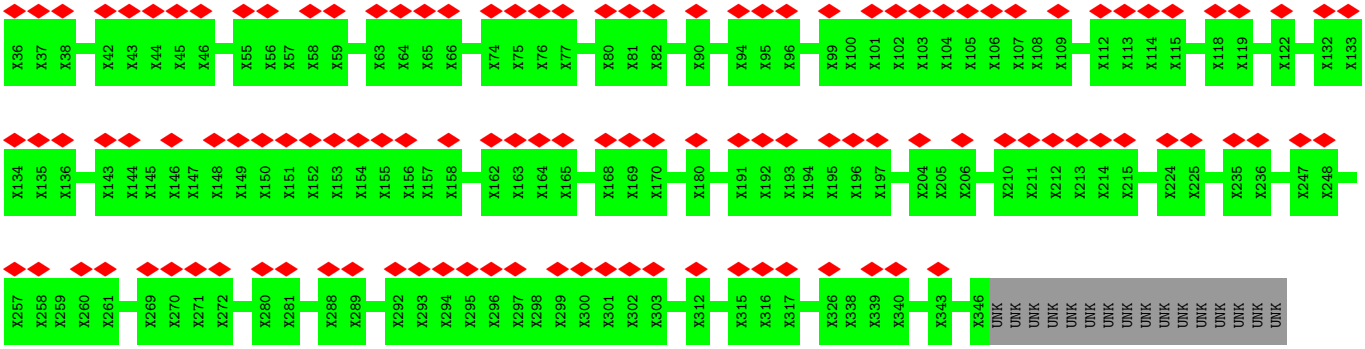
Chain C:

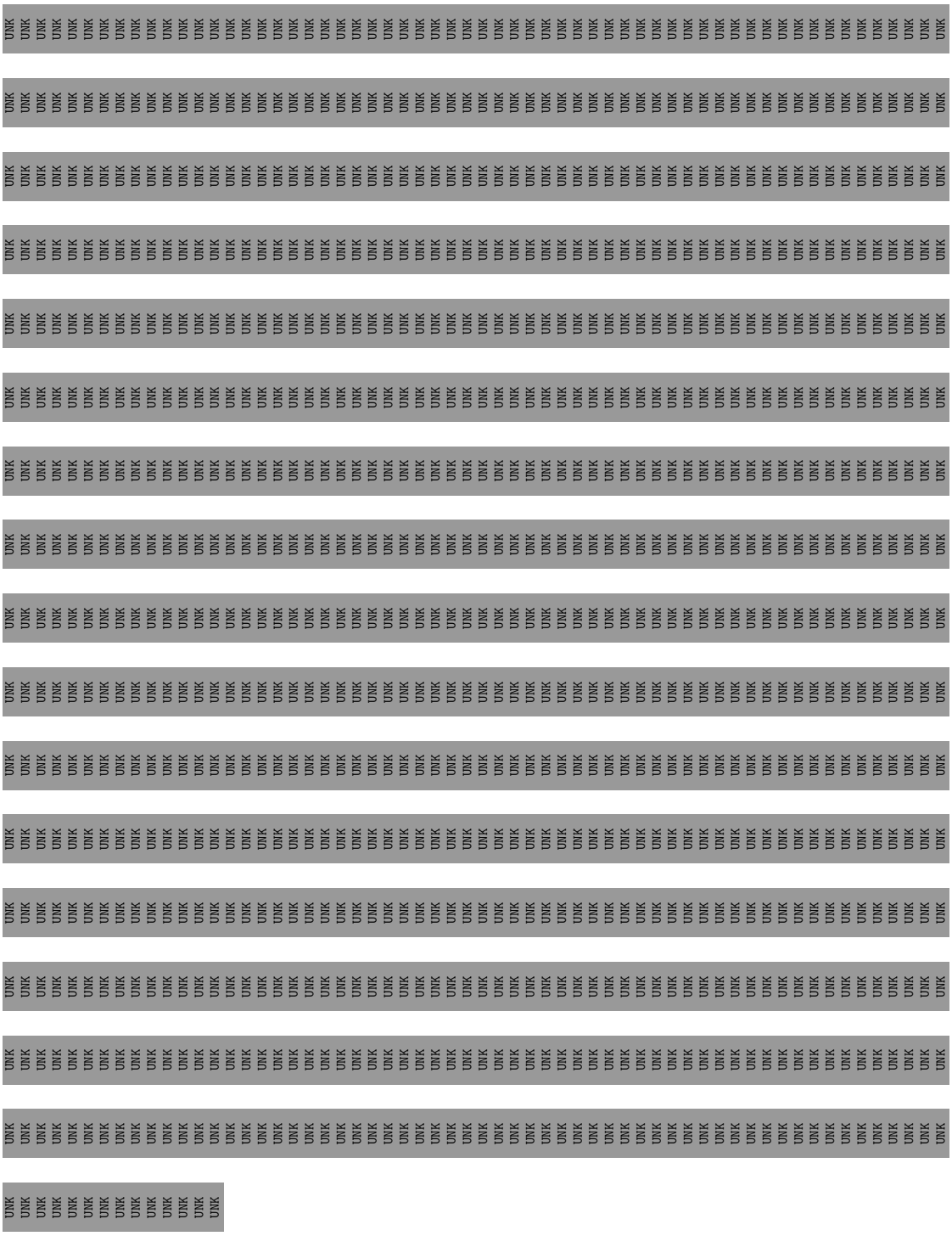




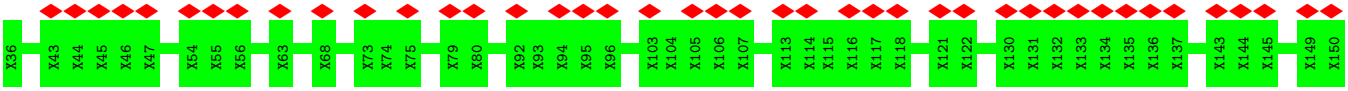
• Molecule 1: WD40 domain proteins

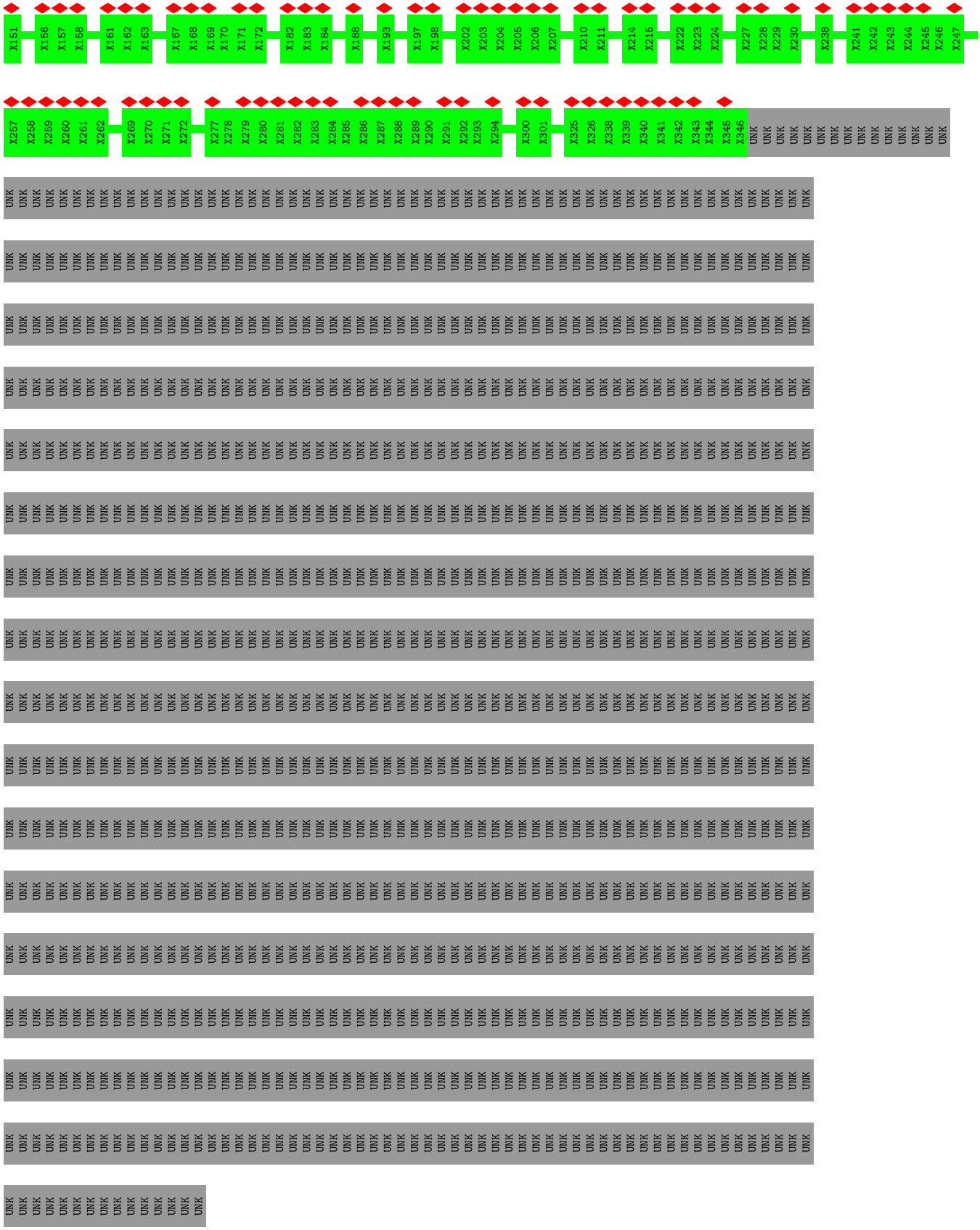
Chain D:





• Molecule 1: WD40 domain proteins

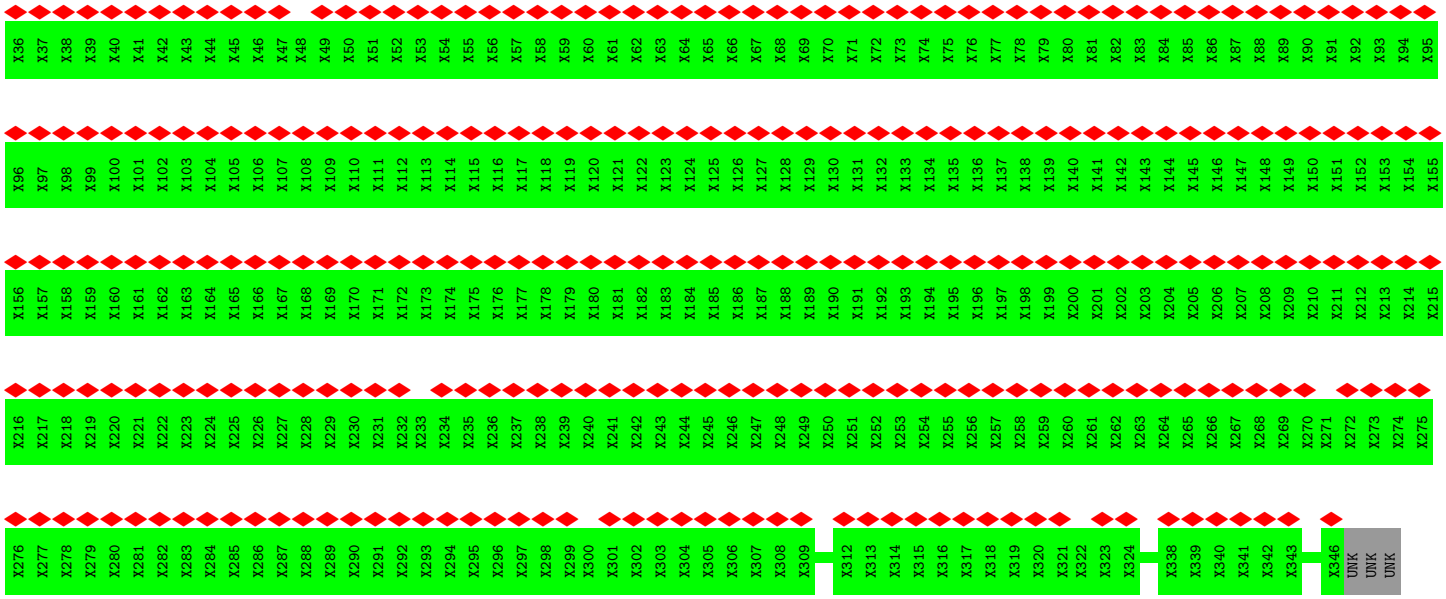




- Molecule 1: WD40 domain proteins

Chain F:


22%
23%
77%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X216 X217 X218 X219 X220 X221 X222 X223 X224 X225 X226 X227 X228 X229 X230 X231 X232 X233 X234 X235 X236 X237 X238 X239 X240 X241 X242 X243 X244 X245 X246 X247 X248 X249 X250 X251 X252 X253 X254 X255 X256 X257 X258 X259 X260 X261 X262 X263 X264 X265 X266 X267 X268 X269 X270 X271 X272 X273 X274 X275
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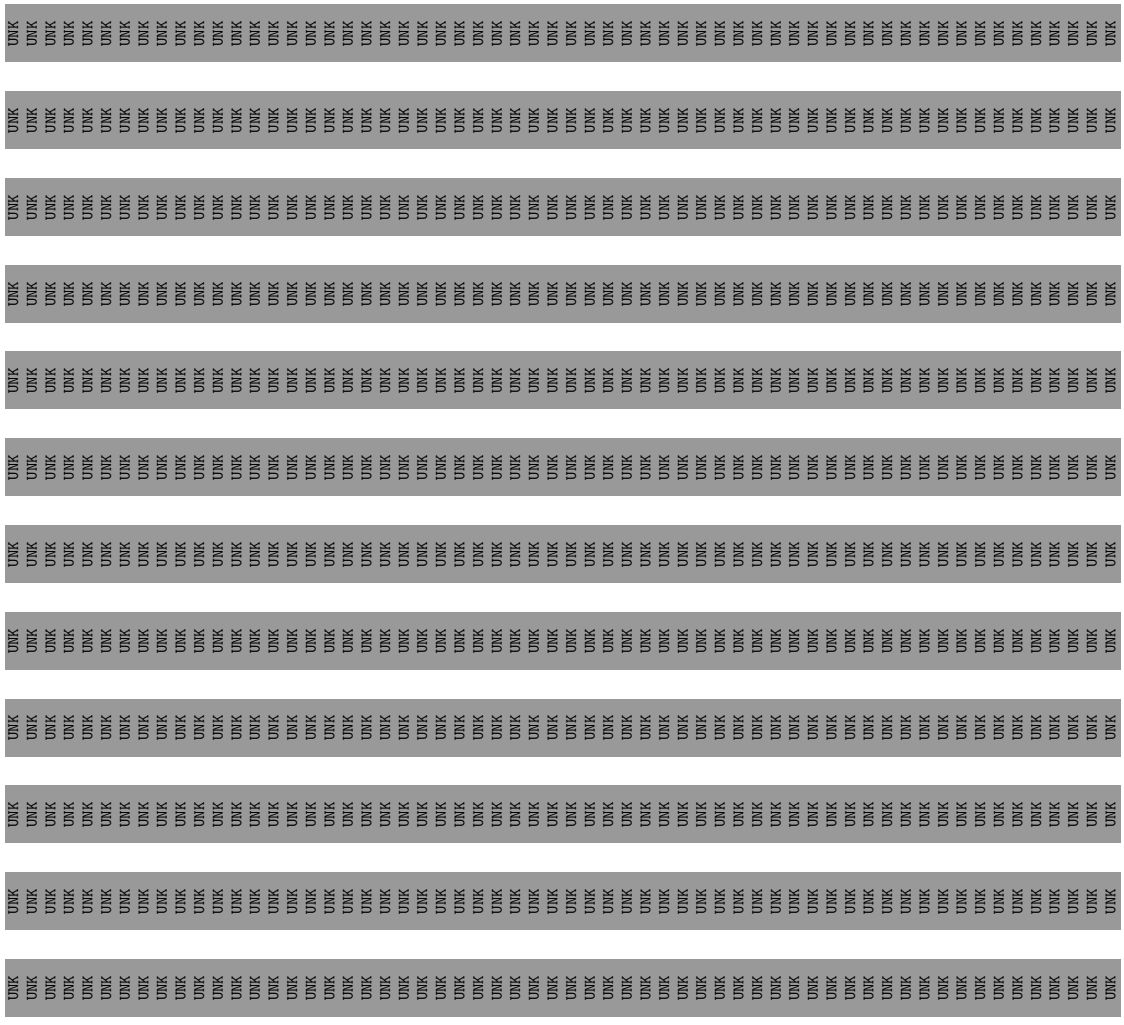
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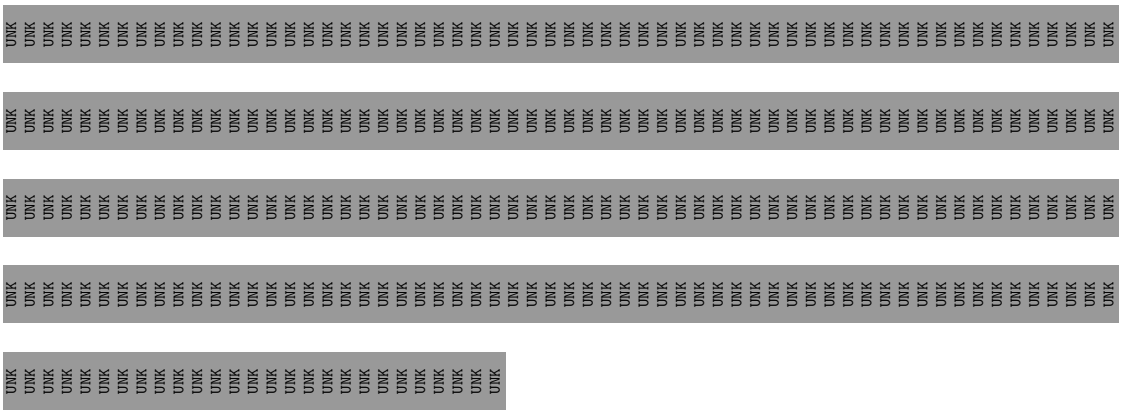
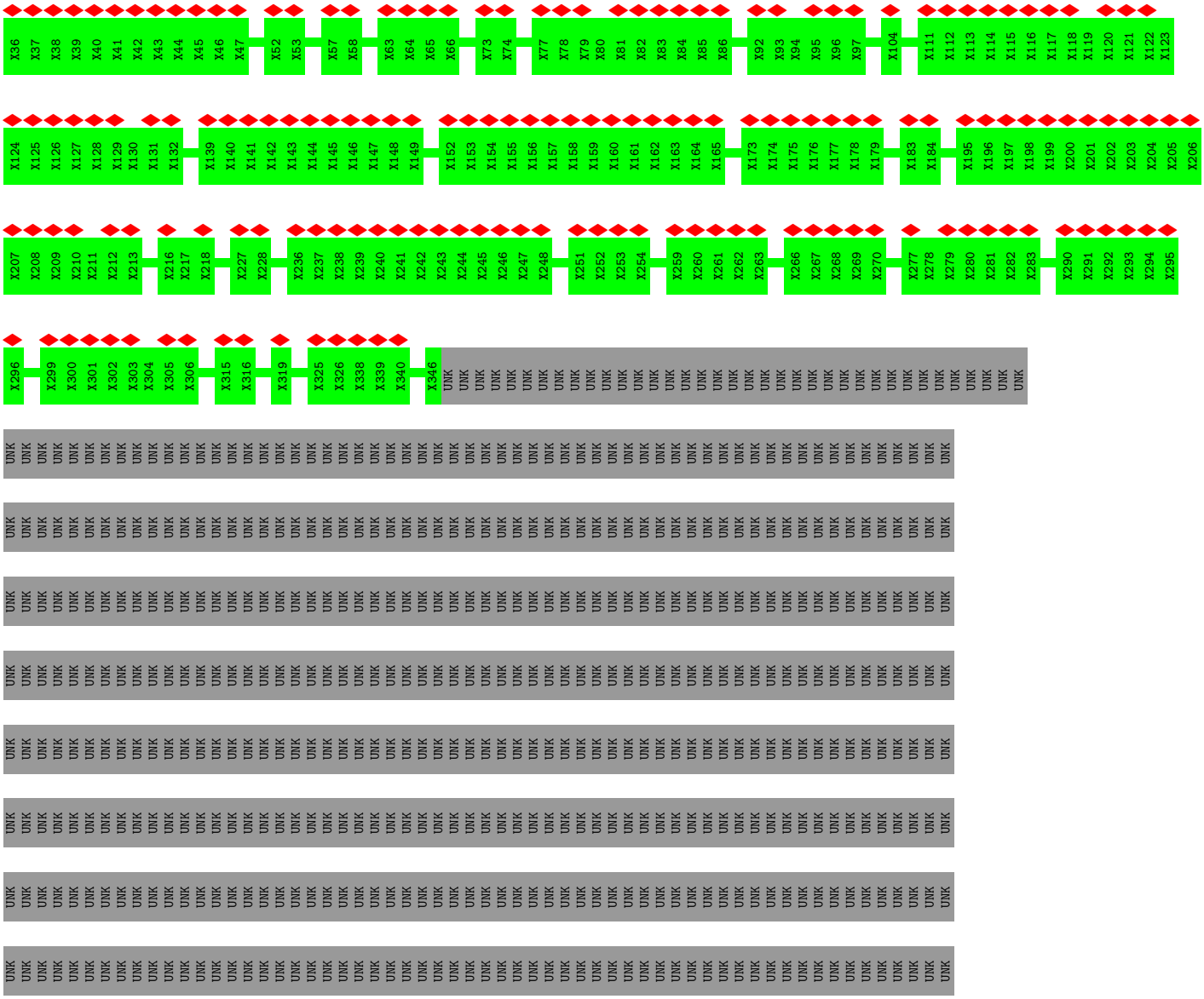
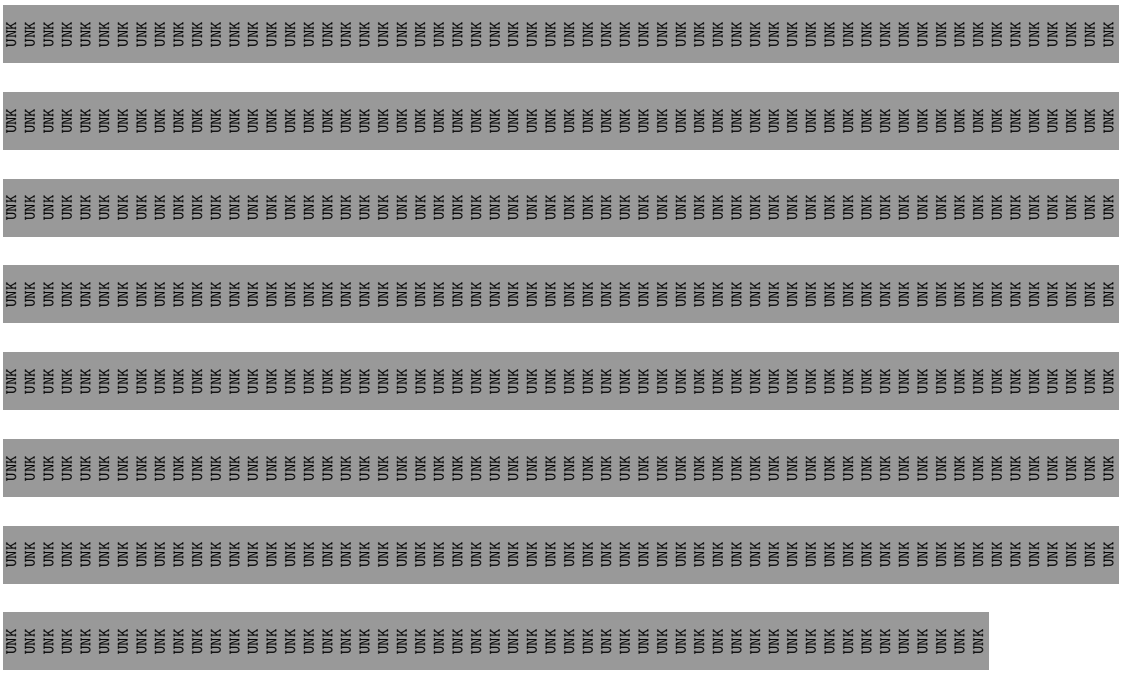


• Molecule 1: WD40 domain proteins

Chain J:





• Molecule 1: WD40 domain proteins

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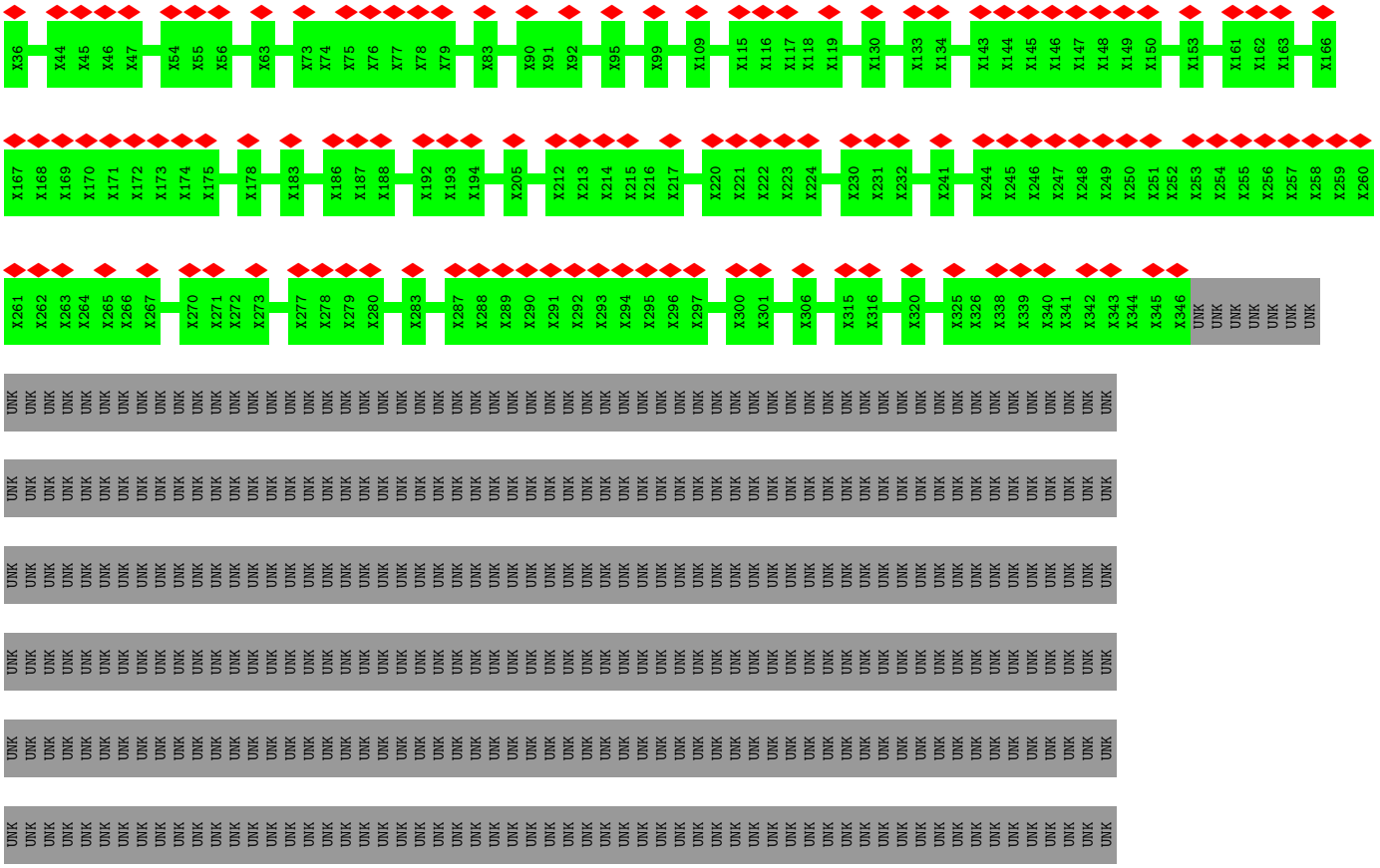
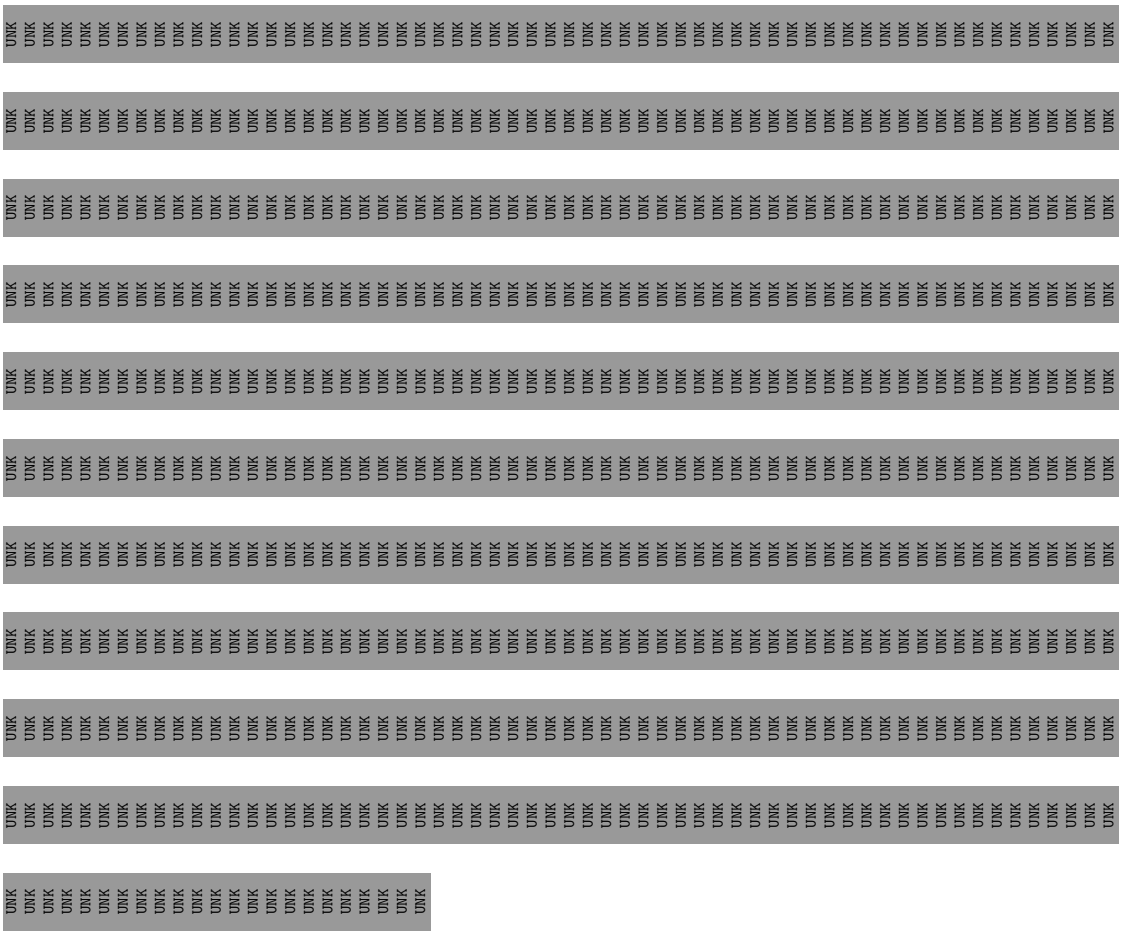
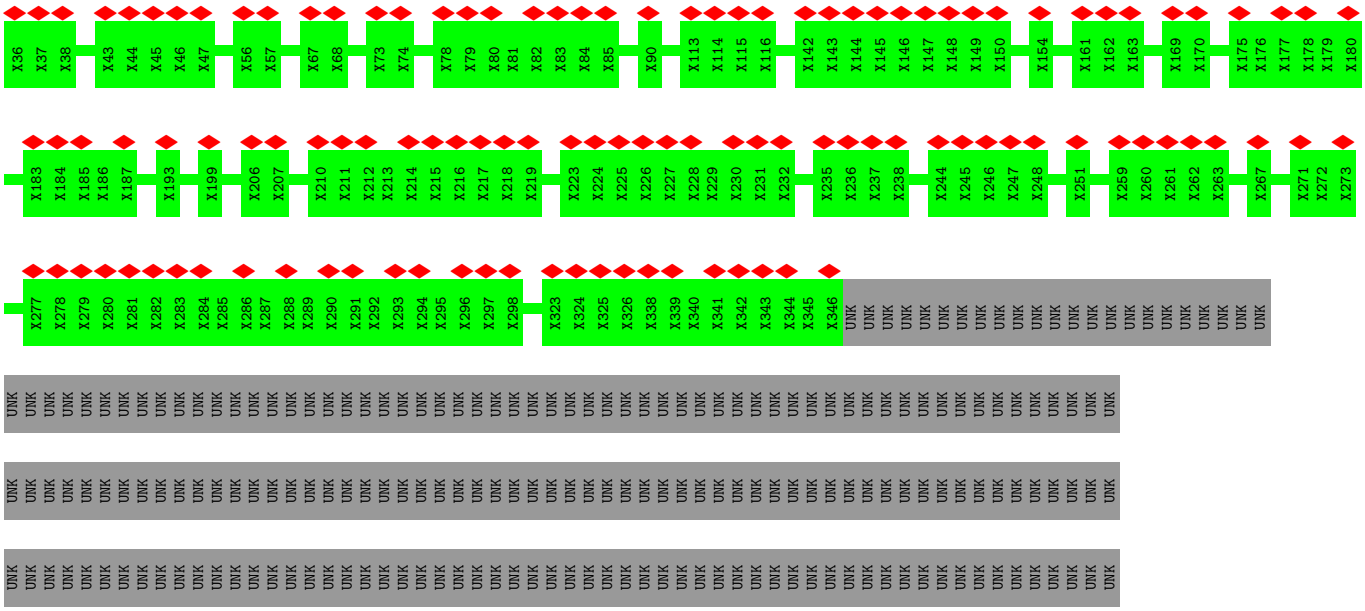
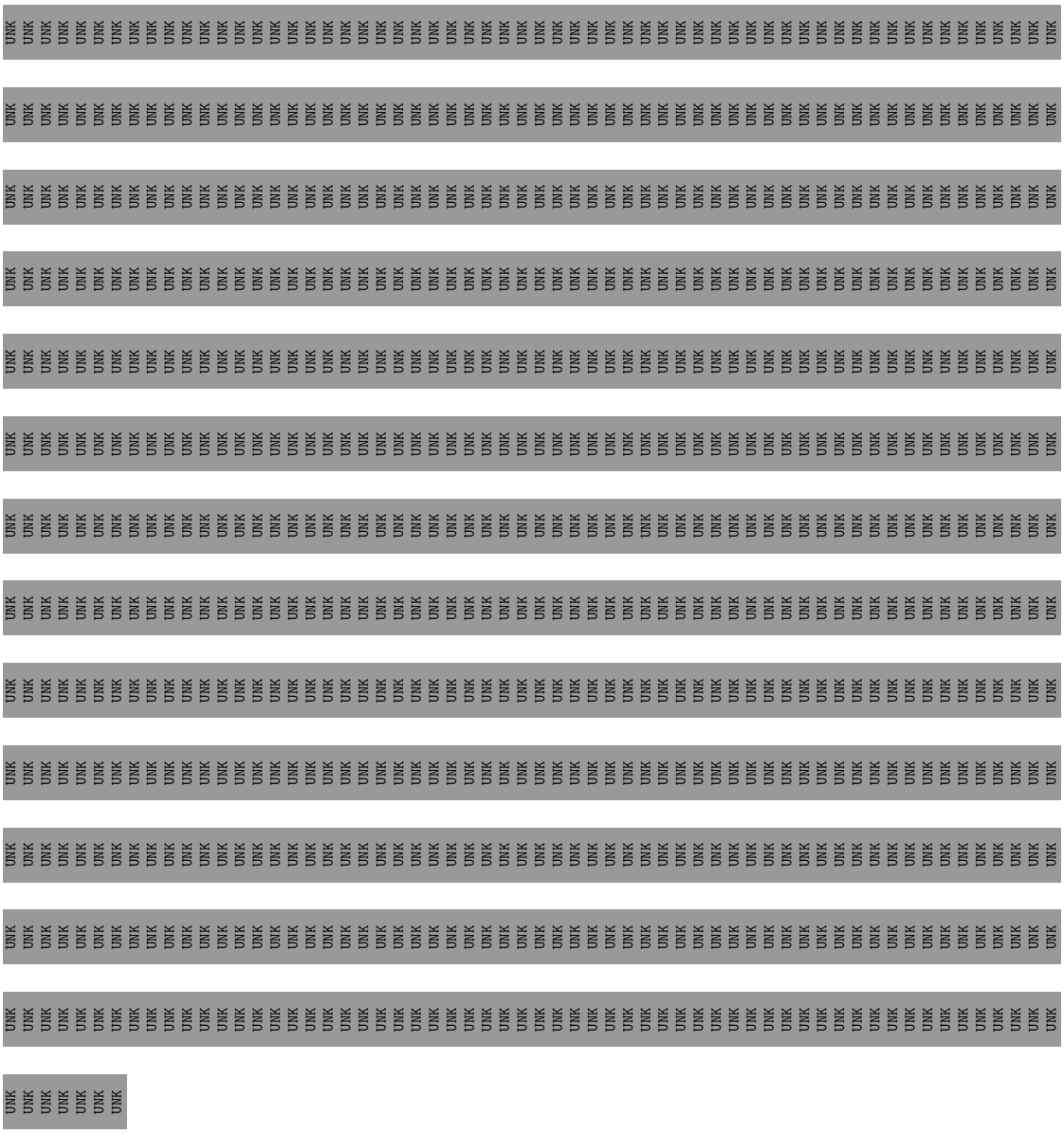




• Molecule 1: WD40 domain proteins

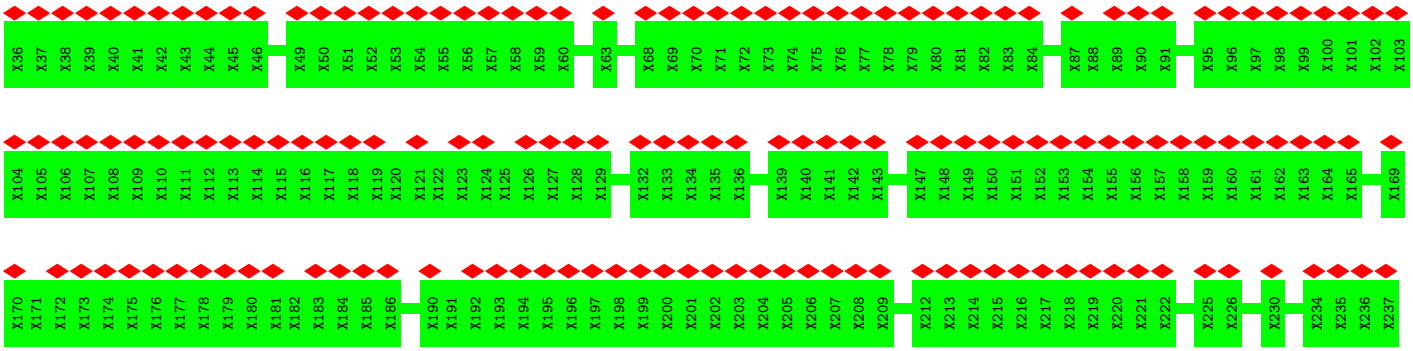
Chain L:

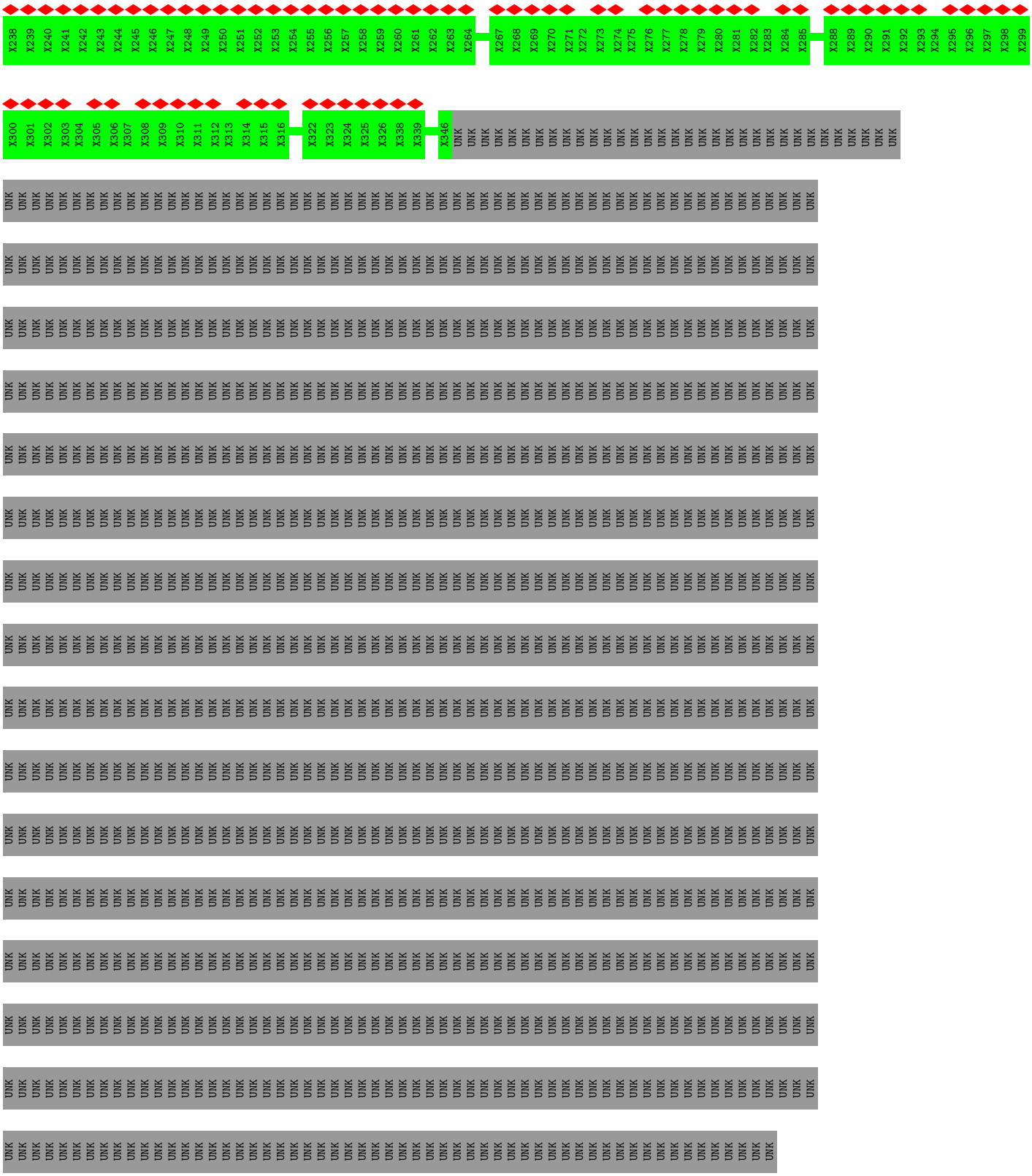




• Molecule 1: WD40 domain proteins

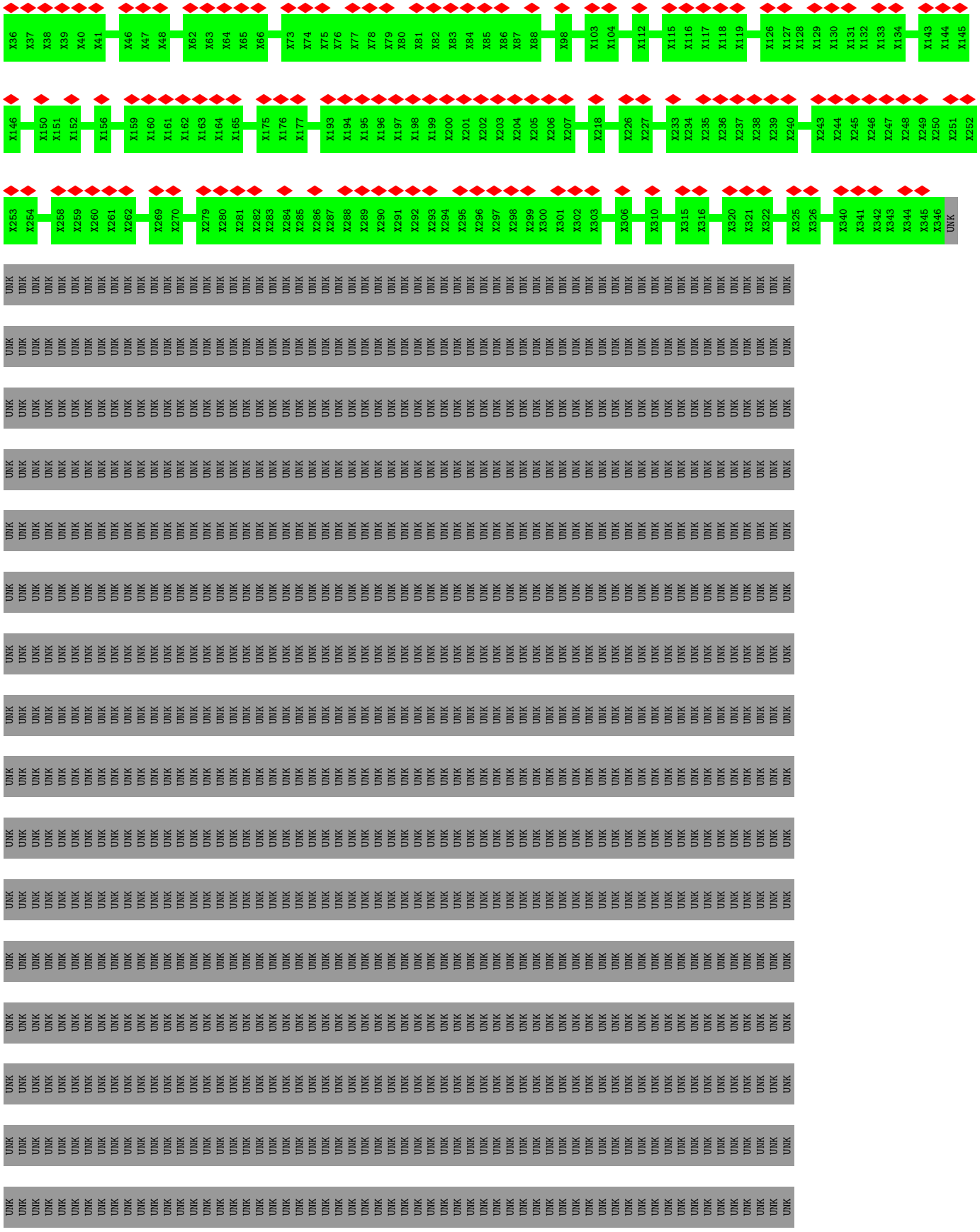
Chain N:





• Molecule 1: WD40 domain proteins

Chain P: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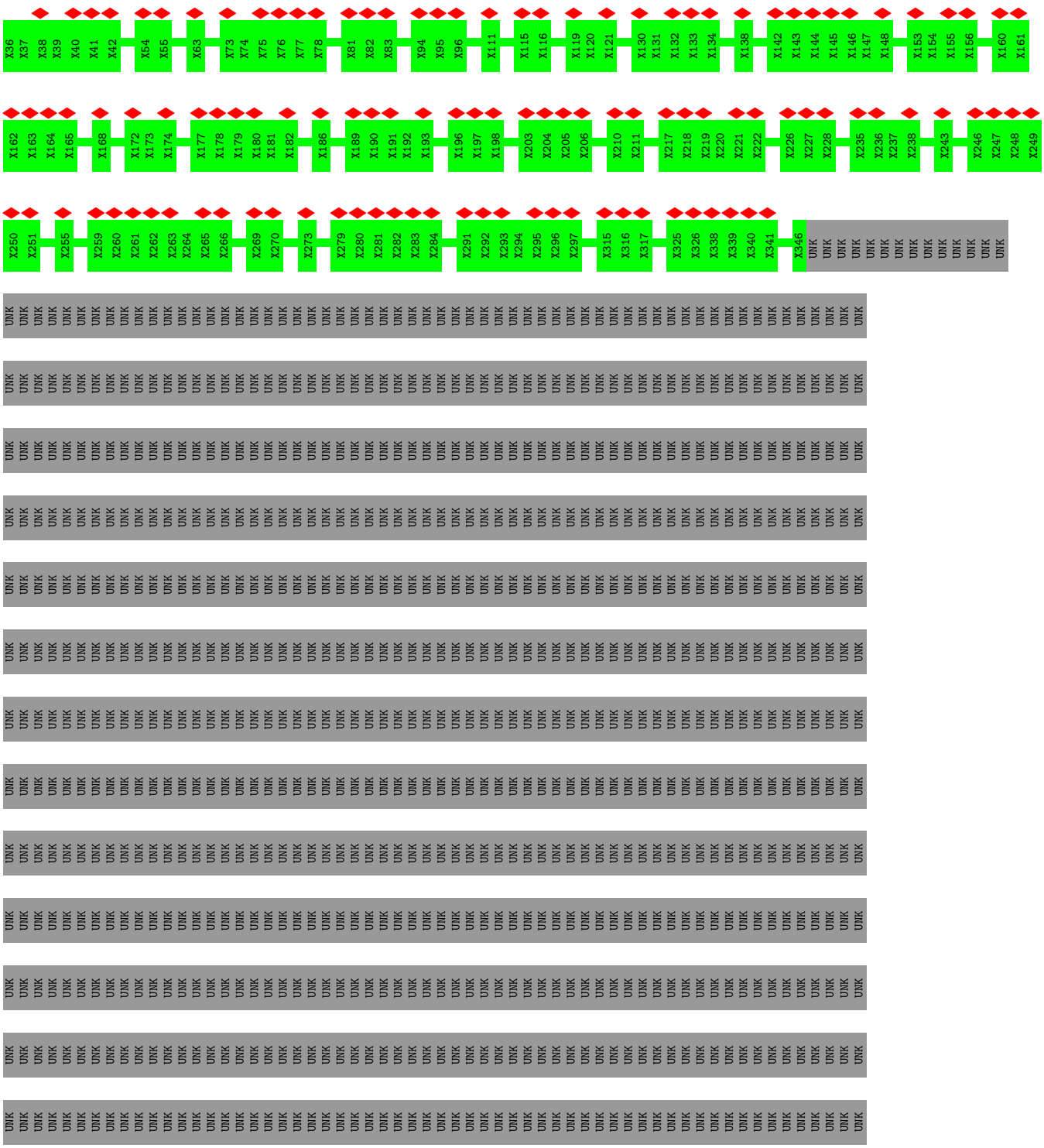
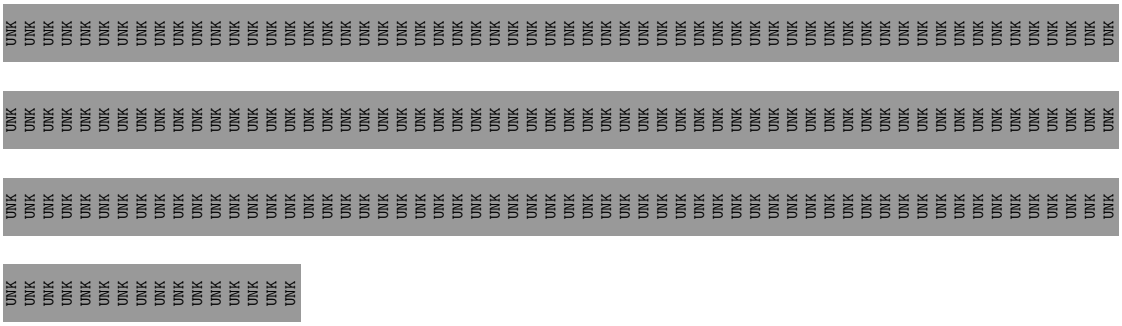
UNK

• Molecule 1: WD40 domain proteins

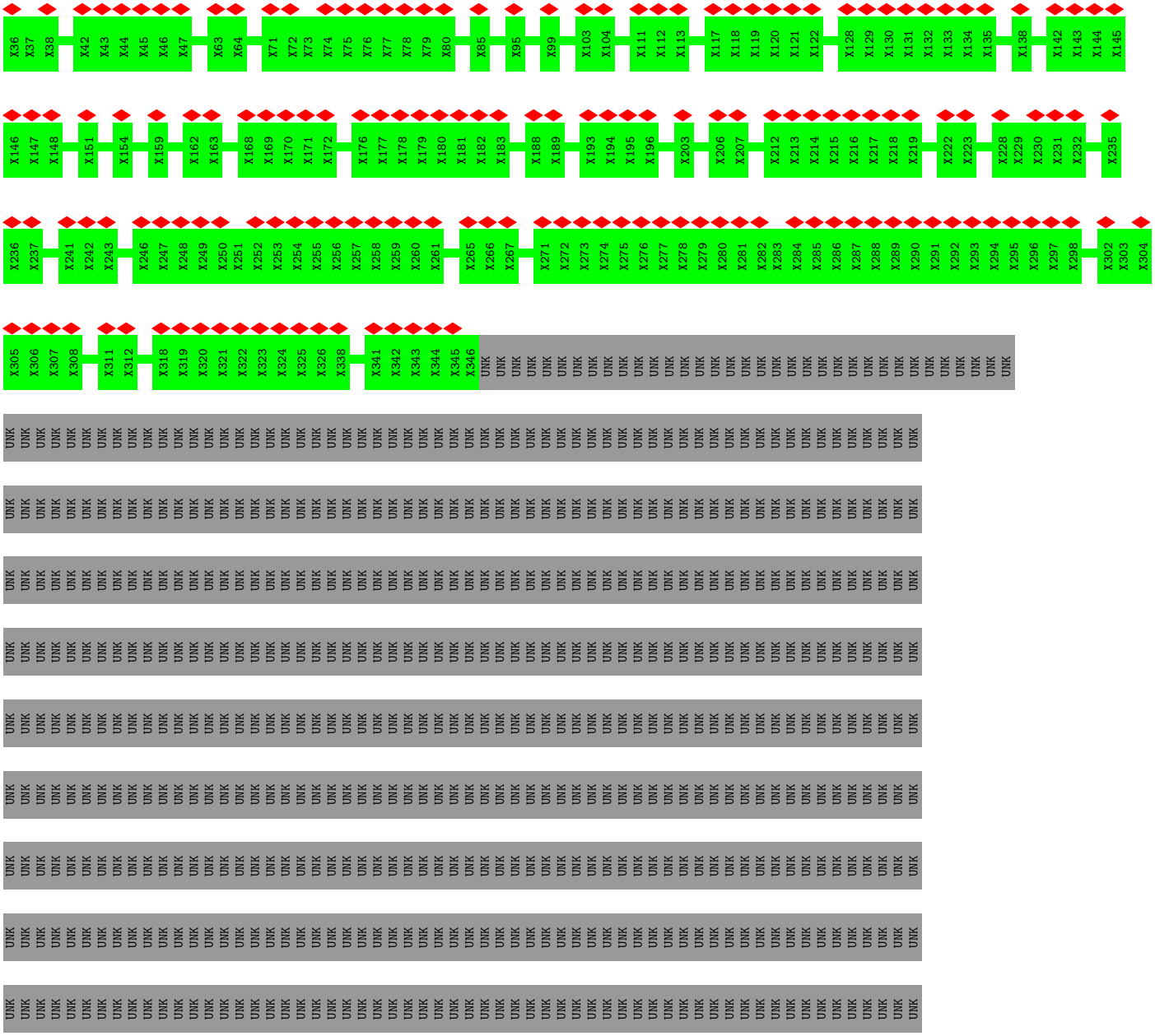
Chain l:

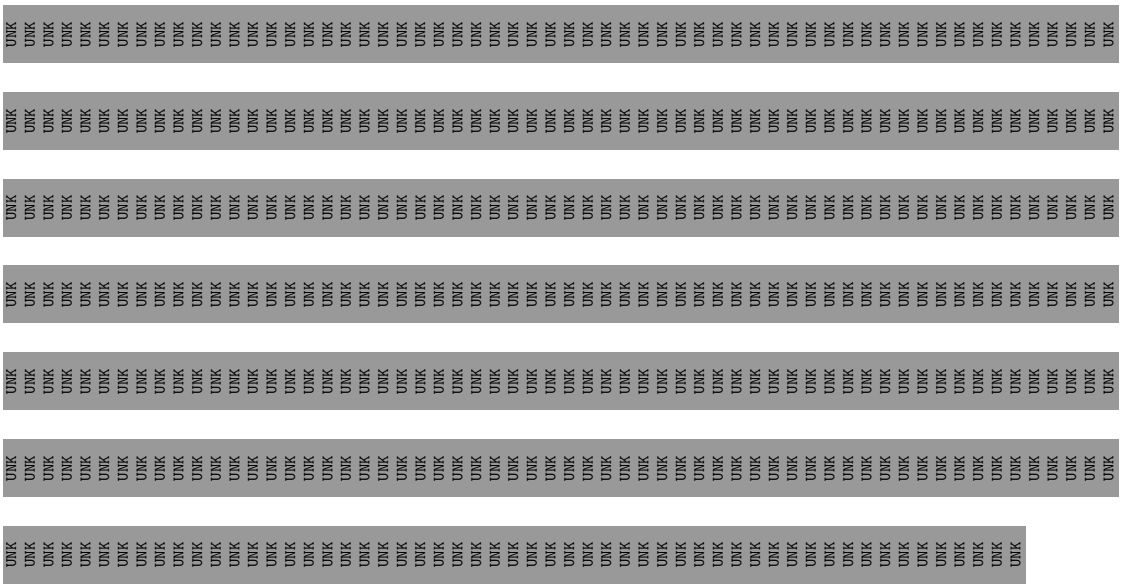




• Molecule 1: WD40 domain proteins

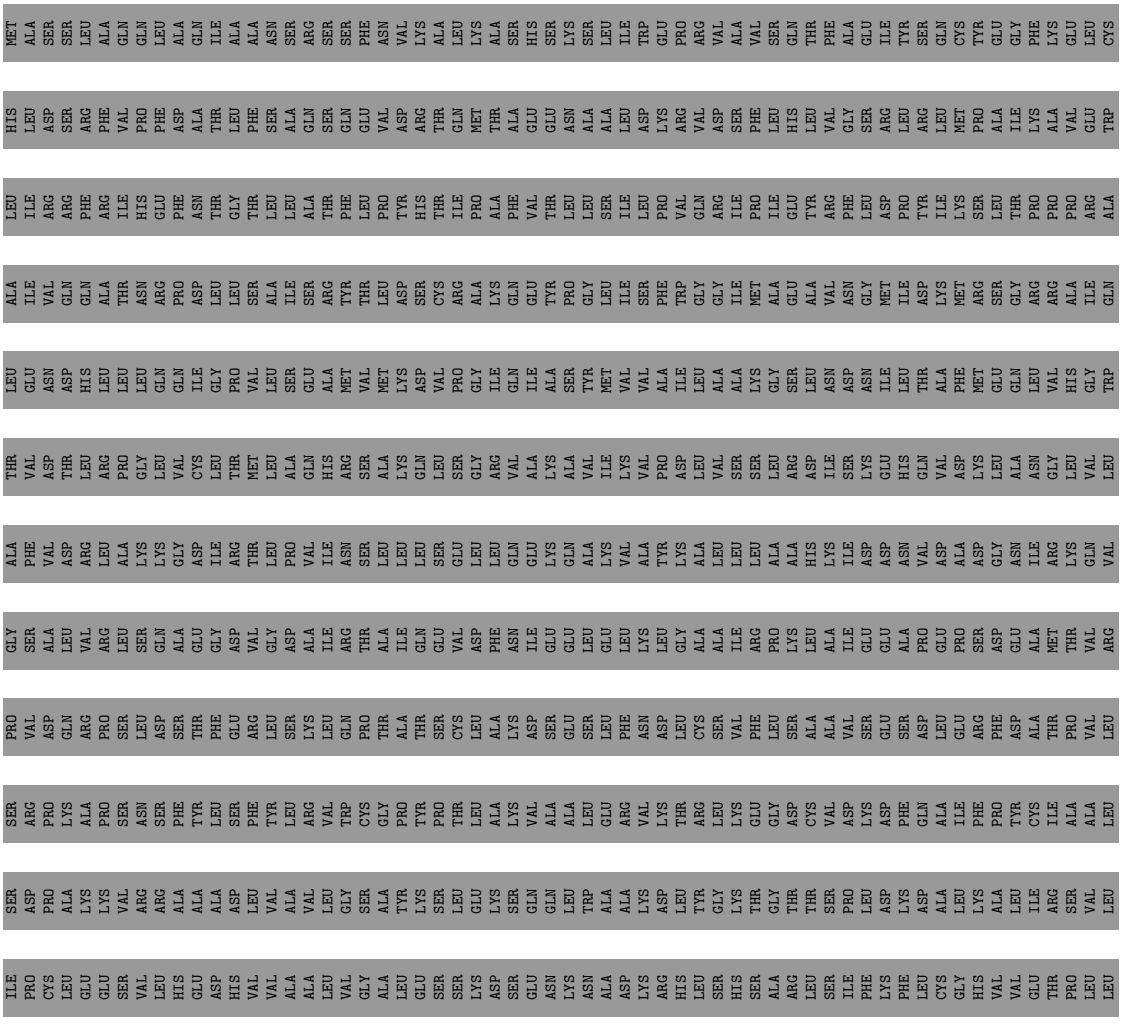
Chain n: 13% 23% 77%

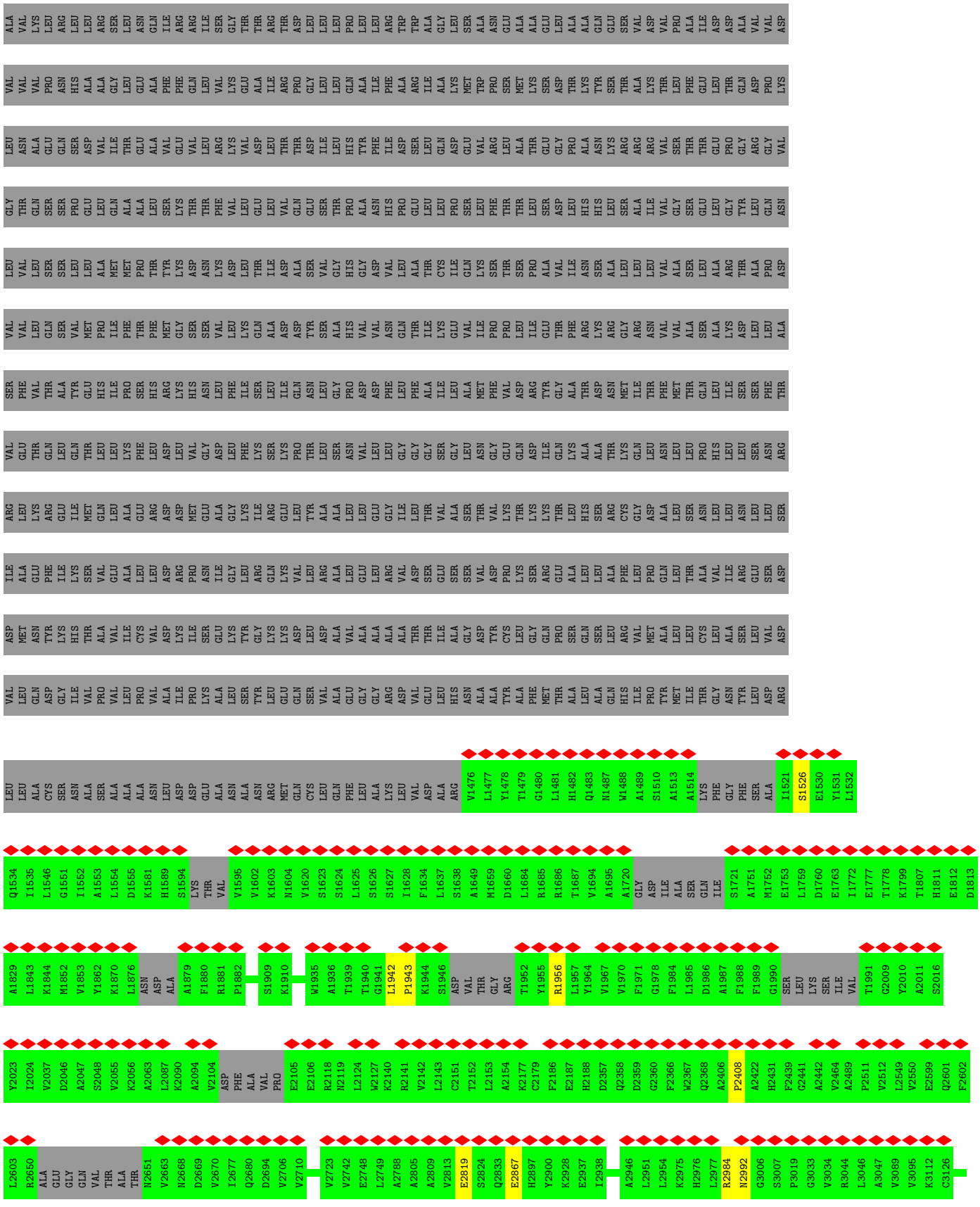




• Molecule 2: UTP10

Chain G:

