Full wwPDB X-ray Structure Validation Report (i)

Sep 10, 2023 – 12:48 PM EDT

PDB ID	:	4KZZ
Title	:	Rabbit 40S ribosomal subunit in complex with mRNA, initiator tRNA and eIF1A
Authors	:	Lomakin, I.B.; Steitz, T.A.
Deposited on	:	2013-05-30
Resolution	:	7.03 Å(reported)

This is a Full wwPDB X-ray Structure 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/XrayValidationReportHelp
with specific help available everywhere you see the (i) symbol.

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

The following versions of software and data (see references (1)) were used in the production of this report:

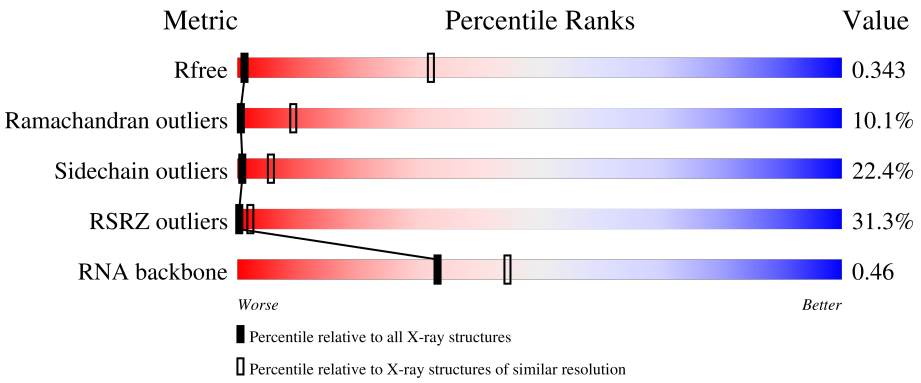
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.35.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.35.1

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 7.03 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)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1004 (10.00-3.90)
Ramachandran outliers	138981	1002 (10.00-3.90)
Sidechain outliers	138945	1002 (10.00-3.86)
RSRZ outliers	127900	1004 (9.50-3.80)
RNA backbone	3102	1078 (10.00-3.00)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower 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 electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	295	14%; 46%; 20%; • •; 29%
2	B	264	28%; 55%; 23%; •; 19%
3	C	278	39%; 58%; 20%; • •; 19%
4	D	243	68%; 63%; 26%; 5%; 7%
5	E	263	51%; 66%; 29%; •

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Mol	Chain	Length	Quality of chain
6	F	204	75% 66% 21% 6%
7	G	249	29% 65% 26% 5%
8	H	194	11% 61% 26% 7%
9	I	208	57% 70% 20% 8%
10	J	194	18% 58% 26% 8% 6%
11	K	165	18% 31% 15% 8% 5% 41%
12	L	158	39% 66% 26%
13	M	132	4% 62% 25% 7% 6%
14	N	151	15% 68% 30%
15	O	151	34% 60% 27% 10%
16	P	145	49% 50% 27% 8% 12%
17	Q	146	34% 68% 23% 5%
18	R	135	10% 66% 17% 7% 7%
19	S	152	16% 59% 20% 9% 10%
20	T	145	5% 70% 21% 5%
21	U	119	54% 48% 30% 5% 13%
22	V	83	14% 54% 30% 13%
23	W	130	36% 81% 16%
24	X	143	43% 68% 26% 6%
25	Y	133	7% 59% 26% 8% 5%
26	Z	125	10% 38% 16% 5% 40%
27	a	115	23% 63% 22% 7% 7%
28	b	84	7% 65% 25% 10%
29	c	69	52% 65% 20% 7% 7%
30	d	56	38% 66% 27% 5%

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Mol	Chain	Length	Quality of chain
31	e	133	9% 18% 16% 10% 56%
32	f	156	19% 18% 8% 54%
33	g	317	12% 74% 20%
34	i	1863	26% 8% 64% 25%
35	j	75	28% 72% 27%
36	k	24	50% 42% 8% 46%
37	n	144	22% 44% 11% 43%

2 Entry composition (i)

There are 37 unique types of molecules in this entry. The entry contains 79048 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 40S Ribosomal Protein SA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	208	1642	1045	289	300	8	0	0	0

- Molecule 2 is a protein called 40S Ribosomal Protein S3A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	B	215	1741	1107	309	310	15	0	0	0

- Molecule 3 is a protein called 40S Ribosomal Protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	C	226	1742	1127	300	306	9	0	0	0

- Molecule 4 is a protein called 40S Ribosomal Protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	D	227	1764	1124	317	315	8	0	0	0

- Molecule 5 is a protein called 40S Ribosomal Protein S4X.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
5	E	263	2083	1329	385	359	10	0	0	0

- Molecule 6 is a protein called 40S Ribosomal Protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
6	F	191	1509	943	286	273	7	0	0	0

- Molecule 7 is a protein called 40S Ribosomal Protein S6.

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

- Molecule 8 is a protein called 40S Ribosomal Protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
8	H	190	1530	975	281	273	1	0	0	0

- Molecule 9 is a protein called 40S Ribosomal Protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
9	I	206	1679	1054	329	291	5	0	0	0

- Molecule 10 is a protein called 40S Ribosomal Protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
10	J	182	1498	952	300	244	2	0	0	0

- Molecule 11 is a protein called 40S Ribosomal Protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
11	K	98	827	539	148	134	6	0	0	0

- Molecule 12 is a protein called 40S Ribosomal Protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
12	L	158	1296	827	241	221	7	0	0	0

- Molecule 13 is a protein called 40S Ribosomal Protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
13	M	124	950	594	169	179	8	0	0	0

- Molecule 14 is a protein called 40S Ribosomal Protein S13.

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

- Molecule 15 is a protein called 40S Ribosomal Protein S14.

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

- Molecule 16 is a protein called 40S Ribosomal Protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
16	P	127	1060	673	201	179	7	0	0	0

- Molecule 17 is a protein called 40S Ribosomal Protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
17	Q	141	1124	715	212	194	3	0	0	0

- Molecule 18 is a protein called 40S Ribosomal Protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
18	R	126	1019	639	188	187	5	0	0	0

- Molecule 19 is a protein called 40S Ribosomal Protein S18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
19	S	137	1139	714	231	193	1	0	0	0

- Molecule 20 is a protein called 40S Ribosomal Protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
20	T	141	1112	701	213	195	3	0	0	0

- Molecule 21 is a protein called 40S Ribosomal Protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
21	U	104	822	514	156	148	4	0	0	0

- Molecule 22 is a protein called 40S Ribosomal Protein S21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
22	V	82	619	378	117	119	5	0	0	0

- Molecule 23 is a protein called 40S Ribosomal Protein S15A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
23	W	129	1034	659	193	176	6	0	0	0

- Molecule 24 is a protein called 40S Ribosomal Protein S23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
24	X	142	1106	698	220	184	4	0	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
X	1	MET	ALA	SEE REMARK 999	UNP G1SZ47

- Molecule 25 is a protein called 40S Ribosomal Protein S24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
25	Y	126	1021	645	198	173	5	0	0	0

- Molecule 26 is a protein called 40S Ribosomal Protein S25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
26	Z	75	598	382	111	104	1	0	0	0

- Molecule 27 is a protein called 40S Ribosomal Protein S26.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
27	a	107	844	527	173	138	6	0	0	0

- Molecule 28 is a protein called 40S Ribosomal Protein S27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
28	b	84	659	413	122	116	8	0	0	0

- Molecule 29 is a protein called 40S Ribosomal Protein S28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
29	c	64	506	308	102	94	2	0	0	0

- Molecule 30 is a protein called 40S Ribosomal Protein S29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
30	d	53	445	278	90	72	5	0	0	0

- Molecule 31 is a protein called 40S Ribosomal Protein S30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
31	e	59	473	293	104	75	1	0	0	0

- Molecule 32 is a protein called 40S Ribosomal Protein S27A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
32	f	71	581	367	109	98	7	0	0	0

- Molecule 33 is a protein called 40S Ribosomal Protein RACK1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
33	g	313	2436	1535	424	465	12	0	0	0

- Molecule 34 is a RNA chain called 18S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
34	i	1797	37514	16712	6634	12372	1796	0	0	0

- Molecule 35 is a RNA chain called initiator Met-RNA-i.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
35	j	75	1607	717	298	517	75	0	0	0

- Molecule 36 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
36	k	13	273	123	47	90	13	0	0	0

- Molecule 37 is a protein called human initiation factor eIF1A.

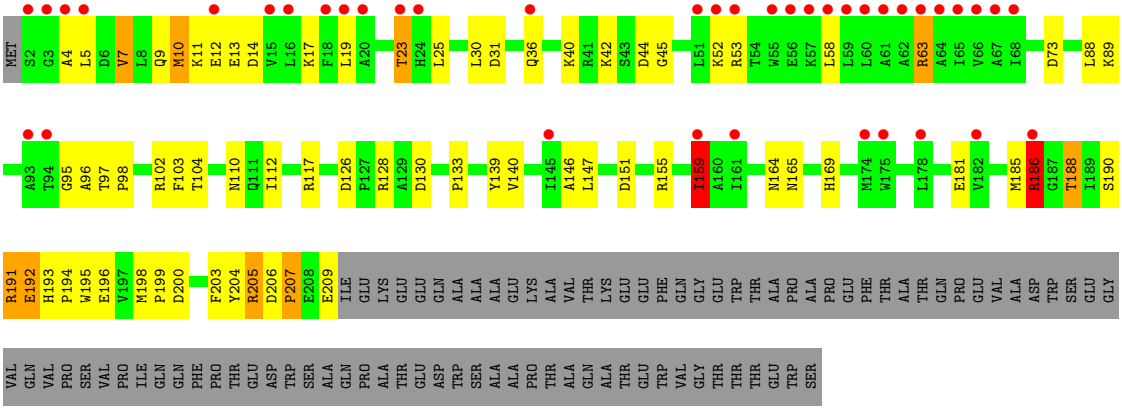
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
37	n	82	648	407	119	118	4	0	0	0

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 electron 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 dot above a residue indicates a poor fit to the electron density (RSRZ > 2). 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.

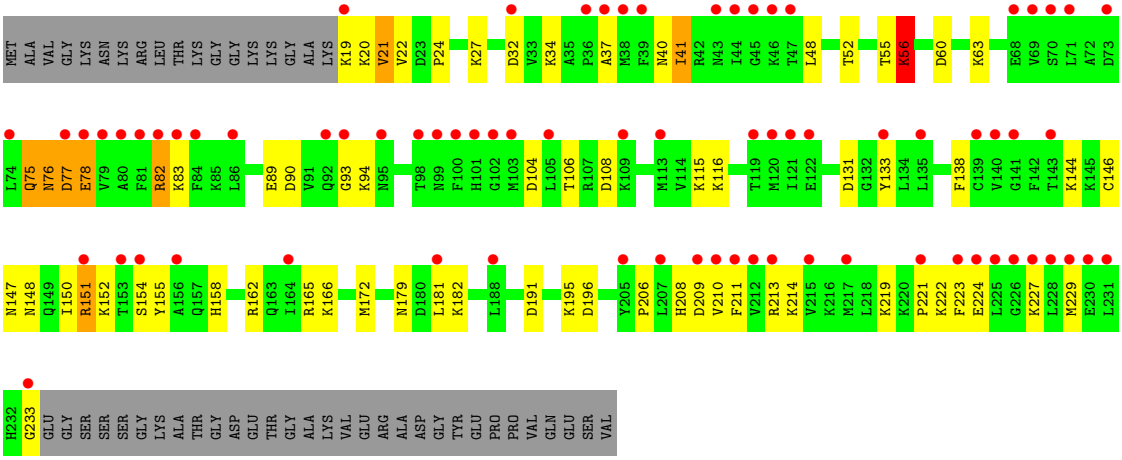
- Molecule 1: 40S Ribosomal Protein SA

Chain A:



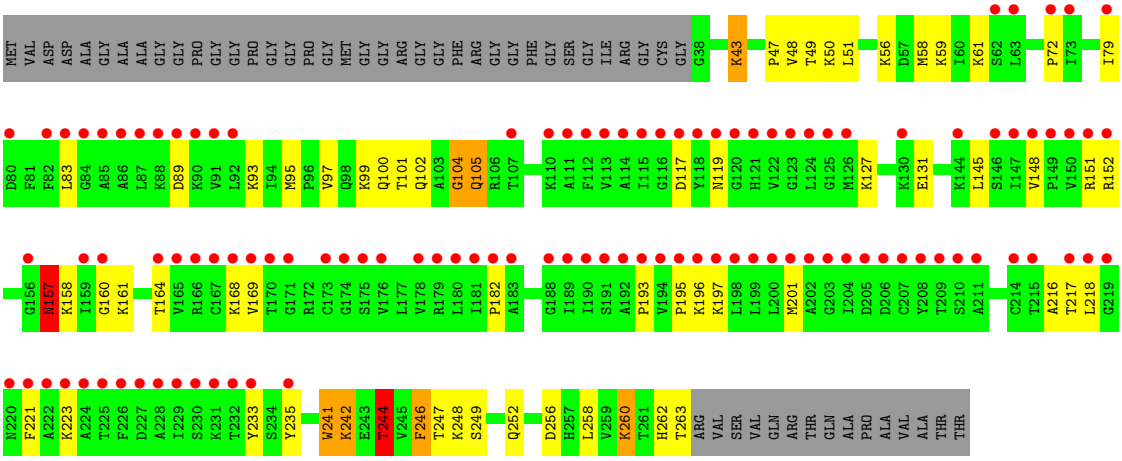
- Molecule 2: 40S Ribosomal Protein S3A

Chain B:



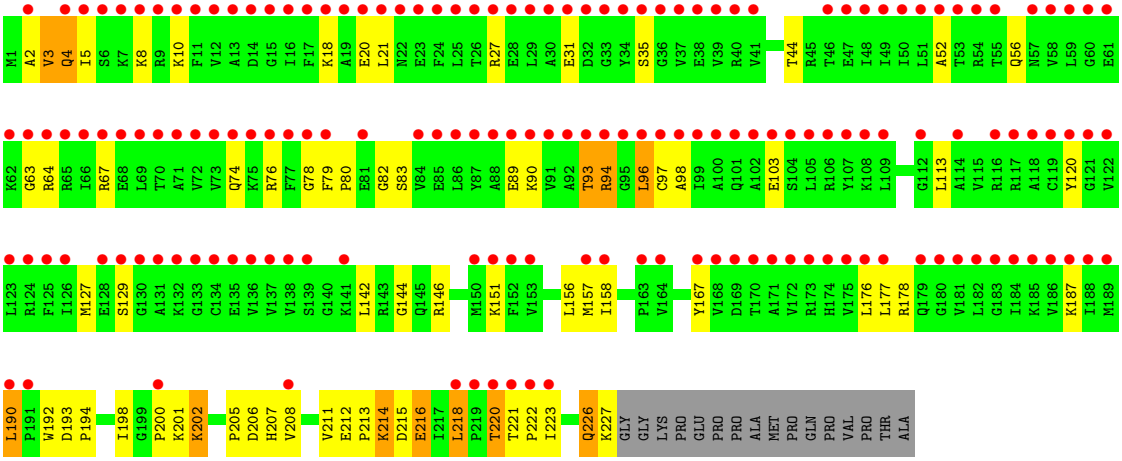
- Molecule 3: 40S Ribosomal Protein S2

Chain C:



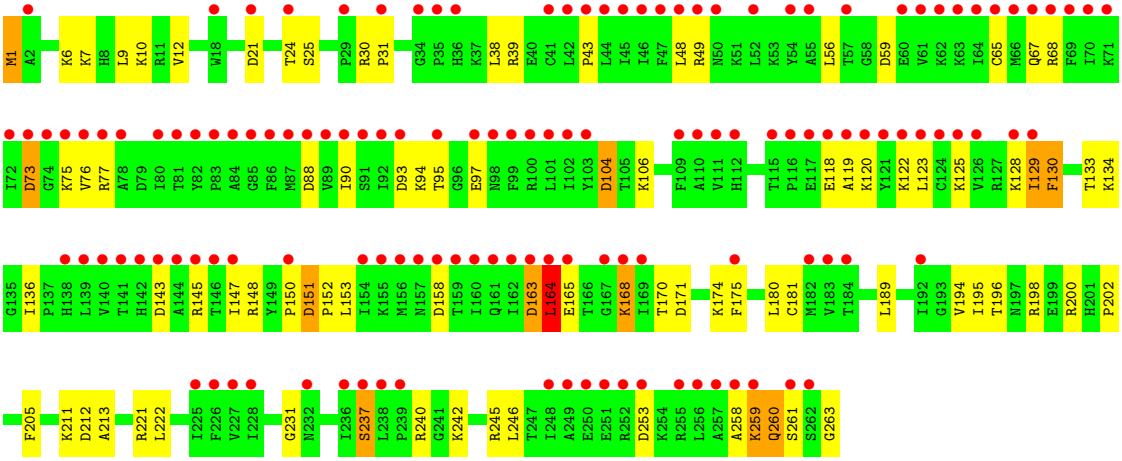
- Molecule 4: 40S Ribosomal Protein S3

Chain D:



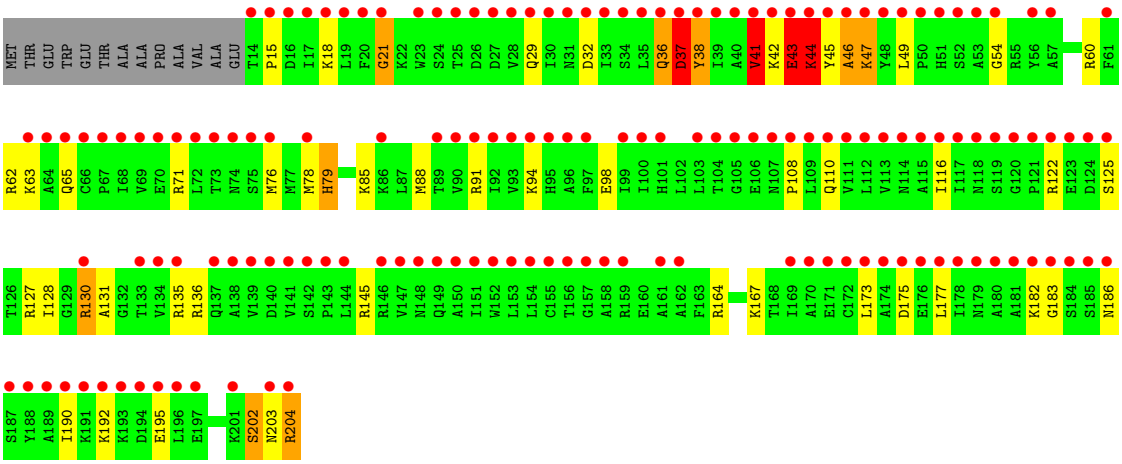
- Molecule 5: 40S Ribosomal Protein S4X

Chain E:



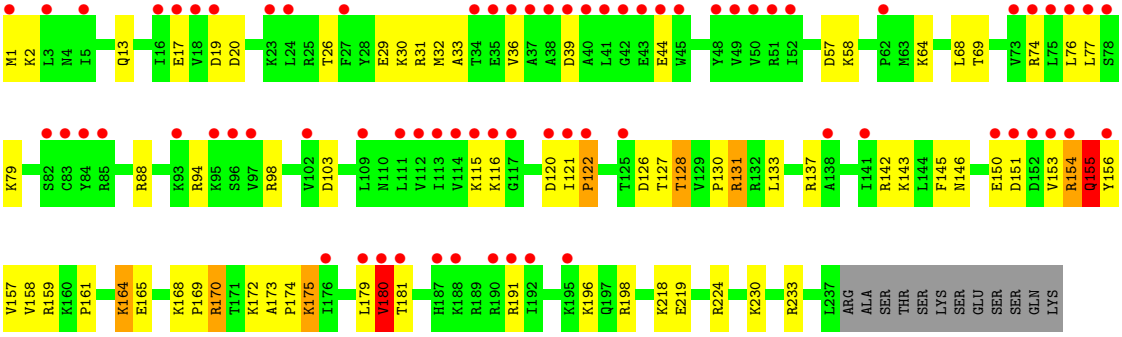
- Molecule 6: 40S Ribosomal Protein S5

Chain F:



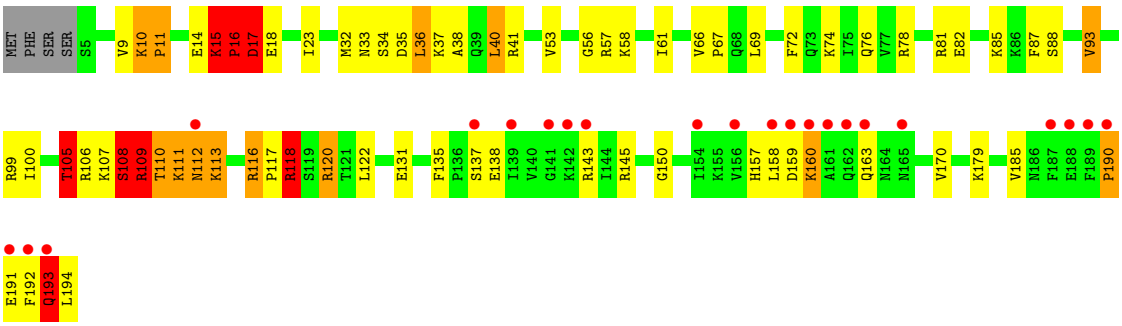
- Molecule 7: 40S Ribosomal Protein S6

Chain G:



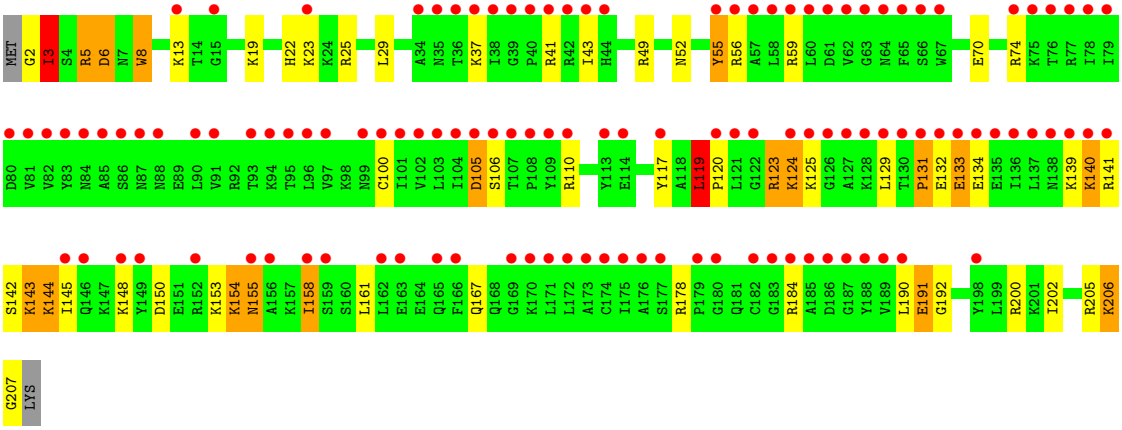
- Molecule 8: 40S Ribosomal Protein S7

Chain H:



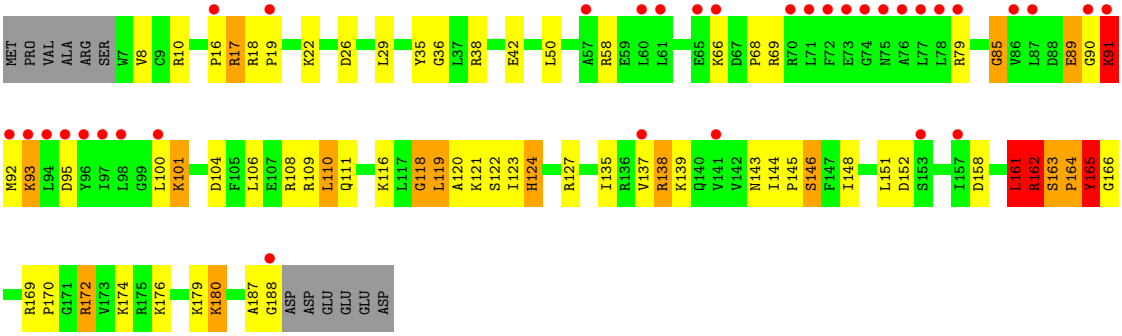
- Molecule 9: 40S Ribosomal Protein S8

Chain I:



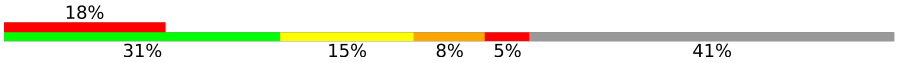
• Molecule 10: 40S Ribosomal Protein S9

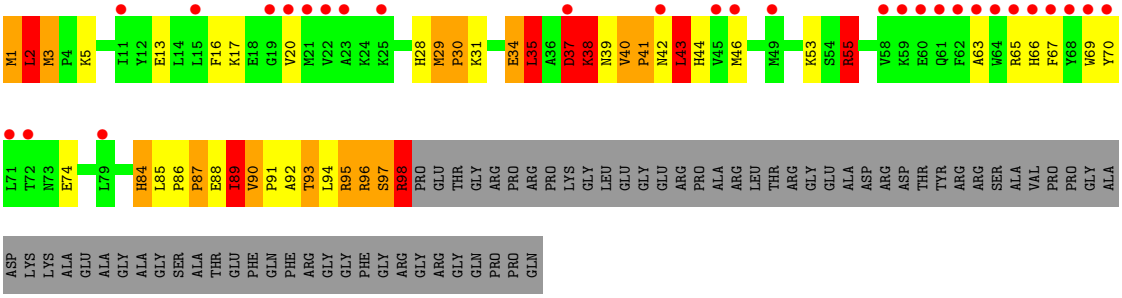
Chain J:



• Molecule 11: 40S Ribosomal Protein S10

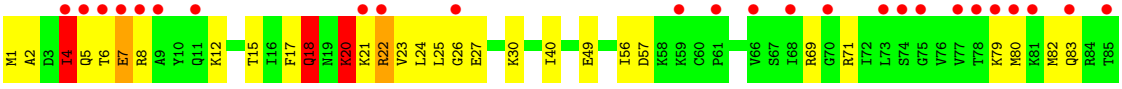
Chain K:

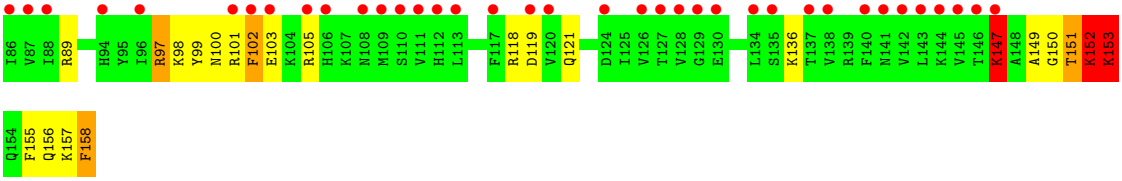




• Molecule 12: 40S Ribosomal Protein S11

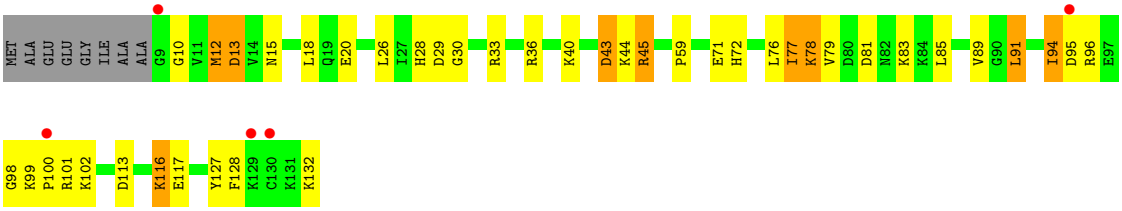
Chain L:





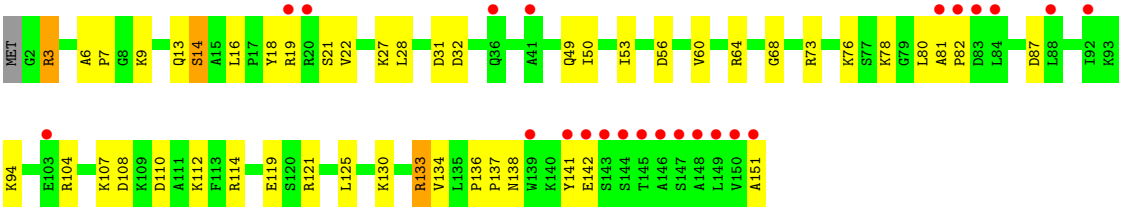
• Molecule 13: 40S Ribosomal Protein S12

Chain M:



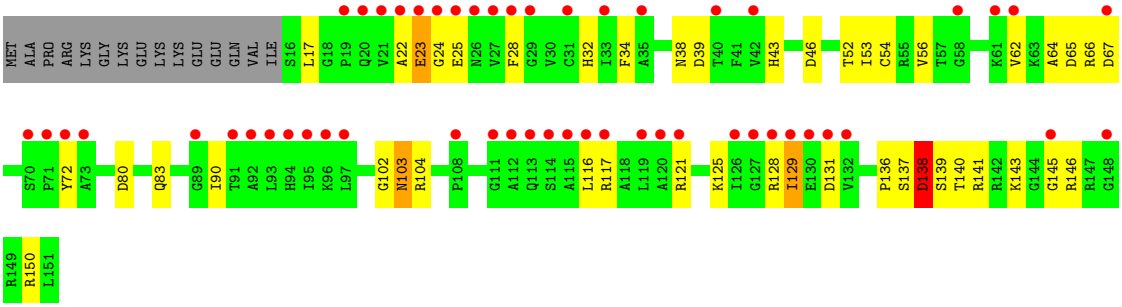
• Molecule 14: 40S Ribosomal Protein S13

Chain N:



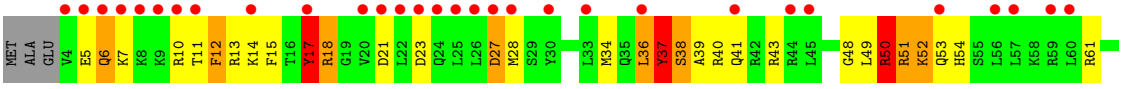
• Molecule 15: 40S Ribosomal Protein S14

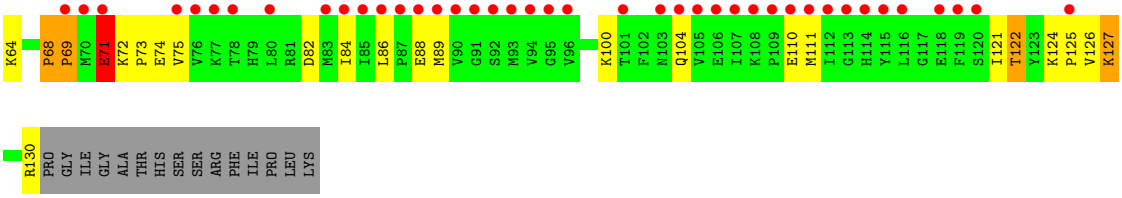
Chain O:



• Molecule 16: 40S Ribosomal Protein S15

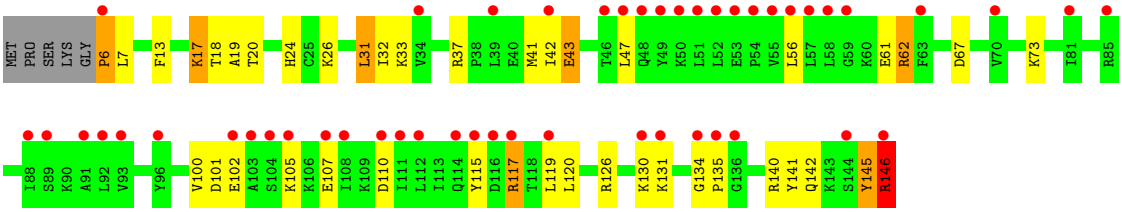
Chain P:





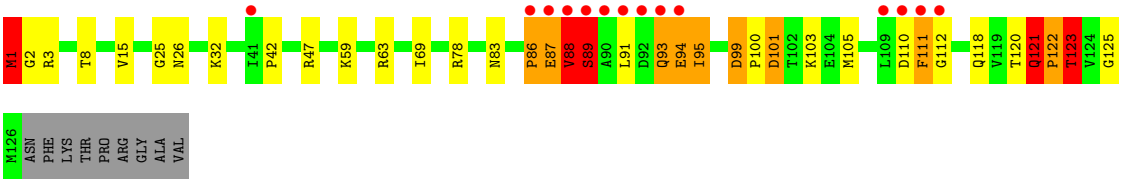
- Molecule 17: 40S Ribosomal Protein S16

Chain Q:



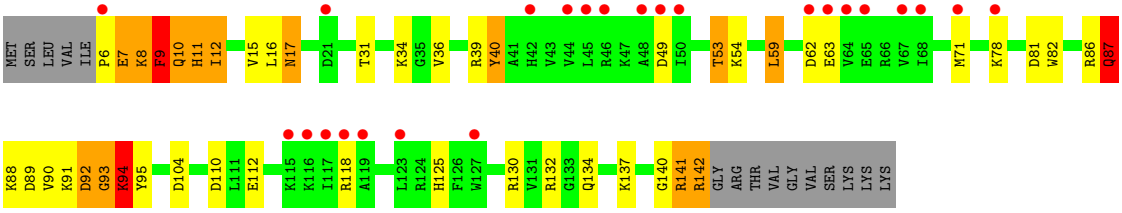
- Molecule 18: 40S Ribosomal Protein S17

Chain R:



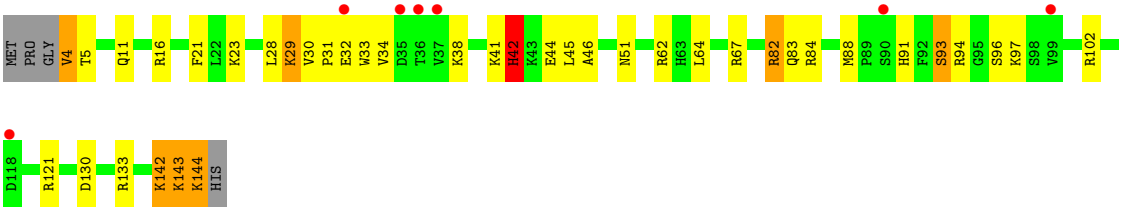
- Molecule 19: 40S Ribosomal Protein S18

Chain S:



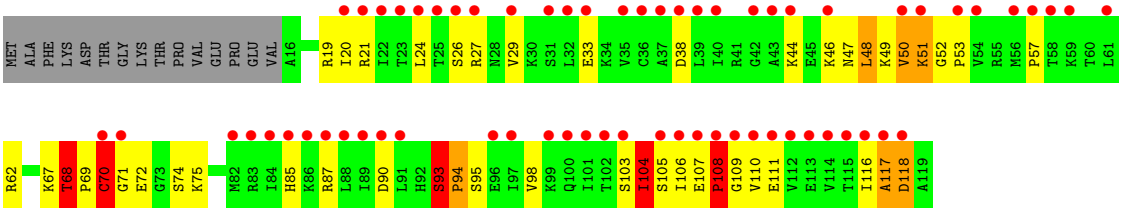
- Molecule 20: 40S Ribosomal Protein S19

Chain T:



- Molecule 21: 40S Ribosomal Protein S20

Chain U:

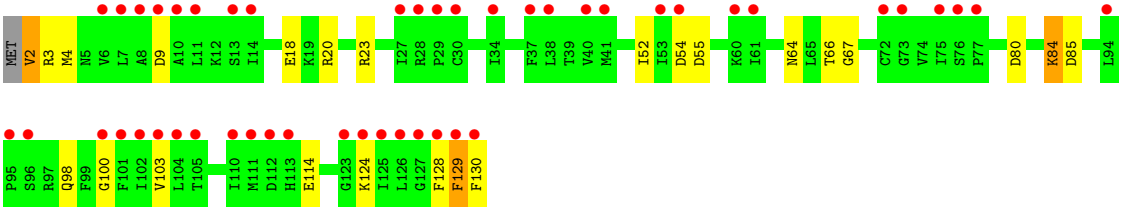


- Molecule 22: 40S Ribosomal Protein S21

Chain V:

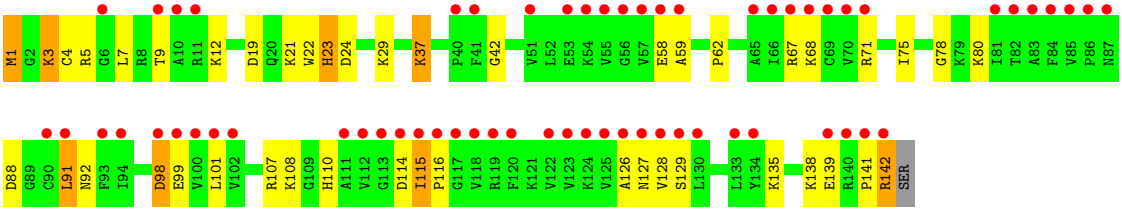
- Molecule 23: 40S Ribosomal Protein S15A

Chain W:



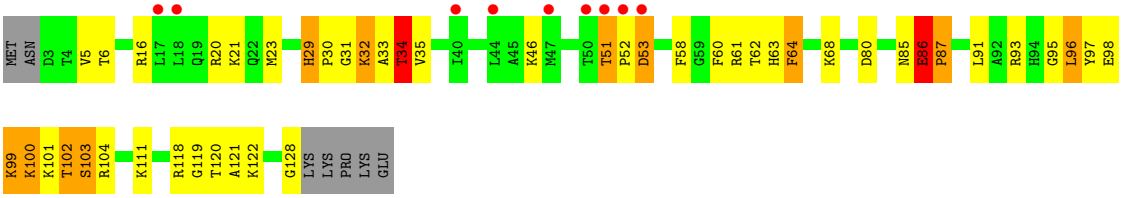
- Molecule 24: 40S Ribosomal Protein S23

Chain X:



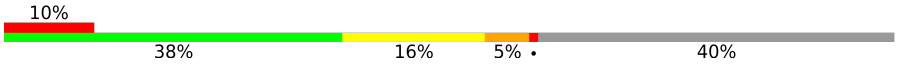
- Molecule 25: 40S Ribosomal Protein S24

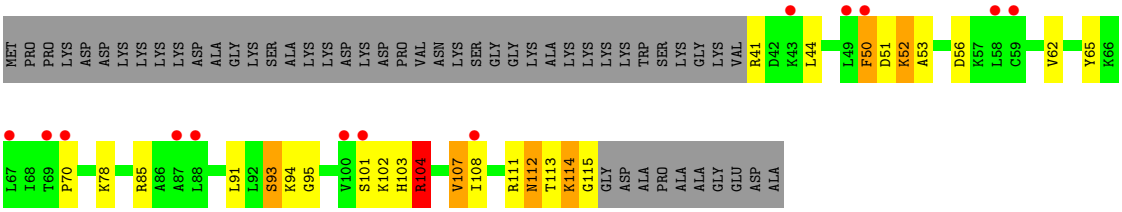
Chain Y:



- Molecule 26: 40S Ribosomal Protein S25

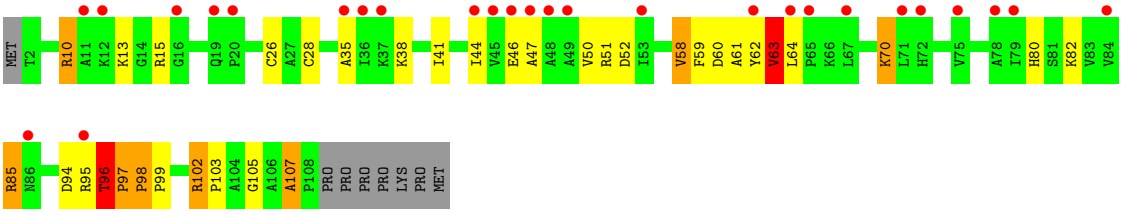
Chain Z:





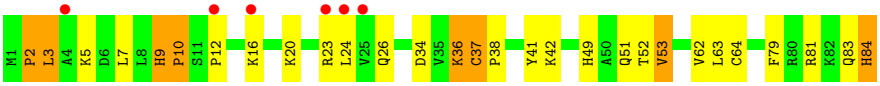
- Molecule 27: 40S Ribosomal Protein S26

Chain a:



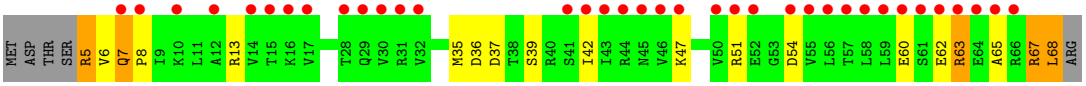
- Molecule 28: 40S Ribosomal Protein S27

Chain b:



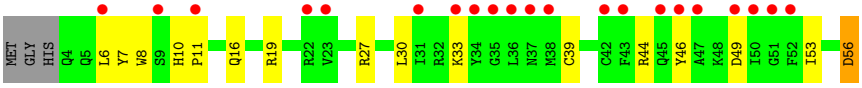
- Molecule 29: 40S Ribosomal Protein S28

Chain c:



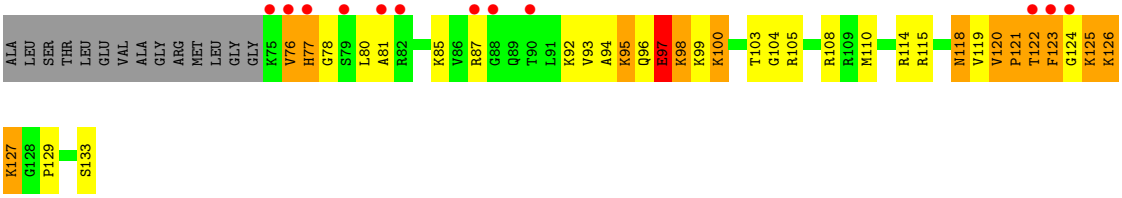
- Molecule 30: 40S Ribosomal Protein S29

Chain d:



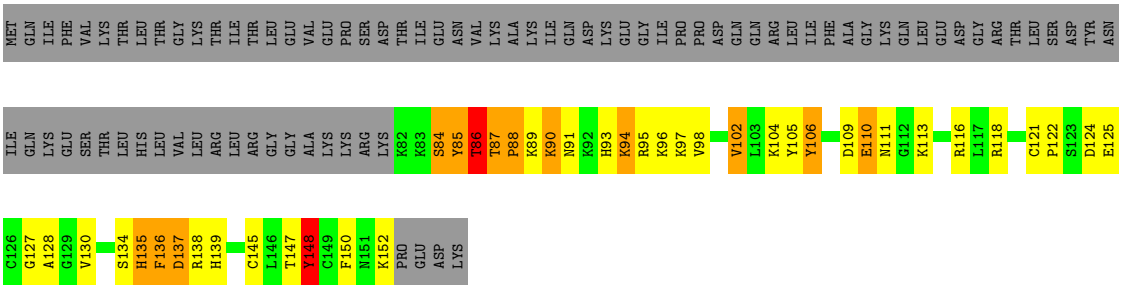
- Molecule 31: 40S Ribosomal Protein S30

Chain e:



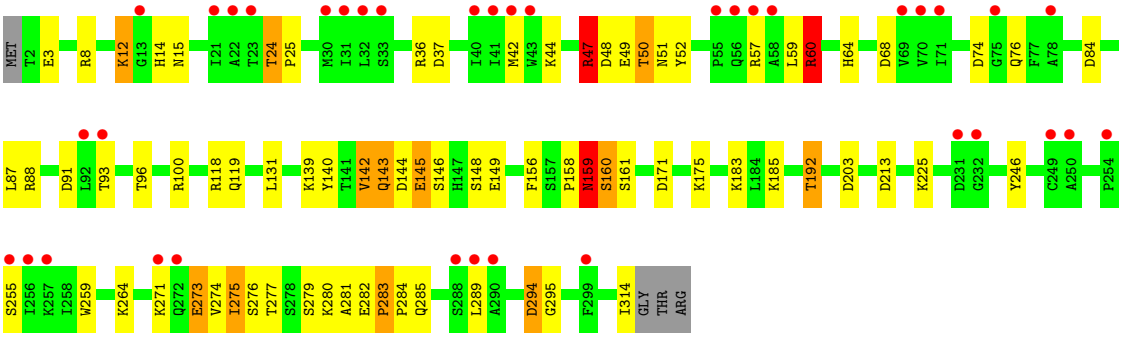
• Molecule 32: 40S Ribosomal Protein S27A

Chain f:



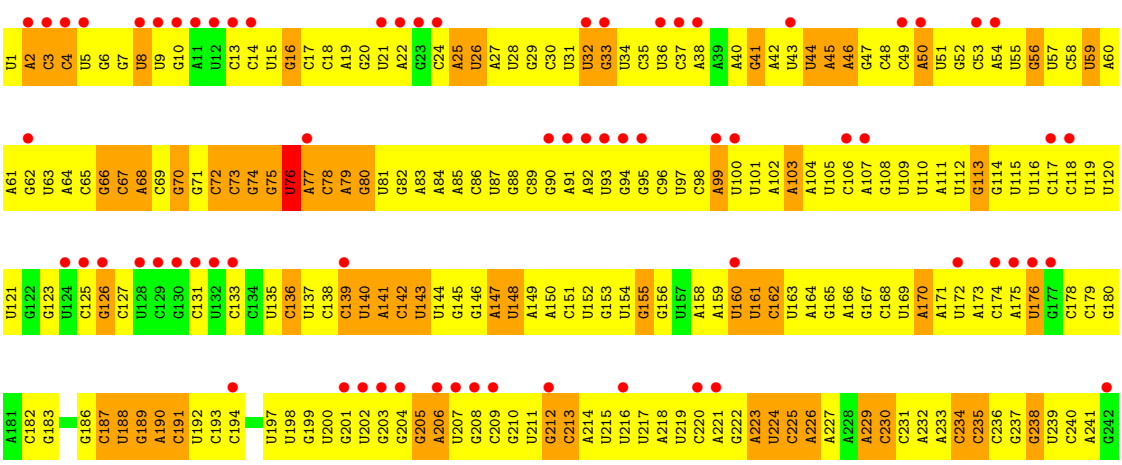
• Molecule 33: 40S Ribosomal Protein RACK1

Chain g:

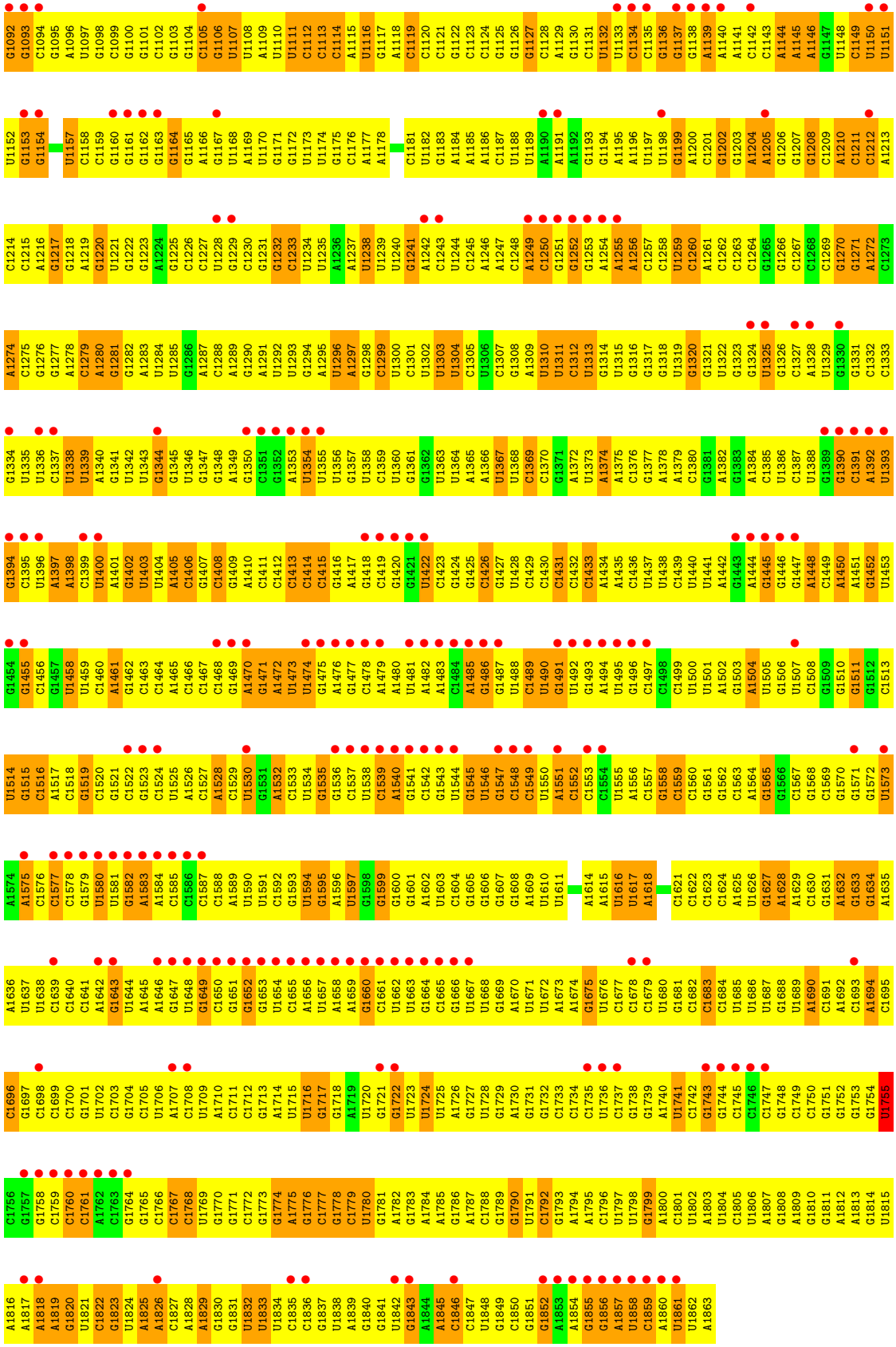


• Molecule 34: 18S Ribosomal RNA

Chain i:

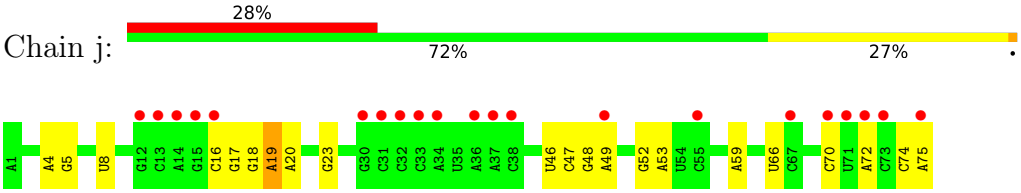


C243 C244 C247 C248 C249 C250 C251 C252 C253 C254 G257 G258 G259 G260 G261 G262 G263 U264 G265 G266 G267 G268 C269 C270 G271 C272 G273 G274 C275 U276 U277 U278 G279 G280 U281 G282 U285 C286 U287 A288 G289 A290 U291 A292 A293 C294 C295 U296 C297 G298 G299 G300 C301 C302 G303 A304 U305
C306 G307 C308 A309 G310 C311 C312 C313 U314 C315 C316 C317 U318 G319 G320 C321 G322 G323 C324 G325 A326 C327 G328 A329 C330 C331 C332 A333 U334 U335 C336 G337 A338 A339 C340 G341 U342 C343 U344 G345 C346 C347 C348 U349 A350 U351 C352 A353 A354 C355 U356 U357 U358 C359 G360 A361 U362 G363 G364 U365
A366 G367 U368 C369 G370 G371 C372 G373 U374 G375 C376 C377 U378 A379 C380 C381 A382 U383 G384 G385 U386 G387 A388 C389 C390 A391 C392 G393 G394 G395 U396 G397 A398 C399 G400 G401 G402 G403 A404 A405 U406 C407 A408 U409 G410 G411 U412 U413 C414 G415 A416 U417 U418 C419 C420 G421 G424 A425 G426
G427 G428 A429 G430 C431 C432 U433 G434 A435 G436 A437 A438 G439 C440 G441 G442 C443 U444 A445 C446 C447 A448 C449 A450 U451 C452 C453 A454 A455 G456 G457 A458 A459 G460 G461 C462 A463 G464 C465 A466 G467 G468 C469 G470 C471 G472 C473 A474 U477 U478 A479 C480 C481 C482 A483 C484 U485 C486 C487
C488 G489 A490 C491 C492 C493 G494 G495 G496 G497 A498 G499 G500 U501 A502 G503 U504 G505 A506 C507 C508 A509 U510 A511 A512 A513 U514 A515 A516 C517 A518 A519 U520 A521 C522 A523 G524 G525 A526 C527 U528 C529 U530 U531 U532 C533 G534 A535 G536 G537 C538 C539 C540 U541 G542 U543 A544 A545 U546 U547
G548 G549 A550 A551 U552 G553 A554 G555 U556 C557 C558 A559 C560 U561 U562 U563 A564 A565 A566 U567 C568 C569 U570 U571 U572 A573 A574 C575 G576 A577 G578 G579 A580 U581 C582 C583 A584 U585 U586 G587 G588 A589 G590 G591 G592 C593 A594 A595 G596 U597 C598 U599 G600 G601 U602 C603 G604 C605 A606 G607
C608 A609 G610 C611 C612 G613 C614 G615 G616 U617 A618 A619 U620 U621 C622 C623 A624 G625 C626 U627 C628 C629 A630 A631 U632 A633 G634 C635 G636 U637 A638 U639 A640 U641 U642 A643 A644 A645 G646 U647 U648 G649 C650 U651 G652 C653 A654 G655 U656 U657 A658 A659 A660 A661 A662 G663 C664 U665 C666 G667
U668 A669 G670 U671 U672 G673 G674 A675 U676 C677 U678 U679 G U G682 G683 A684 G685 G686 G687 U688 G689 C690 G691 U692 A693 G694 C695 G696 G697 G698 C699 G G G C C C C C C C C C C C C C C C A A G G C C719 A720 C721 C722 G723 C724 C725 C726 G727
U728 C729 C730 C731 C732 G733 C734 C735 C736 C U739 G740 C741 C742 U743 C744 U C G G C G C C C C U G A U G C C U U U A G U G C C C C C C
C788 G789 A790 A791 G792 C793 G794 U795 U796 U797 A798 C799 U800 U801 A804 A805 A806 A807 A808 A809 U810 U811 A812 G813 A814 G815 U816 G817 U818 U819 C820 A821 A822 A823 G824 C825 A826 G827 G828 C829 C830 C831 G832 A833 G834 C835 C836 G837 C838 C839 U840 G841 G842 A843 U844 A845 C846 C847 G848
C849 A850 G851 C852 U853 A854 G855 G856 A857 A858 U859 A860 A861 U862 G863 G864 A865 A866 U867 A868 G869 G870 A871 C872 C873 G874 C875 G876 G877 U878 U879 C880 U881 A882 U883 U884 U885 U886 G887 U888 U889 G890 G891 U892 U893 U894 U895 C896 G897 G898 A899 A900 C901 U902 G903 A904 G905 G906 C907 C908
A909 U910 G911 A912 U913 U914 A915 A916 G917 A918 G919 G920 C923 G924 C927 G928 G929 G930 G931 G932 C933 A934 U935 U936 C937 G938 U939 U940 A941 U942 G943 C944 G945 C946 C947 G948 C949 U950 A951 G952 A953 G954 G955 U956 G957 A958 A959 A960 U961 U962 C963 U964 U965 G966 G967 A968 C969 C970
G971 G972 C973 G974 C975 A976 A977 G978 A979 C980 G981 G982 A983 C984 C985 A986 G987 A988 G989 C990 G991 A994 G995 C996 A997 U998 U999 U1000 G1001 U1002 C1003 A1004 A1005 G1006 A1007 A1008 U1009 G1010 U1011 U1012 U1013 U1014 C1015 A1016 U1017 U1018 A1019 A1020 U1021 C1022 A1023 A1024 G1025 A1026 A1027 C1028 G1029 A1030 A1031
A1032 G1033 U1034 C1035 G1036 G1037 A1038 G1039 G1040 U1041 U1042 C1043 G1044 A1045 A1046 G1047 A1048 C1049 G1050 A1051 U1052 C1053 A1054 G1055 A1056 U1057 A1058 C1059 C1060 G1061 U1062 C1063 G1064 U1065 A1066 G1067 U1068 U1069 C1070 C1071 G1072 A1073 C1074 C1075 A1076 U1077 A1078 A1079 A1080 C1081 G1082 A1083 U1084 G1085 C1086 C1087 G1088 A1089 C1090 U1091



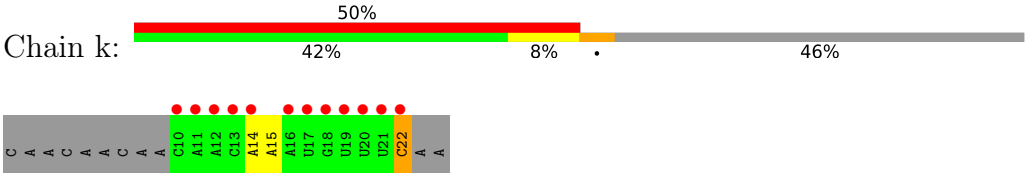
• Molecule 35: initiator Met-RNA-i

Chain j:



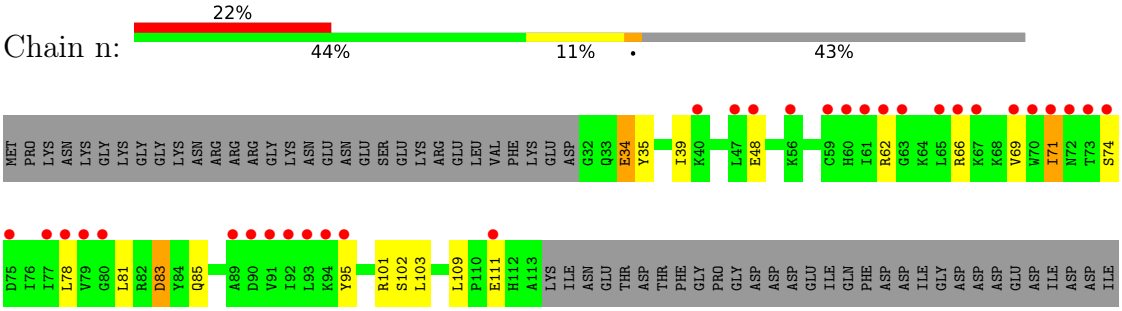
- Molecule 36: mRNA

Chain k:



- Molecule 37: human initiation factor eIF1A

Chain n:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 31 2 1	Depositor
Cell constants a, b, c, α, β, γ	297.75Å 297.75Å 485.16Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	77.53 – 7.03 77.53 – 7.03	Depositor EDS
% Data completeness (in resolution range)	98.3 (77.53-7.03) 98.7 (77.53-7.03)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	0.98 (at 6.72Å)	Xtriage
Refinement program	PHENIX 1.7.3_928	Depositor
R, R_{free}	0.345 , 0.359 0.339 , 0.343	Depositor DCC
R_{free} test set	1946 reflections (5.01%)	wwPDB-VP
Wilson B-factor (Å^2)	566.4	Xtriage
Anisotropy	0.159	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.22 , 125.0	EDS
L-test for twinning[2]	$< \|L\| > = 0.39$, $< L^2 > = 0.22$	Xtriage
Estimated twinning fraction	0.055 for -h,-k,l	Xtriage
F_o,F_c correlation	0.86	EDS
Total number of atoms	79048	wwPDB-VP
Average B, all atoms (Å^2)	179.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.50% of the height of the origin peak. No significant pseudotranslation is detected.*

[1]Intensities estimated from amplitudes.

[2]Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality (i)

5.1 Standard geometry (i)

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
1	A	0.76	2/1679 (0.1%)	1.06	17/2283 (0.7%)
2	B	0.79	7/1769 (0.4%)	1.08	22/2367 (0.9%)
3	C	0.97	7/1778 (0.4%)	1.19	18/2399 (0.8%)
4	D	1.03	6/1792 (0.3%)	1.30	22/2412 (0.9%)
5	E	0.76	5/2125 (0.2%)	0.98	23/2856 (0.8%)
6	F	0.99	5/1531 (0.3%)	1.21	17/2059 (0.8%)
7	G	0.97	15/1946 (0.8%)	1.23	25/2590 (1.0%)
8	H	1.09	7/1553 (0.5%)	2.19	29/2079 (1.4%)
9	I	1.11	7/1708 (0.4%)	1.51	33/2278 (1.4%)
10	J	1.27	19/1522 (1.2%)	1.51	42/2031 (2.1%)
11	K	1.21	6/851 (0.7%)	1.78	31/1147 (2.7%)
12	L	1.10	6/1319 (0.5%)	1.40	17/1761 (1.0%)
13	M	1.00	3/960 (0.3%)	1.23	7/1287 (0.5%)
14	N	0.83	4/1232 (0.3%)	1.01	12/1656 (0.7%)
15	O	0.61	0/1029	1.05	12/1380 (0.9%)
16	P	0.75	1/1079 (0.1%)	1.43	32/1437 (2.2%)
17	Q	0.71	3/1142 (0.3%)	1.11	15/1528 (1.0%)
18	R	1.23	10/1031 (1.0%)	1.64	30/1383 (2.2%)
19	S	1.21	10/1157 (0.9%)	1.61	36/1548 (2.3%)
20	T	0.95	3/1132 (0.3%)	1.26	13/1517 (0.9%)
21	U	0.96	1/832 (0.1%)	1.59	29/1117 (2.6%)
22	V	0.75	1/626 (0.2%)	1.39	15/839 (1.8%)
23	W	0.85	4/1051 (0.4%)	0.86	9/1406 (0.6%)
24	X	1.00	8/1124 (0.7%)	1.24	21/1500 (1.4%)
25	Y	0.93	3/1038 (0.3%)	1.42	21/1380 (1.5%)
26	Z	1.04	5/604 (0.8%)	1.35	17/810 (2.1%)
27	a	0.89	4/860 (0.5%)	1.60	21/1156 (1.8%)
28	b	1.02	2/673 (0.3%)	1.36	12/902 (1.3%)
29	c	0.80	1/508 (0.2%)	1.18	8/680 (1.2%)
30	d	0.90	2/455 (0.4%)	0.79	3/603 (0.5%)
31	e	1.47	5/478 (1.0%)	1.43	11/628 (1.8%)
32	f	1.10	4/593 (0.7%)	1.49	16/786 (2.0%)
33	g	0.91	1/2493 (0.0%)	1.29	27/3394 (0.8%)
34	i	2.41	1848/41879 (4.4%)	2.21	2565/65157 (3.9%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
35	j	0.67	5/1798 (0.3%)	0.82	0/2802
36	k	1.64	1/304 (0.3%)	1.35	3/470 (0.6%)
37	n	0.40	0/657	0.38	0/881
All	All	1.83	2021/84308 (2.4%)	1.84	3231/122509 (2.6%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	11
2	B	0	4
3	C	1	5
4	D	0	5
5	E	1	2
6	F	0	3
7	G	0	1
8	H	0	10
9	I	0	8
10	J	1	11
11	K	0	11
12	L	0	7
13	M	0	1
14	N	0	4
15	O	0	1
16	P	0	10
17	Q	0	4
18	R	1	5
19	S	1	10
20	T	1	6
21	U	0	8
22	V	0	9
23	W	0	2
24	X	0	4
25	Y	1	6
26	Z	0	6
27	a	0	2
28	b	0	3
31	e	0	5
32	f	0	6
33	g	0	13

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Mol	Chain	#Chirality outliers	#Planarity outliers
34	i	6	0
All	All	13	183