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VAL VAL VAL PRO ASN HIS ALA ALA GLY LEU GLU GLU ALA PHE PHE GLN LEU VAL LYS GLU ALA ILE ARG PHE GLU ALA ILE PHE ALA ARG ILE ALA LYS MET TRP PRO SER MET LYS SER ASP THR LYS TYR SER THR ALA LYS THR LEU PHE GLU LEU THR GLN ASP PRO LYS
LEU ASN ALA GLU GLN SER ASP VAL ILE THR GLU GLU ALA VAL GLU VAL LEU ARG LYS VAL ASP ALA LEU THR THR ASP ILE LEU HIS TYR PHE ILE ASP SER LEU GLN ASP GLU VAL ARG LEU ALA THR GLU GLY PRO ALA ASN LYS ARG ARG ARG VAL SER THR THR GLU PRO GLY ARG GLY VAL
GLY THR GLN SER SER PRO GLU LEU GLN ALA ALA LEU SER LYS THR THR PHE VAL LEU GLU LEU VAL GLN GLU SER THR ASP ILE LEU GLN GLU SER THR PRO ALA ASN HIS PRO GLU LEU LEU PRO SER LEU PHE THR THR LEU SER ASP LEU HIS HIS LEU SER ALA ILE VAL GLY PHE GLU LEU GLY TYR LEU GLN ASN
LEU VAL LEU SER SER LEU LEU ALA MET MET PRO THR TYR LYS ASP ASN LYS ASP LEU THR ILE ASP ALA ALA SER VAL GLY HIS GLY ASP VAL LEU ALA ALA THR THR ASP ALA SER PRO ALA VAL LEU ILE ASN SER ALA LEU LEU LEU VAL ALA SER LEU ALA ARG THR ALA PRO ASP
VAL VAL LEU GLN SER VAL MET PRO ILE PHE THR PHE MET GLY SER SER VAL LEU LYS GLN ALA ASP ASP TYR SER ALA HIS VAL VAL ASN GLN THR ILE LYS GLU VAL LEU ILE GLU THR PHE ARG LYS ARG GLY ARG ASN VAL VAL ALA ALA SER ALA LYS ASP LEU LEU ALA
SER PHE VAL THR ALA TYR GLU HIS ILE PRO SER HIS ARG LYS HIS ASN LEU PHE ILE SER LEU ILE GLN ASN LEU GLY PRO ASP ASP PHE LEU PHE ALA ILE LEU LEU ALA MET PHE VAL ASP ARG TYR GLY ALA THR ASP ASN MET ILE THR PHE MET THR GLN LEU ILE SER SER PHE THR
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ILE ALA GLU PHE ILE LYS SER VAL GLU ALA LEU LEU ASP ARG PRO ASN ILE GLY LEU ARG GLN LYS VAL LEU ARG ALA ALA LEU GLU LEU GLU ARG VAL ASP SER GLU SER SER VAL ASP PRO LYS SER ARG GLN GLU ALA LEU LEU ALA PHE LEU PRO GLN LEU THR ALA VAL ILE ARG GLU SER ASP
ASP MET ASN TYR LYS HIS THR ALA VAL ILE CYS VAL ASP LYS ILE SER GLU LYS GLY TYR GLY LYS LYS ASP LEU ASP ALA ALA LEU GLU ALA ALA ALA ALA THR THR ALA THR ILE ALA GLY ASP TYR CYS LEU GLY GLN PRO SER GLN SER LEU ARG VAL MET ALA LEU LEU LEU CYS LEU ALA SER LEU VAL ASP
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LEU LEU ALA CYS SER ASN ASP GLU ALA ASN ASN ARG MET GLN CYS LEU GLN PHE LEU LEU LYS LEU VAL ASP ALA ARG V1476 L1477 Y1478 T1479 G1480 L1481 H1482 Q1483 N1487 W1488 A1489 S1510 A1513 A1514 LYS PHE GLY PHE SER ALA I1521 S1526 E1530 Y1531 L1532
Q1534 I1535 L1546 G1551 I1552 A1553 L1554 D1555 K1581 H1589 S1594 LYS THR VAL V1595 V1602 K1603 N1604 V1620 S1623 S1624 L1625 S1626 S1627 I1628 F1634 L1637 S1638 A1649 M1659 D1660 L1684 R1685 R1686 T1687 V1694 A1695 A1720 GLY ASP ILE ALA SER GLN ILE S1721 A1751 M1752 E1753 L1759 D1760 E1763 I1772 E1777 T1778 K1799 T1807 H1811 E1812 D1813
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Y2023 I2024 V2037 D2046 A2047 S2048 V2055 K2056 A2063 L2087 K2090 A2094 V2104 ASP PHE ALA VAL PRO E2105 E2106 R2118 N2119 L2124 W2127 K2140 R2141 V2142 L2143 C2151 T2152 L2153 A2154 K2177 C2179 F2186 E2187 H2188 D2357 Q2358 D2359 G2360 F2366 W2367 Q2368 A2406 P2408 A2422 H2431 F2439 G2441 A2442 V2464 A2489 P2511 V2512 L2549 V2550 E2599 Q2601 F2602
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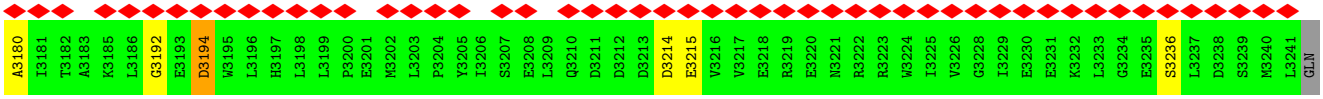
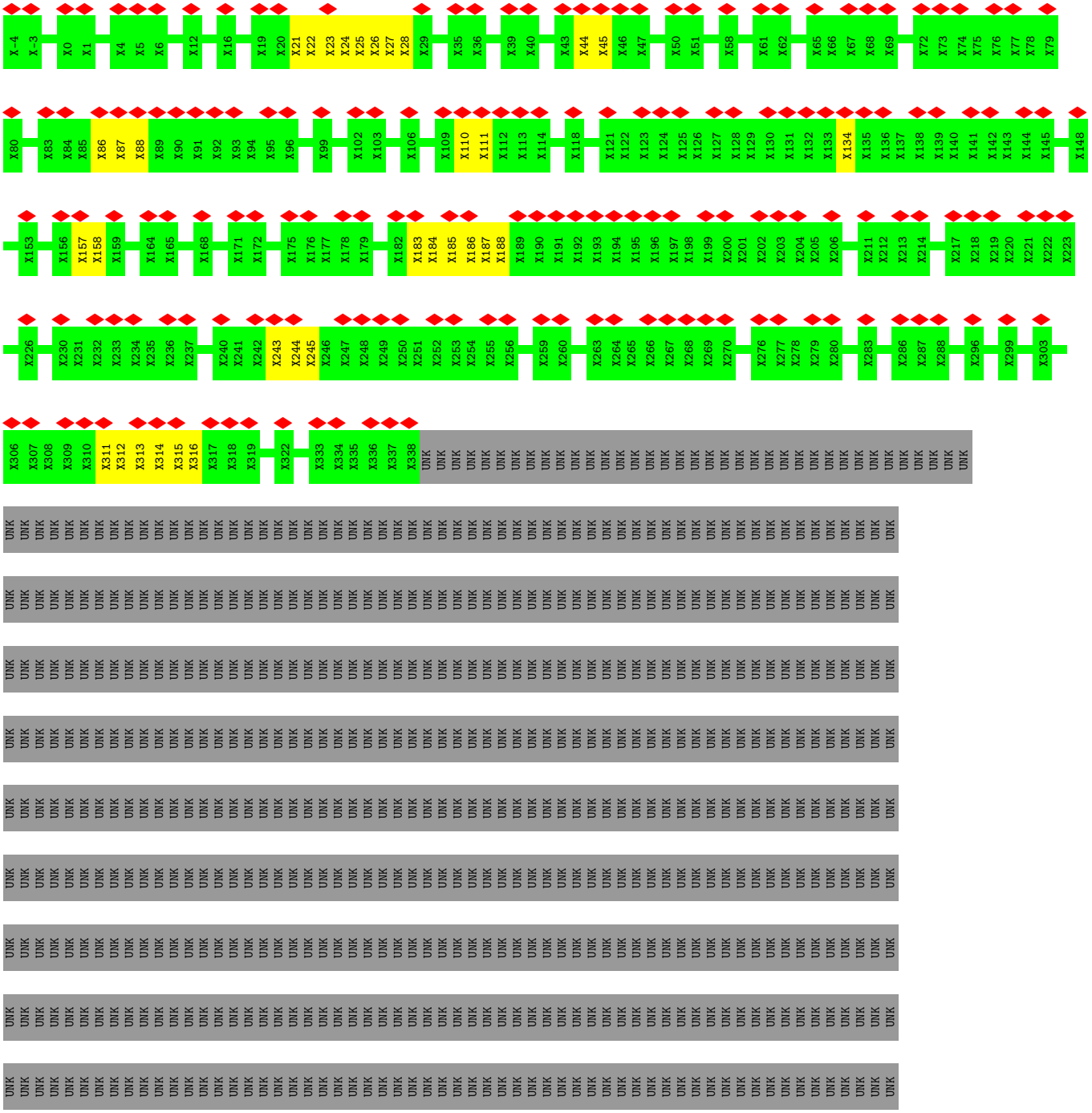


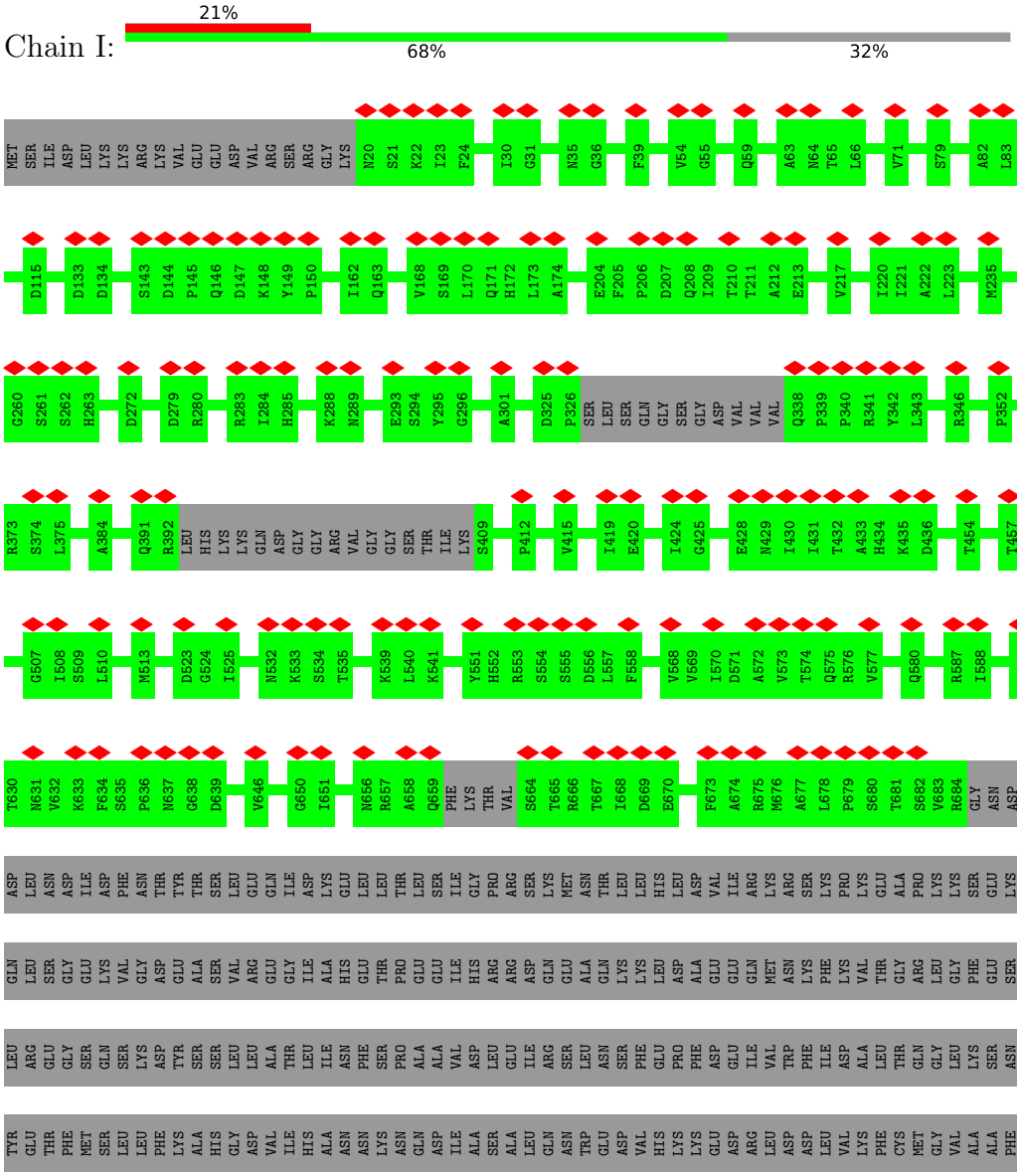
• Molecule 3: UTP-A oligomerization domain

Chain H:



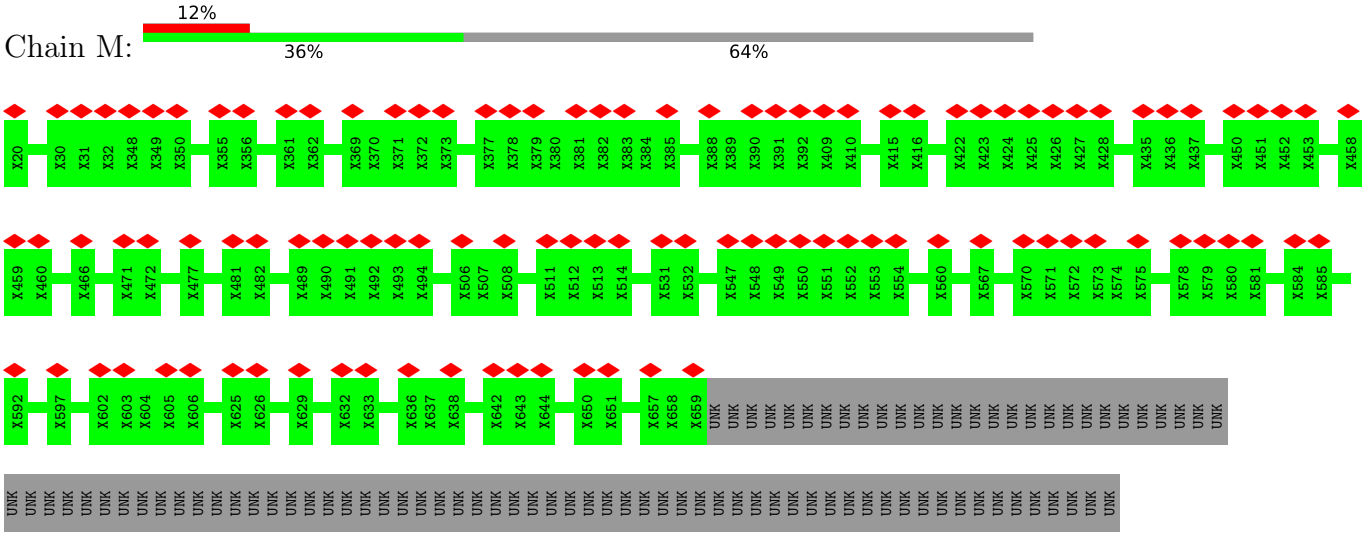
• Molecule 4: U3 small nucleolar RNA-associated protein 21

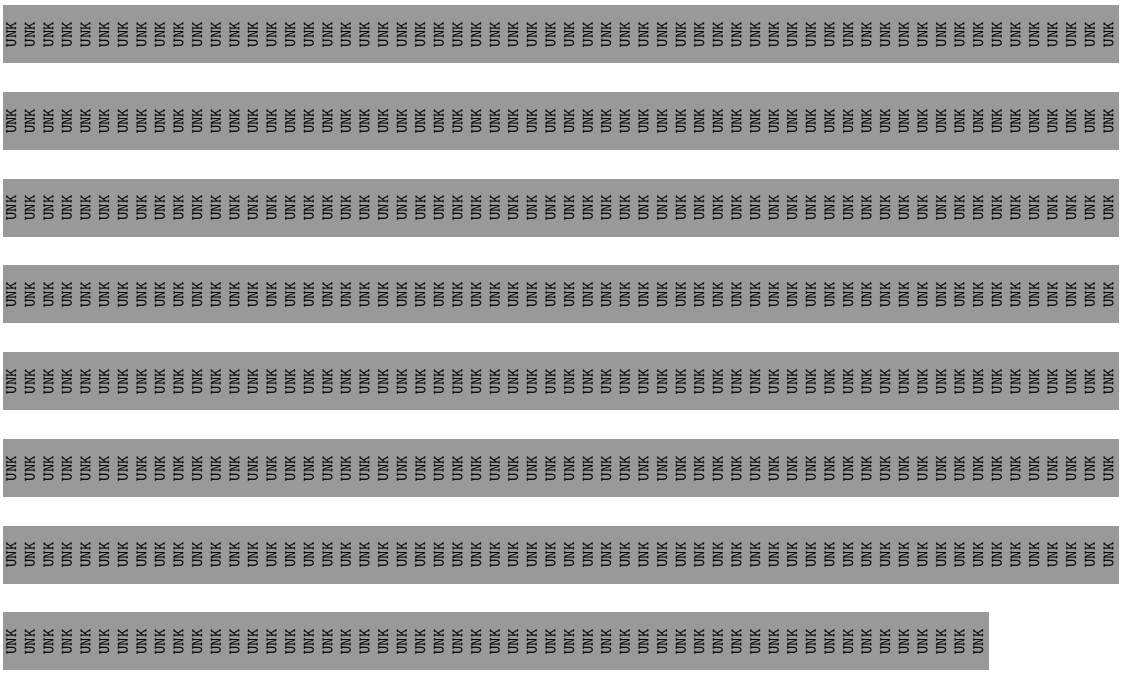
Chain I:



• Molecule 5: WD40 domain proteins

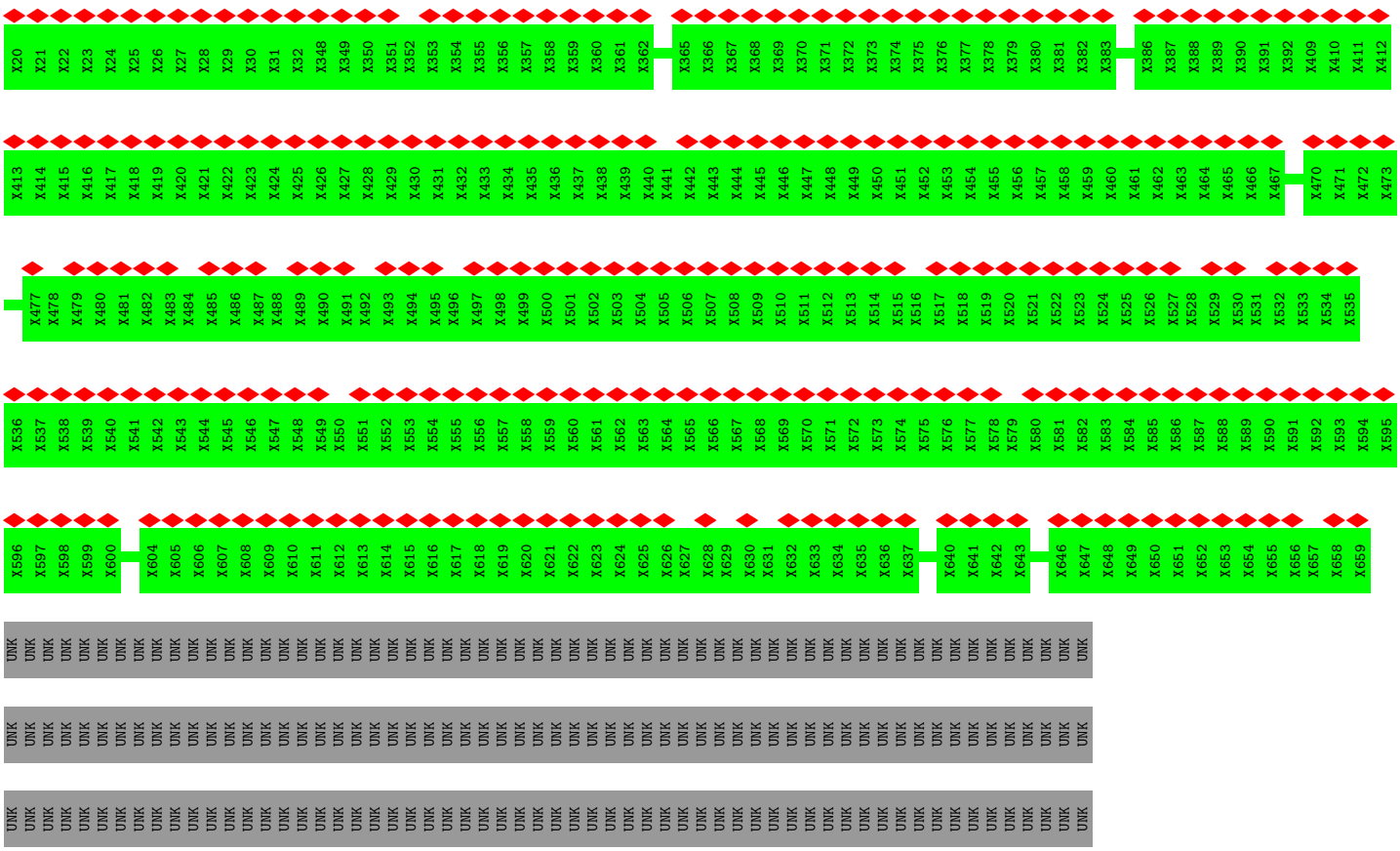
Chain M:

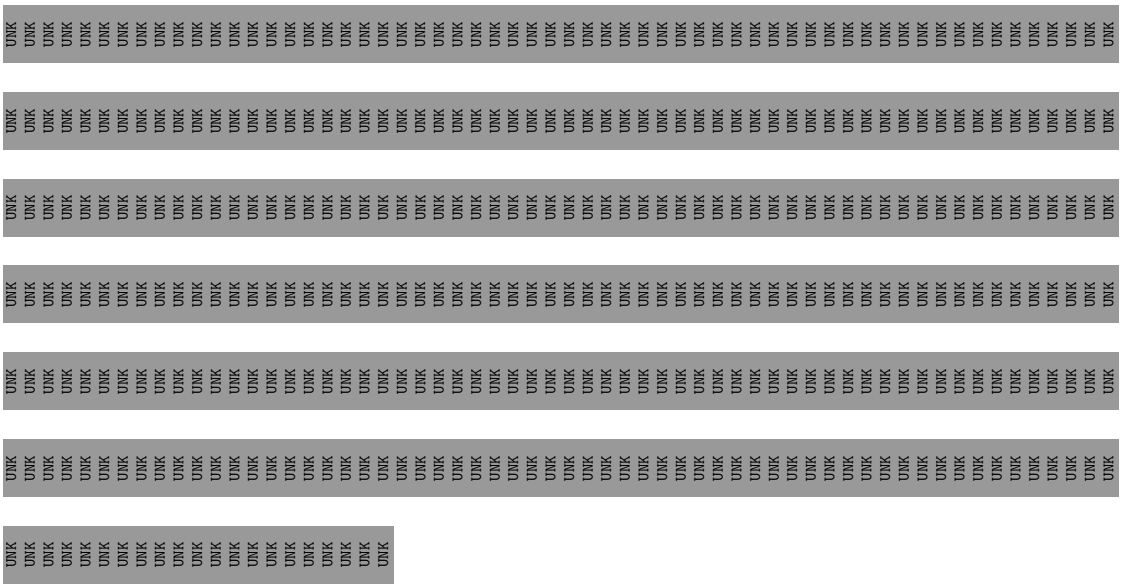




• Molecule 5: WD40 domain proteins

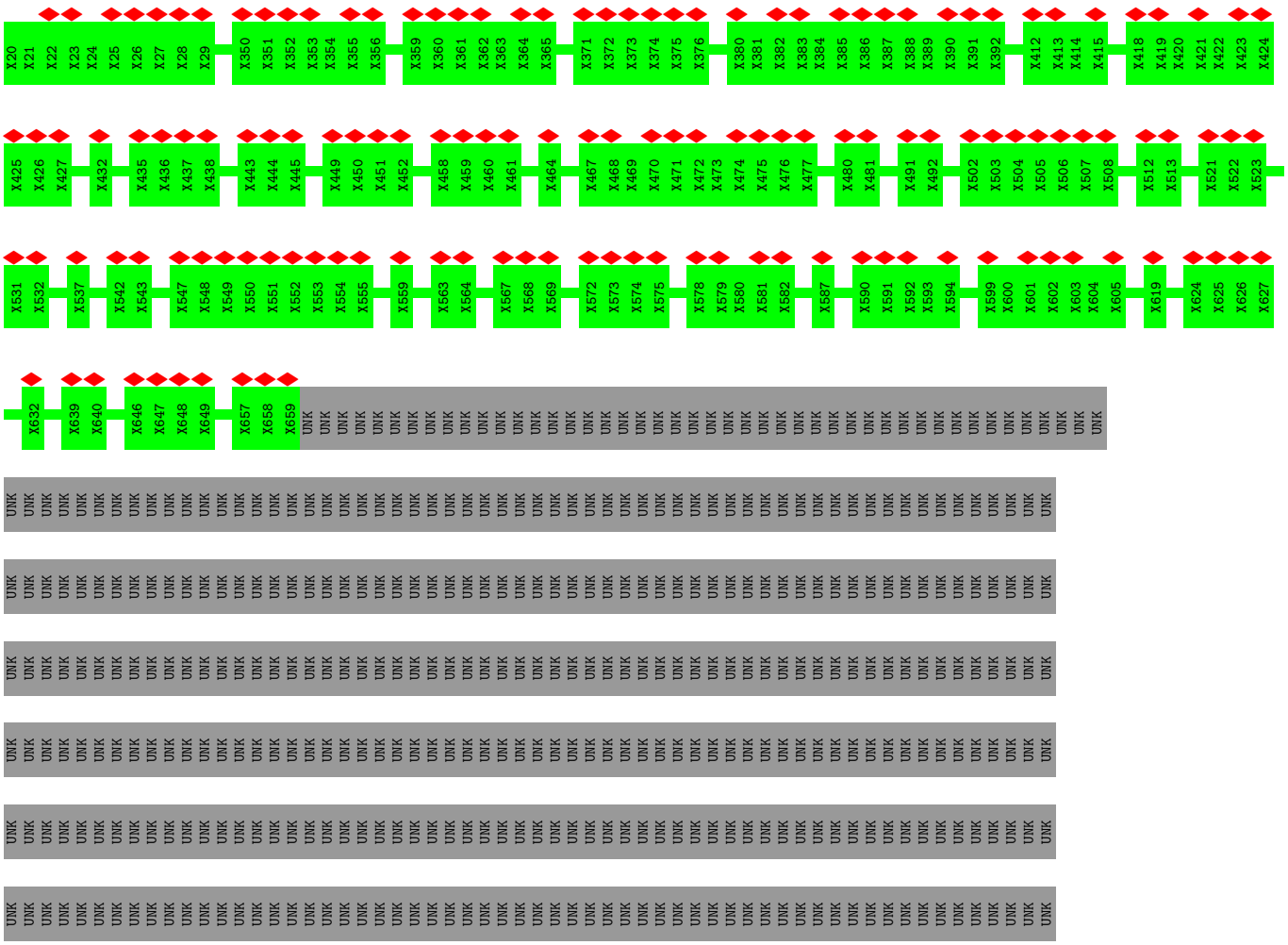
Chain O:

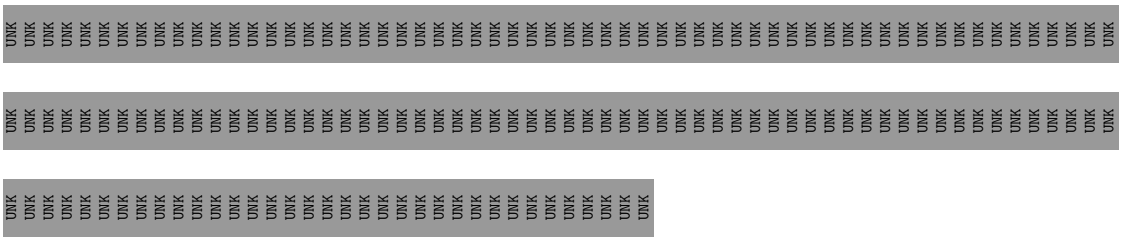




• Molecule 5: WD40 domain proteins

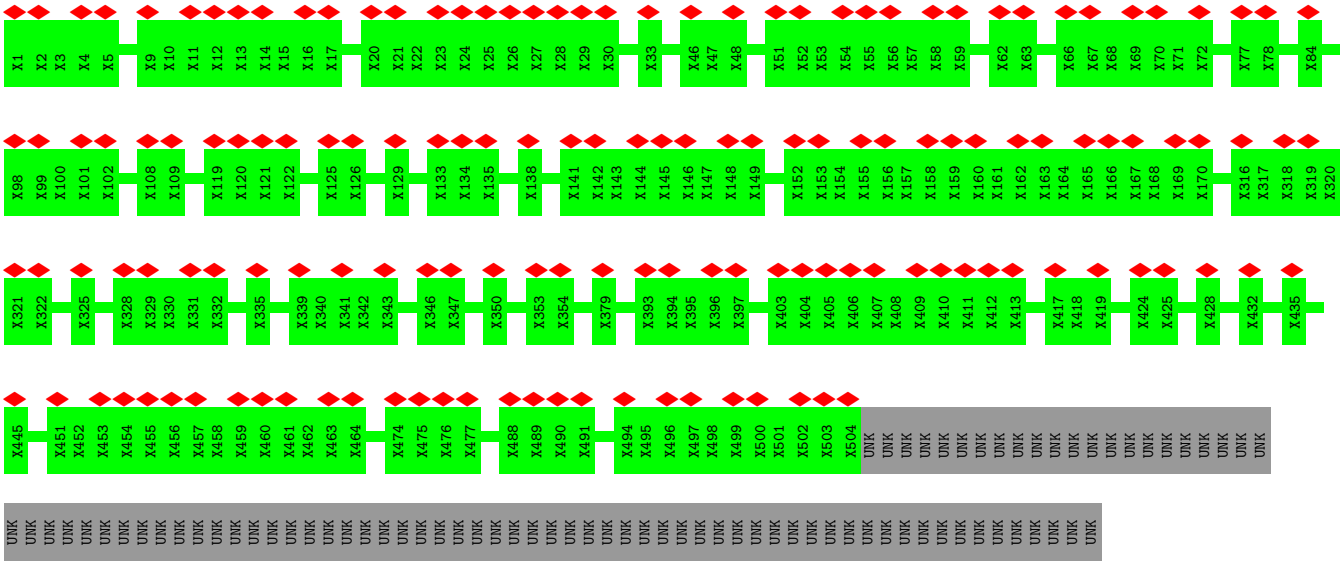
Chain m:





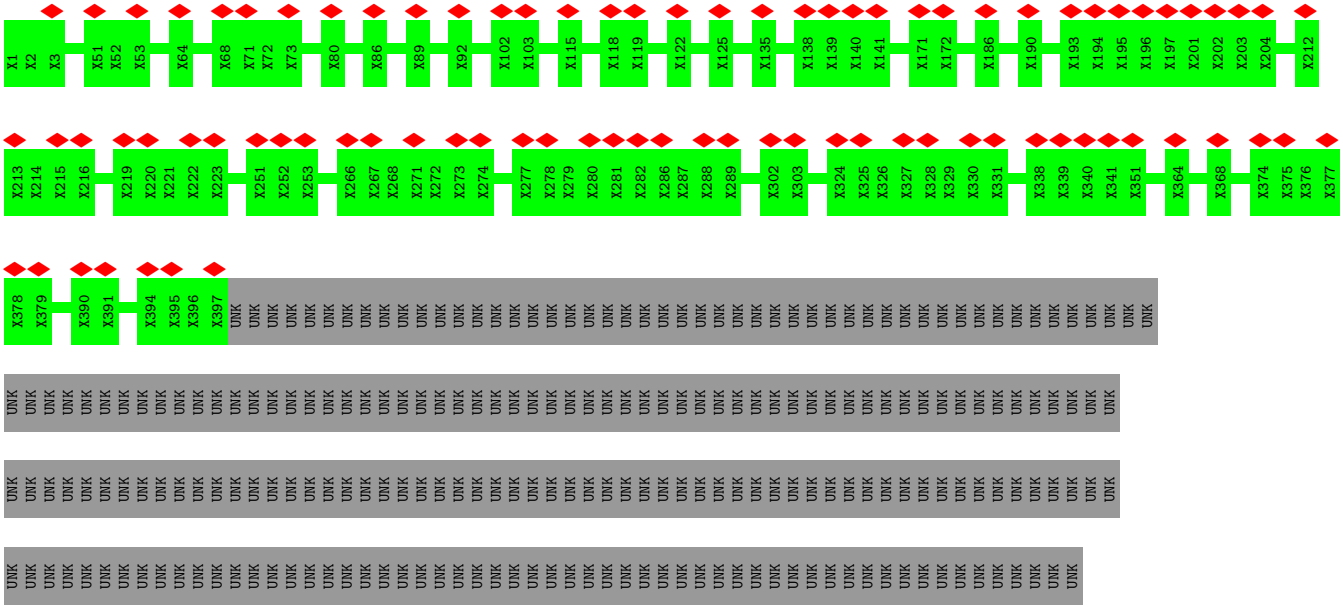
• Molecule 6: UTP6

Chain Q:



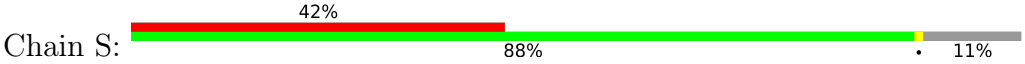
• Molecule 7: UTP-B oligomerisation domain

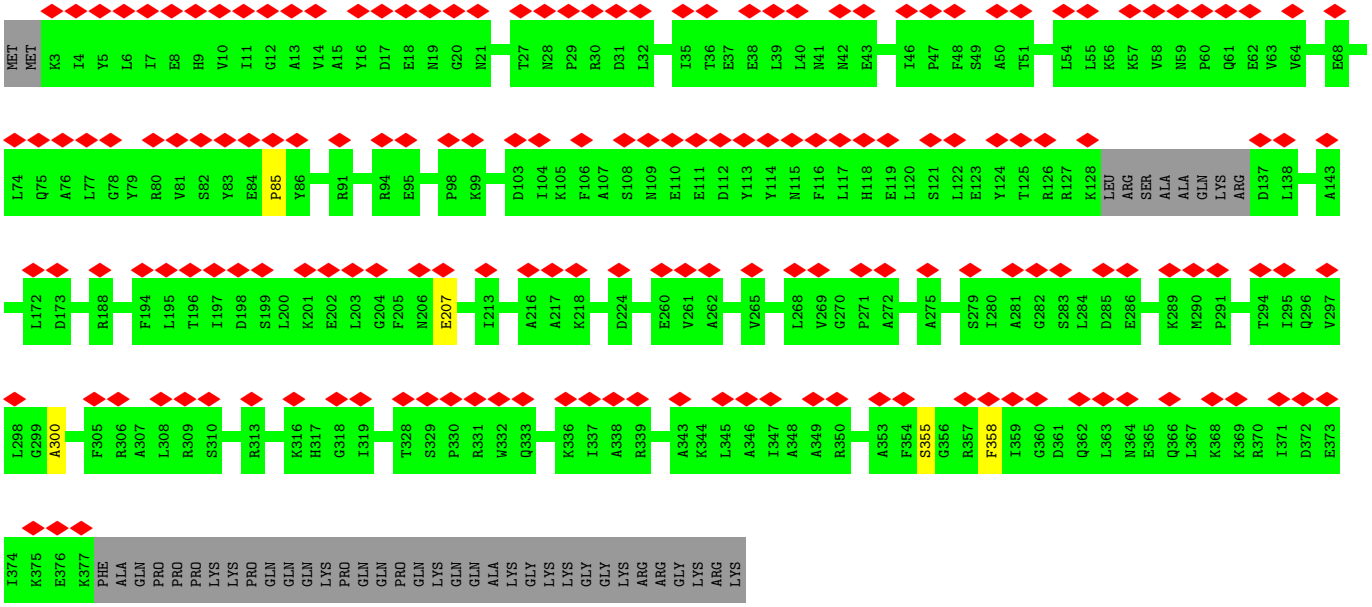
Chain R:



• Molecule 8: Pre mRNA splicing protein

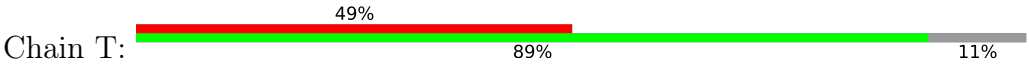
Chain S:

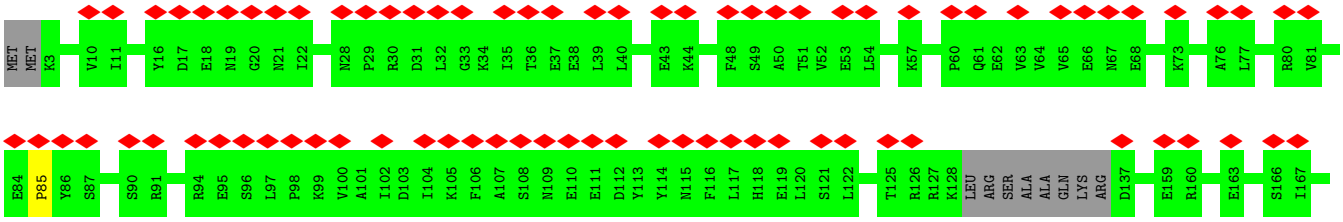




• Molecule 8: Pre mRNA splicing protein

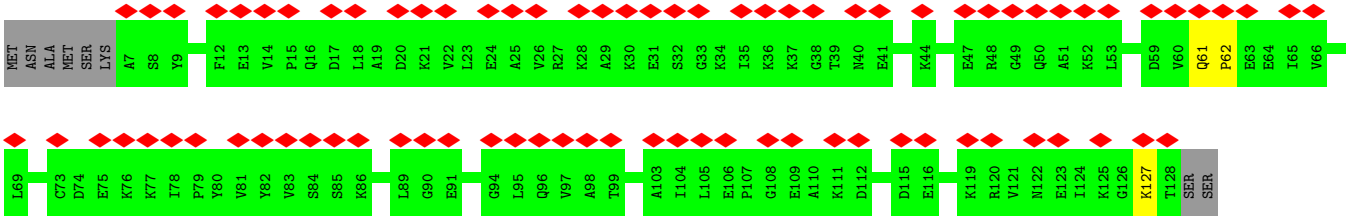
Chain T:



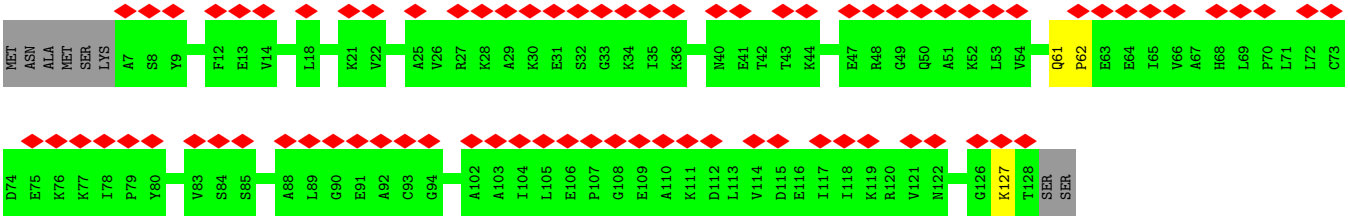


• Molecule 9: Snu13

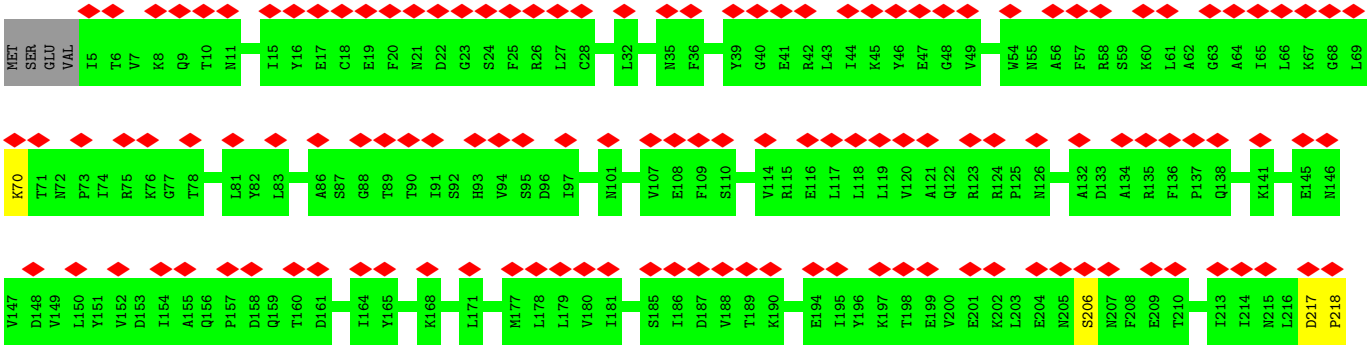
Chain U:



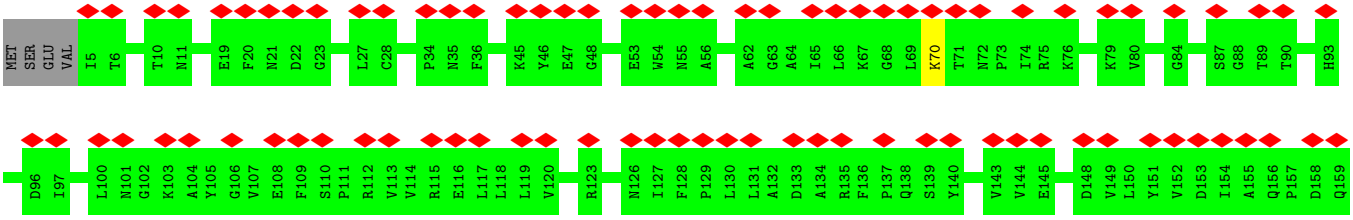
• Molecule 9: Snu13

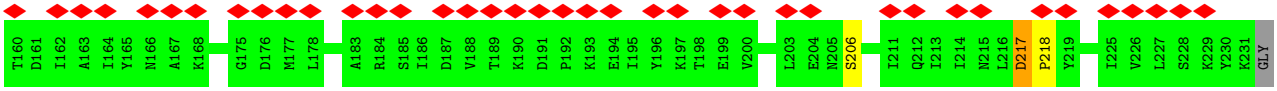


• Molecule 10: Nop1



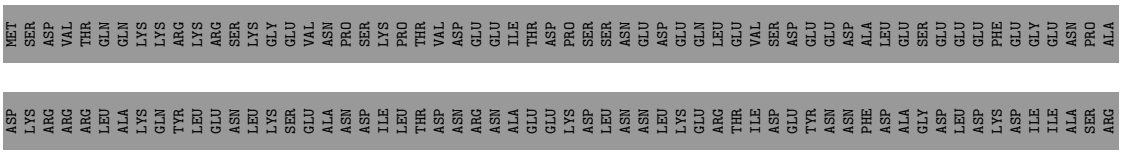
• Molecule 10: Nop1





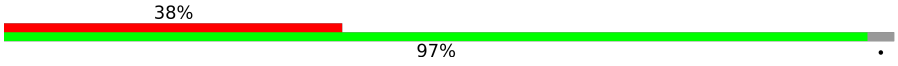
• Molecule 11: rrp9

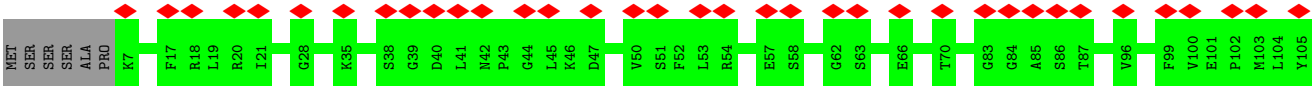
Chain Y:

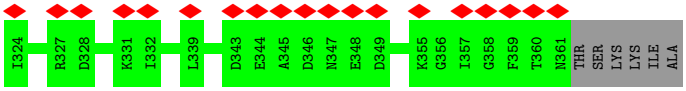


• Molecule 12: Rcl1

Chain Z:

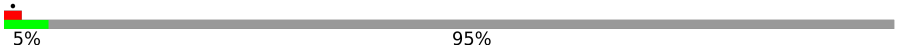


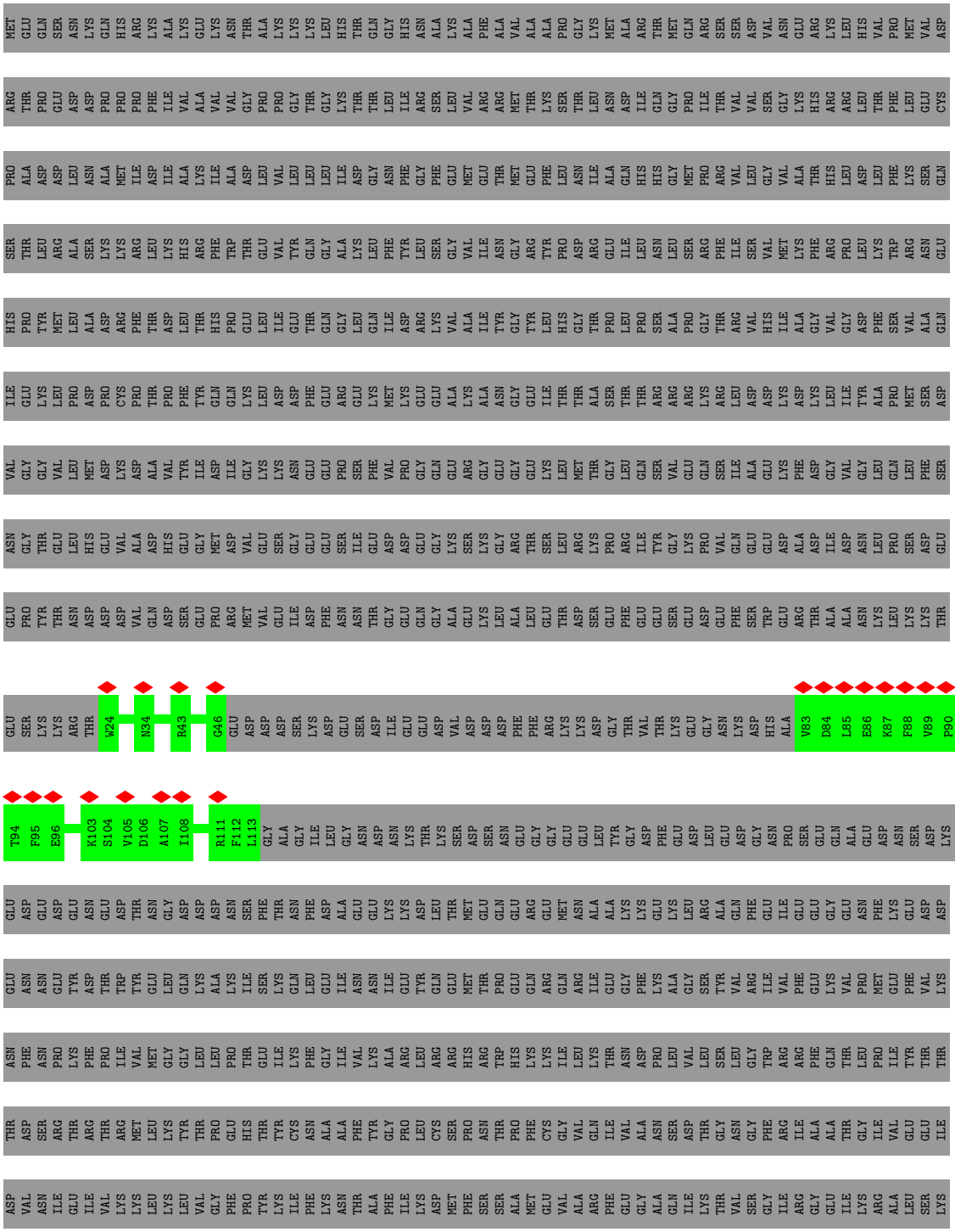


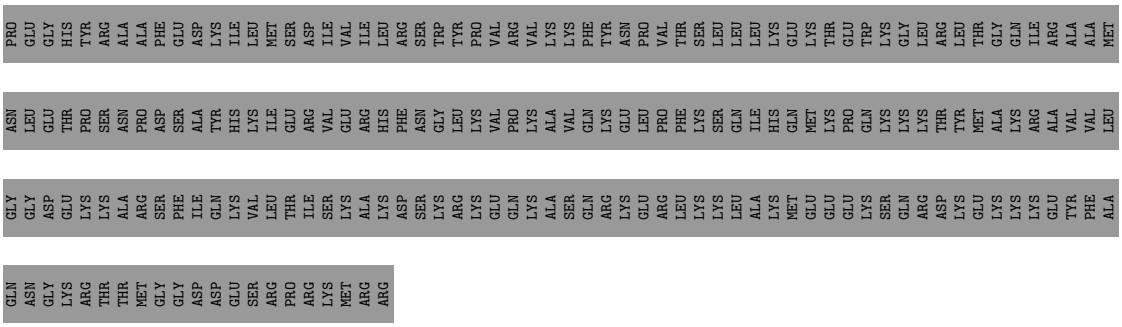


• Molecule 13: Bms1

Chain a:

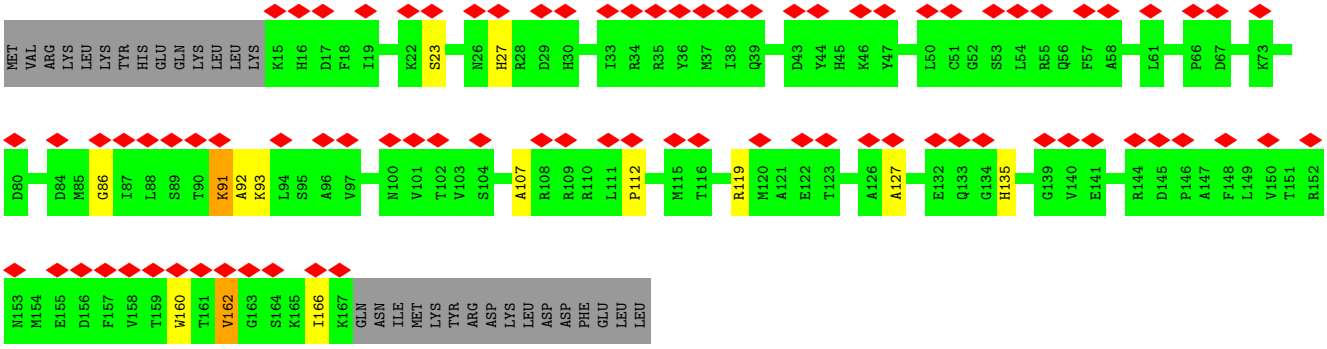






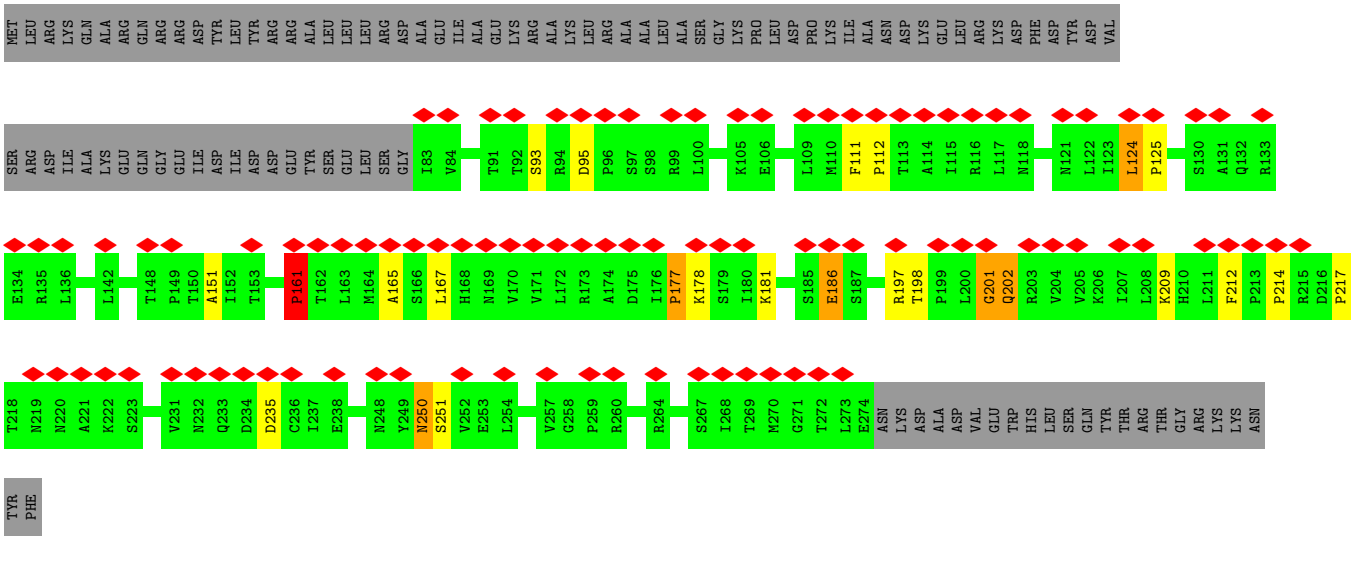
• Molecule 14: Imp3

Chain b:



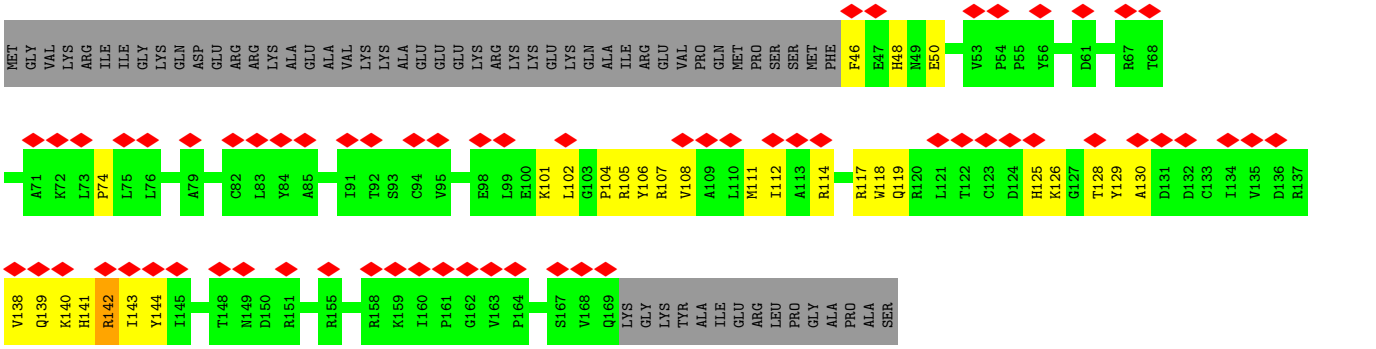
• Molecule 15: Putative U3 small nucleolar ribonucleoprotein

Chain c:



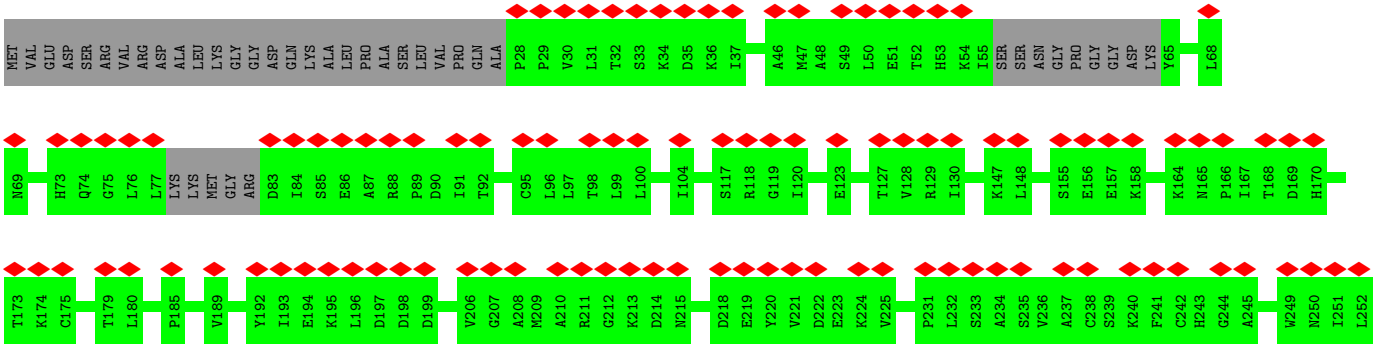
• Molecule 16: Utp24

Chain d:



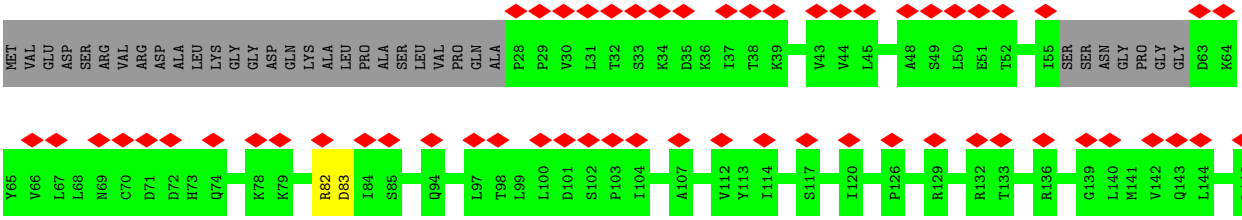
• Molecule 17: Emg1

Chain e:



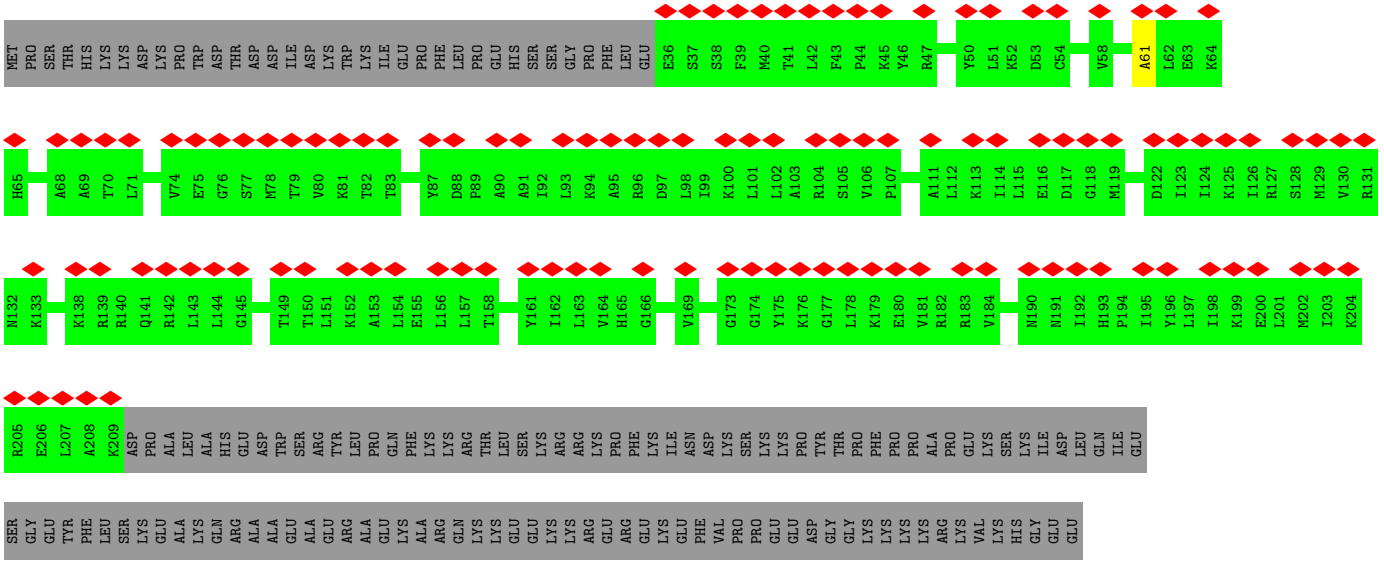
• Molecule 17: Emg1

Chain f:



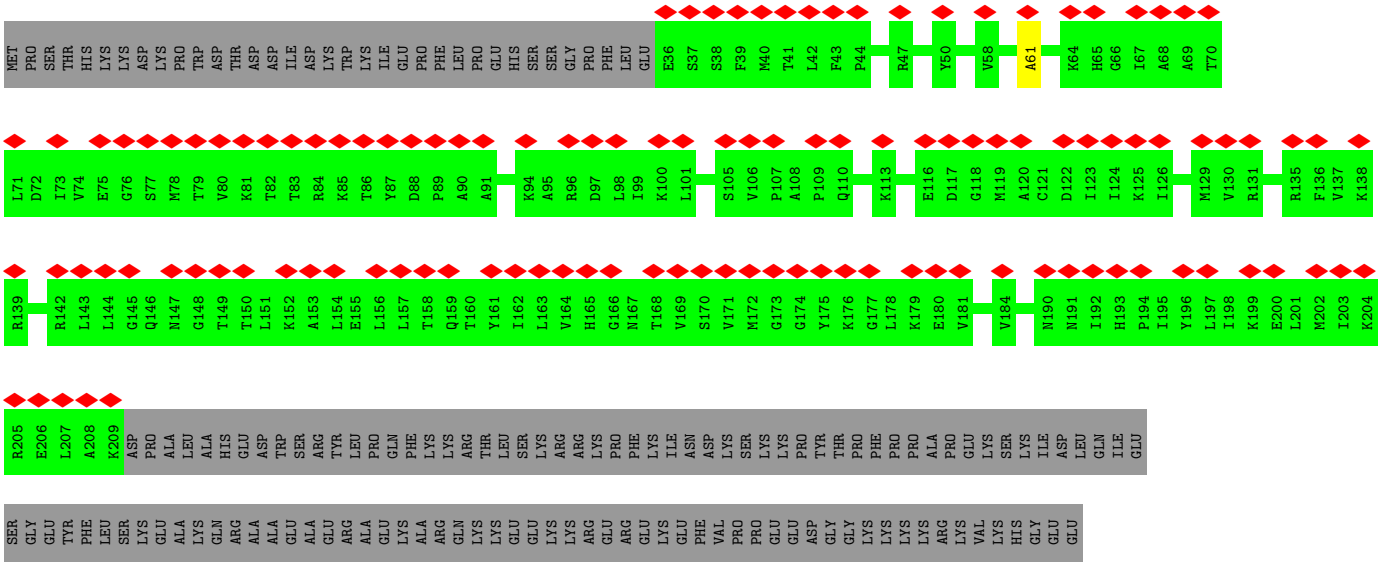
• Molecule 18: KRR1 small subunit processome component

Chain g:



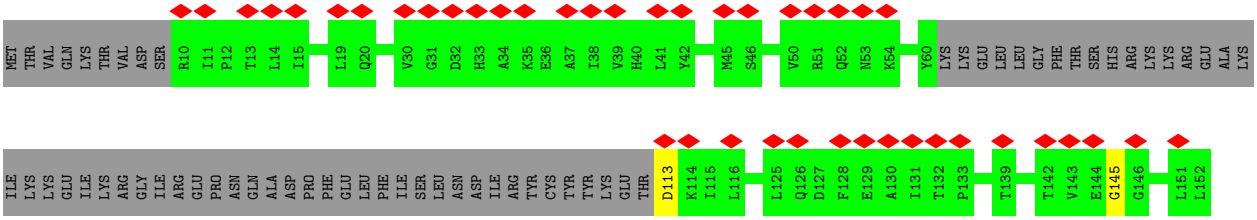
• Molecule 18: KRR1 small subunit processome component

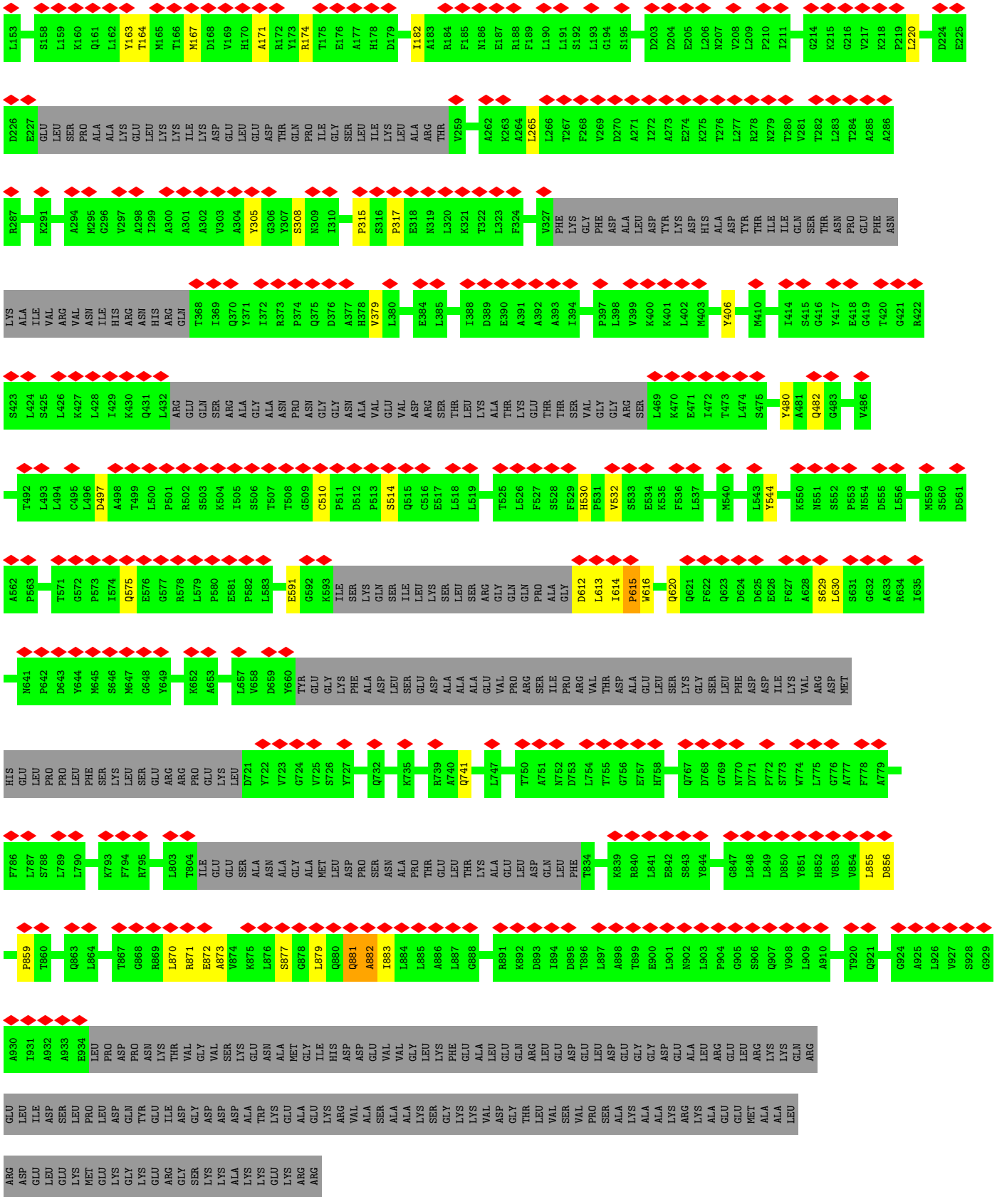
Chain h:



• Molecule 19: Kre33

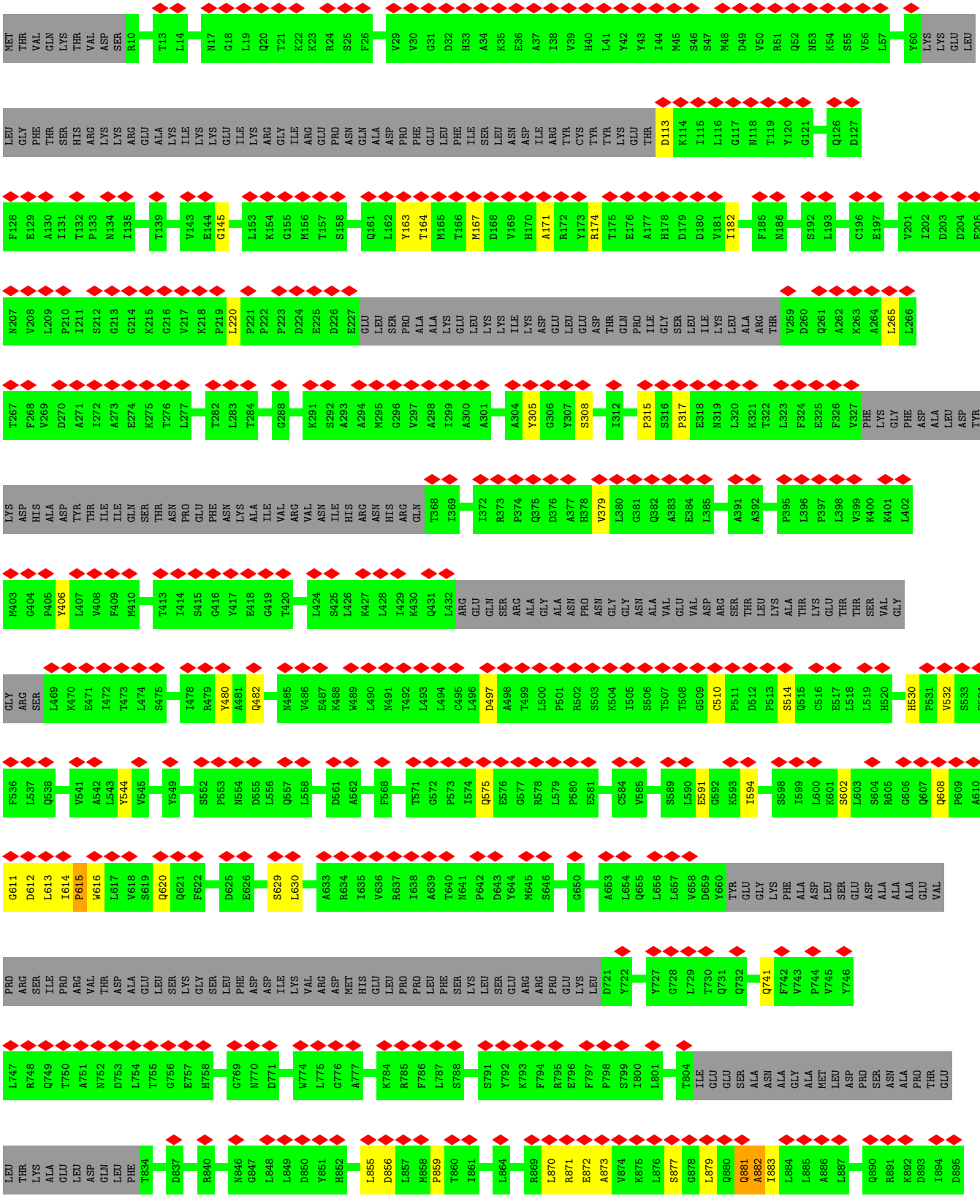
Chain i:

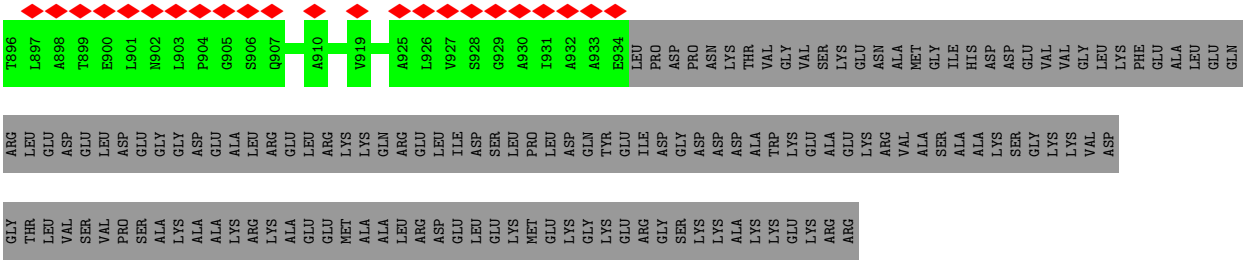




• Molecule 19: Kre33

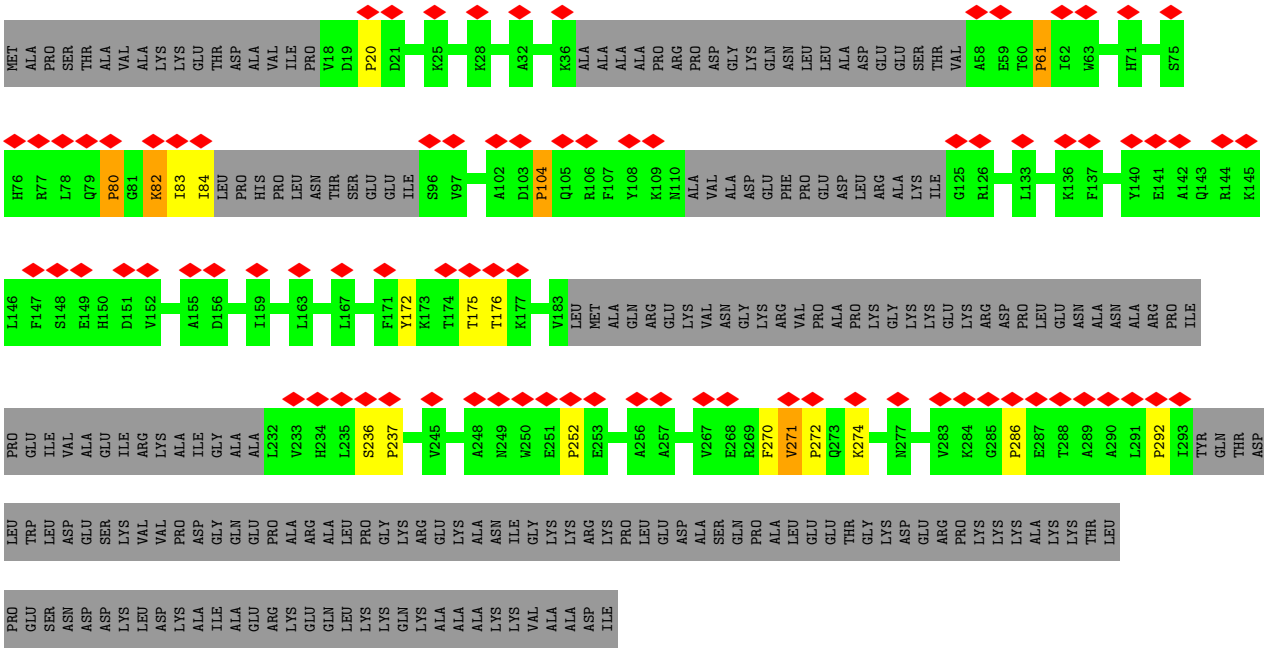
Chain j:





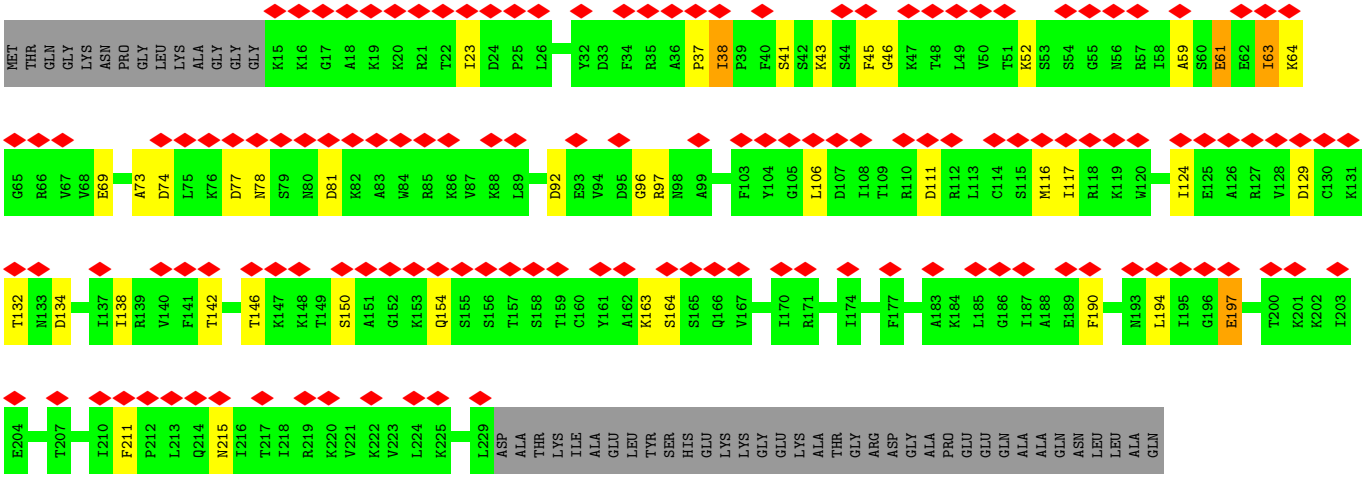
• Molecule 20: Utp30

Chain k:



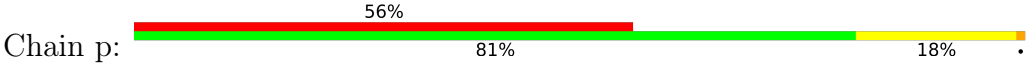
• Molecule 21: eS1

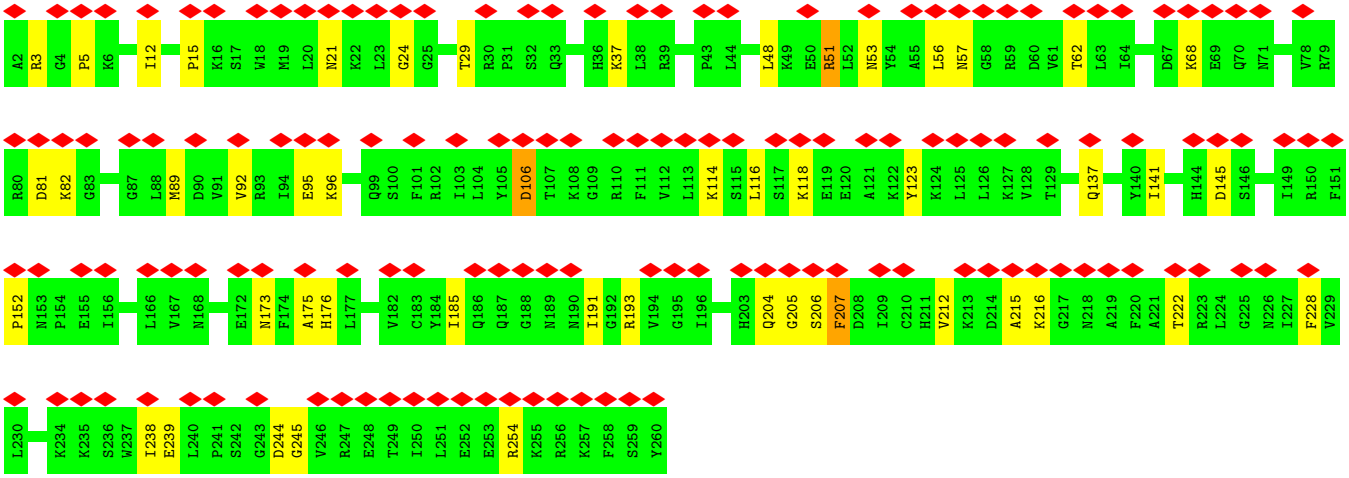
Chain o:



• Molecule 22: eS4

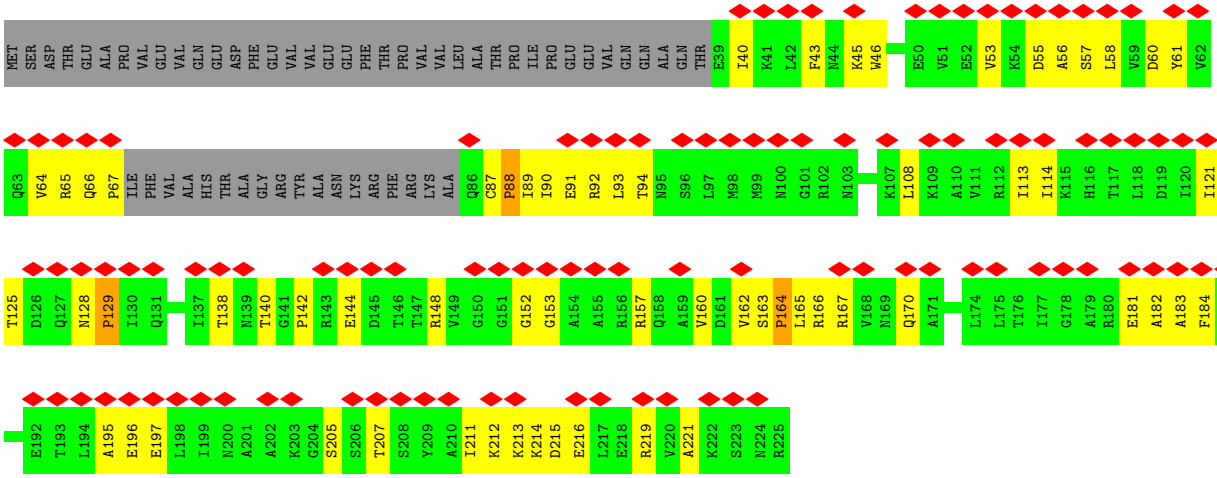
Chain p:





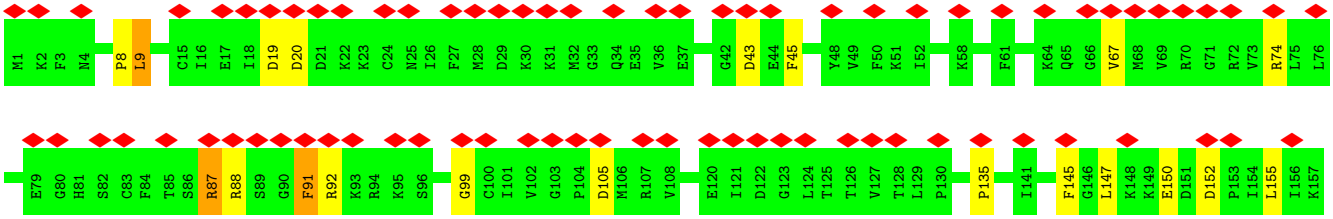
• Molecule 23: uS7

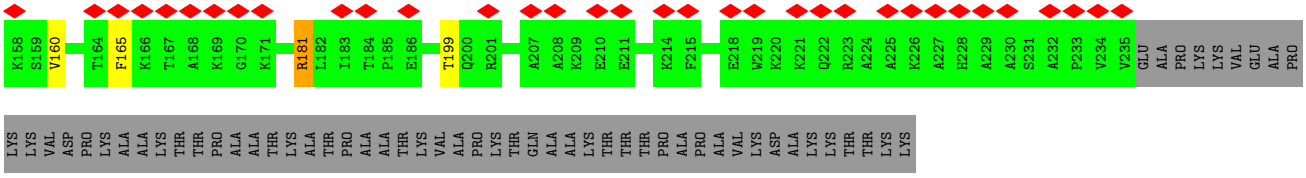
Chain q:



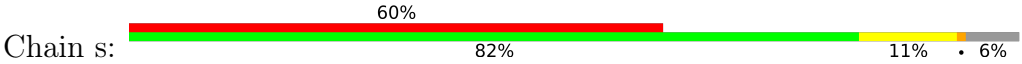
• Molecule 24: eS6

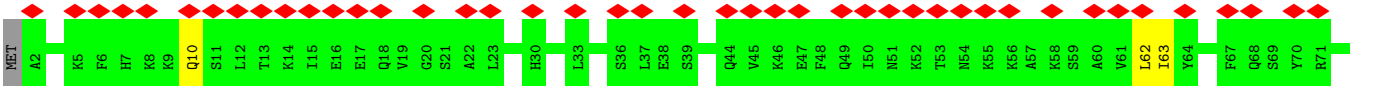
Chain r:

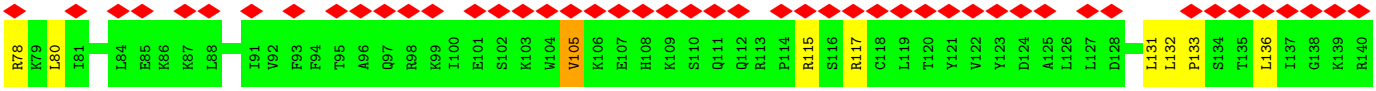


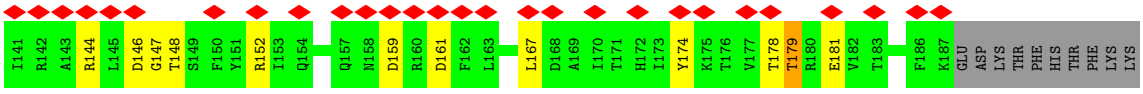


• Molecule 25: eS7

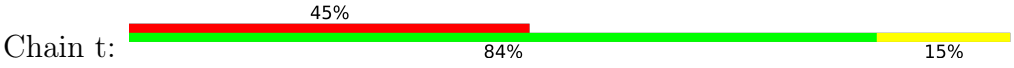


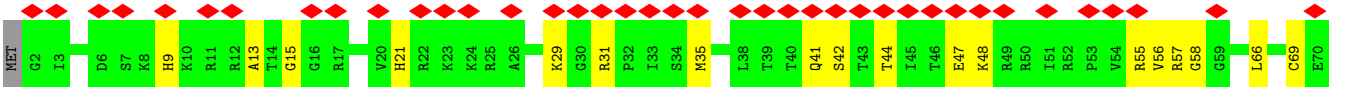


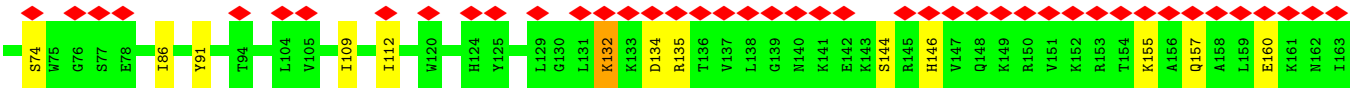


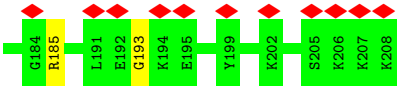


• Molecule 26: eS8

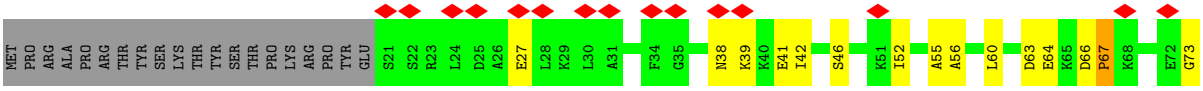


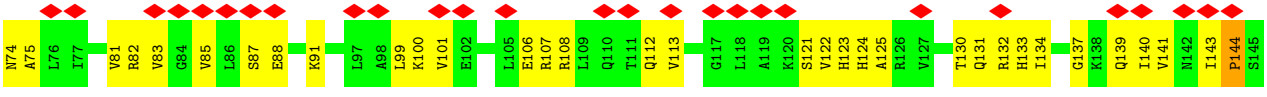


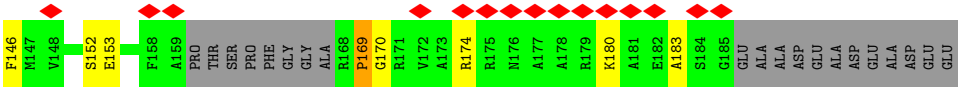




• Molecule 27: uS4

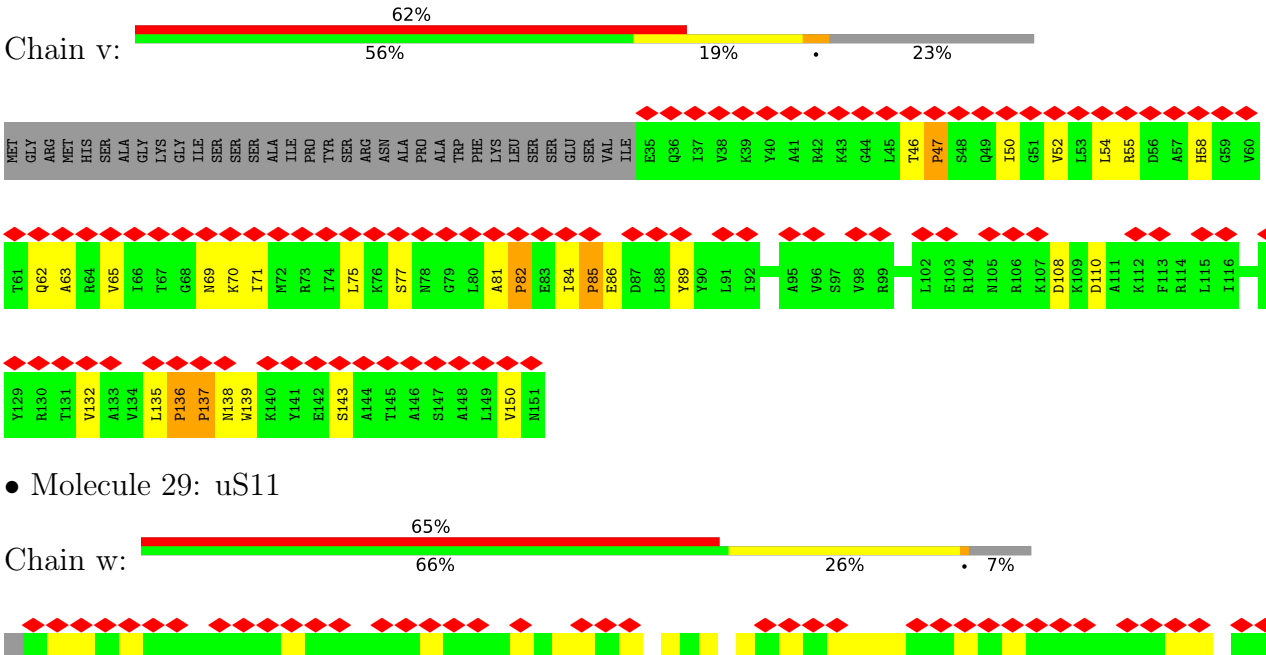






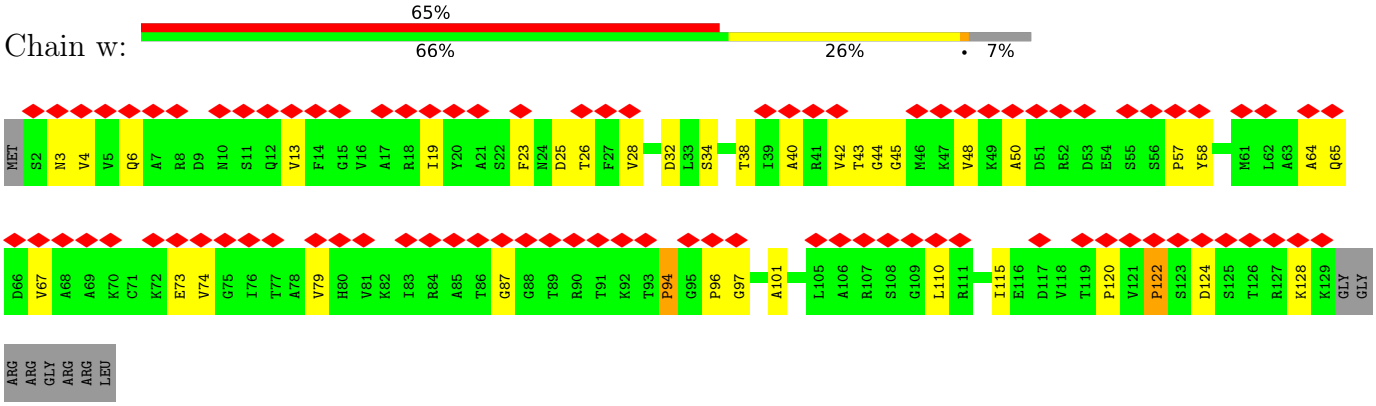
• Molecule 28: uS15

Chain v:



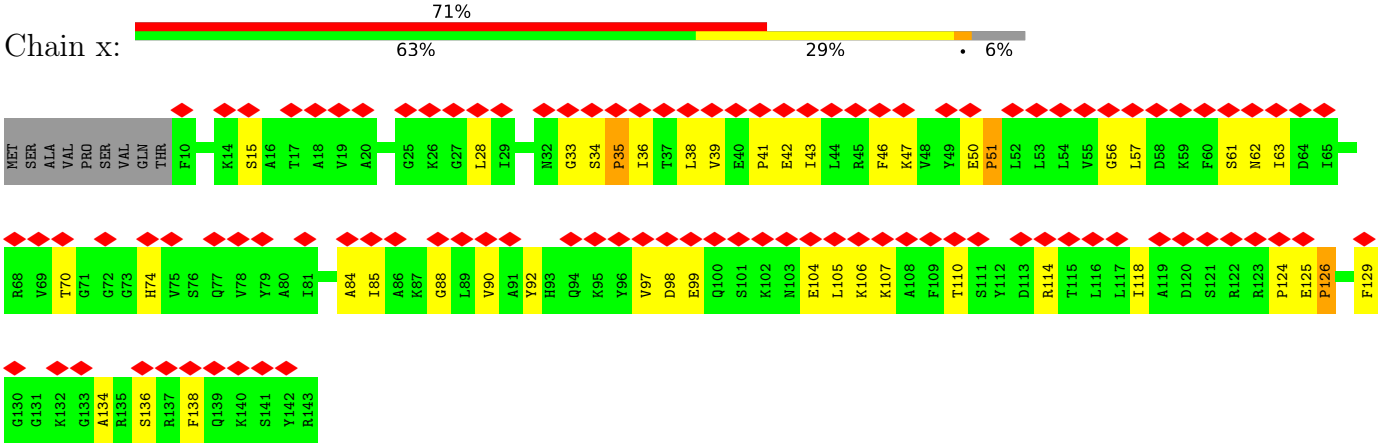
• Molecule 29: uS11

Chain w:



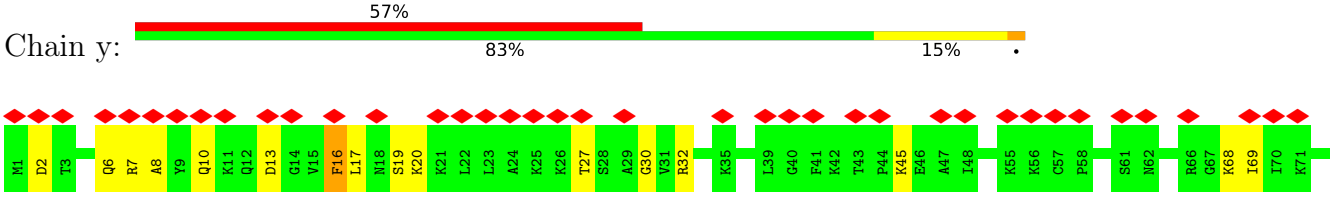
• Molecule 30: uS9

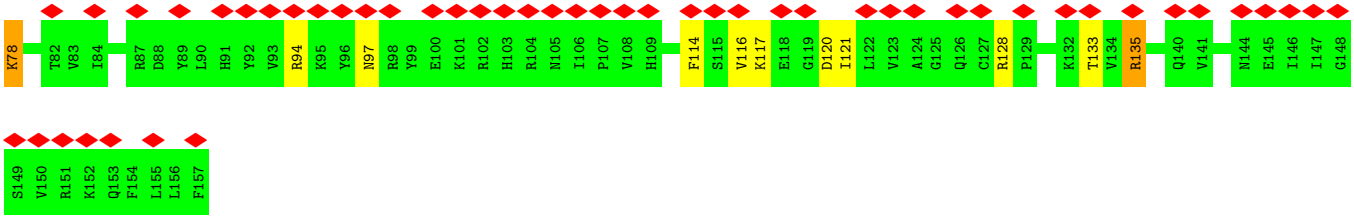
Chain x:



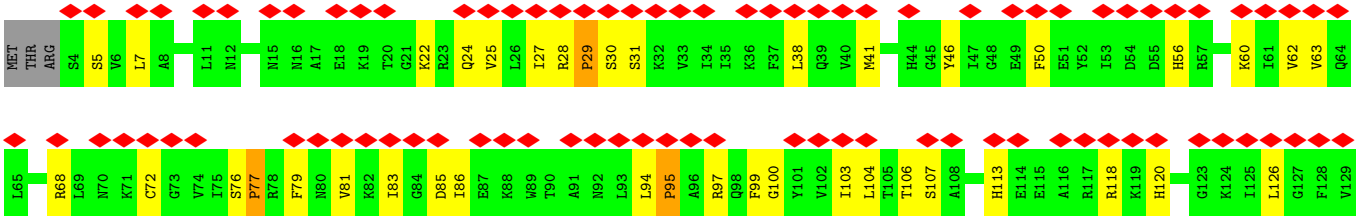
• Molecule 31: uS17

Chain y:

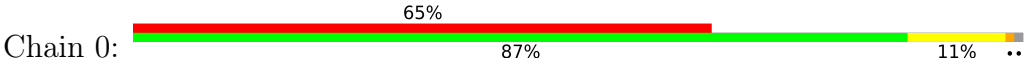


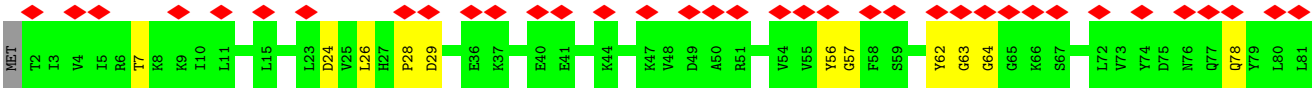


• Molecule 32: uS8

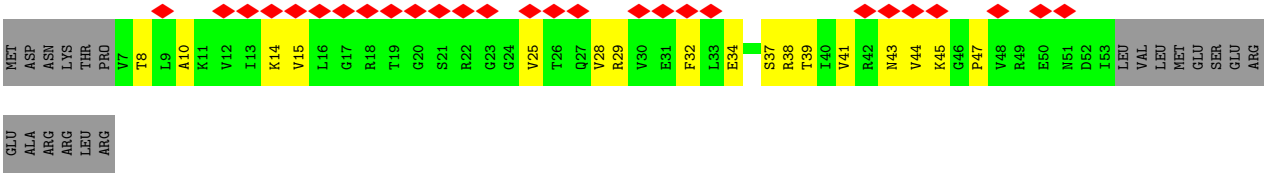


• Molecule 33: eS24

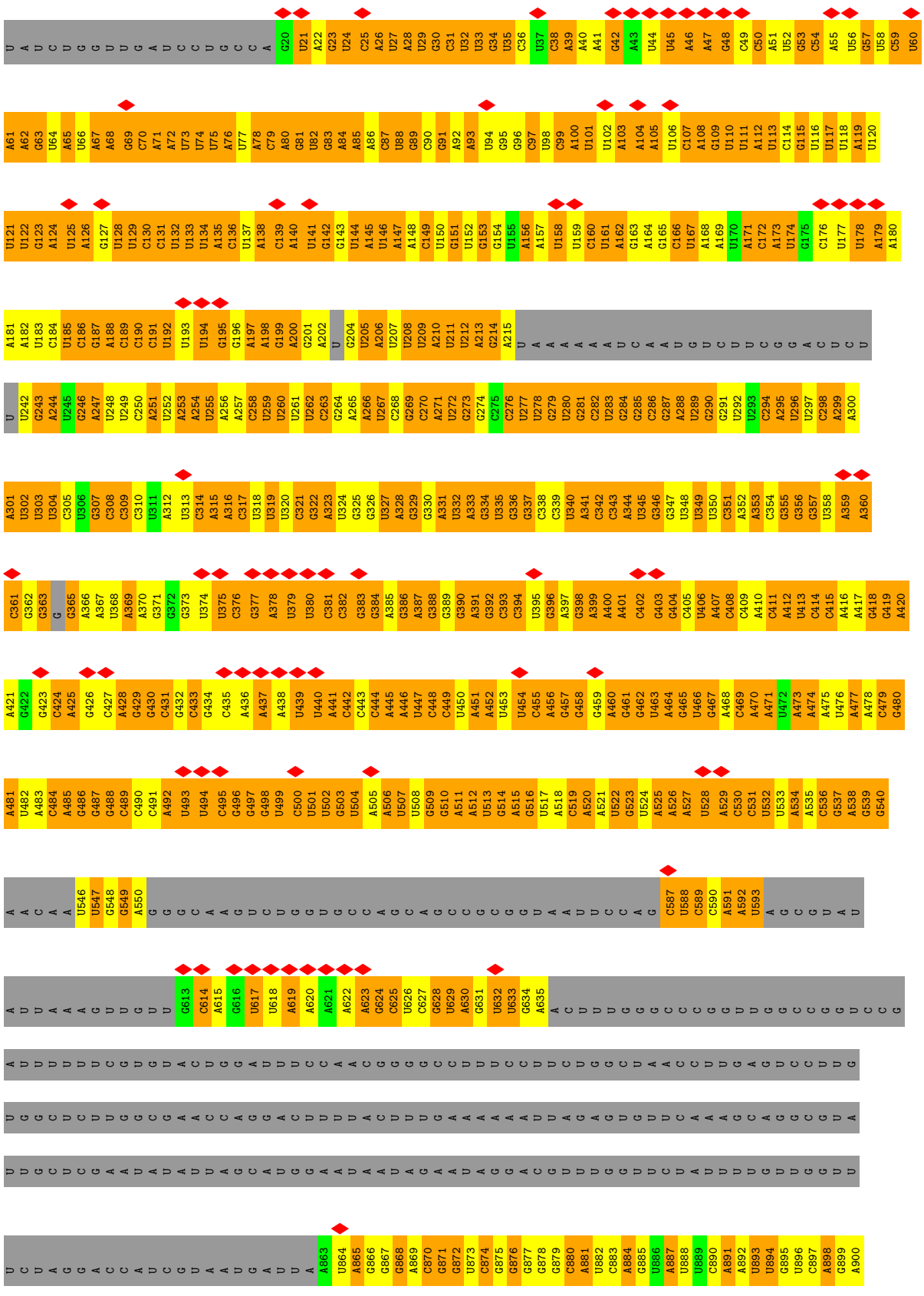


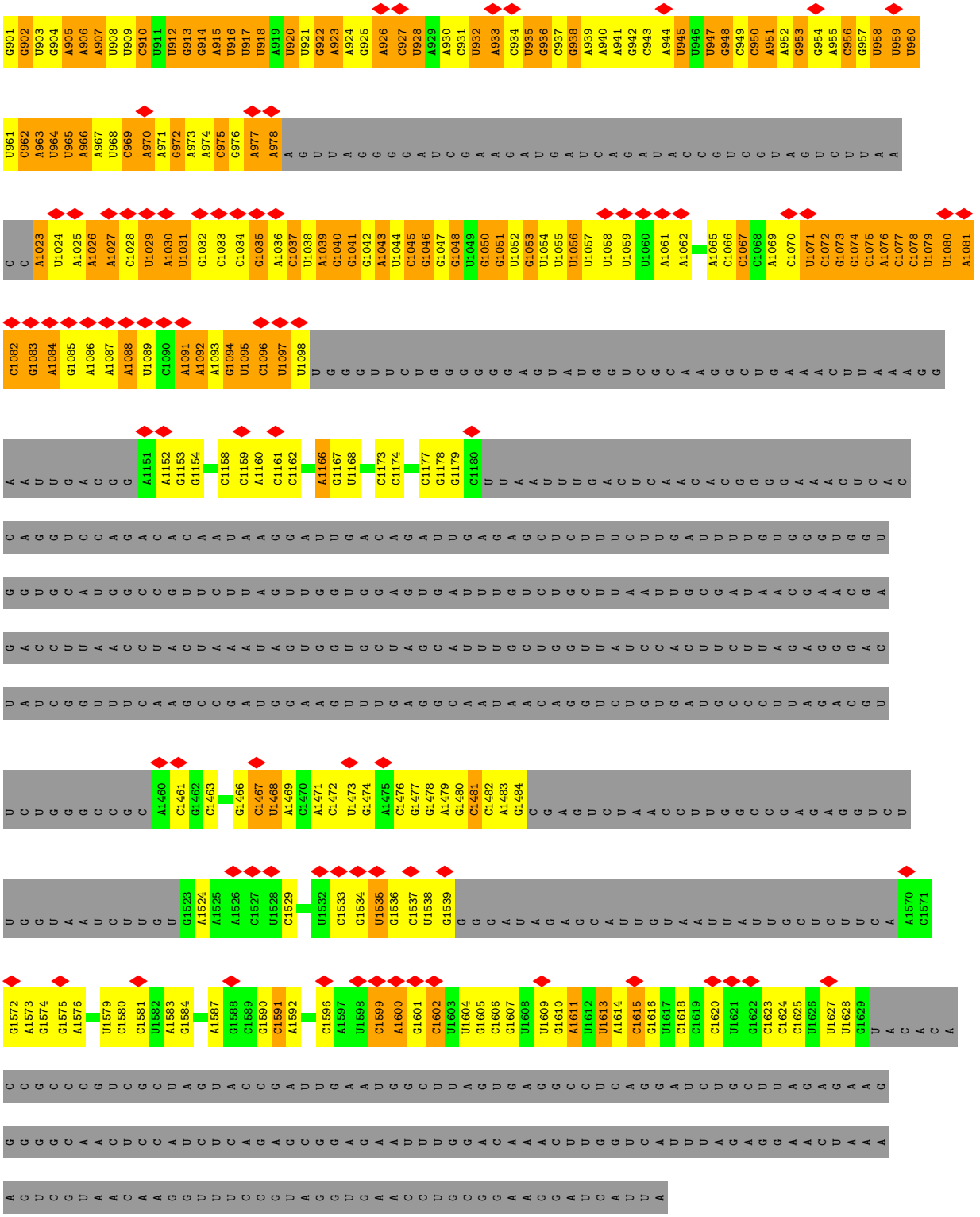


• Molecule 34: eS28



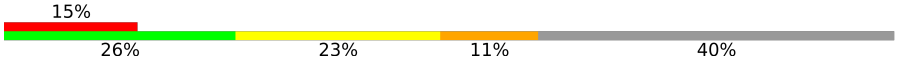
• Molecule 35: 18S ribosomal RNA

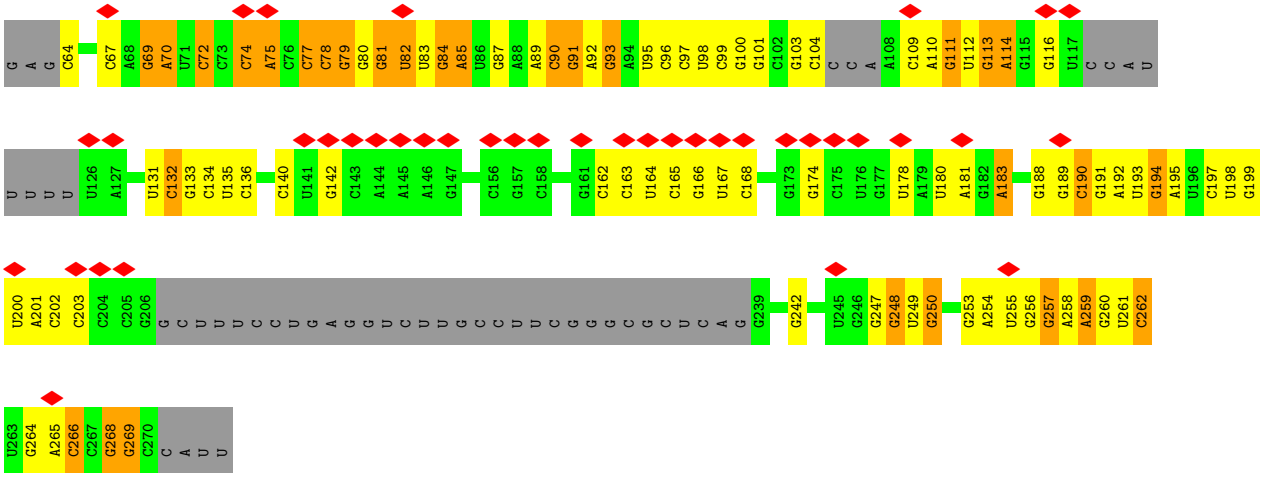




• Molecule 36: U3 RNA

Chain 3:




G A G C64 C67 A68 G69 A70 U71 C72 C73 C74 A75 C76 C77 C78 G79 G80 G81 U82 U83 G84 A85 U86 G87 A88 A89 C90 G91 A92 G93 A94 U95 C96 C97 U98 C99 G100 G101 C102 G103 C104 C C A A108 C109 A110 G111 U112 G113 A114 G115 G116 U117 C C A U
U U U U U126 A127 U131 C132 G133 C134 U135 C136 C140 U141 G142 C143 A144 A145 A146 G147 C156 G157 C158 G161 C162 C163 U164 C165 G166 U167 C168 G173 G174 C175 U176 G177 U178 A179 U180 A181 G182 A183 G188 G189 C190 G191 A192 U193 G194 A195 U196 C197 U198 G199
U200 A201 C202 C203 C204 C205 G206 G C U U U C C C U G A G G U C U U G C C C U U C G G G C G C U C A G G239 G242 U245 G246 G247 G248 U249 G250 G253 A254 U255 G256 G257 A258 A259 G260 U261 C262
U263 G264 A265 C266 C267 G268 G269 C270 C A U U

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	43000	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	16	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.107	Depositor
Minimum map value	-0.056	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.007	Depositor
Recommended contour level	0.025	Depositor
Map size (Å)	478.464, 478.464, 478.464	wwPDB
Map dimensions	448, 448, 448	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.068, 1.068, 1.068	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
2	G	0.99	0/1393	1.23	7/1928 (0.4%)
4	I	0.23	0/3120	0.49	0/4334
8	S	0.36	0/1813	0.53	0/2523
8	T	0.38	0/1813	0.55	0/2523
9	U	0.35	0/602	0.57	0/837
9	V	0.39	0/602	0.59	0/837
10	W	0.40	0/1123	0.62	0/1564
10	X	0.35	0/1123	0.57	0/1564
11	Y	0.23	0/1793	0.52	0/2485
12	Z	0.45	0/1741	0.70	0/2416
13	a	0.48	0/265	0.70	0/367
14	b	0.72	0/759	1.01	2/1058 (0.2%)
15	c	0.74	3/950 (0.3%)	1.32	15/1323 (1.1%)
16	d	0.55	1/615 (0.2%)	2.34	41/857 (4.8%)
17	e	0.35	0/1044	0.61	0/1452
17	f	0.39	0/1079	0.58	0/1502
18	g	0.53	0/860	0.73	1/1197 (0.1%)
18	h	0.53	0/860	0.74	1/1197 (0.1%)
19	i	1.00	5/3246 (0.2%)	1.37	27/4507 (0.6%)
19	j	1.01	5/3335 (0.1%)	1.40	31/4632 (0.7%)
20	k	0.88	0/900	2.02	18/1249 (1.4%)
21	o	0.40	0/1748	0.71	1/2340 (0.0%)
22	p	0.42	0/2119	0.74	0/2849
23	q	0.45	0/834	0.71	5/1159 (0.4%)
24	r	0.38	0/1895	0.67	0/2523
25	s	0.41	0/1563	0.71	0/2100
26	t	0.38	0/1717	0.70	1/2288 (0.0%)
27	u	0.54	0/775	0.73	3/1077 (0.3%)
28	v	0.52	0/579	0.79	5/806 (0.6%)
29	w	0.44	0/626	0.72	4/867 (0.5%)
30	x	0.49	0/657	0.78	5/911 (0.5%)
31	y	0.46	0/1298	0.74	0/1741
32	z	0.56	0/621	0.85	3/860 (0.3%)
33	0	0.41	0/1215	0.70	0/1626

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
34	1	0.40	0/229	0.64	1/316 (0.3%)
35	2	2.02	729/20292 (3.6%)	2.64	2257/31586 (7.1%)
36	3	1.06	8/3912 (0.2%)	1.68	94/6092 (1.5%)
All	All	1.22	751/69116 (1.1%)	1.71	2522/99493 (2.5%)

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
3	H	0	33
8	T	0	1
9	U	0	1
9	V	0	1
10	W	0	1
10	X	0	1
14	b	0	5
15	c	0	7
16	d	0	2
19	i	0	3
19	j	0	3
20	k	0	1
All	All	0	59