All (2021) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	k	22	C	C1'-N1	28.08	1.90	1.48
34	i	1322	U	C2'-C1'	-25.56	1.25	1.53
34	i	66	G	C2'-C1'	-24.65	1.26	1.53
34	i	652	G	C2'-C1'	-23.81	1.27	1.53
34	i	858	A	C2'-C1'	-23.76	1.27	1.53
34	i	1307	C	C2'-C1'	-22.20	1.28	1.53
34	i	521	A	C2'-C1'	-22.14	1.28	1.53
34	i	1037	G	C2'-C1'	-21.86	1.29	1.53
34	i	145	G	C2'-C1'	-21.62	1.29	1.53
34	i	1233	C	C2'-C1'	-21.47	1.29	1.53
34	i	287	U	C2'-C1'	-21.27	1.29	1.53
4	D	5	ILE	C-N	21.22	1.82	1.34
34	i	1327	C	C2'-C1'	-20.67	1.30	1.53
34	i	1393	U	C2'-C1'	-20.58	1.30	1.53
34	i	299	G	C2'-C1'	-20.54	1.30	1.53
34	i	215	U	C2'-C1'	-20.29	1.31	1.53
34	i	1503	G	O4'-C1'	-19.98	1.15	1.41
34	i	630	A	C2'-C1'	-19.72	1.31	1.53
34	i	343	C	C2'-C1'	-19.71	1.31	1.53
34	i	1407	G	C2'-C1'	-19.57	1.31	1.53
34	i	612	C	C2'-C1'	-19.42	1.31	1.53
34	i	1855	G	C2'-C1'	-19.41	1.31	1.53
34	i	1738	G	C2'-C1'	-19.35	1.32	1.53
34	i	956	U	C2'-C1'	-19.28	1.32	1.53
34	i	1308	G	C2'-C1'	-19.27	1.32	1.53
34	i	684	A	C2'-C1'	-18.94	1.32	1.53
34	i	1496	G	C2'-C1'	-18.90	1.32	1.53
34	i	1159	C	C2'-C1'	-18.73	1.32	1.53
34	i	1227	C	C2'-C1'	-18.72	1.32	1.53
31	e	95	LYS	C-N	18.50	1.76	1.34
34	i	1194	G	C2'-C1'	-18.46	1.33	1.53
34	i	518	A	C2'-C1'	-18.41	1.33	1.53
34	i	1222	G	C2'-C1'	-17.91	1.33	1.53
34	i	443	C	C2'-C1'	-17.87	1.33	1.53
34	i	859	U	C2'-C1'	-17.81	1.33	1.53
34	i	1774	G	C2'-C1'	-17.75	1.33	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1226	C	C2'-C1'	-17.72	1.33	1.53
34	i	606	A	C2'-C1'	-17.50	1.34	1.53
34	i	41	G	C2'-C1'	-17.44	1.34	1.53
34	i	1199	G	C2'-C1'	-17.43	1.34	1.53
34	i	1010	G	C2'-C1'	-17.43	1.34	1.53
34	i	1279	C	O4'-C1'	17.42	1.64	1.41
34	i	389	C	O4'-C1'	17.37	1.64	1.41
34	i	1472	A	O4'-C1'	-17.21	1.19	1.41
34	i	984	C	O4'-C1'	17.19	1.64	1.41
10	J	118	GLY	C-N	17.15	1.73	1.34
34	i	1214	C	C2'-C1'	-17.07	1.34	1.53
34	i	1348	G	C2'-C1'	-16.88	1.34	1.53
34	i	1258	C	C2'-C1'	-16.87	1.34	1.53
34	i	1044	G	C2'-C1'	-16.84	1.34	1.53
34	i	1233	C	O4'-C1'	16.77	1.63	1.41
10	J	85	GLY	C-N	-16.75	0.95	1.34
34	i	1732	G	C2'-C1'	-16.74	1.34	1.53
34	i	838	C	C2'-C1'	-16.70	1.34	1.53
34	i	929	G	C2'-C1'	-16.68	1.35	1.53
34	i	94	G	C2'-C1'	-16.68	1.35	1.53
34	i	626	C	O4'-C1'	16.66	1.63	1.41
34	i	604	G	C2'-C1'	-16.65	1.35	1.53
34	i	844	U	C2'-C1'	-16.58	1.35	1.53
34	i	1467	C	O4'-C1'	16.57	1.63	1.41
34	i	1733	C	O4'-C1'	16.43	1.63	1.41
34	i	1308	G	O4'-C1'	16.43	1.63	1.41
34	i	435	A	C2'-C1'	-16.41	1.35	1.53
18	R	1	MET	N-CA	16.34	1.79	1.46
34	i	1043	C	O4'-C1'	16.34	1.62	1.41
34	i	92	A	C2'-C1'	-16.34	1.35	1.53
34	i	1325	U	C2'-C1'	-16.28	1.35	1.53
34	i	689	G	O4'-C1'	16.27	1.62	1.41
34	i	611	C	O4'-C1'	16.26	1.62	1.41
34	i	1571	G	C2'-C1'	-16.25	1.35	1.53
34	i	604	G	O4'-C1'	16.21	1.62	1.41
34	i	446	C	C2'-C1'	-16.17	1.35	1.53
34	i	390	C	O4'-C1'	16.16	1.62	1.41
34	i	277	U	O4'-C1'	16.07	1.62	1.41
34	i	1847	C	C2'-C1'	-16.03	1.35	1.53
34	i	1563	C	C2'-C1'	-16.02	1.35	1.53
34	i	143	U	C2'-C1'	-16.00	1.35	1.53
34	i	788	C	C2'-C1'	-15.93	1.35	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	446	C	O4'-C1'	15.92	1.62	1.41
34	i	1666	G	C2'-C1'	-15.92	1.35	1.53
34	i	1012	U	O4'-C1'	15.85	1.62	1.41
34	i	1305	C	O4'-C1'	15.83	1.62	1.41
34	i	225	C	O4'-C1'	15.81	1.62	1.41
34	i	792	G	C2'-C1'	-15.81	1.35	1.53
34	i	581	U	C2'-C1'	-15.77	1.35	1.53
34	i	830	C	C2'-C1'	-15.74	1.36	1.53
34	i	1432	C	O4'-C1'	15.74	1.62	1.41
34	i	1660	G	C2'-C1'	-15.71	1.36	1.53
34	i	179	C	C2'-C1'	-15.70	1.36	1.53
34	i	1227	C	O4'-C1'	15.70	1.62	1.41
34	i	1683	C	C2'-C1'	-15.70	1.36	1.53
34	i	594	A	O4'-C1'	15.69	1.62	1.41
34	i	794	G	O4'-C1'	15.66	1.62	1.41
34	i	541	U	C2'-C1'	-15.61	1.36	1.53
34	i	1688	G	C2'-C1'	-15.59	1.36	1.53
34	i	1452	G	C2'-C1'	-15.55	1.36	1.53
34	i	1736	U	C2'-C1'	-15.54	1.36	1.53
34	i	909	A	O4'-C1'	15.52	1.61	1.41
34	i	1766	C	O4'-C1'	15.52	1.61	1.41
34	i	741	C	O4'-C1'	15.48	1.61	1.41
34	i	286	C	O4'-C1'	15.47	1.61	1.41
34	i	179	C	O4'-C1'	15.38	1.61	1.41
34	i	877	G	C2'-C1'	-15.37	1.36	1.53
34	i	1659	A	C2'-C1'	-15.34	1.36	1.53
34	i	1393	U	O4'-C1'	15.34	1.61	1.41
34	i	1288	C	O4'-C1'	15.33	1.61	1.41
34	i	222	G	C2'-C1'	-15.33	1.36	1.53
34	i	62	G	C2'-C1'	-15.29	1.36	1.53
34	i	186	G	C2'-C1'	-15.29	1.36	1.53
18	R	1	MET	CA-CB	15.29	1.87	1.53
34	i	730	C	O4'-C1'	15.28	1.61	1.41
34	i	657	U	C2'-C1'	-15.27	1.36	1.53
34	i	1237	A	O4'-C1'	15.21	1.61	1.41
34	i	214	A	O4'-C1'	15.20	1.61	1.41
34	i	986	A	C2'-C1'	-15.19	1.36	1.53
34	i	1524	C	O4'-C1'	15.18	1.61	1.41
34	i	1615	A	C2'-C1'	-15.17	1.36	1.53
34	i	1012	U	C2'-C1'	-15.15	1.36	1.53
34	i	1018	U	C2'-C1'	-15.15	1.36	1.53
34	i	408	A	C2'-C1'	-15.05	1.36	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1171	G	C2'-C1'	-15.05	1.36	1.53
34	i	225	C	C2'-C1'	-15.00	1.36	1.53
34	i	734	C	C2'-C1'	-14.93	1.36	1.53
34	i	164	A	C2'-C1'	-14.91	1.36	1.53
34	i	1307	C	O4'-C1'	14.88	1.60	1.41
34	i	4	C	C2'-C1'	-14.87	1.36	1.53
34	i	1406	C	O4'-C1'	14.87	1.60	1.41
34	i	538	C	O4'-C1'	14.82	1.60	1.41
34	i	838	C	O4'-C1'	14.82	1.60	1.41
34	i	970	C	O4'-C1'	14.78	1.60	1.41
34	i	188	U	C2'-C1'	-14.77	1.37	1.53
34	i	1703	C	O4'-C1'	14.76	1.60	1.41
34	i	1413	C	O4'-C1'	14.74	1.60	1.41
34	i	1656	A	C2'-C1'	-14.70	1.37	1.53
34	i	1610	U	C2'-C1'	-14.70	1.37	1.53
34	i	1090	C	O4'-C1'	14.70	1.60	1.41
34	i	1289	A	O4'-C1'	14.68	1.60	1.41
34	i	1494	A	C2'-C1'	-14.64	1.37	1.53
34	i	205	G	C2'-C1'	-14.62	1.37	1.53
34	i	728	U	C2'-C1'	-14.62	1.37	1.53
34	i	1142	C	C2'-C1'	-14.61	1.37	1.53
10	J	188	GLY	C-O	-14.60	1.00	1.23
34	i	873	C	O4'-C1'	14.60	1.60	1.41
34	i	1828	A	C2'-C1'	-14.60	1.37	1.53
34	i	81	U	C2'-C1'	-14.59	1.37	1.53
34	i	1587	C	O4'-C1'	14.59	1.60	1.41
9	I	207	GLY	C-O	-14.57	1.00	1.23
26	Z	115	GLY	C-O	-14.54	1.00	1.23
34	i	804	A	C2'-C1'	-14.53	1.37	1.53
34	i	914	U	C2'-C1'	-14.53	1.37	1.53
34	i	1230	C	O4'-C1'	14.52	1.60	1.41
34	i	1699	C	O4'-C1'	14.52	1.60	1.41
2	B	233	GLY	C-O	-14.48	1.00	1.23
25	Y	128	GLY	C-O	-14.47	1.00	1.23
34	i	1216	A	C2'-C1'	-14.46	1.37	1.53
34	i	431	C	O4'-C1'	14.44	1.60	1.41
5	E	263	GLY	C-O	-14.44	1.00	1.23
34	i	1376	C	O4'-C1'	14.43	1.60	1.41
34	i	1014	U	C2'-C1'	-14.43	1.37	1.53
9	I	43	ILE	C-N	14.42	1.67	1.34
34	i	1611	U	C2'-C1'	-14.41	1.37	1.53
34	i	215	U	O4'-C1'	14.40	1.60	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1229	G	C2'-C1'	-14.39	1.37	1.53
34	i	1263	C	C2'-C1'	-14.39	1.37	1.53
21	U	93	SER	C-N	14.38	1.61	1.34
34	i	1738	G	O4'-C1'	14.35	1.60	1.41
34	i	1755	U	C2'-C1'	-14.34	1.37	1.53
34	i	1144	A	O4'-C1'	-14.29	1.23	1.41
34	i	845	A	C2'-C1'	-14.28	1.37	1.53
34	i	438	A	O4'-C1'	-14.27	1.23	1.41
34	i	35	C	O4'-C1'	14.24	1.60	1.41
34	i	1416	G	C2'-C1'	-14.23	1.37	1.53
34	i	431	C	C2'-C1'	-14.22	1.37	1.53
34	i	144	U	O4'-C1'	14.21	1.60	1.41
34	i	1691	C	O4'-C1'	14.11	1.59	1.41
34	i	1214	C	O4'-C1'	14.08	1.59	1.41
34	i	623	C	C2'-C1'	-14.08	1.37	1.53
18	R	1	MET	CA-C	-14.03	1.16	1.52
34	i	1587	C	C2'-C1'	-14.02	1.38	1.53
34	i	1793	G	C2'-C1'	-14.02	1.38	1.53
34	i	830	C	O4'-C1'	14.01	1.59	1.41
34	i	1801	C	C2'-C1'	-13.99	1.38	1.53
34	i	1140	A	C2'-C1'	-13.98	1.38	1.53
34	i	915	A	C2'-C1'	-13.96	1.38	1.53
34	i	1557	C	C2'-C1'	-13.96	1.38	1.53
34	i	852	C	O4'-C1'	13.94	1.59	1.41
34	i	1736	U	O4'-C1'	13.93	1.59	1.41
34	i	1184	A	O4'-C1'	13.93	1.59	1.41
34	i	1602	A	C2'-C1'	-13.92	1.38	1.53
34	i	616	G	O4'-C1'	13.90	1.59	1.41
34	i	947	C	O4'-C1'	13.89	1.59	1.41
34	i	1520	C	O4'-C1'	13.89	1.59	1.41
34	i	1693	C	O4'-C1'	13.88	1.59	1.41
34	i	1433	C	O4'-C1'	13.88	1.59	1.41
34	i	1251	G	C2'-C1'	-13.86	1.38	1.53
34	i	187	C	O4'-C1'	13.85	1.59	1.41
34	i	605	C	O4'-C1'	13.82	1.59	1.41
34	i	168	C	O4'-C1'	13.82	1.59	1.41
34	i	887	G	C2'-C1'	-13.82	1.38	1.53
34	i	735	C	O4'-C1'	13.82	1.59	1.41
34	i	1003	C	O4'-C1'	13.79	1.59	1.41
34	i	852	C	C2'-C1'	-13.79	1.38	1.53
34	i	312	C	O4'-C1'	13.76	1.59	1.41
34	i	1765	G	C2'-C1'	-13.75	1.38	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	801	U	O4'-C1'	13.75	1.59	1.41
34	i	1400	U	O4'-C1'	13.73	1.59	1.41
34	i	734	C	O4'-C1'	13.72	1.59	1.41
34	i	1427	G	C2'-C1'	-13.68	1.38	1.53
34	i	377	C	O4'-C1'	13.67	1.59	1.41
34	i	1419	C	O4'-C1'	13.67	1.59	1.41
34	i	1617	U	O4'-C1'	13.66	1.59	1.41
34	i	564	A	O4'-C1'	13.65	1.59	1.41
34	i	340	C	O4'-C1'	13.65	1.59	1.41
34	i	1263	C	O4'-C1'	13.63	1.59	1.41
34	i	1002	C	O4'-C1'	13.63	1.59	1.41
34	i	1436	C	O4'-C1'	13.63	1.59	1.41
34	i	884	U	C2'-C1'	-13.60	1.38	1.53
34	i	1022	C	O4'-C1'	13.59	1.59	1.41
34	i	1411	C	O4'-C1'	13.59	1.59	1.41
34	i	13	C	O4'-C1'	13.57	1.59	1.41
34	i	1241	G	C2'-C1'	-13.56	1.38	1.53
34	i	903	G	C2'-C1'	-13.54	1.38	1.53
34	i	1404	U	O4'-C1'	13.50	1.59	1.41
34	i	1455	G	C2'-C1'	-13.48	1.38	1.53
34	i	1805	C	O4'-C1'	13.48	1.59	1.41
34	i	1471	G	C2'-C1'	-13.47	1.38	1.53
34	i	568	C	O4'-C1'	13.46	1.59	1.41
34	i	1577	C	C2'-C1'	-13.45	1.38	1.53
34	i	1666	G	O4'-C1'	13.45	1.59	1.41
34	i	1777	C	O4'-C1'	13.39	1.59	1.41
34	i	858	A	O4'-C1'	13.39	1.59	1.41
34	i	402	G	O4'-C1'	13.39	1.59	1.41
34	i	728	U	O4'-C1'	13.39	1.59	1.41
34	i	980	C	C2'-C1'	-13.38	1.38	1.53
34	i	174	C	O4'-C1'	13.36	1.59	1.41
34	i	548	G	C2'-C1'	-13.36	1.38	1.53
34	i	510	A	C2'-C1'	-13.35	1.38	1.53
34	i	1623	C	C2'-C1'	-13.34	1.38	1.53
34	i	1091	U	C2'-C1'	-13.34	1.38	1.53
34	i	986	A	O4'-C1'	13.31	1.58	1.41
34	i	54	A	O4'-C1'	13.29	1.58	1.41
34	i	1267	C	O4'-C1'	13.29	1.58	1.41
34	i	1847	C	O4'-C1'	13.29	1.58	1.41
34	i	1433	C	C2'-C1'	-13.27	1.38	1.53
34	i	1074	C	C2'-C1'	-13.27	1.38	1.53
34	i	538	C	C2'-C1'	-13.27	1.38	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1128	C	C2'-C1'	-13.27	1.38	1.53
34	i	1270	G	C2'-C1'	-13.26	1.38	1.53
34	i	1063	C	O4'-C1'	13.26	1.58	1.41
34	i	1406	C	C2'-C1'	-13.24	1.38	1.53
34	i	1639	C	C2'-C1'	-13.21	1.38	1.53
34	i	144	U	C2'-C1'	-13.21	1.38	1.53
34	i	1232	G	O4'-C1'	-13.20	1.24	1.41
34	i	1257	C	O4'-C1'	13.17	1.58	1.41
34	i	826	A	O4'-C1'	-13.15	1.24	1.41
34	i	1583	A	C2'-C1'	-13.13	1.39	1.53
34	i	287	U	O4'-C1'	13.12	1.58	1.41
34	i	1447	G	O4'-C1'	13.10	1.58	1.41
34	i	1690	A	O4'-C1'	13.10	1.58	1.41
34	i	1715	U	C2'-C1'	13.04	1.67	1.53
34	i	565	A	O4'-C1'	13.04	1.58	1.41
34	i	1122	G	C2'-C1'	-13.04	1.39	1.53
34	i	1600	G	C2'-C1'	-13.02	1.39	1.53
34	i	1015	C	O4'-C1'	13.01	1.58	1.41
34	i	1683	C	O4'-C1'	13.00	1.58	1.41
34	i	1075	C	O4'-C1'	12.99	1.58	1.41
34	i	1515	G	C2'-C1'	-12.95	1.39	1.53
34	i	542	G	C2'-C1'	-12.95	1.39	1.53
34	i	1771	G	C2'-C1'	-12.92	1.39	1.53
34	i	1542	C	O4'-C1'	12.91	1.58	1.41
34	i	985	C	O4'-C1'	12.87	1.58	1.41
34	i	1546	U	C2'-C1'	-12.87	1.39	1.53
34	i	274	G	C2'-C1'	-12.87	1.39	1.53
34	i	1539	C	O4'-C1'	12.81	1.58	1.41
34	i	687	G	O4'-C1'	12.80	1.58	1.41
34	i	1837	G	C2'-C1'	-12.80	1.39	1.53
34	i	1390	G	C2'-C1'	-12.80	1.39	1.53
34	i	726	C	C2'-C1'	-12.78	1.39	1.53
34	i	1087	C	O4'-C1'	12.78	1.58	1.41
34	i	973	C	O4'-C1'	12.77	1.58	1.41
34	i	646	G	C2'-C1'	-12.77	1.39	1.53
34	i	1563	C	O4'-C1'	12.73	1.58	1.41
34	i	1792	C	C2'-C1'	-12.72	1.39	1.53
34	i	1856	G	O4'-C1'	12.71	1.58	1.41
34	i	1160	G	C2'-C1'	-12.69	1.39	1.53
34	i	981	G	C2'-C1'	-12.69	1.39	1.53
34	i	1786	G	C2'-C1'	-12.67	1.39	1.53
34	i	731	C	O4'-C1'	12.66	1.58	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	282	G	C2'-C1'	-12.66	1.39	1.53
34	i	484	C	O4'-C1'	12.66	1.58	1.41
34	i	1113	C	O4'-C1'	-12.65	1.25	1.41
34	i	1259	U	O4'-C1'	12.62	1.58	1.41
34	i	324	C	O4'-C1'	12.62	1.58	1.41
34	i	80	G	O4'-C1'	12.62	1.58	1.41
34	i	798	A	C2'-C1'	-12.61	1.39	1.53
34	i	539	C	O4'-C1'	12.60	1.58	1.41
34	i	193	C	O4'-C1'	12.59	1.58	1.41
34	i	788	C	O4'-C1'	12.59	1.58	1.41
34	i	853	U	C2'-C1'	-12.59	1.39	1.53
34	i	1451	A	O4'-C1'	12.59	1.58	1.41
34	i	1677	C	O4'-C1'	12.58	1.58	1.41
34	i	546	U	C2'-C1'	-12.57	1.39	1.53
34	i	1376	C	C2'-C1'	-12.56	1.39	1.53
34	i	907	C	C2'-C1'	-12.55	1.39	1.53
34	i	482	C	O4'-C1'	12.55	1.57	1.41
34	i	1079	A	C2'-C1'	-12.53	1.39	1.53
34	i	1711	C	O4'-C1'	12.51	1.57	1.41
34	i	1326	G	C2'-C1'	-12.51	1.39	1.53
34	i	741	C	C2'-C1'	-12.50	1.39	1.53
34	i	1165	G	C2'-C1'	-12.47	1.39	1.53
34	i	1632	A	C2'-C1'	12.46	1.67	1.53
34	i	1300	U	C2'-C1'	-12.45	1.39	1.53
34	i	155	G	C2'-C1'	-12.44	1.39	1.53
34	i	1436	C	C2'-C1'	-12.44	1.39	1.53
34	i	744	C	O4'-C1'	12.39	1.57	1.41
34	i	1063	C	C2'-C1'	-12.39	1.39	1.53
34	i	48	C	O4'-C1'	12.39	1.57	1.41
34	i	622	C	C2'-C1'	-12.38	1.39	1.53
34	i	650	C	O4'-C1'	12.37	1.57	1.41
34	i	1579	G	C2'-C1'	-12.36	1.39	1.53
34	i	1002	C	C2'-C1'	-12.36	1.39	1.53
34	i	1262	C	C2'-C1'	-12.35	1.39	1.53
34	i	1322	U	O4'-C1'	12.33	1.57	1.41
34	i	1312	C	C2'-C1'	-12.33	1.39	1.53
34	i	64	A	O4'-C1'	-12.30	1.25	1.41
34	i	1003	C	C2'-C1'	-12.30	1.39	1.53
34	i	34	U	C2'-C1'	-12.27	1.39	1.53
34	i	611	C	C2'-C1'	-12.26	1.39	1.53
34	i	1261	A	C2'-C1'	-12.25	1.39	1.53
34	i	522	C	O4'-C1'	12.23	1.57	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	369	C	C2'-C1'	-12.23	1.39	1.53
34	i	1734	C	O4'-C1'	12.23	1.57	1.41
34	i	1338	U	O4'-C1'	12.22	1.57	1.41
34	i	1262	C	O4'-C1'	12.20	1.57	1.41
32	f	152	LYS	C-O	-12.18	1.00	1.23
13	M	132	LYS	C-OXT	-12.15	1.00	1.23
34	i	623	C	O4'-C1'	12.15	1.57	1.41
14	N	151	ALA	C-OXT	-12.15	1.00	1.23
34	i	1737	C	C2'-C1'	-12.15	1.40	1.53
34	i	62	G	O4'-C1'	12.14	1.57	1.41
34	i	1542	C	C2'-C1'	-12.14	1.40	1.53
34	i	869	G	C2'-C1'	-12.14	1.40	1.53
34	i	638	A	C2'-C1'	-12.13	1.40	1.53
20	T	144	LYS	C-O	-12.13	1.00	1.23
13	M	132	LYS	C-O	-12.12	1.00	1.23
3	C	263	THR	C-O	-12.12	1.00	1.23
23	W	130	PHE	C-OXT	-12.12	1.00	1.23
28	b	84	HIS	C-OXT	-12.11	1.00	1.23
24	X	142	ARG	C-O	-12.10	1.00	1.23
8	H	194	LEU	C-O	-12.08	1.00	1.23
14	N	151	ALA	C-O	-12.08	1.00	1.23
34	i	1116	U	C2'-C1'	-12.08	1.40	1.53
31	e	133	SER	C-O	-12.08	1.00	1.23
34	i	1801	C	O4'-C1'	12.07	1.57	1.41
34	i	1532	A	O4'-C1'	12.07	1.57	1.41
34	i	1404	U	C2'-C1'	-12.07	1.40	1.53
34	i	598	C	O4'-C1'	12.06	1.57	1.41
34	i	583	C	O4'-C1'	12.06	1.57	1.41
5	E	263	GLY	C-OXT	-12.05	1.00	1.23
6	F	204	ARG	C-OXT	-12.05	1.00	1.23
31	e	133	SER	C-OXT	-12.04	1.00	1.23
30	d	56	ASP	C-O	-12.03	1.00	1.23
34	i	970	C	C2'-C1'	-12.03	1.40	1.53
34	i	1222	G	O4'-C1'	12.03	1.57	1.41
34	i	1066	A	C2'-C1'	-12.02	1.40	1.53
6	F	204	ARG	C-O	-12.01	1.00	1.23
11	K	98	ARG	C-O	-12.00	1.00	1.23
23	W	130	PHE	C-O	-12.00	1.00	1.23
29	c	68	LEU	C-O	-12.00	1.00	1.23
30	d	56	ASP	C-OXT	-12.00	1.00	1.23
34	i	299	G	O4'-C1'	11.99	1.57	1.41
1	A	209	GLU	C-O	-11.99	1.00	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	L	158	PHE	C-OXT	-11.99	1.00	1.23
34	i	612	C	O4'-C1'	11.99	1.57	1.41
4	D	227	LYS	C-O	-11.98	1.00	1.23
12	L	158	PHE	C-O	-11.98	1.00	1.23
34	i	1548	C	O4'-C1'	-11.97	1.26	1.41
34	i	465	C	O4'-C1'	11.97	1.57	1.41
33	g	314	ILE	C-O	-11.95	1.00	1.23
8	H	194	LEU	C-OXT	-11.94	1.00	1.23
10	J	146	SER	C-N	11.92	1.61	1.34
34	i	971	G	C2'-C1'	-11.92	1.40	1.53
34	i	1009	U	C2'-C1'	-11.91	1.40	1.53
34	i	56	G	C2'-C1'	-11.91	1.40	1.53
34	i	1788	C	O4'-C1'	11.91	1.57	1.41
34	i	276	U	O4'-C1'	11.90	1.57	1.41
34	i	553	G	O4'-C1'	11.90	1.57	1.41
28	b	84	HIS	C-O	-11.89	1.00	1.23
34	i	302	C	O4'-C1'	11.89	1.57	1.41
34	i	1573	U	C2'-C1'	11.88	1.66	1.53
34	i	1114	C	C2'-C1'	11.87	1.66	1.53
34	i	1524	C	C2'-C1'	-11.86	1.40	1.53
34	i	18	C	O4'-C1'	11.84	1.57	1.41
34	i	664	C	C2'-C1'	-11.82	1.40	1.53
34	i	67	C	C2'-C1'	11.81	1.66	1.53
34	i	1060	C	O4'-C1'	11.80	1.56	1.41
34	i	906	G	C2'-C1'	-11.80	1.40	1.53
34	i	727	G	C2'-C1'	-11.80	1.40	1.53
34	i	1650	C	O4'-C1'	11.80	1.56	1.41
34	i	907	C	O4'-C1'	11.79	1.56	1.41
34	i	667	G	C2'-C1'	-11.77	1.40	1.53
34	i	1628	A	O4'-C1'	11.77	1.56	1.41
34	i	318	U	C2'-C1'	-11.75	1.40	1.53
34	i	1428	U	O4'-C1'	11.74	1.56	1.41
34	i	569	C	O4'-C1'	11.73	1.56	1.41
34	i	670	G	C2'-C1'	-11.73	1.40	1.53
34	i	539	C	C2'-C1'	-11.69	1.40	1.53
34	i	1260	C	C2'-C1'	-11.68	1.40	1.53
34	i	396	U	C2'-C1'	-11.68	1.40	1.53
34	i	639	U	C2'-C1'	-11.68	1.40	1.53
34	i	589	A	C2'-C1'	-11.67	1.40	1.53
34	i	833	A	C2'-C1'	-11.67	1.40	1.53
34	i	1387	C	O4'-C1'	11.67	1.56	1.41
34	i	864	G	O4'-C1'	11.66	1.56	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	325	G	O4'-C1'	-11.66	1.26	1.41
34	i	1698	C	O4'-C1'	11.62	1.56	1.41
34	i	606	A	O4'-C1'	11.60	1.56	1.41
34	i	1537	C	O4'-C1'	11.58	1.56	1.41
19	S	141	ARG	C-N	11.58	1.60	1.34
34	i	549	G	C2'-C1'	-11.58	1.40	1.53
34	i	545	A	O4'-C1'	11.57	1.56	1.41
34	i	1181	C	O4'-C1'	11.57	1.56	1.41
34	i	947	C	C2'-C1'	-11.55	1.40	1.53
34	i	1195	A	C2'-C1'	-11.55	1.40	1.53
34	i	1074	C	O4'-C1'	11.54	1.56	1.41
34	i	407	C	O4'-C1'	11.53	1.56	1.41
34	i	668	U	C2'-C1'	-11.52	1.40	1.53
34	i	976	A	C2'-C1'	-11.50	1.40	1.53
34	i	805	A	C2'-C1'	-11.50	1.40	1.53
34	i	471	C	C2'-C1'	-11.50	1.40	1.53
34	i	1114	C	O4'-C1'	-11.49	1.26	1.41
34	i	436	G	O4'-C1'	11.48	1.56	1.41
34	i	1732	G	O4'-C1'	11.47	1.56	1.41
34	i	559	A	C2'-C1'	-11.45	1.40	1.53
34	i	851	G	C2'-C1'	-11.44	1.40	1.53
34	i	622	C	O4'-C1'	11.44	1.56	1.41
34	i	887	G	O4'-C1'	11.41	1.56	1.41
34	i	436	G	C2'-C1'	-11.40	1.40	1.53
34	i	521	A	O4'-C1'	11.40	1.56	1.41
34	i	1025	G	C2'-C1'	-11.40	1.40	1.53
34	i	500	G	C2'-C1'	-11.40	1.40	1.53
34	i	288	A	C2'-C1'	-11.38	1.40	1.53
34	i	1323	G	C2'-C1'	-11.38	1.40	1.53
25	Y	86	GLU	C-N	11.35	1.55	1.34
34	i	48	C	C2'-C1'	-11.34	1.40	1.53
34	i	682	G	C2'-C1'	-11.34	1.40	1.53
34	i	452	C	C2'-C1'	-11.33	1.40	1.53
34	i	1101	G	C2'-C1'	-11.33	1.40	1.53
34	i	1124	C	O4'-C1'	11.33	1.56	1.41
34	i	360	G	C2'-C1'	-11.30	1.41	1.53
34	i	323	G	C2'-C1'	-11.30	1.41	1.53
34	i	395	G	C2'-C1'	-11.28	1.41	1.53
34	i	1653	G	C2'-C1'	-11.27	1.41	1.53
34	i	1775	A	C2'-C1'	-11.27	1.41	1.53
34	i	900	A	O4'-C1'	11.24	1.56	1.41
34	i	736	C	O4'-C1'	11.24	1.56	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1669	G	O4'-C1'	11.22	1.56	1.41
34	i	936	U	C2'-C1'	-11.22	1.41	1.53
34	i	414	C	O4'-C1'	11.21	1.56	1.41
34	i	635	C	O4'-C1'	11.20	1.56	1.41
23	W	2	VAL	C-N	11.20	1.59	1.34
7	G	131	ARG	CG-CD	11.20	1.79	1.51
34	i	1792	C	O4'-C1'	11.18	1.56	1.41
34	i	1448	A	O4'-C1'	11.17	1.56	1.41
34	i	335	U	C2'-C1'	-11.14	1.41	1.53
34	i	938	G	C2'-C1'	-11.14	1.41	1.53
34	i	1044	G	O4'-C1'	11.14	1.56	1.41
34	i	1202	G	C2'-C1'	-11.14	1.41	1.53
34	i	964	U	O4'-C1'	11.13	1.56	1.41
34	i	84	A	O4'-C1'	11.12	1.56	1.41
34	i	839	C	O4'-C1'	11.11	1.56	1.41
34	i	1220	G	C2'-C1'	-11.09	1.41	1.53
34	i	1238	U	C2'-C1'	-11.09	1.41	1.53
34	i	1568	G	C2'-C1'	-11.09	1.41	1.53
34	i	77	A	C2'-C1'	11.09	1.65	1.53
34	i	1015	C	C2'-C1'	-11.08	1.41	1.53
34	i	1585	C	O4'-C1'	11.07	1.56	1.41
7	G	131	ARG	C-N	11.07	1.59	1.34
34	i	347	C	C2'-C1'	-11.06	1.41	1.53
34	i	479	A	O4'-C1'	11.05	1.56	1.41
34	i	871	A	O4'-C1'	11.04	1.56	1.41
34	i	402	G	C2'-C1'	-11.04	1.41	1.53
34	i	691	G	C2'-C1'	-11.00	1.41	1.53
34	i	1813	A	C2'-C1'	-11.00	1.41	1.53
34	i	901	C	O4'-C1'	10.99	1.55	1.41
34	i	1226	C	O4'-C1'	10.98	1.55	1.41
34	i	1603	U	O4'-C1'	10.98	1.55	1.41
34	i	1289	A	C2'-C1'	-10.98	1.41	1.53
34	i	4	C	O4'-C1'	10.97	1.55	1.41
18	R	1	MET	C-N	-10.96	1.13	1.33
34	i	664	C	O4'-C1'	10.95	1.55	1.41
34	i	1120	C	C2'-C1'	-10.94	1.41	1.53
34	i	582	C	O4'-C1'	-10.92	1.27	1.41
34	i	1176	C	O4'-C1'	10.90	1.55	1.41
34	i	547	U	C2'-C1'	-10.89	1.41	1.53
34	i	462	C	O4'-C1'	10.88	1.55	1.41
34	i	870	G	C2'-C1'	-10.87	1.41	1.53
34	i	1716	U	C2'-C1'	10.87	1.65	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1369	C	O4'-C1'	10.86	1.55	1.41
34	i	812	A	O4'-C1'	10.84	1.55	1.41
34	i	432	C	O4'-C1'	10.83	1.55	1.41
34	i	414	C	C2'-C1'	-10.83	1.41	1.53
34	i	1834	U	C2'-C1'	-10.82	1.41	1.53
34	i	839	C	C2'-C1'	-10.82	1.41	1.53
34	i	1403	U	C2'-C1'	-10.80	1.41	1.53
34	i	1400	U	C2'-C1'	-10.79	1.41	1.53
34	i	975	C	O4'-C1'	10.78	1.55	1.41
34	i	633	A	O4'-C1'	10.77	1.55	1.41
34	i	1159	C	O4'-C1'	10.76	1.55	1.41
34	i	1257	C	C2'-C1'	-10.76	1.41	1.53
34	i	916	A	C2'-C1'	-10.76	1.41	1.53
34	i	483	A	C2'-C1'	-10.75	1.41	1.53
34	i	1208	G	C2'-C1'	-10.75	1.41	1.53
34	i	1527	C	C2'-C1'	-10.75	1.41	1.53
34	i	1209	C	O4'-C1'	10.74	1.55	1.41
34	i	640	A	O4'-C1'	10.74	1.55	1.41
34	i	488	C	O4'-C1'	10.74	1.55	1.41
34	i	1301	C	C2'-C1'	-10.74	1.41	1.53
34	i	308	C	O4'-C1'	10.73	1.55	1.41
34	i	1547	G	C2'-C1'	10.73	1.65	1.53
34	i	1807	A	C2'-C1'	-10.71	1.41	1.53
34	i	327	C	C2'-C1'	-10.71	1.41	1.53
34	i	487	C	O4'-C1'	10.71	1.55	1.41
34	i	1050	G	C2'-C1'	-10.68	1.41	1.53
34	i	1200	A	O4'-C1'	10.68	1.55	1.41
34	i	1207	G	C2'-C1'	-10.66	1.41	1.53
34	i	1048	A	O4'-C1'	10.66	1.55	1.41
34	i	1578	C	O4'-C1'	10.66	1.55	1.41
34	i	1481	U	C2'-C1'	-10.65	1.41	1.53
34	i	1496	G	O4'-C1'	10.65	1.55	1.41
34	i	352	C	O4'-C1'	10.64	1.55	1.41
34	i	1684	C	C2'-C1'	-10.63	1.41	1.53
34	i	1481	U	O4'-C1'	10.63	1.55	1.41
34	i	143	U	O4'-C1'	10.63	1.55	1.41
34	i	1708	C	O4'-C1'	10.62	1.55	1.41
19	S	54	LYS	N-CA	10.61	1.67	1.46
34	i	286	C	C2'-C1'	-10.61	1.41	1.53
34	i	1729	G	C2'-C1'	-10.61	1.41	1.53
34	i	875	C	C2'-C1'	-10.60	1.41	1.53
34	i	868	A	O4'-C1'	-10.59	1.27	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	416	A	O4'-C1'	10.58	1.55	1.41
34	i	1258	C	O4'-C1'	10.57	1.55	1.41
34	i	1752	G	C2'-C1'	-10.56	1.41	1.53
9	I	43	ILE	CA-C	-10.56	1.25	1.52
34	i	1259	U	C2'-C1'	-10.55	1.41	1.53
34	i	547	U	O4'-C1'	10.54	1.55	1.41
34	i	449	C	O4'-C1'	10.53	1.55	1.41
34	i	50	A	C2'-C1'	-10.53	1.41	1.53
34	i	605	C	C2'-C1'	-10.51	1.41	1.53
34	i	507	C	C2'-C1'	-10.50	1.41	1.53
34	i	316	C	O4'-C1'	10.50	1.55	1.41
34	i	1280	A	O4'-C1'	10.50	1.55	1.41
34	i	984	C	C2'-C1'	-10.49	1.41	1.53
34	i	16	G	C2'-C1'	-10.49	1.41	1.53
19	S	40	TYR	C-N	-10.48	1.09	1.34
34	i	933	C	O4'-C1'	10.47	1.55	1.41
34	i	241	A	O4'-C1'	10.47	1.55	1.41
34	i	355	C	O4'-C1'	10.46	1.55	1.41
34	i	529	C	O4'-C1'	10.46	1.55	1.41
34	i	480	C	O4'-C1'	10.46	1.55	1.41
34	i	1755	U	O4'-C1'	10.46	1.55	1.41
34	i	1128	C	O4'-C1'	10.45	1.55	1.41
34	i	385	G	C2'-C1'	-10.44	1.41	1.53
34	i	54	A	C2'-C1'	-10.44	1.41	1.53
34	i	1578	C	C2'-C1'	-10.44	1.41	1.53
34	i	1624	C	C2'-C1'	-10.44	1.41	1.53
34	i	825	C	O4'-C1'	10.44	1.55	1.41
34	i	178	C	C2'-C1'	-10.42	1.41	1.53
34	i	1398	A	O4'-C1'	10.41	1.55	1.41
34	i	1778	G	O4'-C1'	10.41	1.55	1.41
34	i	1700	C	O4'-C1'	10.40	1.55	1.41
34	i	170	A	O4'-C1'	-10.40	1.28	1.41
34	i	1105	C	O4'-C1'	-10.40	1.28	1.41
34	i	1617	U	C2'-C1'	-10.40	1.42	1.53
34	i	1375	A	C2'-C1'	-10.39	1.42	1.53
34	i	560	C	O4'-C1'	10.39	1.55	1.41
34	i	558	C	O4'-C1'	10.37	1.55	1.41
34	i	230	C	O4'-C1'	10.36	1.55	1.41
34	i	1309	A	C2'-C1'	-10.34	1.42	1.53
34	i	1324	G	C2'-C1'	-10.32	1.42	1.53
34	i	1682	C	O4'-C1'	10.31	1.55	1.41
34	i	1230	C	C2'-C1'	-10.31	1.42	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1576	C	O4'-C1'	10.31	1.55	1.41
34	i	1682	C	C2'-C1'	-10.31	1.42	1.53
34	i	1272	A	O4'-C1'	10.27	1.55	1.41
34	i	75	G	C2'-C1'	-10.27	1.42	1.53
34	i	729	C	O4'-C1'	10.27	1.54	1.41
34	i	410	G	C2'-C1'	-10.26	1.42	1.53
34	i	1410	A	C2'-C1'	-10.25	1.42	1.53
34	i	382	A	O4'-C1'	10.25	1.54	1.41
34	i	1486	G	C2'-C1'	-10.25	1.42	1.53
34	i	1783	G	O4'-C1'	10.24	1.54	1.41
34	i	79	A	C2'-C1'	10.23	1.64	1.53
34	i	1835	C	O4'-C1'	10.23	1.54	1.41
34	i	1165	G	O4'-C1'	10.23	1.54	1.41
34	i	52	G	C2'-C1'	-10.22	1.42	1.53
34	i	84	A	C2'-C1'	-10.22	1.42	1.53
34	i	1411	C	C2'-C1'	-10.21	1.42	1.53
34	i	653	C	C2'-C1'	-10.20	1.42	1.53
34	i	315	C	C2'-C1'	10.20	1.64	1.53
34	i	352	C	C2'-C1'	-10.19	1.42	1.53
34	i	313	C	O4'-C1'	10.18	1.54	1.41
34	i	1651	G	C2'-C1'	-10.18	1.42	1.53
34	i	977	A	O4'-C1'	10.17	1.54	1.41
34	i	683	G	C2'-C1'	-10.16	1.42	1.53
34	i	1573	U	O4'-C1'	-10.16	1.28	1.41
34	i	1766	C	C2'-C1'	-10.14	1.42	1.53
34	i	1271	G	C2'-C1'	-10.14	1.42	1.53
34	i	209	C	O4'-C1'	10.12	1.54	1.41
34	i	1827	C	O4'-C1'	10.12	1.54	1.41
34	i	563	U	C2'-C1'	-10.09	1.42	1.53
34	i	1071	C	C2'-C1'	-10.09	1.42	1.53
34	i	823	A	C2'-C1'	-10.09	1.42	1.53
34	i	1076	A	O4'-C1'	-10.08	1.28	1.41
34	i	76	U	O4'-C1'	10.07	1.54	1.41
34	i	1139	A	C2'-C1'	-10.06	1.42	1.53
34	i	1181	C	C2'-C1'	-10.06	1.42	1.53
34	i	428	G	C2'-C1'	10.05	1.64	1.53
34	i	588	G	C2'-C1'	-10.05	1.42	1.53
34	i	1133	U	O4'-C1'	10.05	1.54	1.41
34	i	82	G	C2'-C1'	10.04	1.64	1.53
34	i	1312	C	O4'-C1'	10.04	1.54	1.41
34	i	486	C	O4'-C1'	10.03	1.54	1.41
34	i	1096	A	O4'-C1'	10.03	1.54	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	120	U	C2'-C1'	-10.02	1.42	1.53
34	i	809	A	O4'-C1'	10.01	1.54	1.41
34	i	1098	G	C2'-C1'	-10.00	1.42	1.53
34	i	85	A	C2'-C1'	-10.00	1.42	1.53
34	i	1359	C	O4'-C1'	9.99	1.54	1.41
34	i	1377	G	O4'-C1'	-9.99	1.28	1.41
34	i	1467	C	C2'-C1'	-9.97	1.42	1.53
34	i	1316	G	O4'-C1'	-9.97	1.28	1.41
34	i	1504	A	C2'-C1'	9.97	1.64	1.53
34	i	1600	G	O4'-C1'	9.96	1.54	1.41
34	i	142	C	O4'-C1'	-9.96	1.28	1.41
34	i	66	G	O4'-C1'	9.96	1.54	1.41
34	i	1585	C	C2'-C1'	-9.94	1.42	1.53
34	i	111	A	O4'-C1'	-9.93	1.28	1.41
34	i	193	C	C2'-C1'	-9.93	1.42	1.53
34	i	1819	A	C2'-C1'	9.93	1.64	1.53
34	i	1678	C	O4'-C1'	9.92	1.54	1.41
34	i	1787	A	O4'-C1'	9.92	1.54	1.41
34	i	437	A	C2'-C1'	9.91	1.64	1.53
34	i	533	C	O4'-C1'	9.91	1.54	1.41
34	i	1779	C	C2'-C1'	9.90	1.64	1.53
34	i	1055	G	C2'-C1'	-9.90	1.42	1.53
34	i	1006	G	O4'-C1'	-9.90	1.28	1.41
34	i	1209	C	C2'-C1'	-9.89	1.42	1.53
34	i	1822	C	O4'-C1'	9.89	1.54	1.41
34	i	149	A	O4'-C1'	9.87	1.54	1.41
34	i	392	C	O4'-C1'	9.87	1.54	1.41
34	i	946	C	O4'-C1'	9.86	1.54	1.41
34	i	1503	G	C2'-C1'	-9.86	1.42	1.53
34	i	1329	U	C2'-C1'	9.86	1.64	1.53
34	i	1740	A	C2'-C1'	9.86	1.64	1.53
34	i	1559	C	O4'-C1'	9.85	1.54	1.41
34	i	956	U	O4'-C1'	9.85	1.54	1.41
34	i	564	A	C2'-C1'	-9.84	1.42	1.53
34	i	311	C	C2'-C1'	-9.84	1.42	1.53
34	i	1594	U	C2'-C1'	9.82	1.64	1.53
34	i	1432	C	C2'-C1'	-9.82	1.42	1.53
34	i	645	A	C2'-C1'	-9.82	1.42	1.53
34	i	96	C	O4'-C1'	9.81	1.54	1.41
34	i	487	C	C2'-C1'	-9.81	1.42	1.53
34	i	1338	U	C2'-C1'	-9.80	1.42	1.53
34	i	359	C	C2'-C1'	-9.80	1.42	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	855	G	C2'-C1'	-9.79	1.42	1.53
34	i	932	G	C2'-C1'	-9.79	1.42	1.53
34	i	298	G	O4'-C1'	-9.79	1.28	1.41
34	i	1029	G	C2'-C1'	-9.78	1.42	1.53
34	i	1428	U	C2'-C1'	-9.76	1.42	1.53
34	i	1201	C	C2'-C1'	-9.75	1.42	1.53
34	i	654	A	C2'-C1'	-9.74	1.42	1.53
34	i	560	C	C2'-C1'	-9.74	1.42	1.53
34	i	1462	G	C2'-C1'	-9.73	1.42	1.53
34	i	1204	A	C2'-C1'	9.72	1.64	1.53
34	i	544	A	C2'-C1'	-9.71	1.42	1.53
34	i	1320	G	C2'-C1'	-9.70	1.42	1.53
34	i	1784	A	C2'-C1'	-9.70	1.42	1.53
34	i	481	C	C2'-C1'	-9.68	1.42	1.53
34	i	67	C	O4'-C1'	-9.67	1.29	1.41
34	i	888	U	C2'-C1'	-9.67	1.42	1.53
34	i	31	U	C2'-C1'	9.65	1.64	1.53
34	i	419	C	O4'-C1'	9.65	1.54	1.41
34	i	1120	C	O4'-C1'	9.64	1.54	1.41
34	i	1707	A	C2'-C1'	-9.63	1.42	1.53
34	i	1808	G	C2'-C1'	-9.63	1.42	1.53
34	i	1031	A	C2'-C1'	-9.63	1.42	1.53
34	i	1099	C	C2'-C1'	-9.62	1.42	1.53
34	i	1337	C	O4'-C1'	9.62	1.54	1.41
34	i	88	G	C2'-C1'	-9.61	1.42	1.53
34	i	1296	U	O4'-C1'	-9.60	1.29	1.41
34	i	507	C	O4'-C1'	9.60	1.54	1.41
34	i	829	C	C2'-C1'	-9.59	1.42	1.53
34	i	1669	G	C2'-C1'	-9.58	1.42	1.53
34	i	1464	C	O4'-C1'	9.58	1.54	1.41
34	i	150	A	O4'-C1'	9.57	1.54	1.41
34	i	166	A	C2'-C1'	-9.56	1.42	1.53
34	i	675	A	C2'-C1'	-9.56	1.42	1.53
34	i	657	U	O4'-C1'	9.55	1.54	1.41
34	i	448	A	O4'-C1'	9.55	1.54	1.41
34	i	445	A	O4'-C1'	9.54	1.54	1.41
34	i	1572	G	O4'-C1'	9.54	1.54	1.41
34	i	13	C	C2'-C1'	-9.53	1.42	1.53
34	i	511	A	C2'-C1'	-9.53	1.42	1.53
34	i	1437	U	C2'-C1'	9.52	1.63	1.53
34	i	1339	U	O4'-C1'	9.52	1.54	1.41
34	i	799	C	C2'-C1'	-9.52	1.42	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1742	C	O3'-P	-9.52	1.49	1.61
34	i	173	A	O4'-C1'	9.50	1.54	1.41
34	i	212	G	O4'-C1'	9.50	1.53	1.41
34	i	1536	G	C2'-C1'	-9.50	1.43	1.53
19	S	6	PRO	CA-C	9.48	1.71	1.52
34	i	298	G	C2'-C1'	9.47	1.63	1.53
34	i	980	C	O4'-C1'	9.46	1.53	1.41
10	J	35	TYR	CD1-CE1	-9.46	1.25	1.39
34	i	1211	C	C2'-C1'	9.45	1.63	1.53
34	i	311	C	O4'-C1'	9.45	1.53	1.41
34	i	743	U	O4'-C1'	9.44	1.53	1.41
34	i	1790	G	C2'-C1'	-9.43	1.43	1.53
34	i	1440	U	C2'-C1'	-9.42	1.43	1.53
34	i	1365	A	C2'-C1'	-9.41	1.43	1.53
34	i	1101	G	O4'-C1'	9.40	1.53	1.41
34	i	1112	C	O4'-C1'	-9.40	1.29	1.41
34	i	285	U	O4'-C1'	9.40	1.53	1.41
34	i	1025	G	O4'-C1'	9.40	1.53	1.41
34	i	1713	G	C2'-C1'	-9.40	1.43	1.53
34	i	884	U	O4'-C1'	9.39	1.53	1.41
34	i	726	C	O4'-C1'	9.38	1.53	1.41
34	i	1328	A	O4'-C1'	9.37	1.53	1.41
34	i	1735	C	O4'-C1'	9.36	1.53	1.41
34	i	1781	G	C2'-C1'	-9.36	1.43	1.53
34	i	1251	G	O4'-C1'	9.36	1.53	1.41
34	i	1301	C	O4'-C1'	9.36	1.53	1.41
34	i	1534	U	C2'-C1'	9.35	1.63	1.53
34	i	1118	A	C2'-C1'	9.35	1.63	1.53
34	i	614	C	O4'-C1'	9.34	1.53	1.41
34	i	457	G	O4'-C1'	9.33	1.53	1.41
34	i	1029	G	O4'-C1'	9.32	1.53	1.41
34	i	440	C	C2'-C1'	9.32	1.63	1.53
34	i	1548	C	C2'-C1'	9.32	1.63	1.53
34	i	53	C	O4'-C1'	9.32	1.53	1.41
34	i	1618	A	C2'-C1'	9.31	1.63	1.53
34	i	1861	U	C2'-C1'	9.31	1.63	1.53
34	i	927	C	O4'-C1'	9.30	1.53	1.41
34	i	332	C	O4'-C1'	9.30	1.53	1.41
34	i	234	C	C2'-C1'	9.30	1.63	1.53
34	i	790	A	O4'-C1'	9.29	1.53	1.41
34	i	1849	G	C2'-C1'	-9.29	1.43	1.53
34	i	1744	G	C2'-C1'	-9.29	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1335	U	P-O5'	-9.28	1.50	1.59
34	i	1402	G	C2'-C1'	-9.27	1.43	1.53
34	i	1622	C	O4'-C1'	9.27	1.53	1.41
34	i	678	U	O4'-C1'	-9.26	1.29	1.41
19	S	40	TYR	CA-C	-9.25	1.28	1.52
34	i	367	G	C2'-C1'	-9.25	1.43	1.53
34	i	1557	C	O4'-C1'	9.25	1.53	1.41
34	i	1460	C	O4'-C1'	9.23	1.53	1.41
34	i	1729	G	O4'-C1'	9.22	1.53	1.41
34	i	944	C	O4'-C1'	9.21	1.53	1.41
34	i	618	A	O4'-C1'	-9.19	1.29	1.41
4	D	96	LEU	C-N	9.17	1.55	1.34
34	i	1177	A	C2'-C1'	-9.16	1.43	1.53
34	i	49	C	C2'-C1'	-9.15	1.43	1.53
34	i	405	A	C2'-C1'	9.15	1.63	1.53
34	i	1477	G	C2'-C1'	-9.14	1.43	1.53
34	i	650	C	C2'-C1'	-9.14	1.43	1.53
34	i	666	C	O4'-C1'	9.13	1.53	1.41
34	i	1049	C	O4'-C1'	9.13	1.53	1.41
34	i	1275	C	C2'-C1'	9.13	1.63	1.53
34	i	42	A	C2'-C1'	-9.12	1.43	1.53
34	i	939	U	O4'-C1'	9.12	1.53	1.41
34	i	827	G	C2'-C1'	-9.12	1.43	1.53
3	C	47	PRO	N-CD	9.10	1.60	1.47
34	i	481	C	O4'-C1'	9.09	1.53	1.41
2	B	155	TYR	CB-CG	-9.09	1.38	1.51
34	i	1607	G	C2'-C1'	9.09	1.63	1.53
34	i	895	U	O4'-C1'	9.08	1.53	1.41
34	i	804	A	O4'-C1'	9.08	1.53	1.41
34	i	1850	C	O4'-C1'	9.07	1.53	1.41
34	i	171	A	O4'-C1'	-9.06	1.29	1.41
34	i	1385	C	C2'-C1'	-9.05	1.43	1.53
34	i	1028	C	C2'-C1'	-9.04	1.43	1.53
34	i	1647	G	C2'-C1'	-9.03	1.43	1.53
34	i	1341	G	O4'-C1'	9.02	1.53	1.41
34	i	1565	G	O4'-C1'	-9.02	1.29	1.41
34	i	666	C	C2'-C1'	-9.02	1.43	1.53
27	a	10	ARG	CD-NE	9.00	1.61	1.46
34	i	1288	C	C2'-C1'	-8.99	1.43	1.53
8	H	109	ARG	CA-CB	-8.98	1.34	1.53
34	i	373	G	O4'-C1'	8.97	1.53	1.41
34	i	1646	A	C2'-C1'	8.97	1.63	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	211	U	O4'-C1'	8.97	1.53	1.41
34	i	1040	G	C2'-C1'	-8.97	1.43	1.53
34	i	972	G	C2'-C1'	-8.96	1.43	1.53
34	i	1018	U	O4'-C1'	8.95	1.53	1.41
34	i	1559	C	C2'-C1'	-8.95	1.43	1.53
34	i	1533	C	O4'-C1'	8.94	1.53	1.41
34	i	1780	U	O4'-C1'	8.94	1.53	1.41
34	i	683	G	O4'-C1'	8.92	1.53	1.41
34	i	204	G	C2'-C1'	8.92	1.63	1.53
34	i	69	C	O4'-C1'	8.91	1.53	1.41
34	i	1054	A	O4'-C1'	8.91	1.53	1.41
34	i	41	G	O4'-C1'	8.90	1.53	1.41
34	i	97	U	O4'-C1'	8.89	1.53	1.41
34	i	1829	A	O4'-C1'	8.89	1.53	1.41
34	i	1370	C	O4'-C1'	8.89	1.53	1.41
34	i	653	C	O4'-C1'	8.88	1.53	1.41
34	i	432	C	C2'-C1'	-8.87	1.43	1.53
34	i	1478	C	O4'-C1'	8.87	1.53	1.41
34	i	813	G	C2'-C1'	-8.86	1.43	1.53
34	i	1336	U	C2'-C1'	8.86	1.63	1.53
34	i	178	C	O4'-C1'	8.86	1.53	1.41
34	i	1813	A	O4'-C1'	8.86	1.53	1.41
34	i	220	C	O4'-C1'	8.85	1.53	1.41
34	i	1791	U	O4'-C1'	8.85	1.53	1.41
34	i	936	U	O4'-C1'	8.85	1.53	1.41
34	i	1104	G	O4'-C1'	-8.84	1.30	1.41
34	i	1385	C	O4'-C1'	8.84	1.53	1.41
34	i	1571	G	O4'-C1'	8.84	1.53	1.41
34	i	106	C	O4'-C1'	8.82	1.53	1.41
7	G	36	VAL	CB-CG1	-8.82	1.34	1.52
34	i	1039	G	C2'-C1'	-8.82	1.43	1.53
34	i	1407	G	O4'-C1'	8.82	1.53	1.41
34	i	69	C	C2'-C1'	-8.82	1.43	1.53
34	i	1225	G	C2'-C1'	-8.82	1.43	1.53
34	i	26	U	O4'-C1'	8.81	1.53	1.41
27	a	97	PRO	C-N	8.80	1.50	1.34
34	i	194	C	O4'-C1'	8.80	1.53	1.41
34	i	189	G	O4'-C1'	8.80	1.53	1.41
34	i	900	A	C2'-C1'	-8.80	1.43	1.53
34	i	510	A	O4'-C1'	8.79	1.53	1.41
34	i	939	U	C2'-C1'	-8.78	1.43	1.53
34	i	1706	U	C2'-C1'	-8.76	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	380	C	O4'-C1'	8.76	1.53	1.41
34	i	1678	C	C2'-C1'	-8.75	1.43	1.53
34	i	540	C	O4'-C1'	8.75	1.53	1.41
34	i	1456	C	O4'-C1'	8.74	1.53	1.41
34	i	1822	C	C2'-C1'	-8.73	1.43	1.53
34	i	989	G	C2'-C1'	-8.73	1.43	1.53
34	i	575	C	O4'-C1'	8.72	1.52	1.41
34	i	1440	U	O4'-C1'	8.72	1.52	1.41
34	i	170	A	C2'-C1'	-8.72	1.43	1.53
34	i	1158	C	O4'-C1'	8.71	1.52	1.41
34	i	688	U	C2'-C1'	-8.71	1.43	1.53
34	i	1218	G	C2'-C1'	-8.70	1.43	1.53
34	i	853	U	O4'-C1'	8.70	1.52	1.41
19	S	54	LYS	CA-C	8.70	1.75	1.52
34	i	883	U	O4'-C1'	-8.70	1.30	1.41
34	i	1176	C	C2'-C1'	-8.69	1.43	1.53
34	i	1085	G	C2'-C1'	-8.69	1.43	1.53
34	i	824	G	O4'-C1'	-8.68	1.30	1.41
34	i	1560	C	O4'-C1'	8.68	1.52	1.41
34	i	17	C	O4'-C1'	8.68	1.52	1.41
34	i	677	C	C2'-C1'	-8.68	1.43	1.53
34	i	1434	A	O4'-C1'	8.67	1.52	1.41
34	i	1465	A	O4'-C1'	8.67	1.52	1.41
34	i	292	A	C2'-C1'	8.66	1.62	1.53
34	i	1692	A	C2'-C1'	8.66	1.62	1.53
34	i	844	U	O4'-C1'	8.65	1.52	1.41
34	i	807	A	C2'-C1'	-8.65	1.43	1.53
34	i	324	C	C2'-C1'	-8.64	1.43	1.53
34	i	235	C	O4'-C1'	8.64	1.52	1.41
34	i	574	A	C2'-C1'	-8.63	1.43	1.53
34	i	1221	U	O4'-C1'	8.62	1.52	1.41
34	i	107	A	C2'-C1'	8.61	1.62	1.53
34	i	537	G	C2'-C1'	-8.60	1.43	1.53
34	i	1142	C	O4'-C1'	8.60	1.52	1.41
34	i	543	U	O4'-C1'	8.60	1.52	1.41
34	i	1185	A	O4'-C1'	8.59	1.52	1.41
34	i	30	C	O4'-C1'	8.59	1.52	1.41
34	i	1775	A	O4'-C1'	8.59	1.52	1.41
34	i	1221	U	C2'-C1'	-8.54	1.44	1.53
34	i	1825	A	O4'-C1'	8.54	1.52	1.41
34	i	649	G	O4'-C1'	-8.54	1.30	1.41
34	i	593	C	O4'-C1'	8.54	1.52	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1267	C	C2'-C1'	-8.53	1.44	1.53
34	i	1200	A	C2'-C1'	-8.53	1.44	1.53
34	i	1331	G	C2'-C1'	-8.53	1.44	1.53
34	i	1068	U	C2'-C1'	8.52	1.62	1.53
34	i	1138	G	C2'-C1'	8.52	1.62	1.53
34	i	1414	C	C2'-C1'	-8.52	1.44	1.53
34	i	50	A	O4'-C1'	8.51	1.52	1.41
34	i	1490	U	C2'-C1'	8.51	1.62	1.53
34	i	376	C	C2'-C1'	-8.51	1.44	1.53
34	i	443	C	O4'-C1'	8.51	1.52	1.41
34	i	1345	G	O4'-C1'	8.49	1.52	1.41
34	i	1532	A	C2'-C1'	8.49	1.62	1.53
34	i	33	G	C2'-C1'	-8.49	1.44	1.53
34	i	53	C	C2'-C1'	8.49	1.62	1.53
34	i	1624	C	O4'-C1'	8.49	1.52	1.41
34	i	168	C	C2'-C1'	-8.48	1.44	1.53
34	i	361	A	C2'-C1'	-8.48	1.44	1.53
34	i	1807	A	O4'-C1'	8.48	1.52	1.41
34	i	670	G	O4'-C1'	8.48	1.52	1.41
34	i	453	C	O4'-C1'	8.47	1.52	1.41
34	i	1495	U	C2'-C1'	-8.46	1.44	1.53
34	i	1223	G	O4'-C1'	8.46	1.52	1.41
34	i	1168	U	C2'-C1'	8.46	1.62	1.53
4	D	4	GLN	N-CA	-8.45	1.29	1.46
34	i	1672	U	C2'-C1'	8.44	1.62	1.53
34	i	1212	C	O4'-C1'	8.44	1.52	1.41
34	i	409	G	O4'-C1'	8.44	1.52	1.41
34	i	441	G	C2'-C1'	-8.44	1.44	1.53
34	i	1476	A	O4'-C1'	8.43	1.52	1.41
34	i	1527	C	O4'-C1'	8.43	1.52	1.41
34	i	923	C	O4'-C1'	8.43	1.52	1.41
34	i	1611	U	O4'-C1'	8.42	1.52	1.41
34	i	661	A	C2'-C1'	-8.42	1.44	1.53
34	i	1264	C	O4'-C1'	8.42	1.52	1.41
34	i	147	A	C2'-C1'	8.42	1.62	1.53
34	i	148	U	C2'-C1'	8.41	1.62	1.53
34	i	990	C	C2'-C1'	-8.41	1.44	1.53
34	i	18	C	C2'-C1'	-8.40	1.44	1.53
34	i	236	C	O4'-C1'	8.39	1.52	1.41
34	i	462	C	C2'-C1'	-8.39	1.44	1.53
34	i	1079	A	O4'-C1'	8.39	1.52	1.41
10	J	164	PRO	C-N	8.39	1.53	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	165	G	C2'-C1'	8.38	1.62	1.53
34	i	159	A	O4'-C1'	8.37	1.52	1.41
34	i	1019	A	C2'-C1'	8.37	1.62	1.53
34	i	1367	U	O4'-C1'	8.36	1.52	1.41
34	i	1304	U	O4'-C1'	-8.36	1.30	1.41
34	i	354	A	C2'-C1'	-8.36	1.44	1.53
34	i	1292	U	C2'-C1'	-8.36	1.44	1.53
34	i	965	U	O4'-C1'	8.35	1.52	1.41
34	i	1630	C	O4'-C1'	8.35	1.52	1.41
34	i	348	C	O4'-C1'	8.34	1.52	1.41
34	i	736	C	C2'-C1'	-8.34	1.44	1.53
34	i	596	G	O4'-C1'	-8.33	1.30	1.41
34	i	1325	U	O4'-C1'	8.32	1.52	1.41
34	i	465	C	C2'-C1'	-8.32	1.44	1.53
34	i	937	C	O4'-C1'	8.32	1.52	1.41
34	i	1785	A	O4'-C1'	8.31	1.52	1.41
34	i	1569	C	C2'-C1'	-8.31	1.44	1.53
34	i	557	C	O4'-C1'	8.31	1.52	1.41
34	i	908	C	O4'-C1'	8.31	1.52	1.41
34	i	625	G	O4'-C1'	8.30	1.52	1.41
34	i	1840	G	C2'-C1'	-8.30	1.44	1.53
34	i	1252	G	O4'-C1'	8.30	1.52	1.41
34	i	1861	U	O4'-C1'	-8.30	1.30	1.41
34	i	902	U	O4'-C1'	8.29	1.52	1.41
34	i	176	U	O4'-C1'	8.29	1.52	1.41
34	i	625	G	C2'-C1'	-8.29	1.44	1.53
34	i	941	U	C2'-C1'	-8.29	1.44	1.53
34	i	1401	A	C2'-C1'	-8.29	1.44	1.53
34	i	1661	C	O4'-C1'	8.29	1.52	1.41
34	i	528	U	O4'-C1'	8.28	1.52	1.41
34	i	875	C	O4'-C1'	8.28	1.52	1.41
34	i	1046	A	C2'-C1'	-8.27	1.44	1.53
34	i	72	C	C2'-C1'	8.27	1.62	1.53
34	i	832	G	C2'-C1'	8.26	1.62	1.53
34	i	187	C	C2'-C1'	-8.26	1.44	1.53
34	i	1487	G	C2'-C1'	-8.25	1.44	1.53
34	i	1295	A	C2'-C1'	8.25	1.62	1.53
34	i	1309	A	O4'-C1'	8.25	1.52	1.41
34	i	1304	U	C2'-C1'	8.24	1.62	1.53
34	i	955	G	C2'-C1'	-8.23	1.44	1.53
34	i	313	C	C2'-C1'	-8.23	1.44	1.53
34	i	607	G	C2'-C1'	-8.23	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1679	C	O4'-C1'	8.21	1.52	1.41
34	i	1577	C	O4'-C1'	8.21	1.52	1.41
34	i	164	A	O4'-C1'	8.21	1.52	1.41
34	i	918	A	C2'-C1'	8.21	1.62	1.53
34	i	824	G	C2'-C1'	-8.21	1.44	1.53
34	i	1663	U	P-O5'	-8.21	1.51	1.59
34	i	1183	G	O4'-C1'	8.19	1.52	1.41
34	i	1558	G	C2'-C1'	-8.19	1.44	1.53
34	i	1261	A	O4'-C1'	8.18	1.52	1.41
34	i	741	C	O3'-P	-8.18	1.51	1.61
3	C	193	PRO	N-CD	8.17	1.59	1.47
34	i	1075	C	C2'-C1'	-8.17	1.44	1.53
34	i	40	A	C2'-C1'	8.17	1.62	1.53
34	i	676	U	C2'-C1'	8.16	1.62	1.53
34	i	1140	A	O4'-C1'	8.16	1.52	1.41
34	i	1059	C	C2'-C1'	-8.15	1.44	1.53
34	i	618	A	C2'-C1'	8.15	1.62	1.53
34	i	1086	C	O4'-C1'	8.13	1.52	1.41
34	i	303	G	C2'-C1'	8.12	1.62	1.53
34	i	1699	C	C2'-C1'	-8.12	1.44	1.53
34	i	739	U	O4'-C1'	8.11	1.52	1.41
34	i	302	C	C2'-C1'	-8.11	1.44	1.53
34	i	1390	G	O4'-C1'	8.11	1.52	1.41
34	i	1107	U	O4'-C1'	8.10	1.52	1.41
34	i	1480	A	O4'-C1'	8.10	1.52	1.41
34	i	1794	A	O4'-C1'	8.09	1.52	1.41
34	i	943	G	C2'-C1'	-8.09	1.44	1.53
34	i	959	A	O4'-C1'	-8.08	1.31	1.41
34	i	219	U	O4'-C1'	8.08	1.52	1.41
34	i	630	A	O4'-C1'	8.07	1.52	1.41
34	i	1001	G	C2'-C1'	-8.07	1.44	1.53
34	i	727	G	O4'-C1'	8.06	1.52	1.41
34	i	1824	U	O4'-C1'	8.06	1.52	1.41
34	i	336	C	O4'-C1'	8.06	1.52	1.41
34	i	1028	C	O4'-C1'	8.06	1.52	1.41
34	i	1733	C	C2'-C1'	-8.06	1.44	1.53
34	i	1201	C	O4'-C1'	8.04	1.52	1.41
34	i	152	U	C2'-C1'	-8.04	1.44	1.53
34	i	1623	C	O4'-C1'	8.04	1.52	1.41
19	S	95	TYR	CD1-CE1	-8.04	1.27	1.39
20	T	4	VAL	C-N	8.04	1.52	1.34
34	i	26	U	C2'-C1'	-8.04	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	G	36	VAL	CA-CB	-8.03	1.37	1.54
34	i	1394	G	C2'-C1'	-8.03	1.44	1.53
34	i	537	G	O4'-C1'	8.03	1.52	1.41
34	i	369	C	O4'-C1'	8.03	1.52	1.41
34	i	317	G	O4'-C1'	-8.02	1.31	1.41
34	i	1102	C	C2'-C1'	8.02	1.62	1.53
34	i	835	C	C2'-C1'	-8.02	1.44	1.53
34	i	1425	G	O3'-P	-8.02	1.51	1.61
34	i	1800	A	C2'-C1'	-8.01	1.44	1.53
34	i	536	G	O4'-C1'	8.01	1.52	1.41
34	i	57	U	C2'-C1'	8.01	1.62	1.53
34	i	1579	G	O4'-C1'	8.00	1.52	1.41
34	i	1604	C	O4'-C1'	8.00	1.52	1.41
18	R	89	SER	CA-C	7.99	1.73	1.52
34	i	1450	A	O4'-C1'	7.99	1.52	1.41
34	i	1446	G	C2'-C1'	-7.98	1.44	1.53
34	i	1705	C	O4'-C1'	7.98	1.52	1.41
34	i	624	A	O4'-C1'	7.97	1.52	1.41
34	i	1327	C	O4'-C1'	7.96	1.52	1.41
34	i	86	C	C2'-C1'	-7.96	1.44	1.53
34	i	988	A	O4'-C1'	7.96	1.51	1.41
34	i	1652	G	C2'-C1'	-7.96	1.44	1.53
34	i	1482	A	P-O5'	-7.95	1.51	1.59
34	i	37	C	C2'-C1'	-7.95	1.44	1.53
34	i	1447	G	C2'-C1'	-7.94	1.44	1.53
34	i	599	U	O4'-C1'	7.94	1.51	1.41
34	i	1386	U	C2'-C1'	-7.94	1.44	1.53
34	i	1535	G	C2'-C1'	-7.94	1.44	1.53
34	i	863	G	O4'-C1'	7.93	1.51	1.41
34	i	1150	U	O4'-C1'	-7.93	1.31	1.41
34	i	1279	C	C2'-C1'	-7.92	1.44	1.53
34	i	1522	C	O4'-C1'	7.92	1.51	1.41
34	i	1061	G	C2'-C1'	-7.92	1.44	1.53
34	i	1857	A	C2'-C1'	7.92	1.62	1.53
34	i	1537	C	C2'-C1'	-7.92	1.44	1.53
34	i	1321	G	O4'-C1'	7.91	1.51	1.41
34	i	492	C	O4'-C1'	7.91	1.51	1.41
34	i	486	C	C2'-C1'	-7.90	1.44	1.53
34	i	1126	G	O4'-C1'	-7.90	1.31	1.41
34	i	969	C	O4'-C1'	7.90	1.51	1.41
34	i	275	C	O4'-C1'	7.88	1.51	1.41
34	i	930	G	C2'-C1'	-7.88	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	463	A	O4'-C1'	7.88	1.51	1.41
34	i	1818	A	O4'-C1'	-7.88	1.31	1.41
7	G	131	ARG	N-CA	-7.87	1.30	1.46
34	i	338	A	C2'-C1'	-7.86	1.44	1.53
34	i	948	G	C2'-C1'	-7.86	1.44	1.53
34	i	1480	A	C2'-C1'	-7.86	1.44	1.53
34	i	1796	C	O4'-C1'	7.85	1.51	1.41
34	i	337	G	O4'-C1'	7.85	1.51	1.41
34	i	953	A	C2'-C1'	-7.83	1.44	1.53
34	i	876	G	C2'-C1'	7.83	1.61	1.53
34	i	119	U	C2'-C1'	-7.83	1.44	1.53
34	i	1385	C	P-O5'	-7.82	1.51	1.59
34	i	226	A	C2'-C1'	-7.81	1.44	1.53
34	i	557	C	C2'-C1'	-7.81	1.44	1.53
34	i	171	A	C2'-C1'	7.80	1.61	1.53
34	i	399	C	O4'-C1'	7.78	1.51	1.41
34	i	521	A	O3'-P	-7.78	1.51	1.61
34	i	566	A	C2'-C1'	-7.77	1.44	1.53
34	i	190	A	O4'-C1'	7.77	1.51	1.41
34	i	880	C	O4'-C1'	7.77	1.51	1.41
34	i	1687	U	C2'-C1'	-7.77	1.44	1.53
34	i	924	G	C2'-C1'	-7.76	1.44	1.53
34	i	1403	U	O4'-C1'	7.76	1.51	1.41
34	i	447	C	O4'-C1'	7.76	1.51	1.41
34	i	1071	C	O4'-C1'	7.76	1.51	1.41
34	i	1592	C	C2'-C1'	-7.75	1.44	1.53
34	i	37	C	O4'-C1'	7.75	1.51	1.41
34	i	342	U	O4'-C1'	7.74	1.51	1.41
34	i	544	A	O4'-C1'	-7.74	1.31	1.41
34	i	829	C	O4'-C1'	7.74	1.51	1.41
34	i	685	G	C1'-N9	-7.73	1.36	1.46
34	i	1027	A	O4'-C1'	7.73	1.51	1.41
34	i	60	A	O4'-C1'	-7.73	1.31	1.41
34	i	200	U	C2'-C1'	-7.72	1.44	1.53
34	i	368	U	C2'-C1'	-7.72	1.44	1.53
34	i	189	G	C2'-C1'	-7.72	1.44	1.53
34	i	29	G	C2'-C1'	-7.71	1.44	1.53
34	i	938	G	O4'-C1'	7.71	1.51	1.41
34	i	1332	C	O4'-C1'	7.71	1.51	1.41
34	i	563	U	O4'-C1'	7.70	1.51	1.41
34	i	604	G	C1'-N9	-7.70	1.36	1.46
10	J	35	TYR	CD2-CE2	-7.70	1.27	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	449	C	C2'-C1'	-7.69	1.44	1.53
7	G	130	PRO	C-N	-7.69	1.16	1.34
34	i	820	C	O4'-C1'	7.68	1.51	1.41
34	i	452	C	O4'-C1'	7.67	1.51	1.41
34	i	1123	C	O4'-C1'	7.67	1.51	1.41
34	i	38	A	C2'-C1'	7.67	1.61	1.53
34	i	846	C	O4'-C1'	7.67	1.51	1.41
34	i	864	G	C2'-C1'	-7.66	1.45	1.53
34	i	846	C	C2'-C1'	-7.66	1.45	1.53
34	i	874	G	C2'-C1'	-7.66	1.45	1.53
34	i	1384	A	O4'-C1'	7.65	1.51	1.41
34	i	1664	G	C2'-C1'	-7.65	1.45	1.53
34	i	49	C	O4'-C1'	7.64	1.51	1.41
34	i	1313	U	O4'-C1'	7.64	1.51	1.41
34	i	1045	A	O4'-C1'	-7.64	1.31	1.41
34	i	1343	U	O4'-C1'	7.64	1.51	1.41
34	i	399	C	C2'-C1'	-7.62	1.45	1.53
34	i	1444	A	C2'-C1'	-7.62	1.45	1.53
34	i	1382	A	O4'-C1'	7.61	1.51	1.41
34	i	1245	C	O4'-C1'	7.60	1.51	1.41
34	i	725	C	O4'-C1'	7.60	1.51	1.41
34	i	1006	G	C2'-C1'	7.60	1.61	1.53
34	i	1823	G	O4'-C1'	7.60	1.51	1.41
34	i	1799	G	O4'-C1'	7.59	1.51	1.41
34	i	1633	G	O4'-C1'	7.58	1.51	1.41
34	i	271	G	O3'-P	-7.58	1.52	1.61
19	S	82	TRP	CA-CB	-7.57	1.37	1.53
34	i	1041	U	O4'-C1'	7.57	1.51	1.41
34	i	1292	U	O4'-C1'	7.57	1.51	1.41
34	i	689	G	C1'-N9	-7.56	1.36	1.46
34	i	1423	C	C2'-C1'	7.56	1.61	1.53
34	i	211	U	O3'-P	-7.55	1.52	1.61
34	i	194	C	C2'-C1'	-7.55	1.45	1.53
34	i	518	A	O4'-C1'	7.55	1.51	1.41
34	i	386	U	O4'-C1'	7.55	1.51	1.41
34	i	1398	A	C2'-C1'	-7.54	1.45	1.53
34	i	485	U	C2'-C1'	-7.54	1.45	1.53
34	i	1392	A	C2'-C1'	7.54	1.61	1.53
34	i	343	C	O4'-C1'	7.54	1.51	1.41
34	i	360	G	O4'-C1'	7.54	1.51	1.41
10	J	164	PRO	N-CA	-7.53	1.34	1.47
34	i	1493	G	O4'-C1'	7.53	1.51	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1568	G	O4'-C1'	7.53	1.51	1.41
34	i	460	G	C2'-C1'	-7.52	1.45	1.53
34	i	355	C	C2'-C1'	-7.52	1.45	1.53
34	i	1465	A	C2'-C1'	-7.52	1.45	1.53
34	i	95	G	C2'-C1'	-7.51	1.45	1.53
34	i	202	U	C2'-C1'	-7.51	1.45	1.53
34	i	1187	C	O4'-C1'	7.51	1.51	1.41
34	i	442	G	O4'-C1'	7.50	1.51	1.41
34	i	1145	A	C2'-C1'	-7.50	1.45	1.53
34	i	1260	C	O4'-C1'	7.48	1.51	1.41
34	i	1123	C	C2'-C1'	-7.48	1.45	1.53
34	i	1814	G	C2'-C1'	-7.48	1.45	1.53
34	i	840	U	O4'-C1'	7.48	1.51	1.41
34	i	151	C	P-O5'	-7.48	1.52	1.59
34	i	872	C	O4'-C1'	7.47	1.51	1.41
34	i	656	U	O4'-C1'	7.46	1.51	1.41
34	i	1138	G	O4'-C1'	-7.46	1.31	1.41
34	i	859	U	O4'-C1'	7.46	1.51	1.41
34	i	818	U	O4'-C1'	7.46	1.51	1.41
34	i	1423	C	O4'-C1'	7.46	1.51	1.41
34	i	1850	C	C2'-C1'	-7.46	1.45	1.53
7	G	170	ARG	CA-CB	7.46	1.70	1.53
34	i	1299	C	O4'-C1'	-7.45	1.31	1.41
34	i	278	U	O4'-C1'	7.45	1.51	1.41
34	i	1137	G	O4'-C1'	-7.45	1.31	1.41
34	i	1839	A	C2'-C1'	-7.45	1.45	1.53
34	i	1638	U	O4'-C1'	7.45	1.51	1.41
34	i	1758	G	C5'-C4'	7.45	1.60	1.51
34	i	1626	U	C2'-C1'	-7.44	1.45	1.53
34	i	223	A	O4'-C1'	7.43	1.51	1.41
34	i	1778	G	C2'-C1'	-7.42	1.45	1.53
34	i	488	C	C2'-C1'	-7.42	1.45	1.53
34	i	347	C	O4'-C1'	7.42	1.51	1.41
34	i	933	C	C2'-C1'	-7.42	1.45	1.53
34	i	428	G	O4'-C1'	-7.41	1.32	1.41
34	i	686	G	C2'-C1'	-7.41	1.45	1.53
34	i	3	C	C2'-C1'	7.40	1.61	1.53
34	i	1151	U	O4'-C1'	7.40	1.51	1.41
34	i	377	C	C2'-C1'	-7.40	1.45	1.53
34	i	493	C	O4'-C1'	7.40	1.51	1.41
34	i	1340	A	O4'-C1'	7.40	1.51	1.41
34	i	1676	U	C2'-C1'	-7.39	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1808	G	O4'-C1'	7.39	1.51	1.41
34	i	86	C	O4'-C1'	7.39	1.51	1.41
34	i	1434	A	C2'-C1'	7.39	1.61	1.53
34	i	1345	G	C2'-C1'	-7.39	1.45	1.53
34	i	820	C	C2'-C1'	-7.38	1.45	1.53
34	i	845	A	O4'-C1'	7.38	1.51	1.41
34	i	1186	A	O4'-C1'	7.38	1.51	1.41
34	i	1835	C	C2'-C1'	-7.38	1.45	1.53
34	i	515	A	C2'-C1'	-7.38	1.45	1.53
34	i	1045	A	C2'-C1'	7.37	1.61	1.53
34	i	120	U	O4'-C1'	7.36	1.51	1.41
34	i	1091	U	O4'-C1'	7.35	1.51	1.41
34	i	225	C	O3'-P	-7.35	1.52	1.61
34	i	1008	A	C2'-C1'	-7.34	1.45	1.53
34	i	1363	U	O4'-C1'	7.34	1.51	1.41
16	P	122	THR	CA-CB	7.34	1.72	1.53
34	i	743	U	O3'-P	-7.33	1.52	1.61
34	i	982	G	C2'-C1'	-7.33	1.45	1.53
34	i	514	U	O4'-C1'	7.33	1.51	1.41
34	i	621	U	C2'-C1'	-7.33	1.45	1.53
34	i	1668	U	C2'-C1'	-7.31	1.45	1.53
34	i	1059	C	O4'-C1'	7.31	1.51	1.41
34	i	1798	U	O4'-C1'	7.31	1.51	1.41
34	i	213	C	O4'-C1'	7.30	1.51	1.41
9	I	3	ILE	CA-CB	-7.29	1.38	1.54
34	i	404	A	C2'-C1'	7.28	1.61	1.53
34	i	85	A	O4'-C1'	7.27	1.51	1.41
34	i	456	G	C4'-C3'	7.27	1.61	1.53
34	i	798	A	O4'-C1'	7.27	1.51	1.41
34	i	1472	A	C2'-C1'	7.27	1.61	1.53
34	i	1489	C	C2'-C1'	7.27	1.61	1.53
34	i	216	U	O4'-C1'	7.26	1.51	1.41
14	N	137	PRO	N-CD	7.26	1.58	1.47
34	i	596	G	C2'-C1'	-7.25	1.45	1.53
34	i	516	A	C2'-C1'	-7.25	1.45	1.53
34	i	1741	U	O3'-P	7.24	1.69	1.61
34	i	1096	A	C2'-C1'	-7.24	1.45	1.53
6	F	108	PRO	N-CD	7.24	1.57	1.47
34	i	652	G	O4'-C1'	7.23	1.51	1.41
34	i	361	A	O4'-C1'	7.22	1.51	1.41
34	i	35	C	C2'-C1'	-7.21	1.45	1.53
34	i	1460	C	C2'-C1'	-7.21	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	J	91	LYS	C-O	-7.21	1.09	1.23
34	i	1424	G	C2'-C1'	7.21	1.61	1.53
34	i	86	C	P-O5'	-7.21	1.52	1.59
34	i	327	C	O4'-C1'	7.21	1.51	1.41
34	i	856	G	O4'-C1'	7.21	1.51	1.41
34	i	42	A	O4'-C1'	7.20	1.51	1.41
25	Y	91	LEU	C-N	7.20	1.50	1.34
34	i	576	G	O4'-C1'	7.20	1.51	1.41
34	i	6	G	C2'-C1'	-7.18	1.45	1.53
34	i	632	U	C2'-C1'	-7.18	1.45	1.53
34	i	660	A	O4'-C1'	-7.18	1.32	1.41
34	i	1259	U	C5'-C4'	7.18	1.59	1.51
34	i	485	U	O4'-C1'	7.17	1.50	1.41
34	i	937	C	C2'-C1'	-7.16	1.45	1.53
34	i	470	G	C2'-C1'	-7.16	1.45	1.53
34	i	897	G	C2'-C1'	-7.16	1.45	1.53
34	i	1223	G	C2'-C1'	-7.15	1.45	1.53
34	i	1387	C	C2'-C1'	-7.15	1.45	1.53
34	i	871	A	C2'-C1'	-7.15	1.45	1.53
34	i	1256	A	C2'-C1'	-7.13	1.45	1.53
7	G	131	ARG	CB-CG	7.13	1.71	1.52
34	i	1293	U	C2'-C1'	7.12	1.61	1.53
34	i	619	A	C2'-C1'	7.12	1.61	1.53
34	i	916	A	O4'-C1'	7.11	1.50	1.41
34	i	74	G	O4'-C1'	7.11	1.50	1.41
34	i	1033	G	C2'-C1'	-7.11	1.45	1.53
34	i	1405	A	O4'-C1'	7.11	1.50	1.41
34	i	960	A	C2'-C1'	7.10	1.61	1.53
34	i	1528	A	C2'-C1'	-7.09	1.45	1.53
34	i	1419	C	C2'-C1'	-7.09	1.45	1.53
34	i	988	A	C2'-C1'	-7.09	1.45	1.53
34	i	959	A	C2'-C1'	-7.08	1.45	1.53
34	i	489	G	C2'-C1'	-7.07	1.45	1.53
8	H	111	LYS	CA-C	-7.06	1.34	1.52
24	X	24	ASP	CA-C	-7.06	1.34	1.52
34	i	81	U	O4'-C1'	7.05	1.50	1.41
34	i	632	U	O4'-C1'	7.05	1.50	1.41
34	i	1255	A	O4'-C1'	-7.05	1.32	1.41
34	i	104	A	O4'-C1'	7.04	1.50	1.41
34	i	390	C	C2'-C1'	-7.03	1.45	1.53
34	i	1211	C	O4'-C1'	7.03	1.50	1.41
34	i	59	U	C2'-C1'	7.03	1.61	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1174	U	C2'-C1'	-7.02	1.45	1.53
34	i	1355	U	C2'-C1'	7.02	1.61	1.53
34	i	880	C	C2'-C1'	-7.01	1.45	1.53
34	i	674	G	C2'-C1'	-7.01	1.45	1.53
34	i	818	U	C2'-C1'	-7.00	1.45	1.53
34	i	1717	G	O4'-C1'	7.00	1.50	1.41
34	i	1843	G	C2'-C1'	-7.00	1.45	1.53
34	i	1583	A	O4'-C1'	7.00	1.50	1.41
34	i	1125	G	C2'-C1'	-6.99	1.45	1.53
34	i	655	G	C2'-C1'	-6.98	1.45	1.53
34	i	1044	G	C5'-C4'	6.98	1.59	1.51
34	i	601	G	O4'-C1'	6.97	1.50	1.41
34	i	742	C	C2'-C1'	-6.97	1.45	1.53
10	J	35	TYR	CE1-CZ	-6.97	1.29	1.38
34	i	118	C	O4'-C1'	6.97	1.50	1.41
34	i	903	G	O4'-C1'	6.96	1.50	1.41
34	i	876	G	O4'-C1'	-6.96	1.32	1.41
34	i	418	U	C2'-C1'	6.96	1.61	1.53
3	C	93	LYS	C-N	-6.96	1.18	1.34
34	i	811	U	O4'-C1'	6.96	1.50	1.41
34	i	1039	G	O4'-C1'	6.95	1.50	1.41
34	i	1054	A	C2'-C1'	-6.95	1.45	1.53
34	i	172	U	O4'-C1'	6.94	1.50	1.41
34	i	1395	C	O4'-C1'	6.94	1.50	1.41
34	i	1519	G	O4'-C1'	-6.94	1.32	1.41
34	i	464	G	C2'-C1'	-6.94	1.45	1.53
34	i	860	A	C2'-C1'	-6.94	1.45	1.53
34	i	899	A	O4'-C1'	-6.94	1.32	1.41
34	i	1250	C	O4'-C1'	6.94	1.50	1.41
34	i	823	A	O4'-C1'	6.93	1.50	1.41
34	i	609	A	C2'-C1'	6.93	1.60	1.53
34	i	735	C	C2'-C1'	-6.93	1.45	1.53
34	i	231	C	C2'-C1'	-6.92	1.45	1.53
34	i	264	U	O3'-P	-6.92	1.52	1.61
34	i	1021	U	C2'-C1'	6.92	1.60	1.53
34	i	382	A	C2'-C1'	-6.92	1.45	1.53
34	i	1283	A	C2'-C1'	6.91	1.60	1.53
34	i	1043	C	C2'-C1'	-6.91	1.45	1.53
2	B	133	TYR	CB-CG	-6.90	1.41	1.51
34	i	46	A	C2'-C1'	-6.89	1.45	1.53
34	i	1782	A	O4'-C1'	6.89	1.50	1.41
34	i	1784	A	O4'-C1'	6.89	1.50	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1654	U	O3'-P	-6.89	1.52	1.61
34	i	1805	C	C2'-C1'	-6.89	1.45	1.53
34	i	65	C	C2'-C1'	6.88	1.60	1.53
34	i	1621	C	O4'-C1'	6.88	1.50	1.41
34	i	1032	A	C2'-C1'	-6.88	1.45	1.53
34	i	668	U	O4'-C1'	6.87	1.50	1.41
34	i	983	A	O4'-C1'	6.87	1.50	1.41
34	i	325	G	C2'-C1'	6.86	1.60	1.53
35	j	23	G	C1'-N9	-6.86	1.37	1.46
34	i	1452	G	O4'-C1'	6.86	1.50	1.41
34	i	597	U	C2'-C1'	-6.85	1.45	1.53
34	i	1244	U	C2'-C1'	-6.85	1.45	1.53
34	i	1681	G	C2'-C1'	-6.85	1.45	1.53
34	i	1696	C	O4'-C1'	6.85	1.50	1.41
34	i	1538	U	P-O5'	-6.84	1.52	1.59
24	X	128	VAL	CA-CB	-6.84	1.40	1.54
34	i	1175	G	C2'-C1'	-6.84	1.45	1.53
34	i	1723	U	O4'-C1'	6.83	1.50	1.41
34	i	1303	U	C2'-C1'	6.83	1.60	1.53
34	i	896	C	O4'-C1'	6.83	1.50	1.41
24	X	126	ALA	CA-CB	-6.82	1.38	1.52
34	i	1836	C	C2'-C1'	-6.82	1.45	1.53
34	i	969	C	C5'-C4'	6.82	1.59	1.51
34	i	1670	A	O4'-C1'	-6.82	1.32	1.41
34	i	435	A	O4'-C1'	6.81	1.50	1.41
34	i	1842	U	C2'-C1'	-6.81	1.45	1.53
34	i	1144	A	C2'-C1'	6.80	1.60	1.53
34	i	348	C	C2'-C1'	-6.80	1.45	1.53
34	i	1018	U	O3'-P	-6.80	1.52	1.61
34	i	1149	C	O4'-C1'	-6.79	1.32	1.41
34	i	1525	U	O4'-C1'	6.79	1.50	1.41
34	i	1031	A	O4'-C1'	6.79	1.50	1.41
34	i	314	U	O4'-C1'	-6.78	1.32	1.41
34	i	1072	G	C2'-C1'	-6.77	1.46	1.53
34	i	147	A	O4'-C1'	-6.77	1.32	1.41
34	i	118	C	C2'-C1'	-6.76	1.46	1.53
34	i	470	G	O4'-C1'	6.76	1.50	1.41
34	i	1378	A	O4'-C1'	6.76	1.50	1.41
34	i	513	A	O4'-C1'	6.76	1.50	1.41
34	i	941	U	O4'-C1'	6.75	1.50	1.41
34	i	438	A	C2'-C1'	6.75	1.60	1.53
34	i	628	C	O4'-C1'	6.74	1.50	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
19	S	95	TYR	CE1-CZ	-6.73	1.29	1.38
34	i	1691	C	C2'-C1'	-6.73	1.46	1.53
34	i	1734	C	C2'-C1'	-6.73	1.46	1.53
34	i	556	U	C2'-C1'	6.72	1.60	1.53
34	i	434	G	O4'-C1'	-6.72	1.32	1.41
34	i	397	G	C2'-C1'	6.72	1.60	1.53
34	i	320	G	C2'-C1'	-6.71	1.46	1.53
34	i	663	G	P-O5'	-6.71	1.53	1.59
34	i	699	C	C5'-C4'	6.71	1.59	1.51
34	i	1842	U	O4'-C1'	6.71	1.50	1.41
34	i	1707	A	O4'-C1'	6.70	1.50	1.41
34	i	1051	A	C5'-C4'	6.70	1.59	1.51
34	i	504	U	C2'-C1'	-6.70	1.46	1.53
34	i	812	A	C2'-C1'	-6.69	1.46	1.53
34	i	1203	G	O4'-C1'	6.68	1.50	1.41
34	i	1836	C	O4'-C1'	6.68	1.50	1.41
34	i	1514	U	C2'-C1'	6.67	1.60	1.53
34	i	996	C	O4'-C1'	6.67	1.50	1.41
10	J	163	SER	C-N	-6.66	1.21	1.34
34	i	1035	C	O4'-C1'	6.66	1.50	1.41
34	i	913	U	C2'-C1'	6.66	1.60	1.53
34	i	14	C	O4'-C1'	6.65	1.50	1.41
34	i	165	G	O4'-C1'	-6.65	1.33	1.41
34	i	1051	A	O4'-C1'	6.65	1.50	1.41
34	i	1634	G	O4'-C1'	6.65	1.50	1.41
34	i	1743	G	C2'-C1'	-6.65	1.46	1.53
19	S	95	TYR	CD2-CE2	-6.64	1.29	1.39
34	i	388	A	O4'-C1'	6.64	1.50	1.41
34	i	1810	G	C2'-C1'	-6.64	1.46	1.53
34	i	1735	C	C2'-C1'	-6.63	1.46	1.53
34	i	338	A	O4'-C1'	6.63	1.50	1.41
34	i	946	C	C2'-C1'	-6.62	1.46	1.53
34	i	1232	G	C3'-C2'	6.62	1.60	1.52
34	i	273	G	O4'-C1'	6.61	1.50	1.41
34	i	411	G	O3'-P	-6.61	1.53	1.61
34	i	1391	C	O4'-C1'	6.61	1.50	1.41
7	G	157	VAL	CA-CB	-6.61	1.40	1.54
34	i	103	A	O4'-C1'	-6.61	1.33	1.41
34	i	494	G	C2'-C1'	-6.60	1.46	1.53
34	i	1414	C	O4'-C1'	-6.60	1.33	1.41
34	i	1731	G	C2'-C1'	-6.60	1.46	1.53
34	i	1712	C	O4'-C1'	6.59	1.50	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	467	G	C2'-C1'	-6.59	1.46	1.53
34	i	1479	A	C2'-C1'	6.57	1.60	1.53
34	i	1797	U	O4'-C1'	6.57	1.50	1.41
34	i	733	G	C2'-C1'	6.57	1.60	1.53
34	i	1499	C	O4'-C1'	6.57	1.50	1.41
34	i	101	U	C2'-C1'	6.56	1.60	1.53
34	i	9	U	O4'-C1'	6.56	1.50	1.41
34	i	227	A	O4'-C1'	6.55	1.50	1.41
34	i	1737	C	O4'-C1'	6.55	1.50	1.41
34	i	442	G	C2'-C1'	-6.54	1.46	1.53
34	i	1667	U	C2'-C1'	-6.54	1.46	1.53
34	i	1234	U	C2'-C1'	-6.54	1.46	1.53
34	i	1626	U	O4'-C1'	6.54	1.50	1.41
34	i	100	U	O4'-C1'	6.53	1.50	1.41
34	i	1121	C	O4'-C1'	6.53	1.50	1.41
34	i	205	G	O4'-C1'	6.52	1.50	1.41
34	i	300	G	C2'-C1'	-6.52	1.46	1.53
34	i	30	C	C2'-C1'	-6.52	1.46	1.53
3	C	72	PRO	N-CD	6.51	1.56	1.47
34	i	806	A	O4'-C1'	6.51	1.50	1.41
34	i	795	U	C2'-C1'	-6.50	1.46	1.53
34	i	1061	G	O4'-C1'	6.49	1.50	1.41
34	i	201	G	C2'-C1'	6.48	1.60	1.53
34	i	637	U	O4'-C1'	6.48	1.50	1.41
34	i	928	G	C2'-C1'	-6.48	1.46	1.53
34	i	965	U	C2'-C1'	-6.48	1.46	1.53
34	i	958	A	C2'-C1'	6.48	1.60	1.53
34	i	471	C	O4'-C1'	6.48	1.50	1.41
34	i	1243	C	O4'-C1'	6.47	1.50	1.41
34	i	892	U	O4'-C1'	6.47	1.50	1.41
34	i	1702	U	C2'-C1'	-6.46	1.46	1.53
34	i	1392	A	O4'-C1'	-6.46	1.33	1.41
9	I	8	TRP	CD2-CE3	-6.45	1.30	1.40
34	i	920	G	P-O5'	-6.45	1.53	1.59
34	i	1463	C	O4'-C1'	6.45	1.50	1.41
34	i	1797	U	C2'-C1'	-6.45	1.46	1.53
34	i	1030	A	C2'-C1'	6.45	1.60	1.53
34	i	799	C	O4'-C1'	6.44	1.50	1.41
34	i	826	A	C2'-C1'	6.43	1.60	1.53
34	i	1603	U	C2'-C1'	-6.43	1.46	1.53
34	i	458	A	C2'-C1'	-6.42	1.46	1.53
34	i	421	G	C2'-C1'	-6.41	1.46	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1569	C	O4'-C1'	6.41	1.50	1.41
34	i	160	U	O4'-C1'	6.40	1.50	1.41
34	i	627	U	C2'-C1'	6.40	1.60	1.53
34	i	1090	C	C2'-C1'	-6.39	1.46	1.53
34	i	1610	U	O4'-C1'	6.39	1.50	1.41
34	i	1121	C	C2'-C1'	-6.39	1.46	1.53
34	i	1278	A	O4'-C1'	6.39	1.50	1.41
34	i	1173	U	O4'-C1'	6.38	1.50	1.41
34	i	1840	G	O4'-C1'	6.37	1.50	1.41
34	i	1311	U	C5'-C4'	6.36	1.58	1.51
34	i	370	G	O4'-C1'	-6.36	1.33	1.41
34	i	639	U	O4'-C1'	6.36	1.50	1.41
7	G	156	TYR	CB-CG	-6.35	1.42	1.51
34	i	94	G	O4'-C1'	6.35	1.50	1.41
34	i	290	A	C2'-C1'	6.35	1.60	1.53
34	i	406	U	C2'-C1'	6.35	1.60	1.53
34	i	1615	A	O4'-C1'	-6.35	1.33	1.41
34	i	1799	G	C2'-C1'	-6.35	1.46	1.53
34	i	389	C	C2'-C1'	-6.35	1.46	1.53
34	i	997	A	C2'-C1'	6.34	1.60	1.53
34	i	1103	G	C2'-C1'	-6.34	1.46	1.53
34	i	1622	C	C2'-C1'	-6.34	1.46	1.53
34	i	1334	G	O4'-C1'	6.33	1.49	1.41
34	i	1032	A	C5'-C4'	6.33	1.58	1.51
34	i	1102	C	O4'-C1'	6.33	1.49	1.41
34	i	139	C	C2'-C1'	6.33	1.60	1.53
34	i	1138	G	P-O5'	-6.33	1.53	1.59
10	J	101	LYS	N-CA	6.32	1.58	1.46
34	i	1256	A	O3'-P	-6.32	1.53	1.61
34	i	408	A	O4'-C1'	6.32	1.49	1.41
34	i	1215	C	O4'-C1'	6.32	1.49	1.41
34	i	1233	C	P-O5'	-6.32	1.53	1.59
34	i	962	U	C2'-C1'	-6.31	1.46	1.53
4	D	20	GLU	CG-CD	6.30	1.61	1.51
34	i	1047	G	C2'-C1'	-6.30	1.46	1.53
34	i	1444	A	O4'-C1'	6.30	1.49	1.41
34	i	528	U	C2'-C1'	-6.30	1.46	1.53
34	i	567	U	O4'-C1'	6.30	1.49	1.41
34	i	1042	U	O4'-C1'	6.30	1.49	1.41
34	i	461	G	O4'-C1'	-6.29	1.33	1.41
7	G	170	ARG	CA-C	-6.28	1.36	1.52
5	E	150	PRO	N-CD	6.28	1.56	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	Q	145	TYR	CD2-CE2	-6.28	1.29	1.39
34	i	1584	A	C2'-C1'	6.28	1.60	1.53
34	i	879	U	C5'-C4'	6.27	1.58	1.51
34	i	1753	G	C2'-C1'	-6.27	1.46	1.53
26	Z	104	ARG	CD-NE	-6.27	1.35	1.46
34	i	404	A	O4'-C1'	6.27	1.49	1.41
34	i	1426	C	P-O5'	-6.26	1.53	1.59
34	i	665	U	O4'-C1'	6.26	1.49	1.41
34	i	898	G	C2'-C1'	-6.26	1.46	1.53
34	i	954	G	O4'-C1'	-6.26	1.33	1.41
34	i	793	C	O3'-P	-6.26	1.53	1.61
34	i	1280	A	C2'-C1'	-6.26	1.46	1.53
34	i	273	G	C2'-C1'	-6.25	1.46	1.53
18	R	89	SER	C-N	6.25	1.48	1.34
34	i	220	C	C2'-C1'	-6.25	1.46	1.53
34	i	1628	A	C2'-C1'	-6.25	1.46	1.53
34	i	1684	C	O4'-C1'	6.25	1.49	1.41
34	i	1426	C	C2'-C1'	6.24	1.60	1.53
34	i	1476	A	C2'-C1'	-6.24	1.46	1.53
10	J	144	ILE	CA-CB	-6.24	1.40	1.54
34	i	656	U	O3'-P	-6.24	1.53	1.61
34	i	1097	U	C2'-C1'	-6.24	1.46	1.53
34	i	974	G	C2'-C1'	-6.23	1.46	1.53
34	i	678	U	C2'-C1'	6.22	1.60	1.53
34	i	1167	G	C2'-C1'	6.22	1.60	1.53
34	i	1167	G	C5'-C4'	6.22	1.58	1.51
34	i	889	U	C2'-C1'	6.22	1.60	1.53
34	i	364	G	C2'-C1'	-6.21	1.46	1.53
34	i	33	G	O4'-C1'	6.21	1.49	1.41
34	i	1402	G	O4'-C1'	6.21	1.49	1.41
34	i	583	C	C2'-C1'	-6.21	1.46	1.53
34	i	601	G	C2'-C1'	-6.20	1.46	1.53
34	i	969	C	C2'-C1'	-6.20	1.46	1.53
34	i	469	C	O4'-C1'	6.19	1.49	1.41
34	i	477	U	C4'-C3'	6.19	1.59	1.53
34	i	1085	G	O4'-C1'	6.19	1.49	1.41
35	j	49	A	C1'-N9	-6.18	1.38	1.46
17	Q	145	TYR	CD1-CE1	-6.18	1.30	1.39
34	i	337	G	C2'-C1'	-6.18	1.46	1.53
34	i	1657	U	O4'-C1'	6.16	1.49	1.41
24	X	116	PRO	CA-C	6.16	1.65	1.52
34	i	1415	C	O4'-C1'	6.16	1.49	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	C	195	PRO	N-CD	6.16	1.56	1.47
34	i	1093	G	O4'-C1'	-6.15	1.33	1.41
34	i	1852	G	C2'-C1'	-6.15	1.46	1.53
34	i	356	U	O4'-C1'	6.14	1.49	1.41
34	i	335	U	O4'-C1'	6.14	1.49	1.41
34	i	1119	C	C5'-C4'	6.14	1.58	1.51
34	i	494	G	C3'-C2'	-6.13	1.46	1.52
34	i	806	A	C2'-C1'	-6.13	1.46	1.53
27	a	10	ARG	NE-CZ	6.13	1.41	1.33
34	i	1078	A	O4'-C1'	6.13	1.49	1.41
34	i	945	G	C2'-C1'	-6.13	1.46	1.53
34	i	1791	U	P-O5'	-6.12	1.53	1.59
34	i	994	A	C2'-C1'	6.12	1.60	1.53
34	i	1700	C	C2'-C1'	-6.12	1.46	1.53
34	i	1652	G	C4'-C3'	6.11	1.59	1.53
34	i	1284	U	C5'-C4'	6.11	1.58	1.51
34	i	930	G	O4'-C1'	6.10	1.49	1.41
34	i	349	U	C2'-C1'	-6.10	1.46	1.53
34	i	1373	U	C2'-C1'	-6.10	1.46	1.53
34	i	867	U	O4'-C1'	-6.09	1.33	1.41
34	i	627	U	C5'-C4'	6.09	1.58	1.51
34	i	1515	G	C4'-C3'	6.09	1.59	1.53
34	i	1740	A	O4'-C1'	-6.09	1.33	1.41
34	i	1800	A	O4'-C1'	6.08	1.49	1.41
34	i	1739	G	C2'-C1'	6.08	1.60	1.53
34	i	1804	U	O4'-C1'	6.08	1.49	1.41
18	R	111	PHE	CB-CG	-6.08	1.41	1.51
6	F	45	TYR	CB-CG	-6.07	1.42	1.51
34	i	472	G	C2'-C1'	-6.07	1.46	1.53
34	i	370	G	P-O5'	-6.07	1.53	1.59
34	i	1650	C	C2'-C1'	-6.07	1.46	1.53
34	i	1132	U	O4'-C1'	6.06	1.49	1.41
34	i	1397	A	C2'-C1'	6.06	1.60	1.53
34	i	934	A	C2'-C1'	-6.06	1.46	1.53
7	G	36	VAL	CB-CG2	-6.05	1.40	1.52
34	i	396	U	O4'-C1'	6.05	1.49	1.41
34	i	1032	A	O4'-C1'	6.05	1.49	1.41
34	i	629	C	C2'-C1'	-6.05	1.46	1.53
34	i	170	A	O3'-P	-6.05	1.53	1.61
34	i	155	G	O4'-C1'	6.05	1.49	1.41
34	i	449	C	C5'-C4'	6.05	1.58	1.51
34	i	1066	A	O4'-C1'	6.04	1.49	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1641	C	C4'-O4'	-6.04	1.37	1.45
18	R	86	PRO	N-CD	6.03	1.56	1.47
34	i	8	U	C2'-C1'	6.03	1.59	1.53
34	i	342	U	C4'-C3'	-6.02	1.46	1.53
34	i	1016	A	C5'-C4'	6.02	1.58	1.51
34	i	1427	G	O4'-C1'	6.02	1.49	1.41
34	i	301	C	C2'-C1'	6.01	1.59	1.53
34	i	1774	G	O4'-C1'	6.01	1.49	1.41
34	i	891	G	C2'-C1'	-6.01	1.46	1.53
34	i	214	A	C2'-C1'	-6.00	1.46	1.53
34	i	1777	C	C2'-C1'	-6.00	1.46	1.53
34	i	391	A	C2'-C1'	6.00	1.59	1.53
34	i	1564	A	C2'-C1'	6.00	1.59	1.53
34	i	1332	C	P-O5'	-6.00	1.53	1.59
34	i	155	G	P-O5'	-5.99	1.53	1.59
8	H	111	LYS	N-CA	5.98	1.58	1.46
34	i	1264	C	C2'-C1'	-5.98	1.46	1.53
34	i	1037	G	O4'-C1'	5.98	1.49	1.41
34	i	529	C	C2'-C1'	-5.97	1.46	1.53
34	i	1710	A	O4'-C1'	5.96	1.49	1.41
35	j	59	A	C1'-N9	-5.96	1.38	1.46
34	i	106	C	C2'-C1'	-5.96	1.46	1.53
34	i	656	U	C2'-C1'	5.96	1.59	1.53
34	i	175	A	O4'-C1'	5.96	1.49	1.41
34	i	83	A	C2'-C1'	-5.96	1.46	1.53
34	i	593	C	C2'-C1'	-5.96	1.46	1.53
34	i	649	G	C2'-C1'	5.96	1.59	1.53
34	i	1172	G	O4'-C1'	5.96	1.49	1.41
34	i	343	C	O3'-P	-5.95	1.54	1.61
34	i	1502	A	O4'-C1'	5.95	1.49	1.41
34	i	210	G	C2'-C1'	5.94	1.59	1.53
34	i	318	U	O4'-C1'	5.94	1.49	1.41
34	i	1652	G	P-O5'	-5.94	1.53	1.59
34	i	795	U	C3'-C2'	5.93	1.59	1.52
34	i	797	U	P-O5'	-5.93	1.53	1.59
7	G	131	ARG	C-O	-5.93	1.12	1.23
34	i	146	G	C3'-O3'	5.93	1.50	1.42
34	i	1296	U	C2'-C1'	5.92	1.59	1.53
34	i	1311	U	O4'-C1'	-5.92	1.33	1.41
32	f	85	TYR	CE2-CZ	-5.92	1.30	1.38
34	i	351	U	C2'-C1'	5.92	1.59	1.53
34	i	2	A	O4'-C1'	5.92	1.49	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	J	188	GLY	CA-C	5.92	1.61	1.51
34	i	1667	U	P-O5'	-5.91	1.53	1.59
34	i	742	C	C5'-C4'	5.91	1.58	1.51
34	i	1582	G	O4'-C1'	-5.91	1.33	1.41
34	i	1845	A	C2'-C1'	5.91	1.59	1.53
34	i	602	U	C2'-C1'	-5.91	1.46	1.53
34	i	1633	G	C2'-C1'	-5.90	1.46	1.53
34	i	68	A	O4'-C1'	5.90	1.49	1.41
34	i	1776	G	C2'-C1'	-5.90	1.46	1.53
34	i	54	A	C5'-C4'	5.89	1.58	1.51
34	i	1604	C	P-O5'	-5.89	1.53	1.59
34	i	1680	U	C5'-C4'	5.89	1.58	1.51
34	i	805	A	O4'-C1'	5.89	1.49	1.41
34	i	1730	A	O4'-C1'	5.88	1.49	1.41
34	i	1830	G	C2'-C1'	-5.88	1.46	1.53
10	J	187	ALA	CA-C	5.88	1.68	1.52
34	i	282	G	O4'-C1'	5.88	1.49	1.41
34	i	825	C	O3'-P	-5.87	1.54	1.61
23	W	129	PHE	CB-CG	-5.87	1.41	1.51
34	i	804	A	O3'-P	-5.87	1.54	1.61
34	i	231	C	O4'-C1'	5.87	1.49	1.41
34	i	1591	U	O4'-C1'	5.86	1.49	1.41
5	E	130	PHE	CB-CG	-5.86	1.41	1.51
34	i	545	A	C2'-C1'	-5.86	1.47	1.53
24	X	23	HIS	N-CA	-5.85	1.34	1.46
34	i	1415	C	O3'-P	-5.85	1.54	1.61
34	i	990	C	O4'-C1'	5.85	1.49	1.41
34	i	408	A	C5'-C4'	5.85	1.58	1.51
4	D	4	GLN	C-N	-5.84	1.20	1.34
34	i	279	G	C2'-C1'	5.84	1.59	1.53
34	i	819	U	O4'-C1'	-5.84	1.34	1.41
34	i	1639	C	O4'-C1'	5.83	1.49	1.41
34	i	366	A	C2'-C1'	-5.83	1.47	1.53
34	i	1324	G	O4'-C1'	5.83	1.49	1.41
34	i	439	A	C5'-C4'	5.83	1.58	1.51
34	i	566	A	O4'-C1'	5.82	1.49	1.41
34	i	565	A	C2'-C1'	-5.80	1.47	1.53
34	i	743	U	C2'-C1'	-5.79	1.47	1.53
34	i	1523	G	O4'-C1'	-5.79	1.34	1.41
34	i	1577	C	C5'-C4'	5.78	1.58	1.51
34	i	1048	A	O3'-P	-5.78	1.54	1.61
34	i	1015	C	C4'-C3'	5.77	1.59	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1412	C	C2'-C1'	-5.77	1.47	1.53
34	i	1394	G	O4'-C1'	5.77	1.49	1.41
34	i	1402	G	C5'-C4'	5.77	1.58	1.51
34	i	1821	U	O4'-C1'	5.77	1.49	1.41
34	i	834	G	C2'-C1'	-5.77	1.47	1.53
34	i	1161	G	C2'-C1'	5.77	1.59	1.53
34	i	1310	U	O4'-C1'	-5.76	1.34	1.41
34	i	285	U	C2'-C1'	-5.76	1.47	1.53
34	i	1040	G	O4'-C1'	5.76	1.49	1.41
34	i	1567	C	C2'-C1'	-5.76	1.47	1.53
34	i	883	U	C5'-C4'	5.76	1.58	1.51
34	i	1845	A	O4'-C1'	5.75	1.49	1.41
34	i	415	G	P-O5'	-5.75	1.53	1.59
34	i	647	U	O4'-C1'	5.75	1.49	1.41
34	i	1567	C	O4'-C1'	5.75	1.49	1.41
31	e	77	HIS	C-N	5.75	1.43	1.33
34	i	211	U	C2'-C1'	-5.74	1.47	1.53
34	i	1014	U	O4'-C1'	5.74	1.49	1.41
34	i	1473	U	O4'-C1'	5.74	1.49	1.41
34	i	654	A	O4'-C1'	5.73	1.49	1.41
34	i	589	A	O4'-C1'	5.73	1.49	1.41
34	i	1073	A	O4'-C1'	5.72	1.49	1.41
34	i	854	A	O4'-C1'	5.72	1.49	1.41
34	i	1232	G	C2'-C1'	-5.71	1.47	1.53
34	i	1038	A	O4'-C1'	5.71	1.49	1.41
34	i	307	G	C2'-C1'	-5.70	1.47	1.53
34	i	914	U	O4'-C1'	5.70	1.49	1.41
34	i	1414	C	O3'-P	-5.70	1.54	1.61
34	i	317	G	C5'-C4'	5.70	1.58	1.51
34	i	1026	A	C2'-C1'	5.70	1.59	1.53
34	i	1599	G	C3'-C2'	-5.70	1.46	1.52
34	i	319	G	C2'-C1'	-5.70	1.47	1.53
34	i	721	C	P-O5'	5.70	1.65	1.59
34	i	1647	G	O4'-C1'	5.70	1.49	1.41
10	J	188	GLY	N-CA	5.69	1.54	1.46
34	i	1658	A	O4'-C1'	5.69	1.49	1.41
34	i	1439	C	O4'-C1'	5.69	1.49	1.41
32	f	136	PHE	CB-CG	-5.68	1.41	1.51
34	i	1335	U	C2'-C1'	-5.68	1.47	1.53
34	i	1487	G	O4'-C1'	5.68	1.49	1.41
34	i	1809	A	O4'-C1'	5.68	1.49	1.41
34	i	1272	A	P-O5'	-5.68	1.54	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	H	67	PRO	N-CD	5.67	1.55	1.47
34	i	794	G	O3'-P	-5.67	1.54	1.61
34	i	1712	C	C2'-C1'	-5.67	1.47	1.53
34	i	98	C	O4'-C1'	5.67	1.49	1.41
34	i	1556	A	O4'-C1'	5.67	1.49	1.41
34	i	410	G	O4'-C1'	-5.67	1.34	1.41
34	i	562	U	C2'-C1'	5.67	1.59	1.53
34	i	1618	A	O4'-C1'	-5.67	1.34	1.41
11	K	40	VAL	CB-CG1	-5.66	1.41	1.52
34	i	1725	U	O4'-C1'	5.66	1.49	1.41
34	i	97	U	C2'-C1'	-5.65	1.47	1.53
34	i	457	G	C2'-C1'	-5.65	1.47	1.53
34	i	1356	U	C2'-C1'	-5.65	1.47	1.53
34	i	1662	U	C2'-C1'	-5.65	1.47	1.53
34	i	1760	C	C4'-C3'	5.65	1.59	1.53
9	I	6	ASP	N-CA	-5.65	1.35	1.46
34	i	1246	A	C2'-C1'	5.65	1.59	1.53
34	i	1711	C	C2'-C1'	-5.65	1.47	1.53
34	i	644	A	O4'-C1'	5.65	1.49	1.41
32	f	148	TYR	CD1-CE1	-5.64	1.30	1.39
34	i	911	G	O4'-C1'	-5.64	1.34	1.41
34	i	1862	U	C4'-C3'	5.64	1.59	1.53
34	i	306	C	O4'-C1'	5.64	1.49	1.41
34	i	1419	C	C5'-C4'	5.64	1.58	1.51
34	i	1799	G	C5'-C4'	5.63	1.58	1.51
34	i	1641	C	C5'-C4'	5.63	1.58	1.51
34	i	1544	U	O4'-C1'	5.62	1.49	1.41
34	i	36	U	O4'-C1'	5.62	1.49	1.41
17	Q	145	TYR	CB-CG	-5.62	1.43	1.51
34	i	224	U	C5'-C4'	5.62	1.58	1.51
34	i	1696	C	C5'-C4'	5.61	1.58	1.51
34	i	18	C	O3'-P	-5.61	1.54	1.61
34	i	189	G	C3'-C2'	-5.61	1.46	1.52
34	i	1821	U	C2'-C1'	-5.61	1.47	1.53
34	i	497	G	C5'-C4'	5.61	1.58	1.51
31	e	97	GLU	CG-CD	-5.60	1.43	1.51
34	i	1218	G	O4'-C1'	5.60	1.49	1.41
34	i	1727	G	C2'-C1'	-5.60	1.47	1.53
34	i	314	U	O3'-P	-5.60	1.54	1.61
34	i	336	C	P-O5'	-5.60	1.54	1.59
34	i	93	U	C2'-C1'	5.59	1.59	1.53
34	i	99	A	P-O5'	-5.59	1.54	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1702	U	O4'-C1'	5.59	1.49	1.41
34	i	817	G	O3'-P	-5.59	1.54	1.61
12	L	102	PHE	C-O	5.59	1.33	1.23
34	i	550	A	C2'-C1'	-5.59	1.47	1.53
34	i	965	U	C5'-C4'	5.58	1.58	1.51
34	i	586	U	C2'-C1'	-5.58	1.47	1.53
34	i	1248	C	O4'-C1'	5.58	1.49	1.41
10	J	187	ALA	N-CA	5.58	1.57	1.46
12	L	103	GLU	CG-CD	5.58	1.60	1.51
34	i	1370	C	C2'-C1'	-5.58	1.47	1.53
34	i	1379	A	O4'-C1'	5.58	1.49	1.41
34	i	1789	G	C2'-C1'	-5.57	1.47	1.53
34	i	472	G	O4'-C1'	-5.57	1.34	1.41
18	R	42	PRO	N-CD	5.57	1.55	1.47
34	i	1764	G	C5'-C4'	5.57	1.58	1.51
34	i	1405	A	C5'-C4'	5.56	1.58	1.51
34	i	21	U	C2'-C1'	5.56	1.59	1.53
34	i	955	G	O4'-C1'	5.56	1.48	1.41
34	i	1609	A	C2'-C1'	-5.56	1.47	1.53
34	i	1196	A	C2'-C1'	-5.56	1.47	1.53
34	i	1382	A	C5'-C4'	5.56	1.58	1.51
34	i	312	C	C2'-C1'	-5.55	1.47	1.53
34	i	669	A	C2'-C1'	-5.55	1.47	1.53
34	i	221	A	O4'-C1'	5.55	1.48	1.41
34	i	402	G	C5'-C4'	5.55	1.58	1.51
34	i	430	G	C2'-C1'	-5.55	1.47	1.53
34	i	1424	G	O4'-C1'	-5.55	1.34	1.41
34	i	962	U	O4'-C1'	5.54	1.48	1.41
34	i	1833	U	O3'-P	-5.54	1.54	1.61
34	i	308	C	P-O5'	-5.54	1.54	1.59
34	i	374	U	O4'-C1'	5.54	1.48	1.41
34	i	1373	U	O4'-C1'	5.54	1.48	1.41
34	i	427	G	C2'-C1'	-5.53	1.47	1.53
34	i	1372	A	C3'-C2'	-5.53	1.46	1.52
34	i	1726	A	O4'-C1'	5.53	1.48	1.41
34	i	152	U	C5'-C4'	5.53	1.57	1.51
34	i	460	G	O4'-C1'	5.52	1.48	1.41
34	i	796	U	P-O5'	-5.52	1.54	1.59
34	i	1418	G	C2'-C1'	5.52	1.59	1.53
34	i	1415	C	C2'-C1'	5.51	1.59	1.53
34	i	731	C	C2'-C1'	-5.51	1.47	1.53
34	i	1445	G	O4'-C1'	5.51	1.48	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	112	U	C5'-C4'	5.51	1.57	1.51
34	i	272	C	O3'-P	-5.50	1.54	1.61
34	i	77	A	C4'-C3'	5.50	1.59	1.53
34	i	1780	U	C2'-C1'	-5.50	1.47	1.53
34	i	1375	A	O4'-C1'	5.49	1.48	1.41
34	i	910	U	C2'-C1'	5.49	1.59	1.53
34	i	45	A	C2'-C1'	-5.49	1.47	1.53
34	i	94	G	O3'-P	-5.49	1.54	1.61
34	i	401	G	C2'-C1'	-5.49	1.47	1.53
34	i	469	C	C2'-C1'	-5.49	1.47	1.53
34	i	1332	C	C2'-C1'	-5.49	1.47	1.53
34	i	1673	A	O4'-C1'	-5.49	1.34	1.41
34	i	1494	A	C4'-C3'	-5.48	1.47	1.52
34	i	281	U	O3'-P	-5.48	1.54	1.61
34	i	1819	A	O4'-C1'	-5.48	1.34	1.41
34	i	34	U	C5'-C4'	5.48	1.57	1.51
34	i	325	G	C4'-C3'	5.48	1.59	1.53
34	i	1829	A	C2'-C1'	-5.47	1.47	1.53
34	i	428	G	O3'-P	-5.47	1.54	1.61
34	i	343	C	P-O5'	-5.47	1.54	1.59
34	i	1366	A	O4'-C1'	5.46	1.48	1.41
11	K	89	ILE	N-CA	-5.46	1.35	1.46
34	i	112	U	O3'-P	-5.46	1.54	1.61
34	i	976	A	O4'-C1'	5.46	1.48	1.41
34	i	411	G	C2'-C1'	-5.46	1.47	1.53
34	i	577	A	C2'-C1'	-5.45	1.47	1.53
34	i	1412	C	O3'-P	-5.45	1.54	1.61
34	i	395	G	O4'-C1'	5.45	1.48	1.41
34	i	1334	G	P-O5'	-5.44	1.54	1.59
34	i	1462	G	O3'-P	-5.44	1.54	1.61
34	i	266	G	C5'-C4'	5.44	1.57	1.51
34	i	1124	C	O3'-P	-5.44	1.54	1.61
34	i	32	U	C2'-C1'	5.44	1.59	1.53
34	i	145	G	O4'-C1'	5.44	1.48	1.41
34	i	188	U	O4'-C1'	5.44	1.48	1.41
34	i	1637	U	C2'-C1'	5.44	1.59	1.53
34	i	1504	A	O4'-C1'	-5.44	1.34	1.41
34	i	629	C	O4'-C1'	5.43	1.48	1.41
34	i	574	A	O4'-C1'	5.43	1.48	1.41
34	i	82	G	O3'-P	-5.42	1.54	1.61
34	i	1564	A	P-O5'	-5.42	1.54	1.59
34	i	520	U	O3'-P	-5.42	1.54	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	K	37	ASP	CB-CG	5.42	1.63	1.51
34	i	418	U	O4'-C1'	-5.42	1.34	1.41
34	i	87	U	O4'-C1'	5.41	1.48	1.41
26	Z	104	ARG	N-CA	-5.41	1.35	1.46
34	i	1302	U	C2'-C1'	-5.41	1.47	1.53
34	i	390	C	C5'-C4'	5.41	1.57	1.51
34	i	585	U	C2'-C1'	-5.41	1.47	1.53
34	i	1636	A	O3'-P	-5.41	1.54	1.61
34	i	73	C	O4'-C1'	5.40	1.48	1.41
34	i	186	G	O4'-C1'	5.40	1.48	1.41
34	i	1076	A	O3'-P	-5.40	1.54	1.61
34	i	1390	G	C4'-O4'	5.40	1.52	1.45
34	i	44	U	C2'-C1'	-5.39	1.47	1.53
34	i	139	C	O3'-P	-5.39	1.54	1.61
34	i	818	U	C4'-C3'	5.39	1.59	1.53
34	i	979	A	O4'-C1'	5.39	1.48	1.41
34	i	1395	C	C2'-C1'	-5.39	1.47	1.53
34	i	1068	U	O4'-C1'	5.39	1.48	1.41
34	i	1657	U	C2'-C1'	-5.39	1.47	1.53
34	i	1400	U	C4'-C3'	5.38	1.59	1.53
34	i	403	G	C2'-C1'	-5.38	1.47	1.53
34	i	1172	G	C2'-C1'	-5.38	1.47	1.53
34	i	517	C	O4'-C1'	5.38	1.48	1.41
34	i	1665	C	O4'-C1'	5.38	1.48	1.41
34	i	1130	G	C2'-C1'	-5.37	1.47	1.53
34	i	1141	A	C2'-C1'	5.37	1.59	1.53
34	i	839	C	O3'-P	-5.37	1.54	1.61
34	i	1812	A	C5'-C4'	5.37	1.57	1.51
2	B	155	TYR	CD1-CE1	-5.37	1.31	1.39
34	i	1529	C	O4'-C1'	5.36	1.48	1.41
34	i	1341	G	C2'-C1'	-5.36	1.47	1.53
34	i	867	U	C3'-O3'	5.36	1.49	1.42
34	i	1718	G	O4'-C1'	-5.36	1.34	1.41
34	i	1027	A	C2'-C1'	-5.35	1.47	1.53
34	i	1064	G	C2'-C1'	-5.35	1.47	1.53
34	i	1146	A	C5'-C4'	5.35	1.57	1.51
34	i	1009	U	O4'-C1'	5.35	1.48	1.41
34	i	1523	G	P-O5'	-5.35	1.54	1.59
34	i	1365	A	O4'-C1'	5.35	1.48	1.41
9	I	8	TRP	CB-CG	5.34	1.59	1.50
34	i	346	C	C2'-C1'	-5.34	1.47	1.53
34	i	573	A	O4'-C1'	5.34	1.48	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	626	C	P-O5'	-5.34	1.54	1.59
34	i	216	U	C5'-C4'	5.33	1.57	1.51
34	i	288	A	C5'-C4'	5.33	1.57	1.51
34	i	387	G	O4'-C1'	5.32	1.48	1.41
34	i	978	G	C2'-C1'	-5.32	1.47	1.53
34	i	643	A	C2'-C1'	-5.32	1.47	1.53
34	i	942	U	C2'-C1'	-5.32	1.47	1.53
12	L	20	LYS	N-CA	-5.31	1.35	1.46
10	J	144	ILE	C-N	5.31	1.44	1.34
13	M	116	LYS	N-CA	5.31	1.56	1.46
3	C	182	PRO	N-CD	5.31	1.55	1.47
34	i	1056	A	C2'-C1'	-5.30	1.47	1.53
34	i	241	A	C2'-C1'	5.30	1.59	1.53
34	i	281	U	C2'-C1'	5.30	1.59	1.53
7	G	180	VAL	CA-CB	-5.30	1.43	1.54
34	i	1094	C	O4'-C1'	5.30	1.48	1.41
34	i	1680	U	C2'-C1'	-5.29	1.47	1.53
34	i	1279	C	O3'-P	-5.29	1.54	1.61
34	i	90	G	O4'-C1'	5.29	1.48	1.41
34	i	645	A	C5'-C4'	5.29	1.57	1.51
34	i	901	C	C2'-C1'	-5.29	1.47	1.53
34	i	1523	G	C5'-C4'	-5.29	1.45	1.51
34	i	1088	G	O4'-C1'	5.29	1.48	1.41
34	i	1148	U	O4'-C1'	5.29	1.48	1.41
34	i	1709	U	O4'-C1'	5.29	1.48	1.41
34	i	861	A	C5'-C4'	5.28	1.57	1.51
34	i	1416	G	O4'-C1'	5.28	1.48	1.41
7	G	169	PRO	N-CD	5.28	1.55	1.47
34	i	290	A	C3'-C2'	-5.28	1.47	1.52
34	i	83	A	O4'-C1'	5.28	1.48	1.41
34	i	1704	G	C2'-C1'	-5.28	1.47	1.53
8	H	111	LYS	CA-CB	5.28	1.65	1.53
34	i	1287	A	C2'-C1'	5.28	1.59	1.53
34	i	1847	C	P-O5'	-5.28	1.54	1.59
34	i	553	G	C5'-C4'	5.27	1.57	1.51
34	i	1260	C	O3'-P	-5.27	1.54	1.61
24	X	139	GLU	CB-CG	5.27	1.62	1.52
34	i	1708	C	C2'-C1'	-5.27	1.47	1.53
34	i	267	G	O3'-P	-5.27	1.54	1.61
34	i	1621	C	C2'-C1'	-5.27	1.47	1.53
34	i	1311	U	C2'-C1'	5.27	1.59	1.53
6	F	130	ARG	N-CA	5.26	1.56	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	98	C	C4'-C3'	5.26	1.58	1.53
34	i	1344	G	O3'-P	-5.26	1.54	1.61
34	i	801	U	C2'-C1'	-5.25	1.47	1.53
34	i	1533	C	O3'-P	-5.25	1.54	1.61
34	i	1795	A	C5'-C4'	5.25	1.57	1.51
27	a	97	PRO	CA-C	5.25	1.63	1.52
34	i	1119	C	O4'-C1'	5.25	1.48	1.41
34	i	1070	C	O4'-C1'	5.24	1.48	1.41
34	i	360	G	C4'-C3'	5.23	1.58	1.53
34	i	1563	C	C5'-C4'	5.23	1.57	1.51
34	i	394	G	C5'-C4'	5.23	1.57	1.51
34	i	1538	U	O4'-C1'	5.22	1.48	1.41
34	i	176	U	P-O5'	-5.22	1.54	1.59
34	i	730	C	O3'-P	-5.22	1.54	1.61
34	i	1339	U	C2'-C1'	-5.22	1.47	1.53
34	i	1713	G	P-O5'	-5.22	1.54	1.59
34	i	1543	G	C4'-C3'	-5.21	1.47	1.52
34	i	217	U	P-O5'	-5.21	1.54	1.59
34	i	1730	A	C2'-C1'	-5.21	1.47	1.53
34	i	1649	G	C2'-C1'	-5.21	1.47	1.53
35	j	53	A	C1'-N9	-5.21	1.39	1.46
34	i	1339	U	O3'-P	-5.21	1.54	1.61
34	i	1858	U	P-O5'	-5.21	1.54	1.59
35	j	19	A	C1'-N9	-5.21	1.39	1.46
18	R	89	SER	N-CA	5.20	1.56	1.46
34	i	1167	G	O3'-P	-5.20	1.54	1.61
34	i	1609	A	P-O5'	-5.20	1.54	1.59
34	i	1601	G	O4'-C1'	-5.20	1.34	1.41
34	i	1503	G	O3'-P	-5.20	1.54	1.61
34	i	1157	U	C2'-C1'	5.19	1.59	1.53
34	i	1363	U	C2'-C1'	-5.19	1.47	1.53
34	i	1667	U	O4'-C1'	5.19	1.48	1.41
34	i	878	U	C4'-C3'	5.19	1.58	1.53
34	i	667	G	O4'-C1'	5.19	1.48	1.41
34	i	1439	C	O3'-P	-5.19	1.54	1.61
11	K	35	LEU	N-CA	-5.18	1.35	1.46
34	i	1848	U	C2'-C1'	5.18	1.59	1.53
34	i	917	G	O4'-C1'	5.18	1.48	1.41
34	i	1199	G	O4'-C1'	5.18	1.48	1.41
2	B	41	ILE	N-CA	-5.18	1.35	1.46
24	X	115	ILE	CA-C	-5.18	1.39	1.52
34	i	1638	U	C2'-C1'	-5.18	1.47	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	N	136	PRO	N-CD	5.18	1.55	1.47
34	i	659	A	C2'-C1'	5.18	1.59	1.53
34	i	1695	C	O4'-C1'	5.18	1.48	1.41
34	i	21	U	O4'-C1'	5.17	1.48	1.41
34	i	1761	C	C4'-C3'	5.17	1.58	1.53
34	i	951	A	C5'-C4'	5.17	1.57	1.51
34	i	687	G	C2'-C1'	-5.17	1.47	1.53
34	i	1346	U	O4'-C1'	5.17	1.48	1.41
11	K	93	THR	CA-C	5.17	1.66	1.52
34	i	1264	C	P-O5'	-5.17	1.54	1.59
34	i	542	G	O4'-C1'	5.16	1.48	1.41
34	i	619	A	C5'-C4'	5.16	1.57	1.51
10	J	89	GLU	CG-CD	-5.16	1.44	1.51
34	i	1406	C	C4'-O4'	-5.16	1.38	1.45
34	i	662	A	C4'-C3'	5.16	1.58	1.53
34	i	935	U	C5'-C4'	5.15	1.57	1.51
34	i	1695	C	C2'-C1'	5.15	1.59	1.53
34	i	1206	G	O4'-C1'	-5.15	1.34	1.41
34	i	1235	U	O3'-P	-5.15	1.54	1.61
34	i	1627	G	O4'-C1'	-5.15	1.34	1.41
34	i	421	G	C4'-C3'	-5.15	1.47	1.52
34	i	1540	A	C2'-C1'	-5.15	1.47	1.53
34	i	1429	C	O3'-P	5.14	1.67	1.61
34	i	1776	G	C5'-C4'	5.14	1.57	1.51
34	i	1792	C	C5'-C4'	5.14	1.57	1.51
34	i	672	U	P-O5'	-5.14	1.54	1.59
34	i	1391	C	C5'-C4'	5.14	1.57	1.51
34	i	1618	A	C4'-C3'	-5.14	1.47	1.52
34	i	1808	G	C5'-C4'	5.14	1.57	1.51
34	i	78	C	C3'-C2'	5.13	1.58	1.52
34	i	1766	C	C3'-C2'	-5.13	1.47	1.52
2	B	155	TYR	CD2-CE2	-5.13	1.31	1.39
34	i	1592	C	C4'-O4'	-5.13	1.38	1.45
26	Z	104	ARG	CG-CD	5.13	1.64	1.51
34	i	1490	U	O4'-C1'	-5.13	1.34	1.41
34	i	116	U	O4'-C1'	5.13	1.48	1.41
34	i	535	A	C2'-C1'	5.13	1.58	1.53
34	i	1177	A	C5'-C4'	5.13	1.57	1.51
34	i	853	U	P-O5'	5.12	1.64	1.59
34	i	102	A	O3'-P	-5.12	1.55	1.61
34	i	95	G	O4'-C1'	5.12	1.48	1.41
5	E	31	PRO	N-CD	5.11	1.54	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	i	1242	A	C2'-C1'	-5.11	1.47	1.53
34	i	659	A	O3'-P	-5.11	1.55	1.61
34	i	1364	U	O4'-C1'	5.11	1.48	1.41
34	i	1029	G	O3'-P	-5.10	1.55	1.61
34	i	978	G	C5'-C4'	5.10	1.57	1.51
34	i	1417	A	O4'-C1'	5.10	1.48	1.41
34	i	1467	C	P-O5'	-5.10	1.54	1.59
34	i	651	U	C5'-C4'	5.10	1.57	1.51
22	V	33	PRO	N-CD	5.09	1.54	1.47
34	i	790	A	C2'-C1'	-5.09	1.47	1.53
34	i	1314	G	C2'-C1'	-5.08	1.47	1.53
34	i	1344	G	C2'-C1'	5.08	1.58	1.53
34	i	1380	C	O4'-C1'	5.08	1.48	1.41
34	i	1768	C	O4'-C1'	5.08	1.48	1.41
34	i	151	C	C2'-C1'	-5.08	1.47	1.53
34	i	543	U	P-O5'	-5.08	1.54	1.59
34	i	1432	C	O3'-P	-5.08	1.55	1.61
34	i	1546	U	O3'-P	-5.08	1.55	1.61
34	i	1541	G	O4'-C1'	-5.07	1.35	1.41
34	i	1846	C	C2'-C1'	-5.07	1.47	1.53
34	i	1818	A	C3'-C2'	5.07	1.58	1.52
34	i	349	U	C5'-C4'	5.07	1.57	1.51
34	i	1358	U	O4'-C1'	-5.07	1.35	1.41
34	i	1232	G	C4'-C3'	-5.06	1.47	1.52
34	i	113	G	C4'-C3'	5.06	1.58	1.53
34	i	1689	U	C5'-C4'	5.06	1.57	1.51
34	i	910	U	O4'-C1'	5.06	1.48	1.41
34	i	1039	G	C5'-C4'	5.05	1.57	1.51
26	Z	104	ARG	CB-CG	-5.05	1.39	1.52
34	i	1549	C	O3'-P	-5.05	1.55	1.61
34	i	1328	A	P-O5'	-5.05	1.54	1.59
34	i	1420	G	C5'-C4'	5.05	1.57	1.51
34	i	674	G	C4'-C3'	5.04	1.58	1.53
34	i	791	A	O4'-C1'	5.04	1.48	1.41
34	i	1775	A	C5'-C4'	5.04	1.57	1.51
1	A	200	ASP	CA-C	-5.04	1.39	1.52
20	T	82	ARG	CD-NE	5.03	1.55	1.46
34	i	51	U	P-O5'	-5.03	1.54	1.59
34	i	742	C	O4'-C1'	5.03	1.48	1.41
34	i	394	G	O4'-C1'	-5.03	1.35	1.41
34	i	288	A	O4'-C1'	5.02	1.48	1.41
34	i	600	G	P-O5'	-5.02	1.54	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	L	152	LYS	C-N	5.02	1.45	1.34
34	i	597	U	O4'-C1'	5.02	1.48	1.41
34	i	683	G	C4'-O4'	5.02	1.52	1.45
34	i	1168	U	O3'-P	-5.02	1.55	1.61
34	i	308	C	C2'-C1'	-5.02	1.47	1.53
34	i	140	U	C2'-C1'	-5.01	1.47	1.53
34	i	484	C	C5'-C4'	5.01	1.57	1.51
2	B	221	PRO	N-CD	5.01	1.54	1.47
34	i	1397	A	C5'-C4'	5.01	1.57	1.51
34	i	735	C	O3'-P	-5.00	1.55	1.61
34	i	1466	C	C2'-C1'	-5.00	1.47	1.53