All (751) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	2	407	A	N9-C4	-12.24	1.30	1.37
35	2	485	A	N9-C4	-12.21	1.30	1.37
35	2	328	A	N9-C4	-12.18	1.30	1.37
35	2	432	G	N7-C5	-12.13	1.31	1.39
35	2	503	G	N9-C4	-11.40	1.28	1.38
35	2	210	A	N9-C4	-11.25	1.31	1.37
35	2	1023	A	N9-C4	-11.05	1.31	1.37
35	2	307	G	N9-C4	-10.94	1.29	1.38
35	2	256	A	C5-C6	-10.86	1.31	1.41
35	2	1039	A	N9-C4	-10.85	1.31	1.37
35	2	53	G	N9-C4	-10.79	1.29	1.38
35	2	549	G	C2-N3	-10.59	1.24	1.32
35	2	381	C	N3-C4	-10.53	1.26	1.33
35	2	173	A	N9-C4	-10.52	1.31	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	2	196	G	N9-C4	-10.37	1.29	1.38
35	2	537	G	C2-N3	-10.28	1.24	1.32
35	2	288	A	N9-C4	-10.22	1.31	1.37
35	2	941	A	N9-C4	-10.12	1.31	1.37
35	2	456	A	C5-C6	-9.94	1.32	1.41
35	2	375	U	C2-N3	-9.89	1.30	1.37
35	2	484	C	N1-C6	-9.87	1.31	1.37
35	2	196	G	C2-N3	-9.78	1.25	1.32
35	2	905	A	N9-C4	-9.75	1.32	1.37
35	2	914	G	N9-C4	-9.74	1.30	1.38
35	2	497	G	N9-C4	-9.70	1.30	1.38
35	2	488	G	C8-N7	-9.67	1.25	1.30
35	2	498	G	N9-C4	-9.53	1.30	1.38
35	2	521	A	N9-C4	-9.51	1.32	1.37
35	2	497	G	C5-C4	-9.50	1.31	1.38
35	2	301	A	N9-C4	-9.48	1.32	1.37
35	2	481	A	N9-C4	-9.48	1.32	1.37
35	2	156	A	N9-C4	-9.44	1.32	1.37
35	2	496	G	C6-N1	-9.31	1.33	1.39
35	2	432	G	N9-C8	-9.24	1.31	1.37
35	2	1083	G	N9-C4	-9.21	1.30	1.38
35	2	382	C	N3-C4	-9.20	1.27	1.33
35	2	488	G	C5-C6	-9.19	1.33	1.42
35	2	503	G	C5-C6	-9.19	1.33	1.42
35	2	589	C	C2-N3	-9.11	1.28	1.35
35	2	171	A	N9-C4	-9.07	1.32	1.37
35	2	365	G	N7-C5	-9.07	1.33	1.39
35	2	366	A	N9-C4	-9.06	1.32	1.37
35	2	419	G	N9-C4	-9.03	1.30	1.38
35	2	548	G	C5-C6	-9.03	1.33	1.42
35	2	463	U	C2-N3	-9.02	1.31	1.37
35	2	488	G	N7-C5	-9.00	1.33	1.39
35	2	411	C	N1-C6	-8.97	1.31	1.37
35	2	922	G	N9-C4	-8.96	1.30	1.38
35	2	312	A	N9-C4	-8.95	1.32	1.37
35	2	357	G	C2-N3	-8.92	1.25	1.32
35	2	72	A	N9-C4	-8.89	1.32	1.37
35	2	404	G	N9-C4	-8.89	1.30	1.38
35	2	1076	A	N9-C4	-8.89	1.32	1.37
35	2	412	A	N9-C4	-8.87	1.32	1.37
35	2	365	G	C8-N7	-8.87	1.25	1.30
35	2	309	C	N1-C2	-8.86	1.31	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	2	391	A	C5-C6	-8.86	1.33	1.41
35	2	955	A	N9-C4	-8.85	1.32	1.37
35	2	456	A	N9-C4	-8.83	1.32	1.37
35	2	493	U	N1-C2	-8.80	1.30	1.38
35	2	152	U	C2-N3	-8.76	1.31	1.37
35	2	1094	G	C8-N7	-8.75	1.25	1.30
35	2	514	G	C6-O6	-8.71	1.16	1.24
35	2	142	G	N9-C4	-8.71	1.30	1.38
35	2	210	A	C5-C6	-8.69	1.33	1.41
35	2	885	G	N9-C4	-8.59	1.31	1.38
35	2	84	A	C8-N7	-8.59	1.25	1.31
19	i	615	PRO	CA-C	8.52	1.69	1.52
19	j	615	PRO	CA-C	8.52	1.69	1.52
35	2	502	U	C2-N3	-8.49	1.31	1.37
35	2	514	G	N9-C4	-8.47	1.31	1.38
35	2	407	A	C5-C6	-8.45	1.33	1.41
35	2	430	G	N9-C4	-8.45	1.31	1.38
35	2	484	C	C2-N3	-8.44	1.28	1.35
35	2	491	C	C2-N3	-8.35	1.29	1.35
35	2	485	A	C5-C4	-8.35	1.32	1.38
35	2	148	A	N9-C4	-8.33	1.32	1.37
35	2	1045	C	C2-N3	-8.31	1.29	1.35
35	2	482	U	C2-N3	-8.29	1.31	1.37
35	2	548	G	N9-C4	-8.29	1.31	1.38
35	2	503	G	C2-N3	-8.28	1.26	1.32
35	2	107	C	N3-C4	-8.27	1.28	1.33
35	2	288	A	N3-C4	-8.26	1.29	1.34
35	2	923	A	N7-C5	-8.25	1.34	1.39
35	2	868	G	C2-N3	-8.19	1.26	1.32
35	2	202	A	N9-C4	-8.19	1.32	1.37
35	2	162	A	C5-C6	-8.18	1.33	1.41
35	2	93	A	N3-C4	-8.17	1.29	1.34
35	2	53	G	C2-N3	-8.14	1.26	1.32
35	2	295	A	N9-C4	-8.10	1.32	1.37
35	2	390	G	C2-N3	-8.09	1.26	1.32
35	2	407	A	C2-N3	-8.09	1.26	1.33
35	2	73	U	C2-N3	-8.05	1.32	1.37
35	2	142	G	C5-C4	-8.05	1.32	1.38
35	2	381	C	C2-N3	-8.01	1.29	1.35
35	2	151	G	C5-C4	-7.98	1.32	1.38
35	2	84	A	N7-C5	-7.97	1.34	1.39
35	2	93	A	N9-C4	-7.96	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	2	907	A	N9-C4	-7.96	1.33	1.37
35	2	486	G	C8-N7	-7.95	1.26	1.30
35	2	492	A	N9-C4	-7.95	1.33	1.37
35	2	323	A	N9-C4	-7.93	1.33	1.37
35	2	1084	A	N9-C4	-7.92	1.33	1.37
35	2	490	C	N1-C6	-7.90	1.32	1.37
35	2	902	G	C8-N7	-7.88	1.26	1.30
35	2	496	G	N9-C4	-7.87	1.31	1.38
35	2	514	G	C6-N1	-7.86	1.34	1.39
35	2	307	G	C2-N3	-7.86	1.26	1.32
35	2	65	A	N9-C4	-7.85	1.33	1.37
35	2	473	A	N7-C5	-7.79	1.34	1.39
35	2	108	A	C5-C6	-7.78	1.34	1.41
35	2	333	A	N9-C4	-7.78	1.33	1.37
35	2	419	G	N3-C4	-7.77	1.30	1.35
35	2	399	A	N7-C5	-7.75	1.34	1.39
35	2	324	U	C4-O4	-7.75	1.17	1.23
35	2	369	A	N9-C4	-7.75	1.33	1.37
35	2	309	C	N1-C6	-7.73	1.32	1.37
35	2	164	A	N9-C4	-7.72	1.33	1.37
35	2	1094	G	N9-C4	-7.70	1.31	1.38
35	2	497	G	C5-C6	-7.69	1.34	1.42
35	2	392	G	C6-N1	-7.69	1.34	1.39
35	2	480	G	C2-N3	-7.67	1.26	1.32
35	2	495	C	C2-N3	-7.66	1.29	1.35
35	2	1042	G	C6-N1	-7.65	1.34	1.39
35	2	360	A	N9-C4	-7.61	1.33	1.37
35	2	880	C	N1-C6	-7.58	1.32	1.37
35	2	461	G	N9-C8	-7.57	1.32	1.37
35	2	520	A	N7-C5	-7.57	1.34	1.39
35	2	124	A	C5-C4	-7.54	1.33	1.38
35	2	488	G	C6-N1	-7.54	1.34	1.39
35	2	357	G	C5-C6	-7.54	1.34	1.42
35	2	188	A	N9-C4	-7.54	1.33	1.37
35	2	269	G	N9-C4	-7.44	1.31	1.38
35	2	375	U	N1-C2	-7.41	1.31	1.38
35	2	164	A	C5-C4	-7.41	1.33	1.38
35	2	287	G	C5-C6	-7.40	1.34	1.42
35	2	497	G	C2-N3	-7.38	1.26	1.32
35	2	326	G	N9-C4	-7.36	1.32	1.38
35	2	189	C	N1-C6	-7.34	1.32	1.37
35	2	83	G	C2-N3	-7.33	1.26	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	2	1025	A	N9-C4	7.33	1.42	1.37
35	2	497	G	N9-C8	-7.32	1.32	1.37
35	2	484	C	N1-C2	-7.31	1.32	1.40
35	2	406	U	N1-C6	-7.30	1.31	1.38
35	2	253	A	C5-C6	-7.30	1.34	1.41
35	2	295	A	C5-C6	-7.30	1.34	1.41
35	2	307	G	C5-C6	-7.29	1.35	1.42
35	2	365	G	N9-C8	-7.29	1.32	1.37
35	2	328	A	C5-C6	-7.28	1.34	1.41
35	2	549	G	N9-C4	-7.27	1.32	1.38
35	2	549	G	N1-C2	-7.26	1.31	1.37
35	2	874	C	N1-C6	-7.26	1.32	1.37
35	2	162	A	C6-N1	-7.26	1.30	1.35
35	2	497	G	N3-C4	-7.25	1.30	1.35
35	2	47	A	C6-N1	-7.23	1.30	1.35
35	2	548	G	C2-N3	-7.23	1.26	1.32
35	2	872	G	N9-C4	-7.21	1.32	1.38
35	2	496	G	N3-C4	-7.21	1.30	1.35
35	2	396	G	N9-C4	-7.20	1.32	1.38
35	2	303	U	C2-N3	-7.19	1.32	1.37
35	2	108	A	N9-C4	-7.19	1.33	1.37
35	2	1053	G	N9-C4	-7.17	1.32	1.38
35	2	191	C	N1-C2	-7.17	1.32	1.40
35	2	281	G	C5-C6	-7.16	1.35	1.42
35	2	923	A	N9-C4	-7.16	1.33	1.37
35	2	386	G	C8-N7	-7.15	1.26	1.30
35	2	243	G	C5-C6	-7.14	1.35	1.42
35	2	1094	G	N7-C5	-7.13	1.34	1.39
35	2	34	G	P-O5'	7.12	1.66	1.59
35	2	419	G	C2-N3	-7.11	1.27	1.32
35	2	199	G	N9-C4	-7.11	1.32	1.38
35	2	514	G	C5-C6	-7.08	1.35	1.42
35	2	406	U	C2-N3	-7.08	1.32	1.37
35	2	1091	A	N9-C4	-7.06	1.33	1.37
35	2	498	G	N3-C4	-7.03	1.30	1.35
35	2	588	U	C2-N3	-7.03	1.32	1.37
35	2	32	U	C2-N3	-7.01	1.32	1.37
35	2	307	G	C5-C4	-7.01	1.33	1.38
35	2	967	A	N9-C4	-7.01	1.33	1.37
35	2	502	U	C5-C6	-7.00	1.27	1.34
35	2	309	C	C2-N3	-6.99	1.30	1.35
35	2	1039	A	C5-C6	-6.97	1.34	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	2	195	G	N9-C4	-6.96	1.32	1.38
35	2	507	U	C2-N3	-6.96	1.32	1.37
35	2	212	U	C2-N3	-6.95	1.32	1.37
35	2	412	A	N9-C8	-6.94	1.32	1.37
35	2	460	A	N9-C4	-6.93	1.33	1.37
35	2	27	U	C2-N3	-6.93	1.32	1.37
35	2	496	G	C5-C6	-6.92	1.35	1.42
35	2	498	G	C6-N1	-6.91	1.34	1.39
35	2	195	G	C2-N3	-6.91	1.27	1.32
35	2	592	A	N9-C8	-6.90	1.32	1.37
35	2	294	C	N1-C6	-6.90	1.33	1.37
35	2	53	G	N3-C4	-6.89	1.30	1.35
35	2	124	A	N9-C4	-6.88	1.33	1.37
35	2	71	A	N9-C4	-6.88	1.33	1.37
35	2	365	G	C5-C6	-6.88	1.35	1.42
35	2	592	A	C5-C4	-6.88	1.33	1.38
35	2	83	G	N9-C4	-6.87	1.32	1.38
35	2	490	C	C2-N3	-6.87	1.30	1.35
35	2	200	A	N9-C4	-6.87	1.33	1.37
35	2	246	G	N7-C5	-6.83	1.35	1.39
35	2	280	U	N1-C2	-6.83	1.32	1.38
35	2	285	G	N9-C8	-6.83	1.33	1.37
35	2	50	C	N1-C6	-6.82	1.33	1.37
35	2	460	A	C5-C4	-6.81	1.33	1.38
35	2	955	A	N7-C5	-6.81	1.35	1.39
35	2	256	A	C8-N7	-6.81	1.26	1.31
35	2	462	G	C2-N3	-6.80	1.27	1.32
35	2	425	A	N7-C5	-6.79	1.35	1.39
35	2	123	G	C5-C6	-6.79	1.35	1.42
35	2	498	G	C5-C4	-6.78	1.33	1.38
35	2	142	G	C2-N3	-6.77	1.27	1.32
35	2	512	A	N9-C4	-6.75	1.33	1.37
19	i	616	TRP	N-CA	6.74	1.59	1.46
35	2	456	A	C8-N7	-6.74	1.26	1.31
35	2	326	G	C2-N3	-6.73	1.27	1.32
35	2	97	C	N1-C6	-6.73	1.33	1.37
19	j	616	TRP	N-CA	6.72	1.59	1.46
35	2	1038	U	C2-N3	-6.72	1.33	1.37
35	2	1070	C	C2-N3	-6.72	1.30	1.35
35	2	1094	G	C5-C6	-6.72	1.35	1.42
15	c	161	PRO	CA-C	-6.71	1.39	1.52
35	2	174	U	C2-N3	-6.71	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	2	344	A	N9-C4	-6.71	1.33	1.37
35	2	404	G	C5-C6	-6.70	1.35	1.42
35	2	407	A	N3-C4	-6.70	1.30	1.34
35	2	469	C	N1-C6	-6.70	1.33	1.37
35	2	401	A	N9-C4	-6.70	1.33	1.37
35	2	485	A	C5-C6	-6.70	1.35	1.41
35	2	880	C	C2-N3	-6.70	1.30	1.35
35	2	530	C	C5-C6	-6.70	1.28	1.34
35	2	539	G	N9-C8	-6.70	1.33	1.37
35	2	1023	A	C2-N3	-6.70	1.27	1.33
35	2	80	A	C6-N1	-6.69	1.30	1.35
35	2	341	A	N9-C4	-6.67	1.33	1.37
35	2	173	A	N3-C4	-6.67	1.30	1.34
35	2	1053	G	C2-N3	-6.67	1.27	1.32
35	2	281	G	N9-C4	-6.66	1.32	1.38
35	2	343	C	C2-N3	-6.66	1.30	1.35
35	2	390	G	C5-C4	-6.66	1.33	1.38
35	2	540	G	N7-C5	-6.66	1.35	1.39
35	2	537	G	N9-C4	-6.65	1.32	1.38
35	2	527	A	C6-N1	-6.65	1.30	1.35
35	2	371	G	N9-C4	-6.65	1.32	1.38
35	2	456	A	N7-C5	-6.64	1.35	1.39
35	2	456	A	C6-N1	-6.63	1.30	1.35
35	2	47	A	N7-C5	-6.62	1.35	1.39
35	2	288	A	C6-N1	-6.61	1.30	1.35
35	2	1041	G	C5-C6	-6.61	1.35	1.42
35	2	213	A	N9-C4	-6.61	1.33	1.37
35	2	1042	G	C5-C6	-6.60	1.35	1.42
35	2	955	A	N9-C8	-6.59	1.32	1.37
35	2	108	A	N7-C5	-6.59	1.35	1.39
35	2	1080	U	C4-O4	-6.59	1.18	1.23
35	2	243	G	C8-N7	-6.59	1.26	1.30
35	2	496	G	C2-N3	-6.58	1.27	1.32
35	2	328	A	C2-N3	-6.57	1.27	1.33
35	2	974	A	C5-C6	-6.57	1.35	1.41
15	c	161	PRO	C-O	-6.55	1.10	1.23
35	2	243	G	C6-N1	-6.55	1.34	1.39
35	2	951	A	N9-C4	-6.55	1.33	1.37
35	2	549	G	C6-N1	-6.55	1.34	1.39
35	2	367	A	N9-C4	-6.54	1.33	1.37
35	2	441	A	C5-C6	-6.53	1.35	1.41
35	2	428	A	N9-C4	-6.53	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	2	255	U	C2-N3	-6.52	1.33	1.37
35	2	163	G	C8-N7	-6.52	1.27	1.30
35	2	549	G	C5-C4	-6.52	1.33	1.38
35	2	163	G	C5-C6	-6.52	1.35	1.42
35	2	1053	G	N9-C8	-6.52	1.33	1.37
35	2	309	C	C4-C5	-6.51	1.37	1.43
35	2	519	C	N1-C2	-6.51	1.33	1.40
35	2	391	A	C5-C4	-6.50	1.34	1.38
35	2	405	C	C2-N3	-6.50	1.30	1.35
35	2	117	U	C2-N3	-6.50	1.33	1.37
35	2	112	A	N9-C4	-6.49	1.33	1.37
35	2	900	A	N9-C4	-6.46	1.33	1.37
35	2	589	C	N1-C2	-6.46	1.33	1.40
35	2	1074	G	C5-C6	-6.45	1.35	1.42
19	j	612	ASP	CA-C	-6.42	1.36	1.52
35	2	353	A	C5-C6	-6.42	1.35	1.41
35	2	386	G	C6-N1	-6.42	1.35	1.39
35	2	460	A	C5-C6	-6.42	1.35	1.41
35	2	922	G	C5-C6	-6.42	1.35	1.42
19	i	612	ASP	CA-C	-6.40	1.36	1.52
35	2	432	G	C8-N7	-6.40	1.27	1.30
35	2	955	A	N3-C4	-6.39	1.31	1.34
35	2	883	C	N1-C6	-6.39	1.33	1.37
35	2	1074	G	C6-N1	-6.39	1.35	1.39
35	2	527	A	N9-C4	-6.38	1.34	1.37
35	2	976	G	N3-C4	-6.38	1.30	1.35
35	2	390	G	N3-C4	-6.37	1.30	1.35
35	2	382	C	N1-C6	-6.36	1.33	1.37
35	2	388	G	C5-C6	-6.36	1.35	1.42
35	2	496	G	C5-C4	-6.36	1.33	1.38
35	2	923	A	C5-C6	-6.35	1.35	1.41
35	2	1045	C	N1-C2	-6.35	1.33	1.40
35	2	1083	G	C2-N3	-6.35	1.27	1.32
35	2	589	C	N3-C4	-6.35	1.29	1.33
35	2	53	G	C5-C4	-6.34	1.33	1.38
35	2	85	A	N9-C4	-6.34	1.34	1.37
35	2	629	U	N1-C2	-6.34	1.32	1.38
35	2	196	G	N3-C4	-6.34	1.31	1.35
35	2	279	G	N7-C5	-6.33	1.35	1.39
35	2	1082	C	P-O5'	6.33	1.66	1.59
35	2	492	A	N3-C4	-6.33	1.31	1.34
35	2	404	G	C5-C4	-6.32	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	2	256	A	N7-C5	-6.31	1.35	1.39
35	2	357	G	C6-N1	-6.30	1.35	1.39
35	2	495	C	N3-C4	-6.30	1.29	1.33
35	2	271	A	N9-C4	-6.30	1.34	1.37
35	2	477	A	C6-N1	-6.29	1.31	1.35
35	2	267	U	C2-N3	-6.29	1.33	1.37
35	2	151	G	C5-C6	-6.29	1.36	1.42
35	2	109	G	C8-N7	-6.29	1.27	1.30
35	2	163	G	N9-C4	-6.29	1.32	1.38
35	2	124	A	C6-N1	-6.28	1.31	1.35
35	2	309	C	C5-C6	-6.28	1.29	1.34
35	2	491	C	N1-C2	-6.28	1.33	1.40
35	2	462	G	N9-C4	-6.27	1.32	1.38
35	2	922	G	C2-N3	-6.26	1.27	1.32
35	2	502	U	C4-O4	-6.24	1.18	1.23
35	2	344	A	C5-C6	-6.24	1.35	1.41
35	2	377	G	N9-C8	-6.23	1.33	1.37
35	2	1043	A	N9-C4	-6.23	1.34	1.37
35	2	504	U	C2-N3	-6.23	1.33	1.37
35	2	167	U	C4-O4	-6.23	1.18	1.23
35	2	285	G	C6-N1	-6.23	1.35	1.39
35	2	107	C	N1-C6	-6.22	1.33	1.37
35	2	163	G	N7-C5	-6.22	1.35	1.39
35	2	341	A	C5-C6	-6.22	1.35	1.41
35	2	460	A	C6-N6	-6.21	1.28	1.33
35	2	419	G	C2-N2	-6.21	1.28	1.34
35	2	624	G	N9-C4	-6.21	1.32	1.38
35	2	530	C	C4-C5	-6.21	1.38	1.43
35	2	407	A	N7-C5	-6.20	1.35	1.39
35	2	477	A	C6-N6	-6.20	1.28	1.33
35	2	548	G	C5-C4	-6.20	1.34	1.38
35	2	210	A	C5-C4	-6.19	1.34	1.38
35	2	163	G	N9-C8	-6.19	1.33	1.37
35	2	630	A	C6-N6	-6.19	1.28	1.33
35	2	142	G	N3-C4	-6.19	1.31	1.35
36	3	84	G	N9-C4	-6.19	1.32	1.38
35	2	316	A	N3-C4	-6.17	1.31	1.34
35	2	512	A	C6-N6	-6.17	1.29	1.33
35	2	109	G	N9-C4	-6.16	1.33	1.38
35	2	307	G	N3-C4	-6.16	1.31	1.35
35	2	295	A	N3-C4	-6.16	1.31	1.34
35	2	1076	A	C5-C6	-6.16	1.35	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	2	340	U	N1-C2	-6.15	1.33	1.38
35	2	103	A	N9-C4	6.15	1.41	1.37
35	2	387	A	N3-C4	-6.14	1.31	1.34
35	2	206	A	N9-C4	-6.14	1.34	1.37
35	2	514	G	N9-C8	-6.13	1.33	1.37
35	2	382	C	C5-C6	-6.12	1.29	1.34
35	2	494	U	C5-C6	-6.12	1.28	1.34
35	2	885	G	C5-C4	-6.12	1.34	1.38
35	2	398	G	C5-C4	-6.12	1.34	1.38
35	2	489	C	N1-C6	-6.11	1.33	1.37
35	2	1080	U	C2-N3	-6.11	1.33	1.37
35	2	885	G	C6-N1	-6.09	1.35	1.39
35	2	213	A	C5-C4	-6.09	1.34	1.38
35	2	592	A	N7-C5	-6.08	1.35	1.39
35	2	168	A	N7-C5	-6.07	1.35	1.39
35	2	496	G	N7-C5	-6.07	1.35	1.39
35	2	488	G	N1-C2	-6.07	1.32	1.37
35	2	112	A	C5-C6	-6.06	1.35	1.41
35	2	173	A	C2-N3	-6.06	1.28	1.33
35	2	187	G	N9-C4	-6.06	1.33	1.38
35	2	950	C	N1-C6	-6.04	1.33	1.37
35	2	325	G	C5-C6	-6.04	1.36	1.42
35	2	156	A	C5-C6	-6.04	1.35	1.41
36	3	81	G	N9-C4	-6.04	1.33	1.38
35	2	28	A	N9-C4	6.04	1.41	1.37
35	2	316	A	C5-C6	-6.04	1.35	1.41
35	2	477	A	C5-C6	-6.03	1.35	1.41
35	2	546	U	C2-N3	-6.03	1.33	1.37
35	2	65	A	N3-C4	-6.03	1.31	1.34
35	2	84	A	N9-C8	-6.03	1.32	1.37
35	2	948	G	N9-C4	-6.03	1.33	1.38
35	2	100	A	N9-C4	-6.02	1.34	1.37
35	2	441	A	C6-N1	-6.02	1.31	1.35
35	2	142	G	C5-C6	-6.01	1.36	1.42
35	2	973	A	C5-C6	-6.00	1.35	1.41
35	2	922	G	C5-C4	-5.99	1.34	1.38
35	2	955	A	C5-C6	-5.99	1.35	1.41
35	2	288	A	C5-C4	-5.99	1.34	1.38
35	2	879	G	C6-N1	-5.99	1.35	1.39
35	2	301	A	N7-C5	-5.99	1.35	1.39
35	2	352	A	N9-C4	-5.99	1.34	1.37
35	2	548	G	C8-N7	-5.99	1.27	1.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	2	72	A	C5-C4	-5.98	1.34	1.38
35	2	514	G	C5-C4	-5.98	1.34	1.38
35	2	110	U	C2-O2	-5.98	1.17	1.22
35	2	881	A	N9-C4	-5.98	1.34	1.37
35	2	244	A	N9-C4	-5.97	1.34	1.37
35	2	361	C	N1-C2	-5.97	1.34	1.40
35	2	872	G	C5-C4	-5.97	1.34	1.38
35	2	465	G	N9-C8	-5.97	1.33	1.37
35	2	384	G	C5-C6	-5.97	1.36	1.42
35	2	99	C	C5-C6	-5.96	1.29	1.34
35	2	286	C	N1-C6	-5.96	1.33	1.37
35	2	305	C	N1-C6	-5.96	1.33	1.37
35	2	85	A	C8-N7	-5.96	1.27	1.31
35	2	885	G	C2-N3	-5.95	1.27	1.32
35	2	89	G	N9-C4	-5.95	1.33	1.38
35	2	926	A	C5-C6	-5.95	1.35	1.41
35	2	80	A	C5-C6	-5.94	1.35	1.41
35	2	895	G	C5-C4	-5.94	1.34	1.38
35	2	57	G	N9-C4	-5.94	1.33	1.38
35	2	1079	U	N1-C2	-5.94	1.33	1.38
35	2	878	G	C2-N3	-5.93	1.28	1.32
35	2	279	G	N9-C8	-5.92	1.33	1.37
35	2	295	A	N9-C8	-5.92	1.33	1.37
35	2	955	A	C6-N1	-5.92	1.31	1.35
35	2	209	U	C2-N3	-5.91	1.33	1.37
35	2	471	A	N9-C4	-5.91	1.34	1.37
35	2	465	G	N9-C4	-5.91	1.33	1.38
35	2	1023	A	C6-N1	-5.91	1.31	1.35
35	2	483	A	C5-C6	-5.91	1.35	1.41
35	2	185	U	C2-N3	-5.91	1.33	1.37
35	2	254	A	N9-C4	-5.91	1.34	1.37
35	2	457	G	C5-C4	-5.91	1.34	1.38
35	2	484	C	C5-C6	-5.91	1.29	1.34
35	2	1023	A	N3-C4	-5.91	1.31	1.34
35	2	538	A	C5-C6	-5.90	1.35	1.41
35	2	281	G	N7-C5	-5.90	1.35	1.39
35	2	365	G	C6-N1	-5.90	1.35	1.39
35	2	48	G	N9-C4	5.89	1.42	1.38
35	2	406	U	C5-C6	-5.89	1.28	1.34
35	2	464	A	C5-C4	-5.89	1.34	1.38
35	2	34	G	C6-N1	-5.88	1.35	1.39
35	2	590	C	N1-C2	-5.88	1.34	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	2	496	G	N1-C2	-5.86	1.33	1.37
35	2	328	A	N3-C4	-5.86	1.31	1.34
35	2	316	A	N9-C4	-5.83	1.34	1.37
35	2	590	C	N1-C6	-5.83	1.33	1.37
35	2	377	G	C8-N7	-5.82	1.27	1.30
35	2	405	C	C5-C6	-5.82	1.29	1.34
35	2	47	A	N3-C4	-5.82	1.31	1.34
35	2	949	C	C2-N3	-5.82	1.31	1.35
35	2	462	G	N1-C2	-5.82	1.33	1.37
35	2	1042	G	C5-C4	-5.82	1.34	1.38
35	2	496	G	C2-N2	-5.80	1.28	1.34
35	2	100	A	N7-C5	-5.80	1.35	1.39
35	2	404	G	C8-N7	-5.79	1.27	1.30
35	2	884	A	C5-C6	-5.79	1.35	1.41
35	2	269	G	C5-C4	-5.79	1.34	1.38
35	2	898	A	C5-C6	-5.79	1.35	1.41
35	2	295	A	C8-N7	-5.78	1.27	1.31
35	2	1075	C	N1-C2	-5.78	1.34	1.40
35	2	210	A	C8-N7	-5.78	1.27	1.31
35	2	390	G	N9-C4	-5.78	1.33	1.38
35	2	497	G	C8-N7	-5.78	1.27	1.30
35	2	625	C	N1-C6	-5.78	1.33	1.37
35	2	143	G	C5-C4	-5.77	1.34	1.38
35	2	900	A	C5-C4	-5.76	1.34	1.38
35	2	270	C	N1-C6	-5.76	1.33	1.37
35	2	927	C	N1-C6	-5.76	1.33	1.37
35	2	253	A	C6-N1	-5.75	1.31	1.35
35	2	448	C	N1-C6	-5.75	1.33	1.37
35	2	1041	G	C8-N7	-5.75	1.27	1.30
35	2	433	C	N1-C6	-5.75	1.33	1.37
15	c	167	LEU	CA-CB	-5.74	1.40	1.53
35	2	353	A	N7-C5	-5.74	1.35	1.39
35	2	147	A	N7-C5	-5.73	1.35	1.39
35	2	357	G	C5-C4	-5.73	1.34	1.38
35	2	891	A	N9-C4	-5.73	1.34	1.37
35	2	1039	A	C5-C4	-5.73	1.34	1.38
35	2	162	A	N7-C5	-5.72	1.35	1.39
35	2	91	G	C6-O6	-5.72	1.19	1.24
35	2	36	C	C2-N3	-5.71	1.31	1.35
35	2	1074	G	C8-N7	-5.70	1.27	1.30
35	2	108	A	C6-N1	-5.70	1.31	1.35
35	2	497	G	N1-C2	-5.70	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	2	894	U	N1-C2	-5.70	1.33	1.38
35	2	516	G	C2-N3	-5.70	1.28	1.32
35	2	900	A	C5-C6	-5.70	1.35	1.41
35	2	357	G	N9-C4	-5.69	1.33	1.38
35	2	1043	A	C5-C6	-5.69	1.35	1.41
35	2	273	G	C5-C6	-5.68	1.36	1.42
35	2	430	G	C8-N7	-5.68	1.27	1.30
35	2	87	C	C2-N3	-5.68	1.31	1.35
35	2	172	C	N1-C6	-5.68	1.33	1.37
35	2	303	U	N1-C2	-5.68	1.33	1.38
35	2	399	A	C5-C6	-5.68	1.35	1.41
35	2	401	A	C5-C4	-5.68	1.34	1.38
35	2	61	A	N9-C4	-5.67	1.34	1.37
35	2	100	A	C5-C6	-5.67	1.35	1.41
35	2	100	A	C6-N6	-5.67	1.29	1.33
35	2	936	G	C5-C4	-5.67	1.34	1.38
35	2	295	A	C5-C4	-5.67	1.34	1.38
35	2	179	A	N9-C4	5.66	1.41	1.37
35	2	325	G	C6-N1	-5.66	1.35	1.39
35	2	295	A	N7-C5	-5.66	1.35	1.39
35	2	516	G	C5-C4	-5.66	1.34	1.38
35	2	79	C	N1-C6	-5.66	1.33	1.37
35	2	269	G	C2-N3	-5.66	1.28	1.32
35	2	489	C	N3-C4	-5.66	1.29	1.33
35	2	312	A	C5-C4	-5.65	1.34	1.38
35	2	547	U	C5-C6	-5.65	1.29	1.34
35	2	392	G	N9-C8	-5.65	1.33	1.37
35	2	406	U	C4-C5	-5.64	1.38	1.43
35	2	506	A	N9-C4	-5.64	1.34	1.37
35	2	1083	G	C5-C6	-5.64	1.36	1.42
35	2	591	A	C5-C4	-5.64	1.34	1.38
35	2	914	G	C2-N3	-5.64	1.28	1.32
35	2	288	A	C2-N3	-5.64	1.28	1.33
35	2	498	G	C2-N3	-5.63	1.28	1.32
36	3	114	A	N9-C4	-5.63	1.34	1.37
35	2	488	G	C5-C4	-5.63	1.34	1.38
35	2	156	A	C5-C4	-5.63	1.34	1.38
35	2	152	U	N1-C2	-5.62	1.33	1.38
35	2	510	G	N9-C4	-5.62	1.33	1.38
35	2	353	A	N9-C8	-5.62	1.33	1.37
35	2	493	U	C2-N3	-5.62	1.33	1.37
35	2	353	A	C8-N7	-5.61	1.27	1.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	2	432	G	N3-C4	-5.61	1.31	1.35
35	2	497	G	N7-C5	-5.61	1.35	1.39
35	2	392	G	N1-C2	-5.60	1.33	1.37
35	2	588	U	C5-C6	-5.60	1.29	1.34
35	2	387	A	N9-C4	-5.60	1.34	1.37
35	2	428	A	C2-N3	-5.60	1.28	1.33
35	2	504	U	C4-O4	-5.60	1.19	1.23
35	2	151	G	N9-C4	-5.59	1.33	1.38
35	2	538	A	N7-C5	-5.59	1.35	1.39
35	2	87	C	N3-C4	-5.59	1.30	1.33
35	2	499	U	C2-N3	-5.59	1.33	1.37
35	2	405	C	N1-C6	-5.58	1.33	1.37
35	2	1037	C	N1-C2	-5.58	1.34	1.40
35	2	915	A	N9-C4	-5.58	1.34	1.37
35	2	442	C	N1-C6	-5.57	1.33	1.37
35	2	626	U	C2-N3	-5.57	1.33	1.37
35	2	151	G	C6-O6	-5.56	1.19	1.24
35	2	162	A	N9-C8	-5.56	1.33	1.37
35	2	491	C	N1-C6	-5.55	1.33	1.37
35	2	157	A	N9-C4	-5.55	1.34	1.37
35	2	390	G	C6-N1	-5.55	1.35	1.39
35	2	162	A	C8-N7	-5.55	1.27	1.31
35	2	1078	C	C2-N3	-5.54	1.31	1.35
36	3	250	G	N9-C4	-5.54	1.33	1.38
35	2	283	U	N1-C2	-5.54	1.33	1.38
35	2	325	G	C6-O6	-5.53	1.19	1.24
35	2	414	C	N1-C6	-5.53	1.33	1.37
35	2	153	G	N9-C4	-5.52	1.33	1.38
35	2	486	G	N7-C5	-5.52	1.35	1.39
35	2	1071	U	C2-N3	-5.52	1.33	1.37
19	j	882	ALA	CA-C	-5.52	1.38	1.52
35	2	503	G	N7-C5	-5.52	1.35	1.39
35	2	519	C	N3-C4	-5.52	1.30	1.33
19	i	882	ALA	CA-C	-5.50	1.38	1.52
35	2	949	C	N1-C6	-5.50	1.33	1.37
35	2	334	G	C8-N7	-5.50	1.27	1.30
35	2	474	A	N9-C4	-5.50	1.34	1.37
35	2	481	A	C5-C6	-5.50	1.36	1.41
35	2	884	A	N9-C4	-5.50	1.34	1.37
35	2	515	A	C2-N3	-5.49	1.28	1.33
35	2	399	A	N9-C4	-5.49	1.34	1.37
35	2	440	U	N1-C2	5.49	1.43	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	2	70	C	N1-C2	-5.49	1.34	1.40
35	2	1040	G	N9-C4	-5.49	1.33	1.38
35	2	189	C	C5-C6	-5.48	1.29	1.34
35	2	281	G	N9-C8	-5.48	1.34	1.37
35	2	394	C	C2-N3	-5.48	1.31	1.35
35	2	162	A	N9-C4	-5.47	1.34	1.37
35	2	442	C	N1-C2	-5.47	1.34	1.40
35	2	392	G	C8-N7	-5.47	1.27	1.30
35	2	496	G	C8-N7	-5.47	1.27	1.30
35	2	124	A	N3-C4	-5.46	1.31	1.34
35	2	243	G	C5-C4	-5.46	1.34	1.38
35	2	324	U	C2-N3	-5.46	1.33	1.37
35	2	109	G	C5-C4	-5.46	1.34	1.38
35	2	881	A	C5-C6	-5.45	1.36	1.41
35	2	284	G	C5-C6	-5.45	1.36	1.42
35	2	341	A	C5-C4	-5.44	1.34	1.38
35	2	123	G	N1-C2	-5.44	1.33	1.37
35	2	163	G	N3-C4	-5.44	1.31	1.35
35	2	173	A	C5-C4	-5.44	1.34	1.38
35	2	872	G	C2-N3	-5.43	1.28	1.32
35	2	32	U	N3-C4	-5.43	1.33	1.38
35	2	93	A	C5-C4	-5.43	1.34	1.38
35	2	46	A	N9-C4	5.43	1.41	1.37
35	2	65	A	C2-N3	-5.43	1.28	1.33
35	2	357	G	N1-C2	-5.42	1.33	1.37
19	i	615	PRO	C-N	5.42	1.46	1.34
35	2	1053	G	C5-C4	-5.42	1.34	1.38
35	2	473	A	N9-C8	-5.42	1.33	1.37
35	2	879	G	C5-C6	-5.41	1.36	1.42
35	2	877	G	N9-C4	-5.40	1.33	1.38
35	2	518	A	C6-N6	-5.40	1.29	1.33
35	2	1030	A	N9-C4	5.40	1.41	1.37
35	2	35	U	C2-N3	-5.40	1.33	1.37
35	2	464	A	C5-C6	-5.40	1.36	1.41
35	2	880	C	N1-C2	-5.40	1.34	1.40
35	2	87	C	C2-O2	-5.40	1.19	1.24
35	2	301	A	N3-C4	-5.39	1.31	1.34
35	2	523	G	C6-O6	-5.39	1.19	1.24
19	j	615	PRO	C-N	5.39	1.46	1.34
35	2	317	C	C2-N3	-5.39	1.31	1.35
35	2	538	A	N9-C8	-5.39	1.33	1.37
35	2	386	G	C5-C6	-5.38	1.36	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	2	441	A	C8-N7	-5.38	1.27	1.31
35	2	30	G	N7-C5	-5.38	1.36	1.39
35	2	1082	C	C5'-C4'	5.38	1.57	1.51
35	2	270	C	N1-C2	-5.37	1.34	1.40
35	2	83	G	C5-C4	-5.37	1.34	1.38
35	2	389	G	C5-C6	-5.37	1.36	1.42
36	3	248	G	N9-C4	-5.37	1.33	1.38
35	2	154	G	N9-C4	-5.36	1.33	1.38
35	2	498	G	N7-C5	-5.36	1.36	1.39
35	2	503	G	C8-N7	-5.36	1.27	1.30
35	2	57	G	C5-C4	-5.36	1.34	1.38
35	2	963	A	N9-C4	-5.36	1.34	1.37
35	2	488	G	N9-C8	-5.36	1.34	1.37
35	2	865	A	N9-C4	-5.36	1.34	1.37
35	2	103	A	N7-C5	-5.35	1.36	1.39
35	2	624	G	N3-C4	-5.35	1.31	1.35
35	2	325	G	N9-C4	-5.35	1.33	1.38
35	2	420	A	N9-C8	-5.35	1.33	1.37
35	2	113	U	C2-N3	-5.35	1.34	1.37
35	2	941	A	C5-C6	-5.35	1.36	1.41
35	2	413	U	C2-N3	-5.34	1.34	1.37
35	2	283	U	C2-N3	-5.34	1.34	1.37
35	2	397	A	N7-C5	-5.33	1.36	1.39
35	2	481	A	C2-N3	-5.33	1.28	1.33
35	2	527	A	C5-C6	-5.33	1.36	1.41
35	2	419	G	N9-C8	-5.33	1.34	1.37
35	2	186	C	N1-C2	-5.33	1.34	1.40
35	2	415	C	N3-C4	-5.33	1.30	1.33
35	2	538	A	C8-N7	-5.33	1.27	1.31
35	2	299	A	N9-C4	-5.32	1.34	1.37
35	2	263	C	N1-C6	-5.32	1.33	1.37
35	2	902	G	N7-C5	-5.32	1.36	1.39
35	2	960	U	N1-C2	-5.32	1.33	1.38
35	2	504	U	C5-C6	-5.32	1.29	1.34
35	2	393	C	C2-N3	-5.31	1.31	1.35
35	2	1027	A	C5-C6	-5.30	1.36	1.41
35	2	442	C	C2-N3	-5.30	1.31	1.35
35	2	388	G	C6-N1	-5.30	1.35	1.39
35	2	465	G	N7-C5	-5.30	1.36	1.39
35	2	105	A	C6-N6	-5.30	1.29	1.33
35	2	395	U	C2-N3	-5.30	1.34	1.37
35	2	316	A	C5-C4	-5.29	1.35	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	2	100	A	C5-C4	-5.28	1.35	1.38
35	2	974	A	N9-C4	-5.28	1.34	1.37
35	2	466	U	C2-N3	-5.28	1.34	1.37
35	2	253	A	C5-C4	-5.28	1.35	1.38
35	2	39	A	C6-N1	-5.28	1.31	1.35
35	2	143	G	N9-C4	-5.28	1.33	1.38
35	2	353	A	C6-N1	-5.27	1.31	1.35
35	2	336	G	C2-N3	-5.27	1.28	1.32
35	2	483	A	C6-N1	-5.26	1.31	1.35
35	2	503	G	C5-C4	-5.26	1.34	1.38
35	2	483	A	N9-C4	-5.26	1.34	1.37
35	2	148	A	C6-N6	-5.26	1.29	1.33
35	2	70	C	C4-N4	-5.25	1.29	1.33
35	2	497	G	C6-N1	-5.25	1.35	1.39
35	2	537	G	C5-C6	-5.25	1.37	1.42
16	d	50	GLU	C-N	-5.25	1.22	1.34
35	2	119	A	C5-C4	-5.25	1.35	1.38
35	2	353	A	C6-N6	-5.24	1.29	1.33
35	2	198	A	N9-C8	-5.24	1.33	1.37
35	2	267	U	N3-C4	-5.24	1.33	1.38
35	2	326	G	C5-C4	-5.24	1.34	1.38
35	2	393	C	C5-C6	-5.24	1.30	1.34
36	3	114	A	C5-C6	-5.24	1.36	1.41
35	2	869	A	N9-C4	-5.23	1.34	1.37
35	2	506	A	C5-C6	-5.23	1.36	1.41
35	2	285	G	N7-C5	-5.23	1.36	1.39
35	2	328	A	N7-C5	-5.22	1.36	1.39
35	2	1041	G	N9-C4	-5.22	1.33	1.38
35	2	147	A	N9-C4	-5.22	1.34	1.37
35	2	145	A	C2-N3	-5.22	1.28	1.33
35	2	536	C	N1-C2	-5.21	1.34	1.40
35	2	960	U	N1-C6	-5.21	1.33	1.38
35	2	415	C	C2-N3	-5.20	1.31	1.35
35	2	285	G	N3-C4	-5.19	1.31	1.35
35	2	366	A	C6-N1	-5.19	1.31	1.35
35	2	513	U	C2-N3	-5.19	1.34	1.37
35	2	389	G	C8-N7	-5.19	1.27	1.30
35	2	415	C	C2-O2	-5.19	1.19	1.24
35	2	590	C	C2-N3	-5.19	1.31	1.35
35	2	930	A	N9-C4	-5.18	1.34	1.37
35	2	1074	G	C2-N3	-5.18	1.28	1.32
35	2	419	G	C6-N1	-5.18	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	2	1077	C	C2-N3	-5.18	1.31	1.35
35	2	281	G	C8-N7	-5.17	1.27	1.30
35	2	1026	A	N9-C4	5.17	1.41	1.37
35	2	936	G	N9-C4	-5.17	1.33	1.38
35	2	41	A	N9-C4	5.15	1.41	1.37
35	2	151	G	N1-C2	-5.15	1.33	1.37
35	2	537	G	N3-C4	-5.15	1.31	1.35
35	2	281	G	C2-N3	-5.15	1.28	1.32
35	2	518	A	N9-C4	-5.15	1.34	1.37
35	2	922	G	C6-N1	-5.15	1.35	1.39
35	2	465	G	C8-N7	-5.14	1.27	1.30
35	2	276	C	C4-C5	-5.13	1.38	1.43
35	2	412	A	C8-N7	-5.13	1.27	1.31
35	2	506	A	C6-N1	-5.13	1.31	1.35
35	2	1080	U	N1-C2	-5.13	1.33	1.38
36	3	75	A	N9-C4	-5.12	1.34	1.37
35	2	287	G	C2-N3	-5.12	1.28	1.32
35	2	384	G	N9-C4	-5.11	1.33	1.38
35	2	865	A	C5-C6	-5.11	1.36	1.41
35	2	949	C	N1-C2	-5.11	1.35	1.40
35	2	87	C	N1-C2	-5.11	1.35	1.40
35	2	1043	A	N7-C5	-5.11	1.36	1.39
35	2	246	G	N9-C8	-5.10	1.34	1.37
35	2	269	G	N9-C8	-5.10	1.34	1.37
35	2	324	U	N3-C4	-5.09	1.33	1.38
35	2	333	A	N3-C4	-5.09	1.31	1.34
35	2	488	G	N9-C4	-5.09	1.33	1.38
35	2	480	G	N1-C2	-5.08	1.33	1.37
35	2	930	A	N7-C5	-5.08	1.36	1.39
35	2	243	G	N9-C4	-5.08	1.33	1.38
35	2	427	C	N3-C4	-5.08	1.30	1.33
35	2	1091	A	N3-C4	-5.08	1.31	1.34
36	3	268	G	C5-C6	-5.08	1.37	1.42
35	2	202	A	C5-C6	-5.08	1.36	1.41
35	2	591	A	C2-N3	-5.08	1.28	1.33
35	2	411	C	C5-C6	-5.08	1.30	1.34
35	2	81	G	C5-C6	-5.08	1.37	1.42
35	2	412	A	N3-C4	-5.07	1.31	1.34
35	2	279	G	C8-N7	-5.07	1.27	1.30
35	2	906	A	N7-C5	-5.07	1.36	1.39
35	2	926	A	C5-C4	-5.07	1.35	1.38
35	2	927	C	C4-C5	-5.07	1.38	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	2	317	C	C5-C6	-5.07	1.30	1.34
35	2	1053	G	N3-C4	-5.06	1.31	1.35
35	2	384	G	C2-N3	-5.06	1.28	1.32
35	2	973	A	C5-C4	-5.05	1.35	1.38
35	2	259	U	N1-C2	-5.05	1.34	1.38
35	2	69	G	N9-C4	-5.05	1.33	1.38
35	2	871	G	N9-C4	-5.05	1.33	1.38
35	2	1041	G	C6-N1	-5.04	1.36	1.39
35	2	481	A	C5-C4	-5.04	1.35	1.38
35	2	57	G	C5-C6	-5.04	1.37	1.42
35	2	85	A	N9-C8	-5.04	1.33	1.37
35	2	171	A	C6-N1	-5.04	1.32	1.35
35	2	448	C	C5-C6	-5.03	1.30	1.34
35	2	151	G	C8-N7	-5.02	1.27	1.30
35	2	310	C	C2-N3	-5.02	1.31	1.35
35	2	624	G	N9-C8	-5.01	1.34	1.37
35	2	70	C	C2-N3	-5.01	1.31	1.35
35	2	935	U	C5-C6	-5.01	1.29	1.34
35	2	406	U	C4-O4	-5.01	1.19	1.23
35	2	389	G	C6-N1	-5.00	1.36	1.39
35	2	514	G	N1-C2	-5.00	1.33	1.37
35	2	163	G	C2-N3	-5.00	1.28	1.32
35	2	246	G	C8-N7	-5.00	1.27	1.30