All (3231) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	H	109	ARG	NE-CZ-NH2	-53.45	93.58	120.30
8	H	109	ARG	NE-CZ-NH1	42.58	141.59	120.30
34	i	1774	G	P-O3'-C3'	38.31	165.68	119.70
34	i	1114	C	O4'-C1'-N1	35.28	136.42	108.20
34	i	582	C	O4'-C1'-N1	32.53	134.22	108.20
34	i	67	C	O4'-C1'-N1	31.27	133.22	108.20
34	i	72	C	O4'-C1'-N1	30.36	132.49	108.20
8	H	118	ARG	NE-CZ-NH1	29.49	135.04	120.30
34	i	678	U	O4'-C1'-N1	29.07	131.46	108.20
34	i	1548	C	O4'-C1'-N1	28.61	131.09	108.20
34	i	883	U	P-O3'-C3'	28.23	153.58	119.70
34	i	793	C	O4'-C1'-N1	28.18	130.74	108.20
34	i	1299	C	O4'-C1'-N1	27.70	130.36	108.20
34	i	1113	C	O4'-C1'-N1	27.45	130.16	108.20
34	i	418	U	O4'-C1'-N1	27.33	130.06	108.20
34	i	1817	A	P-O3'-C3'	27.26	152.41	119.70
34	i	1080	A	P-O3'-C3'	27.15	152.28	119.70
34	i	521	A	P-O3'-C3'	26.77	151.82	119.70
34	i	1105	C	O4'-C1'-N1	25.52	128.61	108.20
34	i	1311	U	O4'-C1'-N1	25.33	128.47	108.20
34	i	1392	A	O4'-C1'-N9	24.78	128.02	108.20
34	i	1627	G	P-O3'-C3'	24.30	148.86	119.70
34	i	867	U	O4'-C1'-N1	24.18	127.54	108.20
34	i	730	C	P-O3'-C3'	23.82	148.28	119.70
34	i	317	G	P-O3'-C3'	23.79	148.24	119.70
34	i	1470	A	P-O3'-C3'	23.57	147.99	119.70
34	i	1564	A	O4'-C1'-N9	23.47	126.98	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	165	G	O4'-C1'-N9	23.38	126.90	108.20
34	i	1150	U	O4'-C1'-N1	23.23	126.78	108.20
34	i	66	G	P-O3'-C3'	23.04	147.35	119.70
34	i	1472	A	O4'-C1'-N9	22.98	126.58	108.20
34	i	211	U	P-O3'-C3'	22.94	147.23	119.70
34	i	1304	U	O4'-C1'-N1	22.81	126.45	108.20
34	i	544	A	O4'-C1'-N9	22.76	126.41	108.20
10	J	146	SER	O-C-N	-22.68	86.41	122.70
34	i	793	C	P-O3'-C3'	22.64	146.87	119.70
34	i	140	U	P-O3'-C3'	22.44	146.63	119.70
34	i	314	U	O4'-C1'-N1	22.32	126.06	108.20
34	i	836	C	P-O3'-C3'	22.23	146.38	119.70
34	i	876	G	O4'-C1'-N9	22.07	125.86	108.20
34	i	1573	U	O4'-C1'-N1	22.03	125.83	108.20
34	i	1776	G	O4'-C1'-N9	21.95	125.76	108.20
8	H	118	ARG	NE-CZ-NH2	-21.86	109.37	120.30
34	i	1552	C	O4'-C1'-N1	21.78	125.62	108.20
34	i	685	G	P-O3'-C3'	21.73	145.77	119.70
34	i	1296	U	O4'-C1'-N1	21.54	125.43	108.20
34	i	1516	C	P-O3'-C3'	21.53	145.54	119.70
34	i	298	G	O4'-C1'-N9	21.52	125.41	108.20
34	i	743	U	P-O3'-C3'	21.38	145.35	119.70
34	i	1664	G	P-O5'-C5'	21.34	155.05	120.90
34	i	1562	G	O4'-C1'-N9	21.26	125.20	108.20
34	i	722	C	P-O3'-C3'	21.22	145.16	119.70
34	i	1473	U	P-O3'-C3'	20.95	144.84	119.70
34	i	264	U	P-O3'-C3'	20.74	144.59	119.70
34	i	1503	G	O4'-C1'-C2'	20.66	126.46	105.80
34	i	1391	C	P-O3'-C3'	20.65	144.47	119.70
34	i	1819	A	O4'-C1'-N9	20.57	124.65	108.20
34	i	325	G	O4'-C1'-N9	20.08	124.26	108.20
34	i	618	A	O4'-C1'-N9	20.01	124.21	108.20
34	i	1392	A	P-O3'-C3'	20.00	143.70	119.70
34	i	1112	C	O4'-C1'-N1	19.97	124.17	108.20
34	i	1414	C	C3'-C2'-C1'	-19.96	85.53	101.50
34	i	1716	U	O4'-C1'-N1	19.89	124.11	108.20
34	i	1426	C	O4'-C1'-N1	19.77	124.02	108.20
34	i	319	G	P-O3'-C3'	19.66	143.29	119.70
34	i	1819	A	P-O3'-C3'	19.53	143.13	119.70
18	R	1	MET	CA-C-N	-19.48	77.23	116.20
34	i	317	G	O4'-C1'-N9	19.30	123.64	108.20
34	i	1358	U	O4'-C1'-N1	19.25	123.60	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	225	C	P-O3'-C3'	19.18	142.72	119.70
34	i	1471	G	P-O3'-C3'	19.14	142.67	119.70
34	i	142	C	O4'-C1'-N1	18.96	123.37	108.20
34	i	1151	U	N1-C1'-C2'	18.87	138.53	114.00
34	i	697	G	P-O3'-C3'	18.75	142.21	119.70
34	i	688	U	P-O3'-C3'	18.72	142.16	119.70
34	i	1673	A	O4'-C1'-N9	18.69	123.15	108.20
34	i	78	C	P-O3'-C3'	18.68	142.12	119.70
34	i	126	G	P-O3'-C3'	18.67	142.11	119.70
34	i	954	G	O4'-C1'-N9	18.61	123.09	108.20
34	i	180	G	P-O3'-C3'	-18.56	97.43	119.70
34	i	911	G	O4'-C1'-N9	18.41	122.93	108.20
34	i	883	U	O4'-C1'-N1	18.32	122.85	108.20
34	i	899	A	O4'-C1'-N9	18.20	122.76	108.20
34	i	1393	U	N1-C1'-C2'	18.17	137.62	114.00
34	i	72	C	P-O3'-C3'	18.13	141.45	119.70
34	i	1544	U	P-O3'-C3'	18.06	141.37	119.70
34	i	1226	C	N1-C1'-C2'	18.03	137.44	114.00
34	i	1133	U	P-O3'-C3'	17.98	141.28	119.70
34	i	1740	A	O4'-C1'-N9	17.91	122.52	108.20
34	i	1377	G	O4'-C1'-N9	17.85	122.48	108.20
34	i	727	G	P-O3'-C3'	17.72	140.97	119.70
34	i	428	G	O4'-C1'-N9	17.71	122.37	108.20
34	i	1316	G	O4'-C1'-N9	17.61	122.29	108.20
34	i	1012	U	N1-C1'-C2'	17.57	136.85	114.00
34	i	257	G	P-O3'-C3'	17.52	140.72	119.70
34	i	189	G	P-O3'-C3'	17.46	140.65	119.70
7	G	131	ARG	CB-CA-C	17.40	145.21	110.40
34	i	346	C	O4'-C1'-N1	17.28	122.02	108.20
27	a	10	ARG	NE-CZ-NH2	17.28	128.94	120.30
34	i	524	G	P-O3'-C3'	17.26	140.42	119.70
18	R	1	MET	N-CA-CB	17.23	141.61	110.60
34	i	1045	A	O4'-C1'-N9	17.18	121.95	108.20
34	i	135	U	P-O3'-C3'	17.18	140.31	119.70
34	i	1149	C	O4'-C1'-N1	17.12	121.89	108.20
34	i	1322	U	N1-C1'-C2'	17.10	136.23	114.00
34	i	1399	C	O4'-C1'-N1	16.97	121.78	108.20
34	i	819	U	O4'-C1'-N1	16.96	121.77	108.20
34	i	136	C	P-O3'-C3'	16.95	140.04	119.70
34	i	885	U	O4'-C1'-N1	16.92	121.74	108.20
34	i	1618	A	O4'-C1'-N9	16.90	121.72	108.20
34	i	222	G	P-O3'-C3'	16.88	139.95	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	74	G	O4'-C1'-N9	16.85	121.68	108.20
34	i	826	A	O4'-C1'-N9	16.84	121.67	108.20
34	i	868	A	O4'-C1'-N9	16.80	121.64	108.20
34	i	239	U	P-O3'-C3'	16.79	139.84	119.70
22	V	61	ARG	NE-CZ-NH2	-16.76	111.92	120.30
34	i	1563	C	N1-C1'-C2'	16.75	135.77	114.00
34	i	1470	A	O4'-C1'-N9	16.71	121.57	108.20
7	G	131	ARG	CB-CG-CD	16.61	154.79	111.60
36	k	22	C	O4'-C1'-N1	-16.58	94.94	108.20
34	i	1294	G	O4'-C1'-N9	16.54	121.43	108.20
16	P	37	TYR	N-CA-CB	-16.44	81.01	110.60
34	i	358	U	P-O3'-C3'	16.39	139.37	119.70
34	i	171	A	O4'-C1'-N9	16.36	121.29	108.20
34	i	299	G	N9-C1'-C2'	16.20	135.05	114.00
34	i	1144	A	O4'-C1'-N9	15.99	121.00	108.20
34	i	1233	C	N1-C1'-C2'	15.96	134.75	114.00
34	i	141	A	P-O3'-C3'	15.86	138.74	119.70
9	I	134	GLU	N-CA-CB	15.83	139.09	110.60
34	i	73	C	O4'-C1'-N1	15.80	120.84	108.20
34	i	620	U	O4'-C1'-N1	15.73	120.78	108.20
34	i	138	C	P-O3'-C3'	15.70	138.53	119.70
34	i	1006	G	O4'-C1'-N9	15.67	120.73	108.20
4	D	5	ILE	O-C-N	-15.62	97.70	122.70
34	i	1425	G	P-O3'-C3'	15.55	138.36	119.70
25	Y	86	GLU	C-N-CD	-15.50	86.49	120.60
34	i	1056	A	O4'-C1'-N9	15.50	120.60	108.20
34	i	1327	C	N1-C1'-C2'	15.46	134.09	114.00
34	i	295	C	P-O3'-C3'	15.41	138.19	119.70
34	i	79	A	O4'-C1'-C2'	-15.29	90.51	105.80
10	J	146	SER	CA-C-N	15.27	150.78	117.20
27	a	102	ARG	C-N-CD	-15.24	87.07	120.60
34	i	1279	C	P-O3'-C3'	15.21	137.95	119.70
34	i	396	U	P-O3'-C3'	15.19	137.93	119.70
34	i	1663	U	O4'-C1'-N1	15.18	120.35	108.20
34	i	1607	G	O4'-C1'-N9	15.13	120.31	108.20
34	i	64	A	O4'-C1'-N9	15.12	120.30	108.20
34	i	60	A	O4'-C1'-N9	15.08	120.26	108.20
9	I	43	ILE	O-C-N	-15.07	98.59	122.70
34	i	1670	A	O4'-C1'-N9	14.94	120.15	108.20
34	i	1543	G	O4'-C1'-N9	14.93	120.14	108.20
34	i	734	C	P-O3'-C3'	14.92	137.61	119.70
8	H	109	ARG	CD-NE-CZ	14.90	144.46	123.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1492	U	P-O3'-C3'	14.85	137.52	119.70
27	a	97	PRO	N-CA-C	14.83	150.66	112.10
34	i	111	A	O4'-C1'-N9	14.80	120.04	108.20
34	i	478	U	P-O3'-C3'	14.74	137.39	119.70
34	i	215	U	N1-C1'-C2'	14.72	133.13	114.00
34	i	835	C	N1-C1'-C2'	14.71	133.13	114.00
34	i	857	A	O4'-C1'-N9	14.66	119.93	108.20
34	i	1424	G	O4'-C1'-N9	14.62	119.90	108.20
34	i	538	C	P-O3'-C3'	14.59	137.20	119.70
34	i	835	C	C3'-C2'-C1'	-14.56	89.85	101.50
34	i	1773	G	O4'-C1'-N9	14.55	119.84	108.20
34	i	720	A	P-O3'-C3'	14.54	137.15	119.70
34	i	1475	G	O4'-C1'-N9	14.51	119.81	108.20
34	i	1594	U	O4'-C1'-N1	14.49	119.79	108.20
34	i	1390	G	P-O3'-C3'	14.48	137.08	119.70
34	i	383	U	O4'-C1'-N1	14.47	119.78	108.20
34	i	1227	C	N1-C1'-C2'	14.46	132.80	114.00
20	T	93	SER	N-CA-CB	14.45	132.17	110.50
34	i	1344	G	O4'-C1'-N9	14.43	119.74	108.20
34	i	1010	G	O4'-C1'-C2'	14.41	120.57	107.60
34	i	543	U	O4'-C1'-N1	14.40	119.72	108.20
34	i	1412	C	O4'-C1'-N1	14.40	119.72	108.20
34	i	133	C	P-O3'-C3'	14.39	136.97	119.70
34	i	581	U	O4'-C1'-N1	14.39	119.72	108.20
36	k	22	C	C2-N1-C1'	-14.38	102.98	118.80
34	i	210	G	O4'-C1'-N9	14.38	119.70	108.20
34	i	1412	C	P-O3'-C3'	14.31	136.87	119.70
25	Y	103	SER	O-C-N	-14.27	99.87	122.70
14	N	81	ALA	C-N-CD	-14.22	89.32	120.60
34	i	682	G	P-O3'-C3'	14.20	136.74	119.70
9	I	184	ARG	NE-CZ-NH1	-14.18	113.21	120.30
19	S	40	TYR	CB-CG-CD1	14.18	129.51	121.00
34	i	1235	U	P-O3'-C3'	-14.18	102.69	119.70
7	G	170	ARG	CA-CB-CG	14.15	144.53	113.40
34	i	1824	U	P-O3'-C3'	14.15	136.68	119.70
34	i	1414	C	O4'-C1'-N1	14.13	119.50	108.20
25	Y	86	GLU	N-CA-C	14.09	149.03	111.00
34	i	912	A	O4'-C1'-N9	14.07	119.45	108.20
34	i	649	G	O4'-C1'-N9	14.05	119.44	108.20
34	i	1637	U	O4'-C1'-N1	14.04	119.43	108.20
34	i	677	C	O4'-C1'-N1	14.03	119.42	108.20
34	i	1861	U	O4'-C1'-N1	13.97	119.38	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1293	U	O4'-C1'-N1	13.95	119.36	108.20
34	i	794	G	P-O3'-C3'	13.93	136.41	119.70
34	i	295	C	C4'-C3'-O3'	-13.92	80.17	109.40
34	i	1818	A	O4'-C1'-N9	13.91	119.33	108.20
34	i	240	C	P-O3'-C3'	13.88	136.36	119.70
34	i	1721	G	O4'-C1'-N9	13.83	119.26	108.20
34	i	1413	C	O4'-C1'-C2'	-13.82	91.98	105.80
34	i	1018	U	N1-C1'-C2'	13.80	131.94	114.00
34	i	454	A	P-O3'-C3'	-13.76	103.19	119.70
19	S	141	ARG	O-C-N	-13.70	100.78	122.70
28	b	36	LYS	C-N-CA	13.69	155.92	121.70
34	i	313	C	P-O3'-C3'	13.66	136.09	119.70
34	i	1773	G	P-O3'-C3'	13.65	136.08	119.70
34	i	276	U	P-O3'-C3'	13.62	136.04	119.70
34	i	1754	G	O4'-C1'-N9	13.62	119.09	108.20
34	i	1449	C	O4'-C1'-N1	13.58	119.06	108.20
34	i	1393	U	O4'-C1'-N1	-13.56	97.35	108.20
34	i	478	U	O4'-C1'-N1	13.55	119.04	108.20
34	i	548	G	O4'-C1'-N9	13.55	119.04	108.20
34	i	287	U	N1-C1'-C2'	13.51	131.56	114.00
20	T	4	VAL	N-CA-C	13.48	147.39	111.00
34	i	1510	G	O4'-C1'-N9	13.47	118.98	108.20
34	i	1769	U	O4'-C1'-N1	13.46	118.97	108.20
34	i	1862	U	P-O3'-C3'	13.46	135.85	119.70
34	i	1741	U	P-O3'-C3'	13.41	135.80	119.70
34	i	960	A	O4'-C1'-N9	13.41	118.93	108.20
34	i	889	U	O4'-C1'-N1	13.40	118.92	108.20
34	i	829	C	P-O3'-C3'	13.39	135.77	119.70
34	i	519	A	P-O3'-C3'	-13.39	103.63	119.70
34	i	1011	U	O4'-C1'-N1	13.37	118.89	108.20
34	i	830	C	N1-C1'-C2'	13.33	131.32	114.00
34	i	556	U	O4'-C1'-N1	13.32	118.86	108.20
34	i	837	G	O4'-C1'-N9	13.32	118.86	108.20
7	G	131	ARG	CA-CB-CG	13.32	142.69	113.40
36	k	22	C	C6-N1-C1'	13.27	136.73	120.80
34	i	1261	A	N9-C1'-C2'	13.27	131.25	114.00
34	i	530	U	O4'-C1'-N1	13.26	118.81	108.20
34	i	438	A	O4'-C1'-N9	13.22	118.78	108.20
34	i	1548	C	C3'-C2'-C1'	-13.22	90.92	101.50
34	i	1482	A	O4'-C1'-N9	13.22	118.77	108.20
34	i	24	C	P-O3'-C3'	13.19	135.53	119.70
27	a	97	PRO	CB-CA-C	-13.18	79.04	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	277	U	O4'-C1'-N1	-13.18	97.66	108.20
34	i	1257	C	N1-C1'-C2'	13.18	131.13	114.00
34	i	627	U	O4'-C1'-N1	13.16	118.73	108.20
34	i	415	G	O4'-C1'-N9	13.15	118.72	108.20
34	i	1841	G	O4'-C1'-N9	13.14	118.71	108.20
34	i	1616	U	O4'-C1'-N1	13.13	118.70	108.20
34	i	1514	U	O4'-C1'-N1	13.13	118.70	108.20
34	i	742	C	P-O3'-C3'	13.12	135.45	119.70
34	i	406	U	O4'-C1'-N1	13.12	118.69	108.20
34	i	1715	U	P-O3'-C3'	13.10	135.42	119.70
34	i	147	A	O4'-C1'-N9	13.09	118.67	108.20
11	K	55	ARG	CG-CD-NE	13.09	139.28	111.80
34	i	1523	G	O4'-C1'-N9	13.05	118.64	108.20
34	i	1459	U	C4'-C3'-O3'	-13.04	82.02	109.40
34	i	876	G	P-O3'-C3'	13.03	135.34	119.70
34	i	869	G	P-O3'-C3'	12.95	135.24	119.70
34	i	1503	G	O4'-C1'-N9	12.95	118.56	108.20
34	i	1406	C	N1-C1'-C2'	12.95	130.83	114.00
34	i	456	G	O4'-C1'-N9	12.91	118.53	108.20
34	i	594	A	P-O3'-C3'	12.86	135.13	119.70
34	i	1307	C	N1-C1'-C2'	12.85	130.70	114.00
34	i	1533	C	P-O3'-C3'	12.84	135.11	119.70
34	i	123	G	O4'-C1'-N9	12.84	118.47	108.20
34	i	721	C	P-O3'-C3'	12.81	135.07	119.70
34	i	1429	C	O3'-P-O5'	-12.80	79.68	104.00
34	i	126	G	C4'-C3'-O3'	-12.79	82.54	109.40
34	i	1	U	O4'-C1'-N1	12.77	118.42	108.20
34	i	622	C	N1-C1'-C2'	12.77	130.60	114.00
34	i	59	U	O4'-C1'-N1	12.76	118.41	108.20
34	i	1402	G	P-O3'-C3'	12.75	135.00	119.70
34	i	139	C	P-O3'-C3'	12.75	135.00	119.70
34	i	1168	U	O4'-C1'-N1	12.74	118.39	108.20
34	i	1565	G	O4'-C1'-N9	12.70	118.36	108.20
34	i	1238	U	N1-C1'-C2'	12.70	130.51	114.00
34	i	75	G	O4'-C1'-N9	12.63	118.30	108.20
34	i	38	A	O4'-C1'-N9	12.62	118.29	108.20
17	Q	18	THR	N-CA-CB	12.61	134.26	110.30
34	i	1240	U	O4'-C1'-N1	12.61	118.29	108.20
18	R	88	VAL	O-C-N	-12.60	102.53	122.70
34	i	170	A	O4'-C1'-C2'	12.60	118.94	107.60
34	i	1249	A	O4'-C1'-N9	12.59	118.27	108.20
18	R	89	SER	N-CA-C	12.56	144.91	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	816	U	O4'-C1'-N1	12.56	118.25	108.20
34	i	1588	C	P-O3'-C3'	12.55	134.76	119.70
24	X	23	HIS	O-C-N	-12.52	102.67	122.70
34	i	24	C	C1'-C2'-O2'	-12.52	73.04	110.60
34	i	1104	G	O4'-C1'-N9	12.45	118.16	108.20
34	i	1145	A	O4'-C1'-N9	12.44	118.15	108.20
34	i	77	A	P-O3'-C3'	12.44	134.63	119.70
7	G	170	ARG	N-CA-CB	12.41	132.94	110.60
34	i	1753	G	O4'-C1'-N9	12.41	118.12	108.20
34	i	696	G	P-O3'-C3'	12.39	134.57	119.70
34	i	66	G	C1'-O4'-C4'	-12.38	99.99	109.90
34	i	831	C	P-O5'-C5'	12.37	140.69	120.90
34	i	881	U	O4'-C1'-N1	12.35	118.08	108.20
34	i	616	G	C3'-C2'-C1'	12.32	111.35	101.50
34	i	1044	G	N9-C1'-C2'	12.31	130.01	114.00
16	P	17	TYR	CB-CG-CD2	-12.31	113.62	121.00
34	i	542	G	P-O3'-C3'	12.28	134.44	119.70
34	i	1414	C	O4'-C1'-C2'	12.27	118.64	107.60
34	i	1126	G	O4'-C1'-N9	12.25	118.00	108.20
34	i	359	C	O4'-C1'-N1	12.24	117.99	108.20
34	i	866	A	O4'-C1'-N9	12.23	117.99	108.20
34	i	280	G	O4'-C1'-N9	12.22	117.97	108.20
34	i	986	A	N9-C1'-C2'	12.22	129.88	114.00
34	i	1430	C	P-O3'-C3'	12.21	134.35	119.70
34	i	1081	C	P-O5'-C5'	-12.19	101.39	120.90
34	i	1716	U	N1-C1'-C2'	-12.19	98.15	114.00
34	i	1372	A	O4'-C1'-N9	12.18	117.95	108.20
34	i	20	G	O4'-C1'-N9	12.17	117.94	108.20
34	i	531	U	O4'-C1'-N1	12.16	117.93	108.20
34	i	1097	U	O4'-C1'-N1	12.16	117.93	108.20
4	D	4	GLN	CG-CD-OE1	-12.14	97.31	121.60
34	i	237	G	P-O3'-C3'	12.14	134.27	119.70
34	i	329	A	C4'-C3'-O3'	-12.14	83.90	109.40
34	i	1188	U	O4'-C1'-N1	12.11	117.89	108.20
34	i	1167	G	O4'-C1'-N9	12.10	117.88	108.20
34	i	1838	U	O4'-C1'-N1	12.10	117.88	108.20
33	g	24	THR	C-N-CD	-12.09	94.00	120.60
34	i	4	C	N1-C1'-C2'	12.09	129.71	114.00
34	i	857	A	N9-C1'-C2'	-12.07	98.30	114.00
25	Y	86	GLU	CA-C-O	-12.06	94.78	120.10
34	i	1469	G	O3'-P-O5'	12.05	126.91	104.00
34	i	1550	U	O4'-C1'-N1	12.05	117.84	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1310	U	O4'-C1'-N1	12.05	117.84	108.20
34	i	224	U	O4'-C1'-N1	12.03	117.83	108.20
34	i	1255	A	O4'-C1'-N9	12.02	117.82	108.20
34	i	1562	G	C3'-C2'-C1'	-12.01	91.89	101.50
31	e	95	LYS	O-C-N	-12.00	103.50	122.70
17	Q	146	ARG	NE-CZ-NH2	11.99	126.30	120.30
34	i	915	A	P-O3'-C3'	11.99	134.09	119.70
34	i	520	U	O4'-C1'-N1	11.99	117.79	108.20
34	i	1397	A	P-O3'-C3'	11.99	134.09	119.70
34	i	736	C	N1-C1'-C2'	11.98	129.58	114.00
34	i	146	G	O4'-C1'-N9	11.97	117.78	108.20
34	i	835	C	O4'-C1'-N1	11.97	117.78	108.20
34	i	1659	A	P-O3'-C3'	11.96	134.06	119.70
11	K	1	MET	N-CA-CB	-11.96	89.08	110.60
34	i	412	U	O4'-C1'-N1	11.95	117.76	108.20
34	i	807	A	P-O3'-C3'	11.94	134.03	119.70
34	i	426	G	O4'-C1'-N9	11.91	117.73	108.20
34	i	868	A	P-O3'-C3'	11.91	133.99	119.70
34	i	179	C	N1-C1'-C2'	11.90	129.47	114.00
34	i	1355	U	O4'-C1'-N1	11.90	117.72	108.20
34	i	596	G	O4'-C1'-N9	11.88	117.70	108.20
34	i	1549	C	O3'-P-O5'	-11.86	81.47	104.00
34	i	1538	U	P-O3'-C3'	11.85	133.92	119.70
34	i	1671	U	O4'-C1'-N1	11.85	117.68	108.20
4	D	4	GLN	N-CA-CB	-11.84	89.28	110.60
34	i	1418	G	O4'-C1'-N9	11.84	117.67	108.20
34	i	278	U	P-O3'-C3'	11.84	133.91	119.70
34	i	1607	G	N9-C1'-C2'	-11.84	98.61	114.00
18	R	1	MET	C-N-CA	-11.82	97.48	122.30
34	i	1103	G	O4'-C1'-N9	11.81	117.65	108.20
34	i	1315	U	O4'-C1'-N1	11.80	117.64	108.20
34	i	1233	C	C1'-O4'-C4'	-11.71	100.53	109.90
2	B	41	ILE	CB-CA-C	11.71	135.01	111.60
34	i	796	U	O4'-C1'-N1	11.70	117.56	108.20
34	i	1494	A	C1'-O4'-C4'	-11.70	100.54	109.90
34	i	225	C	C3'-C2'-C1'	11.70	110.86	101.50
34	i	1670	A	N9-C1'-C2'	-11.70	98.80	114.00
34	i	1157	U	O4'-C1'-N1	11.69	117.55	108.20
34	i	1828	A	N9-C1'-C2'	11.68	129.19	114.00
34	i	1515	G	N9-C1'-C2'	11.68	129.18	114.00
13	M	99	LYS	C-N-CD	-11.68	94.92	120.60
34	i	570	U	P-O3'-C3'	-11.65	105.72	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1833	U	O4'-C1'-N1	11.65	117.52	108.20
34	i	1231	G	O4'-C1'-N9	11.65	117.52	108.20
9	I	134	GLU	CB-CA-C	-11.63	87.13	110.40
34	i	526	A	P-O3'-C3'	-11.63	105.74	119.70
34	i	734	C	N1-C1'-C2'	11.63	129.11	114.00
34	i	1319	U	O4'-C1'-N1	11.62	117.50	108.20
34	i	461	G	O4'-C1'-N9	11.59	117.48	108.20
34	i	817	G	O4'-C1'-N9	11.59	117.47	108.20
34	i	1437	U	O4'-C1'-N1	11.59	117.47	108.20
34	i	1446	G	O4'-C1'-N9	11.58	117.47	108.20
34	i	365	U	O4'-C1'-N1	11.58	117.47	108.20
34	i	1806	U	O4'-C1'-N1	11.58	117.46	108.20
34	i	277	U	C3'-C2'-C1'	11.57	110.75	101.50
18	R	1	MET	N-CA-C	-11.55	79.80	111.00
34	i	417	U	O4'-C1'-N1	11.55	117.44	108.20
34	i	1007	A	O4'-C1'-N9	11.54	117.44	108.20
34	i	31	U	O4'-C1'-N1	11.52	117.42	108.20
34	i	800	U	O4'-C1'-N1	11.51	117.41	108.20
34	i	413	U	O4'-C1'-N1	11.49	117.40	108.20
34	i	929	G	C1'-O4'-C4'	-11.49	100.70	109.90
10	J	146	SER	C-N-CA	11.49	150.43	121.70
12	L	153	LYS	O-C-N	-11.48	104.33	122.70
34	i	728	U	P-O3'-C3'	11.48	133.47	119.70
34	i	672	U	O4'-C1'-N1	11.44	117.35	108.20
34	i	1000	U	O4'-C1'-N1	11.43	117.35	108.20
34	i	1206	G	O4'-C1'-N9	11.43	117.34	108.20
34	i	1552	C	P-O3'-C3'	11.37	133.35	119.70
34	i	728	U	P-O5'-C5'	11.37	139.09	120.90
34	i	368	U	O4'-C1'-N1	11.36	117.29	108.20
34	i	1718	G	O4'-C1'-N9	11.34	117.27	108.20
34	i	474	A	P-O3'-C3'	11.33	133.30	119.70
9	I	6	ASP	CB-CG-OD2	-11.31	108.12	118.30
34	i	1643	G	C4'-C3'-O3'	11.30	135.61	113.00
34	i	145	G	C1'-O4'-C4'	-11.30	100.86	109.90
34	i	536	G	P-O3'-C3'	11.28	133.24	119.70
34	i	1237	A	C3'-C2'-C1'	11.27	110.52	101.50
34	i	1500	U	O4'-C1'-N1	11.27	117.22	108.20
34	i	358	U	O4'-C1'-N1	11.26	117.20	108.20
34	i	861	A	O4'-C1'-N9	11.23	117.18	108.20
34	i	1815	U	O4'-C1'-N1	11.22	117.18	108.20
4	D	5	ILE	CA-C-N	11.22	141.89	117.20
12	L	20	LYS	N-CA-CB	-11.20	90.44	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1414	C	P-O3'-C3'	11.19	133.12	119.70
34	i	1742	C	P-O3'-C3'	11.16	133.09	119.70
34	i	1496	G	N9-C1'-C2'	11.15	128.49	114.00
27	a	98	PRO	C-N-CD	-11.15	96.08	120.60
34	i	520	U	C4'-C3'-O3'	-11.12	86.04	109.40
34	i	1348	G	C1'-O4'-C4'	-11.12	101.00	109.90
34	i	1405	A	P-O3'-C3'	11.12	133.05	119.70
34	i	947	C	C3'-C2'-C1'	11.12	110.39	101.50
34	i	1738	G	N9-C1'-C2'	11.12	128.45	114.00
34	i	385	G	O4'-C1'-N9	11.09	117.07	108.20
34	i	1414	C	C1'-O4'-C4'	-11.09	101.03	109.90
34	i	918	A	O4'-C1'-N9	11.07	117.05	108.20
34	i	1024	A	P-O3'-C3'	-11.06	106.43	119.70
34	i	1715	U	O4'-C1'-N1	11.05	117.04	108.20
34	i	1194	G	O4'-C1'-C2'	11.04	117.53	107.60
34	i	170	A	C1'-O4'-C4'	-11.03	101.08	109.90
34	i	1154	G	O4'-C1'-N9	11.02	117.02	108.20
34	i	913	U	O4'-C1'-N1	11.02	117.01	108.20
34	i	1772	C	O4'-C1'-N1	11.02	117.01	108.20
34	i	411	G	O4'-C1'-N9	11.00	117.00	108.20
34	i	1648	U	O4'-C1'-N1	11.00	117.00	108.20
34	i	948	G	O4'-C1'-N9	11.00	117.00	108.20
34	i	1255	A	O4'-C1'-C2'	10.97	117.47	107.60
34	i	340	C	O4'-C1'-C2'	-10.97	94.83	105.80
34	i	207	U	P-O3'-C3'	10.95	132.84	119.70
34	i	1432	C	C3'-C2'-C1'	10.95	110.26	101.50
34	i	1848	U	O4'-C1'-N1	10.94	116.96	108.20
34	i	684	A	O4'-C1'-C2'	10.94	117.45	107.60
34	i	1408	C	P-O3'-C3'	10.94	132.83	119.70
34	i	1062	U	O4'-C1'-N1	10.93	116.94	108.20
34	i	631	A	O4'-C1'-N9	10.91	116.93	108.20
34	i	827	G	O4'-C1'-N9	10.90	116.92	108.20
34	i	862	U	O4'-C1'-N1	10.89	116.91	108.20
24	X	91	LEU	CA-CB-CG	10.89	140.34	115.30
34	i	684	A	O4'-C1'-N9	10.87	116.90	108.20
34	i	61	A	O4'-C1'-N9	10.87	116.89	108.20
34	i	103	A	O4'-C1'-N9	10.86	116.89	108.20
34	i	1193	G	O4'-C1'-N9	10.86	116.88	108.20
34	i	1672	U	O4'-C1'-N1	10.84	116.87	108.20
26	Z	107	VAL	N-CA-CB	-10.83	87.67	111.50
34	i	832	G	O4'-C1'-N9	10.82	116.86	108.20
34	i	200	U	O4'-C1'-N1	10.80	116.84	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	436	G	N9-C1'-C2'	10.80	128.04	114.00
18	R	86	PRO	CA-N-CD	-10.80	96.39	111.50
34	i	1138	G	O4'-C1'-N9	10.79	116.83	108.20
18	R	89	SER	CA-C-N	10.78	140.91	117.20
34	i	1290	G	O4'-C1'-N9	10.77	116.82	108.20
19	S	40	TYR	CB-CG-CD2	-10.77	114.54	121.00
34	i	907	C	P-O5'-C5'	10.75	138.10	120.90
34	i	1632	A	P-O3'-C3'	10.75	132.60	119.70
34	i	991	G	O4'-C1'-N9	10.74	116.79	108.20
34	i	671	U	O4'-C1'-N1	10.74	116.79	108.20
34	i	1037	G	C1'-O4'-C4'	-10.73	101.31	109.90
34	i	1111	U	O4'-C1'-N1	10.70	116.76	108.20
34	i	835	C	C1'-O4'-C4'	-10.69	101.35	109.90
34	i	57	U	O4'-C1'-N1	10.68	116.75	108.20
34	i	521	A	C1'-O4'-C4'	-10.68	101.36	109.90
34	i	676	U	O4'-C1'-N1	10.68	116.74	108.20
34	i	1724	U	O4'-C1'-N1	10.65	116.72	108.20
34	i	1354	U	O4'-C1'-N1	10.65	116.72	108.20
34	i	858	A	N9-C1'-C2'	10.64	127.84	114.00
34	i	1536	G	O4'-C1'-N9	10.63	116.71	108.20
34	i	143	U	N1-C1'-C2'	10.63	127.82	114.00
34	i	682	G	O4'-C1'-N9	10.63	116.70	108.20
34	i	878	U	O4'-C1'-N1	10.63	116.70	108.20
34	i	405	A	O4'-C1'-N9	10.62	116.69	108.20
34	i	477	U	P-O3'-C3'	10.62	132.44	119.70
34	i	1329	U	O4'-C1'-N1	10.61	116.69	108.20
34	i	522	C	O4'-C1'-C2'	-10.61	95.19	105.80
34	i	1546	U	O4'-C1'-C2'	10.60	117.14	107.60
27	a	10	ARG	CD-NE-CZ	10.60	138.44	123.60
19	S	87	GLN	O-C-N	-10.59	105.75	122.70
34	i	1615	A	N9-C1'-C2'	10.59	127.77	114.00
34	i	19	A	O4'-C1'-N9	10.58	116.67	108.20
34	i	1308	G	O4'-C1'-N9	-10.58	99.73	108.20
34	i	1856	G	O4'-C1'-C2'	-10.57	95.23	105.80
34	i	1012	U	C3'-C2'-C1'	10.57	109.96	101.50
34	i	1743	G	O4'-C1'-N9	10.57	116.65	108.20
34	i	592	G	O4'-C1'-N9	10.55	116.64	108.20
34	i	894	U	P-O3'-C3'	10.55	132.36	119.70
34	i	1079	A	C1'-O4'-C4'	-10.55	101.46	109.90
34	i	1674	A	P-O3'-C3'	10.53	132.34	119.70
34	i	1346	U	O4'-C1'-N1	10.53	116.62	108.20
19	S	88	LYS	CB-CA-C	10.53	131.45	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1299	C	C3'-C2'-C1'	-10.53	93.08	101.50
34	i	1555	U	O4'-C1'-N1	10.50	116.60	108.20
34	i	1570	G	O4'-C1'-N9	10.49	116.59	108.20
34	i	739	U	O4'-C1'-N1	10.48	116.59	108.20
34	i	1021	U	O4'-C1'-N1	10.48	116.58	108.20
34	i	1210	A	P-O3'-C3'	10.48	132.27	119.70
34	i	154	U	O4'-C1'-N1	10.47	116.58	108.20
34	i	1584	A	O4'-C1'-N9	10.46	116.57	108.20
9	I	6	ASP	CB-CG-OD1	10.46	127.72	118.30
34	i	1074	C	N1-C1'-C2'	10.46	127.59	114.00
34	i	79	A	O4'-C1'-N9	10.44	116.56	108.20
34	i	1295	A	O4'-C1'-N9	10.44	116.56	108.20
34	i	1255	A	C3'-C2'-C1'	-10.44	93.15	101.50
34	i	385	G	C1'-O4'-C4'	-10.44	101.55	109.90
34	i	322	G	O4'-C1'-N9	10.44	116.55	108.20
34	i	915	A	N9-C1'-C2'	10.41	127.53	114.00
34	i	93	U	O4'-C1'-N1	10.41	116.53	108.20
34	i	815	G	O4'-C1'-N9	10.40	116.52	108.20
34	i	1288	C	C3'-C2'-C1'	10.40	109.82	101.50
34	i	542	G	O4'-C1'-N9	10.40	116.52	108.20
34	i	1407	G	C1'-O4'-C4'	-10.40	101.58	109.90
34	i	490	A	O3'-P-O5'	-10.39	84.25	104.00
15	O	129	ILE	CB-CA-C	-10.39	90.83	111.60
34	i	789	G	O4'-C1'-N9	10.39	116.51	108.20
7	G	170	ARG	CB-CG-CD	10.37	138.56	111.60
34	i	794	G	O4'-C1'-C2'	-10.37	95.43	105.80
34	i	1404	U	N1-C1'-C2'	10.37	127.48	114.00
34	i	1479	A	O4'-C1'-N9	10.36	116.49	108.20
34	i	204	G	O4'-C1'-N9	10.35	116.48	108.20
34	i	167	G	O4'-C1'-N9	10.34	116.47	108.20
34	i	170	A	C3'-C2'-C1'	-10.32	93.25	101.50
34	i	1170	U	O4'-C1'-N1	10.30	116.44	108.20
34	i	792	G	O4'-C1'-N9	10.30	116.44	108.20
34	i	585	U	O4'-C1'-N1	10.29	116.43	108.20
10	J	138	ARG	N-CA-C	10.28	138.77	111.00
34	i	1857	A	O4'-C1'-C2'	-10.27	95.53	105.80
34	i	349	U	O4'-C1'-N1	10.27	116.41	108.20
34	i	546	U	P-O5'-C5'	10.23	137.28	120.90
34	i	1010	G	O4'-C1'-N9	10.22	116.38	108.20
34	i	1774	G	C1'-O4'-C4'	-10.22	101.73	109.90
34	i	971	G	O4'-C1'-N9	10.22	116.37	108.20
34	i	1551	A	P-O3'-C3'	10.21	131.96	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	300	G	O4'-C1'-N9	10.21	116.37	108.20
18	R	2	GLY	O-C-N	-10.21	106.37	122.70
34	i	65	C	P-O3'-C3'	10.19	131.93	119.70
34	i	168	C	N1-C1'-C2'	10.19	127.25	114.00
34	i	1232	G	O4'-C1'-C2'	10.17	116.76	107.60
5	E	171	ASP	N-CA-C	10.17	138.46	111.00
34	i	662	A	O4'-C1'-N9	10.15	116.32	108.20
34	i	141	A	O4'-C1'-C2'	-10.14	95.66	105.80
34	i	102	A	P-O3'-C3'	10.13	131.86	119.70
11	K	43	LEU	CA-CB-CG	10.12	138.57	115.30
34	i	1075	C	C3'-C2'-C1'	10.11	109.59	101.50
34	i	517	C	O4'-C1'-N1	10.11	116.29	108.20
34	i	865	A	P-O3'-C3'	10.11	131.83	119.70
34	i	590	G	O4'-C1'-N9	10.10	116.28	108.20
21	U	71	GLY	N-CA-C	10.10	138.35	113.10
34	i	31	U	P-O3'-C3'	10.10	131.82	119.70
34	i	1416	G	C1'-O4'-C4'	-10.10	101.82	109.90
34	i	1662	U	O4'-C1'-N1	10.10	116.28	108.20
34	i	287	U	C1'-O4'-C4'	-10.08	101.84	109.90
34	i	935	U	O4'-C1'-N1	10.08	116.26	108.20
34	i	1276	G	O4'-C1'-N9	10.07	116.26	108.20
34	i	73	C	O4'-C1'-C2'	-10.06	95.74	105.80
34	i	1811	G	O4'-C1'-N9	10.06	116.25	108.20
34	i	1414	C	P-O5'-C5'	10.06	137.00	120.90
34	i	74	G	C3'-C2'-C1'	10.06	109.55	101.50
34	i	1408	C	O3'-P-O5'	-10.06	84.88	104.00
34	i	1722	G	O4'-C1'-N9	10.05	116.24	108.20
11	K	55	ARG	NE-CZ-NH1	10.05	125.33	120.30
34	i	1615	A	O4'-C1'-N9	10.04	116.23	108.20
34	i	1281	G	C4'-C3'-O3'	10.03	133.06	113.00
34	i	1211	C	O4'-C1'-C2'	-10.02	95.78	105.80
34	i	1258	C	N1-C1'-C2'	9.99	126.99	114.00
34	i	1303	U	P-O3'-C3'	9.99	131.69	119.70
4	D	4	GLN	CG-CD-NE2	9.99	140.67	116.70
34	i	547	U	N1-C1'-C2'	9.98	126.98	114.00
34	i	1532	A	O4'-C1'-C2'	-9.98	95.82	105.80
34	i	344	U	O4'-C1'-N1	9.98	116.18	108.20
34	i	1715	U	C1'-O4'-C4'	9.98	117.88	109.90
34	i	546	U	C4'-C3'-C2'	-9.96	92.64	102.60
11	K	1	MET	CB-CG-SD	9.96	142.28	112.40
34	i	1472	A	N9-C1'-C2'	-9.96	101.05	112.00
9	I	43	ILE	CA-C-O	9.95	141.00	120.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	H	110	THR	CA-C-O	-9.95	99.20	120.10
34	i	1036	G	O4'-C1'-N9	9.94	116.15	108.20
34	i	1643	G	P-O3'-C3'	9.94	131.62	119.70
24	X	23	HIS	CB-CA-C	9.93	130.26	110.40
34	i	795	U	O4'-C1'-N1	9.93	116.14	108.20
34	i	1435	A	O4'-C1'-N9	9.93	116.14	108.20
7	G	180	VAL	CB-CA-C	-9.93	92.54	111.40
34	i	204	G	N9-C1'-C2'	-9.93	101.08	112.00
34	i	189	G	C1'-O4'-C4'	-9.92	101.97	109.90
34	i	1771	G	C3'-C2'-C1'	-9.92	93.57	101.50
34	i	92	A	N9-C1'-C2'	9.90	126.87	114.00
34	i	1397	A	O4'-C1'-N9	9.90	116.12	108.20
34	i	1115	A	O4'-C1'-N9	9.89	116.11	108.20
34	i	1010	G	C1'-O4'-C4'	-9.88	102.00	109.90
34	i	663	G	O4'-C1'-N9	9.87	116.09	108.20
34	i	1234	U	O4'-C1'-N1	9.86	116.08	108.20
34	i	616	G	O4'-C1'-C2'	-9.83	95.97	105.80
34	i	1151	U	O4'-C1'-N1	9.83	116.07	108.20
18	R	42	PRO	CA-N-CD	-9.83	97.74	111.50
34	i	1803	A	O4'-C1'-N9	9.82	116.06	108.20
34	i	1004	A	P-O3'-C3'	9.82	131.48	119.70
34	i	5	U	O4'-C1'-N1	9.82	116.05	108.20
34	i	914	U	N1-C1'-C2'	9.82	126.76	114.00
34	i	1194	G	C1'-O4'-C4'	-9.81	102.05	109.90
34	i	80	G	C3'-C2'-C1'	9.80	109.34	101.50
34	i	105	U	O4'-C1'-N1	9.79	116.03	108.20
34	i	1333	C	O4'-C1'-N1	9.78	116.03	108.20
34	i	665	U	O4'-C1'-N1	9.78	116.02	108.20
33	g	142	VAL	CA-C-N	-9.78	95.69	117.20
34	i	1798	U	O4'-C1'-N1	9.77	116.02	108.20
34	i	1659	A	N9-C1'-C2'	9.76	126.69	114.00
34	i	1771	G	O4'-C1'-N9	9.76	116.00	108.20
34	i	1432	C	P-O3'-C3'	9.75	131.40	119.70
19	S	91	LYS	CG-CD-CE	9.74	141.11	111.90
34	i	928	G	O4'-C1'-N9	9.74	115.99	108.20
28	b	36	LYS	N-CA-C	9.73	137.28	111.00
34	i	1126	G	N9-C1'-C2'	-9.73	101.30	112.00
34	i	810	U	O4'-C1'-N1	9.73	115.98	108.20
34	i	999	U	O4'-C1'-N1	9.72	115.98	108.20
21	U	104	ILE	N-CA-C	-9.71	84.77	111.00
1	A	200	ASP	CB-CA-C	-9.71	90.99	110.40
34	i	1072	G	O4'-C1'-N9	9.70	115.96	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1413	C	C3'-C2'-C1'	9.70	109.26	101.50
34	i	520	U	O4'-C4'-C3'	-9.70	94.30	104.00
34	i	121	U	O4'-C1'-N1	9.70	115.96	108.20
34	i	1328	A	O4'-C1'-C2'	-9.70	96.10	105.80
34	i	321	C	O4'-C1'-N1	9.70	115.96	108.20
34	i	743	U	O4'-C1'-N1	9.70	115.96	108.20
34	i	1716	U	P-O3'-C3'	9.69	131.33	119.70
10	J	89	GLU	N-CA-C	9.69	137.16	111.00
34	i	381	C	O4'-C1'-N1	9.68	115.94	108.20
34	i	879	U	O4'-C1'-N1	9.68	115.94	108.20
34	i	1232	G	O4'-C1'-N9	9.67	115.94	108.20
34	i	397	G	O4'-C1'-N9	9.67	115.94	108.20
34	i	1551	A	O4'-C1'-N9	9.66	115.93	108.20
34	i	1490	U	O4'-C1'-N1	9.65	115.92	108.20
19	S	54	LYS	N-CA-C	9.65	137.06	111.00
33	g	159	ASN	N-CA-C	9.65	137.05	111.00
34	i	66	G	N9-C1'-C2'	9.65	126.54	114.00
3	C	93	LYS	C-N-CA	9.64	145.81	121.70
18	R	1	MET	CA-C-O	9.64	140.35	120.10
34	i	1599	G	O4'-C1'-N9	9.64	115.91	108.20
34	i	1546	U	O4'-C1'-N1	9.62	115.90	108.20
34	i	1288	C	O4'-C1'-N1	-9.61	100.52	108.20
34	i	434	G	O4'-C1'-N9	9.60	115.88	108.20
34	i	1503	G	C1'-O4'-C4'	-9.60	102.22	109.90
34	i	824	G	O4'-C1'-C2'	9.60	116.24	107.60
34	i	1249	A	P-O3'-C3'	9.59	131.21	119.70
34	i	468	G	O4'-C1'-N9	9.59	115.87	108.20
34	i	1077	U	O4'-C1'-N1	9.59	115.87	108.20
18	R	3	ARG	N-CA-CB	9.58	127.85	110.60
34	i	1530	U	P-O3'-C3'	9.58	131.20	119.70
34	i	830	C	C1'-O4'-C4'	-9.57	102.24	109.90
34	i	1132	U	O4'-C1'-N1	9.57	115.85	108.20
34	i	1490	U	P-O3'-C3'	9.54	131.14	119.70
34	i	394	G	O4'-C1'-N9	9.53	115.83	108.20
34	i	545	A	P-O3'-C3'	9.52	131.13	119.70
34	i	909	A	C3'-C2'-C1'	9.52	109.12	101.50
34	i	626	C	C3'-C2'-C1'	9.51	109.11	101.50
4	D	193	ASP	N-CA-C	-9.51	85.33	111.00
34	i	961	U	O4'-C1'-N1	9.51	115.80	108.20
34	i	1585	C	N1-C1'-C2'	9.50	126.35	114.00
34	i	1251	G	C1'-O4'-C4'	-9.50	102.30	109.90
34	i	1582	G	O4'-C1'-N9	9.49	115.79	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	647	U	O4'-C1'-N1	9.49	115.79	108.20
34	i	1163	G	O4'-C1'-N9	9.48	115.78	108.20
34	i	838	C	C3'-C2'-C1'	9.48	109.08	101.50
34	i	67	C	C3'-C2'-C1'	-9.47	93.92	101.50
34	i	504	U	O4'-C1'-N1	9.46	115.77	108.20
34	i	987	G	O4'-C1'-N9	9.46	115.77	108.20
9	I	105	ASP	CB-CG-OD2	9.46	126.82	118.30
34	i	1845	A	O4'-C1'-C2'	-9.46	96.34	105.80
34	i	1215	C	O4'-C1'-N1	9.45	115.76	108.20
34	i	1802	U	O4'-C1'-N1	9.45	115.76	108.20
34	i	883	U	P-O5'-C5'	9.45	136.02	120.90
25	Y	103	SER	CA-C-N	9.45	137.98	117.20
34	i	826	A	C3'-C2'-C1'	-9.45	93.94	101.50
27	a	63	VAL	C-N-CA	9.44	145.31	121.70
34	i	160	U	P-O3'-C3'	9.44	131.02	119.70
34	i	1291	A	O4'-C1'-N9	9.43	115.74	108.20
34	i	1564	A	O5'-P-OP2	-9.43	97.22	105.70
34	i	1140	A	N9-C1'-C2'	9.41	126.23	114.00
34	i	79	A	C5'-C4'-O4'	9.40	120.39	109.10
34	i	1125	G	O4'-C1'-N9	9.40	115.72	108.20
34	i	1013	U	O4'-C1'-N1	9.40	115.72	108.20
8	H	111	LYS	N-CA-CB	9.39	127.50	110.60
27	a	10	ARG	CB-CG-CD	9.39	136.01	111.60
34	i	207	U	C4'-C3'-O3'	9.38	131.77	113.00
34	i	793	C	C3'-C2'-C1'	9.38	109.00	101.50
34	i	642	U	O4'-C1'-N1	9.38	115.70	108.20
34	i	855	G	O4'-C1'-N9	9.37	115.70	108.20
34	i	1197	U	O4'-C1'-N1	9.37	115.70	108.20
34	i	840	U	O4'-C1'-N1	9.37	115.69	108.20
34	i	1037	G	O4'-C1'-C2'	9.36	116.03	107.60
34	i	1204	A	O4'-C1'-N9	9.36	115.69	108.20
34	i	1444	A	P-O3'-C3'	9.35	130.92	119.70
34	i	951	A	O4'-C1'-N9	9.35	115.68	108.20
34	i	728	U	N1-C1'-C2'	9.35	126.15	114.00
34	i	1266	G	O4'-C1'-N9	9.35	115.68	108.20
34	i	1317	G	O4'-C1'-N9	9.34	115.67	108.20
34	i	431	C	N1-C1'-C2'	9.33	126.12	114.00
34	i	214	A	C3'-C2'-C1'	9.32	108.96	101.50
34	i	424	G	C4'-C3'-O3'	-9.32	89.84	109.40
34	i	905	G	O3'-P-O5'	9.32	121.70	104.00
34	i	408	A	N9-C1'-C2'	9.30	126.09	114.00
34	i	524	G	O3'-P-O5'	-9.30	86.33	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1786	G	O4'-C1'-C2'	9.30	115.97	107.60
34	i	1617	U	O4'-C1'-N1	-9.30	100.76	108.20
4	D	82	GLY	C-N-CA	-9.29	98.46	121.70
22	V	61	ARG	NE-CZ-NH1	9.29	124.94	120.30
34	i	651	U	O4'-C1'-N1	9.29	115.63	108.20
7	G	122	PRO	CA-N-CD	-9.29	98.50	111.50
34	i	1068	U	O4'-C1'-N1	9.28	115.63	108.20
34	i	619	A	O4'-C1'-N9	9.27	115.62	108.20
34	i	1228	U	O4'-C1'-N1	9.27	115.62	108.20
34	i	892	U	O4'-C1'-N1	9.26	115.61	108.20
34	i	51	U	O4'-C1'-N1	9.25	115.60	108.20
19	S	40	TYR	N-CA-C	9.25	135.98	111.00
34	i	147	A	N9-C1'-C2'	-9.24	101.83	112.00
34	i	1360	U	O3'-P-O5'	9.24	121.56	104.00
34	i	1810	G	O4'-C1'-N9	9.24	115.59	108.20
21	U	94	PRO	CA-N-CD	-9.24	98.56	111.50
34	i	1065	U	P-O3'-C3'	9.24	130.79	119.70
26	Z	104	ARG	CD-NE-CZ	-9.24	110.67	123.60
34	i	1288	C	N1-C1'-C2'	9.22	125.99	114.00
34	i	641	U	O4'-C1'-N1	9.22	115.58	108.20
34	i	1102	C	O4'-C1'-N1	9.22	115.58	108.20
16	P	37	TYR	CB-CG-CD2	-9.22	115.47	121.00
33	g	274	VAL	O-C-N	-9.22	107.95	122.70
34	i	660	A	O4'-C1'-N9	9.22	115.57	108.20
34	i	1642	A	O4'-C1'-N9	9.20	115.56	108.20
34	i	551	A	C4'-C3'-O3'	-9.20	90.08	109.40
34	i	89	C	O4'-C1'-N1	9.20	115.56	108.20
7	G	157	VAL	N-CA-C	9.19	135.82	111.00
34	i	446	C	N1-C1'-C2'	9.19	125.95	114.00
34	i	1403	U	N1-C1'-C2'	9.19	125.95	114.00
34	i	1199	G	N9-C1'-C2'	9.19	125.95	114.00
2	B	40	ASN	C-N-CA	-9.18	98.74	121.70
34	i	60	A	C3'-C2'-C1'	-9.18	94.16	101.50
34	i	1736	U	N1-C1'-C2'	9.17	125.92	114.00
34	i	53	C	O4'-C1'-C2'	-9.17	96.63	105.80
34	i	1153	G	O4'-C1'-N9	9.17	115.53	108.20
34	i	1455	G	C1'-O4'-C4'	-9.17	102.57	109.90
21	U	53	PRO	CA-N-CD	-9.14	98.70	111.50
34	i	114	G	O4'-C1'-N9	9.13	115.50	108.20
12	L	17	PHE	O-C-N	9.13	137.30	122.70
34	i	1743	G	P-O5'-C5'	9.13	135.50	120.90
34	i	561	U	O4'-C1'-N1	9.12	115.50	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	484	C	C3'-C2'-C1'	9.12	108.80	101.50
34	i	995	G	O4'-C1'-N9	9.12	115.49	108.20
34	i	298	G	C3'-C2'-C1'	-9.11	94.21	101.50
34	i	735	C	N1-C1'-C2'	9.10	125.83	114.00
34	i	107	A	O4'-C1'-N9	9.09	115.47	108.20
34	i	1022	C	C3'-C2'-C1'	9.09	108.77	101.50
34	i	1261	A	C3'-C2'-C1'	9.09	108.77	101.50
34	i	910	U	O4'-C1'-N1	9.08	115.47	108.20
34	i	152	U	O4'-C1'-N1	9.08	115.46	108.20
34	i	99	A	O4'-C1'-N9	9.07	115.46	108.20
4	D	5	ILE	C-N-CA	9.06	144.36	121.70
12	L	17	PHE	CA-C-N	-9.06	97.27	117.20
34	i	824	G	C3'-C2'-C1'	-9.06	94.25	101.50
34	i	1076	A	O4'-C1'-N9	9.06	115.45	108.20
19	S	53	THR	O-C-N	-9.06	108.21	122.70
34	i	501	U	O4'-C1'-N1	9.04	115.44	108.20
34	i	414	C	N1-C1'-C2'	9.03	125.73	114.00
9	I	105	ASP	CB-CG-OD1	-9.02	110.18	118.30
34	i	405	A	N9-C1'-C2'	-9.02	102.08	112.00
34	i	640	A	C3'-C2'-C1'	9.02	108.72	101.50
34	i	56	G	O4'-C1'-N9	9.01	115.41	108.20
34	i	1469	G	P-O3'-C3'	9.01	130.51	119.70
34	i	1427	G	O4'-C1'-N9	9.00	115.40	108.20
34	i	1189	U	O4'-C1'-N1	8.99	115.40	108.20
34	i	24	C	O3'-P-O5'	-8.99	86.92	104.00
34	i	1129	A	O4'-C1'-N9	8.98	115.39	108.20
27	a	10	ARG	NH1-CZ-NH2	-8.98	109.53	119.40
34	i	1631	G	O4'-C1'-N9	8.98	115.38	108.20
21	U	93	SER	C-N-CD	8.97	147.24	128.40
34	i	653	C	N1-C1'-C2'	8.97	125.66	114.00
34	i	733	G	C1'-O4'-C4'	8.96	117.07	109.90
34	i	437	A	O4'-C1'-C2'	-8.95	96.85	105.80
34	i	1523	G	C3'-C2'-C1'	-8.95	94.34	101.50
27	a	97	PRO	N-CA-CB	-8.95	92.57	103.30
34	i	542	G	P-O5'-C5'	8.94	135.21	120.90
34	i	730	C	O4'-C1'-C2'	-8.94	96.86	105.80
34	i	652	G	N9-C1'-C2'	8.94	125.62	114.00
34	i	482	C	O4'-C1'-C2'	-8.94	96.86	105.80
24	X	62	PRO	CA-N-CD	-8.93	98.99	111.50
34	i	1405	A	P-O5'-C5'	8.93	135.18	120.90
34	i	1515	G	C1'-O4'-C4'	-8.93	102.76	109.90
34	i	947	C	P-O5'-C5'	8.93	135.18	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1335	U	O4'-C1'-N1	8.93	115.34	108.20
34	i	1775	A	P-O3'-C3'	8.93	130.41	119.70
34	i	1184	A	O4'-C1'-C2'	-8.92	96.88	105.80
34	i	1687	U	O4'-C1'-N1	8.92	115.34	108.20
34	i	1716	U	O4'-C1'-C2'	-8.92	96.88	105.80
34	i	1473	U	P-O5'-C5'	8.91	135.16	120.90
34	i	1472	A	C1'-O4'-C4'	8.91	117.03	109.90
34	i	189	G	N9-C1'-C2'	8.91	125.58	114.00
34	i	609	A	O4'-C1'-N9	8.90	115.32	108.20
34	i	1847	C	N1-C1'-C2'	8.90	125.57	114.00
34	i	1272	A	N9-C1'-C2'	-8.89	102.22	112.00
34	i	847	C	O3'-P-O5'	-8.88	87.12	104.00
34	i	1501	U	O4'-C1'-N1	8.88	115.31	108.20
28	b	12	PRO	CA-N-CD	-8.88	99.07	111.50
34	i	1824	U	C3'-C2'-C1'	8.88	108.60	101.50
34	i	951	A	P-O3'-C3'	8.87	130.35	119.70
34	i	611	C	N1-C1'-C2'	8.87	125.53	114.00
34	i	1191	A	O4'-C1'-N9	8.87	115.30	108.20
34	i	543	U	O4'-C1'-C2'	-8.86	96.94	105.80
34	i	1855	G	O4'-C1'-C2'	8.86	115.57	107.60
34	i	201	G	O4'-C1'-N9	8.86	115.28	108.20
34	i	956	U	N1-C1'-C2'	8.86	125.51	114.00
34	i	1159	C	N1-C1'-C2'	8.86	125.51	114.00
34	i	325	G	N9-C1'-C2'	-8.85	102.27	112.00
10	J	165	TYR	CB-CA-C	8.85	128.09	110.40
19	S	88	LYS	C-N-CA	-8.84	99.59	121.70
19	S	142	ARG	CB-CA-C	-8.84	92.72	110.40
34	i	444	U	O4'-C1'-N1	8.84	115.27	108.20
34	i	1596	A	P-O3'-C3'	8.84	130.30	119.70
34	i	212	G	O4'-C1'-N9	8.83	115.27	108.20
34	i	1214	C	N1-C1'-C2'	8.83	125.48	114.00
19	S	94	LYS	CA-C-N	-8.83	97.78	117.20
33	g	145	GLU	N-CA-C	-8.83	87.16	111.00
34	i	299	G	C1'-O4'-C4'	-8.83	102.84	109.90
34	i	1676	U	O4'-C1'-N1	8.83	115.26	108.20
34	i	25	A	N9-C1'-C2'	-8.82	102.29	112.00
34	i	548	G	C3'-C2'-C1'	-8.82	94.44	101.50
34	i	224	U	N1-C1'-C2'	-8.82	102.30	112.00
6	F	130	ARG	NE-CZ-NH1	8.81	124.71	120.30
34	i	140	U	O4'-C1'-N1	8.81	115.25	108.20
34	i	1068	U	C1'-O4'-C4'	8.81	116.95	109.90
34	i	1861	U	C3'-C2'-C1'	-8.81	94.45	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	963	C	O4'-C1'-N1	8.80	115.24	108.20
34	i	1436	C	C3'-C2'-C1'	8.80	108.54	101.50
34	i	689	G	P-O3'-C3'	8.80	130.26	119.70
22	V	67	ASP	CB-CA-C	8.79	127.98	110.40
34	i	1466	C	O4'-C1'-N1	8.79	115.23	108.20
34	i	108	G	O4'-C1'-N9	8.78	115.23	108.20
34	i	583	C	C3'-C2'-C1'	8.78	108.52	101.50
34	i	564	A	C3'-C2'-C1'	8.76	108.51	101.50
25	Y	52	PRO	CA-N-CD	-8.76	99.24	111.50
3	C	104	GLY	N-CA-C	8.75	134.97	113.10
34	i	903	G	N9-C1'-C2'	8.75	125.37	114.00
34	i	234	C	C1'-O4'-C4'	8.74	116.89	109.90
34	i	837	G	C1'-C2'-O2'	-8.74	84.39	110.60
34	i	1776	G	C3'-C2'-C1'	-8.74	94.51	101.50
34	i	1546	U	C1'-O4'-C4'	-8.73	102.91	109.90
34	i	1601	G	O4'-C1'-N9	8.73	115.18	108.20
34	i	43	U	O4'-C1'-N1	8.72	115.18	108.20
34	i	161	U	O4'-C1'-C2'	-8.72	97.08	105.80
34	i	1548	C	P-O3'-C3'	8.71	130.16	119.70
34	i	872	C	O4'-C1'-N1	8.71	115.17	108.20
34	i	234	C	O4'-C1'-C2'	-8.70	97.10	105.80
10	J	118	GLY	O-C-N	-8.70	108.79	122.70
34	i	1425	G	O4'-C1'-N9	8.70	115.16	108.20
34	i	79	A	C4'-C3'-C2'	-8.69	93.91	102.60
34	i	792	G	P-O3'-C3'	8.69	130.13	119.70
25	Y	86	GLU	CB-CA-C	-8.69	93.02	110.40
34	i	455	A	P-O3'-C3'	8.69	130.12	119.70
17	Q	134	GLY	C-N-CD	-8.68	101.50	120.60
34	i	1232	G	C3'-C2'-C1'	-8.68	94.55	101.50
34	i	604	G	C3'-C2'-C1'	8.68	108.44	101.50
34	i	1104	G	P-O3'-C3'	8.68	130.12	119.70
34	i	1131	C	O4'-C1'-N1	8.68	115.14	108.20
34	i	222	G	C1'-O4'-C4'	-8.68	102.96	109.90
34	i	1428	U	C3'-C2'-C1'	8.67	108.44	101.50
34	i	1706	U	O4'-C1'-N1	8.67	115.14	108.20
34	i	959	A	O4'-C1'-N9	8.66	115.13	108.20
34	i	58	C	O4'-C1'-N1	8.66	115.13	108.20
34	i	929	G	O4'-C1'-N9	8.66	115.12	108.20
21	U	67	LYS	C-N-CA	-8.65	100.08	121.70
34	i	1222	G	N9-C1'-C2'	8.65	125.24	114.00
34	i	1576	C	O4'-C1'-C2'	-8.65	97.15	105.80
8	H	111	LYS	N-CA-C	-8.64	87.67	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	153	G	O4'-C1'-N9	8.64	115.11	108.20
34	i	234	C	O4'-C1'-N1	8.63	115.10	108.20
34	i	472	G	O4'-C1'-N9	8.63	115.10	108.20
34	i	848	G	P-O3'-C3'	8.62	130.05	119.70
34	i	1199	G	C1'-O4'-C4'	-8.62	103.00	109.90
16	P	17	TYR	CB-CA-C	8.62	127.64	110.40
34	i	1208	G	N9-C1'-C2'	8.62	125.21	114.00
34	i	1272	A	O4'-C1'-C2'	-8.62	97.18	105.80
34	i	25	A	O4'-C1'-C2'	-8.61	97.19	105.80
34	i	795	U	N1-C1'-C2'	8.61	125.20	114.00
34	i	835	C	P-O3'-C3'	8.61	130.03	119.70
34	i	518	A	C1'-O4'-C4'	-8.60	103.02	109.90
34	i	1067	G	O4'-C1'-N9	8.60	115.08	108.20
34	i	180	G	C4'-C3'-O3'	8.59	130.18	113.00
34	i	849	C	O3'-P-O5'	8.59	120.32	104.00
34	i	296	U	P-O3'-C3'	-8.59	109.39	119.70
34	i	21	U	O4'-C1'-N1	8.58	115.06	108.20
34	i	1388	U	O4'-C1'-N1	8.58	115.06	108.20
32	f	122	PRO	CA-N-CD	-8.58	99.49	111.50
34	i	1003	C	C3'-C2'-C1'	8.58	108.36	101.50
6	F	45	TYR	CA-CB-CG	-8.57	97.11	113.40
8	H	36	LEU	CA-CB-CG	-8.57	95.58	115.30
34	i	1726	A	O4'-C1'-N9	8.56	115.05	108.20
34	i	1108	U	O4'-C1'-N1	8.56	115.05	108.20
28	b	10	PRO	CA-N-CD	-8.56	99.52	111.50
34	i	972	G	P-O5'-C5'	8.55	134.58	120.90
34	i	159	A	O4'-C1'-N9	8.54	115.03	108.20
34	i	144	U	N1-C1'-C2'	8.54	125.10	114.00
34	i	1646	A	N9-C1'-C2'	-8.53	102.61	112.00
34	i	1325	U	C1'-O4'-C4'	-8.53	103.08	109.90
10	J	161	LEU	O-C-N	-8.53	109.05	122.70
9	I	184	ARG	N-CA-CB	8.53	125.94	110.60
34	i	1229	G	C1'-O4'-C4'	-8.52	103.08	109.90
16	P	69	PRO	CA-N-CD	-8.51	99.58	111.50
34	i	1002	C	N1-C1'-C2'	8.51	125.07	114.00
34	i	1728	U	O4'-C1'-N1	8.51	115.01	108.20
34	i	1517	A	O4'-C1'-N9	8.51	115.01	108.20
27	a	80	HIS	N-CA-CB	-8.51	95.29	110.60
34	i	929	G	O4'-C1'-C2'	8.51	115.25	107.60
34	i	1109	A	O4'-C1'-N9	8.51	115.00	108.20
34	i	1770	G	O4'-C1'-N9	8.51	115.00	108.20
11	K	87	PRO	C-N-CA	8.50	142.96	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1425	G	N9-C1'-C2'	-8.50	102.65	112.00
34	i	1581	U	O4'-C1'-N1	8.50	115.00	108.20
34	i	859	U	C1'-O4'-C4'	-8.49	103.11	109.90
34	i	669	A	O4'-C1'-N9	8.49	114.99	108.20
34	i	602	U	O4'-C1'-N1	8.48	114.98	108.20
34	i	727	G	O3'-P-O5'	8.48	120.11	104.00
34	i	1198	U	N1-C1'-C2'	-8.47	102.68	112.00
34	i	1513	C	O4'-C1'-N1	8.47	114.98	108.20
34	i	343	C	C5'-C4'-C3'	8.47	129.55	116.00
34	i	1526	A	O4'-C1'-N9	8.47	114.97	108.20
34	i	131	C	P-O3'-C3'	8.46	129.85	119.70
8	H	108	SER	N-CA-CB	8.46	123.18	110.50
34	i	824	G	O4'-C1'-N9	8.46	114.97	108.20
34	i	849	C	P-O3'-C3'	-8.45	109.56	119.70
34	i	1442	A	P-O3'-C3'	8.45	129.84	119.70
34	i	28	U	O4'-C1'-N1	8.44	114.95	108.20
17	Q	18	THR	CA-CB-OG1	8.44	126.72	109.00
19	S	95	TYR	N-CA-CB	-8.44	95.41	110.60
34	i	1411	C	N1-C1'-C2'	8.44	124.97	114.00
34	i	739	U	O4'-C1'-C2'	-8.43	97.37	105.80
34	i	1137	G	O4'-C1'-N9	8.43	114.94	108.20
21	U	70	CYS	C-N-CA	8.43	140.00	122.30
31	e	95	LYS	CA-C-N	8.42	135.73	117.20
34	i	1205	A	O4'-C1'-N9	8.42	114.94	108.20
4	D	193	ASP	C-N-CD	8.42	146.08	128.40
34	i	1014	U	N1-C1'-C2'	8.42	124.94	114.00
34	i	1504	A	N9-C1'-C2'	-8.41	102.75	112.00
34	i	733	G	N9-C1'-C2'	-8.40	102.75	112.00
34	i	1272	A	C3'-C2'-C1'	8.40	108.22	101.50
10	J	180	LYS	C-N-CA	8.40	139.93	122.30
34	i	276	U	O4'-C1'-N1	-8.39	101.49	108.20
34	i	1110	U	O4'-C1'-N1	8.39	114.92	108.20
34	i	1198	U	O4'-C1'-N1	8.39	114.91	108.20
34	i	1458	U	C4'-C3'-O3'	8.39	129.78	113.00
34	i	1685	U	O4'-C1'-N1	8.39	114.91	108.20
34	i	442	G	C3'-C2'-C1'	8.39	108.21	101.50
34	i	691	G	P-O3'-C3'	8.39	129.77	119.70
34	i	964	U	O4'-C1'-C2'	-8.39	97.41	105.80
34	i	1322	U	C3'-C2'-C1'	8.39	108.21	101.50
34	i	1006	G	C3'-C2'-C1'	-8.38	94.79	101.50
34	i	1474	U	O4'-C1'-N1	8.38	114.91	108.20
34	i	276	U	C3'-C2'-C1'	8.38	108.21	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1082	G	O3'-P-O5'	-8.38	88.08	104.00
34	i	385	G	C3'-C2'-C1'	-8.38	94.80	101.50
34	i	512	A	O4'-C1'-N9	8.38	114.90	108.20
34	i	103	A	C3'-C2'-C1'	-8.37	94.80	101.50
34	i	1044	G	C1'-O4'-C4'	-8.37	103.20	109.90
5	E	43	PRO	CA-N-CD	-8.36	99.79	111.50
34	i	1691	C	N1-C1'-C2'	8.36	124.87	114.00
34	i	1434	A	O4'-C1'-C2'	-8.36	97.44	105.80
7	G	170	ARG	CB-CA-C	-8.36	93.69	110.40
34	i	1468	C	C4'-C3'-O3'	8.35	129.70	113.00
34	i	97	U	N1-C1'-C2'	8.35	124.85	114.00
34	i	1118	A	O4'-C1'-C2'	-8.35	97.45	105.80
34	i	1014	U	C1'-O4'-C4'	-8.34	103.23	109.90
34	i	389	C	C3'-C2'-C1'	8.34	108.17	101.50
34	i	543	U	C4'-C3'-C2'	-8.33	94.27	102.60
34	i	291	U	O4'-C1'-N1	8.32	114.86	108.20
34	i	546	U	O4'-C1'-N1	8.31	114.85	108.20
34	i	1655	C	O4'-C1'-N1	8.31	114.84	108.20
34	i	1316	G	C3'-C2'-C1'	-8.30	94.86	101.50
34	i	966	G	P-O3'-C3'	8.30	129.66	119.70
34	i	1336	U	O4'-C1'-N1	8.30	114.84	108.20
34	i	82	G	O4'-C1'-C2'	-8.29	97.51	105.80
34	i	544	A	C3'-C2'-C1'	-8.29	94.87	101.50
34	i	639	U	C1'-O4'-C4'	-8.29	103.27	109.90
34	i	1376	C	C3'-C2'-C1'	8.29	108.13	101.50
34	i	520	U	P-O3'-C3'	8.29	129.64	119.70
34	i	1226	C	C1'-O4'-C4'	-8.29	103.27	109.90
27	a	58	VAL	CB-CA-C	-8.28	95.66	111.40
26	Z	104	ARG	NE-CZ-NH1	-8.28	116.16	120.30
34	i	1688	G	C1'-O4'-C4'	-8.27	103.29	109.90
34	i	357	U	O4'-C1'-N1	8.27	114.81	108.20
34	i	1292	U	O4'-C1'-N1	8.27	114.81	108.20
12	L	147	LYS	N-CA-C	8.26	133.31	111.00
34	i	376	C	N1-C1'-C2'	8.26	124.74	114.00
34	i	905	G	P-O3'-C3'	-8.26	109.79	119.70
34	i	1529	C	O4'-C1'-C2'	-8.26	97.54	105.80
34	i	313	C	C3'-C2'-C1'	8.26	108.11	101.50
19	S	6	PRO	N-CA-C	8.25	133.56	112.10
34	i	1151	U	C5'-C4'-O4'	8.25	119.00	109.10
34	i	1464	C	O4'-C1'-N1	8.25	114.80	108.20
11	K	55	ARG	NE-CZ-NH2	-8.24	116.18	120.30
34	i	1305	C	O4'-C1'-C2'	-8.24	97.56	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	I	5	ARG	O-C-N	-8.23	109.52	122.70
34	i	351	U	O4'-C1'-N1	8.23	114.78	108.20
34	i	546	U	N1-C1'-C2'	8.23	124.70	114.00
32	f	87	THR	N-CA-C	-8.22	88.80	111.00
34	i	744	C	C3'-C2'-C1'	8.22	108.08	101.50
34	i	36	U	O4'-C1'-N1	8.22	114.78	108.20
34	i	334	U	O4'-C1'-N1	8.22	114.78	108.20
34	i	1208	G	C1'-O4'-C4'	-8.22	103.33	109.90
25	Y	87	PRO	CA-N-CD	-8.21	100.00	111.50
14	N	7	PRO	CA-N-CD	-8.21	100.00	111.50
34	i	38	A	N9-C1'-C2'	-8.21	102.97	112.00
34	i	578	G	O3'-P-O5'	-8.21	88.40	104.00
34	i	1836	C	O4'-C1'-N1	8.21	114.77	108.20
34	i	303	G	O4'-C1'-N9	8.21	114.77	108.20
34	i	1344	G	N9-C1'-C2'	-8.21	102.97	112.00
34	i	1615	A	C1'-O4'-C4'	-8.21	103.33	109.90
34	i	1804	U	O4'-C1'-N1	8.20	114.76	108.20
34	i	1178	A	O4'-C1'-N9	8.20	114.76	108.20
1	A	133	PRO	CA-N-CD	-8.20	100.02	111.50
34	i	80	G	P-O5'-C5'	8.20	134.01	120.90
34	i	630	A	C1'-O4'-C4'	-8.20	103.34	109.90
34	i	887	G	C1'-O4'-C4'	-8.20	103.34	109.90
34	i	1026	A	O4'-C1'-N9	8.19	114.75	108.20
34	i	1618	A	C3'-C2'-C1'	-8.19	94.95	101.50
34	i	1632	A	O4'-C1'-N9	8.18	114.75	108.20
34	i	156	G	P-O3'-C3'	-8.18	109.89	119.70
34	i	1010	G	C3'-C2'-C1'	-8.18	94.96	101.50
21	U	93	SER	CA-C-N	-8.17	94.21	117.10
34	i	281	U	O4'-C1'-N1	8.17	114.74	108.20
34	i	1660	G	O4'-C1'-C2'	8.17	114.95	107.60
34	i	1715	U	O4'-C1'-C2'	-8.17	97.63	105.80
21	U	57	PRO	CA-N-CD	-8.16	100.08	111.50
34	i	186	G	C1'-O4'-C4'	-8.15	103.38	109.90
34	i	605	C	N1-C1'-C2'	8.15	124.60	114.00
34	i	1307	C	C1'-O4'-C4'	-8.14	103.39	109.90
34	i	435	A	C1'-O4'-C4'	-8.14	103.39	109.90
34	i	1034	U	O4'-C1'-N1	8.14	114.71	108.20
34	i	908	C	C3'-C2'-C1'	8.13	108.01	101.50
34	i	1332	C	O4'-C1'-N1	8.13	114.71	108.20
16	P	37	TYR	CB-CG-CD1	8.13	125.88	121.00
21	U	103	SER	C-N-CA	-8.13	101.37	121.70
34	i	1651	G	O4'-C1'-N9	8.13	114.71	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	909	A	O4'-C1'-C2'	-8.13	97.67	105.80
34	i	145	G	N9-C1'-C2'	8.13	124.56	114.00
34	i	1322	U	C1'-O4'-C4'	-8.12	103.40	109.90
34	i	837	G	O4'-C4'-C3'	-8.12	95.88	104.00
3	C	93	LYS	O-C-N	-8.12	109.71	122.70
34	i	315	C	P-O3'-C3'	8.12	129.44	119.70
34	i	1777	C	O4'-C1'-C2'	-8.12	97.68	105.80
34	i	851	G	O4'-C1'-N9	8.11	114.69	108.20
34	i	927	C	C5'-C4'-C3'	-8.12	103.02	116.00
34	i	311	C	C3'-C2'-C1'	8.11	107.99	101.50
34	i	495	G	O4'-C1'-N9	8.11	114.69	108.20
34	i	451	U	O4'-C1'-N1	8.11	114.69	108.20
12	L	153	LYS	C-N-CA	8.10	141.95	121.70
34	i	562	U	O4'-C1'-N1	8.10	114.68	108.20
34	i	1233	C	C3'-C2'-C1'	8.10	107.98	101.50
34	i	162	C	P-O3'-C3'	8.09	129.41	119.70
34	i	1714	A	C1'-O4'-C4'	8.09	116.37	109.90
34	i	854	A	O4'-C1'-C2'	-8.09	97.71	105.80
21	U	93	SER	O-C-N	8.08	136.46	121.10
34	i	333	A	O4'-C1'-N9	8.08	114.67	108.20
34	i	520	U	N1-C1'-C2'	-8.07	103.12	112.00
34	i	619	A	O4'-C1'-C2'	-8.06	97.74	105.80
34	i	1133	U	C2'-C3'-O3'	8.06	127.24	109.50
34	i	217	U	O4'-C1'-N1	8.06	114.65	108.20
34	i	1467	C	N1-C1'-C2'	8.06	124.48	114.00
34	i	1191	A	O4'-C4'-C3'	-8.06	95.94	104.00
34	i	598	C	C3'-C2'-C1'	8.06	107.94	101.50
34	i	1030	A	O4'-C1'-N9	8.05	114.64	108.20
17	Q	31	LEU	N-CA-C	8.04	132.71	111.00
34	i	917	G	O4'-C1'-N9	8.04	114.63	108.20
34	i	1060	C	O4'-C1'-C2'	-8.04	97.76	105.80
34	i	491	C	P-O3'-C3'	8.04	129.34	119.70
34	i	1046	A	O4'-C1'-N9	8.04	114.63	108.20
34	i	464	G	N9-C1'-C2'	8.03	124.44	114.00
34	i	1161	G	N9-C1'-C2'	-8.03	103.17	112.00
34	i	1655	C	P-O3'-C3'	-8.02	110.08	119.70
34	i	844	U	N1-C1'-C2'	8.01	124.42	114.00