All (2522) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	k	272	PRO	N-CA-CB	37.92	148.80	103.30
16	d	104	PRO	N-CA-CB	37.74	148.58	103.30
20	k	82	LYS	O-C-N	-24.01	84.28	122.70
16	d	128	THR	N-CA-CB	23.81	155.54	110.30
35	2	381	C	N3-C4-N4	-22.05	102.57	118.00
35	2	432	G	C8-N9-C4	-20.04	98.38	106.40
35	2	432	G	N7-C8-N9	19.61	122.90	113.10
35	2	485	A	C8-N9-C4	19.54	113.61	105.80
35	2	381	C	C5-C4-N4	18.90	133.43	120.20
35	2	503	G	N3-C4-C5	18.61	137.90	128.60
35	2	256	A	N1-C6-N6	18.03	129.42	118.60
35	2	589	C	C6-N1-C2	17.41	127.26	120.30
35	2	278	U	N3-C2-O2	-17.25	110.13	122.20
35	2	398	G	C2-N3-C4	16.81	120.30	111.90
35	2	139	C	C6-N1-C2	-16.73	113.61	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	256	A	C4-C5-N7	16.55	118.97	110.70
35	2	381	C	N1-C2-O2	16.18	128.61	118.90
35	2	540	G	C8-N9-C4	-16.16	99.94	106.40
36	3	266	C	N3-C2-O2	-16.12	110.62	121.90
35	2	381	C	N3-C2-O2	-15.99	110.71	121.90
35	2	495	C	N1-C2-O2	15.96	128.47	118.90
35	2	1056	U	C5-C6-N1	15.52	130.46	122.70
35	2	256	A	N9-C4-C5	-15.46	99.61	105.80
35	2	256	A	C5-C6-N6	-15.40	111.38	123.70
35	2	1070	C	C6-N1-C2	15.36	126.44	120.30
35	2	360	A	C2-N3-C4	-15.28	102.96	110.60
35	2	50	C	C4-C5-C6	15.28	125.04	117.40
35	2	484	C	C4-C5-C6	-15.21	109.80	117.40
35	2	488	G	C4-C5-N7	15.14	116.86	110.80
35	2	386	G	N9-C4-C5	-15.10	99.36	105.40
35	2	30	G	O4'-C1'-N9	15.05	120.24	108.20
35	2	488	G	C5-N7-C8	-15.03	96.79	104.30
35	2	307	G	N3-C4-C5	14.92	136.06	128.60
35	2	503	G	C2-N3-C4	-14.88	104.46	111.90
35	2	328	A	C2-N3-C4	-14.74	103.23	110.60
35	2	243	G	N9-C4-C5	-14.71	99.52	105.40
16	d	104	PRO	CB-CA-C	-14.69	75.27	112.00
35	2	914	G	N3-C4-C5	14.64	135.92	128.60
35	2	243	G	C4-C5-N7	14.57	116.63	110.80
35	2	1023	A	C2-N3-C4	-14.57	103.31	110.60
35	2	503	G	C4-C5-N7	14.56	116.62	110.80
35	2	378	A	C8-N9-C4	-14.52	99.99	105.80
35	2	488	G	N7-C8-N9	14.49	120.34	113.10
35	2	1097	U	C6-N1-C2	-14.45	112.33	121.00
35	2	256	A	C5-N7-C8	-14.41	96.69	103.90
35	2	278	U	N1-C2-O2	14.40	132.88	122.80
35	2	196	G	N3-C4-N9	-14.39	117.37	126.00
35	2	30	G	C8-N9-C4	-14.38	100.65	106.40
35	2	500	C	C6-N1-C2	-14.28	114.59	120.30
20	k	271	VAL	N-CA-CB	14.25	142.85	111.50
35	2	196	G	N3-C4-C5	14.24	135.72	128.60
35	2	365	G	C6-C5-N7	-14.21	121.87	130.40
20	k	272	PRO	CB-CA-C	-14.16	76.59	112.00
35	2	191	C	C6-N1-C1'	14.16	137.80	120.80
35	2	53	G	N3-C4-C5	14.15	135.67	128.60
35	2	99	C	N1-C2-O2	14.11	127.36	118.90
35	2	440	U	C2-N1-C1'	13.63	134.06	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	456	A	C4-C5-N7	13.59	117.50	110.70
35	2	394	C	C6-N1-C2	13.54	125.72	120.30
35	2	588	U	C5-C4-O4	-13.52	117.79	125.90
35	2	28	A	O4'-C1'-N9	13.51	119.01	108.20
35	2	142	G	N1-C6-O6	13.51	128.01	119.90
35	2	48	G	N3-C4-N9	13.50	134.10	126.00
36	3	266	C	N1-C2-O2	13.34	126.90	118.90
20	k	271	VAL	CB-CA-C	-13.34	86.06	111.40
35	2	391	A	N9-C4-C5	-13.33	100.47	105.80
35	2	308	C	C6-N1-C2	13.26	125.60	120.30
35	2	362	G	N1-C6-O6	-13.22	111.97	119.90
35	2	1094	G	C2-N3-C4	-13.18	105.31	111.90
19	j	611	GLY	C-N-CA	-13.16	88.80	121.70
35	2	256	A	C6-C5-N7	-13.16	123.09	132.30
35	2	142	G	C5-C6-O6	-13.09	120.74	128.60
16	d	128	THR	CB-CA-C	-13.07	76.30	111.60
35	2	872	G	N1-C6-O6	13.03	127.72	119.90
35	2	360	A	N1-C2-N3	13.01	135.81	129.30
35	2	53	G	N3-C4-N9	-12.88	118.27	126.00
35	2	955	A	C2-N3-C4	-12.88	104.16	110.60
35	2	210	A	N9-C4-C5	-12.83	100.67	105.80
35	2	524	U	C6-N1-C2	-12.79	113.33	121.00
35	2	403	G	N7-C8-N9	12.73	119.46	113.10
35	2	488	G	C6-C5-N7	-12.66	122.81	130.40
35	2	386	G	C4-C5-N7	12.58	115.83	110.80
35	2	191	C	C2-N1-C1'	-12.57	104.98	118.80
35	2	407	A	C5-N7-C8	-12.56	97.62	103.90
35	2	512	A	N1-C6-N6	-12.55	111.07	118.60
35	2	243	G	N1-C6-O6	12.51	127.41	119.90
35	2	485	A	N9-C4-C5	-12.51	100.80	105.80
35	2	142	G	N3-C4-C5	12.49	134.85	128.60
35	2	253	A	N9-C4-C5	-12.45	100.82	105.80
35	2	404	G	C4-C5-N7	12.44	115.78	110.80
35	2	922	G	N3-C4-C5	12.42	134.81	128.60
35	2	34	G	O5'-P-OP2	12.38	125.55	110.70
35	2	71	A	O4'-C1'-N9	12.32	118.06	108.20
35	2	191	C	N1-C2-O2	-12.27	111.54	118.90
35	2	530	C	N1-C2-O2	12.27	126.26	118.90
35	2	1039	A	C8-N9-C4	12.24	110.69	105.80
35	2	589	C	C5-C6-N1	-12.19	114.90	121.00
35	2	1074	G	C4-C5-N7	12.16	115.66	110.80
35	2	123	G	C4-C5-N7	12.13	115.65	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	460	A	C8-N9-C4	12.13	110.65	105.80
35	2	872	G	C5-C6-O6	-12.13	121.32	128.60
35	2	589	C	C2-N1-C1'	-12.12	105.47	118.80
35	2	312	A	C8-N9-C4	12.11	110.64	105.80
35	2	358	U	C5-C6-N1	12.08	128.74	122.70
35	2	50	C	N3-C4-C5	-12.08	117.07	121.90
35	2	456	A	N1-C6-N6	12.06	125.84	118.60
35	2	491	C	N3-C4-C5	11.92	126.67	121.90
35	2	386	G	C6-C5-N7	-11.92	123.25	130.40
35	2	548	G	N3-C4-C5	11.90	134.55	128.60
35	2	1091	A	N1-C2-N3	11.89	135.25	129.30
35	2	50	C	O4'-C1'-N1	11.88	117.71	108.20
35	2	375	U	C2-N1-C1'	-11.87	103.46	117.70
35	2	493	U	N3-C2-O2	11.86	130.50	122.20
35	2	287	G	C4-C5-N7	11.80	115.52	110.80
35	2	523	G	O4'-C1'-N9	11.79	117.64	108.20
35	2	456	A	C5-N7-C8	-11.79	98.01	103.90
35	2	485	A	N7-C8-N9	-11.77	107.91	113.80
35	2	1094	G	N1-C6-O6	11.77	126.96	119.90
35	2	1083	G	N3-C4-C5	11.77	134.48	128.60
35	2	102	U	C5-C4-O4	-11.71	118.87	125.90
35	2	503	G	N9-C4-C5	-11.65	100.74	105.40
35	2	1091	A	C2-N3-C4	-11.62	104.79	110.60
35	2	243	G	C6-C5-N7	-11.60	123.44	130.40
35	2	365	G	C4-C5-N7	11.57	115.43	110.80
35	2	377	G	C8-N9-C4	11.55	111.02	106.40
35	2	378	A	N7-C8-N9	11.52	119.56	113.80
35	2	28	A	C8-N9-C4	-11.49	101.20	105.80
35	2	406	U	C5-C6-N1	11.46	128.43	122.70
35	2	333	A	C2-N3-C4	-11.44	104.88	110.60
35	2	210	A	C8-N9-C4	11.42	110.37	105.80
35	2	354	C	C5-C4-N4	-11.41	112.21	120.20
35	2	914	G	N3-C4-N9	-11.41	119.16	126.00
35	2	440	U	C5-C4-O4	-11.40	119.06	125.90
35	2	540	G	N7-C8-N9	11.36	118.78	113.10
35	2	79	C	N1-C2-O2	11.35	125.71	118.90
35	2	142	G	N3-C4-N9	-11.34	119.20	126.00
35	2	1096	C	C6-N1-C2	-11.33	115.77	120.30
35	2	456	A	N9-C4-C5	-11.32	101.27	105.80
35	2	432	G	C4-N9-C1'	11.30	141.19	126.50
35	2	900	A	C8-N9-C4	11.27	110.31	105.80
35	2	1041	G	C4-C5-N7	11.25	115.30	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	c	151	ALA	N-CA-CB	-11.25	94.35	110.10
20	k	84	ILE	CB-CA-C	-11.25	89.10	111.60
35	2	539	G	C8-N9-C4	11.25	110.90	106.40
35	2	38	C	C6-N1-C2	-11.23	115.81	120.30
35	2	494	U	C5-C6-N1	11.16	128.28	122.70
35	2	959	U	C6-N1-C2	11.14	127.69	121.00
35	2	99	C	C5-C6-N1	11.13	126.57	121.00
35	2	493	U	C6-N1-C2	11.11	127.67	121.00
35	2	65	A	C2-N3-C4	-11.11	105.05	110.60
35	2	495	C	N3-C2-O2	-11.11	114.13	121.90
35	2	317	C	C6-N1-C2	11.10	124.74	120.30
35	2	973	A	N9-C4-C5	-11.09	101.37	105.80
35	2	523	G	C4-C5-N7	11.08	115.23	110.80
35	2	500	C	C5-C6-N1	11.07	126.53	121.00
15	c	167	LEU	CB-CA-C	-11.06	89.18	110.20
35	2	281	G	C5-N7-C8	-11.05	98.78	104.30
35	2	71	A	O5'-P-OP1	-11.03	95.78	105.70
35	2	377	G	N9-C4-C5	-11.00	101.00	105.40
35	2	485	A	N3-C4-C5	10.98	134.48	126.80
35	2	455	C	O4'-C1'-N1	-10.94	99.44	108.20
35	2	977	A	N1-C6-N6	-10.91	112.05	118.60
35	2	80	A	N1-C2-N3	-10.90	123.85	129.30
35	2	391	A	C8-N9-C4	10.90	110.16	105.80
35	2	333	A	N1-C2-N3	10.90	134.75	129.30
35	2	549	G	C8-N9-C4	10.85	110.74	106.40
35	2	592	A	C6-N1-C2	-10.83	112.10	118.60
36	3	77	C	OP1-P-O3'	-10.83	81.37	105.20
35	2	80	A	N9-C4-C5	-10.82	101.47	105.80
35	2	376	C	C6-N1-C2	10.81	124.63	120.30
35	2	502	U	N3-C4-C5	10.79	121.08	114.60
35	2	1023	A	C5-C6-N1	-10.79	112.31	117.70
35	2	99	C	C4-C5-C6	-10.78	112.01	117.40
35	2	412	A	C5-N7-C8	-10.77	98.51	103.90
35	2	473	A	N1-C2-N3	10.76	134.68	129.30
35	2	309	C	C6-N1-C2	10.75	124.60	120.30
35	2	487	G	C8-N9-C4	-10.75	102.10	106.40
36	3	268	G	N9-C4-C5	-10.74	101.10	105.40
35	2	444	C	N1-C2-O2	-10.71	112.47	118.90
35	2	32	U	C2-N1-C1'	-10.69	104.88	117.70
35	2	139	C	C5-C6-N1	10.68	126.34	121.00
35	2	487	G	N7-C8-N9	10.67	118.44	113.10
35	2	365	G	N7-C8-N9	10.66	118.43	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	496	G	C2-N3-C4	-10.65	106.57	111.90
35	2	166	C	N3-C2-O2	-10.65	114.44	121.90
35	2	391	A	C4-C5-N7	10.64	116.02	110.70
36	3	259	A	O4'-C1'-N9	10.64	116.71	108.20
35	2	404	G	N9-C4-C5	-10.63	101.15	105.40
35	2	151	G	C8-N9-C4	10.61	110.64	106.40
35	2	936	G	C8-N9-C4	10.60	110.64	106.40
35	2	523	G	C5-C6-N1	10.57	116.78	111.50
35	2	512	A	C4-C5-C6	-10.57	111.72	117.00
35	2	955	A	C5-N7-C8	-10.57	98.62	103.90
20	k	104	PRO	N-CA-CB	10.56	115.98	103.30
35	2	166	C	C6-N1-C2	-10.56	116.07	120.30
35	2	65	A	N3-C4-N9	-10.56	118.95	127.40
35	2	493	U	C2-N1-C1'	-10.55	105.04	117.70
35	2	103	A	C8-N9-C4	-10.55	101.58	105.80
35	2	432	G	C4-C5-C6	10.54	125.12	118.80
35	2	872	G	N3-C4-C5	10.54	133.87	128.60
35	2	487	G	N3-C4-C5	-10.51	123.34	128.60
35	2	362	G	O5'-P-OP1	-10.51	96.24	105.70
35	2	163	G	C5-N7-C8	-10.50	99.05	104.30
35	2	326	G	C4-N9-C1'	-10.50	112.85	126.50
35	2	63	G	C5-C6-O6	10.48	134.89	128.60
36	3	114	A	N9-C4-C5	-10.48	101.61	105.80
35	2	162	A	N9-C4-C5	-10.47	101.61	105.80
35	2	243	G	C8-N9-C4	10.47	110.59	106.40
35	2	199	G	C2-N3-C4	-10.46	106.67	111.90
35	2	432	G	C6-C5-N7	-10.46	124.13	130.40
35	2	419	G	C2-N3-C4	-10.44	106.68	111.90
35	2	503	G	C5-N7-C8	-10.44	99.08	104.30
35	2	326	G	N3-C4-C5	10.43	133.82	128.60
35	2	287	G	N9-C4-C5	-10.42	101.23	105.40
35	2	457	G	N9-C1'-C2'	-10.41	100.46	114.00
35	2	923	A	C2-N3-C4	-10.40	105.40	110.60
35	2	463	U	C2-N1-C1'	-10.40	105.22	117.70
35	2	307	G	N3-C4-N9	-10.39	119.76	126.00
36	3	192	A	C8-N9-C4	-10.39	101.64	105.80
35	2	142	G	C4-N9-C1'	-10.36	113.04	126.50
35	2	164	A	C8-N9-C4	10.34	109.94	105.80
35	2	524	U	C5-C6-N1	10.34	127.87	122.70
35	2	1023	A	N3-C4-C5	10.32	134.02	126.80
35	2	1094	G	N3-C4-C5	10.31	133.75	128.60
35	2	486	G	C8-N9-C1'	-10.31	113.60	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	48	G	C6-C5-N7	-10.29	124.22	130.40
35	2	403	G	C8-N9-C4	-10.29	102.28	106.40
35	2	973	A	C8-N9-C4	10.27	109.91	105.80
35	2	1070	C	C5-C6-N1	-10.25	115.87	121.00
35	2	407	A	N7-C8-N9	10.24	118.92	113.80
35	2	531	C	N1-C2-O2	10.20	125.02	118.90
36	3	266	C	C6-N1-C2	-10.19	116.22	120.30
35	2	935	U	C5-C4-O4	-10.18	119.79	125.90
35	2	301	A	C5-N7-C8	-10.16	98.82	103.90
35	2	485	A	C4-C5-C6	-10.14	111.93	117.00
35	2	388	G	N1-C6-O6	10.13	125.98	119.90
35	2	366	A	C6-N1-C2	10.11	124.67	118.60
35	2	195	G	N3-C4-C5	10.10	133.65	128.60
35	2	151	G	N9-C4-C5	-10.09	101.36	105.40
35	2	162	A	C4-C5-N7	10.04	115.72	110.70
35	2	301	A	C2-N3-C4	-10.04	105.58	110.60
35	2	456	A	C6-C5-N7	-10.04	125.27	132.30
35	2	452	A	N9-C4-C5	-10.03	101.79	105.80
36	3	77	C	OP2-P-O3'	-10.04	83.12	105.20
35	2	548	G	C4-C5-N7	10.03	114.81	110.80
35	2	53	G	C4-N9-C1'	-10.03	113.46	126.50
35	2	548	G	C2-N3-C4	-10.03	106.89	111.90
35	2	99	C	C2-N1-C1'	10.02	129.82	118.80
35	2	955	A	N7-C8-N9	10.02	118.81	113.80
35	2	256	A	N7-C8-N9	10.01	118.80	113.80
35	2	343	C	N3-C4-C5	10.01	125.90	121.90
35	2	488	G	N1-C6-O6	9.99	125.90	119.90
35	2	162	A	C5-N7-C8	-9.99	98.91	103.90
35	2	391	A	N1-C2-N3	-9.98	124.31	129.30
35	2	1092	A	N1-C2-N3	9.98	134.29	129.30
35	2	401	A	O4'-C1'-N9	9.96	116.17	108.20
35	2	403	G	C5-N7-C8	-9.96	99.32	104.30
35	2	87	C	C6-N1-C1'	9.96	132.75	120.80
35	2	210	A	C4-C5-N7	9.95	115.68	110.70
35	2	440	U	C6-N1-C1'	-9.95	107.27	121.20
35	2	301	A	N7-C8-N9	9.95	118.77	113.80
35	2	393	C	N3-C4-C5	9.94	125.88	121.90
20	k	83	ILE	CB-CA-C	-9.93	91.74	111.60
35	2	30	G	O5'-P-OP1	-9.92	96.78	105.70
35	2	514	G	C4-C5-N7	9.91	114.76	110.80
35	2	502	U	C4-C5-C6	-9.90	113.76	119.70
35	2	197	A	N1-C2-N3	9.90	134.25	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	326	G	N3-C4-N9	-9.87	120.08	126.00
35	2	73	U	N1-C2-O2	9.86	129.70	122.80
35	2	282	C	C6-N1-C2	9.86	124.24	120.30
35	2	539	G	N3-C4-C5	9.86	133.53	128.60
35	2	430	G	N3-C4-C5	9.83	133.52	128.60
35	2	529	A	C5-C6-N1	9.80	122.60	117.70
36	3	268	G	C4-C5-N7	9.80	114.72	110.80
35	2	362	G	C5-C6-O6	9.79	134.48	128.60
35	2	539	G	C4-N9-C1'	-9.79	113.77	126.50
35	2	63	G	N1-C6-O6	-9.79	114.03	119.90
35	2	1042	G	N1-C6-O6	9.78	125.77	119.90
35	2	394	C	N3-C4-C5	9.76	125.80	121.90
35	2	253	A	C8-N9-C4	9.75	109.70	105.80
35	2	491	C	C2-N1-C1'	-9.75	108.07	118.80
35	2	135	A	N9-C1'-C2'	-9.74	101.29	112.00
16	d	143	ILE	CB-CA-C	-9.73	92.14	111.60
35	2	454	U	C6-N1-C2	-9.71	115.17	121.00
35	2	1073	G	C4-C5-N7	9.71	114.68	110.80
35	2	243	G	C5-C6-O6	-9.70	122.78	128.60
35	2	430	G	C4-C5-N7	9.69	114.68	110.80
35	2	131	C	C2-N1-C1'	9.69	129.46	118.80
35	2	289	U	N1-C2-O2	9.69	129.58	122.80
35	2	357	G	C4-C5-N7	9.67	114.67	110.80
35	2	28	A	N3-C4-C5	-9.66	120.04	126.80
35	2	1042	G	N9-C4-C5	-9.66	101.53	105.40
35	2	486	G	C4-N9-C1'	9.65	139.05	126.50
35	2	296	U	C5-C6-N1	9.64	127.52	122.70
35	2	1070	C	C2-N1-C1'	-9.64	108.20	118.80
35	2	79	C	C6-N1-C1'	-9.64	109.24	120.80
35	2	441	A	N9-C4-C5	-9.61	101.95	105.80
35	2	1620	C	C6-N1-C2	-9.61	116.46	120.30
35	2	497	G	N3-C4-C5	9.61	133.40	128.60
2	G	3214	ASP	C-N-CA	9.60	145.69	121.70
35	2	487	G	C4-N9-C1'	9.60	138.97	126.50
35	2	537	G	N3-C4-C5	9.59	133.40	128.60
35	2	131	C	C6-N1-C1'	-9.59	109.30	120.80
35	2	922	G	C4-N9-C1'	-9.58	114.04	126.50
35	2	163	G	C4-C5-N7	9.58	114.63	110.80
35	2	334	G	C4-C5-N7	9.58	114.63	110.80
15	c	165	ALA	N-CA-CB	-9.57	96.70	110.10
35	2	334	G	C5-N7-C8	-9.57	99.52	104.30
35	2	491	C	C6-N1-C2	9.57	124.13	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	d	112	ILE	CB-CA-C	-9.56	92.48	111.60
35	2	48	G	N3-C4-C5	-9.56	123.82	128.60
35	2	549	G	C4-C5-C6	-9.55	113.07	118.80
35	2	322	G	N9-C4-C5	-9.55	101.58	105.40
35	2	1067	C	C6-N1-C2	9.54	124.11	120.30
35	2	196	G	C4-N9-C1'	-9.52	114.13	126.50
35	2	1042	G	C8-N9-C4	9.52	110.21	106.40
35	2	404	G	C8-N9-C4	9.51	110.20	106.40
35	2	151	G	C4-C5-N7	9.51	114.60	110.80
35	2	57	G	C8-N9-C4	9.50	110.20	106.40
35	2	473	A	O4'-C1'-N9	9.49	115.79	108.20
35	2	926	A	C5-C6-N6	-9.48	116.12	123.70
35	2	124	A	C8-N9-C4	9.46	109.58	105.80
35	2	253	A	C4-C5-N7	9.46	115.43	110.70
35	2	396	G	N3-C4-C5	9.45	133.32	128.60
35	2	191	C	C6-N1-C2	-9.44	116.53	120.30
35	2	41	A	N9-C4-C5	-9.43	102.03	105.80
35	2	471	A	C8-N9-C4	9.41	109.56	105.80
35	2	186	C	C5-C6-N1	9.40	125.70	121.00
19	i	480	TYR	CB-CA-C	-9.40	91.60	110.40
35	2	366	A	C8-N9-C4	9.39	109.56	105.80
35	2	1620	C	C2-N1-C1'	9.39	129.13	118.80
35	2	307	G	C4-N9-C1'	-9.39	114.30	126.50
19	j	480	TYR	CB-CA-C	-9.38	91.64	110.40
35	2	128	U	N3-C2-O2	-9.38	115.64	122.20
35	2	273	G	C4-C5-N7	9.38	114.55	110.80
35	2	390	G	N3-C2-N2	-9.37	113.34	119.90
35	2	103	A	C4-C5-C6	9.36	121.68	117.00
35	2	957	G	C8-N9-C4	9.36	110.14	106.40
35	2	1094	G	N9-C4-C5	-9.36	101.66	105.40
35	2	358	U	C4-C5-C6	-9.35	114.09	119.70
35	2	484	C	N3-C4-C5	9.35	125.64	121.90
35	2	538	A	N9-C4-C5	-9.34	102.06	105.80
35	2	412	A	N7-C8-N9	9.34	118.47	113.80
35	2	452	A	O4'-C1'-N9	-9.34	100.73	108.20
35	2	443	C	C6-N1-C2	9.33	124.03	120.30
35	2	103	A	N3-C4-C5	-9.32	120.27	126.80
35	2	173	A	C2-N3-C4	-9.32	105.94	110.60
35	2	519	C	C2-N1-C1'	-9.31	108.56	118.80
35	2	523	G	N3-C2-N2	9.29	126.41	119.90
35	2	502	U	C6-N1-C2	9.29	126.57	121.00
35	2	549	G	N3-C4-C5	9.28	133.24	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	503	G	C8-N9-C4	9.25	110.10	106.40
35	2	960	U	C5-C6-N1	-9.24	118.08	122.70
35	2	65	A	N9-C4-C5	9.24	109.50	105.80
35	2	184	C	C2-N1-C1'	9.23	128.96	118.80
35	2	463	U	N3-C2-O2	-9.21	115.75	122.20
35	2	460	A	N9-C4-C5	-9.21	102.11	105.80
35	2	1041	G	N9-C4-C5	-9.21	101.72	105.40
36	3	248	G	N3-C4-N9	-9.21	120.47	126.00
35	2	67	A	C5-C6-N1	9.19	122.30	117.70
35	2	281	G	N7-C8-N9	9.19	117.69	113.10
35	2	404	G	N3-C4-C5	9.18	133.19	128.60
35	2	53	G	C2-N3-C4	-9.17	107.32	111.90
35	2	1094	G	C5-C6-N1	-9.17	106.92	111.50
35	2	142	G	C8-N9-C1'	9.16	138.91	127.00
35	2	67	A	O4'-C1'-N9	-9.16	100.87	108.20
35	2	123	G	N9-C4-C5	-9.16	101.74	105.40
35	2	354	C	N3-C4-C5	9.15	125.56	121.90
35	2	365	G	C5-N7-C8	-9.14	99.73	104.30
35	2	328	A	N3-C4-C5	9.13	133.19	126.80
35	2	376	C	N3-C4-C5	9.12	125.55	121.90
35	2	309	C	N3-C2-O2	9.11	128.28	121.90
36	3	84	G	N3-C4-C5	9.12	133.16	128.60
35	2	305	C	C5-C6-N1	9.11	125.56	121.00
35	2	588	U	N1-C2-O2	9.11	129.18	122.80
35	2	398	G	N3-C4-C5	-9.11	124.05	128.60
35	2	432	G	N1-C6-O6	9.11	125.36	119.90
35	2	303	U	C5-C6-N1	-9.10	118.15	122.70
35	2	529	A	N7-C8-N9	9.10	118.35	113.80
35	2	347	G	C4-C5-N7	9.09	114.43	110.80
35	2	898	A	N9-C4-C5	-9.09	102.17	105.80
35	2	1075	C	C6-N1-C2	9.08	123.93	120.30
35	2	868	G	N1-C2-N2	9.08	124.37	116.20
35	2	497	G	C8-N9-C4	9.08	110.03	106.40
35	2	36	C	O5'-P-OP2	-9.07	97.53	105.70
35	2	357	G	N9-C4-C5	-9.07	101.77	105.40
35	2	513	U	N3-C4-O4	-9.06	113.06	119.40
35	2	431	C	N3-C4-C5	9.06	125.52	121.90
35	2	365	G	N9-C4-C5	-9.04	101.78	105.40
35	2	384	G	C4-C5-N7	9.04	114.42	110.80
35	2	60	U	O5'-P-OP2	-9.03	97.57	105.70
35	2	87	C	C2-N1-C1'	-9.03	108.87	118.80
35	2	112	A	N9-C4-C5	-9.03	102.19	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	1039	A	N9-C4-C5	-9.01	102.20	105.80
35	2	894	U	N1-C2-O2	-9.01	116.49	122.80
35	2	1041	G	N1-C6-O6	9.01	125.30	119.90
35	2	504	U	C5-C4-O4	-9.00	120.50	125.90
35	2	121	U	C2-N1-C1'	-8.99	106.91	117.70
35	2	1038	U	C5-C4-O4	-8.98	120.51	125.90
35	2	328	A	C5-N7-C8	-8.98	99.41	103.90
16	d	112	ILE	N-CA-CB	8.97	131.44	110.80
35	2	312	A	N7-C8-N9	-8.97	109.31	113.80
35	2	34	G	C5-C6-O6	8.97	133.98	128.60
35	2	1023	A	N3-C4-N9	-8.97	120.23	127.40
35	2	957	G	N9-C4-C5	-8.97	101.81	105.40
35	2	393	C	N1-C2-O2	8.96	124.28	118.90
35	2	1045	C	C2-N1-C1'	-8.96	108.94	118.80
35	2	326	G	C8-N9-C1'	8.96	138.65	127.00
35	2	1039	A	C2-N3-C4	-8.96	106.12	110.60
35	2	369	A	C8-N9-C4	8.95	109.38	105.80
35	2	200	A	C2-N3-C4	-8.94	106.13	110.60
35	2	936	G	C4-N9-C1'	-8.93	114.89	126.50
16	d	143	ILE	N-CA-CB	8.92	131.32	110.80
35	2	1046	G	N9-C4-C5	-8.92	101.83	105.40
35	2	54	C	N3-C4-C5	8.92	125.47	121.90
35	2	386	G	N3-C4-N9	8.92	131.35	126.00
35	2	388	G	C4-C5-N7	8.92	114.37	110.80
35	2	131	C	N1-C2-O2	8.91	124.25	118.90
35	2	539	G	N9-C4-C5	-8.91	101.84	105.40
35	2	103	A	C4-N9-C1'	8.90	142.32	126.30
35	2	523	G	N1-C2-N3	-8.90	118.56	123.90
35	2	523	G	N9-C4-C5	-8.90	101.84	105.40
35	2	402	C	O5'-P-OP1	-8.90	97.69	105.70
35	2	282	C	C6-N1-C1'	-8.90	110.12	120.80
35	2	488	G	C8-N9-C4	-8.89	102.84	106.40
35	2	210	A	N1-C6-N6	8.88	123.93	118.60
35	2	407	A	N3-C4-N9	-8.88	120.29	127.40
35	2	167	U	C2-N1-C1'	8.88	128.35	117.70
35	2	48	G	N3-C2-N2	8.87	126.11	119.90
35	2	502	U	N1-C2-N3	-8.87	109.58	114.90
19	i	615	PRO	N-CA-C	8.86	135.13	112.10
35	2	1080	U	N3-C4-C5	8.86	119.91	114.60
35	2	26	A	N9-C4-C5	-8.85	102.26	105.80
35	2	406	U	C4-C5-C6	-8.85	114.39	119.70
19	j	615	PRO	N-CA-C	8.84	135.08	112.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	548	G	N1-C6-O6	8.83	125.20	119.90
35	2	99	C	C6-N1-C1'	-8.82	110.21	120.80
35	2	885	G	N3-C4-C5	8.82	133.01	128.60
35	2	473	A	C6-N1-C2	-8.81	113.31	118.60
35	2	398	G	N1-C2-N3	-8.81	118.62	123.90
20	k	83	ILE	N-CA-CB	8.79	131.03	110.80
35	2	588	U	N3-C4-C5	8.79	119.88	114.60
35	2	1046	G	C4-C5-N7	8.79	114.32	110.80
35	2	196	G	C8-N9-C1'	8.79	138.42	127.00
35	2	1025	A	C8-N9-C4	-8.79	102.29	105.80
35	2	488	G	C5-C6-O6	-8.78	123.33	128.60
20	k	237	PRO	N-CA-CB	8.78	113.83	103.30
35	2	134	U	C5-C4-O4	-8.77	120.64	125.90
35	2	900	A	N9-C4-C5	-8.77	102.29	105.80
35	2	57	G	N9-C4-C5	-8.77	101.89	105.40
35	2	31	C	C5-C6-N1	8.76	125.38	121.00
35	2	87	C	N1-C2-N3	8.76	125.33	119.20
35	2	273	G	N1-C6-O6	8.76	125.15	119.90
35	2	1081	A	O4'-C1'-N9	-8.76	101.20	108.20
35	2	209	U	C5-C4-O4	-8.75	120.65	125.90
35	2	955	A	N1-C2-N3	8.75	133.67	129.30
35	2	500	C	N3-C2-O2	-8.74	115.78	121.90
35	2	79	C	C2-N1-C1'	8.74	128.41	118.80
35	2	432	G	C5-N7-C8	-8.74	99.93	104.30
35	2	108	A	C5-N7-C8	-8.73	99.53	103.90
35	2	398	G	C5-C6-N1	8.73	115.86	111.50
35	2	471	A	C5-C6-N1	-8.72	113.34	117.70
20	k	61	PRO	N-CA-CB	8.72	113.77	103.30
35	2	41	A	C6-C5-N7	-8.71	126.20	132.30
35	2	212	U	N1-C2-O2	8.71	128.90	122.80
35	2	1097	U	N1-C2-N3	8.71	120.12	114.90
35	2	205	U	C6-N1-C2	8.71	126.22	121.00
35	2	162	A	C6-N1-C2	8.70	123.82	118.60
35	2	344	A	C5-N7-C8	-8.70	99.55	103.90
35	2	485	A	C4-N9-C1'	-8.70	110.64	126.30
35	2	1070	C	N3-C4-C5	8.70	125.38	121.90
20	k	80	PRO	N-CA-CB	8.68	113.72	103.30
35	2	922	G	C2-N3-C4	-8.68	107.56	111.90
35	2	288	A	C2-N3-C4	-8.67	106.27	110.60
35	2	101	U	C4-C5-C6	8.67	124.90	119.70
35	2	146	U	N3-C2-O2	8.67	128.27	122.20
35	2	589	C	N3-C4-N4	-8.66	111.94	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	34	G	N1-C6-O6	-8.66	114.70	119.90
35	2	70	C	N3-C4-C5	8.66	125.36	121.90
35	2	868	G	N3-C2-N2	-8.66	113.84	119.90
35	2	281	G	C4-C5-N7	8.66	114.26	110.80
20	k	292	PRO	N-CA-CB	8.64	113.67	103.30
35	2	407	A	C8-N9-C4	-8.64	102.34	105.80
35	2	1073	G	N9-C4-C5	-8.64	101.94	105.40
35	2	163	G	N1-C6-O6	8.63	125.08	119.90
35	2	922	G	N3-C4-N9	-8.62	120.83	126.00
35	2	48	G	N1-C2-N2	-8.62	108.44	116.20
35	2	139	C	O4'-C1'-N1	8.62	115.10	108.20
35	2	394	C	C5-C6-N1	-8.61	116.70	121.00
35	2	529	A	C8-N9-C4	-8.61	102.36	105.80
36	3	81	G	C4-N9-C1'	-8.61	115.31	126.50
35	2	340	U	N3-C2-O2	8.60	128.22	122.20
35	2	25	C	C6-N1-C2	-8.59	116.86	120.30
35	2	80	A	C6-N1-C2	8.59	123.75	118.60
35	2	1053	G	N3-C4-C5	8.59	132.90	128.60
35	2	156	A	N1-C6-N6	8.59	123.75	118.60
35	2	199	G	O4'-C1'-N9	8.59	115.07	108.20
35	2	506	A	N9-C4-C5	-8.59	102.37	105.80
35	2	33	U	C6-N1-C2	-8.57	115.86	121.00
35	2	139	C	C2-N1-C1'	8.57	128.22	118.80
35	2	451	A	C8-N9-C4	8.56	109.22	105.80
35	2	187	G	N3-C4-N9	-8.54	120.87	126.00
35	2	365	G	C3'-C2'-C1'	-8.55	94.66	101.50
35	2	974	A	C5-C6-N6	-8.53	116.88	123.70
35	2	184	C	N1-C2-O2	8.53	124.02	118.90
35	2	386	G	C2-N3-C4	-8.52	107.64	111.90
35	2	491	C	N1-C2-O2	-8.52	113.79	118.90
35	2	407	A	N3-C4-C5	8.52	132.76	126.80
35	2	28	A	C6-N1-C2	-8.50	113.50	118.60
35	2	353	A	C5-N7-C8	-8.50	99.65	103.90
35	2	362	G	N9-C4-C5	8.50	108.80	105.40
35	2	388	G	N9-C4-C5	-8.50	102.00	105.40
35	2	184	C	C6-N1-C1'	-8.50	110.60	120.80
35	2	407	A	C8-N9-C1'	8.50	143.00	127.70
16	d	106	TYR	N-CA-CB	8.48	125.87	110.60
35	2	289	U	N3-C2-O2	-8.48	116.26	122.20
35	2	484	C	C5-C6-N1	8.48	125.24	121.00
35	2	973	A	N9-C1'-C2'	-8.48	102.67	112.00
35	2	125	U	O4'-C1'-N1	8.48	114.98	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	30	G	N9-C4-C5	8.47	108.79	105.40
35	2	366	A	N3-C4-C5	8.47	132.73	126.80
35	2	111	U	N1-C2-O2	8.46	128.72	122.80
35	2	914	G	C8-N9-C4	8.46	109.78	106.40
35	2	48	G	C4-C5-N7	8.46	114.18	110.80
15	c	151	ALA	CB-CA-C	8.45	122.77	110.10
35	2	30	G	N7-C8-N9	8.45	117.32	113.10
35	2	27	U	C5-C6-N1	-8.44	118.48	122.70
35	2	213	A	C8-N9-C4	8.44	109.17	105.80
35	2	960	U	C4-C5-C6	8.43	124.76	119.70
35	2	460	A	N1-C2-N3	-8.42	125.09	129.30
35	2	148	A	C5-N7-C8	-8.41	99.69	103.90
35	2	195	G	C2-N3-C4	-8.41	107.69	111.90
35	2	347	G	N9-C4-C5	-8.41	102.04	105.40
35	2	437	A	C8-N9-C4	-8.40	102.44	105.80
35	2	163	G	N7-C8-N9	8.40	117.30	113.10
35	2	428	A	N3-C4-N9	-8.40	120.68	127.40
35	2	430	G	N9-C4-C5	-8.40	102.04	105.40
35	2	1094	G	C8-N9-C4	8.39	109.76	106.40
35	2	316	A	N9-C4-C5	-8.39	102.44	105.80
35	2	591	A	C4-C5-C6	-8.39	112.81	117.00
35	2	520	A	C8-N9-C4	-8.37	102.45	105.80
35	2	504	U	O4'-C1'-N1	-8.36	101.51	108.20
35	2	199	G	N3-C4-C5	8.36	132.78	128.60
35	2	259	U	C6-N1-C2	8.36	126.01	121.00
35	2	898	A	C5-C6-N6	-8.36	117.02	123.70
35	2	199	G	C8-N9-C4	8.35	109.74	106.40
35	2	289	U	C2-N1-C1'	8.35	127.71	117.70
35	2	905	A	C8-N9-C1'	8.35	142.72	127.70
35	2	404	G	C5-C6-O6	-8.34	123.60	128.60
35	2	519	C	C6-N1-C2	8.34	123.64	120.30
35	2	514	G	C5-N7-C8	-8.33	100.14	104.30
35	2	528	U	O4'-C1'-N1	8.33	114.86	108.20
35	2	1042	G	C4-C5-N7	8.33	114.13	110.80
35	2	1048	G	C4-N9-C1'	-8.33	115.67	126.50
35	2	109	G	C4-C5-N7	8.32	114.13	110.80
35	2	209	U	N1-C2-N3	-8.32	109.91	114.90
35	2	48	G	N9-C4-C5	-8.31	102.08	105.40
35	2	386	G	C8-N9-C4	8.30	109.72	106.40
35	2	926	A	N9-C4-C5	-8.30	102.48	105.80
35	2	53	G	C8-N9-C1'	8.30	137.79	127.00
35	2	504	U	C6-N1-C1'	-8.30	109.58	121.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	389	G	N9-C4-C5	-8.30	102.08	105.40
35	2	467	G	N7-C8-N9	8.30	117.25	113.10
35	2	362	G	C6-C5-N7	8.29	135.37	130.40
35	2	479	C	O5'-P-OP2	-8.28	98.24	105.70
35	2	482	U	N1-C2-O2	8.29	128.60	122.80
35	2	928	U	C5-C6-N1	8.28	126.84	122.70
35	2	405	C	N3-C4-C5	8.28	125.21	121.90
35	2	952	A	C8-N9-C4	8.28	109.11	105.80
35	2	872	G	N3-C4-N9	-8.28	121.03	126.00
35	2	80	A	C4-C5-N7	8.27	114.84	110.70
35	2	523	G	C4-C5-C6	-8.26	113.84	118.80
35	2	951	A	C8-N9-C1'	8.25	142.56	127.70
35	2	365	G	N9-C1'-C2'	-8.25	102.93	112.00
35	2	41	A	N3-C4-N9	8.24	134.00	127.40
35	2	922	G	C8-N9-C1'	8.24	137.71	127.00
35	2	419	G	N3-C4-C5	8.23	132.71	128.60
35	2	273	G	C5-C6-O6	-8.23	123.66	128.60
35	2	914	G	C4-N9-C1'	-8.23	115.80	126.50
35	2	344	A	C4-C5-N7	8.23	114.81	110.70
35	2	156	A	C5-C6-N6	-8.22	117.12	123.70
35	2	299	A	C8-N9-C4	8.22	109.09	105.80
35	2	951	A	O4'-C1'-N9	8.22	114.78	108.20
35	2	489	C	C2-N1-C1'	-8.22	109.76	118.80
36	3	248	G	C2-N3-C4	-8.22	107.79	111.90
35	2	366	A	C2-N3-C4	-8.21	106.49	110.60
35	2	31	C	N1-C2-O2	8.21	123.83	118.90
35	2	322	G	C4-C5-N7	8.21	114.08	110.80
35	2	334	G	C5-C6-O6	-8.21	123.67	128.60
35	2	936	G	N7-C8-N9	-8.21	109.00	113.10
35	2	489	C	O4'-C1'-N1	8.21	114.76	108.20
35	2	910	C	C2-N1-C1'	-8.20	109.78	118.80
36	3	248	G	N3-C4-C5	8.19	132.69	128.60
35	2	441	A	C4-C5-N7	8.19	114.79	110.70
35	2	974	A	N1-C6-N6	8.18	123.51	118.60
35	2	67	A	C5-C6-N6	-8.17	117.17	123.70
35	2	883	C	C5-C6-N1	8.16	125.08	121.00
35	2	430	G	C5-N7-C8	-8.16	100.22	104.30
35	2	518	A	C4-C5-C6	-8.16	112.92	117.00
36	3	114	A	C8-N9-C4	8.16	109.06	105.80
35	2	624	G	C2-N3-C4	-8.15	107.82	111.90
35	2	1174	C	C6-N1-C2	8.14	123.56	120.30
35	2	185	U	N3-C2-O2	-8.14	116.50	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	k	84	ILE	N-CA-CB	8.13	129.51	110.80
35	2	191	C	N1-C2-N3	8.13	124.89	119.20
35	2	452	A	C4-C5-N7	8.12	114.76	110.70
35	2	486	G	C6-C5-N7	-8.12	125.53	130.40
35	2	872	G	C4-N9-C1'	-8.12	115.94	126.50
35	2	1173	C	C6-N1-C2	8.12	123.55	120.30
35	2	1093	A	C8-N9-C4	8.12	109.05	105.80
35	2	936	G	N9-C1'-C2'	-8.12	103.07	112.00
35	2	303	U	C6-N1-C2	8.12	125.87	121.00
35	2	529	A	C5-N7-C8	-8.12	99.84	103.90
35	2	466	U	N3-C4-C5	8.11	119.47	114.60
35	2	463	U	O4'-C1'-N1	8.11	114.68	108.20
35	2	548	G	C5-N7-C8	-8.10	100.25	104.30
35	2	256	A	N3-C4-N9	8.10	133.88	127.40
35	2	880	C	C2-N1-C1'	-8.10	109.89	118.80
35	2	1075	C	C4-C5-C6	-8.10	113.35	117.40
35	2	277	U	N3-C2-O2	8.09	127.86	122.20
35	2	57	G	C4-C5-N7	8.08	114.03	110.80
35	2	491	C	O5'-P-OP2	-8.07	98.43	105.70
35	2	487	G	N3-C4-N9	8.07	130.84	126.00
35	2	865	A	N9-C4-C5	-8.07	102.57	105.80
35	2	303	U	C2-N1-C1'	-8.06	108.02	117.70
35	2	343	C	N3-C4-N4	-8.06	112.36	118.00
35	2	974	A	C4-C5-N7	8.06	114.73	110.70
2	G	3215	GLU	N-CA-C	8.06	132.76	111.00
35	2	510	G	N3-C4-N9	-8.06	121.16	126.00
35	2	1031	U	N1-C2-O2	-8.06	117.16	122.80
35	2	60	U	O4'-C1'-N1	8.06	114.65	108.20
35	2	467	G	C8-N9-C4	-8.05	103.18	106.40
35	2	68	A	C8-N9-C4	-8.04	102.58	105.80
35	2	421	A	N1-C6-N6	8.04	123.43	118.60
35	2	286	C	C5-C6-N1	8.04	125.02	121.00
16	d	144	TYR	CB-CA-C	-8.04	94.33	110.40
35	2	142	G	N3-C2-N2	-8.04	114.27	119.90
35	2	42	G	N3-C4-C5	-8.03	124.58	128.60
35	2	53	G	N3-C2-N2	-8.03	114.28	119.90
35	2	151	G	C5-C6-O6	-8.03	123.78	128.60
35	2	1077	C	C6-N1-C2	8.03	123.51	120.30
35	2	365	G	N1-C6-O6	8.03	124.72	119.90
35	2	503	G	C6-N1-C2	8.03	129.92	125.10
35	2	1083	G	C5-N7-C8	-8.02	100.29	104.30
35	2	1023	A	C6-N1-C2	8.02	123.41	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	424	C	C2-N1-C1'	8.01	127.61	118.80
35	2	136	C	C4-C5-C6	8.01	121.40	117.40
35	2	407	A	C2-N3-C4	-8.00	106.60	110.60
35	2	1481	C	C6-N1-C2	-8.00	117.10	120.30
35	2	872	G	N1-C2-N2	8.00	123.40	116.20
35	2	142	G	N1-C2-N2	8.00	123.40	116.20
35	2	537	G	C5-C6-O6	7.99	133.40	128.60
35	2	87	C	C5-C4-N4	7.99	125.79	120.20
35	2	1053	G	N9-C1'-C2'	-7.99	103.21	112.00
35	2	430	G	N9-C1'-C2'	-7.99	103.21	112.00
32	z	95	PRO	N-CA-CB	7.97	112.87	103.30
35	2	510	G	N3-C4-C5	7.96	132.58	128.60
35	2	201	G	N9-C4-C5	-7.96	102.22	105.40
35	2	163	G	C5-C6-O6	-7.95	123.83	128.60
35	2	65	A	N1-C2-N3	7.95	133.27	129.30
35	2	162	A	N1-C6-N6	7.95	123.37	118.60
35	2	138	A	O4'-C1'-N9	7.94	114.55	108.20
35	2	479	C	P-O3'-C3'	-7.94	110.18	119.70
35	2	977	A	C2-N3-C4	7.93	114.57	110.60
35	2	27	U	O4'-C1'-N1	7.93	114.54	108.20
35	2	178	U	C2-N1-C1'	7.93	127.21	117.70
35	2	136	C	C5-C6-N1	-7.92	117.04	121.00
35	2	1039	A	N3-C4-C5	7.92	132.34	126.80
35	2	592	A	C5-C6-N1	7.91	121.66	117.70
35	2	932	U	C2-N1-C1'	-7.91	108.21	117.70
35	2	185	U	N1-C2-O2	7.91	128.34	122.80
20	k	286	PRO	N-CA-CB	7.91	112.79	103.30
36	3	84	G	N3-C4-N9	-7.91	121.26	126.00
35	2	184	C	C5-C6-N1	7.90	124.95	121.00
35	2	353	A	N7-C8-N9	7.90	117.75	113.80
35	2	973	A	C4-C5-N7	7.90	114.65	110.70
35	2	537	G	C6-N1-C2	7.90	129.84	125.10
35	2	1056	U	C2-N1-C1'	7.90	127.17	117.70
35	2	444	C	N3-C2-O2	7.89	127.43	121.90
35	2	1041	G	C6-C5-N7	-7.89	125.66	130.40
35	2	307	G	C2-N3-C4	-7.89	107.96	111.90
35	2	923	A	N1-C6-N6	7.88	123.33	118.60
35	2	398	G	C8-N9-C4	-7.88	103.25	106.40
35	2	504	U	N3-C4-C5	7.88	119.33	114.60
35	2	342	C	O4'-C1'-N1	7.88	114.50	108.20
35	2	467	G	N9-C1'-C2'	-7.87	103.34	112.00
35	2	342	C	C2-N1-C1'	-7.87	110.14	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	164	A	N7-C8-N9	-7.87	109.87	113.80
20	k	20	PRO	N-CA-CB	7.86	112.73	103.30
35	2	965	U	C2-N1-C1'	7.85	127.12	117.70
35	2	493	U	C5-C6-N1	-7.85	118.77	122.70
35	2	112	A	C8-N9-C4	7.84	108.94	105.80
35	2	187	G	C8-N9-C1'	7.84	137.19	127.00
35	2	460	A	C4-C5-C6	-7.83	113.08	117.00
35	2	390	G	N1-C2-N2	7.83	123.25	116.20
35	2	503	G	N3-C4-N9	-7.83	121.30	126.00
35	2	504	U	C4-C5-C6	-7.82	115.01	119.70
35	2	149	C	N1-C2-O2	7.82	123.59	118.90
35	2	1579	U	C5-C4-O4	-7.82	121.21	125.90
35	2	393	C	C6-N1-C1'	-7.81	111.42	120.80
35	2	302	U	C4-C5-C6	-7.81	115.01	119.70
35	2	357	G	N3-C4-C5	7.81	132.50	128.60
35	2	146	U	C5-C4-O4	-7.81	121.22	125.90
35	2	361	C	N1-C2-O2	-7.80	114.22	118.90
35	2	167	U	C5-C4-O4	-7.79	121.22	125.90
35	2	974	A	N9-C4-C5	-7.79	102.69	105.80
35	2	1083	G	N3-C4-N9	-7.78	121.33	126.00
35	2	164	A	C4-C5-C6	-7.78	113.11	117.00
35	2	514	G	N9-C4-C5	-7.78	102.29	105.40
35	2	256	A	N1-C2-N3	-7.78	125.41	129.30
35	2	1083	G	C4-C5-N7	7.77	113.91	110.80
35	2	287	G	N1-C6-O6	7.77	124.56	119.90
35	2	208	U	N1-C2-O2	7.77	128.24	122.80
35	2	24	U	N1-C2-O2	7.77	128.24	122.80
35	2	208	U	N3-C2-O2	-7.77	116.76	122.20
35	2	386	G	C8-N9-C1'	-7.77	116.90	127.00
35	2	1074	G	N9-C1'-C2'	-7.76	103.47	112.00
35	2	423	G	N3-C4-C5	-7.75	124.72	128.60
35	2	471	A	O5'-P-OP1	-7.75	98.72	105.70
35	2	341	A	N9-C4-C5	-7.74	102.70	105.80
35	2	464	A	N9-C4-C5	-7.74	102.70	105.80
35	2	33	U	C5-C4-O4	7.72	130.53	125.90
35	2	201	G	C4-C5-N7	7.72	113.89	110.80
35	2	31	C	C6-N1-C2	-7.72	117.21	120.30
36	3	262	C	C6-N1-C2	7.72	123.39	120.30
35	2	1075	C	N3-C2-O2	7.72	127.30	121.90
35	2	401	A	C4-N9-C1'	-7.71	112.42	126.30
35	2	186	C	N1-C2-O2	-7.71	114.27	118.90
35	2	196	G	C2-N3-C4	-7.71	108.04	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	3	114	A	C4-C5-N7	7.71	114.56	110.70
35	2	489	C	C6-N1-C1'	7.70	130.04	120.80
19	j	615	PRO	C-N-CA	7.70	140.94	121.70
35	2	480	G	N9-C1'-C2'	-7.69	103.54	112.00
19	i	615	PRO	C-N-CA	7.69	140.93	121.70
35	2	546	U	C6-N1-C2	7.69	125.61	121.00
35	2	205	U	N1-C2-O2	7.69	128.18	122.80
35	2	871	G	C8-N9-C4	7.68	109.47	106.40
35	2	405	C	C6-N1-C2	7.68	123.37	120.30
35	2	430	G	N1-C6-O6	7.68	124.51	119.90
35	2	332	U	C5-C6-N1	7.67	126.53	122.70
35	2	448	C	C4-C5-C6	-7.67	113.57	117.40
35	2	1620	C	N3-C2-O2	-7.67	116.53	121.90
35	2	333	A	O5'-P-OP2	-7.67	98.80	105.70
35	2	1591	C	C2-N1-C1'	-7.67	110.37	118.80
35	2	538	A	N1-C6-N6	7.66	123.20	118.60
35	2	1042	G	N9-C1'-C2'	-7.66	103.57	112.00
35	2	243	G	C2-N3-C4	-7.66	108.07	111.90
35	2	87	C	N1-C2-O2	-7.66	114.31	118.90
35	2	391	A	C5-C6-N6	-7.66	117.58	123.70
35	2	432	G	C5-C6-N1	-7.65	107.67	111.50
35	2	389	G	C8-N9-C4	7.65	109.46	106.40
35	2	173	A	N1-C2-N3	7.64	133.12	129.30
20	k	252	PRO	N-CA-CB	7.64	112.46	103.30
36	3	192	A	N7-C8-N9	7.63	117.62	113.80
35	2	332	U	C2-N1-C1'	7.63	126.86	117.70
35	2	591	A	N1-C2-N3	-7.63	125.48	129.30
35	2	396	G	N3-C2-N2	-7.63	114.56	119.90
35	2	334	G	N7-C8-N9	7.62	116.91	113.10
35	2	357	G	C8-N9-C4	7.62	109.45	106.40
35	2	1606	C	C6-N1-C2	7.62	123.35	120.30
35	2	310	C	C4-C5-C6	-7.61	113.59	117.40
35	2	932	U	C5-C6-N1	-7.61	118.89	122.70
35	2	530	C	N1-C1'-C2'	-7.61	103.63	112.00
35	2	263	C	C6-N1-C2	7.60	123.34	120.30
35	2	591	A	O4'-C1'-N9	-7.60	102.12	108.20
35	2	495	C	C6-N1-C1'	-7.60	111.68	120.80
35	2	33	U	OP2-P-O3'	-7.59	88.49	105.20
35	2	898	A	C4-C5-N7	7.59	114.50	110.70
35	2	490	C	C6-N1-C2	7.59	123.34	120.30
35	2	283	U	C2-N1-C1'	-7.58	108.60	117.70
35	2	527	A	C2-N3-C4	-7.58	106.81	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	3	250	G	N3-C4-C5	7.57	132.39	128.60
35	2	964	U	C5-C4-O4	-7.57	121.36	125.90
35	2	69	G	N3-C4-C5	7.56	132.38	128.60
35	2	1053	G	N3-C2-N2	-7.56	114.61	119.90
35	2	136	C	C2-N3-C4	-7.55	116.12	119.90
35	2	460	A	N7-C8-N9	-7.55	110.03	113.80
35	2	97	C	N3-C4-C5	7.55	124.92	121.90
35	2	167	U	C6-N1-C1'	-7.55	110.63	121.20
35	2	400	A	C8-N9-C4	-7.55	102.78	105.80
35	2	184	C	C4-C5-C6	-7.55	113.63	117.40
35	2	490	C	N3-C4-C5	7.54	124.92	121.90
35	2	393	C	C6-N1-C2	7.54	123.32	120.30
35	2	1062	A	C5-N7-C8	-7.53	100.13	103.90
35	2	447	U	C6-N1-C2	7.53	125.52	121.00
35	2	513	U	N1-C2-O2	7.53	128.07	122.80
36	3	114	A	N1-C6-N6	7.53	123.12	118.60
35	2	1067	C	N3-C4-C5	7.53	124.91	121.90
35	2	935	U	C2-N1-C1'	7.53	126.73	117.70
35	2	1074	G	N9-C4-C5	-7.52	102.39	105.40
35	2	325	G	C4-C5-N7	7.52	113.81	110.80
35	2	486	G	N9-C4-C5	-7.51	102.39	105.40
35	2	1074	G	C6-C5-N7	-7.51	125.89	130.40
35	2	386	G	N1-C2-N2	-7.51	109.44	116.20
35	2	82	U	P-O3'-C3'	-7.51	110.69	119.70
35	2	284	G	C4-C5-N7	7.50	113.80	110.80
35	2	307	G	C8-N9-C4	7.50	109.40	106.40
35	2	406	U	N1-C2-O2	7.50	128.05	122.80
35	2	945	U	C5-C4-O4	-7.50	121.40	125.90
35	2	1074	G	C5-N7-C8	-7.50	100.55	104.30
35	2	913	G	C8-N9-C4	-7.50	103.40	106.40
35	2	162	A	N1-C2-N3	-7.50	125.55	129.30
35	2	900	A	N1-C6-N6	7.50	123.10	118.60
35	2	29	U	C2-N1-C1'	-7.49	108.71	117.70
35	2	325	G	C8-N9-C4	7.49	109.40	106.40
35	2	87	C	N3-C4-N4	-7.48	112.76	118.00
35	2	495	C	C2-N1-C1'	7.48	127.03	118.80
35	2	531	C	N3-C2-O2	-7.48	116.67	121.90
35	2	276	C	C5-C4-N4	-7.47	114.97	120.20
35	2	1159	C	C2-N1-C1'	7.47	127.02	118.80
36	3	194	G	N3-C4-C5	-7.47	124.86	128.60
35	2	286	C	C6-N1-C2	-7.47	117.31	120.30
35	2	514	G	C5-C6-N1	7.47	115.23	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	246	G	N7-C8-N9	7.47	116.83	113.10
35	2	491	C	N3-C4-N4	-7.46	112.78	118.00
35	2	140	A	C8-N9-C4	-7.46	102.82	105.80
35	2	32	U	C6-N1-C1'	7.45	131.64	121.20
35	2	375	U	C6-N1-C1'	7.45	131.63	121.20
35	2	537	G	N3-C4-N9	-7.45	121.53	126.00
35	2	898	A	N1-C6-N6	7.45	123.07	118.60
35	2	451	A	N9-C4-C5	-7.45	102.82	105.80
35	2	42	G	N3-C4-N9	7.45	130.47	126.00
35	2	67	A	C2-N3-C4	7.44	114.32	110.60
35	2	456	A	C2-N3-C4	-7.44	106.88	110.60
35	2	400	A	N7-C8-N9	7.44	117.52	113.80
35	2	391	A	N1-C6-N6	7.43	123.06	118.60
35	2	361	C	C6-N1-C2	7.43	123.27	120.30
35	2	529	A	C5-C6-N6	-7.43	117.76	123.70
35	2	354	C	C4-C5-C6	-7.42	113.69	117.40
35	2	1056	U	C4-C5-C6	-7.42	115.25	119.70
35	2	309	C	N1-C2-N3	-7.41	114.01	119.20
36	3	190	C	C6-N1-C2	7.41	123.27	120.30
35	2	452	A	N1-C6-N6	7.41	123.05	118.60
35	2	587	C	N3-C2-O2	-7.41	116.71	121.90
19	i	612	ASP	O-C-N	7.41	134.55	122.70
35	2	325	G	N9-C4-C5	-7.40	102.44	105.40
35	2	46	A	C8-N9-C4	-7.40	102.84	105.80
35	2	317	C	N1-C2-O2	7.40	123.34	118.90
35	2	1038	U	N3-C2-O2	-7.39	117.03	122.20
35	2	199	G	N9-C4-C5	-7.39	102.44	105.40
36	3	197	C	N3-C2-O2	-7.39	116.73	121.90
35	2	316	A	C8-N9-C4	7.39	108.75	105.80
35	2	1620	C	N1-C2-O2	7.39	123.33	118.90
35	2	323	A	C2-N3-C4	-7.39	106.91	110.60
35	2	432	G	N3-C4-C5	-7.39	124.91	128.60
35	2	307	G	N9-C1'-C2'	-7.38	103.88	112.00
35	2	630	A	C5-C6-N1	7.38	121.39	117.70
35	2	34	G	C8-N9-C4	-7.38	103.45	106.40
35	2	214	G	O4'-C1'-N9	7.38	114.10	108.20
35	2	587	C	N1-C2-O2	7.38	123.33	118.90
35	2	254	A	C8-N9-C4	7.38	108.75	105.80
35	2	45	U	N3-C2-O2	-7.37	117.04	122.20
35	2	375	U	C5-C6-N1	-7.37	119.02	122.70
19	j	612	ASP	O-C-N	7.37	134.49	122.70
35	2	1062	A	C5-C6-N6	-7.37	117.80	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	70	C	C4-C5-C6	-7.37	113.72	117.40
35	2	396	G	C4-N9-C1'	-7.37	116.92	126.50
35	2	506	A	C4-C5-N7	7.36	114.38	110.70
35	2	492	A	C8-N9-C4	7.35	108.74	105.80
2	G	3180	ALA	N-CA-CB	7.34	120.38	110.10
35	2	105	A	N1-C6-N6	-7.34	114.19	118.60
35	2	455	C	C2-N1-C1'	-7.34	110.72	118.80
15	c	202	GLN	C-N-CA	7.34	140.05	121.70
35	2	872	G	N3-C2-N2	-7.34	114.76	119.90
36	3	90	C	C6-N1-C2	7.33	123.23	120.30
35	2	413	U	C6-N1-C2	7.33	125.40	121.00
15	c	251	SER	N-CA-CB	7.33	121.49	110.50
35	2	124	A	C5-C6-N6	-7.33	117.84	123.70
35	2	246	G	C6-C5-N7	-7.33	126.00	130.40
35	2	479	C	C6-N1-C2	-7.33	117.37	120.30
35	2	187	G	C4-N9-C1'	-7.33	116.98	126.50
35	2	491	C	C4-C5-C6	-7.33	113.74	117.40
35	2	105	A	C5-C6-N1	7.32	121.36	117.70
16	d	144	TYR	N-CA-CB	7.32	123.78	110.60
19	i	612	ASP	C-N-CA	7.32	140.00	121.70
35	2	366	A	C5-C6-N1	-7.32	114.04	117.70
35	2	941	A	N9-C4-C5	-7.32	102.87	105.80
19	j	406	TYR	C-N-CA	7.32	139.99	121.70
35	2	341	A	C8-N9-C4	7.32	108.73	105.80
35	2	973	A	N1-C2-N3	-7.32	125.64	129.30
35	2	163	G	C6-C5-N7	-7.31	126.01	130.40
19	j	612	ASP	C-N-CA	7.31	139.97	121.70
35	2	148	A	N7-C8-N9	7.31	117.45	113.80
35	2	109	G	C5-N7-C8	-7.31	100.65	104.30
35	2	404	G	N1-C6-O6	7.31	124.28	119.90
35	2	1051	G	N3-C4-N9	7.30	130.38	126.00
35	2	382	C	N1-C2-O2	7.30	123.28	118.90
35	2	157	A	C5-N7-C8	-7.30	100.25	103.90
35	2	35	U	N1-C1'-C2'	-7.30	103.97	112.00
35	2	309	C	C4-C5-C6	-7.30	113.75	117.40
35	2	380	U	C2-N1-C1'	-7.29	108.95	117.70
35	2	1091	A	C8-N9-C4	7.29	108.72	105.80
19	i	406	TYR	C-N-CA	7.29	139.93	121.70
35	2	456	A	C5-C6-N6	-7.29	117.87	123.70
35	2	948	G	C4-C5-N7	7.28	113.71	110.80
35	2	317	C	N3-C4-C5	7.28	124.81	121.90
35	2	526	A	C2-N3-C4	7.28	114.24	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	210	A	N3-C4-C5	7.28	131.90	126.80
35	2	540	G	C6-C5-N7	-7.28	126.03	130.40
35	2	255	U	C4-C5-C6	-7.27	115.34	119.70
35	2	323	A	C5-N7-C8	-7.27	100.26	103.90
35	2	549	G	C4-N9-C1'	-7.27	117.05	126.50
35	2	27	U	C6-N1-C2	7.27	125.36	121.00
35	2	865	A	C4-C5-N7	7.27	114.33	110.70
35	2	1042	G	C2-N3-C4	-7.27	108.27	111.90
36	3	114	A	C5-C6-N6	-7.27	117.89	123.70
35	2	935	U	C5-C6-N1	7.26	126.33	122.70
35	2	1097	U	C5-C6-N1	7.26	126.33	122.70
36	3	113	G	C4-N9-C1'	-7.26	117.06	126.50
35	2	324	U	N1-C2-N3	-7.26	110.54	114.90
35	2	500	C	N1-C2-O2	7.26	123.26	118.90
35	2	139	C	N3-C4-C5	-7.26	119.00	121.90
35	2	407	A	N1-C6-N6	7.26	122.95	118.60
35	2	273	G	N9-C4-C5	-7.25	102.50	105.40
35	2	154	G	N7-C8-N9	7.25	116.73	113.10
35	2	951	A	C4-N9-C1'	-7.25	113.25	126.30
35	2	865	A	C5-N7-C8	-7.25	100.28	103.90
35	2	281	G	N3-C4-C5	7.25	132.22	128.60
35	2	335	U	N1-C2-O2	7.24	127.87	122.80
35	2	950	C	C5-C6-N1	7.24	124.62	121.00
35	2	549	G	C6-C5-N7	7.24	134.75	130.40
35	2	360	A	C5-C6-N1	-7.24	114.08	117.70
35	2	371	G	O5'-P-OP2	-7.24	99.18	105.70
35	2	388	G	C6-C5-N7	-7.24	126.06	130.40
35	2	477	A	C2-N3-C4	-7.24	106.98	110.60
35	2	952	A	N9-C4-C5	-7.24	102.90	105.80
36	3	81	G	N3-C4-C5	7.24	132.22	128.60
35	2	974	A	C5-N7-C8	-7.24	100.28	103.90
15	c	161	PRO	N-CA-CB	7.24	111.98	103.30
35	2	210	A	C5-N7-C8	-7.24	100.28	103.90
35	2	253	A	N1-C6-N6	7.23	122.94	118.60
35	2	462	G	C8-N9-C1'	7.23	136.40	127.00
35	2	81	G	N9-C4-C5	-7.23	102.51	105.40
35	2	1046	G	O4'-C1'-N9	-7.23	102.42	108.20
35	2	879	G	C2-N3-C4	-7.22	108.29	111.90
35	2	260	U	C6-N1-C2	-7.22	116.67	121.00
35	2	1027	A	N1-C6-N6	7.22	122.93	118.60
35	2	501	U	C5-C6-N1	-7.22	119.09	122.70
35	2	1096	C	N3-C2-O2	-7.21	116.85	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	132	U	O4'-C1'-N1	7.21	113.97	108.20
35	2	443	C	N3-C4-C5	7.21	124.78	121.90
35	2	941	A	C4-C5-N7	7.21	114.30	110.70
35	2	424	C	C6-N1-C1'	-7.21	112.15	120.80
35	2	91	G	C5-C6-O6	-7.20	124.28	128.60
35	2	92	A	O4'-C1'-N9	7.20	113.96	108.20
35	2	1053	G	N3-C4-N9	-7.19	121.68	126.00
35	2	38	C	N3-C4-C5	-7.18	119.03	121.90
35	2	590	C	C6-N1-C2	7.18	123.17	120.30
35	2	84	A	N9-C1'-C2'	-7.18	104.11	112.00
36	3	268	G	C8-N9-C4	7.17	109.27	106.40
35	2	324	U	N3-C4-C5	7.17	118.90	114.60
35	2	393	C	C4-C5-C6	-7.17	113.81	117.40
35	2	1065	A	N9-C4-C5	-7.17	102.93	105.80
35	2	328	A	N1-C2-N3	7.17	132.88	129.30
35	2	1076	A	N3-C4-C5	7.17	131.82	126.80
35	2	108	A	N1-C6-N6	7.17	122.90	118.60
35	2	202	A	N1-C6-N6	7.17	122.90	118.60
35	2	1078	C	C4-C5-C6	-7.16	113.82	117.40
35	2	905	A	C5-N7-C8	-7.16	100.32	103.90
35	2	1041	G	C5-N7-C8	-7.16	100.72	104.30
35	2	365	G	N3-C4-N9	7.15	130.29	126.00
35	2	486	G	N3-C4-N9	7.15	130.29	126.00
35	2	287	G	C5-C6-O6	-7.15	124.31	128.60
35	2	881	A	C4-C5-N7	7.15	114.27	110.70
35	2	115	G	N1-C2-N2	-7.14	109.77	116.20
35	2	523	G	C5-N7-C8	-7.14	100.73	104.30
35	2	905	A	O4'-C1'-N9	7.14	113.92	108.20
35	2	209	U	C6-N1-C2	7.14	125.28	121.00
35	2	463	U	N3-C4-O4	-7.14	114.41	119.40
35	2	518	A	C5-C6-N1	7.14	121.27	117.70
35	2	883	C	C4-C5-C6	-7.14	113.83	117.40
35	2	1062	A	C4-C5-N7	7.13	114.27	110.70
35	2	99	C	O4'-C1'-N1	-7.13	102.49	108.20
35	2	206	A	C6-N1-C2	7.13	122.88	118.60
35	2	880	C	C6-N1-C1'	7.13	129.36	120.80
35	2	346	G	O5'-P-OP1	-7.13	99.28	105.70
35	2	1039	A	N1-C6-N6	7.13	122.88	118.60
35	2	205	U	N1-C2-N3	-7.12	110.62	114.90
35	2	885	G	C2-N3-C4	-7.12	108.34	111.90
35	2	73	U	C6-N1-C2	7.12	125.27	121.00
35	2	965	U	C2-N3-C4	7.12	131.27	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	463	U	C6-N1-C1'	7.12	131.16	121.20
35	2	179	A	C8-N9-C4	-7.12	102.95	105.80
35	2	462	G	C4-N9-C1'	-7.12	117.25	126.50
35	2	926	A	N1-C6-N6	7.12	122.87	118.60
35	2	914	G	N3-C2-N2	-7.11	114.92	119.90
35	2	295	A	N9-C4-C5	-7.10	102.96	105.80
35	2	497	G	N9-C1'-C2'	-7.10	104.19	112.00
35	2	65	A	OP1-P-O3'	7.10	120.82	105.20
35	2	274	G	C2-N3-C4	-7.10	108.35	111.90
35	2	353	A	C4-C5-N7	7.09	114.25	110.70
35	2	387	A	N1-C2-N3	7.09	132.85	129.30
35	2	440	U	N3-C4-O4	7.09	124.37	119.40
35	2	353	A	N9-C4-C5	-7.09	102.96	105.80
35	2	119	A	O4'-C1'-N9	7.09	113.87	108.20
35	2	391	A	N9-C1'-C2'	-7.09	104.20	112.00
35	2	357	G	C6-N1-C2	7.08	129.35	125.10
35	2	902	G	C2-N3-C4	-7.08	108.36	111.90
35	2	966	A	N1-C6-N6	7.08	122.85	118.60
36	3	81	G	C8-N9-C1'	7.08	136.21	127.00
19	i	882	ALA	N-CA-C	-7.08	91.88	111.00
35	2	1094	G	C6-C5-N7	-7.08	126.15	130.40
35	2	1591	C	C6-N1-C1'	7.08	129.29	120.80
35	2	941	A	C5-N7-C8	-7.08	100.36	103.90
36	3	257	G	N3-C4-C5	7.08	132.14	128.60
35	2	339	C	N1-C2-O2	7.08	123.14	118.90
36	3	197	C	C6-N1-C2	-7.08	117.47	120.30
35	2	484	C	N3-C4-N4	-7.07	113.05	118.00
35	2	491	C	N3-C2-O2	7.07	126.85	121.90
35	2	48	G	C5-C6-O6	-7.07	124.36	128.60
35	2	962	C	N3-C2-O2	-7.07	116.95	121.90
36	3	91	G	N3-C4-C5	7.07	132.13	128.60
35	2	388	G	C5-C6-O6	-7.06	124.36	128.60
35	2	546	U	O5'-P-OP2	-7.06	99.35	105.70
35	2	322	G	N3-C4-N9	7.06	130.24	126.00
35	2	905	A	C4-N9-C1'	-7.06	113.60	126.30
19	j	882	ALA	N-CA-C	-7.05	91.96	111.00
35	2	89	G	N3-C4-C5	7.05	132.13	128.60
35	2	31	C	C2-N1-C1'	7.05	126.56	118.80
35	2	907	A	C4-C5-C6	-7.05	113.48	117.00
35	2	384	G	C5-N7-C8	-7.04	100.78	104.30
35	2	421	A	C5-C6-N6	-7.04	118.07	123.70
35	2	502	U	C5-C4-O4	-7.03	121.68	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	119	A	C8-N9-C4	7.03	108.61	105.80
35	2	941	A	N1-C6-N6	7.03	122.82	118.60
35	2	29	U	C6-N1-C1'	7.03	131.04	121.20
35	2	540	G	C4-N9-C1'	7.02	135.62	126.50
35	2	324	U	N3-C4-O4	-7.02	114.49	119.40
35	2	589	C	N3-C4-C5	7.01	124.71	121.90
35	2	315	A	O4'-C1'-N9	-7.01	102.59	108.20
35	2	112	A	C4-C5-N7	7.01	114.20	110.70
35	2	69	G	C4-C5-C6	-7.01	114.59	118.80
35	2	1083	G	N9-C1'-C2'	-7.01	104.29	112.00
35	2	1097	U	N3-C2-O2	-7.00	117.30	122.20
35	2	1071	U	C6-N1-C2	7.00	125.20	121.00
35	2	1083	G	C4-N9-C1'	-7.00	117.39	126.50
35	2	471	A	N1-C6-N6	7.00	122.80	118.60
35	2	270	C	C6-N1-C2	7.00	123.10	120.30
35	2	209	U	N1-C2-O2	6.99	127.70	122.80
35	2	73	U	N3-C2-O2	-6.99	117.31	122.20
35	2	154	G	N3-C4-N9	-6.99	121.81	126.00
35	2	243	G	O4'-C1'-N9	-6.99	102.61	108.20
35	2	396	G	C8-N9-C4	6.99	109.20	106.40
19	j	497	ASP	C-N-CA	6.99	139.17	121.70
35	2	955	A	N1-C6-N6	6.98	122.79	118.60
35	2	72	A	C8-N9-C4	6.98	108.59	105.80
35	2	72	A	N7-C8-N9	-6.98	110.31	113.80
19	i	497	ASP	C-N-CA	6.97	139.14	121.70
35	2	251	A	O4'-C1'-N9	6.97	113.78	108.20
35	2	367	A	C8-N9-C4	6.97	108.59	105.80
35	2	879	G	C4-C5-N7	6.97	113.59	110.80
35	2	914	G	C2-N3-C4	-6.97	108.42	111.90
35	2	917	U	C5-C6-N1	6.97	126.18	122.70
35	2	108	A	C4-C5-N7	6.96	114.18	110.70
35	2	471	A	C6-N1-C2	6.96	122.78	118.60
35	2	328	A	N1-C6-N6	6.96	122.78	118.60
35	2	166	C	N1-C2-O2	6.95	123.07	118.90
35	2	253	A	N1-C2-N3	-6.95	125.82	129.30
35	2	627	C	C6-N1-C2	6.95	123.08	120.30
35	2	936	G	N3-C4-C5	6.95	132.08	128.60
35	2	1041	G	C5-C6-O6	-6.95	124.43	128.60
35	2	347	G	N3-C2-N2	6.94	124.76	119.90
35	2	423	G	C4-N9-C1'	6.94	135.52	126.50
35	2	625	C	C5-C6-N1	6.94	124.47	121.00
35	2	865	A	N1-C6-N6	6.94	122.76	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	384	G	N3-C4-C5	6.93	132.07	128.60
35	2	865	A	C6-C5-N7	-6.93	127.44	132.30
35	2	50	C	N3-C2-O2	-6.93	117.05	121.90
35	2	502	U	N1-C2-O2	6.93	127.65	122.80
35	2	481	A	C8-N9-C4	6.93	108.57	105.80
35	2	314	C	C2-N1-C1'	6.92	126.42	118.80
35	2	67	A	OP1-P-OP2	-6.92	109.22	119.60
20	k	270	PHE	N-CA-CB	6.92	123.06	110.60
35	2	617	U	N3-C4-C5	6.92	118.75	114.60
35	2	879	G	N9-C4-C5	-6.91	102.64	105.40
35	2	353	A	N1-C6-N6	6.90	122.74	118.60
35	2	371	G	N3-C4-C5	6.90	132.05	128.60
35	2	378	A	N9-C4-C5	6.90	108.56	105.80
35	2	477	A	N1-C2-N3	6.89	132.75	129.30
35	2	267	U	O4'-C1'-N1	6.89	113.71	108.20
35	2	523	G	C5-C6-O6	-6.89	124.47	128.60
35	2	1043	A	N9-C1'-C2'	-6.89	104.42	112.00
35	2	33	U	N3-C2-O2	-6.88	117.38	122.20
35	2	1025	A	C4-C5-C6	6.88	120.44	117.00
35	2	80	A	C6-C5-N7	-6.88	127.49	132.30
35	2	965	U	C5-C6-N1	6.87	126.14	122.70
35	2	1041	G	C2-N3-C4	-6.87	108.46	111.90
35	2	162	A	C6-C5-N7	-6.87	127.49	132.30
35	2	1051	G	C8-N9-C1'	-6.87	118.07	127.00
35	2	463	U	N1-C2-O2	6.87	127.61	122.80
35	2	328	A	N9-C1'-C2'	-6.86	104.46	112.00
35	2	41	A	C4-C5-N7	6.86	114.13	110.70
35	2	481	A	N9-C4-C5	-6.86	103.06	105.80
35	2	41	A	N1-C2-N3	-6.85	125.88	129.30
35	2	242	U	C2-N1-C1'	6.85	125.92	117.70
35	2	540	G	C4-C5-C6	6.85	122.91	118.80
35	2	885	G	C4-N9-C1'	-6.85	117.60	126.50
35	2	28	A	C4-C5-C6	6.84	120.42	117.00
35	2	884	A	C4-C5-N7	6.84	114.12	110.70
35	2	922	G	C4-C5-N7	6.84	113.54	110.80
35	2	396	G	N3-C4-N9	-6.84	121.90	126.00
35	2	521	A	C5-N7-C8	-6.84	100.48	103.90
35	2	73	U	N3-C4-C5	6.83	118.70	114.60
35	2	166	C	C5-C4-N4	6.83	124.98	120.20
35	2	1606	C	N1-C2-O2	-6.83	114.80	118.90
35	2	211	U	C4-C5-C6	-6.83	115.60	119.70
35	2	498	G	C5-N7-C8	-6.83	100.89	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	462	G	N1-C6-O6	-6.83	115.80	119.90
35	2	371	G	C5-N7-C8	-6.82	100.89	104.30
35	2	258	C	O4'-C1'-N1	-6.82	102.75	108.20
35	2	163	G	N3-C2-N2	-6.82	115.13	119.90
35	2	201	G	C5-C6-O6	-6.82	124.51	128.60
35	2	941	A	N3-C4-C5	6.82	131.57	126.80
35	2	401	A	N9-C1'-C2'	6.81	122.86	114.00
35	2	1159	C	C6-N1-C1'	-6.81	112.63	120.80
35	2	334	G	N1-C6-O6	6.81	123.98	119.90
35	2	948	G	C5-N7-C8	-6.81	100.90	104.30
15	c	201	GLY	CA-C-O	-6.80	108.35	120.60
35	2	512	A	C6-C5-N7	6.80	137.06	132.30
35	2	1463	C	C6-N1-C2	6.80	123.02	120.30
35	2	273	G	C6-C5-N7	-6.80	126.32	130.40
35	2	894	U	N3-C2-O2	6.80	126.96	122.20
35	2	358	U	N1-C2-N3	-6.79	110.83	114.90
35	2	392	G	N3-C4-N9	6.79	130.07	126.00
35	2	548	G	N9-C4-C5	-6.79	102.69	105.40
35	2	187	G	N3-C4-C5	6.78	131.99	128.60
35	2	454	U	N1-C2-N3	6.78	118.97	114.90
35	2	538	A	C4-C5-N7	6.78	114.09	110.70
35	2	407	A	C4-C5-N7	6.78	114.09	110.70
35	2	593	U	N3-C2-O2	-6.78	117.46	122.20
35	2	473	A	C4-C5-C6	6.77	120.39	117.00
35	2	282	C	N3-C4-C5	6.77	124.61	121.90
35	2	894	U	C2-N1-C1'	-6.77	109.58	117.70
35	2	83	G	N3-C4-C5	6.76	131.98	128.60
35	2	425	A	N3-C4-C5	-6.76	122.06	126.80
35	2	401	A	N7-C8-N9	-6.76	110.42	113.80
35	2	115	G	N3-C2-N2	6.76	124.63	119.90
35	2	452	A	C5-C6-N6	-6.76	118.29	123.70
35	2	276	C	O4'-C1'-N1	6.76	113.61	108.20
35	2	81	G	C4-C5-N7	6.75	113.50	110.80
35	2	323	A	N9-C1'-C2'	-6.75	104.57	112.00
35	2	91	G	C5-C6-N1	6.75	114.88	111.50
35	2	428	A	N3-C4-C5	6.75	131.53	126.80
35	2	454	U	N3-C2-O2	-6.75	117.48	122.20
35	2	365	G	C2-N3-C4	-6.75	108.53	111.90
35	2	325	G	N3-C4-C5	6.74	131.97	128.60
19	j	611	GLY	N-CA-C	-6.74	96.24	113.10
36	3	84	G	C2-N3-C4	-6.74	108.53	111.90
35	2	503	G	C4-N9-C1'	-6.74	117.74	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	3	85	A	N1-C6-N6	6.74	122.64	118.60
35	2	540	G	N3-C4-C5	-6.73	125.23	128.60
35	2	362	G	C8-N9-C4	-6.73	103.71	106.40
35	2	493	U	N1-C2-O2	-6.73	118.09	122.80
35	2	910	C	O4'-C1'-N1	6.73	113.58	108.20
35	2	625	C	N1-C2-O2	-6.73	114.86	118.90
35	2	1043	A	C4-C5-N7	6.73	114.06	110.70
35	2	957	G	C4-C5-N7	6.72	113.49	110.80
35	2	1062	A	N1-C6-N6	6.72	122.64	118.60
14	b	107	ALA	CB-CA-C	6.72	120.18	110.10
35	2	33	U	O4'-C1'-N1	6.72	113.57	108.20
35	2	485	A	C2-N3-C4	-6.72	107.24	110.60
35	2	307	G	C8-N9-C1'	6.71	135.73	127.00
35	2	926	A	C4-C5-N7	6.71	114.06	110.70
35	2	184	C	O4'-C1'-N1	-6.71	102.83	108.20
35	2	259	U	N3-C2-O2	6.71	126.89	122.20
35	2	310	C	C6-N1-C2	6.71	122.98	120.30
35	2	332	U	N1-C2-O2	6.71	127.50	122.80
35	2	465	G	C5-N7-C8	-6.71	100.95	104.30
35	2	504	U	N1-C2-O2	6.71	127.50	122.80
35	2	195	G	C8-N9-C4	6.71	109.08	106.40
35	2	196	G	N3-C2-N2	-6.70	115.21	119.90
35	2	593	U	O4'-C1'-N1	6.70	113.56	108.20
35	2	266	A	N1-C6-N6	-6.70	114.58	118.60
35	2	29	U	O5'-P-OP1	-6.70	99.67	105.70
35	2	539	G	C4-C5-C6	-6.70	114.78	118.80
35	2	353	A	O5'-P-OP2	-6.69	99.67	105.70
35	2	907	A	C8-N9-C4	6.69	108.48	105.80
35	2	26	A	C4-C5-N7	6.69	114.05	110.70
35	2	289	U	C6-N1-C1'	-6.69	111.83	121.20
35	2	404	G	C5-N7-C8	-6.69	100.96	104.30
35	2	307	G	N1-C6-O6	6.69	123.91	119.90
35	2	27	U	C2-N1-C1'	-6.68	109.68	117.70
35	2	893	U	N3-C2-O2	-6.68	117.52	122.20
35	2	386	G	N3-C2-N2	6.68	124.58	119.90
35	2	900	A	C5-C6-N6	-6.68	118.36	123.70
35	2	977	A	N9-C4-C5	6.68	108.47	105.80
16	d	139	GLN	N-CA-CB	6.68	122.62	110.60
35	2	492	A	N3-C4-C5	6.67	131.47	126.80
35	2	923	A	C5-C6-N1	-6.67	114.36	117.70
36	3	190	C	C5-C6-N1	-6.67	117.67	121.00
30	x	51	PRO	N-CA-CB	6.66	111.29	103.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	327	U	C5-C6-N1	-6.66	119.37	122.70
35	2	519	C	N3-C2-O2	6.66	126.56	121.90
35	2	440	U	C5-C6-N1	6.65	126.03	122.70
35	2	35	U	N1-C2-O2	6.65	127.45	122.80
35	2	324	U	C6-N1-C2	6.65	124.99	121.00
35	2	530	C	N3-C2-O2	-6.65	117.25	121.90
35	2	173	A	N3-C4-C5	6.64	131.45	126.80
35	2	295	A	C5-N7-C8	-6.64	100.58	103.90
35	2	103	A	C8-N9-C1'	-6.64	115.74	127.70
35	2	206	A	O4'-C1'-N9	-6.64	102.89	108.20
35	2	964	U	C2-N1-C1'	6.64	125.67	117.70
35	2	366	A	N9-C4-C5	-6.63	103.15	105.80
35	2	884	A	N9-C4-C5	-6.63	103.15	105.80
35	2	210	A	C2-N3-C4	-6.63	107.29	110.60
35	2	50	C	C5-C6-N1	-6.62	117.69	121.00
35	2	162	A	N7-C8-N9	6.62	117.11	113.80
35	2	419	G	N3-C4-N9	-6.62	122.03	126.00
35	2	540	G	O5'-P-OP1	-6.61	99.75	105.70
35	2	633	U	N1-C2-O2	6.61	127.43	122.80
35	2	884	A	C5-N7-C8	-6.61	100.59	103.90
35	2	900	A	N7-C8-N9	-6.61	110.49	113.80
35	2	103	A	O4'-C1'-N9	6.61	113.49	108.20
35	2	392	G	C4-C5-N7	6.61	113.44	110.80
35	2	21	U	C5-C6-N1	6.60	126.00	122.70
35	2	1043	A	C5-N7-C8	-6.60	100.60	103.90
35	2	383	G	C4-N9-C1'	-6.60	117.92	126.50
35	2	415	C	N3-C2-O2	-6.60	117.28	121.90
35	2	1027	A	O4'-C1'-N9	6.60	113.48	108.20
35	2	48	G	C4-N9-C1'	6.60	135.07	126.50
35	2	431	C	N1-C2-O2	6.60	122.86	118.90
35	2	91	G	C4-C5-N7	6.59	113.44	110.80
35	2	173	A	N3-C4-N9	-6.59	122.13	127.40
35	2	878	G	N9-C1'-C2'	-6.59	104.75	112.00
35	2	1094	G	C4-C5-N7	6.59	113.44	110.80
35	2	593	U	N3-C4-O4	6.59	124.01	119.40
35	2	869	A	C5-N7-C8	-6.59	100.61	103.90
35	2	464	A	C4-C5-N7	6.58	113.99	110.70
35	2	871	G	N3-C4-C5	6.58	131.89	128.60
35	2	298	C	C6-N1-C2	6.58	122.93	120.30
30	x	41	PRO	N-CA-CB	6.58	111.19	103.30
35	2	206	A	N9-C4-C5	-6.58	103.17	105.80
35	2	212	U	N3-C2-O2	-6.58	117.60	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	3	64	C	N1-C2-O2	6.58	122.85	118.90
35	2	72	A	C4-N9-C1'	-6.57	114.47	126.30
35	2	151	G	O4'-C1'-N9	-6.57	102.94	108.20
35	2	444	C	C2-N1-C1'	-6.57	111.57	118.80
35	2	876	G	C4-C5-N7	6.57	113.43	110.80
35	2	143	G	C8-N9-C4	6.57	109.03	106.40
35	2	342	C	C6-N1-C1'	6.57	128.69	120.80
35	2	1095	U	C6-N1-C2	-6.57	117.06	121.00
35	2	321	C	C6-N1-C2	-6.57	117.67	120.30
35	2	324	U	C4-C5-C6	-6.57	115.76	119.70
35	2	955	A	C5-C6-N1	-6.57	114.42	117.70
35	2	28	A	N1-C2-N3	6.56	132.58	129.30
35	2	304	U	C5-C6-N1	6.56	125.98	122.70
35	2	487	G	C8-N9-C1'	-6.56	118.47	127.00
35	2	504	U	C2-N1-C1'	6.56	125.58	117.70
35	2	363	G	N3-C4-C5	6.56	131.88	128.60
35	2	454	U	C4-C5-C6	6.56	123.64	119.70
35	2	65	A	N3-C4-C5	6.56	131.39	126.80
35	2	448	C	N1-C2-O2	6.55	122.83	118.90
35	2	103	A	N7-C8-N9	6.55	117.07	113.80
35	2	518	A	N1-C6-N6	-6.55	114.67	118.60
15	c	177	PRO	CA-C-O	-6.55	104.49	120.20
35	2	514	G	C8-N9-C4	6.55	109.02	106.40
36	3	111	G	N3-C4-C5	6.55	131.87	128.60
35	2	1029	U	C6-N1-C2	-6.54	117.07	121.00
35	2	80	A	N1-C6-N6	6.54	122.53	118.60
35	2	195	G	N3-C4-N9	-6.54	122.07	126.00
35	2	463	U	C2-N3-C4	-6.54	123.07	127.00
35	2	480	G	C3'-C2'-C1'	-6.54	96.27	101.50
35	2	515	A	OP1-P-O3'	6.54	119.60	105.20
35	2	1083	G	C2-N3-C4	-6.54	108.63	111.90
35	2	592	A	N1-C2-N3	6.54	132.57	129.30
35	2	68	A	C6-N1-C2	-6.54	114.68	118.60
35	2	295	A	C4-C5-N7	6.54	113.97	110.70
35	2	874	C	C4-C5-C6	-6.54	114.13	117.40
35	2	1073	G	C6-C5-N7	-6.54	126.48	130.40
36	3	78	C	OP1-P-OP2	6.54	129.40	119.60
35	2	287	G	N3-C4-C5	6.53	131.87	128.60
35	2	593	U	C6-N1-C2	-6.53	117.08	121.00
35	2	131	C	C5'-C4'-O4'	6.53	116.94	109.10
35	2	337	G	C4-C5-N7	6.53	113.41	110.80
35	2	382	C	C4-C5-C6	6.52	120.66	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	490	C	C2-N1-C1'	-6.52	111.62	118.80
35	2	491	C	C2-N3-C4	-6.52	116.64	119.90
35	2	30	G	N3-C2-N2	-6.52	115.34	119.90
35	2	959	U	N1-C2-N3	-6.51	110.99	114.90
35	2	1091	A	N9-C4-C5	-6.51	103.19	105.80
35	2	498	G	N3-C4-C5	6.51	131.86	128.60
35	2	524	U	OP1-P-O3'	6.51	119.52	105.20
35	2	332	U	C6-N1-C1'	-6.51	112.09	121.20
19	j	591	GLU	CB-CA-C	6.50	123.41	110.40
35	2	483	A	N9-C4-C5	-6.50	103.20	105.80
36	3	91	G	C4-N9-C1'	-6.50	118.05	126.50
35	2	91	G	C4-N9-C1'	6.50	134.95	126.50
35	2	483	A	C4-C5-N7	6.50	113.95	110.70
35	2	419	G	N1-C6-O6	6.50	123.80	119.90
19	i	591	GLU	CB-CA-C	6.50	123.39	110.40
35	2	365	G	C4-C5-C6	6.50	122.70	118.80
36	3	79	G	N9-C4-C5	-6.50	102.80	105.40
36	3	268	G	C5-C6-O6	-6.50	124.70	128.60
35	2	31	C	N3-C2-O2	-6.49	117.36	121.90
35	2	36	C	C6-N1-C2	6.49	122.90	120.30
35	2	344	A	O4'-C1'-N9	-6.49	103.01	108.20
35	2	439	U	OP1-P-O3'	6.49	119.48	105.20
35	2	427	C	O4'-C1'-N1	6.49	113.39	108.20
35	2	901	G	C8-N9-C4	6.49	109.00	106.40
19	j	620	GLN	N-CA-CB	6.49	122.28	110.60
35	2	1035	G	C4-N9-C1'	-6.49	118.07	126.50
35	2	38	C	N3-C4-N4	6.49	122.54	118.00
35	2	432	G	N9-C4-C5	6.48	107.99	105.40
16	d	142	ARG	N-CA-CB	6.48	122.27	110.60
35	2	341	A	N1-C6-N6	6.48	122.49	118.60
19	i	620	GLN	N-CA-CB	6.48	122.26	110.60
35	2	474	A	C2-N3-C4	-6.48	107.36	110.60
35	2	153	G	C8-N9-C4	6.48	108.99	106.40
35	2	166	C	N3-C4-C5	-6.47	119.31	121.90
35	2	322	G	C8-N9-C1'	-6.47	118.58	127.00
35	2	914	G	N1-C2-N2	6.47	122.03	116.20
16	d	105	ARG	CB-CA-C	-6.47	97.46	110.40
35	2	407	A	C4-N9-C1'	-6.47	114.65	126.30
35	2	926	A	C5-C6-N1	6.47	120.94	117.70
35	2	452	A	C6-C5-N7	-6.46	127.78	132.30
35	2	1071	U	C5-C6-N1	-6.46	119.47	122.70
35	2	99	C	N3-C4-C5	6.46	124.48	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	121	U	O4'-C1'-N1	6.46	113.37	108.20
36	3	266	C	C2-N1-C1'	6.46	125.91	118.80
35	2	308	C	N1-C2-O2	6.46	122.78	118.90
35	2	401	A	C8-N9-C4	6.46	108.38	105.80
35	2	32	U	N1-C2-O2	6.46	127.32	122.80
35	2	413	U	N3-C4-C5	6.46	118.47	114.60
35	2	549	G	N1-C2-N2	6.46	122.01	116.20
35	2	935	U	N3-C4-O4	6.46	123.92	119.40
35	2	392	G	C5-C6-O6	-6.45	124.73	128.60
35	2	287	G	C8-N9-C4	6.45	108.98	106.40
35	2	915	A	C8-N9-C4	6.45	108.38	105.80
19	j	616	TRP	N-CA-C	6.45	128.41	111.00
35	2	1051	G	C4-N9-C1'	6.45	134.88	126.50
19	i	616	TRP	N-CA-C	6.45	128.41	111.00
35	2	62	A	O5'-P-OP2	-6.45	99.90	105.70
35	2	530	C	C5-C4-N4	-6.45	115.69	120.20
35	2	869	A	C4-C5-N7	6.45	113.92	110.70
35	2	110	U	N1-C2-N3	6.45	118.77	114.90
35	2	111	U	C2-N3-C4	6.45	130.87	127.00
35	2	1048	G	N3-C4-C5	6.45	131.82	128.60
35	2	158	U	O4'-C1'-N1	6.44	113.35	108.20
35	2	394	C	C2-N3-C4	-6.44	116.68	119.90
35	2	23	G	C8-N9-C4	-6.44	103.83	106.40
35	2	59	C	C5-C4-N4	-6.43	115.70	120.20
35	2	509	G	N1-C6-O6	-6.43	116.04	119.90
35	2	592	A	N3-C4-N9	6.43	132.55	127.40
35	2	485	A	C4-C5-N7	6.43	113.91	110.70
35	2	1065	A	C8-N9-C4	6.43	108.37	105.80
35	2	365	G	P-O3'-C3'	-6.43	111.99	119.70
35	2	550	A	C8-N9-C4	6.42	108.37	105.80
35	2	588	U	C6-N1-C2	6.42	124.85	121.00
36	3	248	G	C5-C6-O6	6.42	132.45	128.60
35	2	877	G	N3-C4-C5	6.42	131.81	128.60
35	2	617	U	C2-N3-C4	-6.42	123.15	127.00
35	2	881	A	C5-N7-C8	-6.42	100.69	103.90
35	2	479	C	N1-C1'-C2'	-6.42	104.94	112.00
35	2	91	G	N3-C4-N9	6.41	129.85	126.00
35	2	527	A	C8-N9-C4	6.41	108.36	105.80
35	2	108	A	N7-C8-N9	6.41	117.01	113.80
35	2	479	C	C3'-C2'-C1'	-6.41	96.37	101.50
35	2	123	G	C5-N7-C8	-6.41	101.10	104.30
35	2	614	C	C6-N1-C2	-6.41	117.74	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	1591	C	C2-N3-C4	-6.40	116.70	119.90
35	2	496	G	N3-C4-C5	6.40	131.80	128.60
35	2	308	C	C5-C6-N1	-6.40	117.80	121.00
35	2	1080	U	C6-N1-C2	6.40	124.84	121.00
35	2	154	G	C8-N9-C4	-6.40	103.84	106.40
35	2	440	U	N1-C2-O2	6.40	127.28	122.80
35	2	36	C	C4-C5-C6	-6.40	114.20	117.40
35	2	463	U	C5-C6-N1	-6.39	119.50	122.70
35	2	465	G	C4-C5-N7	6.39	113.36	110.80
35	2	86	A	C4-N9-C1'	-6.39	114.80	126.30
35	2	872	G	C8-N9-C4	6.39	108.96	106.40
35	2	461	G	N9-C1'-C2'	-6.39	104.97	112.00
35	2	45	U	C6-N1-C2	-6.38	117.17	121.00
35	2	199	G	C4-C5-N7	6.38	113.35	110.80
35	2	408	C	C6-N1-C2	6.38	122.85	120.30
15	c	161	PRO	N-CA-C	6.38	128.69	112.10
35	2	307	G	C6-N1-C2	6.38	128.93	125.10
35	2	295	A	N1-C6-N6	6.38	122.43	118.60
35	2	316	A	N1-C2-N3	-6.38	126.11	129.30
35	2	488	G	N9-C4-C5	-6.38	102.85	105.40
35	2	504	U	N1-C2-N3	-6.38	111.07	114.90
35	2	202	A	C5-N7-C8	-6.38	100.71	103.90
35	2	157	A	N7-C8-N9	6.37	116.99	113.80
35	2	314	C	C6-N1-C1'	-6.37	113.15	120.80
35	2	463	U	N3-C4-C5	6.37	118.42	114.60
16	d	106	TYR	CB-CA-C	-6.37	97.66	110.40
35	2	124	A	N7-C8-N9	-6.37	110.62	113.80
35	2	69	G	C6-C5-N7	6.37	134.22	130.40
35	2	72	A	N1-C2-N3	-6.37	126.12	129.30
35	2	375	U	C6-N1-C2	6.37	124.82	121.00
35	2	69	G	N3-C4-N9	-6.36	122.18	126.00
35	2	185	U	C3'-C2'-C1'	-6.36	96.41	101.50
19	j	881	GLN	C-N-CA	6.36	137.59	121.70
35	2	192	U	N1-C2-O2	6.36	127.25	122.80
35	2	466	U	C2-N3-C4	-6.36	123.19	127.00
35	2	975	C	N1-C2-O2	-6.36	115.09	118.90
36	3	85	A	C5-N7-C8	-6.36	100.72	103.90
35	2	408	C	C5-C6-N1	-6.36	117.82	121.00
19	i	881	GLN	C-N-CA	6.35	137.59	121.70
35	2	146	U	N1-C2-O2	-6.35	118.35	122.80
35	2	88	U	C6-N1-C2	6.35	124.81	121.00
35	2	550	A	O4'-C1'-N9	-6.35	103.12	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	540	G	N9-C4-C5	6.35	107.94	105.40
35	2	82	U	C3'-C2'-C1'	-6.34	96.43	101.50
35	2	331	A	N7-C8-N9	6.34	116.97	113.80
35	2	875	G	N3-C4-C5	6.34	131.77	128.60
35	2	260	U	N1-C2-N3	6.34	118.70	114.90
35	2	24	U	C6-N1-C1'	-6.33	112.33	121.20
35	2	128	U	N1-C2-O2	6.33	127.23	122.80
35	2	425	A	C5-N7-C8	6.33	107.07	103.90
35	2	868	G	O4'-C1'-N9	-6.33	103.14	108.20
35	2	1075	C	N3-C4-C5	6.33	124.43	121.90
35	2	1088	A	C6-C5-N7	-6.33	127.87	132.30
35	2	28	A	N9-C4-C5	6.33	108.33	105.80
35	2	316	A	C4-C5-N7	6.33	113.86	110.70
35	2	322	G	C6-C5-N7	-6.33	126.61	130.40
35	2	184	C	C5-C4-N4	-6.31	115.78	120.20
35	2	305	C	C2-N3-C4	6.31	123.06	119.90
35	2	54	C	C6-N1-C2	6.31	122.82	120.30
35	2	344	A	N1-C6-N6	6.31	122.39	118.60
36	3	249	U	C2-N1-C1'	-6.31	110.13	117.70
35	2	195	G	N1-C6-O6	6.31	123.68	119.90
19	i	482	GLN	CB-CA-C	-6.30	97.79	110.40
27	u	67	PRO	N-CA-CB	6.30	110.87	103.30
35	2	1042	G	C5-C6-O6	-6.30	124.82	128.60
35	2	539	G	C8-N9-C1'	6.30	135.19	127.00
19	j	482	GLN	CB-CA-C	-6.29	97.82	110.40
35	2	1606	C	N3-C2-O2	6.29	126.30	121.90
16	d	46	PHE	CB-CA-C	-6.29	97.83	110.40
35	2	1097	U	N3-C4-C5	-6.29	110.83	114.60
35	2	347	G	C5-N7-C8	-6.28	101.16	104.30
35	2	484	C	C6-N1-C2	6.28	122.81	120.30
35	2	1095	U	C2-N1-C1'	6.28	125.24	117.70
35	2	151	G	N9-C1'-C2'	-6.28	105.09	112.00
35	2	360	A	N3-C4-C5	6.28	131.20	126.80
35	2	474	A	N1-C2-N3	6.28	132.44	129.30
15	c	111	PHE	O-C-N	-6.27	109.19	121.10
35	2	341	A	C4-C5-N7	6.26	113.83	110.70
35	2	186	C	C6-N1-C2	-6.26	117.80	120.30
35	2	251	A	N1-C2-N3	-6.26	126.17	129.30
35	2	457	G	C4-N9-C1'	-6.26	118.36	126.50
35	2	1046	G	C8-N9-C4	6.26	108.90	106.40
35	2	164	A	C4-N9-C1'	-6.26	115.04	126.30
35	2	431	C	C4-C5-C6	-6.26	114.27	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	537	G	O4'-C1'-N9	-6.26	103.19	108.20
35	2	877	G	C8-N9-C4	6.25	108.90	106.40
35	2	386	G	N1-C6-O6	6.25	123.65	119.90
14	b	127	ALA	N-CA-CB	-6.25	101.35	110.10
35	2	955	A	C6-C5-N7	-6.25	127.92	132.30
35	2	1048	G	C8-N9-C1'	6.25	135.13	127.00
35	2	870	C	N3-C4-C5	6.25	124.40	121.90
35	2	163	G	N9-C1'-C2'	-6.25	105.13	112.00
35	2	587	C	C6-N1-C2	-6.25	117.80	120.30
35	2	124	A	N1-C6-N6	6.25	122.35	118.60
35	2	548	G	C5-C6-O6	-6.25	124.85	128.60
35	2	1043	A	N1-C6-N6	6.25	122.35	118.60
35	2	880	C	C4-C5-C6	-6.24	114.28	117.40
35	2	527	A	N9-C4-C5	-6.24	103.31	105.80
35	2	183	U	C5-C6-N1	6.23	125.82	122.70
35	2	550	A	N9-C1'-C2'	-6.23	105.14	112.00
35	2	167	U	N3-C4-C5	6.23	118.34	114.60
35	2	99	C	N1-C2-N3	-6.23	114.84	119.20
35	2	965	U	N1-C2-O2	6.23	127.16	122.80
35	2	206	A	C5-C6-N1	-6.23	114.59	117.70
28	v	82	PRO	N-CA-CB	6.23	110.77	103.30
36	3	250	G	N3-C4-N9	-6.22	122.27	126.00
35	2	910	C	C6-N1-C1'	6.22	128.26	120.80
16	d	140	LYS	N-CA-CB	6.22	121.80	110.60
35	2	1026	A	C8-N9-C4	-6.22	103.31	105.80
35	2	504	U	C6-N1-C2	6.21	124.73	121.00
35	2	1080	U	C2-N3-C4	-6.21	123.27	127.00
35	2	376	C	C4-C5-C6	-6.21	114.29	117.40
35	2	464	A	C5-C6-N6	-6.21	118.73	123.70
35	2	312	A	C2-N3-C4	-6.21	107.49	110.60
35	2	503	G	C5-C6-N1	-6.21	108.39	111.50
35	2	393	C	O4'-C1'-N1	-6.21	103.23	108.20
35	2	1591	C	N1-C2-O2	-6.21	115.17	118.90
35	2	33	U	N1-C2-N3	6.20	118.62	114.90
35	2	209	U	C6-N1-C1'	-6.20	112.52	121.20
35	2	67	A	C4-C5-C6	-6.20	113.90	117.00
35	2	196	G	C6-C5-N7	6.19	134.11	130.40
35	2	497	G	C2-N3-C4	-6.19	108.80	111.90
35	2	928	U	C6-N1-C2	-6.19	117.29	121.00
35	2	309	C	C2-N3-C4	6.19	122.99	119.90
35	2	1044	U	C2-N1-C1'	6.19	125.12	117.70
35	2	186	C	N3-C2-O2	6.18	126.23	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	510	G	N3-C2-N2	-6.18	115.57	119.90
35	2	546	U	C5-C6-N1	-6.18	119.61	122.70
35	2	328	A	C4-C5-N7	6.18	113.79	110.70
34	1	47	PRO	N-CA-CB	6.18	110.71	103.30
35	2	80	A	N3-C4-N9	6.18	132.34	127.40
35	2	962	C	N1-C2-O2	6.18	122.61	118.90
35	2	524	U	N1-C2-N3	6.18	118.61	114.90
35	2	457	G	C3'-C2'-C1'	-6.17	96.56	101.50
35	2	99	C	N3-C2-O2	-6.17	117.58	121.90
35	2	388	G	C2-N3-C4	-6.17	108.81	111.90
35	2	254	A	N9-C4-C5	-6.17	103.33	105.80
35	2	955	A	C4-C5-N7	6.17	113.78	110.70
35	2	872	G	C8-N9-C1'	6.17	135.01	127.00
35	2	935	U	C6-N1-C1'	-6.16	112.57	121.20
35	2	75	U	N1-C2-O2	6.16	127.11	122.80
35	2	48	G	C8-N9-C1'	-6.16	119.00	127.00
35	2	91	G	C8-N9-C1'	-6.16	119.00	127.00
35	2	360	A	N3-C4-N9	-6.15	122.48	127.40
16	d	107	ARG	CB-CA-C	-6.15	98.11	110.40
35	2	362	G	N3-C4-N9	-6.15	122.31	126.00
35	2	1042	G	C6-N1-C2	6.14	128.79	125.10
35	2	1081	A	C5-C6-N1	-6.14	114.63	117.70
35	2	927	C	C5-C6-N1	6.14	124.07	121.00
35	2	876	G	C8-N9-C4	6.14	108.86	106.40
35	2	530	C	P-O3'-C3'	-6.14	112.33	119.70
35	2	481	A	O5'-P-OP1	-6.14	100.18	105.70
35	2	314	C	N1-C1'-C2'	6.13	121.98	114.00
35	2	548	G	N9-C1'-C2'	-6.13	105.25	112.00
35	2	1611	A	N7-C8-N9	6.13	116.87	113.80
36	3	91	G	C8-N9-C4	6.13	108.85	106.40
35	2	271	A	N9-C1'-C2'	-6.13	105.26	112.00
35	2	117	U	N3-C4-O4	-6.13	115.11	119.40
35	2	448	C	C5-C6-N1	6.13	124.06	121.00
36	3	103	G	C5-C6-O6	-6.12	124.92	128.60
35	2	532	U	C5-C4-O4	-6.12	122.23	125.90
35	2	1599	C	N1-C2-O2	6.12	122.57	118.90
35	2	549	G	N1-C6-O6	-6.12	116.23	119.90
19	i	480	TYR	N-CA-CB	6.12	121.61	110.60
35	2	126	A	C5-C6-N6	-6.11	118.81	123.70
35	2	1062	A	N9-C4-C5	-6.11	103.36	105.80
35	2	1476	C	C6-N1-C2	6.11	122.75	120.30
16	d	139	GLN	CB-CA-C	-6.11	98.18	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	885	G	N3-C4-N9	-6.11	122.33	126.00
35	2	537	G	C5-N7-C8	-6.11	101.25	104.30
16	d	117	ARG	N-CA-CB	6.11	121.59	110.60
35	2	456	A	N9-C1'-C2'	-6.11	105.28	112.00
35	2	1088	A	N9-C4-C5	-6.11	103.36	105.80
35	2	549	G	O5'-P-OP2	-6.11	100.20	105.70
35	2	501	U	C2-N1-C1'	-6.10	110.38	117.70
35	2	329	G	C4-C5-N7	6.10	113.24	110.80
35	2	483	A	OP2-P-O3'	6.10	118.61	105.20
35	2	288	A	N3-C4-N9	-6.09	122.53	127.40
35	2	493	U	N1-C2-N3	-6.09	111.24	114.90
35	2	624	G	C5-C6-N1	-6.09	108.45	111.50
19	j	480	TYR	N-CA-CB	6.09	121.57	110.60
35	2	423	G	C8-N9-C4	-6.09	103.96	106.40
35	2	102	U	N3-C4-C5	6.09	118.25	114.60
35	2	402	C	O5'-P-OP2	6.09	118.01	110.70
35	2	483	A	C5-N7-C8	-6.09	100.86	103.90
35	2	959	U	N3-C4-C5	6.09	118.25	114.60
35	2	51	A	N1-C2-N3	-6.08	126.26	129.30
35	2	81	G	C8-N9-C4	6.08	108.83	106.40
35	2	117	U	C5-C4-O4	6.08	129.55	125.90
35	2	331	A	C8-N9-C4	-6.08	103.37	105.80
35	2	522	U	C6-N1-C2	-6.08	117.35	121.00
35	2	113	U	C2-N1-C1'	-6.08	110.41	117.70
35	2	284	G	C5-C6-O6	-6.08	124.95	128.60
35	2	404	G	C2-N3-C4	-6.08	108.86	111.90
35	2	538	A	C5-C6-N6	-6.08	118.84	123.70
35	2	593	U	C4-C5-C6	6.08	123.35	119.70
35	2	196	G	C6-N1-C2	6.08	128.75	125.10
35	2	284	G	N9-C4-C5	-6.08	102.97	105.40
35	2	75	U	C2-N1-C1'	6.07	124.99	117.70
35	2	497	G	N9-C4-C5	-6.07	102.97	105.40
16	d	114	ARG	N-CA-CB	6.07	121.53	110.60
35	2	546	U	N3-C4-C5	6.07	118.24	114.60
35	2	42	G	C4-N9-C1'	6.07	134.39	126.50
35	2	343	C	C4-C5-C6	-6.07	114.37	117.40
35	2	430	G	C2-N3-C4	-6.07	108.87	111.90
16	d	118	TRP	CB-CA-C	-6.07	98.27	110.40
35	2	401	A	C8-N9-C1'	6.06	138.61	127.70
35	2	442	C	C2-N1-C1'	-6.06	112.13	118.80
36	3	268	G	C6-C5-N7	-6.06	126.76	130.40
35	2	269	G	C4-N9-C1'	-6.06	118.62	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	521	A	N3-C4-C5	6.06	131.04	126.80
35	2	211	U	N3-C4-C5	6.06	118.23	114.60
36	3	79	G	C4-C5-N7	6.06	113.22	110.80
16	d	125	HIS	CB-CA-C	-6.05	98.29	110.40
35	2	964	U	C5-C6-N1	6.05	125.73	122.70
35	2	1024	U	N3-C4-C5	-6.05	110.97	114.60
35	2	351	C	C5-C6-N1	-6.05	117.97	121.00
29	w	94	PRO	N-CA-CB	6.05	110.56	103.30
36	3	85	A	C5-C6-N6	-6.05	118.86	123.70
35	2	288	A	N7-C8-N9	-6.04	110.78	113.80
35	2	334	G	C3'-C2'-C1'	-6.04	96.66	101.50
35	2	913	G	N3-C4-C5	-6.04	125.58	128.60
19	j	602	SER	C-N-CA	-6.04	106.59	121.70
27	u	169	PRO	N-CA-CB	6.04	110.55	103.30
35	2	164	A	N1-C2-N3	-6.04	126.28	129.30
35	2	485	A	C5-C6-N6	-6.04	118.87	123.70
35	2	922	G	C5-N7-C8	-6.04	101.28	104.30
19	i	855	LEU	N-CA-C	6.04	127.31	111.00
35	2	41	A	C4-N9-C1'	6.04	137.17	126.30
35	2	354	C	C5-C6-N1	6.04	124.02	121.00
35	2	354	C	N3-C4-N4	6.04	122.23	118.00
35	2	295	A	C6-C5-N7	-6.04	128.07	132.30
35	2	71	A	C8-N9-C4	6.03	108.21	105.80
35	2	353	A	C5-C6-N6	-6.03	118.87	123.70
35	2	466	U	N3-C2-O2	-6.03	117.98	122.20
35	2	136	C	N1-C2-N3	6.03	123.42	119.20
35	2	430	G	C5-C6-O6	-6.03	124.98	128.60
35	2	529	A	C4-C5-N7	6.03	113.72	110.70
35	2	926	A	C8-N9-C4	6.03	108.21	105.80
35	2	334	G	N9-C1'-C2'	-6.03	105.37	112.00
35	2	1579	U	C2-N1-C1'	6.03	124.93	117.70
35	2	301	A	N1-C6-N6	6.03	122.22	118.60
36	3	257	G	C2-N3-C4	-6.03	108.89	111.90
35	2	497	G	C4-C5-N7	6.02	113.21	110.80
19	j	855	LEU	N-CA-C	6.02	127.26	111.00
35	2	353	A	C6-C5-N7	-6.02	128.09	132.30
35	2	1052	U	C6-N1-C1'	6.02	129.63	121.20
35	2	424	C	N1-C2-O2	6.02	122.51	118.90
35	2	963	A	C8-N9-C4	6.02	108.21	105.80
35	2	1052	U	C2-N1-C1'	-6.02	110.48	117.70
35	2	419	G	C5-N7-C8	-6.01	101.29	104.30
35	2	1039	A	C4-C5-N7	6.01	113.71	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	243	G	N3-C4-N9	6.01	129.61	126.00
35	2	913	G	N7-C8-N9	6.01	116.10	113.10
35	2	401	A	C4-C5-C6	-6.01	114.00	117.00
35	2	285	G	C2-N3-C4	-6.00	108.90	111.90
35	2	514	G	N3-C4-C5	6.00	131.60	128.60
35	2	347	G	N9-C1'-C2'	-6.00	105.40	112.00
21	o	73	ALA	N-CA-C	-6.00	94.80	111.00
35	2	36	C	N3-C4-C5	6.00	124.30	121.90
35	2	82	U	C2'-C3'-O3'	6.00	123.30	113.70
35	2	593	U	C2-N1-C1'	6.00	124.90	117.70
19	i	620	GLN	CB-CA-C	-6.00	98.40	110.40
35	2	441	A	C6-C5-N7	-6.00	128.10	132.30
35	2	103	A	N3-C4-N9	6.00	132.20	127.40
35	2	486	G	C4-C5-C6	6.00	122.40	118.80
35	2	41	A	C8-N9-C1'	-5.99	116.91	127.70
35	2	276	C	N3-C4-N4	5.99	122.20	118.00
35	2	365	G	C4'-C3'-O3'	5.99	124.99	113.00
35	2	1048	G	C8-N9-C4	5.99	108.80	106.40
35	2	477	A	C6-C5-N7	-5.99	128.11	132.30
35	2	1025	A	N3-C4-C5	-5.99	122.61	126.80
35	2	202	A	C4-C5-N7	5.99	113.69	110.70
35	2	243	G	N9-C1'-C2'	-5.99	105.41	112.00
35	2	356	G	N9-C4-C5	-5.99	103.00	105.40
19	j	620	GLN	CB-CA-C	-5.99	98.43	110.40
35	2	502	U	C6-N1-C1'	-5.99	112.82	121.20
35	2	447	U	C4-C5-C6	-5.98	116.11	119.70
35	2	79	C	N3-C2-O2	-5.98	117.71	121.90
35	2	951	A	N3-C4-N9	-5.98	122.61	127.40
35	2	1173	C	N3-C4-C5	5.98	124.29	121.90
28	v	85	PRO	N-CA-CB	5.98	110.47	103.30
35	2	71	A	C2-N3-C4	-5.98	107.61	110.60
35	2	535	A	C5-C6-N1	5.98	120.69	117.70
35	2	592	A	N3-C4-C5	-5.98	122.62	126.80
35	2	877	G	N9-C1'-C2'	-5.97	105.43	112.00
35	2	442	C	N1-C2-O2	-5.97	115.32	118.90
35	2	512	A	N3-C4-C5	5.97	130.98	126.80
35	2	173	A	N9-C1'-C2'	-5.97	105.44	112.00
35	2	1088	A	N3-C4-N9	5.97	132.17	127.40
35	2	271	A	C3'-C2'-C1'	-5.96	96.73	101.50
35	2	312	A	N3-C4-C5	5.96	130.97	126.80
35	2	360	A	O4'-C1'-N9	5.96	112.97	108.20
35	2	447	U	C2-N1-C1'	-5.96	110.55	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	482	U	C4-C5-C6	-5.96	116.12	119.70
32	z	77	PRO	N-CA-CB	5.96	110.45	103.30
35	2	443	C	C2-N1-C1'	-5.96	112.25	118.80
35	2	214	G	N9-C4-C5	-5.95	103.02	105.40
35	2	288	A	C8-N9-C4	5.95	108.18	105.80
16	d	74	PRO	N-CA-CB	5.95	110.44	103.30
35	2	1086	A	C5-C6-N6	-5.95	118.94	123.70
35	2	458	G	N9-C4-C5	-5.95	103.02	105.40
35	2	593	U	N3-C4-C5	-5.94	111.03	114.60
36	3	194	G	N3-C4-N9	5.94	129.57	126.00
35	2	513	U	C5-C4-O4	5.94	129.47	125.90
35	2	966	A	C6-N1-C2	5.94	122.16	118.60
35	2	1078	C	C5-C6-N1	5.94	123.97	121.00
36	3	111	G	C4-N9-C1'	-5.94	118.78	126.50
35	2	90	C	N1-C2-O2	5.93	122.46	118.90
35	2	199	G	N1-C6-O6	5.93	123.46	119.90
35	2	481	A	C4-C5-N7	5.93	113.67	110.70
35	2	467	G	P-O3'-C3'	-5.93	112.58	119.70
23	q	67	PRO	N-CA-CB	5.93	110.41	103.30
28	v	47	PRO	N-CA-CB	5.93	110.41	103.30
35	2	412	A	C4-C5-N7	5.93	113.66	110.70
35	2	282	C	C2-N1-C1'	5.93	125.32	118.80
35	2	119	A	N9-C4-C5	-5.92	103.43	105.80
35	2	977	A	C5-C6-N1	5.92	120.66	117.70
16	d	114	ARG	CB-CA-C	-5.92	98.57	110.40
35	2	353	A	C2-N3-C4	-5.91	107.64	110.60
35	2	514	G	C4-C5-C6	-5.91	115.25	118.80
35	2	1037	C	C4-C5-C6	-5.91	114.44	117.40
32	z	29	PRO	N-CA-CB	5.91	110.39	103.30
35	2	512	A	C5-C6-N6	5.91	128.43	123.70
35	2	618	U	C5-C6-N1	5.91	125.65	122.70
35	2	39	A	O4'-C1'-N9	5.91	112.92	108.20
35	2	392	G	C6-C5-N7	-5.91	126.86	130.40
35	2	405	C	N1-C2-O2	5.90	122.44	118.90
35	2	900	A	C4-C5-N7	5.90	113.65	110.70
35	2	933	A	C2-N3-C4	-5.90	107.65	110.60
35	2	973	A	N1-C6-N6	5.90	122.14	118.60
35	2	83	G	N3-C4-N9	-5.90	122.46	126.00
35	2	1037	C	C5-C6-N1	5.90	123.95	121.00
35	2	78	A	OP2-P-O3'	5.90	118.17	105.20
36	3	257	G	N3-C4-N9	-5.90	122.46	126.00
35	2	524	U	O4'-C1'-N1	5.89	112.92	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	529	A	C2-N3-C4	5.89	113.55	110.60
35	2	537	G	C4-C5-N7	5.89	113.16	110.80
35	2	1024	U	N3-C4-O4	5.89	123.53	119.40
35	2	1050	G	N7-C8-N9	5.89	116.05	113.10
35	2	550	A	O5'-P-OP2	-5.89	100.40	105.70
35	2	282	C	C4-C5-C6	-5.89	114.46	117.40
35	2	869	A	N1-C6-N6	5.89	122.13	118.60
35	2	253	A	C6-C5-N7	-5.89	128.18	132.30
36	3	84	G	N3-C2-N2	-5.89	115.78	119.90
35	2	389	G	N1-C6-O6	5.88	123.43	119.90
35	2	941	A	C2-N3-C4	-5.88	107.66	110.60
16	d	46	PHE	N-CA-CB	5.88	121.19	110.60
35	2	299	A	N9-C4-C5	-5.88	103.45	105.80
35	2	363	G	C4-N9-C1'	-5.88	118.85	126.50
35	2	328	A	N3-C4-N9	-5.88	122.70	127.40
35	2	876	G	N9-C4-C5	-5.88	103.05	105.40
29	w	57	PRO	N-CA-CB	5.88	110.35	103.30
35	2	905	A	N3-C4-N9	-5.88	122.70	127.40
35	2	373	G	C5-C6-O6	5.87	132.12	128.60
35	2	276	C	C4-C5-C6	-5.87	114.47	117.40
35	2	196	G	C4-C5-C6	-5.87	115.28	118.80
35	2	29	U	OP1-P-O3'	5.86	118.10	105.20
35	2	456	A	N7-C8-N9	5.86	116.73	113.80
35	2	493	U	P-O3'-C3'	-5.86	112.66	119.70
16	d	117	ARG	CB-CA-C	-5.86	98.68	110.40
35	2	404	G	N9-C1'-C2'	-5.86	105.56	112.00
16	d	107	ARG	N-CA-CB	5.86	121.14	110.60
35	2	378	A	O4'-C1'-N9	5.86	112.88	108.20
35	2	898	A	C8-N9-C4	5.86	108.14	105.80
35	2	134	U	N3-C2-O2	-5.85	118.10	122.20
35	2	325	G	C2-N3-C4	-5.85	108.97	111.90
35	2	874	C	C5-C6-N1	5.85	123.93	121.00
2	G	3194	ASP	N-CA-C	5.85	126.80	111.00
35	2	506	A	C8-N9-C4	5.85	108.14	105.80
35	2	61	A	N3-C4-C5	5.85	130.90	126.80
23	q	142	PRO	N-CA-CB	5.85	110.32	103.30
35	2	72	A	C4-C5-C6	-5.85	114.08	117.00
35	2	619	A	N1-C6-N6	-5.85	115.09	118.60
35	2	30	G	C1'-O4'-C4'	-5.85	105.22	109.90
35	2	151	G	N7-C8-N9	-5.85	110.18	113.10
35	2	269	G	C8-N9-C4	5.85	108.74	106.40
35	2	389	G	N9-C1'-C2'	-5.85	105.57	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	623	A	C8-N9-C4	-5.84	103.46	105.80
35	2	1045	C	C6-N1-C1'	5.84	127.81	120.80
35	2	31	C	O4'-C1'-N1	5.84	112.87	108.20
35	2	101	U	N3-C4-C5	-5.84	111.10	114.60
35	2	200	A	C5-N7-C8	-5.84	100.98	103.90
35	2	1083	G	C8-N9-C1'	5.84	134.59	127.00
35	2	895	G	C4-C5-N7	5.84	113.14	110.80
35	2	301	A	C8-N9-C4	-5.84	103.47	105.80
35	2	307	G	C4-C5-N7	5.84	113.14	110.80
36	3	247	G	C4-C5-N7	5.84	113.13	110.80
35	2	953	G	N9-C4-C5	-5.83	103.07	105.40
35	2	1051	G	N3-C4-C5	-5.83	125.68	128.60
35	2	389	G	C4-C5-N7	5.83	113.13	110.80
35	2	905	A	N7-C8-N9	5.83	116.72	113.80
35	2	24	U	C2-N1-C1'	5.83	124.69	117.70
35	2	71	A	C5-C6-N1	-5.83	114.79	117.70
16	d	101	LYS	N-CA-CB	5.83	121.09	110.60
35	2	418	G	C6-C5-N7	-5.83	126.91	130.40
35	2	1615	C	C6-N1-C2	-5.83	117.97	120.30
35	2	272	U	O5'-P-OP1	5.82	117.69	110.70
35	2	393	C	C2-N1-C1'	5.82	125.21	118.80
35	2	84	A	C3'-C2'-C1'	-5.82	96.84	101.50
35	2	98	U	C2-N1-C1'	5.82	124.69	117.70
35	2	124	A	N9-C4-C5	-5.82	103.47	105.80
35	2	72	A	N9-C1'-C2'	-5.82	105.60	112.00
35	2	67	A	N1-C2-N3	-5.81	126.39	129.30
35	2	871	G	C4-N9-C1'	-5.81	118.94	126.50
35	2	523	G	C4-N9-C1'	-5.81	118.95	126.50
35	2	495	C	O5'-P-OP2	-5.81	100.47	105.70
35	2	1053	G	N1-C2-N2	5.81	121.43	116.20
35	2	522	U	C5-C6-N1	5.81	125.60	122.70
35	2	1056	U	C2-N3-C4	5.80	130.48	127.00
28	v	136	PRO	N-CA-CB	5.80	110.26	103.30
35	2	121	U	C6-N1-C1'	5.80	129.32	121.20
35	2	196	G	C5-C6-N1	-5.80	108.60	111.50
35	2	404	G	C4-N9-C1'	-5.80	118.96	126.50
35	2	418	G	C2-N3-C4	-5.80	109.00	111.90
35	2	430	G	C8-N9-C4	5.80	108.72	106.40
35	2	534	A	N1-C6-N6	-5.80	115.12	118.60
16	d	126	LYS	CB-CA-C	-5.80	98.81	110.40
35	2	441	A	C5-N7-C8	-5.80	101.00	103.90
35	2	97	C	C2-N3-C4	-5.79	117.00	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	202	A	N9-C4-C5	-5.79	103.48	105.80
35	2	98	U	N1-C2-O2	5.79	126.85	122.80
35	2	189	C	N3-C4-C5	-5.79	119.58	121.90
35	2	519	C	C6-N1-C1'	5.79	127.75	120.80
35	2	396	G	N1-C2-N2	5.79	121.41	116.20
35	2	464	A	C5-C6-N1	5.78	120.59	117.70
35	2	84	A	O4'-C1'-N9	-5.78	103.58	108.20
35	2	970	A	C8-N9-C4	5.78	108.11	105.80
35	2	1077	C	N3-C4-C5	5.78	124.21	121.90
35	2	880	C	N1-C1'-C2'	-5.77	105.65	112.00
19	j	113	ASP	N-CA-C	5.77	126.59	111.00
35	2	891	A	O4'-C1'-N9	-5.77	103.58	108.20
19	i	113	ASP	N-CA-C	5.77	126.57	111.00
35	2	286	C	N1-C2-O2	-5.77	115.44	118.90
36	3	111	G	N3-C4-N9	-5.77	122.54	126.00
35	2	485	A	N1-C6-N6	5.77	122.06	118.60
35	2	481	A	N3-C4-C5	5.76	130.84	126.80
35	2	178	U	N1-C2-O2	5.76	126.83	122.80
35	2	210	A	C5-C6-N6	-5.76	119.09	123.70
35	2	466	U	N3-C4-O4	-5.76	115.37	119.40
35	2	895	G	C5-C6-O6	-5.76	125.14	128.60
16	d	118	TRP	N-CA-CB	5.76	120.97	110.60
35	2	302	U	C5-C6-N1	5.76	125.58	122.70
35	2	875	G	C4-N9-C1'	-5.76	119.02	126.50
35	2	299	A	C2-N3-C4	-5.76	107.72	110.60
35	2	355	G	N9-C1'-C2'	-5.76	105.67	112.00
35	2	361	C	OP1-P-O3'	5.75	117.86	105.20
35	2	869	A	C5-C6-N6	-5.75	119.10	123.70
35	2	920	U	C5-C6-N1	5.75	125.58	122.70
35	2	1529	C	C6-N1-C2	5.75	122.60	120.30
35	2	33	U	N3-C4-C5	-5.75	111.15	114.60
35	2	466	U	N1-C2-O2	5.75	126.83	122.80
35	2	32	U	C5-C6-N1	-5.75	119.83	122.70
35	2	57	G	N3-C4-C5	5.75	131.47	128.60
35	2	171	A	C2-N3-C4	-5.74	107.73	110.60
36	3	85	A	N7-C8-N9	5.74	116.67	113.80
28	v	137	PRO	N-CA-CB	5.74	110.19	103.30
35	2	1602	C	C6-N1-C1'	-5.74	113.91	120.80
16	d	48	HIS	N-CA-CB	5.74	120.93	110.60
35	2	103	A	C6-N1-C2	-5.74	115.16	118.60
35	2	260	U	O4'-C1'-N1	5.74	112.79	108.20
35	2	271	A	C8-N9-C4	5.74	108.10	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	443	C	C5-C6-N1	-5.74	118.13	121.00
35	2	1042	G	C6-C5-N7	-5.74	126.96	130.40
35	2	549	G	N7-C8-N9	-5.74	110.23	113.10
16	d	102	LEU	CB-CA-C	-5.74	99.30	110.20
35	2	144	U	C6-N1-C2	5.74	124.44	121.00
35	2	327	U	C2-N1-C1'	-5.74	110.82	117.70
35	2	242	U	N3-C2-O2	-5.73	118.19	122.20
35	2	383	G	C8-N9-C1'	5.73	134.45	127.00
35	2	520	A	N7-C8-N9	5.73	116.67	113.80
35	2	269	G	N3-C4-C5	5.73	131.47	128.60
35	2	959	U	C5-C6-N1	-5.73	119.84	122.70
35	2	460	A	C4-C5-N7	5.73	113.56	110.70
35	2	408	C	C2-N1-C1'	-5.72	112.50	118.80
35	2	1602	C	C2-N1-C1'	5.72	125.10	118.80
35	2	1080	U	C4-C5-C6	-5.72	116.27	119.70
36	3	113	G	N9-C1'-C2'	-5.72	105.71	112.00
19	j	615	PRO	CA-C-N	5.72	129.78	117.20
35	2	255	U	N3-C4-C5	5.72	118.03	114.60
35	2	1038	U	C4-C5-C6	-5.72	116.27	119.70
16	d	141	HIS	N-CA-CB	5.72	120.89	110.60
35	2	109	G	N9-C4-C5	-5.72	103.11	105.40
35	2	351	C	N3-C4-N4	-5.71	114.00	118.00
35	2	1042	G	N3-C4-C5	5.71	131.46	128.60
35	2	1029	U	C5-C6-N1	5.71	125.56	122.70
35	2	135	A	C8-N9-C1'	-5.71	117.42	127.70
35	2	1081	A	N7-C8-N9	5.71	116.66	113.80
35	2	329	G	N9-C4-C5	-5.71	103.12	105.40
35	2	625	C	C4-C5-C6	-5.71	114.55	117.40
35	2	201	G	C8-N9-C4	5.70	108.68	106.40
35	2	281	G	C2-N3-C4	-5.70	109.05	111.90
19	i	615	PRO	CA-C-N	5.70	129.74	117.20
35	2	327	U	O4'-C1'-N1	5.70	112.76	108.20
35	2	1174	C	C5-C6-N1	-5.70	118.15	121.00
35	2	489	C	C2-N3-C4	-5.70	117.05	119.90
35	2	419	G	C5-C6-N1	-5.70	108.65	111.50
35	2	498	G	N3-C4-N9	-5.70	122.58	126.00
35	2	485	A	N9-C1'-C2'	-5.69	105.74	112.00
35	2	26	A	C5-C6-N6	-5.69	119.15	123.70
35	2	927	C	C4-C5-C6	-5.69	114.55	117.40
35	2	69	G	C4-N9-C1'	-5.69	119.10	126.50
35	2	101	U	N3-C2-O2	-5.69	118.22	122.20
35	2	267	U	C2-N1-C1'	-5.69	110.88	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	373	G	N3-C4-C5	-5.69	125.76	128.60
35	2	403	G	C4-C5-N7	5.69	113.08	110.80
35	2	28	A	N7-C8-N9	5.69	116.64	113.80
35	2	243	G	C5-N7-C8	-5.68	101.46	104.30
35	2	960	U	N1-C2-O2	-5.68	118.82	122.80
35	2	1076	A	N1-C6-N6	5.68	122.01	118.60
35	2	288	A	N3-C4-C5	5.68	130.77	126.80
35	2	334	G	N9-C4-C5	-5.68	103.13	105.40
35	2	389	G	C6-C5-N7	-5.68	126.99	130.40
35	2	324	U	N1-C1'-C2'	-5.67	105.76	112.00
35	2	538	A	C6-C5-N7	-5.67	128.33	132.30
35	2	59	C	N3-C4-C5	5.67	124.17	121.90
23	q	129	PRO	N-CA-CB	5.67	110.11	103.30
35	2	321	C	N3-C4-C5	-5.67	119.63	121.90
35	2	870	C	C4-C5-C6	-5.67	114.56	117.40
35	2	479	C	C5-C6-N1	5.67	123.83	121.00
35	2	1095	U	C5-C6-N1	5.67	125.53	122.70
35	2	629	U	C2-N1-C1'	-5.67	110.90	117.70
35	2	1038	U	C5-C6-N1	5.67	125.53	122.70
35	2	83	G	N9-C1'-C2'	-5.66	105.77	112.00
35	2	361	C	C2-N1-C1'	-5.66	112.57	118.80
35	2	617	U	C4-C5-C6	-5.66	116.30	119.70
35	2	342	C	N1-C1'-C2'	-5.66	105.77	112.00
35	2	123	G	C6-C5-N7	-5.66	127.00	130.40
35	2	26	A	N1-C6-N6	5.66	121.99	118.60
35	2	1076	A	C5-N7-C8	-5.66	101.07	103.90
35	2	346	G	C4-N9-C1'	5.65	133.85	126.50
35	2	82	U	N3-C4-C5	5.65	117.99	114.60
35	2	407	A	O4'-C1'-N9	5.65	112.72	108.20
35	2	27	U	N3-C4-C5	5.65	117.99	114.60
35	2	362	G	C8-N9-C1'	5.65	134.34	127.00
29	w	120	PRO	N-CA-CB	5.65	110.08	103.30
35	2	165	G	C4-C5-N7	5.65	113.06	110.80
35	2	427	C	N1-C2-O2	5.65	122.29	118.90
35	2	1045	C	N3-C4-N4	-5.65	114.05	118.00
35	2	351	C	C6-N1-C2	5.65	122.56	120.30
23	q	88	PRO	N-CA-CB	5.64	110.07	103.30
35	2	301	A	N1-C2-N3	5.64	132.12	129.30
35	2	324	U	N1-C2-O2	5.64	126.75	122.80
35	2	516	G	C4-C5-C6	-5.64	115.42	118.80
35	2	87	C	C6-N1-C2	-5.64	118.04	120.30
35	2	296	U	C5-C4-O4	-5.64	122.52	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	948	G	N3-C4-C5	5.64	131.42	128.60
35	2	347	G	N3-C4-N9	5.64	129.38	126.00
35	2	922	G	O4'-C1'-N9	5.64	112.71	108.20
35	2	190	C	N1-C2-O2	5.63	122.28	118.90
35	2	375	U	N3-C4-O4	-5.63	115.45	119.40
35	2	494	U	C4-C5-C6	-5.63	116.32	119.70
35	2	510	G	C2-N3-C4	-5.63	109.08	111.90
35	2	954	G	C4-C5-N7	5.63	113.05	110.80
35	2	328	A	C5-C6-N1	-5.63	114.89	117.70
35	2	296	U	C4-C5-C6	-5.63	116.32	119.70
36	3	268	G	N1-C6-O6	5.62	123.27	119.90
16	d	105	ARG	N-CA-CB	5.62	120.72	110.60
35	2	920	U	C4-C5-C6	-5.62	116.33	119.70
35	2	973	A	C5-C6-N6	-5.62	119.20	123.70
19	i	629	SER	C-N-CA	-5.62	107.66	121.70
35	2	497	G	C4-N9-C1'	-5.62	119.20	126.50
35	2	881	A	N9-C4-C5	-5.62	103.55	105.80
35	2	307	G	N1-C2-N2	5.62	121.25	116.20
35	2	467	G	C3'-C2'-C1'	-5.61	97.01	101.50
35	2	1074	G	C3'-C2'-C1'	-5.61	97.01	101.50
35	2	1076	A	C4-C5-N7	5.61	113.51	110.70
19	j	629	SER	C-N-CA	-5.61	107.67	121.70
35	2	287	G	C5-N7-C8	-5.61	101.50	104.30
35	2	464	A	C8-N9-C4	5.60	108.04	105.80
35	2	179	A	N3-C4-C5	-5.60	122.88	126.80
35	2	35	U	C4'-C3'-O3'	5.60	124.20	113.00
35	2	357	G	N1-C6-O6	5.60	123.26	119.90
35	2	184	C	N1-C2-N3	-5.60	115.28	119.20
35	2	959	U	O4'-C1'-N1	5.60	112.68	108.20
35	2	1083	G	N1-C6-O6	5.60	123.26	119.90
35	2	450	U	N1-C2-O2	5.60	126.72	122.80
35	2	28	A	C2-N3-C4	5.59	113.40	110.60
35	2	28	A	C4-N9-C1'	5.59	136.37	126.30
35	2	431	C	C5-C4-N4	-5.59	116.28	120.20
23	q	164	PRO	N-CA-CB	5.59	110.01	103.30
35	2	74	U	C6-N1-C2	5.59	124.35	121.00
35	2	624	G	N3-C4-C5	5.59	131.40	128.60
35	2	920	U	N1-C2-O2	5.59	126.71	122.80
35	2	950	C	C4-C5-C6	-5.59	114.60	117.40
35	2	487	G	C6-C5-N7	-5.59	127.05	130.40
35	2	454	U	N3-C4-C5	-5.59	111.25	114.60
35	2	885	G	C8-N9-C4	5.59	108.63	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	63	G	N3-C4-N9	-5.58	122.65	126.00
35	2	482	U	N3-C2-O2	-5.58	118.30	122.20
35	2	1025	A	N7-C8-N9	5.58	116.59	113.80
35	2	134	U	C2-N3-C4	-5.58	123.65	127.00
35	2	309	C	C2-N1-C1'	-5.58	112.67	118.80
35	2	69	G	O4'-C1'-N9	-5.58	103.74	108.20
35	2	332	U	O4'-C1'-N1	-5.58	103.74	108.20
35	2	68	A	N9-C4-C5	5.57	108.03	105.80
35	2	87	C	C2-N3-C4	-5.57	117.11	119.90
35	2	174	U	N1-C2-O2	5.57	126.70	122.80
35	2	246	G	C8-N9-C4	-5.57	104.17	106.40
35	2	871	G	N9-C1'-C2'	-5.57	105.88	112.00
35	2	1075	C	C2-N1-C1'	-5.57	112.68	118.80
35	2	86	A	O4'-C1'-N9	5.57	112.65	108.20
35	2	130	C	N3-C4-C5	5.57	124.13	121.90
35	2	363	G	N9-C1'-C2'	-5.57	105.88	112.00
35	2	512	A	C5-C6-N1	5.56	120.48	117.70
35	2	178	U	C6-N1-C1'	-5.56	113.42	121.20
35	2	591	A	C3'-C2'-C1'	-5.56	97.05	101.50
35	2	1467	C	N1-C2-O2	-5.56	115.57	118.90
35	2	539	G	C2-N3-C4	-5.56	109.12	111.90
35	2	868	G	N3-C4-N9	-5.55	122.67	126.00
35	2	967	A	N1-C6-N6	5.55	121.93	118.60
35	2	530	C	N3-C4-N4	5.55	121.89	118.00
35	2	905	A	C8-N9-C4	-5.55	103.58	105.80
36	3	93	G	C5-N7-C8	-5.55	101.52	104.30
35	2	47	A	C8-N9-C4	-5.55	103.58	105.80
35	2	539	G	C6-N1-C2	5.55	128.43	125.10
35	2	879	G	N1-C6-O6	5.55	123.23	119.90
35	2	495	C	O4'-C1'-N1	5.54	112.63	108.20
35	2	65	A	C5-C6-N1	-5.54	114.93	117.70
35	2	481	A	C4-C5-C6	-5.54	114.23	117.00
36	3	81	G	N9-C1'-C2'	-5.54	105.91	112.00
35	2	469	C	C5-C6-N1	-5.54	118.23	121.00
35	2	86	A	C8-N9-C1'	5.53	137.66	127.70
35	2	1031	U	C5-C6-N1	-5.53	119.93	122.70
35	2	126	A	N1-C6-N6	5.53	121.92	118.60
19	j	594	ILE	N-CA-CB	5.53	123.52	110.80
35	2	194	U	C2-N1-C1'	5.53	124.33	117.70
35	2	413	U	C5-C6-N1	-5.53	119.94	122.70
19	i	630	LEU	N-CA-CB	5.53	121.45	110.40
35	2	427	C	N3-C2-O2	-5.52	118.03	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	j	630	LEU	N-CA-CB	5.52	121.44	110.40
35	2	445	A	C5-C6-N1	5.52	120.46	117.70
35	2	423	G	N3-C4-N9	5.51	129.31	126.00
35	2	504	U	OP2-P-O3'	5.51	117.33	105.20
35	2	1026	A	C2-N3-C4	5.51	113.36	110.60
35	2	1166	A	C5-C6-N6	-5.51	119.29	123.70
36	3	93	G	C4-C5-N7	5.51	113.00	110.80
35	2	285	G	N1-C6-O6	5.51	123.21	119.90
35	2	880	C	N3-C4-C5	5.51	124.10	121.90
35	2	1039	A	N7-C8-N9	-5.51	111.05	113.80
35	2	357	G	C5-N7-C8	-5.51	101.55	104.30
35	2	23	G	N7-C8-N9	5.51	115.85	113.10
35	2	464	A	O5'-P-OP1	5.51	117.31	110.70
35	2	483	A	N1-C6-N6	5.51	121.90	118.60
35	2	442	C	N3-C4-C5	5.50	124.10	121.90
35	2	382	C	C2-N1-C1'	5.50	124.85	118.80
35	2	1045	C	C6-N1-C2	5.50	122.50	120.30
35	2	200	A	N1-C6-N6	5.50	121.90	118.60
35	2	521	A	C4-C5-C6	-5.50	114.25	117.00
35	2	61	A	C4-C5-C6	-5.49	114.25	117.00
35	2	163	G	C2-N3-C4	-5.49	109.15	111.90
35	2	361	C	N3-C4-C5	5.49	124.10	121.90
35	2	1050	G	C5-N7-C8	-5.49	101.55	104.30
35	2	196	G	N1-C2-N2	5.49	121.14	116.20
35	2	481	A	C5-N7-C8	-5.49	101.15	103.90
16	d	126	LYS	N-CA-CB	5.49	120.48	110.60
29	w	122	PRO	N-CA-CB	5.49	109.89	103.30
35	2	383	G	N3-C4-C5	5.49	131.34	128.60
35	2	1076	A	C2-N3-C4	-5.49	107.86	110.60
35	2	295	A	C5-C6-N6	-5.48	119.31	123.70
35	2	926	A	C6-N1-C2	-5.48	115.31	118.60
35	2	149	C	N3-C2-O2	-5.48	118.06	121.90
35	2	288	A	N1-C2-N3	5.48	132.04	129.30
35	2	440	U	N3-C2-O2	-5.48	118.36	122.20
35	2	878	G	N1-C2-N2	5.48	121.13	116.20
36	3	81	G	N3-C4-N9	-5.48	122.71	126.00
35	2	129	U	C2-N1-C1'	5.48	124.27	117.70
35	2	1052	U	C5-C6-N1	5.48	125.44	122.70
35	2	309	C	N1-C1'-C2'	-5.48	105.98	112.00
35	2	506	A	C5-N7-C8	-5.47	101.16	103.90
35	2	900	A	N9-C1'-C2'	-5.47	105.98	112.00
35	2	1041	G	N3-C4-C5	5.47	131.34	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
30	x	35	PRO	N-CA-CB	5.47	109.87	103.30
35	2	103	A	C2-N3-C4	5.47	113.34	110.60
35	2	183	U	C4-C5-C6	-5.47	116.42	119.70
35	2	213	A	N9-C4-C5	-5.47	103.61	105.80
35	2	247	A	C2-N3-C4	5.47	113.34	110.60
35	2	428	A	OP1-P-OP2	-5.47	111.39	119.60
35	2	471	A	C2-N3-C4	-5.47	107.86	110.60
35	2	914	G	C8-N9-C1'	5.47	134.11	127.00
35	2	1052	U	N1-C1'-C2'	-5.47	105.98	112.00
27	u	144	PRO	N-CA-CB	5.47	109.86	103.30
35	2	449	C	N1-C2-O2	5.47	122.18	118.90
35	2	938	G	C8-N9-C4	5.47	108.59	106.40
35	2	940	A	N1-C6-N6	-5.47	115.32	118.60
35	2	179	A	N9-C4-C5	5.47	107.99	105.80
35	2	83	G	C4-N9-C1'	-5.47	119.39	126.50
35	2	443	C	N3-C4-N4	-5.47	114.17	118.00
35	2	550	A	N7-C8-N9	-5.47	111.07	113.80
35	2	212	U	N1-C1'-C2'	-5.46	105.99	112.00
35	2	916	U	C4-C5-C6	5.46	122.98	119.70
36	3	203	C	N3-C2-O2	-5.46	118.08	121.90
35	2	383	G	N1-C2-N2	5.46	121.11	116.20
35	2	82	U	N1-C1'-C2'	-5.46	106.00	112.00
35	2	503	G	C4-C5-C6	-5.46	115.53	118.80
35	2	1072	C	N1-C2-O2	5.46	122.17	118.90
35	2	152	U	C2-N1-C1'	-5.45	111.16	117.70
35	2	156	A	C4-C5-N7	5.45	113.43	110.70
35	2	941	A	C8-N9-C4	5.45	107.98	105.80
36	3	113	G	N3-C4-C5	5.45	131.33	128.60
19	i	616	TRP	O-C-N	-5.45	113.98	122.70
35	2	922	G	C6-N1-C2	5.45	128.37	125.10
35	2	379	U	C2-N1-C1'	5.45	124.24	117.70
36	3	70	A	N7-C8-N9	5.45	116.52	113.80
35	2	251	A	N9-C4-C5	-5.45	103.62	105.80
35	2	442	C	C6-N1-C2	5.45	122.48	120.30
35	2	516	G	N1-C6-O6	-5.45	116.63	119.90
35	2	527	A	C6-N1-C2	5.45	121.87	118.60
35	2	201	G	N1-C6-O6	5.44	123.17	119.90
19	j	616	TRP	O-C-N	-5.44	113.99	122.70
35	2	1035	G	C8-N9-C4	5.44	108.58	106.40
35	2	413	U	N3-C4-O4	-5.44	115.59	119.40
35	2	425	A	N3-C4-N9	5.44	131.75	127.40
35	2	1086	A	C5-C6-N1	5.44	120.42	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	c	250	ASN	CB-CA-C	5.44	121.28	110.40
16	d	102	LEU	N-CA-CB	5.44	121.28	110.40
35	2	111	U	C2-N1-C1'	5.44	124.22	117.70
35	2	429	G	C5-C6-N1	-5.44	108.78	111.50
35	2	546	U	N3-C4-O4	-5.44	115.59	119.40
35	2	36	C	N1-C1'-C2'	-5.43	106.02	112.00
35	2	448	C	P-O3'-C3'	-5.43	113.18	119.70
35	2	912	U	C2-N3-C4	5.43	130.26	127.00
35	2	68	A	N7-C8-N9	5.43	116.52	113.80
35	2	287	G	C6-C5-N7	-5.43	127.14	130.40
35	2	462	G	C5-C6-O6	5.43	131.86	128.60
35	2	972	G	N9-C1'-C2'	-5.43	106.03	112.00
35	2	471	A	N9-C4-C5	-5.43	103.63	105.80
35	2	914	G	OP2-P-O3'	5.43	117.14	105.20
35	2	501	U	C5-C4-O4	5.43	129.16	125.90
35	2	48	G	C5-C6-N1	5.43	114.21	111.50
35	2	413	U	N1-C1'-C2'	-5.43	106.03	112.00
35	2	284	G	N1-C6-O6	5.42	123.15	119.90
35	2	548	G	N3-C4-N9	-5.42	122.75	126.00
35	2	53	G	N1-C2-N2	5.42	121.08	116.20
35	2	291	G	N7-C8-N9	5.42	115.81	113.10
35	2	1094	G	O4'-C1'-N9	-5.42	103.87	108.20
35	2	251	A	C8-N9-C4	5.42	107.97	105.80
35	2	281	G	N9-C1'-C2'	-5.41	106.05	112.00
35	2	380	U	C5-C6-N1	-5.41	119.99	122.70
35	2	397	A	N1-C6-N6	5.41	121.85	118.60
35	2	632	U	N1-C2-N3	-5.41	111.65	114.90
35	2	377	G	N7-C8-N9	-5.41	110.39	113.10
35	2	479	C	N3-C2-O2	-5.41	118.11	121.90
35	2	632	U	C5-C6-N1	5.41	125.40	122.70
35	2	1535	U	C2-N1-C1'	5.41	124.19	117.70
35	2	959	U	N3-C2-O2	5.40	125.98	122.20
35	2	384	G	C4-C5-C6	-5.40	115.56	118.80
36	3	268	G	N3-C4-N9	5.40	129.24	126.00
35	2	310	C	N1-C2-N3	-5.40	115.42	119.20
36	3	85	A	C4-C5-N7	5.40	113.40	110.70
35	2	317	C	C4-C5-C6	-5.40	114.70	117.40
35	2	446	A	C5-C6-N6	-5.40	119.38	123.70
35	2	539	G	N9-C1'-C2'	5.40	121.02	114.00
35	2	947	U	N1-C1'-C2'	-5.40	106.06	112.00
35	2	76	A	N1-C2-N3	5.40	132.00	129.30
35	2	307	G	C4-C5-C6	-5.40	115.56	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	51	A	O4'-C1'-N9	5.39	112.52	108.20
36	3	78	C	N3-C4-C5	5.39	124.06	121.90
36	3	91	G	N3-C4-N9	-5.39	122.77	126.00
36	3	183	A	N9-C4-C5	-5.39	103.64	105.80
35	2	295	A	O4'-C1'-N9	5.39	112.51	108.20
35	2	401	A	OP1-P-O3'	5.39	117.06	105.20
35	2	958	U	C4-C5-C6	-5.39	116.47	119.70
35	2	343	C	C2-N1-C1'	-5.38	112.88	118.80
35	2	305	C	C4-C5-C6	-5.38	114.71	117.40
35	2	129	U	C6-N1-C1'	-5.38	113.67	121.20
35	2	388	G	C8-N9-C4	5.38	108.55	106.40
35	2	466	U	C6-N1-C2	5.38	124.23	121.00
35	2	879	G	N3-C4-C5	5.38	131.29	128.60
35	2	290	G	C8-N9-C4	5.38	108.55	106.40
35	2	956	C	N1-C2-O2	-5.37	115.67	118.90
35	2	84	A	P-O3'-C3'	-5.37	113.25	119.70
35	2	357	G	N9-C1'-C2'	-5.37	106.09	112.00
35	2	398	G	N3-C4-N9	5.37	129.22	126.00
35	2	491	C	C6-N1-C1'	5.37	127.24	120.80
16	d	101	LYS	CB-CA-C	-5.37	99.66	110.40
35	2	154	G	C5-N7-C8	-5.37	101.61	104.30
35	2	206	A	C2-N3-C4	-5.37	107.92	110.60
35	2	425	A	C4-C5-C6	5.37	119.68	117.00
35	2	455	C	C6-N1-C1'	5.37	127.24	120.80
35	2	918	U	N1-C2-O2	5.37	126.56	122.80
35	2	112	A	C2-N3-C4	-5.37	107.92	110.60
35	2	588	U	N3-C2-O2	-5.37	118.44	122.20
35	2	1093	A	N7-C8-N9	-5.37	111.12	113.80
35	2	591	A	C5-C6-N1	5.36	120.38	117.70
35	2	112	A	C6-C5-N7	-5.36	128.55	132.30
35	2	914	G	C4-C5-C6	-5.36	115.58	118.80
35	2	26	A	C8-N9-C4	5.36	107.94	105.80
35	2	285	G	C6-C5-N7	-5.36	127.19	130.40
36	3	194	G	C2-N3-C4	5.36	114.58	111.90
35	2	334	G	O5'-P-OP2	-5.36	100.88	105.70
35	2	346	G	C6-C5-N7	-5.36	127.19	130.40
35	2	527	A	C4-C5-N7	5.35	113.38	110.70
35	2	323	A	N3-C4-C5	5.35	130.55	126.80
35	2	961	U	N1-C2-O2	-5.35	119.05	122.80
35	2	970	A	N7-C8-N9	-5.35	111.12	113.80
16	d	142	ARG	CB-CA-C	-5.35	99.70	110.40
35	2	922	G	C4-C5-C6	-5.35	115.59	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	3	194	G	O4'-C1'-N9	5.35	112.48	108.20
35	2	253	A	C5-C6-N6	-5.35	119.42	123.70
35	2	253	A	C6-N1-C2	5.35	121.81	118.60
35	2	332	U	OP2-P-O3'	5.35	116.97	105.20
35	2	254	A	N1-C6-N6	5.35	121.81	118.60
35	2	1620	C	C6-N1-C1'	-5.35	114.38	120.80
35	2	76	A	C6-N1-C2	-5.35	115.39	118.60
35	2	977	A	C6-C5-N7	5.35	136.04	132.30
36	3	266	C	O4'-C1'-N1	5.34	112.48	108.20
35	2	1038	U	N3-C4-C5	5.34	117.81	114.60
35	2	412	A	N1-C6-N6	5.34	121.81	118.60
35	2	447	U	N1-C2-N3	-5.34	111.70	114.90
35	2	630	A	C5-C6-N6	-5.34	119.43	123.70
35	2	1600	A	C8-N9-C4	-5.34	103.67	105.80
35	2	41	A	N1-C6-N6	5.34	121.80	118.60
35	2	105	A	O4'-C1'-N9	5.34	112.47	108.20
35	2	471	A	N7-C8-N9	-5.34	111.13	113.80
35	2	1620	C	C5-C6-N1	5.34	123.67	121.00
35	2	337	G	N3-C4-C5	5.34	131.27	128.60
35	2	1083	G	C6-N1-C2	5.34	128.30	125.10
35	2	589	C	N1-C1'-C2'	-5.33	106.13	112.00
35	2	173	A	C4-N9-C1'	-5.33	116.70	126.30
35	2	277	U	N1-C2-O2	-5.33	119.07	122.80
36	3	113	G	C8-N9-C1'	5.33	133.93	127.00
35	2	970	A	C5-N7-C8	5.33	106.56	103.90
35	2	464	A	N3-C4-N9	5.33	131.66	127.40
35	2	953	G	C4-C5-N7	5.33	112.93	110.80
35	2	168	A	N9-C4-C5	-5.33	103.67	105.80
35	2	276	C	N1-C2-N3	-5.33	115.47	119.20
35	2	72	A	N3-C4-C5	5.33	130.53	126.80
35	2	174	U	N3-C2-O2	-5.33	118.47	122.20
35	2	445	A	O4'-C1'-N9	-5.33	103.94	108.20
35	2	122	U	C5-C6-N1	-5.32	120.04	122.70
35	2	259	U	C5-C6-N1	-5.32	120.04	122.70
36	3	262	C	C5-C6-N1	-5.32	118.34	121.00
35	2	481	A	N9-C1'-C2'	-5.32	106.15	112.00
35	2	91	G	C6-N1-C2	-5.32	121.91	125.10
35	2	148	A	C4-C5-C6	-5.32	114.34	117.00
35	2	437	A	N9-C4-C5	5.32	107.93	105.80
35	2	178	U	C5-C6-N1	5.31	125.36	122.70
35	2	204	G	C8-N9-C4	5.31	108.53	106.40
35	2	974	A	C6-C5-N7	-5.31	128.58	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	498	G	N3-C2-N2	-5.31	116.18	119.90
35	2	302	U	N3-C4-C5	5.31	117.78	114.60
35	2	371	G	N7-C8-N9	5.31	115.75	113.10
35	2	966	A	N9-C4-C5	-5.31	103.68	105.80
35	2	291	G	C5-N7-C8	-5.31	101.65	104.30
35	2	511	A	C4-C5-C6	5.31	119.65	117.00
35	2	912	U	N1-C2-O2	5.31	126.51	122.80
35	2	199	G	N1-C2-N2	-5.30	111.43	116.20
35	2	447	U	N3-C2-O2	5.30	125.91	122.20
35	2	522	U	C2-N1-C1'	5.30	124.06	117.70
35	2	326	G	C4-C5-C6	-5.30	115.62	118.80
35	2	389	G	C2-N3-C4	-5.30	109.25	111.90
35	2	165	G	N9-C4-C5	-5.30	103.28	105.40
35	2	963	A	N1-C6-N6	5.30	121.78	118.60
35	2	973	A	N7-C8-N9	-5.30	111.15	113.80
35	2	322	G	C8-N9-C4	5.29	108.52	106.40
35	2	147	A	O5'-P-OP2	-5.29	100.94	105.70
35	2	448	C	N1-C1'-C2'	-5.29	106.18	112.00
35	2	192	U	N3-C2-O2	-5.29	118.50	122.20
35	2	398	G	N7-C8-N9	5.28	115.74	113.10
36	3	67	C	C2-N1-C1'	-5.28	112.99	118.80
35	2	1067	C	N1-C2-O2	5.28	122.07	118.90
35	2	42	G	C8-N9-C1'	-5.28	120.14	127.00
35	2	513	U	N1-C1'-C2'	-5.28	106.19	112.00
19	i	544	TYR	N-CA-CB	5.28	120.10	110.60
35	2	396	G	C8-N9-C1'	5.28	133.86	127.00
35	2	547	U	N3-C2-O2	5.28	125.89	122.20
35	2	1529	C	C5-C6-N1	-5.28	118.36	121.00
35	2	87	C	O4'-C1'-N1	5.27	112.42	108.20
35	2	98	U	C6-N1-C1'	-5.27	113.82	121.20
35	2	34	G	N9-C4-C5	5.27	107.51	105.40
35	2	161	U	N3-C2-O2	5.27	125.89	122.20
35	2	1166	A	C5-C6-N1	5.27	120.33	117.70
19	j	544	TYR	N-CA-CB	5.27	120.08	110.60
35	2	432	G	C8-N9-C1'	-5.27	120.15	127.00
35	2	628	G	C8-N9-C4	5.27	108.51	106.40
35	2	923	A	C8-N9-C4	5.27	107.91	105.80
35	2	473	A	C6-C5-N7	-5.26	128.62	132.30
35	2	523	G	C2-N3-C4	5.26	114.53	111.90
35	2	894	U	C6-N1-C1'	5.26	128.56	121.20
35	2	965	U	O4'-C1'-N1	5.26	112.41	108.20
35	2	550	A	N1-C6-N6	-5.25	115.45	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	1026	A	N3-C4-C5	-5.25	123.12	126.80
35	2	1096	C	C5-C6-N1	5.25	123.63	121.00
35	2	265	A	N1-C6-N6	5.25	121.75	118.60
35	2	1611	A	C5-N7-C8	-5.25	101.28	103.90
36	3	269	G	N3-C4-C5	5.25	131.22	128.60
35	2	492	A	C4-C5-C6	-5.25	114.38	117.00
35	2	526	A	C5-C6-N1	5.25	120.32	117.70
36	3	79	G	C8-N9-C4	5.25	108.50	106.40
35	2	411	C	C2-N1-C1'	5.24	124.57	118.80
35	2	129	U	N1-C2-O2	5.24	126.47	122.80
35	2	286	C	C4-C5-C6	-5.24	114.78	117.40
35	2	135	A	C4-N9-C1'	5.24	135.73	126.30
35	2	190	C	C5-C6-N1	5.24	123.62	121.00
35	2	358	U	P-O3'-C3'	-5.24	113.41	119.70
35	2	39	A	C8-N9-C4	-5.24	103.70	105.80
35	2	360	A	N9-C1'-C2'	-5.24	106.24	112.00
35	2	195	G	N3-C2-N2	-5.24	116.24	119.90
35	2	1084	A	N3-C4-C5	5.24	130.47	126.80
35	2	41	A	C4-C5-C6	5.23	119.62	117.00
35	2	964	U	N3-C4-O4	5.23	123.06	119.40
36	3	82	U	O4'-C1'-N1	5.23	112.39	108.20
35	2	549	G	C6-N1-C2	5.23	128.24	125.10
35	2	891	A	N9-C4-C5	-5.23	103.71	105.80
35	2	516	G	C5-C6-N1	5.23	114.12	111.50
35	2	866	G	N9-C1'-C2'	-5.23	106.25	112.00
35	2	883	C	C2-N3-C4	5.23	122.52	119.90
26	t	132	LYS	N-CA-C	5.23	125.11	111.00
35	2	317	C	N1-C2-N3	-5.23	115.54	119.20
35	2	926	A	C6-C5-N7	-5.22	128.64	132.30
35	2	953	G	C8-N9-C4	5.22	108.49	106.40
35	2	975	C	C6-N1-C2	-5.22	118.21	120.30
35	2	978	A	N7-C8-N9	5.22	116.41	113.80
35	2	276	C	C6-N1-C1'	-5.22	114.54	120.80
35	2	591	A	C2-N3-C4	5.22	113.21	110.60
35	2	959	U	OP1-P-O3'	5.22	116.68	105.20
35	2	386	G	C4-N9-C1'	5.22	133.28	126.50
35	2	1043	A	N9-C4-C5	-5.21	103.71	105.80
35	2	381	C	N3-C4-C5	5.21	123.98	121.90
35	2	301	A	N3-C4-C5	5.21	130.45	126.80
35	2	444	C	C5-C6-N1	-5.21	118.39	121.00
35	2	537	G	C5-C6-N1	-5.21	108.89	111.50
35	2	196	G	C5-C6-O6	5.21	131.73	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	452	A	N3-C4-N9	5.21	131.57	127.40
35	2	68	A	C5-C6-N1	5.21	120.30	117.70
35	2	363	G	C8-N9-C4	5.21	108.48	106.40
35	2	78	A	C2-N3-C4	5.21	113.20	110.60
35	2	284	G	N3-C4-C5	5.21	131.20	128.60
35	2	349	U	N1-C2-N3	-5.21	111.78	114.90
35	2	1030	A	C8-N9-C4	-5.21	103.72	105.80
35	2	186	C	C4-C5-C6	-5.20	114.80	117.40
35	2	428	A	C6-N1-C2	5.20	121.72	118.60
35	2	399	A	N9-C4-C5	-5.20	103.72	105.80
35	2	490	C	P-O3'-C3'	-5.20	113.46	119.70
35	2	319	U	C5-C6-N1	-5.20	120.10	122.70
35	2	498	G	C3'-C2'-C1'	-5.20	97.34	101.50
18	g	61	ALA	N-CA-CB	-5.20	102.83	110.10
35	2	1067	C	N1-C2-N3	-5.20	115.56	119.20
35	2	210	A	C6-C5-N7	-5.19	128.66	132.30
35	2	470	A	C6-N1-C2	5.19	121.72	118.60
35	2	1044	U	O4'-C1'-N1	-5.19	104.05	108.20
15	c	177	PRO	CA-C-N	5.19	128.61	117.20
35	2	344	A	N9-C4-C5	-5.18	103.73	105.80
18	h	61	ALA	N-CA-CB	-5.18	102.84	110.10
19	j	174	ARG	C-N-CA	5.18	134.65	121.70
35	2	139	C	C2-N3-C4	5.18	122.49	119.90
35	2	301	A	C5-C6-N1	-5.18	115.11	117.70
35	2	1080	U	C5-C4-O4	-5.18	122.79	125.90
16	d	130	ALA	N-CA-CB	-5.18	102.85	110.10
35	2	591	A	C6-C5-N7	5.18	135.93	132.30
35	2	967	A	C2-N3-C4	-5.18	108.01	110.60
35	2	369	A	N3-C4-C5	5.18	130.43	126.80
35	2	195	G	C4-N9-C1'	-5.18	119.77	126.50
35	2	377	G	N9-C1'-C2'	-5.18	106.31	112.00
19	j	613	LEU	N-CA-C	5.18	124.98	111.00
35	2	347	G	C5-C6-N1	5.18	114.09	111.50
35	2	441	A	N1-C6-N6	5.18	121.71	118.60
35	2	136	C	N1-C2-O2	-5.17	115.80	118.90
35	2	205	U	C4-C5-C6	-5.17	116.59	119.70
35	2	359	A	P-O3'-C3'	5.17	125.91	119.70
35	2	496	G	C5-C6-N1	-5.17	108.91	111.50
35	2	950	C	C2-N3-C4	5.17	122.49	119.90
19	i	613	LEU	N-CA-C	5.17	124.96	111.00
35	2	352	A	C8-N9-C4	5.17	107.87	105.80
35	2	477	A	N1-C6-N6	5.17	121.70	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	626	U	C4-C5-C6	-5.17	116.60	119.70
35	2	928	U	N3-C2-O2	-5.17	118.58	122.20
35	2	90	C	C4-C5-C6	-5.17	114.81	117.40
35	2	513	U	O4'-C1'-N1	5.17	112.33	108.20
35	2	405	C	C4-C5-C6	-5.17	114.82	117.40
35	2	914	G	N7-C8-N9	-5.17	110.52	113.10
35	2	1463	C	N3-C4-C5	5.17	123.97	121.90
15	c	186	GLU	O-C-N	-5.16	114.44	122.70
35	2	419	G	N1-C2-N3	5.16	127.00	123.90
35	2	878	G	C3'-C2'-C1'	-5.16	97.37	101.50
35	2	1024	U	C2-N1-C1'	5.16	123.89	117.70
19	i	174	ARG	C-N-CA	5.16	134.60	121.70
35	2	70	C	C2-N1-C1'	-5.16	113.13	118.80
35	2	351	C	C5-C4-N4	5.16	123.81	120.20
35	2	498	G	C4-C5-N7	5.16	112.86	110.80
35	2	923	A	N1-C2-N3	5.16	131.88	129.30
35	2	960	U	O5'-P-OP1	-5.16	101.06	105.70
35	2	1046	G	C6-C5-N7	-5.16	127.31	130.40
35	2	1052	U	C3'-C2'-C1'	-5.15	97.38	101.50
35	2	891	A	C4-C5-N7	5.15	113.28	110.70
35	2	448	C	N1-C2-N3	-5.15	115.60	119.20
35	2	972	G	C4-N9-C1'	-5.15	119.81	126.50
35	2	1591	C	N3-C4-N4	-5.15	114.40	118.00
35	2	28	A	N3-C4-N9	5.15	131.52	127.40
35	2	154	G	C5-C6-O6	5.14	131.69	128.60
35	2	32	U	C2-N3-C4	5.14	130.09	127.00
35	2	34	G	N3-C4-N9	-5.14	122.92	126.00
35	2	201	G	N9-C1'-C2'	-5.14	106.34	112.00
35	2	340	U	N1-C2-N3	-5.14	111.81	114.90
35	2	365	G	N1-C2-N2	-5.14	111.57	116.20
35	2	868	G	C3'-C2'-C1'	-5.14	97.39	101.50
35	2	194	U	N1-C2-O2	5.14	126.40	122.80
2	G	2984	ARG	CA-C-N	5.14	128.51	117.20
35	2	34	G	N1-C2-N3	5.14	126.98	123.90
35	2	518	A	N1-C2-N3	-5.14	126.73	129.30
35	2	887	A	C8-N9-C4	-5.14	103.74	105.80
35	2	902	G	N1-C6-O6	5.14	122.98	119.90
35	2	51	A	C4-C5-N7	5.14	113.27	110.70
30	x	124	PRO	N-CA-CB	5.14	109.46	103.30
35	2	103	A	N1-C2-N3	5.13	131.87	129.30
35	2	269	G	N3-C4-N9	-5.13	122.92	126.00
35	2	141	U	C5-C6-N1	5.13	125.27	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	202	A	N1-C2-N3	-5.13	126.73	129.30
35	2	361	C	C2-N3-C4	-5.13	117.33	119.90
35	2	441	A	O4'-C1'-N9	-5.13	104.09	108.20
35	2	883	C	C5-C4-N4	-5.13	116.61	120.20
35	2	885	G	C8-N9-C1'	5.13	133.67	127.00
35	2	163	G	N9-C4-C5	-5.13	103.35	105.40
35	2	79	C	C6-N1-C2	5.13	122.35	120.30
36	3	72	C	C6-N1-C1'	5.13	126.95	120.80
35	2	262	U	N3-C2-O2	-5.13	118.61	122.20
35	2	879	G	C6-C5-N7	-5.13	127.32	130.40
35	2	197	A	C2-N3-C4	-5.12	108.04	110.60
35	2	515	A	O4'-C1'-N9	-5.12	104.10	108.20
35	2	953	G	N9-C1'-C2'	-5.12	106.36	112.00
35	2	34	G	O4'-C1'-N9	5.12	112.30	108.20
35	2	247	A	C8-N9-C4	-5.12	103.75	105.80
35	2	1043	A	C3'-C2'-C1'	-5.12	97.40	101.50
35	2	1088	A	C4-C5-C6	5.12	119.56	117.00
35	2	1604	U	C2-N1-C1'	5.12	123.85	117.70
35	2	629	U	C6-N1-C1'	5.12	128.37	121.20
36	3	192	A	N9-C4-C5	5.12	107.85	105.80
35	2	304	U	C2-N3-C4	5.12	130.07	127.00
35	2	326	G	C6-C5-N7	5.12	133.47	130.40
36	3	69	G	C4-C5-N7	5.12	112.85	110.80
35	2	346	G	C8-N9-C1'	-5.12	120.35	127.00
36	3	74	C	C5-C6-N1	5.12	123.56	121.00
35	2	206	A	N1-C6-N6	5.11	121.67	118.60
35	2	267	U	C5-C4-O4	5.11	128.97	125.90
35	2	485	A	N1-C2-N3	-5.11	126.74	129.30
35	2	490	C	C4-C5-C6	-5.11	114.84	117.40
35	2	626	U	N1-C2-O2	5.11	126.38	122.80
36	3	140	C	C5-C6-N1	5.11	123.56	121.00
30	x	126	PRO	N-CA-CB	5.11	109.43	103.30
35	2	271	A	P-O3'-C3'	-5.11	113.57	119.70
2	G	3192	GLY	N-CA-C	-5.11	100.33	113.10
19	i	591	GLU	N-CA-CB	-5.11	101.40	110.60
35	2	63	G	N9-C4-C5	5.11	107.44	105.40
35	2	538	A	N9-C1'-C2'	-5.11	106.38	112.00
35	2	592	A	N9-C1'-C2'	-5.11	106.38	112.00
35	2	898	A	C6-C5-N7	-5.11	128.72	132.30
35	2	133	U	C5-C6-N1	5.11	125.25	122.70
35	2	269	G	P-O3'-C3'	-5.11	113.57	119.70
35	2	276	C	C5-C6-N1	5.11	123.55	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	423	G	C8-N9-C1'	-5.10	120.36	127.00
35	2	273	G	C5-N7-C8	-5.10	101.75	104.30
36	3	262	C	C2-N1-C1'	-5.10	113.19	118.80
35	2	70	C	OP1-P-O3'	5.10	116.42	105.20
19	j	591	GLU	N-CA-CB	-5.10	101.42	110.60
35	2	34	G	C2-N3-C4	-5.10	109.35	111.90
35	2	392	G	C5-N7-C8	-5.10	101.75	104.30
35	2	403	G	C6-C5-N7	-5.10	127.34	130.40
35	2	1073	G	C2-N3-C4	-5.10	109.35	111.90
35	2	104	A	C6-C5-N7	5.10	135.87	132.30
35	2	901	G	N9-C1'-C2'	-5.10	106.39	112.00
35	2	51	A	C2-N3-C4	5.10	113.15	110.60
35	2	1048	G	N9-C1'-C2'	-5.10	106.39	112.00
35	2	308	C	N1-C2-N3	-5.09	115.63	119.20
36	3	248	G	C8-N9-C1'	5.09	133.62	127.00
35	2	67	A	P-O5'-C5'	5.09	129.05	120.90
19	j	317	PRO	N-CA-C	5.09	125.34	112.10
35	2	355	G	C3'-C2'-C1'	-5.09	97.43	101.50
35	2	380	U	C6-N1-C1'	5.09	128.33	121.20
35	2	949	C	C4-C5-C6	-5.09	114.85	117.40
35	2	967	A	C4-C5-N7	5.09	113.25	110.70
35	2	1044	U	C6-N1-C1'	-5.09	114.07	121.20
35	2	212	U	C6-N1-C2	5.09	124.05	121.00
35	2	367	A	N7-C8-N9	-5.09	111.25	113.80
35	2	969	C	N1-C2-O2	5.09	121.95	118.90
35	2	1056	U	C6-N1-C2	-5.09	117.95	121.00
15	c	209	LYS	CA-C-O	-5.09	109.42	120.10
19	i	317	PRO	N-CA-C	5.09	125.32	112.10
35	2	199	G	C4-N9-C1'	-5.09	119.89	126.50
35	2	480	G	P-O3'-C3'	-5.09	113.60	119.70
35	2	362	G	C4-C5-C6	-5.08	115.75	118.80
35	2	415	C	N3-C4-N4	-5.08	114.44	118.00
35	2	278	U	O4'-C1'-N1	5.08	112.27	108.20
35	2	350	U	P-O3'-C3'	-5.08	113.60	119.70
35	2	1051	G	C2-N3-C4	5.08	114.44	111.90
35	2	1159	C	N1-C2-O2	5.08	121.95	118.90
35	2	456	A	O5'-P-OP2	-5.08	101.13	105.70
35	2	965	U	C6-N1-C1'	-5.08	114.09	121.20
35	2	72	A	N3-C4-N9	-5.07	123.34	127.40
35	2	205	U	N3-C4-C5	5.07	117.64	114.60
35	2	441	A	C5-C6-N6	-5.07	119.64	123.70
35	2	27	U	C2-N3-C4	-5.07	123.96	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	71	A	N9-C4-C5	-5.07	103.77	105.80
35	2	881	A	C5-C6-N6	-5.07	119.64	123.70
35	2	936	G	C5'-C4'-O4'	5.07	115.18	109.10
35	2	355	G	C5'-C4'-O4'	5.07	115.18	109.10
35	2	512	A	C8-N9-C4	5.07	107.83	105.80
35	2	926	A	N3-C4-N9	5.07	131.45	127.40
35	2	1468	U	C5-C4-O4	-5.07	122.86	125.90
35	2	32	U	C5-C4-O4	5.07	128.94	125.90
35	2	1042	G	N7-C8-N9	-5.07	110.57	113.10
36	3	87	G	C5-C6-O6	5.07	131.64	128.60
35	2	547	U	C4-C5-C6	-5.06	116.66	119.70
35	2	63	G	C6-C5-N7	5.06	133.44	130.40
35	2	165	G	C8-N9-C4	5.06	108.42	106.40
35	2	401	A	C3'-C2'-C1'	-5.06	97.45	101.50
35	2	525	A	N7-C8-N9	-5.06	111.27	113.80
35	2	881	A	C4-C5-C6	-5.06	114.47	117.00
35	2	93	A	C4-C5-C6	-5.05	114.47	117.00
35	2	167	U	O5'-P-OP2	-5.05	101.15	105.70
35	2	526	A	N1-C2-N3	-5.05	126.77	129.30
36	3	132	C	N1-C2-O2	-5.05	115.87	118.90
35	2	345	U	OP1-P-O3'	5.05	116.32	105.20
35	2	23	G	O4'-C1'-N9	5.05	112.24	108.20
35	2	164	A	C5-C6-N1	5.05	120.23	117.70
35	2	337	G	C5-N7-C8	-5.05	101.77	104.30
35	2	124	A	C6-N1-C2	-5.05	115.57	118.60
35	2	146	U	N3-C4-O4	5.05	122.93	119.40
35	2	394	C	C2-N1-C1'	-5.05	113.25	118.80
35	2	522	U	N3-C2-O2	-5.05	118.67	122.20
35	2	83	G	O4'-C1'-N9	-5.04	104.16	108.20
35	2	932	U	O4'-C1'-N1	5.04	112.24	108.20
35	2	391	A	N7-C8-N9	-5.04	111.28	113.80
35	2	130	C	C2-N3-C4	-5.04	117.38	119.90
35	2	1067	C	C4-C5-C6	-5.04	114.88	117.40
35	2	53	G	C8-N9-C4	5.04	108.42	106.40
35	2	72	A	C6-C5-N7	5.04	135.83	132.30
35	2	119	A	N7-C8-N9	-5.04	111.28	113.80
35	2	140	A	N9-C4-C5	5.04	107.81	105.80
35	2	358	U	C2-N3-C4	5.04	130.02	127.00
35	2	1481	C	C5-C6-N1	5.04	123.52	121.00
35	2	332	U	C4-C5-C6	-5.03	116.68	119.70
2	G	2867	GLU	N-CA-C	5.03	124.58	111.00
35	2	102	U	N1-C2-N3	-5.03	111.88	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	2	369	A	N9-C4-C5	-5.03	103.79	105.80
35	2	373	G	C8-N9-C4	-5.03	104.39	106.40
35	2	51	A	N9-C4-C5	-5.03	103.79	105.80
35	2	456	A	C6-N1-C2	5.03	121.62	118.60
35	2	462	G	C5-N7-C8	-5.03	101.79	104.30
35	2	957	G	N3-C4-C5	5.02	131.11	128.60
35	2	396	G	N1-C6-O6	5.02	122.91	119.90
35	2	428	A	C8-N9-C1'	5.02	136.74	127.70
35	2	1039	A	C5-C6-N6	-5.02	119.68	123.70
19	i	591	GLU	C-N-CA	-5.02	111.76	122.30
35	2	160	C	C6-N1-C2	-5.02	118.29	120.30
19	j	591	GLU	C-N-CA	-5.02	111.77	122.30
35	2	1611	A	C8-N9-C4	-5.02	103.79	105.80
35	2	83	G	C3'-C2'-C1'	-5.02	97.49	101.50
35	2	593	U	N1-C2-O2	5.02	126.31	122.80
35	2	1596	C	C6-N1-C2	5.02	122.31	120.30
16	d	141	HIS	CB-CA-C	-5.01	100.37	110.40
35	2	1065	A	C4-C5-N7	5.01	113.21	110.70
35	2	1072	C	C2-N1-C1'	5.01	124.31	118.80
35	2	514	G	N1-C6-O6	-5.01	116.89	119.90
35	2	1579	U	C6-N1-C1'	-5.01	114.18	121.20
35	2	34	G	N7-C8-N9	5.01	115.61	113.10
35	2	452	A	C5-N7-C8	-5.01	101.39	103.90
35	2	1177	C	C6-N1-C2	5.01	122.30	120.30
35	2	1613	U	N1-C2-O2	5.01	126.31	122.80
35	2	518	A	C6-C5-N7	5.01	135.81	132.30
35	2	206	A	C4-C5-N7	5.00	113.20	110.70
35	2	131	C	C5-C4-N4	-5.00	116.70	120.20
36	3	113	G	N3-C4-N9	-5.00	123.00	126.00