34	i	1359	C	C3'-C2'-C1'	8.01	107.91	101.50
34	i	570	U	C4'-C3'-O3'	8.01	129.02	113.00
34	i	1117	G	O4'-C1'-N9	8.01	114.61	108.20
34	i	1707	A	O4'-C1'-N9	8.00	114.60	108.20
11	K	84	HIS	CB-CA-C	-8.00	94.40	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	41	G	O4'-C1'-N9	-8.00	101.80	108.20
34	i	435	A	N9-C1'-C2'	7.99	124.39	114.00
34	i	490	A	P-O3'-C3'	7.99	129.29	119.70
34	i	1289	A	N9-C1'-C2'	7.99	124.39	114.00
34	i	1850	C	O4'-C1'-N1	7.99	114.59	108.20
34	i	205	G	N9-C1'-C2'	7.99	124.39	114.00
34	i	342	U	C3'-C2'-C1'	7.98	107.89	101.50
34	i	1786	G	C3'-C2'-C1'	-7.98	95.11	101.50
34	i	1068	U	O4'-C1'-C2'	-7.98	97.82	105.80
34	i	939	U	O4'-C1'-N1	7.97	114.58	108.20
34	i	1303	U	O4'-C1'-N1	7.97	114.58	108.20
34	i	366	A	O4'-C1'-N9	7.97	114.57	108.20
34	i	1534	U	O4'-C1'-C2'	-7.97	97.83	105.80
34	i	1093	G	O4'-C1'-N9	7.96	114.57	108.20
7	G	131	ARG	C-N-CA	-7.96	101.81	121.70
34	i	986	A	C3'-C2'-C1'	7.96	107.87	101.50
34	i	1650	C	N1-C1'-C2'	7.96	124.34	114.00
34	i	735	C	O4'-C1'-C2'	-7.95	97.85	105.80
34	i	429	A	N9-C1'-C2'	-7.95	103.25	112.00
34	i	1348	G	O4'-C1'-C2'	7.95	114.75	107.60
34	i	890	G	O4'-C1'-N9	7.95	114.56	108.20
34	i	238	G	O4'-C1'-N9	7.95	114.56	108.20
34	i	1677	C	O4'-C1'-C2'	-7.95	97.85	105.80
34	i	1725	U	O4'-C1'-N1	7.95	114.56	108.20
34	i	525	G	P-O3'-C3'	7.94	129.23	119.70
26	Z	70	PRO	CA-N-CD	-7.94	100.39	111.50
34	i	960	A	C1'-O4'-C4'	7.94	116.25	109.90
34	i	1136	G	O4'-C1'-N9	7.94	114.55	108.20
34	i	520	U	P-O5'-C5'	-7.94	108.20	120.90
34	i	650	C	N1-C1'-C2'	7.93	124.31	114.00
34	i	1095	G	O4'-C1'-N9	7.93	114.54	108.20
34	i	1111	U	P-O3'-C3'	7.92	129.21	119.70
34	i	80	G	O4'-C1'-C2'	-7.92	97.88	105.80
34	i	1741	U	C4'-C3'-O3'	7.92	128.85	113.00
34	i	872	C	O4'-C1'-C2'	-7.92	97.88	105.80
9	I	184	ARG	CB-CA-C	-7.92	94.56	110.40
34	i	207	U	O3'-P-O5'	-7.91	88.97	104.00
34	i	1312	C	N1-C1'-C2'	7.91	124.28	114.00
34	i	905	G	C4'-C3'-O3'	7.90	128.81	113.00
34	i	1786	G	C1'-O4'-C4'	-7.90	103.58	109.90
34	i	1297	A	C4'-C3'-O3'	7.90	128.81	113.00
34	i	1660	G	C1'-O4'-C4'	-7.90	103.58	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1369	C	C3'-C2'-C1'	7.90	107.82	101.50
34	i	626	C	P-O5'-C5'	7.90	133.53	120.90
34	i	1537	C	C1'-O4'-C4'	-7.89	103.59	109.90
34	i	817	G	P-O3'-C3'	7.88	129.16	119.70
34	i	1515	G	O3'-P-O5'	7.88	118.97	104.00
34	i	1779	C	O4'-C1'-C2'	-7.88	97.92	105.80
34	i	33	G	O4'-C1'-N9	7.87	114.50	108.20
34	i	1229	G	O4'-C1'-C2'	7.87	114.69	107.60
34	i	467	G	O4'-C1'-N9	7.87	114.50	108.20
34	i	1471	G	P-O5'-C5'	7.87	133.49	120.90
34	i	82	G	O4'-C1'-N9	7.86	114.49	108.20
34	i	342	U	O4'-C1'-C2'	-7.86	97.94	105.80
34	i	1678	C	N1-C1'-C2'	7.86	124.22	114.00
34	i	1524	C	N1-C1'-C2'	7.86	124.21	114.00
8	H	15	LYS	C-N-CD	-7.85	103.33	120.60
34	i	329	A	C2'-C3'-O3'	7.84	126.75	109.50
34	i	1539	C	C3'-C2'-C1'	7.84	107.77	101.50
34	i	1653	G	O4'-C1'-C2'	7.84	114.65	107.60
34	i	549	G	O4'-C1'-N9	7.84	114.47	108.20
34	i	907	C	N1-C1'-C2'	7.83	124.19	114.00
7	G	161	PRO	CA-N-CD	-7.83	100.53	111.50
34	i	169	U	P-O3'-C3'	7.83	129.10	119.70
34	i	791	A	O4'-C1'-N9	7.83	114.47	108.20
26	Z	104	ARG	N-CA-CB	-7.83	96.51	110.60
34	i	316	C	O4'-C1'-C2'	-7.83	97.97	105.80
34	i	1709	U	O4'-C1'-N1	7.83	114.46	108.20
34	i	77	A	N9-C1'-C2'	-7.83	103.39	112.00
34	i	117	C	O4'-C1'-N1	7.83	114.46	108.20
34	i	1632	A	N9-C1'-C2'	-7.83	103.39	112.00
34	i	1666	G	N9-C1'-C2'	7.82	124.16	114.00
34	i	1860	A	P-O3'-C3'	7.82	129.08	119.70
34	i	96	C	N1-C1'-C2'	7.81	124.16	114.00
34	i	147	A	C1'-O4'-C4'	7.81	116.15	109.90
34	i	541	U	N1-C1'-C2'	7.80	124.15	114.00
34	i	594	A	O4'-C1'-C2'	-7.80	98.00	105.80
34	i	987	G	O4'-C1'-C2'	7.80	114.62	107.60
11	K	35	LEU	CA-CB-CG	-7.80	97.37	115.30
34	i	1686	U	O4'-C1'-N1	7.79	114.44	108.20
34	i	446	C	C3'-C2'-C1'	7.79	107.73	101.50
34	i	524	G	C4'-C3'-O3'	7.79	128.58	113.00
34	i	612	C	N1-C1'-C2'	7.79	124.12	114.00
34	i	1091	U	N1-C1'-C2'	7.79	124.12	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	222	G	O4'-C1'-C2'	7.78	114.60	107.60
34	i	429	A	O4'-C1'-N9	7.77	114.42	108.20
34	i	733	G	O4'-C1'-N9	7.77	114.42	108.20
34	i	821	A	P-O3'-C3'	-7.77	110.38	119.70
34	i	368	U	C1'-O4'-C4'	-7.77	103.69	109.90
34	i	1655	C	C5'-C4'-C3'	-7.77	103.57	116.00
34	i	3	C	O4'-C1'-C2'	-7.77	98.03	105.80
34	i	1420	G	O4'-C1'-N9	7.77	114.41	108.20
34	i	904	A	O3'-P-O5'	-7.76	89.25	104.00
34	i	1386	U	O4'-C1'-N1	7.76	114.41	108.20
9	I	5	ARG	C-N-CA	7.76	141.10	121.70
25	Y	51	THR	C-N-CD	-7.76	103.54	120.60
34	i	191	C	C4'-C3'-O3'	7.75	128.50	113.00
34	i	977	A	C3'-C2'-C1'	7.75	107.70	101.50
34	i	1692	A	O4'-C1'-N9	7.75	114.40	108.20
7	G	155	GLN	O-C-N	-7.74	110.31	122.70
16	P	36	LEU	CA-C-N	-7.74	100.17	117.20
34	i	1841	G	N9-C1'-C2'	-7.74	103.48	112.00
34	i	1485	A	O4'-C1'-N9	7.74	114.39	108.20
34	i	40	A	O4'-C1'-N9	7.74	114.39	108.20
20	T	42	HIS	CB-CA-C	-7.74	94.93	110.40
9	I	178	ARG	CG-CD-NE	-7.73	95.56	111.80
17	Q	146	ARG	NE-CZ-NH1	-7.72	116.44	120.30
34	i	1449	C	N1-C1'-C2'	7.72	124.04	114.00
24	X	23	HIS	CA-C-N	7.72	134.19	117.20
34	i	645	A	O4'-C1'-N9	7.72	114.37	108.20
34	i	1405	A	C5'-C4'-C3'	7.71	128.34	116.00
3	C	148	VAL	C-N-CD	-7.71	103.64	120.60
10	J	166	GLY	C-N-CA	-7.71	106.10	122.30
34	i	1003	C	N1-C1'-C2'	7.71	124.03	114.00
34	i	1696	C	O4'-C1'-C2'	-7.71	98.09	105.80
34	i	2	A	P-O3'-C3'	7.70	128.94	119.70
34	i	171	A	N9-C1'-C2'	-7.70	103.53	112.00
34	i	1606	G	O4'-C1'-N9	7.70	114.36	108.20
34	i	164	A	C1'-O4'-C4'	-7.69	103.75	109.90
34	i	1215	C	C3'-C2'-C1'	7.69	107.66	101.50
34	i	484	C	O4'-C1'-C2'	-7.69	98.11	105.80
34	i	227	A	C1'-O4'-C4'	7.68	116.05	109.90
34	i	521	A	O4'-C4'-C3'	-7.68	96.32	104.00
34	i	690	C	O4'-C1'-N1	7.68	114.34	108.20
34	i	1134	C	O3'-P-O5'	7.68	118.58	104.00
2	B	37	ALA	C-N-CA	-7.67	102.51	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	76	U	O4'-C1'-N1	7.67	114.34	108.20
34	i	959	A	O4'-C1'-C2'	7.67	114.50	107.60
31	e	77	HIS	C-N-CA	7.67	138.41	122.30
19	S	6	PRO	CA-C-N	7.67	134.07	117.20
34	i	1448	A	C3'-C2'-C1'	7.66	107.63	101.50
34	i	522	C	O4'-C1'-N1	7.66	114.33	108.20
34	i	689	G	O4'-C1'-C2'	-7.65	98.15	105.80
18	R	89	SER	O-C-N	-7.64	110.47	122.70
34	i	301	C	O4'-C1'-N1	7.64	114.31	108.20
34	i	1396	U	O4'-C1'-N1	7.63	114.31	108.20
34	i	385	G	O4'-C1'-C2'	7.63	114.47	107.60
34	i	1597	U	O3'-P-O5'	-7.63	89.50	104.00
34	i	1859	C	C4'-C3'-O3'	7.63	128.26	113.00
34	i	630	A	N9-C1'-C2'	7.63	123.92	114.00
34	i	1056	A	N9-C1'-C2'	7.63	123.91	114.00
5	E	259	LYS	N-CA-C	7.62	131.59	111.00
34	i	1092	G	O4'-C1'-N9	7.62	114.30	108.20
34	i	296	U	O4'-C1'-N1	7.62	114.30	108.20
34	i	526	A	C4'-C3'-O3'	7.62	128.24	113.00
34	i	1690	A	O4'-C1'-C2'	-7.62	98.19	105.80
12	L	153	LYS	CA-C-N	7.61	133.95	117.20
10	J	93	LYS	C-N-CA	7.61	140.73	121.70
34	i	595	A	O4'-C1'-N9	7.61	114.29	108.20
34	i	35	C	C3'-C2'-C1'	7.61	107.59	101.50
34	i	450	A	O4'-C1'-N9	7.61	114.29	108.20
8	H	106	ARG	NE-CZ-NH1	-7.61	116.50	120.30
16	P	52	LYS	C-N-CA	-7.60	102.69	121.70
34	i	865	A	O4'-C1'-N9	7.60	114.28	108.20
34	i	1043	C	C3'-C2'-C1'	7.59	107.57	101.50
34	i	1517	A	C5'-C4'-O4'	7.59	118.21	109.10
34	i	628	C	O4'-C1'-N1	7.59	114.27	108.20
34	i	1182	U	O4'-C1'-N1	7.58	114.27	108.20
9	I	55	TYR	CA-CB-CG	-7.58	99.00	113.40
34	i	606	A	N9-C1'-C2'	7.58	123.86	114.00
33	g	274	VAL	C-N-CA	-7.58	102.76	121.70
34	i	1258	C	C1'-O4'-C4'	-7.57	103.84	109.90
34	i	1828	A	O4'-C1'-N9	7.57	114.25	108.20
6	F	36	GLN	N-CA-C	-7.55	90.60	111.00
34	i	1771	G	C1'-O4'-C4'	-7.55	103.86	109.90
34	i	436	G	C3'-C2'-C1'	7.55	107.54	101.50
6	F	131	ALA	C-N-CA	-7.55	106.44	122.30
34	i	848	G	C4'-C3'-O3'	-7.55	93.55	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1263	C	N1-C1'-C2'	7.55	123.81	114.00
34	i	1113	C	C3'-C2'-C1'	-7.55	95.46	101.50
34	i	296	U	P-O5'-C5'	7.55	132.98	120.90
34	i	1447	G	C3'-C2'-C1'	7.54	107.53	101.50
34	i	1600	G	C1'-O4'-C4'	-7.54	103.87	109.90
34	i	1771	G	O4'-C1'-C2'	7.54	114.39	107.60
34	i	1630	C	O4'-C1'-N1	7.54	114.23	108.20
34	i	554	A	O4'-C1'-N9	7.53	114.23	108.20
34	i	604	G	N9-C1'-C2'	7.53	123.80	114.00
34	i	659	A	O4'-C1'-N9	7.53	114.23	108.20
4	D	94	ARG	CB-CA-C	-7.53	95.34	110.40
34	i	902	U	O4'-C1'-N1	7.53	114.22	108.20
34	i	1269	C	P-O3'-C3'	-7.53	110.66	119.70
34	i	170	A	O4'-C1'-N9	7.53	114.22	108.20
34	i	794	G	P-O5'-C5'	7.53	132.94	120.90
34	i	1289	A	C3'-C2'-C1'	7.52	107.51	101.50
21	U	104	ILE	N-CA-CB	7.51	128.07	110.80
34	i	78	C	N1-C1'-C2'	-7.51	103.74	112.00
34	i	594	A	C3'-C2'-C1'	7.50	107.50	101.50
34	i	825	C	O4'-C1'-C2'	-7.50	98.30	105.80
34	i	795	U	P-O3'-C3'	7.50	128.71	119.70
34	i	1499	C	O4'-C1'-N1	7.50	114.20	108.20
34	i	1591	U	O4'-C1'-N1	7.50	114.20	108.20
34	i	218	A	O4'-C1'-N9	7.50	114.20	108.20
34	i	1055	G	P-O3'-C3'	7.50	128.70	119.70
34	i	1488	U	O4'-C1'-N1	7.50	114.20	108.20
34	i	1504	A	C1'-O4'-C4'	7.50	115.90	109.90
34	i	1720	U	O4'-C1'-N1	7.50	114.20	108.20
34	i	188	U	O4'-C1'-N1	7.50	114.20	108.20
13	M	10	GLY	N-CA-C	7.50	131.85	113.10
34	i	230	C	O4'-C1'-N1	7.49	114.19	108.20
34	i	400	G	O4'-C1'-N9	7.49	114.19	108.20
34	i	837	G	P-O5'-C5'	7.49	132.88	120.90
34	i	1505	U	C4'-C3'-O3'	-7.49	93.67	109.40
10	J	17	ARG	CB-CA-C	-7.49	95.42	110.40
34	i	1664	G	O4'-C1'-N9	7.49	114.19	108.20
10	J	161	LEU	C-N-CA	-7.48	103.00	121.70
34	i	1043	C	O4'-C1'-C2'	-7.48	98.32	105.80
34	i	931	G	O4'-C1'-N9	7.47	114.18	108.20
34	i	1413	C	C1'-O4'-C4'	7.47	115.88	109.90
34	i	1410	A	O4'-C1'-N9	7.47	114.18	108.20
34	i	639	U	N1-C1'-C2'	7.47	123.71	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1667	U	O4'-C1'-N1	7.47	114.18	108.20
34	i	1424	G	N9-C1'-C2'	-7.46	103.79	112.00
34	i	1559	C	N1-C1'-C2'	7.46	123.70	114.00
34	i	1244	U	O4'-C1'-N1	7.46	114.17	108.20
34	i	1530	U	O3'-P-O5'	-7.46	89.83	104.00
34	i	35	C	O4'-C1'-C2'	-7.46	98.34	105.80
34	i	853	U	C1'-O4'-C4'	-7.45	103.94	109.90
34	i	1028	C	N1-C1'-C2'	7.45	123.68	114.00
34	i	1459	U	P-O5'-C5'	7.45	132.82	120.90
34	i	797	U	O4'-C1'-N1	7.45	114.16	108.20
34	i	1270	G	C3'-C2'-C1'	7.44	107.46	101.50
18	R	1	MET	CB-CA-C	7.44	125.29	110.40
34	i	808	A	O4'-C1'-N9	7.44	114.15	108.20
34	i	684	A	C3'-C2'-C1'	-7.44	95.55	101.50
34	i	976	A	C1'-O4'-C4'	-7.44	103.95	109.90
34	i	1590	U	N1-C1'-C2'	-7.44	103.82	112.00
8	H	109	ARG	CA-CB-CG	-7.44	97.04	113.40
34	i	689	G	C3'-C2'-C1'	7.42	107.44	101.50
34	i	514	U	O4'-C1'-N1	7.42	114.14	108.20
34	i	1237	A	P-O3'-C3'	7.42	128.61	119.70
34	i	1406	C	C3'-C2'-C1'	7.42	107.44	101.50
34	i	927	C	O4'-C1'-C2'	-7.42	98.38	105.80
34	i	1632	A	C1'-O4'-C4'	7.42	115.84	109.90
34	i	1068	U	P-O3'-C3'	7.42	128.60	119.70
34	i	980	C	N1-C1'-C2'	7.41	123.64	114.00
34	i	1776	G	C5'-C4'-C3'	7.41	127.86	116.00
34	i	34	U	C1'-O4'-C4'	-7.41	103.97	109.90
5	E	75	LYS	N-CA-C	7.41	131.00	111.00
34	i	1127	G	O4'-C1'-N9	7.41	114.12	108.20
19	S	9	PHE	N-CA-C	7.40	130.99	111.00
34	i	503	G	O4'-C1'-N9	7.39	114.11	108.20
9	I	133	GLU	O-C-N	-7.39	110.88	122.70
33	g	50	THR	C-N-CA	-7.39	103.23	121.70
34	i	1186	A	O4'-C1'-C2'	-7.39	98.41	105.80
34	i	1675	G	O4'-C1'-N9	7.39	114.11	108.20
34	i	420	C	O4'-C1'-N1	7.38	114.11	108.20
34	i	432	C	C3'-C2'-C1'	7.38	107.41	101.50
32	f	148	TYR	CA-CB-CG	-7.38	99.37	113.40
34	i	1766	C	C3'-C2'-C1'	7.38	107.41	101.50
34	i	985	C	O4'-C1'-C2'	-7.38	98.42	105.80
34	i	1433	C	C1'-O4'-C4'	-7.38	104.00	109.90
34	i	1404	U	C1'-O4'-C4'	-7.37	104.00	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1533	C	C4'-C3'-C2'	-7.37	95.23	102.60
34	i	1019	A	C1'-O4'-C4'	7.37	115.79	109.90
10	J	144	ILE	CA-CB-CG1	-7.36	97.01	111.00
18	R	1	MET	O-C-N	7.36	135.71	123.20
24	X	115	ILE	N-CA-C	-7.36	91.14	111.00
34	i	27	A	O4'-C1'-N9	7.36	114.08	108.20
23	W	100	GLY	N-CA-C	-7.35	94.71	113.10
28	b	9	HIS	C-N-CD	-7.35	104.43	120.60
34	i	534	G	O4'-C1'-N9	7.35	114.08	108.20
25	Y	64	PHE	C-N-CA	-7.35	106.86	122.30
34	i	529	C	O4'-C1'-N1	7.35	114.08	108.20
34	i	76	U	P-O5'-C5'	7.35	132.66	120.90
34	i	410	G	C1'-O4'-C4'	-7.35	104.02	109.90
34	i	547	U	O4'-C1'-C2'	-7.35	98.45	105.80
34	i	841	G	P-O3'-C3'	-7.34	110.89	119.70
18	R	3	ARG	NE-CZ-NH2	7.34	123.97	120.30
34	i	731	C	O4'-C1'-N1	7.34	114.07	108.20
34	i	1717	G	P-O5'-C5'	7.34	132.65	120.90
34	i	1818	A	P-O3'-C3'	7.34	128.51	119.70
34	i	1355	U	C1'-O4'-C4'	7.34	115.77	109.90
34	i	14	C	O4'-C1'-N1	7.34	114.07	108.20
34	i	1175	G	O4'-C1'-N9	7.34	114.07	108.20
34	i	608	C	O4'-C1'-N1	7.33	114.07	108.20
34	i	893	U	O3'-P-O5'	-7.33	90.06	104.00
34	i	1773	G	N9-C1'-C2'	-7.33	103.93	112.00
34	i	81	U	N1-C1'-C2'	7.33	123.53	114.00
34	i	1194	G	C3'-C2'-C1'	-7.33	95.64	101.50
34	i	1451	A	O4'-C1'-C2'	-7.33	98.47	105.80
34	i	1773	G	C3'-C2'-C1'	-7.33	95.64	101.50
34	i	798	A	C1'-O4'-C4'	-7.33	104.04	109.90
10	J	180	LYS	CB-CA-C	-7.32	95.75	110.40
34	i	210	G	N9-C1'-C2'	-7.32	103.94	112.00
34	i	1845	A	P-O3'-C3'	7.32	128.49	119.70
34	i	57	U	C1'-O4'-C4'	7.32	115.76	109.90
34	i	1689	U	O4'-C1'-N1	7.32	114.06	108.20
4	D	82	GLY	O-C-N	-7.31	111.00	122.70
9	I	3	ILE	N-CA-C	7.31	130.74	111.00
34	i	574	A	P-O5'-C5'	7.30	132.59	120.90
34	i	168	C	C3'-C2'-C1'	7.30	107.34	101.50
34	i	1672	U	N1-C1'-C2'	-7.30	103.97	112.00
34	i	545	A	O4'-C1'-C2'	-7.30	98.50	105.80
34	i	332	C	C3'-C2'-C1'	7.29	107.34	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	225	C	N1-C1'-C2'	7.29	123.48	114.00
34	i	656	U	O4'-C1'-C2'	-7.29	98.51	105.80
21	U	93	SER	C-N-CA	-7.29	91.38	122.00
34	i	1648	U	P-O3'-C3'	7.29	128.45	119.70
34	i	1237	A	O4'-C1'-C2'	-7.28	98.52	105.80
34	i	454	A	O3'-P-O5'	7.28	117.83	104.00
34	i	1325	U	N1-C1'-C2'	7.28	123.46	114.00
18	R	1	MET	CA-CB-CG	7.28	125.67	113.30
34	i	1504	A	O4'-C1'-N9	7.28	114.02	108.20
34	i	187	C	O4'-C1'-C2'	-7.27	98.53	105.80
24	X	23	HIS	C-N-CA	7.27	139.87	121.70
34	i	827	G	C3'-C2'-C1'	-7.27	95.69	101.50
34	i	1204	A	N9-C1'-C2'	-7.27	104.00	112.00
34	i	942	U	O4'-C1'-N1	7.26	114.01	108.20
32	f	88	PRO	O-C-N	-7.26	111.08	122.70
34	i	743	U	O4'-C1'-C2'	-7.26	98.54	105.80
34	i	1527	C	C3'-C2'-C1'	7.26	107.31	101.50
34	i	64	A	N9-C1'-C2'	-7.26	104.02	112.00
34	i	541	U	P-O5'-C5'	7.26	132.51	120.90
34	i	1557	C	N1-C1'-C2'	7.26	123.44	114.00
34	i	1693	C	C3'-C2'-C1'	7.26	107.31	101.50
34	i	873	C	O4'-C1'-C2'	-7.25	98.55	105.80
34	i	1059	C	C3'-C2'-C1'	7.25	107.30	101.50
34	i	1161	G	O4'-C1'-N9	7.25	114.00	108.20
34	i	1060	C	C3'-C2'-C1'	7.25	107.30	101.50
34	i	1275	C	O4'-C1'-C2'	-7.25	98.55	105.80
34	i	498	A	O4'-C1'-N9	7.25	114.00	108.20
18	R	89	SER	C-N-CA	-7.25	103.58	121.70
34	i	798	A	O4'-C1'-N9	7.24	114.00	108.20
34	i	1781	G	O4'-C1'-N9	7.24	113.99	108.20
34	i	359	C	N1-C1'-C2'	7.24	123.41	114.00
34	i	60	A	O4'-C1'-C2'	7.24	114.11	107.60
34	i	277	U	O4'-C1'-C2'	-7.24	98.56	105.80
34	i	299	G	P-O3'-C3'	7.24	128.38	119.70
34	i	1305	C	C3'-C2'-C1'	7.24	107.29	101.50
33	g	275	ILE	N-CA-C	7.23	130.53	111.00
34	i	997	A	O4'-C1'-C2'	-7.23	98.57	105.80
34	i	1184	A	C3'-C2'-C1'	7.23	107.28	101.50
34	i	290	A	O4'-C1'-N9	7.23	113.98	108.20
34	i	1637	U	C1'-O4'-C4'	7.22	115.68	109.90
34	i	106	C	O4'-C1'-N1	7.22	113.98	108.20
34	i	1210	A	O4'-C1'-N9	7.22	113.98	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	162	C	C4'-C3'-O3'	7.22	127.44	113.00
34	i	17	C	O4'-C1'-N1	7.22	113.97	108.20
34	i	170	A	C5'-C4'-C3'	-7.22	104.45	116.00
34	i	431	C	C1'-O4'-C4'	-7.21	104.13	109.90
34	i	673	G	O4'-C1'-N9	7.21	113.97	108.20
34	i	740	G	C3'-C2'-C1'	7.21	107.27	101.50
11	K	37	ASP	CB-CG-OD2	7.21	124.79	118.30
10	J	91	LYS	O-C-N	-7.21	111.17	122.70
34	i	542	G	C3'-C2'-C1'	-7.21	95.73	101.50
34	i	1041	U	O4'-C1'-N1	7.20	113.96	108.20
14	N	19	ARG	N-CA-C	-7.20	91.56	111.00
34	i	1560	C	O4'-C1'-C2'	-7.20	98.60	105.80
10	J	35	TYR	CA-C-N	-7.20	101.81	116.20
34	i	635	C	C3'-C2'-C1'	7.19	107.25	101.50
34	i	791	A	O4'-C1'-C2'	-7.19	98.61	105.80
34	i	1767	C	O4'-C1'-N1	7.19	113.95	108.20
4	D	52	ALA	C-N-CA	-7.19	103.73	121.70
34	i	306	C	O4'-C1'-N1	7.19	113.95	108.20
34	i	1546	U	C3'-C2'-C1'	-7.19	95.75	101.50
8	H	191	GLU	O-C-N	-7.18	111.21	122.70
34	i	149	A	C3'-C2'-C1'	7.18	107.24	101.50
14	N	14	SER	CB-CA-C	-7.18	96.46	110.10
34	i	364	G	O4'-C1'-N9	7.18	113.94	108.20
34	i	1116	U	N1-C1'-C2'	7.18	123.33	114.00
34	i	1301	C	O4'-C1'-N1	7.18	113.94	108.20
27	a	97	PRO	CA-CB-CG	7.17	118.43	104.80
34	i	279	G	N9-C1'-C2'	-7.17	104.11	112.00
34	i	1517	A	P-O3'-C3'	-7.16	111.10	119.70
34	i	145	G	O4'-C1'-C2'	7.16	114.05	107.60
18	R	111	PHE	N-CA-C	7.16	130.33	111.00
34	i	1452	G	C1'-O4'-C4'	-7.16	104.17	109.90
34	i	1287	A	P-O3'-C3'	7.16	128.29	119.70
11	K	35	LEU	N-CA-C	-7.15	91.69	111.00
34	i	1578	C	C3'-C2'-C1'	7.15	107.22	101.50
8	H	109	ARG	O-C-N	7.15	134.14	122.70
34	i	1788	C	O4'-C1'-C2'	-7.15	98.65	105.80
34	i	1288	C	P-O5'-C5'	-7.15	109.46	120.90
16	P	49	LEU	CA-C-N	7.14	132.91	117.20
24	X	22	TRP	C-N-CA	-7.14	103.86	121.70
34	i	368	U	C4'-C3'-C2'	-7.14	95.46	102.60
34	i	1852	G	O4'-C1'-N9	7.14	113.91	108.20
2	B	147	ASN	C-N-CA	-7.13	103.87	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	899	A	C3'-C2'-C1'	-7.13	95.80	101.50
34	i	1118	A	N9-C1'-C2'	-7.13	104.16	112.00
34	i	1045	A	C4'-C3'-C2'	-7.13	95.47	102.60
8	H	110	THR	CA-C-N	7.12	132.87	117.20
34	i	834	G	O4'-C1'-N9	7.12	113.90	108.20
34	i	1015	C	N1-C1'-C2'	7.12	123.26	114.00
34	i	1666	G	C1'-O4'-C4'	-7.12	104.20	109.90
34	i	167	G	N9-C1'-C2'	-7.12	104.17	112.00
34	i	1019	A	N9-C1'-C2'	-7.11	104.17	112.00
34	i	1858	U	P-O5'-C5'	7.11	132.28	120.90
34	i	684	A	C1'-O4'-C4'	-7.11	104.21	109.90
34	i	1738	G	C1'-O4'-C4'	-7.11	104.21	109.90
34	i	1656	A	C1'-O4'-C4'	-7.11	104.21	109.90
19	S	93	GLY	CA-C-N	-7.11	101.56	117.20
20	T	4	VAL	N-CA-CB	-7.11	95.86	111.50
34	i	227	A	C3'-C2'-C1'	7.11	107.18	101.50
34	i	1651	G	C1'-O4'-C4'	-7.11	104.22	109.90
34	i	830	C	P-O3'-C3'	7.10	128.22	119.70
34	i	1459	U	O4'-C1'-N1	7.10	113.88	108.20
34	i	894	U	P-O5'-C5'	7.10	132.25	120.90
34	i	1001	G	O4'-C1'-N9	7.10	113.88	108.20
34	i	275	C	O4'-C1'-C2'	-7.09	98.71	105.80
34	i	47	G	O4'-C1'-N9	7.09	113.87	108.20
34	i	241	A	O4'-C1'-C2'	-7.09	98.71	105.80
34	i	1634	G	C3'-C2'-C1'	7.09	107.17	101.50
34	i	567	U	O4'-C1'-N1	7.08	113.87	108.20
34	i	906	G	O4'-C1'-N9	7.08	113.87	108.20
34	i	1663	U	O5'-P-OP2	-7.08	99.32	105.70
18	R	2	GLY	CA-C-N	7.08	132.78	117.20
34	i	275	C	C3'-C2'-C1'	7.08	107.17	101.50
34	i	1363	U	O4'-C1'-N1	7.08	113.86	108.20
15	O	145	GLY	N-CA-C	7.08	130.80	113.10
34	i	49	C	N1-C1'-C2'	7.08	123.20	114.00
34	i	1503	G	C1'-C2'-O2'	7.07	131.82	110.60
20	T	82	ARG	NE-CZ-NH1	7.07	123.84	120.30
34	i	1311	U	C3'-C2'-C1'	-7.07	95.84	101.50
34	i	792	G	C3'-C2'-C1'	-7.07	95.84	101.50
34	i	279	G	O4'-C1'-N9	7.07	113.86	108.20
34	i	1661	C	O4'-C1'-N1	7.07	113.86	108.20
34	i	53	C	C3'-C2'-C1'	7.07	107.15	101.50
34	i	32	U	O4'-C1'-N1	7.07	113.85	108.20
34	i	100	U	O4'-C1'-N1	7.06	113.85	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	970	C	N1-C1'-C2'	7.06	123.18	114.00
34	i	1783	G	O4'-C1'-C2'	-7.06	98.74	105.80
34	i	58	C	N1-C1'-C2'	-7.06	104.23	112.00
34	i	1755	U	P-O5'-C5'	7.06	132.19	120.90
19	S	142	ARG	N-CA-CB	-7.05	97.90	110.60
11	K	1	MET	N-CA-C	7.05	130.04	111.00
10	J	164	PRO	N-CA-CB	-7.05	94.84	103.30
34	i	1668	U	O4'-C1'-N1	7.05	113.84	108.20
34	i	997	A	C1'-O4'-C4'	7.04	115.54	109.90
34	i	1105	C	C3'-C2'-C1'	-7.04	95.86	101.50
10	J	123	ILE	CB-CA-C	7.04	125.69	111.60
34	i	166	A	O4'-C1'-N9	7.04	113.83	108.20
34	i	274	G	O4'-C1'-C2'	7.04	113.94	107.60
34	i	342	U	O4'-C1'-N1	7.04	113.83	108.20
34	i	1093	G	C5'-C4'-O4'	7.04	117.55	109.10
34	i	1205	A	N9-C1'-C2'	-7.04	104.26	112.00
34	i	1671	U	P-O3'-C3'	-7.04	111.25	119.70
34	i	1837	G	C1'-O4'-C4'	-7.03	104.28	109.90
34	i	518	A	N9-C1'-C2'	7.03	123.14	114.00
34	i	1478	C	O4'-C1'-N1	7.03	113.82	108.20
34	i	1326	G	C1'-O4'-C4'	-7.02	104.28	109.90
34	i	1827	C	C3'-C2'-C1'	7.02	107.11	101.50
34	i	41	G	C1'-O4'-C4'	-7.02	104.29	109.90
34	i	908	C	O4'-C1'-N1	7.02	113.81	108.20
34	i	267	G	P-O3'-C3'	7.01	128.12	119.70
34	i	1373	U	O4'-C1'-N1	7.01	113.81	108.20
3	C	258	LEU	CB-CG-CD2	7.01	122.92	111.00
34	i	1099	C	O4'-C1'-N1	7.01	113.81	108.20
34	i	1425	G	P-O5'-C5'	7.01	132.12	120.90
4	D	83	SER	N-CA-CB	7.01	121.01	110.50
34	i	1339	U	O4'-C1'-N1	7.01	113.81	108.20
34	i	93	U	O4'-C1'-C2'	-7.00	98.80	105.80
34	i	1405	A	O4'-C1'-C2'	-7.00	98.80	105.80
34	i	956	U	C1'-O4'-C4'	-7.00	104.30	109.90
34	i	1640	C	P-O3'-C3'	7.00	128.10	119.70
20	T	82	ARG	NE-CZ-NH2	7.00	123.80	120.30
34	i	286	C	N1-C1'-C2'	7.00	123.10	114.00
34	i	945	G	O4'-C1'-N9	7.00	113.80	108.20
34	i	1847	C	C1'-O4'-C4'	-7.00	104.30	109.90
34	i	1438	U	O4'-C1'-N1	6.99	113.80	108.20
20	T	82	ARG	NH1-CZ-NH2	-6.99	111.71	119.40
34	i	409	G	O4'-C1'-C2'	-6.99	98.81	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	T	4	VAL	CA-C-N	6.99	132.57	117.20
34	i	1542	C	C3'-C2'-C1'	6.98	107.09	101.50
34	i	53	C	C1'-O4'-C4'	6.98	115.49	109.90
34	i	315	C	O4'-C1'-C2'	-6.98	98.82	105.80
34	i	1479	A	N9-C1'-C2'	-6.98	104.32	112.00
11	K	55	ARG	CB-CG-CD	6.98	129.74	111.60
34	i	906	G	C1'-O4'-C4'	-6.97	104.32	109.90
34	i	91	A	O4'-C1'-N9	6.97	113.78	108.20
34	i	860	A	O4'-C1'-N9	6.97	113.78	108.20
34	i	465	C	C3'-C2'-C1'	6.96	107.07	101.50
34	i	587	G	O4'-C1'-N9	6.96	113.77	108.20
34	i	1053	C	O4'-C1'-N1	6.96	113.76	108.20
34	i	726	C	P-O3'-C3'	6.95	128.04	119.70
34	i	1584	A	N9-C1'-C2'	-6.95	104.35	112.00
34	i	499	G	O4'-C1'-N9	6.95	113.76	108.20
34	i	510	A	C1'-O4'-C4'	-6.95	104.34	109.90
25	Y	31	GLY	N-CA-C	6.94	130.45	113.10
34	i	74	G	P-O3'-C3'	6.94	128.03	119.70
34	i	1503	G	C3'-C2'-C1'	-6.94	95.95	101.50
22	V	67	ASP	CB-CG-OD2	6.93	124.54	118.30
32	f	148	TYR	N-CA-C	6.93	129.72	111.00
34	i	1693	C	P-O3'-C3'	6.93	128.02	119.70
34	i	262	G	P-O3'-C3'	6.93	128.02	119.70
34	i	1047	G	O4'-C1'-N9	6.93	113.75	108.20
34	i	1648	U	N1-C1'-C2'	-6.93	104.38	112.00
34	i	438	A	C3'-C2'-C1'	-6.93	95.96	101.50
34	i	1052	U	P-O3'-C3'	-6.93	111.39	119.70
21	U	118	ASP	CB-CG-OD1	6.92	124.53	118.30
34	i	1328	A	C3'-C2'-C1'	6.92	107.04	101.50
19	S	93	GLY	O-C-N	6.92	133.77	122.70
34	i	1114	C	C1'-O4'-C4'	6.92	115.44	109.90
34	i	1042	U	O4'-C1'-N1	6.92	113.74	108.20
34	i	597	U	N1-C1'-C2'	6.92	122.99	114.00
34	i	509	A	O4'-C1'-C2'	-6.91	98.89	105.80
8	H	110	THR	CA-CB-CG2	6.91	122.08	112.40
34	i	369	C	C3'-C2'-C1'	6.91	107.03	101.50
34	i	1426	C	O4'-C1'-C2'	-6.91	98.89	105.80
34	i	127	C	P-O3'-C3'	6.91	127.99	119.70
34	i	637	U	O4'-C1'-N1	6.91	113.73	108.20
34	i	1118	A	C1'-O4'-C4'	6.90	115.42	109.90
34	i	374	U	N1-C1'-C2'	6.90	122.97	114.00
28	b	79	PHE	N-CA-C	6.90	129.62	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	729	C	O4'-C1'-C2'	-6.89	98.91	105.80
34	i	1329	U	N1-C1'-C2'	-6.89	104.42	112.00
34	i	1497	C	O3'-P-O5'	-6.89	90.91	104.00
1	A	53	ARG	NE-CZ-NH1	-6.89	116.86	120.30
18	R	123	THR	CB-CA-C	-6.89	93.01	111.60
34	i	1173	U	O4'-C1'-N1	6.89	113.71	108.20
2	B	77	ASP	CB-CG-OD1	6.88	124.50	118.30
11	K	2	LEU	N-CA-C	6.88	129.59	111.00
34	i	63	U	O4'-C1'-N1	6.88	113.71	108.20
34	i	507	C	N1-C1'-C2'	6.88	122.95	114.00
24	X	128	VAL	N-CA-C	6.88	129.58	111.00
34	i	299	G	O4'-C1'-C2'	6.88	113.79	107.60
34	i	1402	G	N9-C1'-C2'	6.88	122.94	114.00
34	i	636	G	O4'-C1'-N9	6.88	113.70	108.20
11	K	2	LEU	CA-CB-CG	-6.87	99.49	115.30
34	i	1775	A	C3'-C2'-C1'	6.87	107.00	101.50
34	i	389	C	O4'-C1'-C2'	-6.87	98.93	105.80
34	i	1573	U	C1'-O4'-C4'	6.87	115.39	109.90
34	i	1642	A	C3'-C2'-C1'	-6.87	96.00	101.50
34	i	1693	C	O4'-C1'-C2'	-6.87	98.93	105.80
34	i	343	C	N1-C1'-C2'	6.86	122.92	114.00
34	i	1128	C	O4'-C1'-N1	6.86	113.69	108.20
34	i	978	G	O4'-C1'-N9	6.86	113.69	108.20
34	i	65	C	C1'-O4'-C4'	6.85	115.38	109.90
34	i	407	C	C3'-C2'-C1'	6.85	106.98	101.50
34	i	609	A	N9-C1'-C2'	-6.85	104.46	112.00
34	i	845	A	O4'-C1'-N9	6.85	113.68	108.20
34	i	571	U	P-O3'-C3'	-6.85	111.48	119.70
34	i	839	C	O4'-C1'-N1	6.85	113.68	108.20
18	R	87	GLU	CB-CA-C	-6.85	96.71	110.40
34	i	312	C	C3'-C2'-C1'	6.84	106.97	101.50
34	i	1171	G	C1'-O4'-C4'	-6.84	104.42	109.90
3	C	105	GLN	N-CA-C	6.84	129.47	111.00
34	i	31	U	N1-C1'-C2'	-6.84	104.48	112.00
34	i	447	C	O4'-C1'-N1	6.84	113.67	108.20
34	i	1545	G	P-O3'-C3'	6.84	127.91	119.70
34	i	227	A	O4'-C1'-C2'	-6.84	98.96	105.80
34	i	877	G	C1'-O4'-C4'	-6.84	104.43	109.90
34	i	790	A	C3'-C2'-C1'	6.83	106.97	101.50
34	i	15	U	O4'-C1'-N1	6.83	113.67	108.20
34	i	1782	A	O4'-C1'-N9	6.83	113.67	108.20
13	M	13	ASP	CB-CG-OD1	-6.83	112.15	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	31	U	C1'-O4'-C4'	6.83	115.36	109.90
3	C	242	LYS	N-CA-C	6.83	129.44	111.00
34	i	365	U	P-O5'-C5'	6.83	131.83	120.90
34	i	981	G	O4'-C1'-N9	6.83	113.66	108.20
34	i	1533	C	O4'-C1'-C2'	-6.83	98.97	105.80
34	i	900	A	C1'-O4'-C4'	-6.83	104.44	109.90
34	i	1638	U	C3'-C2'-C1'	6.83	106.96	101.50
34	i	1350	G	C2'-C3'-O3'	6.82	124.62	113.70
34	i	1199	G	O4'-C1'-C2'	6.82	113.74	107.60
34	i	1418	G	N9-C1'-C2'	-6.82	104.50	112.00
34	i	312	C	P-O3'-C3'	6.82	127.88	119.70
34	i	1603	U	O4'-C1'-N1	6.82	113.65	108.20
34	i	1779	C	P-O3'-C3'	6.81	127.87	119.70
34	i	683	G	O4'-C4'-C3'	-6.81	97.19	104.00
34	i	920	G	O4'-C1'-N9	6.80	113.64	108.20
34	i	1777	C	C3'-C2'-C1'	6.80	106.94	101.50
34	i	373	G	C3'-C2'-C1'	6.79	106.94	101.50
34	i	862	U	C3'-C2'-C1'	-6.79	96.06	101.50
34	i	612	C	C1'-O4'-C4'	-6.79	104.47	109.90
34	i	1647	G	O4'-C1'-N9	6.79	113.63	108.20
34	i	1727	G	O4'-C1'-N9	6.79	113.63	108.20
34	i	725	C	O4'-C1'-C2'	-6.79	99.01	105.80
6	F	37	ASP	N-CA-C	6.79	129.33	111.00
34	i	1681	G	O4'-C1'-N9	6.79	113.63	108.20
34	i	1222	G	C1'-O4'-C4'	-6.78	104.47	109.90
27	a	58	VAL	CG1-CB-CG2	-6.78	100.05	110.90
34	i	850	A	P-O5'-C5'	6.78	131.74	120.90
34	i	1633	G	C3'-C2'-C1'	6.78	106.92	101.50
34	i	202	U	O4'-C1'-N1	6.77	113.62	108.20
34	i	741	C	C3'-C2'-C1'	6.77	106.92	101.50
34	i	1239	U	O4'-C1'-N1	6.77	113.62	108.20
34	i	1754	G	N9-C1'-C2'	-6.77	104.55	112.00
34	i	125	C	O3'-P-O5'	6.77	116.86	104.00
34	i	876	G	C3'-C2'-C1'	-6.77	96.09	101.50
34	i	1423	C	O4'-C1'-C2'	-6.77	99.03	105.80
34	i	540	C	O3'-P-O5'	-6.76	91.15	104.00
34	i	1024	A	C5'-C4'-C3'	-6.76	105.18	116.00
34	i	1857	A	C1'-O4'-C4'	6.76	115.31	109.90
33	g	159	ASN	C-N-CA	-6.76	104.80	121.70
34	i	193	C	N1-C1'-C2'	6.76	122.79	114.00
34	i	989	G	O4'-C1'-N9	6.76	113.61	108.20
34	i	1859	C	C2'-C3'-O3'	-6.76	94.64	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	377	C	N1-C1'-C2'	6.75	122.78	114.00
31	e	122	THR	O-C-N	-6.75	111.90	122.70
34	i	243	C	P-O3'-C3'	6.75	127.80	119.70
34	i	318	U	O4'-C1'-N1	6.75	113.60	108.20
34	i	1530	U	C4'-C3'-O3'	6.75	126.49	113.00
34	i	369	C	P-O3'-C3'	6.74	127.79	119.70
34	i	1038	A	O4'-C1'-N9	6.74	113.59	108.20
33	g	142	VAL	O-C-N	6.74	133.48	122.70
34	i	421	G	O4'-C1'-N9	6.73	113.59	108.20
2	B	133	TYR	N-CA-CB	-6.73	98.48	110.60
10	J	179	LYS	C-N-CA	6.72	138.51	121.70
34	i	449	C	C5'-C4'-O4'	6.72	117.17	109.10
2	B	41	ILE	CG1-CB-CG2	-6.72	96.62	111.40
19	S	16	LEU	CB-CG-CD2	-6.72	99.58	111.00
34	i	1778	G	N9-C1'-C2'	6.72	122.73	114.00
34	i	278	U	O4'-C1'-N1	-6.71	102.83	108.20
34	i	823	A	N9-C1'-C2'	6.71	122.72	114.00
34	i	959	A	C3'-C2'-C1'	-6.71	96.13	101.50
34	i	1216	A	C1'-O4'-C4'	-6.71	104.53	109.90
34	i	1652	G	C1'-O4'-C4'	-6.71	104.53	109.90
34	i	1739	G	C1'-O4'-C4'	6.71	115.27	109.90
34	i	1455	G	N9-C1'-C2'	6.70	122.71	114.00
34	i	1774	G	O3'-P-O5'	6.70	116.73	104.00
34	i	1511	G	O4'-C1'-N9	6.69	113.55	108.20
34	i	321	C	O4'-C1'-C2'	-6.69	99.11	105.80
23	W	2	VAL	C-N-CA	-6.69	104.98	121.70
34	i	1167	G	O4'-C1'-C2'	-6.69	99.11	105.80
21	U	48	LEU	CA-CB-CG	-6.68	99.93	115.30
34	i	550	A	O4'-C1'-N9	6.68	113.55	108.20
7	G	157	VAL	CA-C-N	-6.68	102.50	117.20
34	i	1251	G	P-O3'-C3'	-6.68	111.68	119.70
34	i	548	G	C1'-O4'-C4'	-6.68	104.56	109.90
34	i	541	U	O4'-C1'-C2'	6.68	113.61	107.60
34	i	94	G	C1'-O4'-C4'	-6.67	104.56	109.90
34	i	657	U	C1'-O4'-C4'	-6.67	104.56	109.90
34	i	512	A	P-O5'-C5'	6.67	131.57	120.90
10	J	144	ILE	CB-CA-C	6.67	124.94	111.60
34	i	1775	A	P-O5'-C5'	6.67	131.57	120.90
6	F	130	ARG	N-CA-C	6.66	128.99	111.00
34	i	82	G	C1'-O4'-C4'	6.66	115.23	109.90
11	K	89	ILE	CA-CB-CG1	-6.66	98.34	111.00
34	i	471	C	N1-C1'-C2'	6.66	122.66	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1779	C	C1'-O4'-C4'	6.66	115.23	109.90
34	i	391	A	O4'-C1'-C2'	-6.66	99.14	105.80
34	i	1786	G	O4'-C1'-N9	6.66	113.53	108.20
34	i	307	G	P-O5'-C5'	6.66	131.55	120.90
34	i	1347	G	O4'-C1'-N9	6.65	113.52	108.20
34	i	1243	C	O4'-C1'-C2'	-6.65	99.15	105.80
34	i	728	U	C1'-O4'-C4'	-6.65	104.58	109.90
34	i	1366	A	O4'-C1'-C2'	-6.65	99.15	105.80
34	i	158	A	O4'-C1'-N9	6.65	113.52	108.20
18	R	121	GLN	C-N-CD	-6.65	105.97	120.60
34	i	736	C	O4'-C1'-N1	6.65	113.52	108.20
34	i	1604	C	O4'-C1'-N1	6.65	113.52	108.20
22	V	64	GLU	N-CA-C	6.64	128.94	111.00
34	i	1105	C	O4'-C1'-C2'	6.64	113.58	107.60
34	i	1342	U	O4'-C1'-N1	6.64	113.52	108.20
34	i	190	A	O4'-C1'-C2'	-6.64	99.16	105.80
10	J	91	LYS	N-CA-C	-6.63	93.09	111.00
27	a	63	VAL	CB-CA-C	6.63	124.00	111.40
34	i	144	U	C1'-O4'-C4'	-6.63	104.59	109.90
34	i	622	C	C3'-C2'-C1'	6.63	106.80	101.50
34	i	807	A	O4'-C1'-N9	6.63	113.50	108.20
2	B	155	TYR	CB-CA-C	-6.63	97.15	110.40
34	i	1202	G	O4'-C1'-N9	6.63	113.50	108.20
34	i	1541	G	O4'-C1'-N9	6.63	113.50	108.20
34	i	1656	A	C3'-C2'-C1'	-6.62	96.20	101.50
34	i	1250	C	O4'-C1'-N1	6.62	113.50	108.20
34	i	616	G	O4'-C1'-N9	-6.62	102.90	108.20
34	i	550	A	C3'-C2'-C1'	-6.62	96.20	101.50
34	i	1385	C	P-O5'-C5'	6.62	131.49	120.90
11	K	42	ASN	CA-C-N	6.62	131.76	117.20
34	i	1251	G	N9-C1'-C2'	6.61	122.60	114.00
34	i	274	G	C1'-O4'-C4'	-6.61	104.61	109.90
34	i	1646	A	C1'-O4'-C4'	6.61	115.19	109.90
34	i	40	A	C1'-O4'-C4'	6.61	115.19	109.90
34	i	53	C	O4'-C1'-N1	6.61	113.49	108.20
34	i	541	U	C1'-O4'-C4'	-6.61	104.61	109.90
34	i	340	C	C3'-C2'-C1'	6.60	106.78	101.50
34	i	554	A	P-O3'-C3'	6.60	127.62	119.70
34	i	1144	A	O4'-C1'-C2'	6.60	113.54	107.60
34	i	553	G	O4'-C1'-C2'	-6.60	99.20	105.80
19	S	87	GLN	CA-C-N	6.60	131.71	117.20
34	i	1277	G	O4'-C1'-N9	6.60	113.48	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	a	85	ARG	NE-CZ-NH2	6.59	123.60	120.30
34	i	983	A	P-O5'-C5'	-6.59	110.35	120.90
34	i	984	C	C3'-C2'-C1'	6.59	106.78	101.50
34	i	1285	U	P-O3'-C3'	6.59	127.61	119.70
15	O	43	HIS	N-CA-C	6.59	128.79	111.00
34	i	1266	G	N9-C1'-C2'	-6.59	104.75	112.00
34	i	285	U	C3'-C2'-C1'	6.59	106.77	101.50
16	P	36	LEU	N-CA-C	-6.59	93.22	111.00
34	i	286	C	O4'-C1'-C2'	-6.59	99.21	105.80
34	i	1071	C	C1'-O4'-C4'	-6.59	104.63	109.90
34	i	208	G	P-O5'-C5'	6.58	131.43	120.90
34	i	1490	U	C2'-C3'-O3'	6.58	124.23	113.70
34	i	1816	A	C4'-C3'-O3'	-6.58	95.58	109.40
34	i	432	C	N1-C1'-C2'	6.58	122.55	114.00
33	g	160	SER	N-CA-C	6.58	128.76	111.00
34	i	62	G	C1'-O4'-C4'	-6.58	104.64	109.90
34	i	1461	A	C1'-O4'-C4'	6.58	115.16	109.90
34	i	1682	C	C3'-C2'-C1'	6.58	106.76	101.50
34	i	70	G	O3'-P-O5'	-6.58	91.51	104.00
34	i	289	G	N9-C1'-C2'	-6.58	104.77	112.00
34	i	1280	A	O4'-C1'-C2'	-6.58	99.22	105.80
34	i	1525	U	O4'-C1'-N1	6.57	113.46	108.20
9	I	8	TRP	CG-CD2-CE3	-6.57	127.99	133.90
34	i	272	C	O3'-P-O5'	6.57	116.48	104.00
34	i	1695	C	O4'-C1'-C2'	-6.57	99.23	105.80
34	i	1455	G	O4'-C1'-C2'	6.57	113.51	107.60
3	C	217	THR	C-N-CA	6.57	138.12	121.70
34	i	1071	C	N1-C1'-C2'	6.56	122.53	114.00
33	g	274	VAL	CA-C-N	6.56	131.63	117.20
34	i	164	A	N9-C1'-C2'	6.56	122.53	114.00
9	I	207	GLY	CA-C-O	-6.55	108.80	120.60
34	i	1819	A	C3'-C2'-C1'	-6.55	96.26	101.50
34	i	342	U	C5'-C4'-C3'	-6.55	105.52	116.00
34	i	1088	G	O4'-C1'-N9	6.55	113.44	108.20
34	i	1861	U	O4'-C1'-C2'	-6.55	99.25	105.80
17	Q	18	THR	N-CA-C	-6.55	93.32	111.00
34	i	729	C	C3'-C2'-C1'	6.55	106.74	101.50
34	i	486	C	O4'-C1'-C2'	-6.54	99.26	105.80
34	i	1639	C	P-O3'-C3'	6.54	127.55	119.70
34	i	1816	A	O3'-P-O5'	-6.54	91.57	104.00
11	K	42	ASN	CA-C-O	-6.54	106.36	120.10
34	i	428	G	N9-C1'-C2'	-6.54	104.80	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1831	G	O4'-C1'-N9	6.54	113.43	108.20
34	i	853	U	N1-C1'-C2'	6.54	122.50	114.00
34	i	957	G	O4'-C1'-N9	6.54	113.43	108.20
34	i	1082	G	P-O3'-C3'	6.53	127.54	119.70
34	i	1550	U	O4'-C4'-C3'	-6.53	97.47	104.00
34	i	1521	G	O4'-C1'-N9	6.53	113.42	108.20
34	i	29	G	O4'-C1'-N9	6.53	113.42	108.20
34	i	1377	G	C3'-C2'-C1'	-6.53	96.28	101.50
34	i	1861	U	P-O3'-C3'	6.53	127.53	119.70
34	i	581	U	P-O3'-C3'	6.53	127.53	119.70
34	i	611	C	C3'-C2'-C1'	6.53	106.72	101.50
34	i	1656	A	O4'-C1'-N9	6.53	113.42	108.20
34	i	1664	G	O5'-P-OP2	6.53	118.53	110.70
34	i	192	U	P-O5'-C5'	6.52	131.34	120.90
34	i	459	A	O4'-C1'-C2'	-6.52	99.28	105.80
19	S	92	ASP	CB-CG-OD2	-6.52	112.43	118.30
34	i	685	G	O4'-C1'-C2'	-6.52	99.28	105.80
34	i	190	A	O3'-P-O5'	6.52	116.38	104.00
34	i	534	G	C1'-O4'-C4'	6.52	115.11	109.90
34	i	685	G	O3'-P-O5'	6.52	116.38	104.00
34	i	1859	C	P-O3'-C3'	-6.52	111.88	119.70
34	i	1204	A	O4'-C1'-C2'	-6.52	99.28	105.80
34	i	1387	C	O4'-C1'-N1	6.51	113.41	108.20
34	i	1154	G	N9-C1'-C2'	-6.51	104.84	112.00
10	J	101	LYS	N-CA-C	6.51	128.58	111.00
34	i	1794	A	C3'-C2'-C1'	6.51	106.71	101.50
25	Y	128	GLY	CA-C-O	-6.51	108.88	120.60
34	i	538	C	N1-C1'-C2'	6.51	122.46	114.00
34	i	974	G	O4'-C1'-N9	6.51	113.41	108.20
22	V	81	GLN	O-C-N	-6.51	112.29	122.70
34	i	1039	G	C3'-C2'-C1'	6.51	106.71	101.50
34	i	1519	G	O4'-C1'-N9	6.51	113.41	108.20
34	i	1151	U	C3'-C2'-C1'	6.50	106.70	101.50
34	i	401	G	O4'-C1'-N9	6.50	113.40	108.20
34	i	1665	C	O4'-C1'-N1	6.50	113.40	108.20
34	i	1656	A	N9-C1'-C2'	6.50	122.45	114.00
26	Z	115	GLY	CA-C-O	-6.50	108.90	120.60
34	i	443	C	C3'-C2'-C1'	6.50	106.70	101.50
34	i	1206	G	C3'-C2'-C1'	-6.50	96.30	101.50
34	i	1496	G	C1'-O4'-C4'	-6.50	104.70	109.90
34	i	1369	C	O4'-C1'-C2'	-6.49	99.31	105.80
34	i	390	C	O4'-C1'-C2'	-6.49	99.31	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	882	A	C3'-C2'-C1'	6.49	106.69	101.50
34	i	1169	A	O4'-C1'-N9	6.49	113.39	108.20
34	i	1673	A	C3'-C2'-C1'	-6.49	96.31	101.50
34	i	282	G	N9-C1'-C2'	6.49	122.44	114.00
34	i	962	U	O4'-C1'-N1	6.49	113.39	108.20
9	I	8	TRP	CB-CG-CD1	6.49	135.43	127.00
34	i	1486	G	O4'-C1'-N9	6.49	113.39	108.20
34	i	1376	C	N1-C1'-C2'	6.48	122.43	114.00
34	i	310	G	C4'-C3'-O3'	6.48	125.96	113.00
34	i	1202	G	C1'-O4'-C4'	-6.48	104.72	109.90
34	i	79	A	O5'-C5'-C4'	6.48	124.01	111.70
34	i	903	G	C1'-O4'-C4'	-6.48	104.72	109.90
34	i	1284	U	O4'-C1'-N1	6.48	113.38	108.20
34	i	1513	C	P-O3'-C3'	-6.48	111.93	119.70
34	i	277	U	P-O3'-C3'	6.48	127.47	119.70
34	i	837	G	C5'-C4'-O4'	6.48	116.87	109.10
21	U	70	CYS	O-C-N	-6.47	112.19	123.20
24	X	91	LEU	N-CA-C	-6.47	93.52	111.00
26	Z	107	VAL	CA-CB-CG2	6.47	120.61	110.90
26	Z	112	ASN	N-CA-CB	-6.47	98.95	110.60
34	i	840	U	P-O3'-C3'	-6.47	111.94	119.70
34	i	837	G	C2'-C3'-O3'	-6.47	95.27	109.50
11	K	46	MET	N-CA-CB	6.47	122.24	110.60
34	i	10	G	P-O3'-C3'	-6.47	111.94	119.70
34	i	947	C	N1-C1'-C2'	6.47	122.41	114.00
34	i	1537	C	O5'-C5'-C4'	6.46	123.98	111.70
3	C	157	ASN	N-CA-C	6.46	128.45	111.00
34	i	1339	U	C3'-C2'-C1'	6.46	106.67	101.50
34	i	1837	G	O4'-C1'-C2'	6.46	113.42	107.60
34	i	870	G	O4'-C1'-N9	6.46	113.36	108.20
5	E	263	GLY	CA-C-O	-6.45	108.98	120.60
9	I	119	LEU	C-N-CD	-6.45	106.40	120.60
34	i	814	A	O4'-C1'-N9	6.45	113.36	108.20
34	i	1297	A	P-O3'-C3'	6.45	127.44	119.70
34	i	305	U	P-O3'-C3'	-6.45	111.96	119.70
34	i	1089	A	O4'-C1'-N9	6.45	113.36	108.20
2	B	77	ASP	N-CA-C	6.45	128.40	111.00
34	i	882	A	P-O3'-C3'	6.44	127.43	119.70
34	i	211	U	O4'-C1'-N1	6.44	113.35	108.20
34	i	437	A	C1'-O4'-C4'	6.44	115.05	109.90
34	i	1254	A	O4'-C1'-N9	6.44	113.35	108.20
34	i	147	A	O4'-C1'-C2'	-6.44	99.36	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	c	7	GLN	C-N-CD	-6.44	106.43	120.60
34	i	577	A	P-O3'-C3'	-6.44	111.97	119.70
34	i	1202	G	N9-C1'-C2'	6.44	122.37	114.00
34	i	155	G	C5'-C4'-C3'	6.44	126.30	116.00
34	i	1467	C	C3'-C2'-C1'	6.43	106.65	101.50
34	i	236	C	O4'-C1'-N1	6.43	113.34	108.20
34	i	1405	A	C1'-O4'-C4'	6.43	115.04	109.90
34	i	1702	U	N1-C1'-C2'	6.42	122.35	114.00
34	i	1436	C	N1-C1'-C2'	6.42	122.35	114.00
34	i	1384	A	O4'-C1'-N9	6.42	113.34	108.20
10	J	188	GLY	CA-C-O	-6.42	109.05	120.60
34	i	1785	A	O4'-C1'-C2'	-6.42	99.38	105.80
34	i	1135	C	O4'-C1'-N1	6.42	113.33	108.20
34	i	372	C	P-O3'-C3'	-6.42	112.00	119.70
34	i	1232	G	P-O3'-C3'	6.41	127.39	119.70
2	B	233	GLY	CA-C-O	-6.41	109.06	120.60
34	i	9	U	O4'-C1'-N1	6.41	113.33	108.20
34	i	1502	A	P-O3'-C3'	6.41	127.39	119.70
33	g	284	PRO	N-CA-C	-6.41	95.44	112.10
34	i	192	U	O4'-C1'-N1	6.41	113.32	108.20
34	i	1361	G	C4'-C3'-O3'	-6.40	95.95	109.40
34	i	1141	A	O4'-C1'-N9	6.40	113.32	108.20
18	R	99	ASP	C-N-CD	-6.40	106.52	120.60
27	a	96	THR	O-C-N	6.40	133.26	121.10
34	i	1284	U	N1-C1'-C2'	6.40	122.32	114.00
34	i	1801	C	N1-C1'-C2'	6.40	122.31	114.00
34	i	1151	U	P-O5'-C5'	6.39	131.13	120.90
34	i	1510	G	N9-C1'-C2'	-6.39	104.97	112.00
34	i	38	A	C1'-O4'-C4'	6.39	115.01	109.90
34	i	794	G	C3'-C2'-C1'	6.39	106.61	101.50
3	C	83	LEU	C-N-CA	-6.39	108.88	122.30
34	i	994	A	C1'-O4'-C4'	6.39	115.01	109.90
34	i	1122	G	C1'-O4'-C4'	-6.39	104.79	109.90
34	i	1158	C	O4'-C1'-N1	6.39	113.31	108.20
34	i	1377	G	N9-C1'-C2'	-6.39	104.97	112.00
34	i	1411	C	O4'-C1'-N1	6.39	113.31	108.20
31	e	120	VAL	C-N-CD	-6.38	106.55	120.60
34	i	523	A	C2'-C3'-O3'	6.38	123.92	113.70
34	i	1422	U	O4'-C1'-N1	6.38	113.31	108.20
34	i	70	G	N9-C1'-C2'	-6.38	104.98	112.00
16	P	18	ARG	N-CA-CB	6.38	122.08	110.60
34	i	840	U	O4'-C1'-C2'	-6.38	99.42	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1360	U	P-O3'-C3'	-6.38	112.04	119.70
34	i	1353	A	O4'-C1'-N9	6.38	113.30	108.20
34	i	1858	U	O4'-C1'-N1	6.38	113.30	108.20
34	i	150	A	O4'-C1'-C2'	-6.37	99.43	105.80
34	i	1227	C	C3'-C2'-C1'	6.37	106.59	101.50
22	V	47	ASN	N-CA-C	-6.36	93.82	111.00
34	i	639	U	O4'-C1'-N1	6.36	113.29	108.20
19	S	49	ASP	O-C-N	-6.36	112.53	122.70
34	i	205	G	O4'-C1'-N9	6.36	113.29	108.20
34	i	1790	G	O4'-C1'-N9	6.36	113.29	108.20
34	i	176	U	N1-C1'-C2'	6.36	122.27	114.00
5	E	258	ALA	C-N-CA	-6.35	105.82	121.70
34	i	634	G	O4'-C1'-N9	6.35	113.28	108.20
34	i	1534	U	C1'-O4'-C4'	6.35	114.98	109.90
34	i	190	A	C5'-C4'-C3'	-6.35	105.84	116.00
28	b	53	VAL	N-CA-C	-6.34	93.88	111.00
34	i	1207	G	N9-C1'-C2'	6.34	122.24	114.00
34	i	568	C	C3'-C2'-C1'	6.34	106.57	101.50
34	i	1167	G	C3'-C2'-C1'	-6.34	96.43	101.50
34	i	1545	G	O4'-C1'-N9	6.34	113.27	108.20
10	J	162	ARG	N-CA-C	6.33	128.09	111.00
16	P	37	TYR	CB-CA-C	6.33	123.06	110.40
34	i	174	C	O4'-C1'-C2'	-6.33	99.47	105.80
34	i	635	C	O4'-C1'-C2'	-6.33	99.47	105.80
34	i	1196	A	O4'-C1'-N9	6.33	113.26	108.20
16	P	18	ARG	NE-CZ-NH1	6.32	123.46	120.30
34	i	1076	A	P-O3'-C3'	6.32	127.29	119.70
34	i	8	U	O4'-C1'-N1	6.32	113.26	108.20
8	H	106	ARG	CD-NE-CZ	6.32	132.45	123.60
34	i	1202	G	C3'-C2'-C1'	-6.32	96.44	101.50
34	i	1425	G	O3'-P-O5'	-6.32	91.99	104.00
34	i	831	C	P-O3'-C3'	6.32	127.28	119.70
2	B	76	ASN	N-CA-C	6.31	128.05	111.00
34	i	582	C	N1-C1'-C2'	-6.31	105.06	112.00
34	i	1495	U	O4'-C1'-N1	6.31	113.25	108.20
34	i	1015	C	C3'-C2'-C1'	6.31	106.55	101.50
34	i	1348	G	C3'-C2'-C1'	-6.31	96.45	101.50
34	i	1540	A	C5'-C4'-O4'	6.31	116.67	109.10
34	i	1390	G	C1'-O4'-C4'	-6.30	104.86	109.90
34	i	1480	A	P-O3'-C3'	6.30	127.27	119.70
7	G	128	THR	N-CA-CB	-6.30	98.33	110.30
16	P	68	PRO	C-N-CD	-6.30	106.73	120.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	597	U	P-O3'-C3'	6.30	127.26	119.70
34	i	806	A	C3'-C2'-C1'	6.30	106.54	101.50
34	i	626	C	O4'-C1'-C2'	-6.30	99.50	105.80
34	i	796	U	C5'-C4'-C3'	-6.30	105.92	116.00
34	i	522	C	P-O3'-C3'	6.30	127.26	119.70
34	i	730	C	C3'-C2'-C1'	6.30	106.54	101.50
34	i	1256	A	N9-C1'-C2'	6.29	122.18	114.00
16	P	18	ARG	CB-CG-CD	6.29	127.96	111.60
9	I	55	TYR	CB-CG-CD1	6.29	124.77	121.00
19	S	92	ASP	N-CA-C	6.29	127.98	111.00
34	i	486	C	O4'-C1'-N1	6.29	113.23	108.20
34	i	509	A	N9-C1'-C2'	-6.29	105.08	112.00
34	i	794	G	N9-C1'-C2'	6.29	122.17	114.00
34	i	837	G	P-O3'-C3'	6.29	127.24	119.70
34	i	1415	C	O4'-C1'-C2'	-6.29	99.51	105.80
34	i	110	U	P-O3'-C3'	-6.28	112.17	119.70
34	i	493	C	O4'-C1'-C2'	-6.28	99.52	105.80
34	i	1774	G	N9-C1'-C2'	6.28	122.16	114.00
34	i	887	G	N9-C1'-C2'	6.28	122.16	114.00
34	i	424	G	C2'-C3'-O3'	6.27	123.74	113.70
34	i	1111	U	O4'-C1'-C2'	6.27	113.25	107.60
34	i	1415	C	C3'-C2'-C1'	6.27	106.52	101.50
34	i	1594	U	P-O5'-C5'	6.27	130.94	120.90
34	i	733	G	O4'-C1'-C2'	-6.27	99.53	105.80
34	i	1337	C	O4'-C1'-C2'	-6.27	99.53	105.80
7	G	173	ALA	C-N-CD	-6.27	106.81	120.60
34	i	1084	U	O4'-C1'-N1	6.27	113.21	108.20
34	i	1337	C	C3'-C2'-C1'	6.27	106.51	101.50
34	i	62	G	N9-C1'-C2'	6.26	122.14	114.00
34	i	1304	U	P-O3'-C3'	6.26	127.22	119.70
15	O	102	GLY	C-N-CA	-6.26	106.05	121.70
34	i	341	G	N9-C1'-C2'	-6.26	105.12	112.00
31	e	120	VAL	CB-CA-C	-6.25	99.52	111.40
34	i	356	U	O4'-C1'-N1	6.25	113.20	108.20
34	i	973	C	O4'-C1'-N1	6.25	113.20	108.20
34	i	1486	G	C3'-C2'-C1'	-6.25	96.50	101.50
34	i	1487	G	O4'-C1'-N9	6.25	113.20	108.20
1	A	186	ARG	C-N-CA	6.25	135.42	122.30
34	i	109	U	C4'-C3'-O3'	-6.25	96.28	109.40
34	i	1807	A	C1'-O4'-C4'	-6.24	104.91	109.90
34	i	74	G	C4'-C3'-C2'	-6.24	96.36	102.60
34	i	1404	U	P-O3'-C3'	6.24	127.19	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	g	47	ARG	N-CA-C	-6.24	94.16	111.00
9	I	6	ASP	N-CA-CB	-6.24	99.38	110.60
34	i	341	G	O4'-C1'-N9	6.24	113.19	108.20
10	J	164	PRO	N-CD-CG	-6.23	93.85	103.20
34	i	605	C	C1'-O4'-C4'	-6.23	104.91	109.90
34	i	1515	G	O4'-C1'-N9	6.23	113.19	108.20
34	i	1658	A	C3'-C2'-C1'	6.23	106.48	101.50
19	S	82	TRP	CB-CA-C	-6.23	97.94	110.40
34	i	279	G	P-O5'-C5'	6.23	130.86	120.90
34	i	1214	C	C3'-C2'-C1'	6.23	106.48	101.50
34	i	295	C	O3'-P-O5'	6.23	115.83	104.00
6	F	130	ARG	N-CA-CB	6.22	121.81	110.60
12	L	152	LYS	CA-C-O	-6.22	107.04	120.10
34	i	1445	G	P-O3'-C3'	6.22	127.17	119.70
34	i	1636	A	C3'-C2'-C1'	6.22	106.48	101.50
34	i	825	C	P-O3'-C3'	6.22	127.16	119.70
34	i	220	C	O4'-C1'-N1	6.21	113.17	108.20
34	i	1300	U	C1'-O4'-C4'	-6.21	104.93	109.90
34	i	1514	U	N1-C1'-C2'	-6.21	105.17	112.00
34	i	1654	U	O3'-P-O5'	6.21	115.80	104.00
19	S	6	PRO	CA-C-O	-6.21	105.30	120.20
34	i	313	C	O4'-C1'-N1	6.21	113.17	108.20
34	i	445	A	C3'-C2'-C1'	6.21	106.46	101.50
9	I	178	ARG	CD-NE-CZ	6.20	132.28	123.60
34	i	544	A	C1'-O4'-C4'	-6.20	104.94	109.90
34	i	1784	A	N9-C1'-C2'	6.20	122.06	114.00
34	i	1563	C	C1'-O4'-C4'	-6.20	104.94	109.90
34	i	1855	G	C1'-O4'-C4'	-6.19	104.94	109.90
10	J	145	PRO	N-CA-C	-6.19	96.00	112.10
34	i	678	U	P-O3'-C3'	6.19	127.13	119.70
26	Z	104	ARG	CA-C-N	-6.19	103.58	117.20
34	i	1489	C	O4'-C1'-N1	6.19	113.15	108.20
34	i	424	G	O3'-P-O5'	-6.19	92.24	104.00
34	i	1036	G	C3'-C2'-C1'	-6.19	96.55	101.50
33	g	50	THR	CB-CA-C	6.19	128.30	111.60
34	i	1030	A	C1'-O4'-C4'	6.19	114.85	109.90
34	i	1395	C	O4'-C1'-N1	6.19	113.15	108.20
34	i	1519	G	O4'-C4'-C3'	-6.19	97.81	104.00
6	F	46	ALA	C-N-CA	-6.18	106.24	121.70
34	i	1214	C	C1'-O4'-C4'	-6.18	104.95	109.90
34	i	1587	C	C1'-O4'-C4'	-6.18	104.95	109.90
34	i	1521	G	N9-C1'-C2'	-6.18	105.20	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1562	G	P-O3'-C3'	-6.18	112.28	119.70
34	i	1623	C	C1'-O4'-C4'	-6.18	104.96	109.90
3	C	258	LEU	CA-CB-CG	6.18	129.51	115.30
34	i	1135	C	P-O5'-C5'	-6.18	111.02	120.90
34	i	958	A	N9-C1'-C2'	-6.17	105.21	112.00
34	i	1723	U	O4'-C1'-N1	6.17	113.14	108.20
34	i	1729	G	C3'-C2'-C1'	6.17	106.44	101.50
12	L	102	PHE	N-CA-C	-6.17	94.34	111.00
34	i	1293	U	C1'-O4'-C4'	6.16	114.83	109.90
34	i	456	G	O4'-C1'-C2'	6.16	113.14	107.60
34	i	792	G	C1'-O4'-C4'	-6.16	104.97	109.90
10	J	93	LYS	O-C-N	-6.16	112.85	122.70
34	i	210	G	P-O3'-C3'	-6.16	112.31	119.70
34	i	542	G	C1'-O4'-C4'	-6.16	104.97	109.90
6	F	41	VAL	N-CA-C	-6.15	94.39	111.00
13	M	116	LYS	N-CA-C	6.15	127.62	111.00
34	i	2	A	O4'-C1'-N9	6.15	113.12	108.20
34	i	1364	U	O4'-C1'-N1	6.15	113.12	108.20
34	i	343	C	C4'-C3'-C2'	6.15	108.75	102.60
34	i	1663	U	C3'-C2'-C1'	-6.15	96.58	101.50
4	D	4	GLN	CA-C-O	6.15	133.01	120.10
34	i	924	G	O4'-C1'-N9	6.15	113.12	108.20
34	i	1395	C	C5'-C4'-C3'	-6.15	106.16	116.00
34	i	1514	U	O4'-C1'-C2'	-6.15	99.65	105.80
34	i	549	G	N9-C1'-C2'	6.15	121.99	114.00
34	i	1570	G	C4'-C3'-C2'	-6.14	96.46	102.60
10	J	180	LYS	N-CA-C	6.14	127.58	111.00
34	i	126	G	O3'-P-O5'	6.14	115.67	104.00
34	i	1238	U	C1'-O4'-C4'	-6.14	104.99	109.90
34	i	272	C	O5'-P-OP1	-6.14	100.17	105.70
34	i	795	U	C1'-O4'-C4'	-6.14	104.99	109.90
19	S	9	PHE	C-N-CA	-6.14	106.35	121.70
34	i	824	G	C1'-O4'-C4'	-6.14	104.99	109.90
34	i	954	G	C3'-C2'-C1'	-6.14	96.59	101.50
34	i	1255	A	C1'-O4'-C4'	-6.14	104.99	109.90
34	i	1489	C	N1-C1'-C2'	-6.13	105.26	112.00
34	i	1657	U	O4'-C1'-N1	6.13	113.10	108.20
15	O	143	LYS	CB-CA-C	-6.13	98.15	110.40
34	i	395	G	C1'-O4'-C4'	-6.12	105.00	109.90
34	i	489	G	C1'-O4'-C4'	-6.12	105.00	109.90
34	i	1644	U	P-O3'-C3'	-6.12	112.35	119.70
34	i	903	G	C3'-C2'-C1'	-6.12	96.60	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	205	G	C1'-O4'-C4'	-6.12	105.00	109.90
34	i	1361	G	P-O5'-C5'	6.12	130.69	120.90
34	i	1186	A	C3'-C2'-C1'	6.12	106.39	101.50
34	i	1776	G	O4'-C4'-C3'	-6.11	97.89	104.00
34	i	973	C	O4'-C1'-C2'	-6.11	99.69	105.80
34	i	201	G	O4'-C1'-C2'	-6.11	99.69	105.80
34	i	685	G	C5'-C4'-C3'	6.11	125.77	116.00
34	i	1543	G	C3'-C2'-C1'	-6.11	96.61	101.50
34	i	986	A	C1'-O4'-C4'	-6.11	105.02	109.90
34	i	1050	G	C1'-O4'-C4'	-6.11	105.02	109.90
34	i	1849	G	O4'-C1'-C2'	6.11	113.09	107.60
34	i	193	C	C3'-C2'-C1'	6.10	106.38	101.50
34	i	880	C	O4'-C1'-N1	6.10	113.08	108.20
34	i	1796	C	O4'-C1'-N1	6.10	113.08	108.20
31	e	121	PRO	CA-N-CD	-6.10	102.96	111.50
34	i	1535	G	O4'-C1'-N9	6.10	113.08	108.20
19	S	10	GLN	C-N-CA	6.10	136.94	121.70
34	i	906	G	O4'-C1'-C2'	6.10	113.09	107.60
34	i	1533	C	P-O5'-C5'	-6.10	111.15	120.90
34	i	209	C	P-O5'-C5'	6.09	130.65	120.90
34	i	1181	C	N1-C1'-C2'	6.09	121.92	114.00
34	i	1400	U	N1-C1'-C2'	6.09	121.92	114.00
34	i	1610	U	C1'-O4'-C4'	-6.09	105.03	109.90
34	i	1678	C	C3'-C2'-C1'	6.09	106.37	101.50
11	K	89	ILE	CA-CB-CG2	6.09	123.08	110.90
34	i	327	C	O4'-C1'-N1	6.09	113.07	108.20
34	i	940	A	C3'-C2'-C1'	6.08	106.37	101.50
34	i	1066	A	N9-C1'-C2'	6.08	121.91	114.00
34	i	1462	G	O4'-C1'-N9	6.08	113.07	108.20
34	i	741	C	O4'-C1'-C2'	-6.08	99.72	105.80
34	i	854	A	C3'-C2'-C1'	6.08	106.36	101.50
34	i	872	C	C3'-C2'-C1'	6.08	106.36	101.50
34	i	64	A	C3'-C2'-C1'	-6.08	96.64	101.50
12	L	151	THR	C-N-CA	6.08	136.89	121.70
34	i	352	C	N1-C1'-C2'	6.08	121.90	114.00
34	i	584	A	P-O3'-C3'	6.08	126.99	119.70
34	i	1433	C	N1-C1'-C2'	6.07	121.89	114.00
25	Y	96	LEU	N-CA-CB	6.07	122.54	110.40
34	i	1118	A	C4'-C3'-C2'	-6.07	96.53	102.60
34	i	1431	C	C3'-C2'-C1'	6.07	106.36	101.50
34	i	1701	G	O4'-C1'-N9	6.07	113.05	108.20
34	i	1702	U	O4'-C1'-N1	6.07	113.05	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1774	G	C3'-C2'-C1'	-6.07	96.65	101.50
34	i	4	C	C1'-O4'-C4'	-6.06	105.05	109.90
34	i	460	G	O4'-C1'-N9	6.06	113.05	108.20
34	i	1486	G	O4'-C1'-C2'	6.06	113.06	107.60
34	i	1698	C	O4'-C1'-C2'	-6.06	99.74	105.80
34	i	1705	C	C3'-C2'-C1'	6.06	106.35	101.50
16	P	49	LEU	C-N-CA	-6.06	106.55	121.70
21	U	117	ALA	O-C-N	6.06	132.40	122.70
32	f	134	SER	O-C-N	6.06	132.40	122.70
2	B	151	ARG	C-N-CA	-6.06	106.56	121.70
34	i	410	G	O4'-C1'-C2'	6.06	113.05	107.60
34	i	1845	A	C1'-O4'-C4'	6.06	114.75	109.90
34	i	1102	C	O4'-C1'-C2'	-6.06	99.74	105.80
25	Y	64	PHE	N-CA-CB	-6.05	99.70	110.60
16	P	17	TYR	N-CA-CB	6.05	121.49	110.60
34	i	1425	G	OP1-P-O3'	6.05	118.51	105.20
34	i	1571	G	C1'-O4'-C4'	-6.05	105.06	109.90
12	L	150	GLY	N-CA-C	-6.05	97.98	113.10
29	c	6	VAL	N-CA-C	6.05	127.33	111.00
34	i	960	A	N9-C1'-C2'	-6.05	105.35	112.00
34	i	1112	C	O4'-C1'-C2'	6.05	113.05	107.60
34	i	1187	C	O4'-C1'-N1	6.05	113.04	108.20
11	K	40	VAL	C-N-CD	-6.04	107.30	120.60
34	i	1588	C	O4'-C1'-N1	6.04	113.04	108.20
34	i	1558	G	C1'-O4'-C4'	-6.04	105.06	109.90
33	g	213	ASP	CB-CG-OD2	-6.04	112.86	118.30