There are no chirality outliers.

All (59) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	H	110	UNK	Mainchain
3	H	111	UNK	Mainchain
3	H	134	UNK	Mainchain
3	H	157	UNK	Mainchain
3	H	158	UNK	Mainchain
3	H	183	UNK	Mainchain
3	H	184	UNK	Mainchain
3	H	185	UNK	Mainchain

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Mol	Chain	Res	Type	Group
3	H	186	UNK	Mainchain
3	H	187	UNK	Mainchain
3	H	188	UNK	Mainchain
3	H	21	UNK	Mainchain
3	H	22	UNK	Mainchain
3	H	23	UNK	Mainchain
3	H	24	UNK	Mainchain
3	H	243	UNK	Mainchain
3	H	244	UNK	Mainchain
3	H	245	UNK	Mainchain
3	H	25	UNK	Mainchain
3	H	26	UNK	Mainchain
3	H	27	UNK	Mainchain
3	H	28	UNK	Mainchain
3	H	311	UNK	Mainchain
3	H	312	UNK	Mainchain
3	H	313	UNK	Mainchain
3	H	314	UNK	Mainchain
3	H	315	UNK	Mainchain
3	H	316	UNK	Mainchain
3	H	44	UNK	Mainchain
3	H	45	UNK	Mainchain
3	H	86	UNK	Mainchain
3	H	87	UNK	Mainchain
3	H	88	UNK	Mainchain
8	T	355	SER	Peptide
9	U	61	GLN	Peptide
9	V	61	GLN	Peptide
10	W	217	ASP	Peptide
10	X	217	ASP	Peptide
14	b	160	TRP	Mainchain
14	b	162	VAL	Mainchain
14	b	23	SER	Mainchain
14	b	27	HIS	Mainchain
14	b	91	LYS	Peptide
15	c	124	LEU	Peptide
15	c	161	PRO	Peptide
15	c	177	PRO	Peptide,Mainchain
15	c	181	LYS	Peptide
15	c	197	ARG	Peptide
15	c	93	SER	Mainchain
16	d	111	MET	Mainchain

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Mol	Chain	Res	Type	Group
16	d	138	VAL	Mainchain
19	i	614	ILE	Peptide
19	i	615	PRO	Peptide
19	i	882	ALA	Peptide
19	j	614	ILE	Peptide
19	j	615	PRO	Peptide
19	j	882	ALA	Peptide
20	k	82	LYS	Mainchain

5.2 Too-close contacts

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

5.3 Torsion angles

5.3.1 Protein backbone

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	G	265/1802 (15%)	245 (92%)	11 (4%)	9 (3%)	3 26
4	I	626/939 (67%)	609 (97%)	17 (3%)	0	100 100
8	S	363/412 (88%)	344 (95%)	14 (4%)	5 (1%)	11 46
8	T	363/412 (88%)	341 (94%)	20 (6%)	2 (1%)	25 66
9	U	120/130 (92%)	111 (92%)	7 (6%)	2 (2%)	9 42
9	V	120/130 (92%)	112 (93%)	6 (5%)	2 (2%)	9 42
10	W	225/232 (97%)	206 (92%)	16 (7%)	3 (1%)	12 48
10	X	225/232 (97%)	204 (91%)	17 (8%)	4 (2%)	8 40
11	Y	353/573 (62%)	341 (97%)	11 (3%)	1 (0%)	41 77
12	Z	353/367 (96%)	347 (98%)	6 (2%)	0	100 100
13	a	50/1183 (4%)	49 (98%)	1 (2%)	0	100 100
14	b	151/183 (82%)	128 (85%)	14 (9%)	9 (6%)	1 17

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
15	c	190/297 (64%)	163 (86%)	12 (6%)	15 (8%)	1 12
16	d	122/184 (66%)	110 (90%)	8 (7%)	4 (3%)	4 26
17	e	205/252 (81%)	190 (93%)	15 (7%)	0	100 100
17	f	214/252 (85%)	201 (94%)	11 (5%)	2 (1%)	17 57
18	g	172/322 (53%)	163 (95%)	9 (5%)	0	100 100
18	h	172/322 (53%)	163 (95%)	9 (5%)	0	100 100
19	i	643/1073 (60%)	577 (90%)	38 (6%)	28 (4%)	2 22
19	j	663/1073 (62%)	591 (89%)	43 (6%)	29 (4%)	2 22
20	k	172/391 (44%)	151 (88%)	12 (7%)	9 (5%)	2 19
21	o	213/265 (80%)	161 (76%)	33 (16%)	19 (9%)	1 11
22	p	257/259 (99%)	193 (75%)	40 (16%)	24 (9%)	0 10
23	q	165/225 (73%)	55 (33%)	46 (28%)	64 (39%)	0 0
24	r	233/293 (80%)	188 (81%)	31 (13%)	14 (6%)	1 17
25	s	184/197 (93%)	151 (82%)	23 (12%)	10 (5%)	2 19
26	t	205/208 (99%)	147 (72%)	38 (18%)	20 (10%)	0 9
27	u	153/197 (78%)	48 (31%)	49 (32%)	56 (37%)	0 0
28	v	115/151 (76%)	49 (43%)	33 (29%)	33 (29%)	0 0
29	w	126/137 (92%)	51 (40%)	39 (31%)	36 (29%)	0 0
30	x	132/143 (92%)	57 (43%)	33 (25%)	42 (32%)	0 0
31	y	155/157 (99%)	115 (74%)	26 (17%)	14 (9%)	1 11
32	z	125/130 (96%)	50 (40%)	35 (28%)	40 (32%)	0 0
33	0	146/149 (98%)	115 (79%)	20 (14%)	11 (8%)	1 13
34	1	45/67 (67%)	17 (38%)	12 (27%)	16 (36%)	0 0
All	All	8021/13339 (60%)	6743 (84%)	755 (9%)	523 (6%)	2 16

All (523) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	G	2992	ASN
2	G	3194	ASP
8	T	355	SER
9	U	62	PRO
9	V	62	PRO
10	W	206	SER

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Mol	Chain	Res	Type
10	W	218	PRO
10	X	218	PRO
14	b	93	LYS
14	b	166	ILE
15	c	124	LEU
15	c	125	PRO
15	c	161	PRO
15	c	186	GLU
15	c	198	THR
15	c	214	PRO
15	c	235	ASP
16	d	108	VAL
16	d	119	GLN
16	d	142	ARG
17	f	83	ASP
19	i	145	GLY
19	i	163	TYR
19	i	164	THR
19	i	510	CYS
19	i	514	SER
19	i	530	HIS
19	i	856	ASP
19	i	873	ALA
19	i	877	SER
19	i	879	LEU
19	i	881	GLN
19	i	883	ILE
19	j	163	TYR
19	j	164	THR
19	j	510	CYS
19	j	514	SER
19	j	530	HIS
19	j	856	ASP
19	j	873	ALA
19	j	877	SER
19	j	879	LEU
19	j	881	GLN
19	j	883	ILE
20	k	80	PRO
20	k	104	PRO
20	k	172	TYR
20	k	175	THR

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Mol	Chain	Res	Type
20	k	176	THR
21	o	37	PRO
21	o	43	LYS
21	o	52	LYS
21	o	59	ALA
21	o	77	ASP
21	o	78	ASN
21	o	96	GLY
22	p	15	PRO
22	p	24	GLY
22	p	96	LYS
22	p	106	ASP
22	p	204	GLN
22	p	206	SER
22	p	207	PHE
22	p	215	ALA
23	q	40	ILE
23	q	46	TRP
23	q	53	VAL
23	q	57	SER
23	q	61	TYR
23	q	66	GLN
23	q	87	CYS
23	q	88	PRO
23	q	90	ILE
23	q	91	GLU
23	q	92	ARG
23	q	93	LEU
23	q	94	THR
23	q	128	ASN
23	q	129	PRO
23	q	160	VAL
23	q	162	VAL
23	q	163	SER
23	q	164	PRO
23	q	182	ALA
23	q	184	PHE
23	q	187	ILE
23	q	195	ALA
23	q	216	GLU
24	r	8	PRO
24	r	9	LEU

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Mol	Chain	Res	Type
24	r	43	ASP
24	r	87	ARG
24	r	181	ARG
25	s	132	LEU
25	s	178	THR
25	s	179	THR
26	t	13	ALA
26	t	15	GLY
26	t	44	THR
26	t	57	ARG
26	t	132	LYS
26	t	135	ARG
26	t	160	GLU
27	u	39	LYS
27	u	41	GLU
27	u	55	ALA
27	u	56	ALA
27	u	64	GLU
27	u	66	ASP
27	u	67	PRO
27	u	81	VAL
27	u	82	ARG
27	u	83	VAL
27	u	99	LEU
27	u	100	LYS
27	u	106	GLU
27	u	112	GLN
27	u	121	SER
27	u	122	VAL
27	u	124	HIS
27	u	130	THR
27	u	131	GLN
27	u	132	ARG
27	u	140	ILE
27	u	141	VAL
27	u	143	ILE
27	u	152	SER
27	u	153	GLU
27	u	169	PRO
27	u	174	ARG
28	v	46	THR
28	v	47	PRO

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Mol	Chain	Res	Type
28	v	50	ILE
28	v	58	HIS
28	v	62	GLN
28	v	65	VAL
28	v	69	ASN
28	v	71	ILE
28	v	82	PRO
28	v	84	ILE
28	v	85	PRO
28	v	86	GLU
28	v	126	ALA
28	v	132	VAL
28	v	135	LEU
28	v	136	PRO
28	v	137	PRO
29	w	4	VAL
29	w	23	PHE
29	w	26	THR
29	w	40	ALA
29	w	42	VAL
29	w	43	THR
29	w	50	ALA
29	w	65	GLN
29	w	67	VAL
29	w	79	VAL
29	w	94	PRO
29	w	96	PRO
29	w	101	ALA
29	w	122	PRO
30	x	34	SER
30	x	35	PRO
30	x	36	ILE
30	x	38	LEU
30	x	42	GLU
30	x	57	LEU
30	x	61	SER
30	x	63	ILE
30	x	70	THR
30	x	74	HIS
30	x	85	ILE
30	x	97	VAL
30	x	105	LEU

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Mol	Chain	Res	Type
30	x	118	ILE
30	x	126	PRO
30	x	136	SER
31	y	10	GLN
31	y	16	PHE
31	y	17	LEU
32	z	5	SER
32	z	24	GLN
32	z	27	ILE
32	z	28	ARG
32	z	29	PRO
32	z	30	SER
32	z	31	SER
32	z	38	LEU
32	z	63	VAL
32	z	76	SER
32	z	77	PRO
32	z	79	PHE
32	z	85	ASP
32	z	86	ILE
32	z	95	PRO
32	z	97	ARG
32	z	99	PHE
32	z	103	ILE
32	z	106	THR
32	z	118	ARG
32	z	120	HIS
32	z	126	LEU
33	0	29	ASP
33	0	57	GLY
33	0	148	ALA
34	1	10	ALA
34	1	14	LYS
34	1	15	VAL
34	1	34	GLU
34	1	39	THR
34	1	44	VAL
8	S	85	PRO
8	T	85	PRO
11	Y	555	ASN
14	b	86	GLY
14	b	91	LYS

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Mol	Chain	Res	Type
14	b	92	ALA
14	b	135	HIS
15	c	178	LYS
15	c	201	GLY
15	c	202	GLN
15	c	250	ASN
16	d	129	TYR
19	i	171	ALA
19	i	532	VAL
19	i	870	LEU
19	j	145	GLY
19	j	171	ALA
19	j	532	VAL
19	j	608	GLN
19	j	870	LEU
20	k	236	SER
20	k	274	LYS
21	o	38	ILE
21	o	46	GLY
21	o	61	GLU
21	o	197	GLU
21	o	215	ASN
22	p	5	PRO
22	p	62	THR
22	p	68	LYS
22	p	95	GLU
22	p	173	ASN
22	p	175	ALA
22	p	216	LYS
23	q	43	PHE
23	q	56	ALA
23	q	60	ASP
23	q	64	VAL
23	q	89	ILE
23	q	108	LEU
23	q	113	ILE
23	q	122	ASN
23	q	140	THR
23	q	144	GLU
23	q	153	GLY
23	q	165	LEU
23	q	166	ARG

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Mol	Chain	Res	Type
23	q	167	ARG
23	q	181	GLU
23	q	183	ALA
23	q	197	GLU
23	q	211	ILE
23	q	215	ASP
24	r	67	VAL
24	r	91	PHE
24	r	99	GLY
24	r	147	LEU
24	r	150	GLU
25	s	10	GLN
25	s	161	ASP
26	t	48	LYS
26	t	58	GLY
26	t	155	LYS
26	t	193	GLY
27	u	63	ASP
27	u	85	VAL
27	u	88	GLU
27	u	113	VAL
27	u	133	HIS
27	u	137	GLY
27	u	139	GLN
27	u	146	PHE
28	v	54	LEU
28	v	128	TYR
28	v	138	ASN
29	w	3	ASN
29	w	6	GLN
29	w	19	ILE
29	w	25	ASP
29	w	28	VAL
29	w	45	GLY
29	w	64	ALA
29	w	73	GLU
29	w	97	GLY
29	w	124	ASP
29	w	128	LYS
30	x	43	ILE
30	x	62	ASN
30	x	92	TYR

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Mol	Chain	Res	Type
30	x	98	ASP
30	x	104	GLU
30	x	107	LYS
30	x	129	PHE
31	y	6	GLN
31	y	8	ALA
31	y	19	SER
31	y	27	THR
31	y	30	GLY
31	y	94	ARG
32	z	22	LYS
32	z	56	HIS
32	z	62	VAL
32	z	68	ARG
32	z	72	CYS
32	z	81	VAL
32	z	94	LEU
32	z	100	GLY
32	z	113	HIS
33	0	62	TYR
33	0	63	GLY
33	0	102	ARG
33	0	129	GLY
33	0	130	ASP
34	1	28	VAL
34	1	29	ARG
34	1	41	VAL
34	1	45	LYS
2	G	1956	ARG
2	G	3236	SER
8	S	207	GLU
8	S	300	ALA
8	S	355	SER
8	S	358	PHE
9	V	127	LYS
10	W	70	LYS
10	X	206	SER
15	c	217	PRO
19	i	220	LEU
19	i	308	SER
19	i	741	GLN
19	i	859	PRO

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Mol	Chain	Res	Type
19	j	220	LEU
19	j	308	SER
19	j	741	GLN
19	j	859	PRO
20	k	61	PRO
21	o	41	SER
22	p	56	LEU
22	p	82	LYS
22	p	118	LYS
22	p	205	GLY
23	q	55	ASP
23	q	125	THR
23	q	205	SER
23	q	207	THR
24	r	92	ARG
24	r	160	VAL
25	s	147	GLY
25	s	167	LEU
26	t	42	SER
26	t	91	TYR
26	t	157	GLN
27	u	38	ASN
27	u	87	SER
27	u	107	ARG
27	u	108	ARG
27	u	123	HIS
27	u	134	ILE
28	v	52	VAL
28	v	63	ALA
28	v	70	LYS
28	v	89	TYR
28	v	110	ASP
28	v	139	TRP
29	w	34	SER
29	w	48	VAL
30	x	47	LYS
30	x	56	GLY
30	x	88	GLY
30	x	110	THR
30	x	114	ARG
30	x	125	GLU
30	x	138	PHE

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Mol	Chain	Res	Type
31	y	7	ARG
31	y	117	LYS
31	y	135	ARG
32	z	46	TYR
33	0	28	PRO
34	1	8	THR
34	1	25	VAL
34	1	43	ASN
2	G	1526	SER
2	G	2819	GLU
10	X	70	LYS
14	b	119	ARG
19	i	167	MET
19	i	265	LEU
19	i	305	TYR
19	j	167	MET
19	j	265	LEU
19	j	305	TYR
21	o	117	ILE
21	o	154	GLN
21	o	163	LYS
22	p	3	ARG
23	q	58	LEU
23	q	138	THR
23	q	148	ARG
23	q	157	ARG
23	q	186	ASN
23	q	196	GLU
23	q	212	LYS
23	q	219	ARG
24	r	135	PRO
26	t	9	HIS
26	t	29	LYS
26	t	47	GLU
26	t	69	CYS
27	u	27	GLU
27	u	46	SER
27	u	91	LYS
27	u	101	VAL
27	u	180	LYS
28	v	55	ARG
28	v	75	LEU

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Mol	Chain	Res	Type
28	v	81	ALA
29	w	32	ASP
29	w	38	THR
29	w	110	LEU
30	x	28	LEU
30	x	46	PHE
30	x	51	PRO
30	x	90	VAL
30	x	99	GLU
30	x	106	LYS
30	x	134	ALA
32	z	41	MET
32	z	50	PHE
32	z	60	LYS
32	z	83	ILE
32	z	104	LEU
32	z	107	SER
34	1	32	PHE
34	1	38	ARG
2	G	2408	PRO
14	b	112	PRO
17	f	82	ARG
19	i	182	ILE
19	i	575	GLN
19	i	872	GLU
19	j	182	ILE
19	j	575	GLN
19	j	872	GLU
21	o	23	ILE
21	o	164	SER
22	p	51	ARG
22	p	53	ASN
22	p	145	ASP
23	q	45	LYS
23	q	65	ARG
23	q	213	LYS
23	q	214	LYS
23	q	221	ALA
24	r	88	ARG
26	t	41	GLN
26	t	144	SER
27	u	60	LEU

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Mol	Chain	Res	Type
27	u	74	ASN
27	u	75	ALA
27	u	125	ALA
27	u	170	GLY
27	u	183	ALA
28	v	77	SER
28	v	150	VAL
30	x	15	SER
31	y	78	LYS
33	0	64	GLY
33	0	128	LYS
9	U	127	LYS
15	c	95	ASP
19	i	379	VAL
19	i	871	ARG
19	j	379	VAL
19	j	871	ARG
20	k	271	VAL
23	q	170	GLN
25	s	78	ARG
28	v	108	ASP
28	v	143	SER
29	w	58	TYR
29	w	87	GLY
29	w	115	ILE
30	x	33	GLY
30	x	84	ALA
32	z	7	LEU
34	1	37	SER
19	i	315	PRO
19	j	315	PRO
22	p	245	GLY
25	s	105	VAL
25	s	133	PRO
30	x	39	VAL
31	y	116	VAL
21	o	63	ILE
23	q	114	ILE
27	u	52	ILE
27	u	144	PRO
29	w	74	VAL
2	G	1942	LEU

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Mol	Chain	Res	Type
2	G	1943	PRO
14	b	162	VAL
15	c	212	PHE
23	q	121	ILE
23	q	152	GLY
27	u	42	ILE
29	w	13	VAL
32	z	25	VAL
10	X	217	ASP
27	u	73	GLY
29	w	44	GLY
30	x	50	GLU
15	c	112	PRO

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
21	o	191/225 (85%)	166 (87%)	25 (13%)	4 18
22	p	226/226 (100%)	197 (87%)	29 (13%)	4 18
24	r	201/244 (82%)	187 (93%)	14 (7%)	15 40
25	s	172/183 (94%)	156 (91%)	16 (9%)	9 28
26	t	184/185 (100%)	171 (93%)	13 (7%)	14 39
31	y	141/141 (100%)	125 (89%)	16 (11%)	6 21
33	0	133/134 (99%)	124 (93%)	9 (7%)	16 41
All	All	1248/1338 (93%)	1126 (90%)	122 (10%)	11 26

All (122) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
21	o	38	ILE
21	o	45	PHE
21	o	61	GLU
21	o	63	ILE

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Mol	Chain	Res	Type
21	o	64	LYS
21	o	69	GLU
21	o	74	ASP
21	o	81	ASP
21	o	92	ASP
21	o	97	ARG
21	o	106	LEU
21	o	111	ASP
21	o	116	MET
21	o	124	ILE
21	o	129	ASP
21	o	132	THR
21	o	134	ASP
21	o	138	ILE
21	o	142	THR
21	o	146	THR
21	o	150	SER
21	o	190	PHE
21	o	194	LEU
21	o	197	GLU
21	o	211	PHE
22	p	12	ILE
22	p	21	ASN
22	p	29	THR
22	p	37	LYS
22	p	48	LEU
22	p	51	ARG
22	p	57	ASN
22	p	81	ASP
22	p	89	MET
22	p	92	VAL
22	p	106	ASP
22	p	114	LYS
22	p	116	LEU
22	p	123	TYR
22	p	137	GLN
22	p	141	ILE
22	p	152	PRO
22	p	176	HIS
22	p	185	ILE
22	p	191	ILE
22	p	193	ARG

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Mol	Chain	Res	Type
22	p	207	PHE
22	p	212	VAL
22	p	222	THR
22	p	228	PHE
22	p	238	ILE
22	p	239	GLU
22	p	244	ASP
22	p	254	ARG
24	r	9	LEU
24	r	19	ASP
24	r	20	ASP
24	r	45	PHE
24	r	74	ARG
24	r	87	ARG
24	r	91	PHE
24	r	105	ASP
24	r	145	PHE
24	r	152	ASP
24	r	155	LEU
24	r	165	PHE
24	r	181	ARG
24	r	199	THR
25	s	62	LEU
25	s	63	ILE
25	s	80	LEU
25	s	105	VAL
25	s	115	ARG
25	s	117	ARG
25	s	131	LEU
25	s	136	LEU
25	s	144	ARG
25	s	146	ASP
25	s	148	THR
25	s	152	ARG
25	s	159	ASP
25	s	174	TYR
25	s	179	THR
25	s	181	GLU
26	t	21	HIS
26	t	31	ARG
26	t	35	MET
26	t	55	ARG

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Mol	Chain	Res	Type
26	t	56	VAL
26	t	66	LEU
26	t	74	SER
26	t	86	ILE
26	t	109	ILE
26	t	112	ILE
26	t	134	ASP
26	t	146	HIS
26	t	185	ARG
31	y	2	ASP
31	y	13	ASP
31	y	16	PHE
31	y	20	LYS
31	y	32	ARG
31	y	45	LYS
31	y	68	LYS
31	y	69	ILE
31	y	78	LYS
31	y	97	ASN
31	y	114	PHE
31	y	120	ASP
31	y	121	ILE
31	y	128	ARG
31	y	133	THR
31	y	135	ARG
33	0	7	THR
33	0	24	ASP
33	0	26	LEU
33	0	56	TYR
33	0	78	GLN
33	0	98	LYS
33	0	102	ARG
33	0	121	THR
33	0	130	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (37) such sidechains are listed below:

Mol	Chain	Res	Type
21	o	133	ASN
21	o	166	GLN
21	o	175	ASN
21	o	180	ASN

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Mol	Chain	Res	Type
21	o	193	ASN
22	p	8	HIS
22	p	21	ASN
22	p	53	ASN
22	p	186	GLN
22	p	204	GLN
22	p	211	HIS
24	r	25	ASN
24	r	34	GLN
24	r	81	HIS
24	r	180	GLN
24	r	206	ASN
25	s	28	ASN
25	s	44	GLN
25	s	49	GLN
25	s	54	ASN
25	s	154	GLN
26	t	79	ASN
26	t	92	ASN
26	t	124	HIS
26	t	182	GLN
26	t	204	GLN
31	y	4	GLN
31	y	12	GLN
31	y	36	ASN
31	y	62	ASN
31	y	80	ASN
31	y	97	ASN
31	y	109	HIS
31	y	153	GLN
33	0	20	GLN
33	0	27	HIS
33	0	136	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
35	2	842/1800 (46%)	640 (76%)	124 (14%)
36	3	160/274 (58%)	80 (50%)	11 (6%)
All	All	1002/2074 (48%)	720 (71%)	135 (13%)

All (720) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
35	2	21	U
35	2	22	A
35	2	23	G
35	2	24	U
35	2	25	C
35	2	26	A
35	2	27	U
35	2	28	A
35	2	29	U
35	2	30	G
35	2	31	C
35	2	32	U
35	2	33	U
35	2	34	G
35	2	35	U
35	2	38	C
35	2	39	A
35	2	40	A
35	2	42	G
35	2	44	U
35	2	45	U
35	2	46	A
35	2	47	A
35	2	48	G
35	2	49	C
35	2	50	C
35	2	52	U
35	2	53	G
35	2	54	C
35	2	55	A
35	2	56	U
35	2	57	G
35	2	58	U
35	2	59	C
35	2	60	U
35	2	61	A
35	2	62	A
35	2	63	G
35	2	64	U
35	2	65	A
35	2	66	U
35	2	67	A
35	2	68	A

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Mol	Chain	Res	Type
35	2	69	G
35	2	70	C
35	2	71	A
35	2	72	A
35	2	73	U
35	2	74	U
35	2	75	U
35	2	76	A
35	2	77	U
35	2	78	A
35	2	79	C
35	2	80	A
35	2	82	U
35	2	83	G
35	2	84	A
35	2	85	A
35	2	87	C
35	2	88	U
35	2	89	G
35	2	91	G
35	2	93	A
35	2	94	U
35	2	95	G
35	2	96	G
35	2	97	C
35	2	99	C
35	2	100	A
35	2	101	U
35	2	104	A
35	2	105	A
35	2	106	U
35	2	107	C
35	2	108	A
35	2	109	G
35	2	110	U
35	2	111	U
35	2	113	U
35	2	114	C
35	2	115	G
35	2	116	U
35	2	117	U
35	2	119	A

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Mol	Chain	Res	Type
35	2	120	U
35	2	121	U
35	2	122	U
35	2	123	G
35	2	124	A
35	2	125	U
35	2	126	A
35	2	127	G
35	2	128	U
35	2	129	U
35	2	130	C
35	2	131	C
35	2	132	U
35	2	133	U
35	2	134	U
35	2	135	A
35	2	136	C
35	2	137	U
35	2	138	A
35	2	139	C
35	2	140	A
35	2	141	U
35	2	142	G
35	2	144	U
35	2	145	A
35	2	146	U
35	2	147	A
35	2	149	C
35	2	150	U
35	2	151	G
35	2	153	G
35	2	156	A
35	2	158	U
35	2	159	U
35	2	160	C
35	2	161	U
35	2	162	A
35	2	166	C
35	2	167	U
35	2	169	A
35	2	171	A
35	2	172	C

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Mol	Chain	Res	Type
35	2	173	A
35	2	174	U
35	2	176	C
35	2	177	U
35	2	178	U
35	2	179	A
35	2	180	A
35	2	181	A
35	2	182	A
35	2	185	U
35	2	186	C
35	2	187	G
35	2	188	A
35	2	189	C
35	2	190	C
35	2	191	C
35	2	192	U
35	2	193	U
35	2	194	U
35	2	195	G
35	2	197	A
35	2	198	A
35	2	199	G
35	2	200	A
35	2	205	U
35	2	206	A
35	2	207	U
35	2	208	U
35	2	209	U
35	2	210	A
35	2	211	U
35	2	212	U
35	2	213	A
35	2	214	G
35	2	215	A
35	2	243	G
35	2	244	A
35	2	246	G
35	2	247	A
35	2	248	U
35	2	249	U
35	2	250	C

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Mol	Chain	Res	Type
35	2	251	A
35	2	252	U
35	2	253	A
35	2	254	A
35	2	255	U
35	2	257	A
35	2	258	C
35	2	259	U
35	2	260	U
35	2	261	U
35	2	262	U
35	2	263	C
35	2	264	G
35	2	266	A
35	2	267	U
35	2	268	C
35	2	269	G
35	2	270	C
35	2	271	A
35	2	272	U
35	2	273	G
35	2	276	C
35	2	277	U
35	2	278	U
35	2	279	G
35	2	280	U
35	2	281	G
35	2	282	C
35	2	283	U
35	2	284	G
35	2	285	G
35	2	286	C
35	2	287	G
35	2	288	A
35	2	289	U
35	2	290	G
35	2	292	U
35	2	294	C
35	2	295	A
35	2	296	U
35	2	297	U
35	2	298	C

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Mol	Chain	Res	Type
35	2	299	A
35	2	300	A
35	2	301	A
35	2	302	U
35	2	303	U
35	2	304	U
35	2	307	G
35	2	308	C
35	2	309	C
35	2	313	U
35	2	314	C
35	2	315	A
35	2	316	A
35	2	317	C
35	2	318	U
35	2	319	U
35	2	320	U
35	2	321	C
35	2	322	G
35	2	323	A
35	2	327	U
35	2	328	A
35	2	329	G
35	2	330	G
35	2	331	A
35	2	332	U
35	2	333	A
35	2	334	G
35	2	335	U
35	2	336	G
35	2	337	G
35	2	338	C
35	2	340	U
35	2	341	A
35	2	342	C
35	2	343	C
35	2	345	U
35	2	346	G
35	2	348	U
35	2	349	U
35	2	351	C
35	2	353	A

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Mol	Chain	Res	Type
35	2	355	G
35	2	356	G
35	2	357	G
35	2	359	A
35	2	360	A
35	2	361	C
35	2	363	G
35	2	368	U
35	2	369	A
35	2	370	A
35	2	374	U
35	2	375	U
35	2	376	C
35	2	377	G
35	2	378	A
35	2	379	U
35	2	380	U
35	2	381	C
35	2	382	C
35	2	383	G
35	2	384	G
35	2	385	A
35	2	387	A
35	2	388	G
35	2	390	G
35	2	391	A
35	2	392	G
35	2	393	C
35	2	394	C
35	2	396	G
35	2	399	A
35	2	400	A
35	2	401	A
35	2	402	C
35	2	403	G
35	2	404	G
35	2	406	U
35	2	407	A
35	2	408	C
35	2	409	C
35	2	410	A
35	2	411	C

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Mol	Chain	Res	Type
35	2	412	A
35	2	413	U
35	2	414	C
35	2	415	C
35	2	416	A
35	2	417	A
35	2	418	G
35	2	419	G
35	2	420	A
35	2	424	C
35	2	425	A
35	2	426	G
35	2	428	A
35	2	429	G
35	2	430	G
35	2	431	C
35	2	433	C
35	2	434	G
35	2	435	C
35	2	436	A
35	2	437	A
35	2	438	A
35	2	439	U
35	2	440	U
35	2	441	A
35	2	442	C
35	2	444	C
35	2	445	A
35	2	446	A
35	2	447	U
35	2	448	C
35	2	449	C
35	2	451	A
35	2	452	A
35	2	453	U
35	2	454	U
35	2	455	C
35	2	456	A
35	2	457	G
35	2	458	G
35	2	459	G
35	2	460	A

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Mol	Chain	Res	Type
35	2	461	G
35	2	462	G
35	2	463	U
35	2	464	A
35	2	465	G
35	2	466	U
35	2	467	G
35	2	468	A
35	2	469	C
35	2	470	A
35	2	471	A
35	2	473	A
35	2	474	A
35	2	475	A
35	2	476	U
35	2	477	A
35	2	478	A
35	2	479	C
35	2	480	G
35	2	481	A
35	2	484	C
35	2	485	A
35	2	486	G
35	2	487	G
35	2	488	G
35	2	489	C
35	2	492	A
35	2	493	U
35	2	494	U
35	2	495	C
35	2	496	G
35	2	497	G
35	2	498	G
35	2	499	U
35	2	500	C
35	2	501	U
35	2	502	U
35	2	503	G
35	2	504	U
35	2	505	A
35	2	506	A
35	2	507	U

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Mol	Chain	Res	Type
35	2	508	U
35	2	510	G
35	2	511	A
35	2	512	A
35	2	513	U
35	2	514	G
35	2	515	A
35	2	516	G
35	2	517	U
35	2	519	C
35	2	520	A
35	2	522	U
35	2	523	G
35	2	525	A
35	2	526	A
35	2	527	A
35	2	528	U
35	2	529	A
35	2	530	C
35	2	531	C
35	2	532	U
35	2	533	U
35	2	534	A
35	2	536	C
35	2	537	G
35	2	538	A
35	2	539	G
35	2	540	G
35	2	547	U
35	2	549	G
35	2	588	U
35	2	589	C
35	2	591	A
35	2	592	A
35	2	593	U
35	2	614	C
35	2	615	A
35	2	617	U
35	2	619	A
35	2	620	A
35	2	622	A
35	2	623	A

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Mol	Chain	Res	Type
35	2	624	G
35	2	625	C
35	2	629	U
35	2	630	A
35	2	631	G
35	2	632	U
35	2	633	U
35	2	634	G
35	2	635	A
35	2	864	U
35	2	865	A
35	2	867	G
35	2	868	G
35	2	870	C
35	2	871	G
35	2	872	G
35	2	873	U
35	2	874	C
35	2	876	G
35	2	880	C
35	2	881	A
35	2	882	U
35	2	884	A
35	2	887	A
35	2	888	U
35	2	890	C
35	2	891	A
35	2	892	A
35	2	893	U
35	2	894	U
35	2	896	U
35	2	897	C
35	2	898	A
35	2	899	G
35	2	902	G
35	2	903	U
35	2	904	G
35	2	905	A
35	2	906	A
35	2	907	A
35	2	908	U
35	2	909	U

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Mol	Chain	Res	Type
35	2	910	C
35	2	912	U
35	2	913	G
35	2	914	G
35	2	915	A
35	2	916	U
35	2	917	U
35	2	918	U
35	2	920	U
35	2	921	U
35	2	922	G
35	2	923	A
35	2	924	A
35	2	925	G
35	2	926	A
35	2	927	C
35	2	928	U
35	2	931	C
35	2	932	U
35	2	933	A
35	2	934	C
35	2	935	U
35	2	936	G
35	2	937	C
35	2	938	G
35	2	939	A
35	2	942	G
35	2	943	C
35	2	944	A
35	2	945	U
35	2	947	U
35	2	948	G
35	2	950	C
35	2	951	A
35	2	953	G
35	2	956	C
35	2	958	U
35	2	959	U
35	2	960	U
35	2	962	C
35	2	963	A
35	2	964	U

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Mol	Chain	Res	Type
35	2	965	U
35	2	966	A
35	2	968	U
35	2	969	C
35	2	970	A
35	2	971	A
35	2	972	G
35	2	975	C
35	2	977	A
35	2	978	A
35	2	1026	A
35	2	1027	A
35	2	1028	C
35	2	1029	U
35	2	1030	A
35	2	1031	U
35	2	1032	G
35	2	1033	C
35	2	1034	C
35	2	1035	G
35	2	1036	A
35	2	1037	C
35	2	1039	A
35	2	1040	G
35	2	1041	G
35	2	1043	A
35	2	1045	C
35	2	1046	G
35	2	1047	G
35	2	1048	G
35	2	1050	G
35	2	1051	G
35	2	1053	G
35	2	1054	U
35	2	1055	U
35	2	1056	U
35	2	1057	U
35	2	1058	U
35	2	1059	U
35	2	1061	A
35	2	1066	C
35	2	1067	C

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Mol	Chain	Res	Type
35	2	1069	A
35	2	1071	U
35	2	1072	C
35	2	1073	G
35	2	1074	G
35	2	1075	C
35	2	1076	A
35	2	1077	C
35	2	1078	C
35	2	1079	U
35	2	1080	U
35	2	1081	A
35	2	1082	C
35	2	1083	G
35	2	1084	A
35	2	1085	G
35	2	1087	A
35	2	1088	A
35	2	1089	U
35	2	1091	A
35	2	1092	A
35	2	1094	G
35	2	1095	U
35	2	1096	C
35	2	1097	U
35	2	1098	U
35	2	1152	A
35	2	1153	G
35	2	1154	G
35	2	1158	C
35	2	1160	A
35	2	1161	C
35	2	1162	C
35	2	1166	A
35	2	1167	G
35	2	1168	U
35	2	1178	G
35	2	1179	G
35	2	1461	C
35	2	1466	G
35	2	1467	C
35	2	1468	U

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Mol	Chain	Res	Type
35	2	1469	A
35	2	1471	A
35	2	1472	C
35	2	1473	U
35	2	1474	G
35	2	1477	G
35	2	1478	G
35	2	1479	A
35	2	1481	C
35	2	1482	C
35	2	1483	A
35	2	1484	G
35	2	1524	A
35	2	1533	C
35	2	1534	G
35	2	1535	U
35	2	1536	G
35	2	1537	C
35	2	1538	U
35	2	1539	G
35	2	1572	G
35	2	1573	A
35	2	1574	G
35	2	1575	G
35	2	1576	A
35	2	1581	C
35	2	1583	A
35	2	1584	G
35	2	1587	A
35	2	1590	G
35	2	1591	C
35	2	1592	A
35	2	1599	C
35	2	1600	A
35	2	1601	G
35	2	1602	C
35	2	1605	G
35	2	1607	G
35	2	1609	U
35	2	1610	G
35	2	1611	A
35	2	1613	U

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Mol	Chain	Res	Type
35	2	1614	A
35	2	1615	C
35	2	1616	G
35	2	1618	C
35	2	1623	C
35	2	1624	C
35	2	1625	C
35	2	1627	U
35	2	1628	U
36	3	69	G
36	3	70	A
36	3	72	C
36	3	74	C
36	3	75	A
36	3	77	C
36	3	78	C
36	3	79	G
36	3	80	G
36	3	81	G
36	3	82	U
36	3	83	U
36	3	84	G
36	3	85	A
36	3	89	A
36	3	90	C
36	3	91	G
36	3	92	A
36	3	93	G
36	3	95	U
36	3	96	C
36	3	97	C
36	3	98	U
36	3	99	C
36	3	100	G
36	3	101	G
36	3	104	C
36	3	109	C
36	3	111	G
36	3	112	U
36	3	114	A
36	3	116	G
36	3	131	U

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Mol	Chain	Res	Type
36	3	132	C
36	3	133	G
36	3	134	C
36	3	135	U
36	3	136	C
36	3	142	G
36	3	162	C
36	3	163	C
36	3	164	U
36	3	165	C
36	3	166	G
36	3	167	U
36	3	168	C
36	3	174	G
36	3	178	U
36	3	180	U
36	3	181	A
36	3	183	A
36	3	188	G
36	3	189	G
36	3	190	C
36	3	191	G
36	3	193	U
36	3	194	G
36	3	195	A
36	3	198	U
36	3	199	G
36	3	200	U
36	3	201	A
36	3	202	C
36	3	242	G
36	3	248	G
36	3	250	G
36	3	253	G
36	3	254	A
36	3	255	U
36	3	256	G
36	3	257	G
36	3	259	A
36	3	260	G
36	3	261	U
36	3	262	C

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Mol	Chain	Res	Type
36	3	264	G
36	3	265	A
36	3	266	C
36	3	268	G
36	3	269	G

All (135) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
35	2	23	G
35	2	24	U
35	2	27	U
35	2	28	A
35	2	29	U
35	2	30	G
35	2	39	A
35	2	49	C
35	2	55	A
35	2	58	U
35	2	59	C
35	2	62	A
35	2	64	U
35	2	65	A
35	2	66	U
35	2	67	A
35	2	68	A
35	2	70	C
35	2	71	A
35	2	77	U
35	2	78	A
35	2	81	G
35	2	82	U
35	2	87	C
35	2	99	C
35	2	103	A
35	2	112	A
35	2	118	U
35	2	125	U
35	2	131	C
35	2	133	U
35	2	135	A
35	2	137	U

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Mol	Chain	Res	Type
35	2	138	A
35	2	140	A
35	2	141	U
35	2	159	U
35	2	160	C
35	2	173	A
35	2	179	A
35	2	192	U
35	2	199	G
35	2	208	U
35	2	259	U
35	2	263	C
35	2	272	U
35	2	278	U
35	2	294	C
35	2	295	A
35	2	314	C
35	2	322	G
35	2	327	U
35	2	332	U
35	2	342	C
35	2	344	A
35	2	345	U
35	2	355	G
35	2	359	A
35	2	365	G
35	2	379	U
35	2	386	G
35	2	398	G
35	2	400	A
35	2	401	A
35	2	416	A
35	2	417	A
35	2	440	U
35	2	447	U
35	2	455	C
35	2	457	G
35	2	459	G
35	2	461	G
35	2	467	G
35	2	473	A
35	2	474	A

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Mol	Chain	Res	Type
35	2	477	A
35	2	479	C
35	2	485	A
35	2	492	A
35	2	495	C
35	2	499	U
35	2	500	C
35	2	501	U
35	2	504	U
35	2	509	G
35	2	513	U
35	2	515	A
35	2	525	A
35	2	528	U
35	2	529	A
35	2	530	C
35	2	534	A
35	2	538	A
35	2	539	G
35	2	587	C
35	2	592	A
35	2	614	C
35	2	628	G
35	2	880	C
35	2	887	A
35	2	914	G
35	2	932	U
35	2	933	A
35	2	936	G
35	2	959	U
35	2	963	A
35	2	964	U
35	2	1023	A
35	2	1026	A
35	2	1045	C
35	2	1055	U
35	2	1080	U
35	2	1084	A
35	2	1091	A
35	2	1094	G
35	2	1472	C
35	2	1478	G

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Mol	Chain	Res	Type
35	2	1480	G
35	2	1481	C
35	2	1573	A
35	2	1574	G
35	2	1580	C
35	2	1591	C
35	2	1609	U
36	3	78	C
36	3	91	G
36	3	92	A
36	3	110	A
36	3	113	G
36	3	135	U
36	3	199	G
36	3	255	U
36	3	258	A
36	3	259	A
36	3	260	G

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

The following chains have linkage breaks:

Mol	Chain	Number of breaks
6	Q	30
7	R	15
3	H	13
5	M	2
5	O	2
5	m	2
1	A	1
1	B	1
1	C	1
1	D	1
1	E	1
1	F	1
1	J	1
1	K	1
1	L	1
1	N	1
1	P	1
1	l	1
1	n	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	Q	171:UNK	C	301:UNK	N	88.70
1	R	41:UNK	C	51:UNK	N	66.84
1	R	141:UNK	C	151:UNK	N	66.84
1	R	241:UNK	C	251:UNK	N	66.84
1	R	341:UNK	C	351:UNK	N	66.84
1	H	287:UNK	C	288:UNK	N	58.68
1	R	197:UNK	C	201:UNK	N	55.89
1	H	135:UNK	C	136:UNK	N	47.92
1	R	297:UNK	C	301:UNK	N	46.21
1	H	66:UNK	C	67:UNK	N	46.19
1	H	217:UNK	C	218:UNK	N	41.95
1	R	97:UNK	C	101:UNK	N	41.50
1	H	89:UNK	C	90:UNK	N	37.62
1	Q	153:UNK	C	154:UNK	N	35.55
1	H	112:UNK	C	113:UNK	N	34.97
1	H	46:UNK	C	47:UNK	N	34.40
1	Q	416:UNK	C	417:UNK	N	31.57
1	H	159:UNK	C	160:UNK	N	30.20
1	Q	340:UNK	C	341:UNK	N	30.12
1	H	266:UNK	C	267:UNK	N	28.92
1	H	317:UNK	C	318:UNK	N	28.31

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	R	68:UNK	C	71:UNK	N	27.85
1	R	168:UNK	C	171:UNK	N	27.85
1	R	268:UNK	C	271:UNK	N	27.85
1	R	368:UNK	C	371:UNK	N	27.85
1	Q	96:UNK	C	97:UNK	N	26.91
1	Q	352:UNK	C	353:UNK	N	24.70
1	Q	402:UNK	C	403:UNK	N	24.25
1	Q	444:UNK	C	445:UNK	N	23.16
1	Q	366:UNK	C	367:UNK	N	22.53
1	Q	378:UNK	C	379:UNK	N	22.27
1	Q	120:UNK	C	121:UNK	N	22.17
1	H	29:UNK	C	30:UNK	N	21.69
1	H	246:UNK	C	247:UNK	N	21.15
1	Q	107:UNK	C	108:UNK	N	19.83
1	Q	330:UNK	C	331:UNK	N	18.77
1	Q	12:UNK	C	13:UNK	N	18.66
1	Q	342:UNK	C	343:UNK	N	18.27
1	Q	392:UNK	C	393:UNK	N	18.09
1	Q	133:UNK	C	134:UNK	N	17.79
1	Q	474:UNK	C	475:UNK	N	17.24
1	Q	316:UNK	C	317:UNK	N	17.11
1	Q	484:UNK	C	485:UNK	N	16.84
1	H	189:UNK	C	190:UNK	N	15.95
1	Q	494:UNK	C	495:UNK	N	14.94
1	M	392:UNK	C	409:UNK	N	13.48
1	O	392:UNK	C	409:UNK	N	13.48
1	Q	81:UNK	C	82:UNK	N	13.48
1	m	392:UNK	C	409:UNK	N	13.48
1	Q	26:UNK	C	27:UNK	N	11.03
1	Q	454:UNK	C	455:UNK	N	10.27
1	Q	430:UNK	C	431:UNK	N	9.59
1	Q	46:UNK	C	47:UNK	N	9.29
1	Q	33:UNK	C	34:UNK	N	9.18
1	R	82:UNK	C	86:UNK	N	7.41
1	R	182:UNK	C	186:UNK	N	7.41
1	R	282:UNK	C	286:UNK	N	7.41
1	R	382:UNK	C	386:UNK	N	7.41
1	Q	72:UNK	C	73:UNK	N	7.40
1	A	326:UNK	C	338:UNK	N	7.23
1	B	326:UNK	C	338:UNK	N	7.23
1	C	326:UNK	C	338:UNK	N	7.23
1	D	326:UNK	C	338:UNK	N	7.23

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	E	326:UNK	C	338:UNK	N	7.23
1	F	326:UNK	C	338:UNK	N	7.23
1	J	326:UNK	C	338:UNK	N	7.23
1	K	326:UNK	C	338:UNK	N	7.23
1	L	326:UNK	C	338:UNK	N	7.23
1	N	326:UNK	C	338:UNK	N	7.23
1	P	326:UNK	C	338:UNK	N	7.23
1	l	326:UNK	C	338:UNK	N	7.23
1	n	326:UNK	C	338:UNK	N	7.23
1	Q	59:UNK	C	60:UNK	N	7.16
1	O	32:UNK	C	348:UNK	N	6.12
1	M	32:UNK	C	348:UNK	N	6.11
1	m	32:UNK	C	348:UNK	N	6.11
1	Q	464:UNK	C	465:UNK	N	3.86

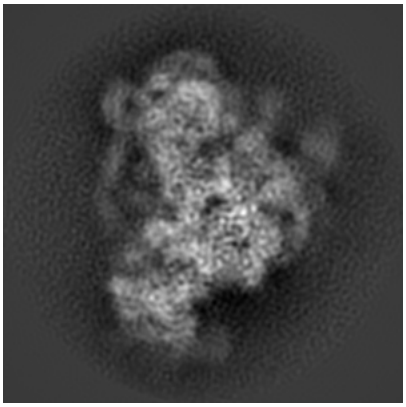
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-8143. These allow visual inspection of the internal detail of the map and identification of artifacts.

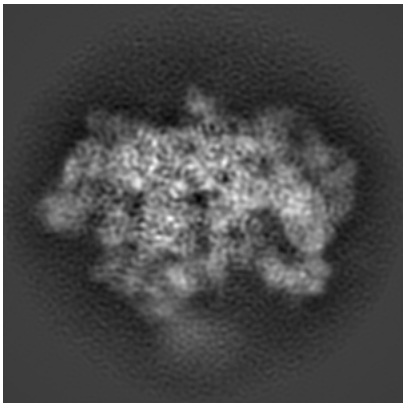
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

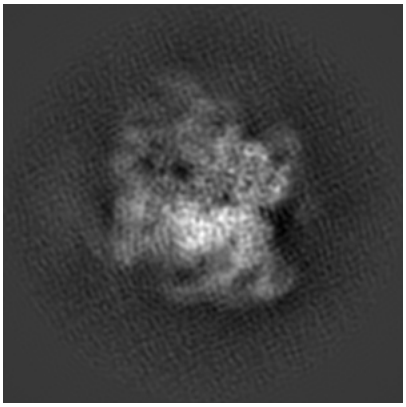
6.1.1 Primary map



X



Y

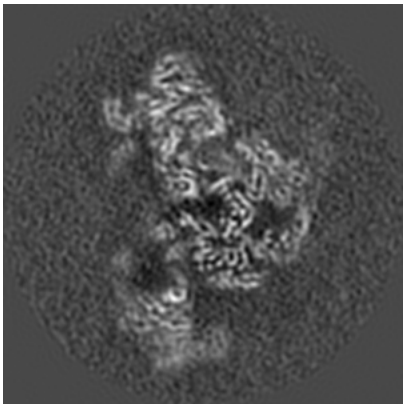


Z

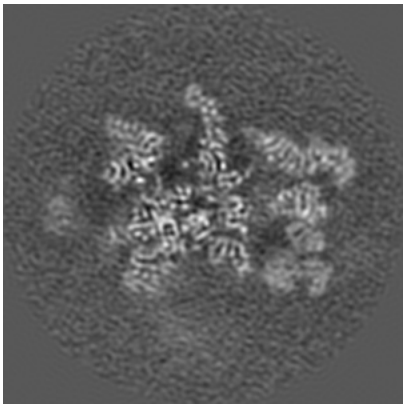
The images above show the map projected in three orthogonal directions.

6.2 Central slices

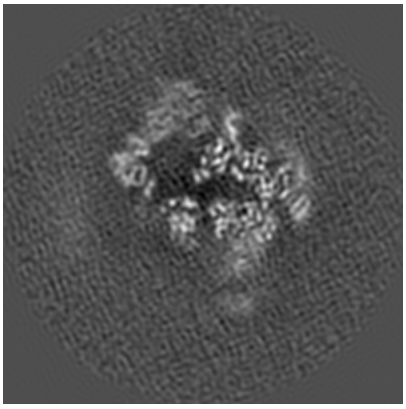
6.2.1 Primary map



X Index: 224



Y Index: 224

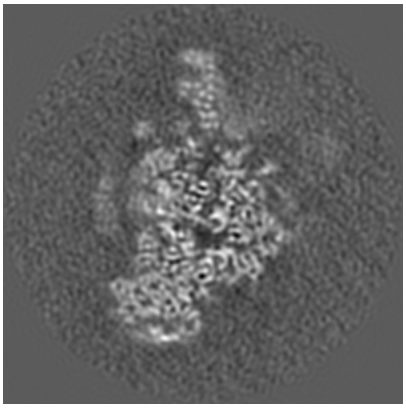


Z Index: 224

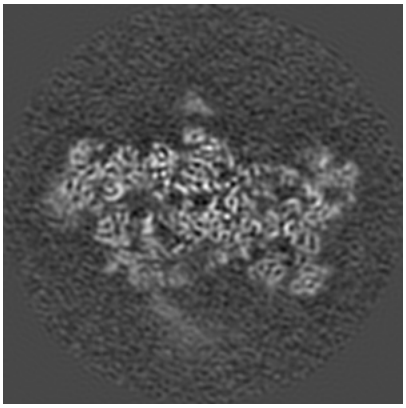
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

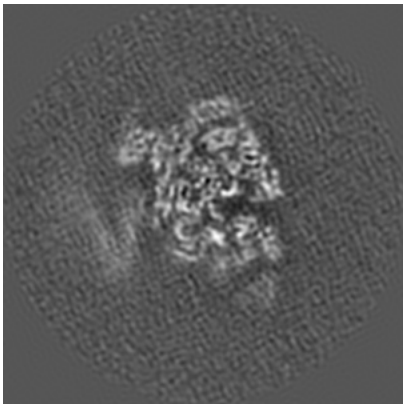
6.3.1 Primary map



X Index: 266



Y Index: 206



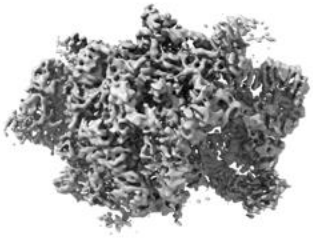
Z Index: 191

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

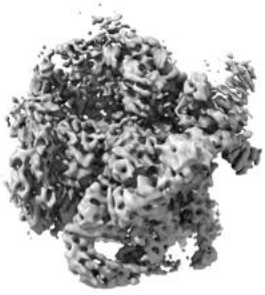
6.4 Orthogonal surface views (i)

6.4.1 Primary map

X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.025. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

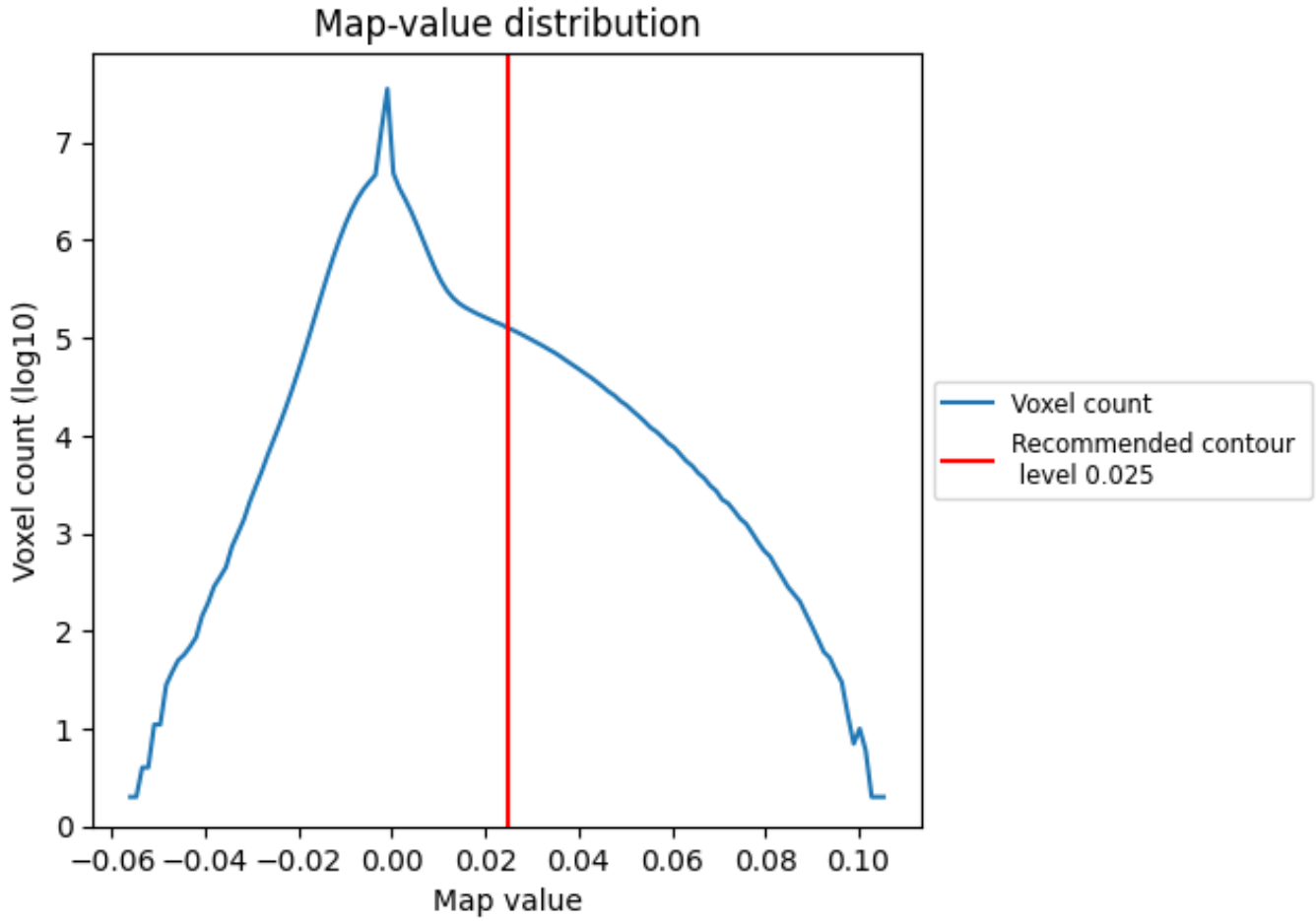
6.5 Mask visualisation (i)

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

7 Map analysis

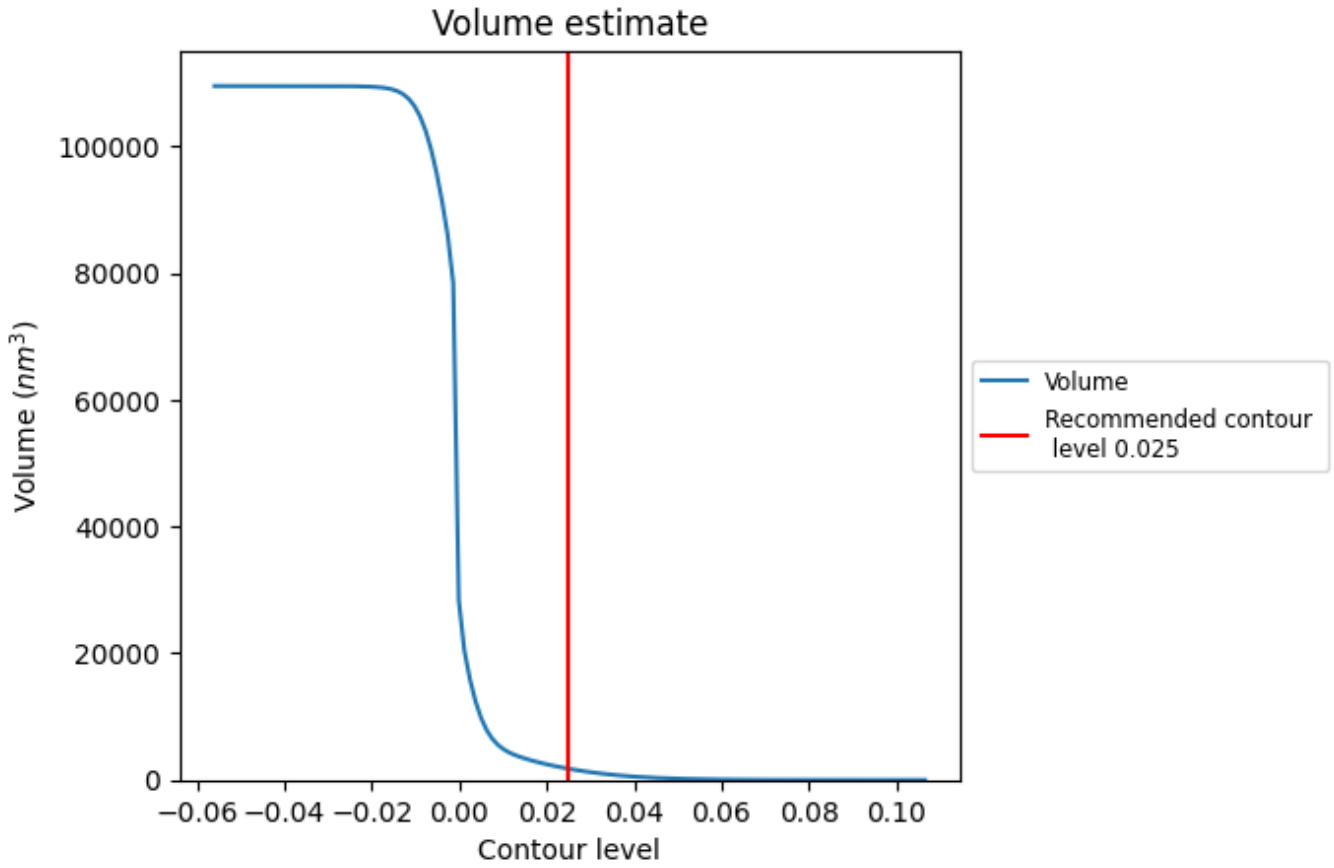
This section contains the results of statistical analysis of the map.

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.

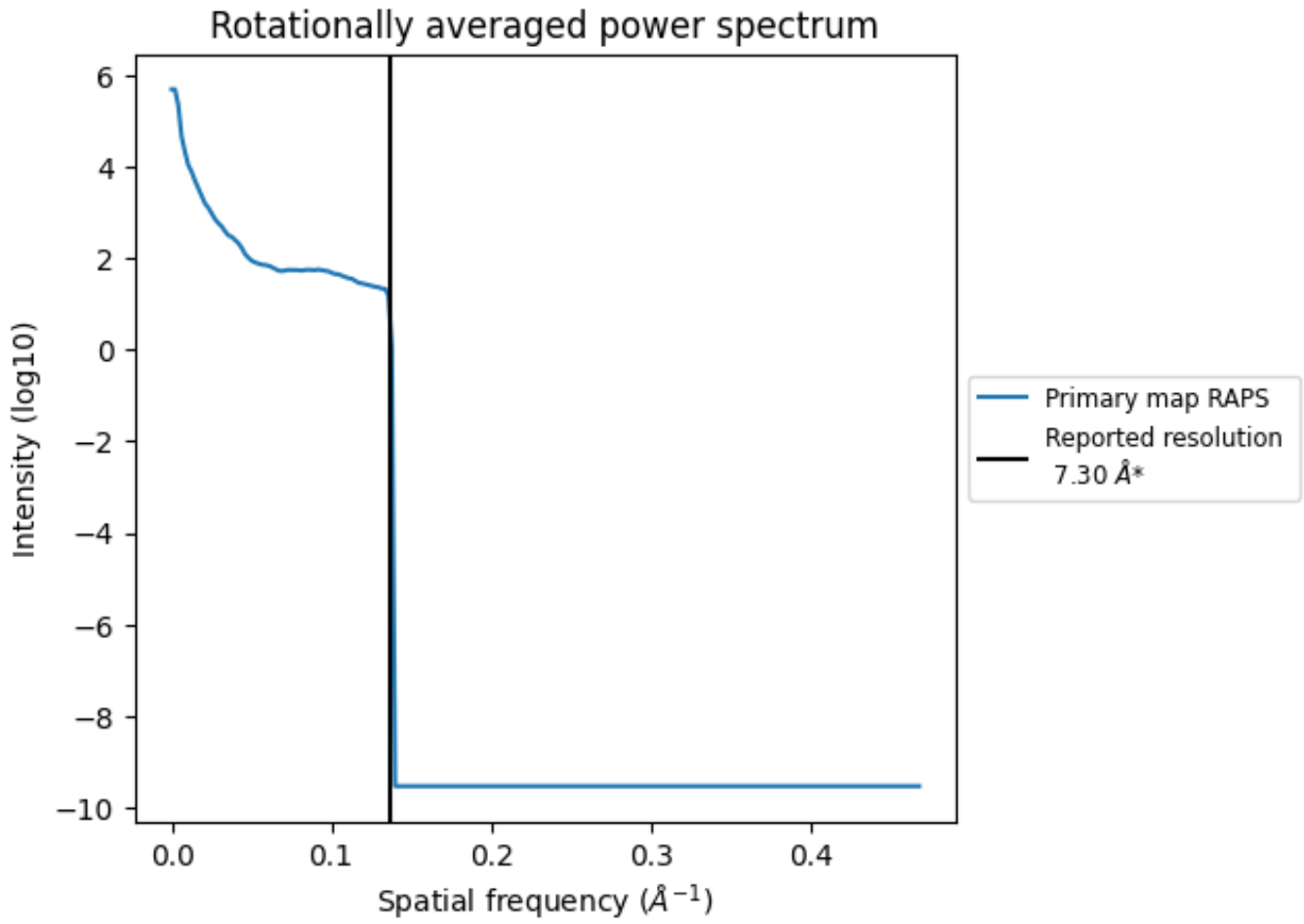
7.2 Volume estimate



The volume at the recommended contour level is 1769 nm^3; this corresponds to an approximate mass of 1598 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)

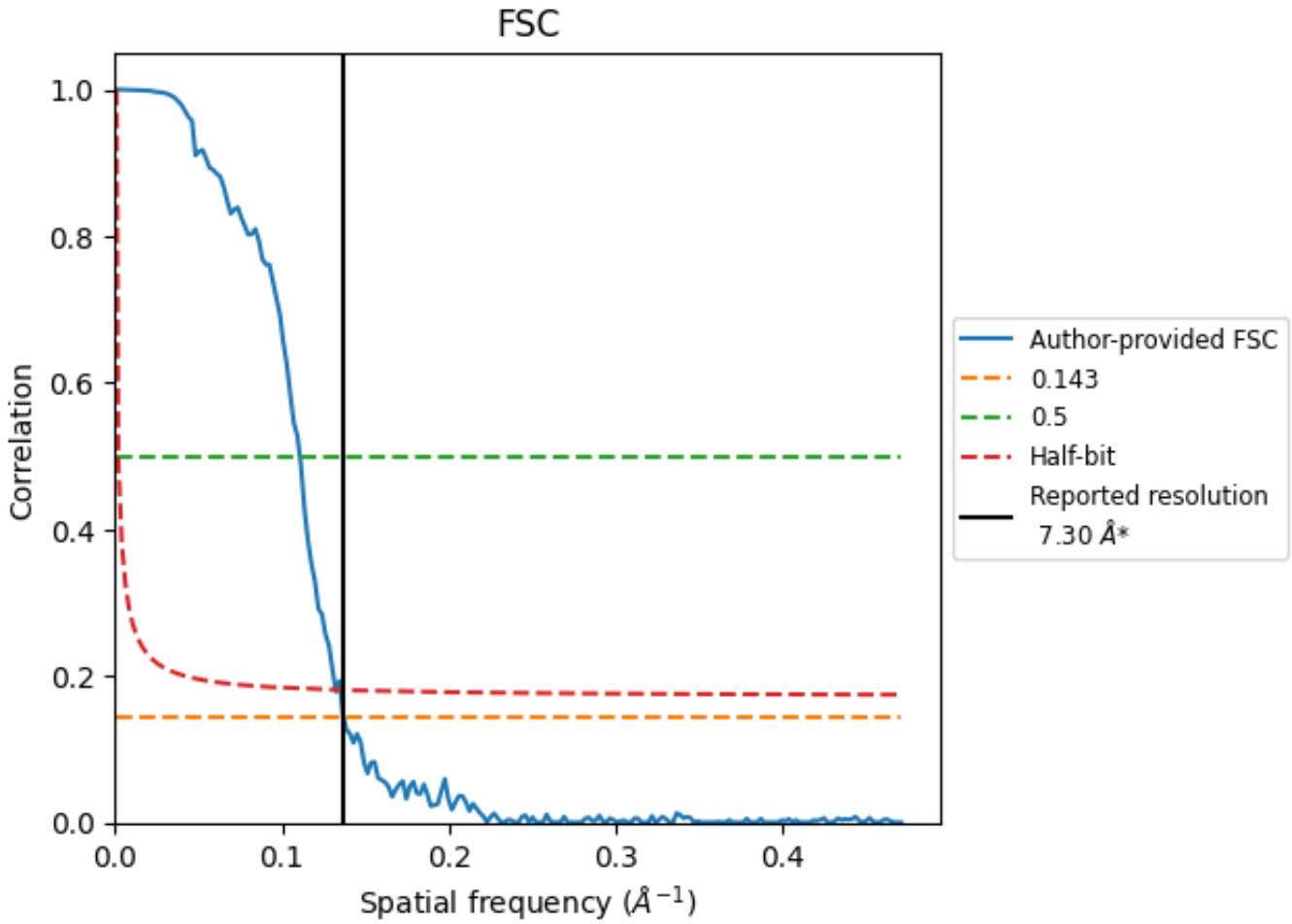


*Reported resolution corresponds to spatial frequency of 0.137 Å^{-1}

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 0.137 Å^{-1}

8.2 Resolution estimates (i)

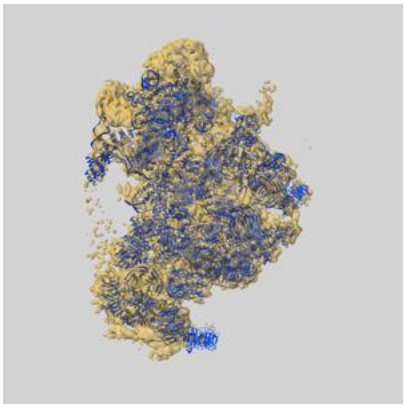
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	7.30	-	-
Author-provided FSC curve	7.30	9.03	7.56
Unmasked-calculated*	-	-	-

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

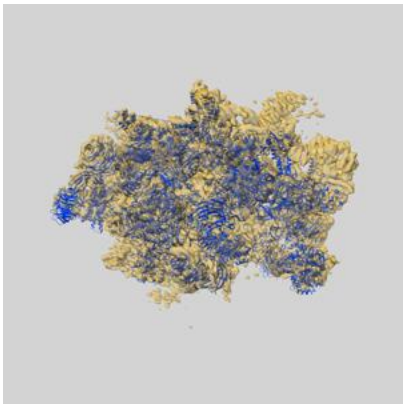
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-8143 and PDB model 5JPQ. Per-residue inclusion information can be found in section 3 on page 12.

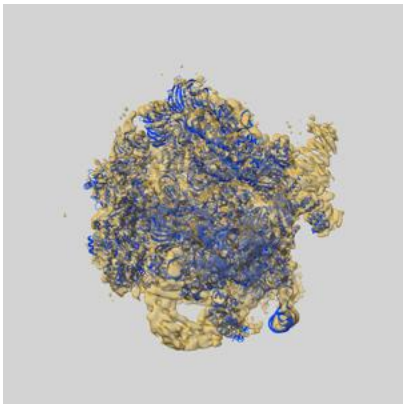
9.1 Map-model overlay



X



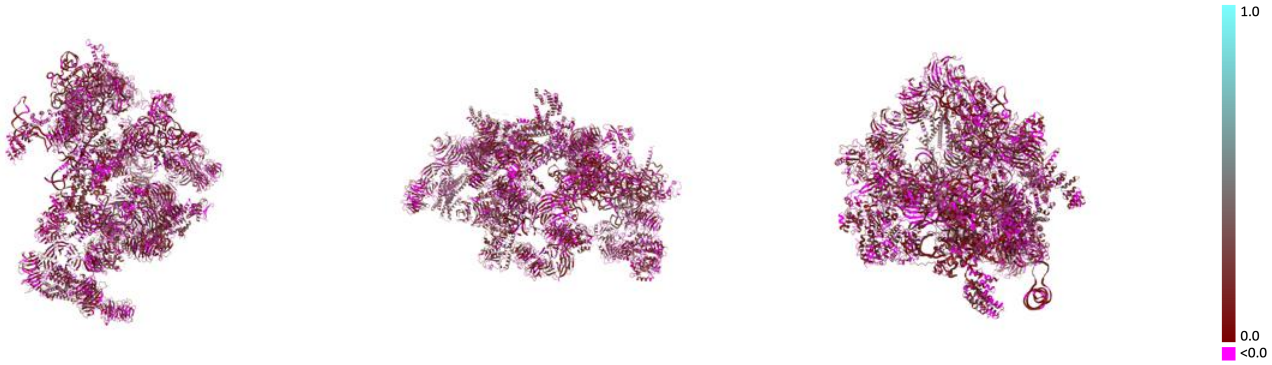
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.025 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.

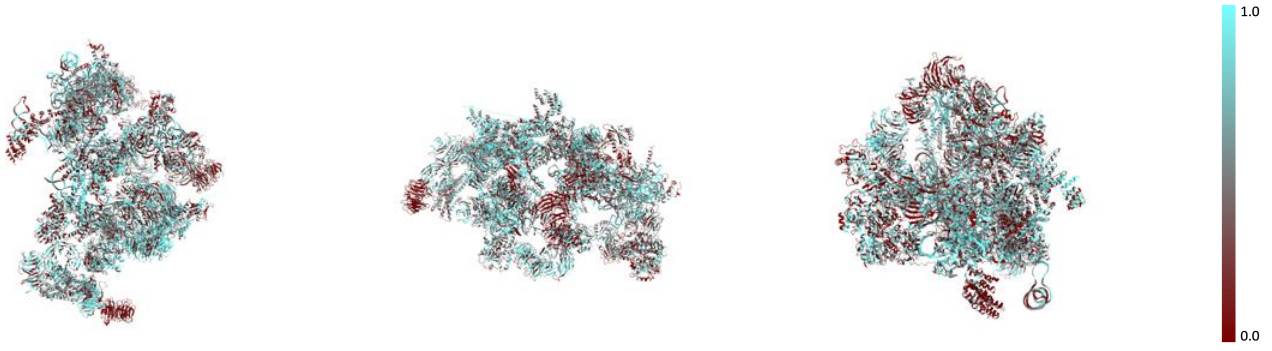
9.2 Q-score mapped to coordinate model



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.

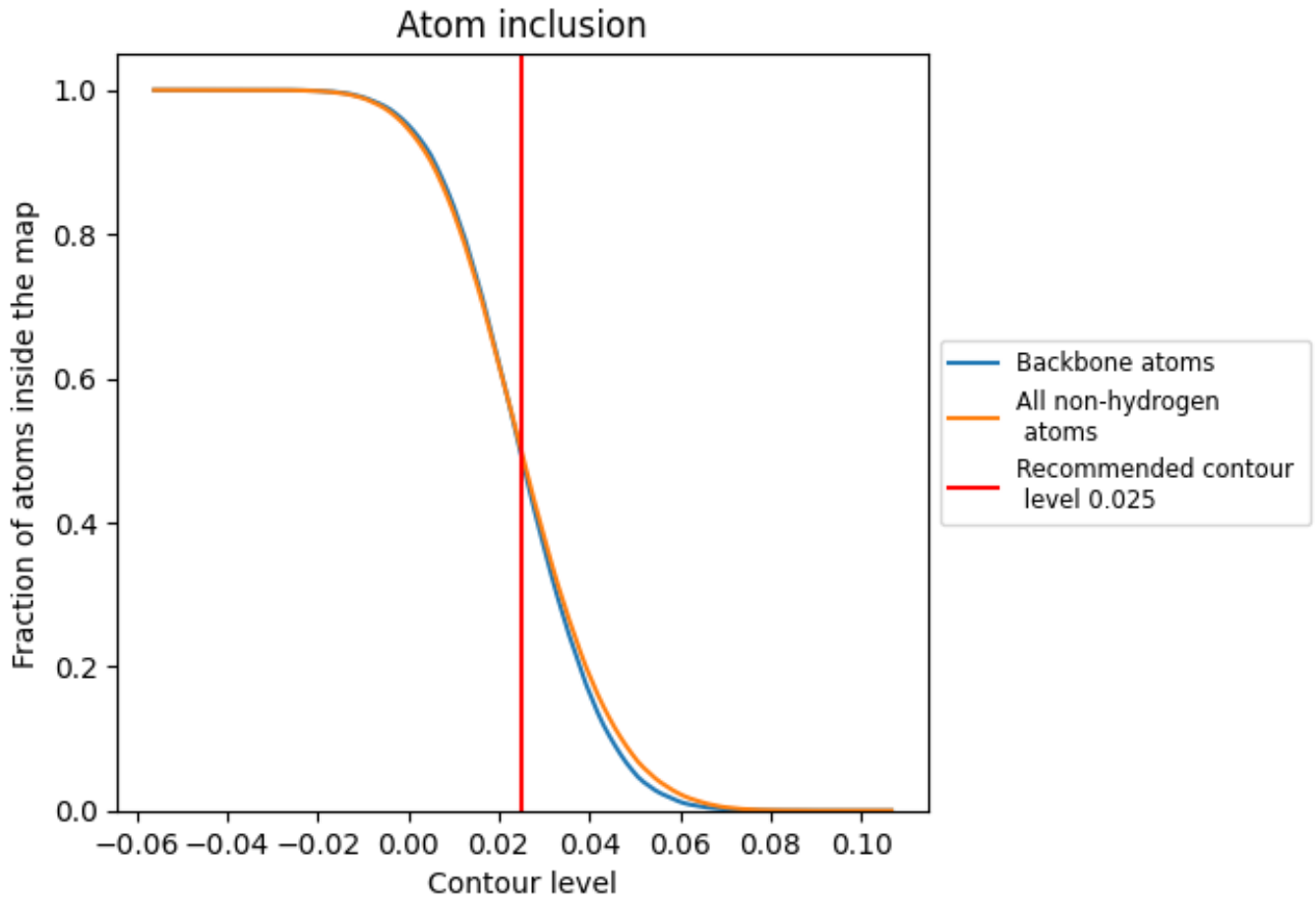
9.3 Atom inclusion mapped to coordinate model



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 (0.025).

9.4 Atom inclusion (i)



At the recommended contour level, 49% of all backbone atoms, 50% 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 (0.025) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.4982	0.0970
0	0.3048	0.0260
1	0.4087	0.0650
2	0.6615	0.1280
3	0.6130	0.1220
A	0.6107	0.0820
B	0.5833	0.0830
C	0.5453	0.0770
D	0.6067	0.0980
E	0.5800	0.0960
F	0.0367	0.0420
G	0.1127	0.0640
H	0.4962	0.1840
I	0.6533	0.1260
J	0.4473	0.1170
K	0.5400	0.0860
L	0.5940	0.1300
M	0.6142	0.1110
N	0.2333	0.0800
O	0.1184	0.0390
P	0.5427	0.1060
Q	0.6011	0.1280
R	0.7247	0.2060
S	0.5240	0.1050
T	0.4567	0.0770
U	0.3582	0.0160
V	0.3449	0.0050
W	0.4004	0.0570
X	0.4600	0.0650
Y	0.5192	0.0970
Z	0.5695	0.1350
a	0.5281	0.1590
b	0.4855	0.1190
c	0.4658	0.1190
d	0.4562	0.1080

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Chain	Atom inclusion	Q-score
e	0.4718	0.1430
f	0.4801	0.1490
g	0.3554	0.0620
h	0.3438	0.0650
i	0.4084	0.0800
j	0.3612	0.0740
k	0.5392	0.1430
l	0.5987	0.1410
m	0.5476	0.0940
n	0.4407	0.0680
o	0.2979	0.0530
p	0.3622	0.0230
q	0.3373	0.0210
r	0.4370	0.0780
s	0.3024	0.0230
t	0.4474	0.0610
u	0.6242	0.1790
v	0.2138	0.0690
w	0.3270	0.0790
x	0.2401	-0.0630
y	0.3755	0.0250
z	0.3135	0.0310