34	i	1394	G	P-O3'-C3'	-6.04	112.45	119.70
34	i	1172	G	O4'-C1'-N9	6.04	113.03	108.20
34	i	1440	U	O4'-C1'-N1	6.03	113.03	108.20
3	C	262	HIS	CB-CA-C	-6.03	98.34	110.40
18	R	88	VAL	C-N-CA	-6.03	106.62	121.70
27	a	107	ALA	C-N-CD	6.03	141.06	128.40
34	i	410	G	O4'-C1'-N9	6.03	113.02	108.20
34	i	1431	C	C5'-C4'-C3'	6.02	125.64	116.00
6	F	135	ARG	CB-CA-C	6.02	122.44	110.40
33	g	15	ASN	C-N-CA	-6.02	109.66	122.30
34	i	1549	C	C2'-C3'-O3'	-6.02	96.26	109.50
32	f	88	PRO	N-CA-C	-6.02	96.46	112.10
34	i	623	C	N1-C1'-C2'	6.02	121.82	114.00
34	i	952	G	O4'-C1'-N9	6.02	113.01	108.20
34	i	1742	C	C5'-C4'-O4'	6.02	116.32	109.10
34	i	1355	U	O4'-C1'-C2'	-6.02	99.78	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1698	C	C3'-C2'-C1'	6.02	106.31	101.50
34	i	1743	G	O5'-C5'-C4'	6.02	123.13	111.70
34	i	1367	U	C3'-C2'-C1'	6.01	106.31	101.50
21	U	109	GLY	N-CA-C	-6.01	98.07	113.10
11	K	38	LYS	N-CA-C	-6.01	94.78	111.00
34	i	1391	C	O4'-C1'-N1	6.01	113.01	108.20
34	i	1441	U	C4'-C3'-O3'	-6.01	96.78	109.40
26	Z	112	ASN	N-CA-C	6.00	127.22	111.00
34	i	1547	G	P-O5'-C5'	6.00	130.50	120.90
34	i	1393	U	C3'-C2'-C1'	6.00	106.30	101.50
34	i	946	C	C3'-C2'-C1'	6.00	106.30	101.50
7	G	173	ALA	O-C-N	-5.99	109.71	121.10
9	I	29	LEU	C-N-CA	5.99	134.88	122.30
34	i	204	G	O4'-C1'-C2'	-5.99	99.81	105.80
34	i	1663	U	P-O3'-C3'	5.99	126.89	119.70
34	i	1219	A	O4'-C1'-C2'	-5.99	99.81	105.80
34	i	7	G	O4'-C1'-N9	5.99	112.99	108.20
34	i	1403	U	O4'-C1'-N1	5.99	112.99	108.20
34	i	1367	U	O4'-C1'-N1	5.98	112.99	108.20
34	i	430	G	O4'-C1'-N9	5.98	112.98	108.20
34	i	1740	A	C4'-C3'-C2'	-5.98	96.62	102.60
9	I	132	GLU	CA-C-N	5.98	130.35	117.20
34	i	844	U	C1'-O4'-C4'	-5.98	105.12	109.90
34	i	848	G	O4'-C1'-N9	5.98	112.98	108.20
1	A	193	HIS	C-N-CD	-5.97	107.46	120.60
34	i	1348	G	O4'-C1'-N9	5.97	112.98	108.20
34	i	1441	U	P-O3'-C3'	-5.97	112.53	119.70
34	i	1752	G	C1'-O4'-C4'	-5.97	105.12	109.90
34	i	849	C	O4'-C1'-N1	5.97	112.98	108.20
34	i	959	A	P-O5'-C5'	-5.97	111.35	120.90
34	i	563	U	N1-C1'-C2'	5.96	121.75	114.00
34	i	610	G	C1'-O4'-C4'	5.96	114.67	109.90
34	i	1535	G	C1'-O4'-C4'	-5.96	105.13	109.90
34	i	1091	U	C1'-O4'-C4'	-5.96	105.13	109.90
22	V	66	ASP	C-N-CA	-5.96	106.80	121.70
34	i	194	C	O4'-C1'-N1	5.96	112.97	108.20
34	i	1343	U	O4'-C1'-C2'	-5.96	99.84	105.80
21	U	69	PRO	N-CA-C	-5.96	96.62	112.10
25	Y	86	GLU	CA-C-N	5.96	133.77	117.10
6	F	38	TYR	C-N-CA	-5.95	106.82	121.70
34	i	558	C	C3'-C2'-C1'	5.95	106.26	101.50
34	i	1547	G	O4'-C1'-C2'	-5.95	99.85	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	223	A	O4'-C1'-C2'	-5.95	99.85	105.80
11	K	41	PRO	N-CA-C	-5.95	96.63	112.10
22	V	32	ILE	C-N-CD	5.95	140.90	128.40
21	U	68	THR	N-CA-CB	-5.95	99.00	110.30
34	i	743	U	O3'-P-O5'	-5.95	92.70	104.00
34	i	727	G	C5'-C4'-O4'	-5.95	101.97	109.10
34	i	853	U	P-O5'-C5'	-5.95	111.39	120.90
34	i	1485	A	P-O3'-C3'	5.95	126.84	119.70
34	i	272	C	O5'-P-OP2	-5.94	100.35	105.70
34	i	623	C	C3'-C2'-C1'	5.94	106.25	101.50
34	i	1646	A	O4'-C1'-N9	5.94	112.95	108.20
11	K	90	VAL	N-CA-C	5.94	127.05	111.00
34	i	621	U	O4'-C1'-N1	5.94	112.95	108.20
34	i	1497	C	P-O3'-C3'	5.94	126.83	119.70
34	i	373	G	O4'-C1'-N9	5.94	112.95	108.20
34	i	970	C	C1'-O4'-C4'	-5.94	105.15	109.90
34	i	1019	A	O4'-C1'-C2'	-5.94	99.86	105.80
8	H	16	PRO	O-C-N	-5.93	113.20	122.70
34	i	793	C	P-O5'-C5'	5.93	130.39	120.90
34	i	1534	U	C3'-C2'-C1'	5.93	106.25	101.50
34	i	1087	C	O4'-C1'-C2'	-5.93	99.87	105.80
34	i	1834	U	O4'-C1'-N1	5.93	112.94	108.20
34	i	1459	U	P-O3'-C3'	-5.93	112.58	119.70
16	P	121	ILE	O-C-N	-5.93	113.22	122.70
34	i	1138	G	C3'-C2'-C1'	-5.93	96.76	101.50
34	i	541	U	P-O3'-C3'	5.93	126.81	119.70
34	i	1426	C	C1'-O4'-C4'	5.93	114.64	109.90
16	P	130	ARG	NE-CZ-NH1	5.92	123.26	120.30
34	i	1022	C	O4'-C1'-C2'	-5.92	99.88	105.80
34	i	1058	A	C3'-C2'-C1'	5.92	106.23	101.50
34	i	1127	G	C5'-C4'-C3'	-5.92	106.53	116.00
34	i	1408	C	C4'-C3'-O3'	5.92	124.83	113.00
34	i	858	A	C1'-O4'-C4'	-5.91	105.17	109.90
34	i	1694	A	P-O3'-C3'	-5.91	112.61	119.70
34	i	603	C	C1'-O4'-C4'	5.91	114.63	109.90
34	i	1621	C	O4'-C1'-N1	5.91	112.93	108.20
34	i	24	C	O4'-C1'-N1	5.91	112.93	108.20
34	i	278	U	P-O5'-C5'	5.91	130.35	120.90
34	i	1121	C	O4'-C1'-N1	5.91	112.93	108.20
34	i	1547	G	C1'-O4'-C4'	5.91	114.63	109.90
34	i	1733	C	C3'-C2'-C1'	5.90	106.22	101.50
34	i	419	C	C3'-C2'-C1'	5.90	106.22	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1148	U	O4'-C1'-N1	5.90	112.92	108.20
34	i	581	U	N1-C1'-C2'	5.90	121.67	114.00
34	i	1051	A	C3'-C2'-C1'	5.90	106.22	101.50
34	i	1300	U	O4'-C1'-N1	5.90	112.92	108.20
34	i	684	A	P-O5'-C5'	5.89	130.33	120.90
34	i	788	C	N1-C1'-C2'	5.89	121.66	114.00
34	i	1846	C	N1-C1'-C2'	5.89	121.66	114.00
34	i	1114	C	C3'-C2'-C1'	-5.89	96.79	101.50
34	i	1349	A	O3'-P-O5'	-5.89	92.80	104.00
34	i	1413	C	OP1-P-OP2	-5.89	110.76	119.60
34	i	1732	G	C1'-O4'-C4'	-5.89	105.19	109.90
34	i	1527	C	N1-C1'-C2'	5.89	121.66	114.00
29	c	5	ARG	N-CA-C	5.89	126.89	111.00
34	i	21	U	O4'-C1'-C2'	-5.88	99.92	105.80
34	i	1134	C	C4'-C3'-O3'	-5.88	97.04	109.40
34	i	1571	G	N9-C1'-C2'	5.88	121.65	114.00
34	i	1230	C	C1'-O4'-C4'	-5.88	105.20	109.90
34	i	163	U	O4'-C4'-C3'	-5.88	98.12	104.00
34	i	292	A	O4'-C1'-N9	5.88	112.90	108.20
34	i	1318	G	O4'-C1'-N9	5.88	112.90	108.20
34	i	1434	A	C3'-C2'-C1'	5.88	106.20	101.50
34	i	1577	C	N1-C1'-C2'	5.88	121.64	114.00
34	i	617	U	O4'-C1'-C2'	-5.87	99.93	105.80
34	i	826	A	O4'-C1'-C2'	5.87	112.88	107.60
34	i	119	U	O4'-C1'-N1	5.87	112.89	108.20
34	i	172	U	O4'-C1'-C2'	-5.87	99.93	105.80
34	i	1380	C	O4'-C1'-N1	5.87	112.89	108.20
34	i	1800	A	N9-C1'-C2'	5.87	121.63	114.00
34	i	830	C	C3'-C2'-C1'	-5.87	96.81	101.50
34	i	1416	G	N9-C1'-C2'	5.86	121.62	114.00
33	g	159	ASN	O-C-N	-5.86	113.32	122.70
34	i	1605	G	O4'-C1'-N9	5.86	112.89	108.20
34	i	192	U	O5'-C5'-C4'	-5.86	100.57	111.70
34	i	213	C	C3'-C2'-C1'	5.86	106.18	101.50
20	T	30	VAL	N-CA-C	5.85	126.80	111.00
28	b	53	VAL	C-N-CA	-5.85	107.07	121.70
34	i	103	A	O4'-C1'-C2'	5.85	112.87	107.60
34	i	1013	U	C1'-O4'-C4'	5.85	114.58	109.90
34	i	1552	C	C2'-C3'-O3'	5.85	123.06	113.70
34	i	1199	G	C3'-C2'-C1'	-5.85	96.82	101.50
34	i	1274	A	P-O5'-C5'	5.85	130.26	120.90
34	i	1417	A	O4'-C1'-N9	5.85	112.88	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	10	MET	N-CA-C	5.85	126.78	111.00
34	i	875	C	O4'-C1'-N1	5.85	112.88	108.20
34	i	98	C	N1-C1'-C2'	-5.84	105.57	112.00
34	i	368	U	N1-C1'-C2'	5.84	121.60	114.00
17	Q	17	LYS	O-C-N	-5.84	113.35	122.70
27	a	96	THR	CA-C-N	-5.84	100.74	117.10
34	i	1065	U	P-O5'-C5'	-5.84	111.56	120.90
34	i	332	C	O4'-C1'-N1	5.84	112.87	108.20
34	i	392	C	O4'-C1'-C2'	-5.84	99.96	105.80
34	i	633	A	O4'-C1'-C2'	-5.84	99.96	105.80
34	i	1204	A	C1'-O4'-C4'	5.84	114.57	109.90
8	H	192	PHE	N-CA-C	5.83	126.75	111.00
34	i	115	U	O4'-C1'-N1	5.83	112.87	108.20
34	i	1779	C	O4'-C1'-N1	5.83	112.87	108.20
34	i	114	G	C1'-O4'-C4'	5.83	114.57	109.90
34	i	314	U	C3'-C2'-C1'	-5.83	96.83	101.50
34	i	730	C	N1-C1'-C2'	5.83	121.58	114.00
34	i	190	A	O5'-P-OP2	-5.83	100.46	105.70
34	i	376	C	C1'-O4'-C4'	-5.82	105.24	109.90
34	i	546	U	C5'-C4'-C3'	5.82	125.32	116.00
34	i	730	C	O3'-P-O5'	5.82	115.07	104.00
34	i	528	U	C3'-C2'-C1'	5.82	106.16	101.50
34	i	1282	G	C4'-C3'-O3'	-5.82	97.18	109.40
33	g	12	LYS	C-N-CA	5.82	134.51	122.30
34	i	544	A	O4'-C1'-C2'	5.82	112.83	107.60
34	i	611	C	C1'-O4'-C4'	-5.81	105.25	109.90
34	i	1602	A	O4'-C1'-C2'	5.81	112.83	107.60
3	C	241	TRP	C-N-CA	-5.81	107.17	121.70
34	i	1118	A	C3'-C2'-C1'	5.81	106.15	101.50
34	i	1303	U	N1-C1'-C2'	-5.81	105.61	112.00
11	K	40	VAL	CB-CA-C	-5.81	100.36	111.40
13	M	99	LYS	N-CA-C	5.81	126.67	111.00
34	i	1227	C	O4'-C1'-N1	-5.81	103.56	108.20
34	i	1428	U	N1-C1'-C2'	5.81	121.55	114.00
34	i	1532	A	C3'-C2'-C1'	5.81	106.14	101.50
34	i	998	U	O4'-C1'-N1	5.80	112.84	108.20
34	i	1790	G	C5'-C4'-O4'	5.80	116.06	109.10
34	i	1450	A	O4'-C1'-C2'	-5.80	100.00	105.80
34	i	54	A	N9-C1'-C2'	5.80	121.53	114.00
34	i	726	C	O4'-C1'-N1	5.80	112.84	108.20
34	i	914	U	C1'-O4'-C4'	-5.80	105.26	109.90
34	i	367	G	O4'-C1'-N9	5.79	112.84	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	U	108	PRO	CA-N-CD	-5.79	103.39	111.50
34	i	77	A	O4'-C1'-N9	5.79	112.83	108.20
34	i	1633	G	O4'-C1'-N9	-5.79	103.57	108.20
34	i	1414	C	N1-C1'-C2'	5.79	121.53	114.00
34	i	839	C	C3'-C2'-C1'	5.79	106.13	101.50
34	i	884	U	P-O5'-C5'	5.79	130.16	120.90
6	F	131	ALA	N-CA-C	5.78	126.61	111.00
34	i	55	U	O4'-C1'-N1	5.78	112.83	108.20
34	i	402	G	C3'-C2'-C1'	5.78	106.13	101.50
34	i	1110	U	C1'-O4'-C4'	5.78	114.53	109.90
34	i	90	G	O4'-C1'-N9	5.78	112.82	108.20
34	i	277	U	N1-C1'-C2'	5.78	121.51	114.00
34	i	1020	A	O4'-C1'-N9	5.78	112.82	108.20
34	i	1047	G	C3'-C2'-C1'	-5.78	96.88	101.50
5	E	170	THR	C-N-CA	5.78	136.14	121.70
11	K	41	PRO	CA-N-CD	-5.78	103.41	111.50
34	i	461	G	C5'-C4'-O4'	5.78	116.03	109.10
34	i	876	G	N9-C1'-C2'	-5.77	105.65	112.00
34	i	516	A	C3'-C2'-C1'	-5.77	96.89	101.50
34	i	832	G	C1'-O4'-C4'	5.77	114.52	109.90
34	i	1501	U	C1'-O4'-C4'	5.77	114.51	109.90
34	i	206	A	O3'-P-O5'	5.76	114.95	104.00
34	i	1801	C	C1'-O4'-C4'	-5.76	105.29	109.90
12	L	4	ILE	N-CA-C	-5.76	95.44	111.00
34	i	139	C	C1'-O4'-C4'	5.76	114.51	109.90
34	i	1142	C	C1'-O4'-C4'	-5.76	105.29	109.90
17	Q	146	ARG	CA-CB-CG	5.76	126.07	113.40
34	i	962	U	C5'-C4'-O4'	5.76	116.01	109.10
34	i	970	C	C3'-C2'-C1'	5.76	106.11	101.50
34	i	1138	G	N9-C1'-C2'	-5.76	105.67	112.00
7	G	131	ARG	CG-CD-NE	5.76	123.89	111.80
34	i	188	U	C1'-O4'-C4'	-5.76	105.29	109.90
34	i	1168	U	N1-C1'-C2'	-5.76	105.67	112.00
34	i	871	A	O4'-C1'-C2'	-5.75	100.05	105.80
34	i	1251	G	C3'-C2'-C1'	-5.75	96.90	101.50
8	H	40	LEU	CA-CB-CG	-5.75	102.07	115.30
34	i	958	A	O4'-C1'-C2'	-5.75	100.05	105.80
34	i	1706	U	N1-C1'-C2'	5.75	121.48	114.00
34	i	652	G	C1'-O4'-C4'	-5.75	105.30	109.90
7	G	155	GLN	C-N-CA	-5.75	107.33	121.70
26	Z	104	ARG	N-CA-C	5.75	126.52	111.00
34	i	148	U	O4'-C1'-N1	5.75	112.80	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1135	C	C4'-C3'-O3'	-5.75	97.33	109.40
34	i	1100	G	O4'-C1'-N9	5.75	112.80	108.20
34	i	1842	U	O4'-C1'-N1	5.75	112.80	108.20
34	i	923	C	O4'-C1'-N1	5.75	112.80	108.20
12	L	151	THR	CB-CA-C	5.74	127.11	111.60
34	i	386	U	O4'-C1'-N1	5.74	112.79	108.20
34	i	215	U	C1'-O4'-C4'	-5.74	105.31	109.90
5	E	151	ASP	CB-CA-C	5.74	121.87	110.40
34	i	1057	U	O4'-C1'-N1	5.74	112.79	108.20
34	i	1345	G	N9-C1'-C2'	5.74	121.46	114.00
34	i	1494	A	O4'-C1'-C2'	5.74	112.76	107.60
34	i	1327	C	C1'-O4'-C4'	-5.74	105.31	109.90
34	i	1771	G	P-O3'-C3'	-5.74	112.82	119.70
22	V	42	VAL	CB-CA-C	-5.73	100.51	111.40
34	i	495	G	P-O3'-C3'	-5.73	112.82	119.70
34	i	1471	G	O4'-C1'-N9	5.73	112.79	108.20
11	K	29	MET	C-N-CD	-5.73	107.99	120.60
20	T	4	VAL	O-C-N	-5.73	113.53	122.70
34	i	163	U	O4'-C1'-N1	5.73	112.78	108.20
34	i	331	C	P-O3'-C3'	-5.73	112.83	119.70
34	i	1501	U	O4'-C1'-C2'	-5.73	100.07	105.80
34	i	1309	A	O4'-C1'-C2'	-5.73	100.07	105.80
34	i	1532	A	C5'-C4'-C3'	-5.72	106.84	116.00
34	i	86	C	C3'-C2'-C1'	5.72	106.08	101.50
34	i	190	A	C5'-C4'-O4'	5.72	115.97	109.10
34	i	969	C	C3'-C2'-C1'	5.72	106.08	101.50
34	i	1774	G	O4'-C1'-N9	5.72	112.78	108.20
24	X	98	ASP	N-CA-C	5.72	126.44	111.00
34	i	1262	C	N1-C1'-C2'	5.72	121.44	114.00
34	i	1366	A	C1'-O4'-C4'	5.72	114.47	109.90
34	i	79	A	O3'-P-O5'	-5.71	93.14	104.00
34	i	1407	G	N9-C1'-C2'	5.71	121.43	114.00
20	T	51	ASN	C-N-CA	5.71	135.98	121.70
34	i	864	G	O4'-C1'-N9	-5.71	103.63	108.20
34	i	504	U	N1-C1'-C2'	5.71	121.43	114.00
34	i	1390	G	C2'-C3'-O3'	5.71	122.84	113.70
34	i	1859	C	O4'-C1'-N1	5.71	112.77	108.20
4	D	96	LEU	O-C-N	-5.71	113.56	122.70
34	i	897	G	O4'-C1'-N9	5.71	112.77	108.20
26	Z	107	VAL	C-N-CA	5.71	135.97	121.70
34	i	645	A	C5'-C4'-O4'	5.70	115.94	109.10
34	i	1045	A	P-O3'-C3'	5.70	126.54	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1437	U	O4'-C1'-C2'	-5.70	100.10	105.80
19	S	53	THR	CA-C-N	5.70	129.74	117.20
34	i	734	C	C3'-C2'-C1'	5.70	106.06	101.50
34	i	965	U	P-O3'-C3'	5.70	126.54	119.70
34	i	1271	G	C5'-C4'-C3'	5.70	125.12	116.00
16	P	49	LEU	O-C-N	-5.70	113.58	122.70
34	i	171	A	C1'-O4'-C4'	5.70	114.46	109.90
34	i	441	G	P-O5'-C5'	5.69	130.01	120.90
34	i	1446	G	C3'-C2'-C1'	-5.69	96.94	101.50
34	i	141	A	C2'-C3'-O3'	5.69	122.81	113.70
34	i	827	G	O4'-C1'-C2'	5.69	112.72	107.60
34	i	895	U	O4'-C1'-N1	5.69	112.75	108.20
34	i	895	U	O4'-C1'-C2'	-5.69	100.11	105.80
34	i	78	C	O4'-C1'-N1	5.69	112.75	108.20
34	i	1779	C	N1-C1'-C2'	-5.69	105.74	112.00
34	i	274	G	N9-C1'-C2'	5.69	121.39	114.00
34	i	290	A	N9-C1'-C2'	-5.68	105.75	112.00
34	i	625	G	C5'-C4'-C3'	5.68	125.09	116.00
34	i	856	G	N9-C1'-C2'	5.68	121.39	114.00
34	i	569	C	O4'-C1'-C2'	-5.68	100.12	105.80
34	i	597	U	C3'-C2'-C1'	5.68	106.04	101.50
34	i	1821	U	O4'-C1'-N1	5.68	112.75	108.20
8	H	111	LYS	CA-CB-CG	5.68	125.89	113.40
34	i	1407	G	C3'-C2'-C1'	-5.67	96.96	101.50
11	K	42	ASN	N-CA-C	-5.67	95.69	111.00
34	i	340	C	C1'-O4'-C4'	5.67	114.44	109.90
34	i	820	C	O4'-C1'-N1	5.67	112.74	108.20
34	i	1144	A	C3'-C2'-C1'	-5.67	96.97	101.50
31	e	100	LYS	N-CA-C	-5.66	95.72	111.00
34	i	1323	G	C1'-O4'-C4'	-5.66	105.37	109.90
34	i	1826	A	P-O5'-C5'	5.66	129.96	120.90
34	i	818	U	O4'-C1'-N1	5.66	112.73	108.20
12	L	98	LYS	N-CA-C	-5.66	95.73	111.00
34	i	1646	A	O4'-C1'-C2'	-5.66	100.14	105.80
34	i	1781	G	C3'-C2'-C1'	-5.66	96.97	101.50
34	i	1467	C	O4'-C1'-C2'	-5.65	100.15	105.80
34	i	1608	G	C3'-C2'-C1'	-5.65	96.98	101.50
34	i	927	C	C5'-C4'-O4'	5.65	115.88	109.10
34	i	1753	G	C3'-C2'-C1'	-5.65	96.98	101.50
34	i	741	C	C5'-C4'-C3'	5.64	125.03	116.00
34	i	1515	G	C5'-C4'-C3'	5.64	125.03	116.00
34	i	597	U	O4'-C1'-N1	5.64	112.71	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1174	U	O4'-C1'-N1	5.64	112.71	108.20
34	i	397	G	P-O3'-C3'	5.64	126.47	119.70
34	i	1518	C	P-O5'-C5'	-5.64	111.88	120.90
34	i	1589	A	C5'-C4'-C3'	5.63	125.01	116.00
34	i	225	C	C2'-C3'-O3'	5.63	122.71	113.70
34	i	1705	C	O4'-C1'-C2'	-5.63	100.17	105.80
34	i	789	G	C4'-C3'-C2'	-5.63	96.97	102.60
34	i	1181	C	C3'-C2'-C1'	5.63	106.00	101.50
34	i	374	U	C1'-O4'-C4'	-5.62	105.40	109.90
34	i	1018	U	C1'-O4'-C4'	-5.62	105.40	109.90
20	T	45	LEU	O-C-N	-5.62	113.70	122.70
24	X	58	GLU	N-CA-C	5.62	126.18	111.00
21	U	70	CYS	CA-C-N	5.62	127.44	116.20
34	i	341	G	C4'-C3'-C2'	-5.62	96.98	102.60
34	i	1219	A	C3'-C2'-C1'	5.62	105.99	101.50
34	i	1390	G	N9-C1'-C2'	5.62	121.30	114.00
34	i	1044	G	P-O5'-C5'	5.62	129.89	120.90
19	S	10	GLN	N-CA-C	5.62	126.16	111.00
34	i	1413	C	C5'-C4'-C3'	5.62	124.99	116.00
34	i	1542	C	N1-C1'-C2'	5.62	121.30	114.00
34	i	278	U	C3'-C2'-C1'	5.61	105.99	101.50
8	H	105	THR	CB-CA-C	5.61	126.75	111.60
34	i	1423	C	O4'-C1'-N1	5.61	112.69	108.20
34	i	1460	C	C3'-C2'-C1'	5.61	105.99	101.50
34	i	819	U	O4'-C1'-C2'	5.61	112.65	107.60
34	i	3	C	C1'-O4'-C4'	5.61	114.39	109.90
34	i	323	G	C1'-O4'-C4'	-5.61	105.41	109.90
34	i	346	C	O4'-C1'-C2'	5.61	112.65	107.60
34	i	434	G	C3'-C2'-C1'	-5.61	97.01	101.50
34	i	619	A	C1'-O4'-C4'	5.61	114.39	109.90
34	i	1411	C	O4'-C1'-C2'	-5.61	100.19	105.80
34	i	1817	A	C5'-C4'-O4'	-5.61	102.37	109.10
34	i	86	C	O4'-C1'-N1	5.61	112.68	108.20
34	i	151	C	C3'-C2'-C1'	5.61	105.98	101.50
34	i	235	C	O4'-C1'-C2'	-5.61	100.19	105.80
34	i	1561	G	N9-C1'-C2'	-5.61	105.83	112.00
27	a	70	LYS	CD-CE-NZ	5.60	124.59	111.70
34	i	1819	A	C2'-C3'-O3'	5.60	122.67	113.70
34	i	176	U	O4'-C1'-N1	5.60	112.68	108.20
34	i	667	G	C1'-O4'-C4'	-5.60	105.42	109.90
34	i	817	G	C2'-C3'-O3'	5.60	122.66	113.70
34	i	874	G	C1'-O4'-C4'	-5.60	105.42	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1160	G	N9-C1'-C2'	5.60	121.28	114.00
34	i	1407	G	O4'-C1'-C2'	5.60	112.64	107.60
34	i	1448	A	O4'-C1'-C2'	-5.60	100.20	105.80
34	i	143	U	C1'-O4'-C4'	-5.60	105.42	109.90
34	i	742	C	C4'-C3'-C2'	-5.60	97.00	102.60
34	i	1439	C	O4'-C1'-N1	5.60	112.68	108.20
21	U	68	THR	CB-CA-C	5.60	126.71	111.60
34	i	93	U	N1-C1'-C2'	-5.60	105.84	112.00
34	i	1220	G	N9-C1'-C2'	5.60	121.28	114.00
34	i	1037	G	C3'-C2'-C1'	-5.59	97.03	101.50
34	i	1639	C	C1'-O4'-C4'	-5.59	105.42	109.90
16	P	53	GLN	CB-CA-C	5.59	121.58	110.40
34	i	1587	C	C3'-C2'-C1'	5.59	105.97	101.50
32	f	125	GLU	CB-CA-C	5.59	121.58	110.40
33	g	294	ASP	N-CA-CB	-5.59	100.54	110.60
34	i	1152	U	O4'-C1'-N1	5.59	112.67	108.20
34	i	1409	G	P-O3'-C3'	-5.59	112.99	119.70
34	i	1042	U	O4'-C1'-C2'	-5.58	100.22	105.80
34	i	1471	G	C4'-C3'-C2'	-5.58	97.02	102.60
34	i	224	U	P-O5'-C5'	5.58	129.83	120.90
34	i	648	U	O4'-C1'-N1	5.58	112.66	108.20
34	i	804	A	N9-C1'-C2'	5.58	121.25	114.00
34	i	1672	U	C1'-O4'-C4'	5.58	114.36	109.90
34	i	91	A	C1'-O4'-C4'	5.58	114.36	109.90
34	i	49	C	C1'-O4'-C4'	-5.58	105.44	109.90
34	i	125	C	C4'-C3'-O3'	5.57	124.15	113.00
34	i	225	C	C1'-O4'-C4'	-5.57	105.44	109.90
34	i	1587	C	N1-C1'-C2'	5.57	121.25	114.00
34	i	1361	G	P-O3'-C3'	-5.57	113.01	119.70
34	i	230	C	O4'-C1'-C2'	-5.57	100.23	105.80
34	i	508	G	O4'-C1'-N9	5.57	112.66	108.20
34	i	1079	A	C3'-C2'-C1'	5.57	105.96	101.50
24	X	37	LYS	N-CA-C	5.57	126.04	111.00
33	g	143	GLN	N-CA-C	-5.57	95.96	111.00
34	i	314	U	O4'-C1'-C2'	5.57	112.61	107.60
34	i	549	G	C3'-C2'-C1'	-5.57	97.05	101.50
34	i	1078	A	C3'-C2'-C1'	5.57	105.95	101.50
34	i	1411	C	C3'-C2'-C1'	5.57	105.95	101.50
34	i	1618	A	N9-C1'-C2'	-5.57	105.88	112.00
34	i	539	C	O4'-C1'-N1	5.57	112.65	108.20
34	i	656	U	C3'-C2'-C1'	5.57	105.95	101.50
34	i	1283	A	N9-C1'-C2'	-5.57	105.88	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	1557	C	C3'-C2'-C1'	5.57	105.95	101.50
9	I	105	ASP	CB-CA-C	5.56	121.53	110.40
34	i	1198	U	C3'-C2'-C1'	5.56	105.95	101.50
34	i	1661	C	C3'-C2'-C1'	5.56	105.95	101.50
29	c	60	GLU	N-CA-C	-5.56	95.98	111.00
34	i	226	A	O4'-C1'-N9	5.56	112.65	108.20
1	A	159	ILE	CA-CB-CG1	-5.56	100.44	111.00
32	f	148	TYR	C-N-CA	5.56	135.59	121.70
34	i	658	A	O4'-C1'-N9	5.56	112.65	108.20
34	i	996	C	C3'-C2'-C1'	5.56	105.95	101.50
34	i	1070	C	O4'-C1'-N1	5.56	112.65	108.20
34	i	1692	A	N9-C1'-C2'	-5.56	105.89	112.00
4	D	142	LEU	CB-CG-CD1	5.55	120.44	111.00
34	i	1143	C	O4'-C1'-N1	5.55	112.64	108.20
34	i	1246	A	C1'-O4'-C4'	5.55	114.34	109.90
34	i	1538	U	O4'-C1'-N1	5.55	112.64	108.20
34	i	987	G	C3'-C2'-C1'	-5.55	97.06	101.50
34	i	1240	U	P-O3'-C3'	5.55	126.36	119.70
34	i	1639	C	C3'-C2'-C1'	5.55	105.94	101.50
34	i	1708	C	N1-C1'-C2'	5.55	121.21	114.00
34	i	1814	G	O4'-C1'-N9	5.55	112.64	108.20
34	i	676	U	P-O3'-C3'	-5.54	113.05	119.70
34	i	994	A	O4'-C1'-C2'	-5.54	100.26	105.80
34	i	1432	C	O4'-C1'-C2'	-5.54	100.26	105.80
17	Q	6	PRO	CB-CA-C	-5.54	98.16	112.00
34	i	286	C	C3'-C2'-C1'	5.54	105.93	101.50
34	i	1063	C	C1'-O4'-C4'	-5.54	105.47	109.90
17	Q	145	TYR	C-N-CA	5.54	135.54	121.70
34	i	40	A	N9-C1'-C2'	-5.54	105.91	112.00
34	i	308	C	C3'-C2'-C1'	5.54	105.93	101.50
34	i	1274	A	O4'-C1'-N9	5.54	112.63	108.20
34	i	1854	A	P-O3'-C3'	-5.54	113.06	119.70
34	i	58	C	C1'-O4'-C4'	5.53	114.33	109.90
34	i	329	A	P-O3'-C3'	-5.53	113.06	119.70
34	i	398	A	O4'-C1'-C2'	-5.53	100.27	105.80
34	i	1343	U	O4'-C1'-N1	5.53	112.63	108.20
9	I	5	ARG	CA-C-N	5.53	129.36	117.20
34	i	116	U	O4'-C1'-N1	5.53	112.62	108.20
34	i	805	A	P-O3'-C3'	5.53	126.33	119.70
34	i	1259	U	C3'-C2'-C1'	5.53	105.92	101.50
34	i	1638	U	O4'-C1'-N1	5.53	112.62	108.20
34	i	13	C	O4'-C1'-N1	5.52	112.62	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	949	C	P-O3'-C3'	-5.52	113.07	119.70
34	i	964	U	O4'-C1'-N1	5.52	112.62	108.20
6	F	47	LYS	CD-CE-NZ	-5.52	99.00	111.70
34	i	388	A	C1'-O4'-C4'	5.52	114.31	109.90
34	i	675	A	O4'-C1'-N9	5.52	112.61	108.20
34	i	38	A	C5'-C4'-C3'	-5.51	107.18	116.00
34	i	376	C	P-O5'-C5'	-5.51	112.08	120.90
16	P	36	LEU	C-N-CA	5.51	135.48	121.70
34	i	1795	A	O4'-C1'-N9	5.51	112.61	108.20
34	i	489	G	P-O5'-C5'	-5.51	112.08	120.90
34	i	536	G	O4'-C1'-C2'	-5.51	100.29	105.80
34	i	642	U	C1'-O4'-C4'	5.51	114.31	109.90
22	V	67	ASP	N-CA-CB	-5.50	100.69	110.60
34	i	522	C	C4'-C3'-C2'	-5.50	97.09	102.60
4	D	3	VAL	C-N-CA	5.50	135.46	121.70
15	O	103	ASN	N-CA-CB	5.50	120.51	110.60
34	i	282	G	C1'-O4'-C4'	-5.50	105.50	109.90
34	i	1370	C	N1-C1'-C2'	5.50	121.15	114.00
34	i	1837	G	P-O3'-C3'	-5.50	113.10	119.70
16	P	130	ARG	NE-CZ-NH2	-5.50	117.55	120.30
34	i	462	C	P-O3'-C3'	5.50	126.30	119.70
34	i	1123	C	O4'-C1'-N1	5.50	112.60	108.20
34	i	503	G	C1'-O4'-C4'	-5.50	105.50	109.90
34	i	241	A	O4'-C1'-N9	5.49	112.59	108.20
34	i	516	A	C5'-C4'-C3'	5.49	124.79	116.00
34	i	1106	G	O4'-C1'-C2'	-5.49	100.31	105.80
34	i	350	A	O4'-C1'-N9	5.49	112.59	108.20
34	i	1280	A	C5'-C4'-O4'	5.49	115.69	109.10
34	i	400	G	N9-C1'-C2'	-5.49	105.97	112.00
34	i	459	A	O4'-C1'-N9	5.49	112.59	108.20
34	i	1382	A	O4'-C1'-C2'	-5.49	100.31	105.80
34	i	1013	U	O4'-C1'-C2'	-5.48	100.32	105.80
18	R	89	SER	CA-C-O	-5.48	108.59	120.10
34	i	919	G	O4'-C1'-N9	5.48	112.59	108.20
34	i	1705	C	O4'-C1'-N1	5.48	112.59	108.20
34	i	469	C	C3'-C2'-C1'	5.48	105.88	101.50
34	i	1035	C	O4'-C1'-N1	5.48	112.58	108.20
34	i	1191	A	N9-C1'-C2'	-5.48	105.97	112.00
34	i	614	C	C5'-C4'-C3'	-5.48	107.23	116.00
34	i	1271	G	O4'-C1'-N9	5.48	112.58	108.20
34	i	1691	C	C3'-C2'-C1'	5.48	105.88	101.50
4	D	167	TYR	CA-CB-CG	-5.48	103.00	113.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	101	U	O4'-C1'-N1	5.48	112.58	108.20
34	i	391	A	C3'-C2'-C1'	5.47	105.88	101.50
34	i	80	G	O4'-C1'-N9	5.47	112.58	108.20
34	i	355	C	C3'-C2'-C1'	5.47	105.88	101.50
34	i	456	G	C3'-C2'-C1'	-5.47	97.12	101.50
34	i	1221	U	O4'-C1'-N1	5.47	112.58	108.20
34	i	1344	G	P-O3'-C3'	5.47	126.27	119.70
34	i	560	C	C5'-C4'-O4'	5.47	115.66	109.10
34	i	822	A	P-O3'-C3'	-5.47	113.14	119.70
34	i	564	A	N9-C1'-C2'	5.47	121.11	114.00
34	i	889	U	C1'-O4'-C4'	5.47	114.27	109.90
34	i	1556	A	O4'-C1'-C2'	-5.47	100.33	105.80
34	i	15	U	O4'-C1'-C2'	-5.46	100.33	105.80
34	i	1716	U	O3'-P-O5'	5.46	114.38	104.00
34	i	859	U	O4'-C1'-C2'	5.46	112.52	107.60
34	i	440	C	O4'-C1'-N1	5.46	112.57	108.20
3	C	241	TRP	O-C-N	-5.46	113.97	122.70
34	i	71	G	C4'-C3'-O3'	5.46	123.91	113.00
34	i	1595	G	P-O3'-C3'	-5.46	113.15	119.70
19	S	89	ASP	CB-CA-C	-5.45	99.49	110.40
34	i	929	G	C3'-C2'-C1'	-5.45	97.14	101.50
34	i	396	U	O4'-C1'-N1	5.45	112.56	108.20
34	i	586	U	O4'-C1'-N1	5.45	112.56	108.20
34	i	57	U	C3'-C2'-C1'	5.45	105.86	101.50
34	i	292	A	O4'-C1'-C2'	-5.45	100.35	105.80
34	i	790	A	O4'-C1'-C2'	-5.45	100.35	105.80
34	i	606	A	C1'-O4'-C4'	-5.45	105.54	109.90
34	i	540	C	C3'-C2'-C1'	5.45	105.86	101.50
34	i	1823	G	O4'-C1'-C2'	-5.45	100.35	105.80
34	i	509	A	C1'-O4'-C4'	5.44	114.25	109.90
34	i	640	A	O4'-C1'-C2'	-5.44	100.36	105.80
34	i	1848	U	N1-C1'-C2'	-5.44	106.01	112.00
17	Q	18	THR	C-N-CA	5.44	135.30	121.70
34	i	1279	C	C1'-O4'-C4'	-5.44	105.55	109.90
34	i	882	A	O3'-P-O5'	5.44	114.33	104.00
9	I	55	TYR	CB-CG-CD2	-5.44	117.74	121.00
34	i	396	U	N1-C1'-C2'	5.44	121.07	114.00
34	i	1458	U	O4'-C1'-N1	5.44	112.55	108.20
34	i	1740	A	C3'-C2'-C1'	-5.44	97.15	101.50
19	S	81	ASP	CB-CG-OD2	5.43	123.19	118.30
34	i	101	U	O4'-C1'-C2'	-5.43	100.36	105.80
34	i	911	G	O4'-C1'-C2'	5.43	112.49	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	536	G	O4'-C1'-N9	5.43	112.55	108.20
1	A	205	ARG	NE-CZ-NH1	5.43	123.01	120.30
34	i	560	C	N1-C1'-C2'	5.42	121.05	114.00
34	i	1053	C	P-O3'-C3'	-5.42	113.19	119.70
34	i	1528	A	O4'-C1'-N9	5.42	112.54	108.20
2	B	63	LYS	N-CA-C	5.42	125.64	111.00
10	J	100	LEU	N-CA-C	5.42	125.64	111.00
34	i	378	U	O4'-C1'-N1	5.42	112.53	108.20
34	i	462	C	C3'-C2'-C1'	5.42	105.83	101.50
34	i	682	G	C1'-O4'-C4'	-5.42	105.56	109.90
34	i	1166	A	C3'-C2'-C1'	-5.42	97.17	101.50
34	i	218	A	C3'-C2'-C1'	-5.42	97.17	101.50
34	i	67	C	N1-C1'-C2'	-5.42	106.04	112.00
34	i	1227	C	C1'-O4'-C4'	-5.42	105.57	109.90
34	i	404	A	O4'-C1'-C2'	-5.41	100.39	105.80
34	i	868	A	O4'-C1'-C2'	5.41	112.47	107.60
34	i	1625	A	O4'-C1'-N9	5.41	112.53	108.20
34	i	1819	A	C5'-C4'-O4'	5.41	115.60	109.10
21	U	118	ASP	N-CA-C	-5.41	96.39	111.00
34	i	1058	A	O4'-C1'-N9	5.41	112.53	108.20
34	i	1164	G	O4'-C1'-N9	5.41	112.53	108.20
1	A	14	ASP	CB-CG-OD2	5.41	123.17	118.30
29	c	36	ASP	CB-CG-OD2	5.41	123.17	118.30
34	i	1165	G	C1'-O4'-C4'	-5.41	105.57	109.90
34	i	1374	A	O4'-C1'-C2'	-5.41	100.39	105.80
34	i	1618	A	C1'-O4'-C4'	5.41	114.23	109.90
8	H	16	PRO	CA-N-CD	-5.41	103.93	111.50
34	i	870	G	P-O3'-C3'	5.40	126.18	119.70
34	i	1027	A	C5'-C4'-O4'	5.40	115.58	109.10
9	I	132	GLU	CA-C-O	-5.40	108.76	120.10
23	W	54	ASP	CB-CG-OD2	5.40	123.16	118.30
29	c	54	ASP	CB-CG-OD2	5.40	123.16	118.30
34	i	1127	G	O4'-C1'-C2'	-5.40	100.40	105.80
34	i	852	C	C1'-O4'-C4'	-5.39	105.58	109.90
34	i	1122	G	O4'-C1'-N9	5.39	112.52	108.20
34	i	1384	A	P-O3'-C3'	-5.39	113.23	119.70
34	i	1608	G	O4'-C1'-N9	5.39	112.51	108.20
10	J	35	TYR	C-N-CA	5.39	133.62	122.30
34	i	613	G	O4'-C1'-N9	5.39	112.51	108.20
34	i	1424	G	C3'-C2'-C1'	-5.39	97.19	101.50
15	O	39	ASP	CB-CG-OD2	5.39	123.15	118.30
34	i	25	A	O4'-C1'-N9	5.39	112.51	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	V	28	ASP	CB-CG-OD2	5.39	123.15	118.30
22	V	82	ASN	CB-CA-C	-5.39	99.63	110.40
34	i	188	U	P-O3'-C3'	-5.39	113.24	119.70
34	i	550	A	O5'-C5'-C4'	5.39	121.93	111.70
34	i	1437	U	C1'-O4'-C4'	5.39	114.21	109.90
34	i	918	A	N9-C1'-C2'	-5.38	106.08	112.00
34	i	1003	C	O4'-C1'-C2'	-5.38	100.42	105.80
25	Y	62	THR	C-N-CA	-5.38	108.24	121.70
34	i	1356	U	O4'-C1'-N1	5.38	112.51	108.20
6	F	21	GLY	N-CA-C	-5.38	99.65	113.10
34	i	297	C	O4'-C1'-N1	5.38	112.50	108.20
34	i	427	G	N9-C1'-C2'	5.38	120.99	114.00
34	i	1341	G	O4'-C1'-C2'	-5.38	100.42	105.80
34	i	1851	G	O4'-C1'-C2'	5.38	112.44	107.60
11	K	98	ARG	CA-C-O	-5.38	108.81	120.10
34	i	139	C	O4'-C1'-N1	5.38	112.50	108.20
34	i	276	U	P-O5'-C5'	-5.38	112.30	120.90
2	B	108	ASP	CB-CG-OD2	5.37	123.14	118.30
34	i	375	G	O4'-C1'-N9	5.37	112.50	108.20
16	P	71	GLU	CA-C-N	-5.37	105.38	117.20
34	i	502	A	O4'-C1'-N9	5.37	112.50	108.20
33	g	14	HIS	C-N-CA	-5.37	108.28	121.70
34	i	462	C	N1-C1'-C2'	5.37	120.98	114.00
34	i	1208	G	O4'-C1'-N9	5.37	112.50	108.20
34	i	1491	G	O4'-C1'-N9	5.37	112.50	108.20
34	i	69	C	O4'-C1'-N1	5.37	112.49	108.20
3	C	216	ALA	O-C-N	-5.37	114.11	122.70
34	i	94	G	N9-C1'-C2'	5.37	120.97	114.00
34	i	1370	C	O4'-C1'-N1	5.37	112.49	108.20
34	i	461	G	N9-C1'-C2'	-5.36	106.10	112.00
34	i	1823	G	C5'-C4'-O4'	5.36	115.54	109.10
11	K	43	LEU	CB-CG-CD1	5.36	120.11	111.00
34	i	139	C	C3'-C2'-C1'	5.36	105.79	101.50
34	i	229	A	O4'-C1'-N9	5.36	112.49	108.20
34	i	1318	G	C1'-O4'-C4'	5.36	114.19	109.90
34	i	1739	G	O4'-C1'-N9	5.36	112.49	108.20
34	i	146	G	O4'-C1'-C2'	-5.36	100.44	105.80
34	i	346	C	C3'-C2'-C1'	-5.36	97.22	101.50
34	i	1201	C	O4'-C1'-N1	5.36	112.48	108.20
34	i	906	G	O5'-P-OP1	-5.35	100.88	105.70
34	i	1357	G	C3'-C2'-C1'	5.35	105.78	101.50
31	e	95	LYS	C-N-CA	5.35	135.08	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	76	U	N1-C1'-C2'	5.35	120.96	114.00
34	i	1037	G	N9-C1'-C2'	5.35	120.96	114.00
34	i	727	G	N9-C1'-C2'	5.35	120.96	114.00
14	N	151	ALA	CA-C-O	-5.35	108.86	120.10
34	i	235	C	N1-C1'-C2'	5.35	120.95	114.00
15	O	129	ILE	CG1-CB-CG2	5.35	123.16	111.40
34	i	437	A	O4'-C1'-N9	5.35	112.48	108.20
34	i	109	U	C2'-C3'-O3'	5.34	122.25	113.70
34	i	685	G	C1'-O4'-C4'	5.34	114.17	109.90
1	A	53	ARG	CD-NE-CZ	-5.34	116.12	123.60
24	X	142	ARG	CA-C-O	-5.34	108.88	120.10
34	i	102	A	C1'-O4'-C4'	-5.34	105.63	109.90
34	i	1313	U	O4'-C1'-N1	5.34	112.47	108.20
10	J	104	ASP	CB-CG-OD2	5.34	123.11	118.30
14	N	6	ALA	C-N-CD	5.34	139.61	128.40
34	i	443	C	N1-C1'-C2'	5.34	120.94	114.00
34	i	988	A	C1'-O4'-C4'	-5.34	105.63	109.90
34	i	1129	A	O5'-C5'-C4'	-5.34	101.56	111.70
34	i	1300	U	N1-C1'-C2'	5.34	120.94	114.00
34	i	1717	G	C5'-C4'-C3'	-5.34	107.46	116.00
8	H	16	PRO	C-N-CA	5.34	135.04	121.70
34	i	370	G	C1'-O4'-C4'	5.34	114.17	109.90
7	G	170	ARG	CA-C-N	-5.34	105.46	117.20
34	i	820	C	N1-C1'-C2'	5.34	120.94	114.00
34	i	1846	C	O4'-C1'-N1	5.34	112.47	108.20
34	i	1150	U	C4'-C3'-C2'	-5.33	97.27	102.60
34	i	1535	G	P-O5'-C5'	-5.33	112.36	120.90
34	i	1158	C	O4'-C1'-C2'	-5.33	100.47	105.80
34	i	1667	U	C1'-O4'-C4'	-5.33	105.63	109.90
34	i	1703	C	C3'-C2'-C1'	5.33	105.77	101.50
34	i	1832	U	O4'-C1'-N1	5.33	112.47	108.20
18	R	101	ASP	CB-CG-OD2	5.33	123.10	118.30
34	i	1229	G	O4'-C1'-N9	5.33	112.47	108.20
34	i	1255	A	C5'-C4'-O4'	5.33	115.50	109.10
34	i	1301	C	N1-C1'-C2'	5.33	120.93	114.00
3	C	233	TYR	CA-CB-CG	-5.33	103.28	113.40
34	i	835	C	O3'-P-O5'	-5.33	93.88	104.00
34	i	1018	U	P-O3'-C3'	5.33	126.09	119.70
34	i	1635	A	C3'-C2'-C1'	5.33	105.76	101.50
34	i	313	C	C2'-C3'-O3'	5.33	122.22	113.70
34	i	795	U	C4'-C3'-C2'	-5.33	97.27	102.60
34	i	1024	A	C4'-C3'-O3'	-5.33	98.22	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	C	244	THR	N-CA-C	5.32	125.37	111.00
24	X	88	ASP	CB-CG-OD2	5.32	123.09	118.30
4	D	227	LYS	CA-C-O	-5.32	108.93	120.10
6	F	46	ALA	O-C-N	-5.32	114.19	122.70
1	A	209	GLU	CA-C-O	-5.32	108.93	120.10
4	D	193	ASP	C-N-CA	-5.32	99.67	122.00
34	i	33	G	C5'-C4'-O4'	5.32	115.48	109.10
34	i	332	C	O4'-C1'-C2'	-5.32	100.48	105.80
34	i	729	C	C4'-C3'-C2'	-5.32	97.28	102.60
34	i	1110	U	O4'-C1'-C2'	-5.32	100.48	105.80
34	i	1479	A	C4'-C3'-C2'	-5.32	97.28	102.60
34	i	1557	C	P-O3'-C3'	5.32	126.08	119.70
25	Y	53	ASP	CB-CG-OD2	5.32	123.08	118.30
34	i	1607	G	C3'-C2'-C1'	-5.32	97.25	101.50
22	V	24	ILE	CB-CA-C	-5.31	100.97	111.60
34	i	1267	C	N1-C1'-C2'	5.31	120.91	114.00
3	C	263	THR	CA-C-O	-5.31	108.95	120.10
34	i	103	A	P-O3'-C3'	5.31	126.07	119.70
23	W	130	PHE	CA-C-O	-5.31	108.96	120.10
34	i	66	G	O4'-C1'-C2'	5.31	112.38	107.60
34	i	901	C	O4'-C1'-N1	5.31	112.45	108.20
34	i	1737	C	N1-C1'-C2'	5.31	120.90	114.00
34	i	1602	A	C1'-O4'-C4'	-5.31	105.66	109.90
34	i	1833	U	C5'-C4'-O4'	5.31	115.47	109.10
10	J	95	ASP	CB-CG-OD2	5.30	123.07	118.30
34	i	1234	U	C3'-C2'-C1'	-5.30	97.26	101.50
34	i	1423	C	C3'-C2'-C1'	5.30	105.74	101.50
17	Q	110	ASP	CB-CG-OD2	5.30	123.07	118.30
34	i	540	C	O4'-C1'-C2'	-5.30	100.50	105.80
34	i	1256	A	O4'-C1'-N9	5.30	112.44	108.20
34	i	1624	C	O4'-C4'-C3'	-5.30	98.70	104.00
34	i	911	G	C3'-C2'-C1'	-5.30	97.26	101.50
34	i	1683	C	C5'-C4'-O4'	5.30	115.46	109.10
7	G	39	ASP	CB-CG-OD2	5.30	123.07	118.30
34	i	65	C	O4'-C1'-C2'	-5.30	100.50	105.80
34	i	960	A	O4'-C1'-C2'	-5.30	100.50	105.80
5	E	88	ASP	CB-CG-OD2	5.30	123.07	118.30
14	N	87	ASP	CB-CG-OD2	5.29	123.06	118.30
34	i	1807	A	O4'-C1'-N9	5.29	112.43	108.20
1	A	53	ARG	N-CA-CB	-5.29	101.09	110.60
34	i	77	A	C5'-C4'-C3'	5.29	124.46	116.00
10	J	137	VAL	C-N-CA	5.28	134.91	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	994	A	N9-C1'-C2'	-5.28	106.19	112.00
6	F	43	GLU	N-CA-C	-5.28	96.74	111.00
8	H	118	ARG	CB-CA-C	-5.28	99.84	110.40
30	d	56	ASP	CA-C-O	-5.28	109.01	120.10
33	g	314	ILE	CA-C-O	-5.28	109.01	120.10
34	i	516	A	O4'-C1'-N9	5.28	112.42	108.20
34	i	1486	G	C1'-O4'-C4'	-5.28	105.67	109.90
5	E	59	ASP	CB-CG-OD2	5.28	123.05	118.30
27	a	52	ASP	CB-CG-OD2	5.28	123.05	118.30
29	c	68	LEU	CA-C-O	-5.28	109.01	120.10
34	i	742	C	O4'-C1'-N1	5.28	112.42	108.20
34	i	1695	C	N1-C1'-C2'	-5.28	106.19	112.00
18	R	94	GLU	N-CA-C	-5.28	96.75	111.00
34	i	189	G	O5'-C5'-C4'	5.28	121.73	111.70
34	i	1539	C	O4'-C1'-C2'	-5.28	100.52	105.80
34	i	1820	G	O4'-C1'-N9	5.28	112.42	108.20
34	i	1298	G	C2'-C3'-O3'	-5.27	97.90	109.50
34	i	201	G	C1'-O4'-C4'	5.27	114.12	109.90
34	i	554	A	N9-C1'-C2'	-5.27	106.20	112.00
34	i	84	A	C5'-C4'-O4'	5.27	115.42	109.10
34	i	109	U	P-O3'-C3'	-5.27	113.38	119.70
28	b	52	THR	O-C-N	5.27	131.13	122.70
34	i	534	G	O4'-C1'-C2'	-5.27	100.53	105.80
34	i	551	A	C2'-C3'-O3'	5.27	122.13	113.70
4	D	93	THR	C-N-CA	5.27	134.87	121.70
5	E	170	THR	O-C-N	5.27	131.13	122.70
15	O	80	ASP	CB-CG-OD2	5.27	123.04	118.30
34	i	895	U	P-O5'-C5'	5.27	129.33	120.90
14	N	110	ASP	CB-CG-OD2	5.26	123.04	118.30
34	i	84	A	P-O5'-C5'	-5.26	112.48	120.90
34	i	209	C	C3'-C2'-C1'	5.26	105.71	101.50
34	i	378	U	N1-C1'-C2'	5.26	120.84	114.00
34	i	416	A	C3'-C2'-C1'	5.26	105.71	101.50
5	E	73	ASP	CB-CG-OD2	5.26	123.04	118.30
8	H	56	GLY	N-CA-C	5.26	126.26	113.10
34	i	1209	C	N1-C1'-C2'	5.26	120.84	114.00
34	i	1408	C	O5'-P-OP1	5.26	117.01	110.70
10	J	26	ASP	CB-CG-OD2	5.26	123.03	118.30
12	L	158	PHE	CA-C-O	-5.26	109.06	120.10
31	e	133	SER	CA-C-O	-5.26	109.05	120.10
34	i	1397	A	N9-C1'-C2'	-5.26	106.22	112.00
34	i	1695	C	O4'-C1'-N1	5.26	112.41	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	655	G	N9-C1'-C2'	5.26	120.83	114.00
34	i	660	A	C1'-O4'-C4'	5.26	114.11	109.90
34	i	1036	G	O4'-C1'-C2'	5.26	112.33	107.60
34	i	516	A	C1'-O4'-C4'	-5.25	105.70	109.90
10	J	124	HIS	N-CA-C	-5.25	96.81	111.00
34	i	1280	A	N9-C1'-C2'	5.25	120.83	114.00
34	i	1473	U	O4'-C1'-N1	5.25	112.40	108.20
10	J	91	LYS	CA-C-N	5.25	128.75	117.20
21	U	27	ARG	O-C-N	-5.25	114.30	122.70
34	i	1094	C	O4'-C1'-N1	5.25	112.40	108.20
34	i	1283	A	O4'-C1'-N9	5.25	112.40	108.20
9	I	191	GLU	CB-CA-C	-5.25	99.90	110.40
34	i	459	A	C1'-O4'-C4'	5.25	114.10	109.90
34	i	1130	G	O4'-C1'-N9	5.25	112.40	108.20
34	i	1419	C	O4'-C1'-N1	5.25	112.40	108.20
28	b	3	LEU	CB-CG-CD2	5.25	119.92	111.00
34	i	1580	U	O4'-C1'-N1	5.25	112.40	108.20
14	N	133	ARG	NE-CZ-NH1	5.25	122.92	120.30
34	i	235	C	O4'-C1'-N1	5.25	112.40	108.20
34	i	1137	G	O4'-C1'-C2'	5.25	112.32	107.60
34	i	1473	U	C1'-O4'-C4'	-5.25	105.70	109.90
34	i	306	C	P-O5'-C5'	-5.25	112.51	120.90
34	i	458	A	P-O5'-C5'	-5.25	112.51	120.90
34	i	1331	G	N9-C1'-C2'	5.24	120.82	114.00
34	i	165	G	N9-C1'-C2'	-5.24	106.23	112.00
34	i	1130	G	C5'-C4'-O4'	5.24	115.39	109.10
34	i	1361	G	O4'-C1'-N9	5.24	112.39	108.20
15	O	46	ASP	CB-CG-OD2	5.24	123.02	118.30
34	i	895	U	C3'-C2'-C1'	5.24	105.69	101.50
23	W	80	ASP	CB-CG-OD2	5.24	123.02	118.30
34	i	1051	A	C1'-O4'-C4'	5.24	114.09	109.90
34	i	1635	A	N9-C1'-C2'	-5.24	106.24	112.00
34	i	382	A	C5'-C4'-O4'	5.24	115.38	109.10
5	E	104	ASP	CB-CG-OD2	5.23	123.01	118.30
28	b	84	HIS	CA-C-O	-5.23	109.11	120.10
34	i	624	A	C3'-C2'-C1'	5.23	105.69	101.50
34	i	725	C	C1'-O4'-C4'	5.23	114.08	109.90
34	i	1262	C	C1'-O4'-C4'	-5.23	105.72	109.90
34	i	1645	A	O4'-C1'-C2'	-5.23	100.57	105.80
17	Q	67	ASP	CB-CG-OD2	5.23	123.01	118.30
18	R	25	GLY	O-C-N	5.23	131.07	122.70
28	b	34	ASP	CB-CG-OD2	5.23	123.01	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	621	U	N1-C1'-C2'	5.23	120.80	114.00
7	G	57	ASP	CB-CG-OD2	5.23	123.00	118.30
34	i	923	C	C3'-C2'-C1'	5.23	105.68	101.50
34	i	1119	C	O4'-C1'-N1	5.23	112.38	108.20
34	i	207	U	N1-C1'-C2'	5.22	120.79	114.00
8	H	194	LEU	CA-C-O	-5.22	109.13	120.10
9	I	133	GLU	CA-C-N	5.22	128.69	117.20
24	X	138	LYS	O-C-N	-5.22	114.34	122.70
34	i	1560	C	O4'-C1'-N1	5.22	112.38	108.20
34	i	1645	A	P-O5'-C5'	-5.22	112.55	120.90
34	i	88	G	O4'-C1'-N9	5.22	112.38	108.20
5	E	253	ASP	CB-CG-OD2	5.22	123.00	118.30
34	i	1186	A	O4'-C1'-N9	5.22	112.38	108.20
34	i	107	A	C1'-O4'-C4'	5.22	114.08	109.90
13	M	132	LYS	CA-C-O	-5.22	109.15	120.10
34	i	1161	G	C5'-C4'-O4'	5.22	115.36	109.10
34	i	178	C	N1-C1'-C2'	5.21	120.78	114.00
34	i	1416	G	O4'-C1'-C2'	5.21	112.29	107.60
12	L	18	GLN	C-N-CA	-5.21	108.67	121.70
23	W	9	ASP	CB-CG-OD2	5.21	122.99	118.30
34	i	1455	G	C3'-C2'-C1'	-5.21	97.33	101.50
34	i	906	G	C3'-C2'-C1'	-5.21	97.33	101.50
34	i	1137	G	P-O5'-C5'	5.21	129.24	120.90
34	i	682	G	O4'-C1'-C2'	5.21	112.29	107.60
34	i	1340	A	P-O3'-C3'	5.21	125.95	119.70
34	i	1348	G	N9-C1'-C2'	5.21	120.77	114.00
34	i	1513	C	O4'-C4'-C3'	-5.21	98.79	104.00
19	S	104	ASP	CB-CG-OD2	5.21	122.99	118.30
25	Y	80	ASP	CB-CG-OD2	5.21	122.99	118.30
21	U	90	ASP	CB-CG-OD2	5.20	122.98	118.30
26	Z	52	LYS	N-CA-C	-5.20	96.95	111.00
34	i	832	G	N9-C1'-C2'	-5.20	106.28	112.00
6	F	204	ARG	CA-C-O	-5.20	109.18	120.10
34	i	916	A	P-O3'-C3'	5.20	125.94	119.70
34	i	1006	G	N9-C1'-C2'	-5.20	106.28	112.00
34	i	1078	A	O4'-C1'-C2'	-5.20	100.60	105.80
34	i	1482	A	O5'-C5'-C4'	-5.20	101.82	111.70
15	O	131	ASP	CB-CG-OD2	5.20	122.98	118.30
34	i	370	G	O4'-C1'-N9	5.20	112.36	108.20
2	B	104	ASP	CB-CG-OD2	5.20	122.98	118.30
24	X	114	ASP	CB-CG-OD2	5.20	122.98	118.30
34	i	317	G	C5'-C4'-O4'	5.20	115.33	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	516	A	O4'-C1'-C2'	5.20	112.28	107.60
34	i	1675	G	C3'-C2'-C1'	5.20	105.66	101.50
34	i	1688	G	O4'-C1'-C2'	5.20	112.28	107.60
34	i	599	U	O4'-C1'-C2'	-5.19	100.61	105.80
34	i	984	C	O4'-C1'-N1	-5.19	104.05	108.20
34	i	1400	U	C3'-C2'-C1'	5.19	105.65	101.50
34	i	1658	A	O4'-C1'-C2'	-5.19	100.61	105.80
1	A	126	ASP	CB-CG-OD2	5.19	122.97	118.30
34	i	125	C	C5'-C4'-O4'	-5.19	102.87	109.10
34	i	652	G	C3'-C2'-C1'	5.19	105.65	101.50
34	i	78	C	C1'-O4'-C4'	-5.19	105.75	109.90
14	N	32	ASP	CB-CG-OD2	5.19	122.97	118.30
23	W	55	ASP	CB-CG-OD2	5.19	122.97	118.30
34	i	530	U	N1-C1'-C2'	-5.19	106.29	112.00
34	i	549	G	O4'-C4'-C3'	-5.19	98.81	104.00
10	J	152	ASP	CB-CG-OD2	5.19	122.97	118.30
32	f	152	LYS	CA-C-O	-5.19	109.21	120.10
34	i	1629	A	O4'-C1'-N9	5.19	112.35	108.20
34	i	1862	U	O4'-C1'-N1	5.19	112.35	108.20
10	J	158	ASP	CB-CG-OD2	5.18	122.97	118.30
34	i	480	C	O4'-C1'-C2'	-5.18	100.62	105.80
34	i	1328	A	C4'-C3'-C2'	-5.18	97.42	102.60
34	i	1501	U	C3'-C2'-C1'	5.18	105.65	101.50
34	i	1742	C	C5'-C4'-C3'	5.18	124.29	116.00
34	i	120	U	C3'-C2'-C1'	5.18	105.64	101.50
16	P	71	GLU	C-N-CA	5.18	134.65	121.70
24	X	139	GLU	CB-CA-C	5.18	120.76	110.40
34	i	1048	A	C3'-C2'-C1'	5.18	105.64	101.50
34	i	1335	U	C5'-C4'-O4'	5.18	115.32	109.10
16	P	82	ASP	CB-CG-OD2	5.18	122.96	118.30
12	L	24	LEU	C-N-CA	5.18	134.64	121.70
34	i	71	G	C2'-C3'-O3'	-5.18	98.11	109.50
34	i	142	C	O4'-C1'-C2'	5.17	112.26	107.60
34	i	1558	G	O4'-C1'-C2'	5.17	112.26	107.60
34	i	1603	U	N1-C1'-C2'	5.17	120.73	114.00
5	E	158	ASP	CB-CG-OD2	5.17	122.95	118.30
34	i	74	G	C1'-O4'-C4'	-5.17	105.76	109.90
34	i	539	C	C3'-C2'-C1'	5.17	105.64	101.50
2	B	60	ASP	CB-CG-OD2	5.17	122.95	118.30
26	Z	104	ARG	CB-CA-C	-5.17	100.06	110.40
34	i	136	C	C5'-C4'-C3'	5.17	124.27	116.00
34	i	279	G	C1'-O4'-C4'	5.17	114.03	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	850	A	P-O3'-C3'	5.17	125.90	119.70
34	i	1323	G	N9-C1'-C2'	5.17	120.72	114.00
34	i	1858	U	C5'-C4'-O4'	5.17	115.30	109.10
33	g	213	ASP	CB-CG-OD1	5.17	122.95	118.30
34	i	271	G	OP1-P-O3'	5.17	116.57	105.20
34	i	1275	C	C3'-C2'-C1'	5.17	105.63	101.50
34	i	1544	U	N1-C1'-C2'	5.17	120.72	114.00
34	i	1714	A	C3'-C2'-C1'	5.17	105.63	101.50
34	i	1019	A	O4'-C1'-N9	5.17	112.33	108.20
5	E	258	ALA	O-C-N	-5.16	114.44	122.70
34	i	72	C	P-O5'-C5'	5.16	129.16	120.90
34	i	1090	C	N1-C1'-C2'	5.16	120.71	114.00
34	i	1555	U	C4'-C3'-C2'	-5.16	97.44	102.60
32	f	148	TYR	CB-CG-CD1	-5.16	117.90	121.00
34	i	1233	C	C4'-C3'-C2'	-5.16	97.44	102.60
34	i	1453	U	P-O3'-C3'	-5.16	113.51	119.70
34	i	971	G	O4'-C4'-C3'	-5.16	98.84	104.00
34	i	932	G	O4'-C1'-N9	5.16	112.32	108.20
34	i	1039	G	O4'-C1'-N9	5.16	112.32	108.20
34	i	1461	A	C3'-C2'-C1'	5.16	105.62	101.50
34	i	1611	U	C3'-C2'-C1'	5.16	105.62	101.50
5	E	164	LEU	C-N-CA	-5.15	108.81	121.70
16	P	37	TYR	CA-CB-CG	5.15	123.19	113.40
34	i	231	C	O4'-C1'-N1	5.15	112.32	108.20
34	i	1302	U	O4'-C1'-N1	5.15	112.32	108.20
19	S	16	LEU	CA-C-N	-5.15	105.87	117.20
33	g	12	LYS	CB-CA-C	-5.15	100.10	110.40
34	i	629	C	O4'-C1'-N1	5.15	112.32	108.20
34	i	1651	G	C3'-C2'-C1'	-5.15	97.38	101.50
34	i	550	A	C1'-O4'-C4'	-5.15	105.78	109.90
34	i	1238	U	O4'-C1'-N1	-5.15	104.08	108.20
34	i	1338	U	C3'-C2'-C1'	5.15	105.62	101.50
34	i	455	A	O3'-P-O5'	-5.15	94.22	104.00
34	i	542	G	O4'-C1'-C2'	5.15	112.23	107.60
34	i	1575	A	O4'-C1'-N9	5.15	112.32	108.20
26	Z	50	PHE	CB-CA-C	-5.14	100.11	110.40
34	i	1217	G	C3'-C2'-C1'	-5.14	97.38	101.50
16	P	51	ARG	N-CA-C	5.14	124.88	111.00
34	i	32	U	C5'-C4'-O4'	5.14	115.27	109.10
34	i	308	C	O4'-C1'-C2'	-5.14	100.66	105.80
34	i	410	G	P-O3'-C3'	-5.14	113.53	119.70
34	i	740	G	O3'-P-O5'	-5.14	94.23	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	799	C	C3'-C2'-C1'	5.14	105.61	101.50
34	i	323	G	O4'-C1'-N9	5.14	112.31	108.20
34	i	411	G	O4'-C1'-C2'	5.14	112.22	107.60
34	i	1267	C	O4'-C1'-C2'	-5.14	100.66	105.80
24	X	126	ALA	N-CA-C	-5.14	97.13	111.00
34	i	1308	G	C3'-C2'-C1'	5.14	105.61	101.50
16	P	21	ASP	CB-CG-OD2	5.13	122.92	118.30
34	i	520	U	C4'-C3'-C2'	-5.13	97.47	102.60
34	i	1106	G	C1'-O4'-C4'	5.13	114.01	109.90
1	A	53	ARG	CB-CG-CD	-5.13	98.26	111.60
24	X	115	ILE	C-N-CD	-5.13	109.31	120.60
34	i	1568	G	C4'-C3'-C2'	-5.13	97.47	102.60
34	i	1788	C	C3'-C2'-C1'	5.13	105.61	101.50
34	i	608	C	C1'-O4'-C4'	5.13	114.00	109.90
13	M	43	ASP	CB-CG-OD2	5.13	122.92	118.30
20	T	144	LYS	CA-C-O	-5.13	109.33	120.10
34	i	1275	C	C1'-O4'-C4'	5.13	114.00	109.90
11	K	43	LEU	N-CA-C	-5.13	97.16	111.00
34	i	638	A	C1'-O4'-C4'	-5.13	105.80	109.90
34	i	1235	U	O3'-P-O5'	5.13	113.74	104.00
34	i	1280	A	C5'-C4'-C3'	-5.13	107.80	116.00
1	A	151	ASP	CB-CG-OD2	5.12	122.91	118.30
7	G	103	ASP	CB-CG-OD2	5.12	122.91	118.30
34	i	1157	U	N1-C1'-C2'	-5.12	106.36	112.00
34	i	1375	A	C5'-C4'-C3'	-5.12	107.80	116.00
22	V	66	ASP	CB-CG-OD2	5.12	122.91	118.30
34	i	1298	G	C5'-C4'-O4'	5.12	115.25	109.10
2	B	196	ASP	CB-CG-OD2	5.12	122.91	118.30
5	E	21	ASP	CB-CG-OD2	5.12	122.91	118.30
34	i	78	C	O4'-C1'-C2'	-5.12	100.68	105.80
2	B	191	ASP	CB-CG-OD2	5.12	122.91	118.30
23	W	2	VAL	O-C-N	-5.12	114.51	122.70
34	i	1320	G	C3'-C2'-C1'	5.12	105.59	101.50
34	i	1452	G	N9-C1'-C2'	5.12	120.65	114.00
34	i	1551	A	C5'-C4'-C3'	-5.12	107.81	116.00
34	i	1645	A	C1'-O4'-C4'	5.12	113.99	109.90
34	i	1753	G	C1'-O4'-C4'	-5.12	105.81	109.90
34	i	1784	A	C1'-O4'-C4'	-5.12	105.81	109.90
32	f	124	ASP	CB-CG-OD2	5.12	122.90	118.30
34	i	22	A	C1'-O4'-C4'	5.12	113.99	109.90
34	i	830	C	O4'-C1'-N1	5.12	112.29	108.20
34	i	1562	G	O4'-C4'-C3'	-5.12	98.88	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	G	180	VAL	N-CA-CB	-5.11	100.25	111.50
10	J	89	GLU	N-CA-CB	-5.11	101.39	110.60
19	S	110	ASP	CB-CG-OD2	5.11	122.90	118.30
23	W	85	ASP	CB-CG-OD2	5.11	122.90	118.30
34	i	1308	G	N9-C1'-C2'	5.11	120.65	114.00
34	i	1021	U	C1'-O4'-C4'	5.11	113.99	109.90
15	O	67	ASP	CB-CG-OD2	5.11	122.90	118.30
21	U	48	LEU	CB-CG-CD2	-5.11	102.32	111.00
34	i	503	G	O4'-C1'-C2'	5.11	112.20	107.60
9	I	8	TRP	CE3-CZ3-CH2	5.11	126.82	121.20
34	i	13	C	C3'-C2'-C1'	5.11	105.58	101.50
34	i	309	A	O4'-C1'-N9	5.11	112.28	108.20
34	i	1776	G	O5'-C5'-C4'	5.10	121.40	111.70
14	N	108	ASP	CB-CG-OD2	5.10	122.89	118.30
34	i	581	U	O4'-C1'-C2'	5.10	112.19	107.60
34	i	819	U	C3'-C2'-C1'	-5.10	97.42	101.50
29	c	37	ASP	CB-CG-OD2	5.10	122.89	118.30
34	i	689	G	N9-C1'-C2'	5.10	120.63	114.00
34	i	729	C	O4'-C1'-N1	5.10	112.28	108.20
34	i	896	C	P-O5'-C5'	5.10	129.06	120.90
34	i	1135	C	C2-N1-C1'	5.10	124.41	118.80
34	i	1490	U	C3'-C2'-C1'	-5.10	97.42	101.50
16	P	28	MET	CA-C-N	-5.10	105.99	117.20
34	i	1326	G	O4'-C1'-C2'	5.10	112.19	107.60
34	i	1477	G	O4'-C1'-N9	5.10	112.28	108.20
16	P	27	ASP	CB-CG-OD2	5.09	122.89	118.30
34	i	871	A	C3'-C2'-C1'	5.09	105.58	101.50
34	i	1483	A	C4'-C3'-O3'	-5.09	98.70	109.40
2	B	152	LYS	CB-CA-C	5.09	120.58	110.40
31	e	118	ASN	N-CA-C	5.09	124.75	111.00
34	i	610	G	O4'-C1'-C2'	-5.09	100.71	105.80
34	i	1313	U	O4'-C1'-C2'	-5.09	100.71	105.80
34	i	1367	U	O4'-C1'-C2'	-5.09	100.71	105.80
34	i	22	A	O4'-C1'-C2'	-5.09	100.71	105.80
34	i	341	G	O4'-C4'-C3'	-5.09	98.91	104.00
34	i	318	U	C5'-C4'-C3'	5.09	124.14	116.00
34	i	880	C	C3'-C2'-C1'	5.09	105.57	101.50
34	i	888	U	O4'-C1'-N1	5.09	112.27	108.20
14	N	31	ASP	CB-CG-OD2	5.09	122.88	118.30
18	R	110	ASP	CB-CG-OD2	5.09	122.88	118.30
34	i	1272	A	C1'-O4'-C4'	5.09	113.97	109.90
34	i	1470	A	O3'-P-O5'	5.08	113.66	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
32	f	106	TYR	N-CA-C	-5.08	97.27	111.00
34	i	1813	A	N9-C1'-C2'	5.08	120.61	114.00
21	U	38	ASP	CB-CG-OD2	5.08	122.87	118.30
34	i	1742	C	C4'-C3'-O3'	-5.08	98.73	109.40
8	H	191	GLU	C-N-CA	-5.08	109.00	121.70
25	Y	29	HIS	C-N-CD	-5.08	109.43	120.60
34	i	660	A	P-O3'-C3'	5.08	125.80	119.70
34	i	955	G	C3'-C2'-C1'	5.08	105.56	101.50
34	i	439	A	O4'-C1'-N9	5.08	112.26	108.20
34	i	1246	A	O4'-C1'-C2'	-5.08	100.72	105.80
34	i	1614	A	P-O3'-C3'	5.08	125.79	119.70
1	A	130	ASP	CB-CG-OD2	5.07	122.86	118.30
34	i	1765	G	P-O3'-C3'	5.07	125.79	119.70
34	i	677	C	N1-C1'-C2'	5.07	120.59	114.00
7	G	151	ASP	CB-CG-OD2	5.07	122.86	118.30
30	d	49	ASP	CB-CG-OD2	5.07	122.86	118.30
34	i	216	U	C3'-C2'-C1'	5.07	105.56	101.50
34	i	292	A	N9-C1'-C2'	-5.07	106.42	112.00
34	i	1427	G	N9-C1'-C2'	5.07	120.59	114.00
34	i	79	A	C1'-O4'-C4'	5.07	113.95	109.90
34	i	88	G	O4'-C1'-C2'	5.07	112.16	107.60
34	i	419	C	N1-C1'-C2'	5.07	120.59	114.00
4	D	52	ALA	O-C-N	-5.07	114.60	122.70
34	i	1328	A	N9-C1'-C2'	-5.07	106.43	112.00
5	E	237	SER	N-CA-CB	-5.06	102.91	110.50
10	J	188	GLY	N-CA-C	5.06	125.75	113.10
34	i	586	U	P-O3'-C3'	5.06	125.77	119.70
1	A	193	HIS	N-CA-C	5.06	124.66	111.00
26	Z	56	ASP	CB-CG-OD2	5.06	122.86	118.30
32	f	137	ASP	CB-CG-OD2	5.06	122.86	118.30
34	i	1246	A	N9-C1'-C2'	-5.06	106.43	112.00
32	f	134	SER	CA-C-N	-5.06	106.07	117.20
33	g	143	GLN	CB-CA-C	-5.06	100.29	110.40
34	i	1023	A	O3'-P-O5'	5.06	113.61	104.00
34	i	1493	G	C3'-C2'-C1'	5.06	105.55	101.50
34	i	1663	U	C4'-C3'-C2'	-5.06	97.54	102.60
2	B	155	TYR	CB-CG-CD1	-5.06	117.97	121.00
34	i	1413	C	O4'-C4'-C3'	-5.06	98.94	104.00
5	E	93	ASP	CB-CG-OD2	5.05	122.85	118.30
34	i	22	A	O4'-C1'-N9	5.05	112.24	108.20
34	i	376	C	C5'-C4'-C3'	-5.05	107.92	116.00
34	i	1656	A	O4'-C1'-C2'	5.05	112.15	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	E	143	ASP	CB-CG-OD2	5.05	122.84	118.30
34	i	1219	A	C1'-O4'-C4'	5.05	113.94	109.90
34	i	1730	A	N9-C1'-C2'	5.04	120.56	114.00
5	E	129	ILE	CA-C-N	-5.04	106.10	117.20
10	J	85	GLY	CA-C-N	-5.04	106.11	117.20
34	i	1426	C	N1-C1'-C2'	-5.04	106.45	112.00
16	P	23	ASP	CB-CG-OD2	5.04	122.84	118.30
34	i	410	G	C4'-C3'-C2'	-5.04	97.56	102.60
24	X	19	ASP	CB-CG-OD2	5.04	122.83	118.30
34	i	896	C	C3'-C2'-C1'	5.04	105.53	101.50
34	i	1541	G	C3'-C2'-C1'	-5.04	97.47	101.50
17	Q	31	LEU	C-N-CA	5.03	134.28	121.70
34	i	1711	C	N1-C1'-C2'	5.03	120.54	114.00
25	Y	103	SER	C-N-CA	5.03	134.28	121.70
34	i	125	C	P-O3'-C3'	5.03	125.74	119.70
34	i	1333	C	C2'-C3'-O3'	5.03	121.75	113.70
34	i	1573	U	C5'-C4'-O4'	5.03	115.14	109.10
34	i	1823	G	C3'-C2'-C1'	5.03	105.53	101.50
5	E	163	ASP	CB-CG-OD2	5.03	122.83	118.30
21	U	52	GLY	C-N-CD	-5.03	109.53	120.60
34	i	1410	A	P-O3'-C3'	5.03	125.73	119.70
34	i	1609	A	O4'-C1'-N9	5.03	112.22	108.20
34	i	160	U	O4'-C1'-N1	5.03	112.22	108.20
34	i	577	A	O4'-C1'-N9	5.03	112.22	108.20
34	i	625	G	C3'-C2'-C1'	5.03	105.52	101.50
34	i	1721	G	C3'-C2'-C1'	-5.03	97.48	101.50
34	i	1133	U	O4'-C1'-N1	5.02	112.22	108.20
34	i	1385	C	O5'-P-OP2	-5.02	101.18	105.70
19	S	62	ASP	CB-CG-OD2	5.02	122.81	118.30
25	Y	34	THR	N-CA-C	5.02	124.55	111.00
34	i	8	U	O4'-C1'-C2'	-5.02	100.78	105.80
34	i	677	C	P-O3'-C3'	5.02	125.72	119.70
34	i	850	A	O5'-C5'-C4'	-5.02	102.17	111.70
34	i	994	A	C3'-C2'-C1'	5.02	105.52	101.50
34	i	1248	C	P-O3'-C3'	-5.02	113.68	119.70
34	i	73	C	P-O3'-C3'	-5.02	113.68	119.70
34	i	1240	U	C4'-C3'-C2'	-5.01	97.58	102.60
34	i	1379	A	O4'-C1'-N9	5.01	112.21	108.20
34	i	1063	C	N1-C1'-C2'	5.01	120.52	114.00
34	i	1343	U	C3'-C2'-C1'	5.01	105.51	101.50
32	f	86	THR	N-CA-C	-5.01	97.47	111.00
34	i	43	U	C5'-C4'-O4'	5.01	115.11	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	i	859	U	N1-C1'-C2'	5.01	120.52	114.00
34	i	1386	U	N1-C1'-C2'	5.01	120.52	114.00
33	g	273	GLU	C-N-CA	5.01	134.22	121.70
2	B	32	ASP	CB-CG-OD2	5.01	122.81	118.30
2	B	90	ASP	CB-CG-OD2	5.01	122.81	118.30
34	i	1568	G	O4'-C1'-N9	5.01	112.20	108.20
26	Z	51	ASP	CB-CG-OD2	5.00	122.80	118.30
30	d	6	LEU	N-CA-C	-5.00	97.49	111.00
34	i	15	U	C1'-O4'-C4'	5.00	113.90	109.90
34	i	1634	G	O4'-C1'-C2'	-5.00	100.80	105.80
34	i	468	G	P-O5'-C5'	5.00	128.90	120.90
34	i	596	G	P-O3'-C3'	5.00	125.70	119.70

All (13) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
3	C	157	ASN	CA
5	E	171	ASP	CA
10	J	138	ARG	CA
18	R	3	ARG	CA
19	S	92	ASP	CA
20	T	93	SER	CA
25	Y	86	GLU	CA
34	i	544	A	C1'
34	i	794	G	C4'
34	i	835	C	C1'
34	i	1151	U	C1'
34	i	1414	C	C1'
34	i	1503	G	C1'

All (183) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	146	ALA	Mainchain
1	A	185	MET	Mainchain
1	A	192	GLU	Peptide,Mainchain
1	A	199	PRO	Mainchain
1	A	206	ASP	Peptide,Mainchain
1	A	23	THR	Mainchain
1	A	4	ALA	Peptide
1	A	63	ARG	Sidechain
1	A	97	THR	Mainchain

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Mol	Chain	Res	Type	Group
2	B	146	CYS	Peptide
2	B	56	LYS	Mainchain
2	B	75	GLN	Peptide
2	B	76	ASN	Peptide
3	C	157	ASN	Peptide
3	C	160	GLY	Mainchain
3	C	241	TRP	Mainchain
3	C	97	VAL	Peptide,Mainchain
4	D	144	GLY	Peptide
4	D	190	LEU	Mainchain
4	D	3	VAL	Peptide,Mainchain
4	D	96	LEU	Mainchain
5	E	1	MET	Peptide
5	E	129	ILE	Peptide
6	F	43	GLU	Peptide
6	F	44	LYS	Peptide
6	F	79	HIS	Peptide
7	G	155	GLN	Mainchain
8	H	105	THR	Peptide
8	H	108	SER	Peptide
8	H	109	ARG	Sidechain
8	H	113	LYS	Mainchain
8	H	118	ARG	Sidechain
8	H	16	PRO	Peptide
8	H	17	ASP	Peptide
8	H	190	PRO	Peptide
8	H	193	GLN	Peptide
8	H	53	VAL	Peptide
9	I	123	ARG	Mainchain
9	I	129	LEU	Mainchain
9	I	131	PRO	Mainchain
9	I	155	ASN	Peptide
9	I	190	LEU	Mainchain
9	I	2	GLY	Mainchain
9	I	3	ILE	Peptide
9	I	55	TYR	Sidechain
10	J	146	SER	Mainchain
10	J	16	PRO	Peptide
10	J	161	LEU	Peptide,Mainchain
10	J	162	ARG	Peptide
10	J	164	PRO	Mainchain
10	J	165	TYR	Peptide

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Mol	Chain	Res	Type	Group
10	J	85	GLY	Mainchain
10	J	90	GLY	Peptide
10	J	91	LYS	Mainchain
10	J	92	MET	Peptide
11	K	29	MET	Peptide
11	K	30	PRO	Peptide
11	K	37	ASP	Peptide
11	K	43	LEU	Peptide
11	K	55	ARG	Sidechain
11	K	70	TYR	Sidechain
11	K	86	PRO	Peptide
11	K	89	ILE	Mainchain
11	K	90	VAL	Mainchain
11	K	92	ALA	Peptide
11	K	97	SER	Peptide
12	L	147	LYS	Peptide
12	L	149	ALA	Mainchain
12	L	152	LYS	Mainchain
12	L	18	GLN	Peptide
12	L	26	GLY	Peptide
12	L	27	GLU	Peptide
12	L	97	ARG	Peptide
13	M	98	GLY	Peptide
14	N	13	GLN	Peptide
14	N	14	SER	Peptide
14	N	18	TYR	Peptide
14	N	82	PRO	Peptide
15	O	138	ASP	Peptide
16	P	17	TYR	Peptide,Sidechain
16	P	18	ARG	Sidechain
16	P	27	ASP	Peptide
16	P	36	LEU	Peptide
16	P	37	TYR	Peptide
16	P	38	SER	Peptide
16	P	48	GLY	Peptide,Mainchain
16	P	50	ARG	Peptide
17	Q	146	ARG	Sidechain
17	Q	31	LEU	Peptide
17	Q	43	GLU	Peptide
17	Q	47	LEU	Peptide
18	R	1	MET	Mainchain
18	R	122	PRO	Peptide

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Mol	Chain	Res	Type	Group
18	R	88	VAL	Peptide,Mainchain
18	R	89	SER	Peptide
19	S	10	GLN	Peptide
19	S	141	ARG	Mainchain
19	S	15	VAL	Peptide
19	S	40	TYR	Sidechain,Mainchain
19	S	8	LYS	Peptide
19	S	87	GLN	Mainchain
19	S	9	PHE	Peptide
19	S	93	GLY	Peptide
19	S	94	LYS	Peptide
20	T	142	LYS	Peptide,Mainchain
20	T	4	VAL	Peptide,Mainchain
20	T	42	HIS	Sidechain
20	T	82	ARG	Sidechain
21	U	104	ILE	Mainchain
21	U	105	SER	Mainchain
21	U	108	PRO	Peptide
21	U	46	LYS	Peptide
21	U	50	VAL	Peptide
21	U	68	THR	Peptide
21	U	70	CYS	Mainchain
21	U	93	SER	Mainchain
22	V	25	GLY	Peptide
22	V	48	GLY	Peptide,Mainchain
22	V	49	GLN	Peptide
22	V	61	ARG	Sidechain
22	V	63	GLY	Mainchain
22	V	81	GLN	Peptide,Mainchain
22	V	9	VAL	Peptide
23	W	2	VAL	Mainchain
23	W	84	LYS	Peptide
24	X	1	MET	Peptide
24	X	127	ASN	Peptide
24	X	23	HIS	Mainchain
24	X	42	GLY	Peptide
25	Y	103	SER	Peptide
25	Y	32	LYS	Peptide
25	Y	33	ALA	Peptide
25	Y	34	THR	Peptide
25	Y	85	ASN	Peptide
25	Y	86	GLU	Mainchain

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Mol	Chain	Res	Type	Group
26	Z	101	SER	Mainchain
26	Z	104	ARG	Sidechain,Mainchain
26	Z	41	ARG	Peptide
26	Z	93	SER	Peptide
26	Z	95	GLY	Peptide
27	a	96	THR	Peptide,Mainchain
28	b	2	PRO	Mainchain
28	b	36	LYS	Peptide
28	b	37	CYS	Mainchain
31	e	93	VAL	Mainchain
31	e	94	ALA	Peptide,Mainchain
31	e	96	GLN	Mainchain
31	e	97	GLU	Peptide
32	f	102	VAL	Peptide
32	f	105	TYR	Peptide
32	f	135	HIS	Mainchain
32	f	148	TYR	Peptide
32	f	84	SER	Peptide
32	f	90	LYS	Peptide
33	g	12	LYS	Peptide
33	g	142	VAL	Mainchain
33	g	148	SER	Mainchain
33	g	158	PRO	Peptide
33	g	159	ASN	Peptide,Mainchain
33	g	160	SER	Peptide
33	g	192	THR	Peptide
33	g	273	GLU	Peptide
33	g	283	PRO	Peptide
33	g	47	ARG	Peptide
33	g	59	LEU	Mainchain
33	g	60	ARG	Peptide

5.2 Too-close contacts (i)

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

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	206/295 (70%)	156 (76%)	23 (11%)	27 (13%)	0	4
2	B	213/264 (81%)	174 (82%)	24 (11%)	15 (7%)	1	14
3	C	224/278 (81%)	199 (89%)	14 (6%)	11 (5%)	2	20
4	D	225/243 (93%)	180 (80%)	23 (10%)	22 (10%)	0	9
5	E	261/263 (99%)	210 (80%)	27 (10%)	24 (9%)	1	11
6	F	189/204 (93%)	162 (86%)	15 (8%)	12 (6%)	1	17
7	G	235/249 (94%)	201 (86%)	19 (8%)	15 (6%)	1	16
8	H	188/194 (97%)	146 (78%)	11 (6%)	31 (16%)	0	3
9	I	204/208 (98%)	169 (83%)	13 (6%)	22 (11%)	0	8
10	J	180/194 (93%)	138 (77%)	18 (10%)	24 (13%)	0	4
11	K	96/165 (58%)	67 (70%)	11 (12%)	18 (19%)	0	2
12	L	156/158 (99%)	132 (85%)	10 (6%)	14 (9%)	1	11
13	M	122/132 (92%)	85 (70%)	16 (13%)	21 (17%)	0	3
14	N	148/151 (98%)	123 (83%)	19 (13%)	6 (4%)	3	22
15	O	134/151 (89%)	101 (75%)	14 (10%)	19 (14%)	0	4
16	P	125/145 (86%)	92 (74%)	16 (13%)	17 (14%)	0	4
17	Q	139/146 (95%)	110 (79%)	19 (14%)	10 (7%)	1	14
18	R	124/135 (92%)	97 (78%)	13 (10%)	14 (11%)	0	7
19	S	135/152 (89%)	106 (78%)	20 (15%)	9 (7%)	1	15
20	T	139/145 (96%)	119 (86%)	10 (7%)	10 (7%)	1	14
21	U	102/119 (86%)	76 (74%)	10 (10%)	16 (16%)	0	3
22	V	80/83 (96%)	55 (69%)	11 (14%)	14 (18%)	0	2
23	W	127/130 (98%)	111 (87%)	14 (11%)	2 (2%)	9	44
24	X	140/143 (98%)	121 (86%)	11 (8%)	8 (6%)	1	18
25	Y	124/133 (93%)	91 (73%)	15 (12%)	18 (14%)	0	4
26	Z	73/125 (58%)	52 (71%)	12 (16%)	9 (12%)	0	5
27	a	105/115 (91%)	72 (69%)	14 (13%)	19 (18%)	0	2
28	b	82/84 (98%)	57 (70%)	14 (17%)	11 (13%)	0	4
29	c	62/69 (90%)	44 (71%)	13 (21%)	5 (8%)	1	12

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
30	d	51/56 (91%)	46 (90%)	3 (6%)	2 (4%)	3	23
31	e	57/133 (43%)	37 (65%)	7 (12%)	13 (23%)	0	2
32	f	69/156 (44%)	38 (55%)	13 (19%)	18 (26%)	0	1
33	g	311/317 (98%)	271 (87%)	23 (7%)	17 (6%)	2	19
37	n	80/144 (56%)	61 (76%)	15 (19%)	4 (5%)	2	20
All	All	4906/5679 (86%)	3899 (80%)	510 (10%)	497 (10%)	0	9

All (497) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	9	GLN
1	A	31	ASP
1	A	45	GLY
1	A	103	PHE
1	A	164	ASN
1	A	165	ASN
1	A	188	THR
1	A	192	GLU
1	A	203	PHE
1	A	207	PRO
2	B	27	LYS
2	B	77	ASP
2	B	78	GLU
2	B	106	THR
2	B	154	SER
2	B	179	ASN
2	B	206	PRO
2	B	210	VAL
3	C	102	GLN
3	C	104	GLY
3	C	117	ASP
3	C	218	LEU
3	C	260	LYS
4	D	2	ALA
4	D	4	GLN
4	D	93	THR
4	D	98	ALA
4	D	202	LYS
4	D	205	PRO
4	D	213	PRO

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Mol	Chain	Res	Type
4	D	214	LYS
4	D	216	GLU
4	D	220	THR
4	D	221	THR
4	D	222	PRO
4	D	223	ILE
4	D	226	GLN
5	E	12	VAL
5	E	24	THR
5	E	76	VAL
5	E	95	THR
5	E	163	ASP
5	E	196	THR
5	E	260	GLN
5	E	261	SER
6	F	43	GLU
6	F	44	LYS
6	F	202	SER
6	F	203	ASN
7	G	20	ASP
7	G	154	ARG
7	G	164	LYS
7	G	174	PRO
7	G	175	LYS
7	G	180	VAL
7	G	181	THR
8	H	15	LYS
8	H	16	PRO
8	H	33	ASN
8	H	35	ASP
8	H	66	VAL
8	H	88	SER
8	H	108	SER
8	H	109	ARG
8	H	110	THR
8	H	116	ARG
8	H	135	PHE
8	H	137	SER
8	H	138	GLU
8	H	160	LYS
8	H	190	PRO
9	I	8	TRP

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Mol	Chain	Res	Type
9	I	120	PRO
9	I	124	LYS
9	I	131	PRO
9	I	133	GLU
9	I	139	LYS
9	I	140	LYS
9	I	142	SER
9	I	143	LYS
9	I	145	ILE
9	I	153	LYS
9	I	154	LYS
9	I	158	ILE
9	I	206	LYS
10	J	19	PRO
10	J	22	LYS
10	J	36	GLY
10	J	110	LEU
10	J	111	GLN
10	J	118	GLY
10	J	119	LEU
10	J	122	SER
10	J	138	ARG
10	J	161	LEU
10	J	163	SER
10	J	169	ARG
10	J	170	PRO
10	J	172	ARG
11	K	2	LEU
11	K	3	MET
11	K	30	PRO
11	K	35	LEU
11	K	39	ASN
11	K	40	VAL
11	K	41	PRO
11	K	44	HIS
11	K	63	ALA
11	K	88	GLU
11	K	89	ILE
12	L	5	GLN
12	L	6	THR
12	L	7	GLU
12	L	20	LYS

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Mol	Chain	Res	Type
12	L	23	VAL
12	L	147	LYS
12	L	152	LYS
12	L	153	LYS
13	M	12	MET
13	M	15	ASN
13	M	44	LYS
13	M	72	HIS
13	M	77	ILE
13	M	78	LYS
13	M	79	VAL
13	M	81	ASP
13	M	89	VAL
13	M	96	ARG
13	M	100	PRO
13	M	116	LYS
13	M	117	GLU
14	N	22	VAL
15	O	23	GLU
15	O	52	THR
15	O	53	ILE
15	O	64	ALA
15	O	104	ARG
15	O	137	SER
15	O	138	ASP
15	O	139	SER
15	O	140	THR
16	P	6	GLN
16	P	11	THR
16	P	12	PHE
16	P	37	TYR
16	P	38	SER
16	P	68	PRO
16	P	69	PRO
16	P	71	GLU
16	P	73	PRO
16	P	75	VAL
16	P	125	PRO
16	P	126	VAL
16	P	127	LYS
17	Q	19	ALA
17	Q	61	GLU

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Mol	Chain	Res	Type
17	Q	62	ARG
17	Q	117	ARG
17	Q	119	LEU
17	Q	141	TYR
18	R	88	VAL
18	R	89	SER
18	R	100	PRO
18	R	101	ASP
18	R	121	GLN
18	R	123	THR
19	S	11	HIS
19	S	53	THR
19	S	59	LEU
19	S	90	VAL
20	T	5	THR
20	T	31	PRO
20	T	32	GLU
20	T	33	TRP
20	T	34	VAL
20	T	96	SER
20	T	143	LYS
21	U	51	LYS
21	U	94	PRO
21	U	95	SER
21	U	107	GLU
21	U	118	ASP
22	V	4	ASN
22	V	10	ASP
22	V	42	VAL
22	V	43	THR
22	V	44	GLY
22	V	50	SER
22	V	65	SER
22	V	78	ILE
24	X	3	LYS
24	X	4	CYS
25	Y	6	THR
25	Y	30	PRO
25	Y	34	THR
25	Y	86	GLU
25	Y	87	PRO
25	Y	100	LYS

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Mol	Chain	Res	Type
25	Y	104	ARG
25	Y	120	THR
26	Z	93	SER
26	Z	104	ARG
26	Z	108	ILE
26	Z	113	THR
27	a	28	CYS
27	a	46	GLU
27	a	47	ALA
27	a	58	VAL
27	a	59	PHE
27	a	61	ALA
27	a	63	VAL
27	a	64	LEU
27	a	98	PRO
27	a	99	PRO
27	a	103	PRO
28	b	62	VAL
28	b	63	LEU
28	b	64	CYS
29	c	8	PRO
29	c	67	ARG
30	d	8	TRP
31	e	76	VAL
31	e	78	GLY
31	e	81	ALA
31	e	98	LYS
31	e	119	VAL
31	e	121	PRO
31	e	126	LYS
32	f	84	SER
32	f	85	TYR
32	f	86	THR
32	f	91	ASN
32	f	102	VAL
32	f	106	TYR
32	f	110	GLU
32	f	128	ALA
33	g	3	GLU
33	g	48	ASP
33	g	52	TYR
33	g	96	THR

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Mol	Chain	Res	Type
33	g	282	GLU
33	g	283	PRO
37	n	71	ILE
37	n	83	ASP
1	A	7	VAL
1	A	96	ALA
1	A	112	ILE
1	A	140	VAL
1	A	159	ILE
1	A	186	ARG
1	A	190	SER
1	A	191	ARG
2	B	93	GLY
2	B	209	ASP
3	C	43	LYS
3	C	246	PHE
4	D	78	GLY
4	D	194	PRO
4	D	201	LYS
4	D	208	VAL
5	E	104	ASP
5	E	164	LEU
6	F	21	GLY
6	F	32	ASP
6	F	41	VAL
6	F	54	GLY
6	F	79	HIS
7	G	26	THR
7	G	146	ASN
7	G	153	VAL
8	H	11	PRO
8	H	17	ASP
8	H	38	ALA
8	H	41	ARG
8	H	76	GLN
8	H	100	ILE
8	H	112	ASN
8	H	120	ARG
8	H	159	ASP
8	H	193	GLN
9	I	22	HIS
9	I	192	GLY

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Mol	Chain	Res	Type
10	J	106	LEU
10	J	120	ALA
10	J	124	HIS
10	J	135	ILE
10	J	148	ILE
11	K	34	GLU
11	K	91	PRO
12	L	4	ILE
12	L	21	LYS
12	L	22	ARG
12	L	57	ASP
13	M	45	ARG
14	N	68	GLY
15	O	54	CYS
15	O	56	VAL
16	P	54	HIS
17	Q	32	ILE
17	Q	100	VAL
18	R	93	GLN
18	R	112	GLY
18	R	125	GLY
19	S	17	ASN
19	S	31	THR
19	S	140	GLY
20	T	142	LYS
21	U	74	SER
21	U	98	VAL
22	V	6	GLY
22	V	33	PRO
22	V	48	GLY
23	W	66	THR
24	X	59	ALA
25	Y	95	GLY
25	Y	99	LYS
25	Y	119	GLY
26	Z	53	ALA
27	a	35	ALA
28	b	2	PRO
28	b	38	PRO
28	b	81	ARG
31	e	77	HIS
31	e	104	GLY

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Mol	Chain	Res	Type
31	e	124	GLY
32	f	98	VAL
32	f	127	GLY
32	f	148	TYR
33	g	49	GLU
33	g	60	ARG
33	g	144	ASP
33	g	159	ASN
33	g	171	ASP
33	g	281	ALA
33	g	295	GLY
37	n	111	GLU
1	A	11	LYS
1	A	30	LEU
1	A	194	PRO
1	A	205	ARG
2	B	56	LYS
2	B	82	ARG
4	D	218	LEU
5	E	25	SER
5	E	168	LYS
5	E	194	VAL
5	E	205	PHE
7	G	69	THR
8	H	18	GLU
8	H	117	PRO
8	H	150	GLY
9	I	105	ASP
9	I	106	SER
9	I	144	LYS
10	J	91	LYS
11	K	28	HIS
11	K	87	PRO
13	M	91	LEU
14	N	28	LEU
15	O	32	HIS
16	P	17	TYR
16	P	39	ALA
18	R	86	PRO
18	R	122	PRO
20	T	29	LYS
21	U	70	CYS

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Mol	Chain	Res	Type
21	U	93	SER
21	U	110	VAL
24	X	92	ASN
25	Y	5	VAL
25	Y	53	ASP
25	Y	60	PHE
25	Y	63	HIS
27	a	13	LYS
27	a	97	PRO
27	a	102	ARG
27	a	107	ALA
28	b	7	LEU
29	c	65	ALA
31	e	127	LYS
31	e	129	PRO
32	f	137	ASP
32	f	138	ARG
33	g	84	ASP
33	g	255	SER
33	g	285	GLN
37	n	34	GLU
1	A	104	THR
2	B	224	GLU
3	C	244	THR
3	C	249	SER
5	E	30	ARG
5	E	119	ALA
5	E	189	LEU
6	F	37	ASP
7	G	33	ALA
7	G	122	PRO
10	J	151	LEU
10	J	162	ARG
11	K	67	PHE
11	K	95	ARG
12	L	119	ASP
13	M	29	ASP
13	M	94	ILE
13	M	113	ASP
15	O	17	LEU
15	O	83	GLN
16	P	50	ARG

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Mol	Chain	Res	Type
18	R	95	ILE
19	S	12	ILE
20	T	46	ALA
21	U	50	VAL
21	U	116	ILE
22	V	79	VAL
24	X	9	THR
24	X	129	SER
25	Y	102	THR
26	Z	111	ARG
26	Z	114	LYS
27	a	62	TYR
28	b	24	LEU
29	c	63	ARG
32	f	145	CYS
33	g	37	ASP
1	A	23	THR
3	C	164	THR
4	D	80	PRO
5	E	90	ILE
5	E	134	LYS
5	E	213	ALA
9	I	52	ASN
9	I	59	ARG
11	K	38	LYS
12	L	2	ALA
13	M	59	PRO
13	M	95	ASP
14	N	3	ARG
14	N	138	ASN
15	O	22	ALA
15	O	38	ASN
17	Q	43	GLU
18	R	99	ASP
19	S	7	GLU
21	U	26	SER
21	U	117	ALA
23	W	67	GLY
24	X	99	GLU
25	Y	51	THR
25	Y	121	ALA
26	Z	62	VAL

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Mol	Chain	Res	Type
26	Z	78	LYS
27	a	105	GLY
28	b	10	PRO
29	c	39	SER
31	e	97	GLU
32	f	93	HIS
32	f	94	LYS
32	f	147	THR
1	A	110	ASN
5	E	73	ASP
6	F	46	ALA
6	F	183	GLY
7	G	68	LEU
7	G	165	GLU
8	H	170	VAL
10	J	68	PRO
10	J	116	LYS
14	N	60	VAL
15	O	24	GLY
15	O	136	PRO
22	V	9	VAL
24	X	78	GLY
4	D	63	GLY
9	I	119	LEU
21	U	104	ILE
22	V	77	GLY
32	f	87	THR
5	E	152	PRO
8	H	10	LYS
1	A	95	GLY
1	A	98	PRO
2	B	24	PRO
3	C	161	LYS
5	E	195	ILE
5	E	231	GLY
15	O	62	VAL
17	Q	42	ILE
27	a	96	THR
28	b	37	CYS
30	d	11	PRO
2	B	21	VAL
8	H	93	VAL

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Mol	Chain	Res	Type
13	M	30	GLY
28	b	9	HIS
4	D	200	PRO
18	R	15	VAL
21	U	29	VAL

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	174/244 (71%)	139 (80%)	35 (20%)	1 7
2	B	196/231 (85%)	155 (79%)	41 (21%)	1 6
3	C	187/215 (87%)	147 (79%)	40 (21%)	1 6
4	D	190/202 (94%)	144 (76%)	46 (24%)	0 4
5	E	225/225 (100%)	173 (77%)	52 (23%)	1 4
6	F	161/170 (95%)	116 (72%)	45 (28%)	0 3
7	G	207/218 (95%)	157 (76%)	50 (24%)	0 4
8	H	170/174 (98%)	124 (73%)	46 (27%)	0 3
9	I	177/179 (99%)	142 (80%)	35 (20%)	1 8
10	J	157/168 (94%)	128 (82%)	29 (18%)	1 9
11	K	89/136 (65%)	61 (68%)	28 (32%)	0 2
12	L	142/142 (100%)	105 (74%)	37 (26%)	0 3
13	M	101/108 (94%)	78 (77%)	23 (23%)	1 5
14	N	130/131 (99%)	103 (79%)	27 (21%)	1 6
15	O	106/119 (89%)	87 (82%)	19 (18%)	2 10
16	P	116/130 (89%)	84 (72%)	32 (28%)	0 3
17	Q	117/121 (97%)	89 (76%)	28 (24%)	0 4
18	R	114/121 (94%)	90 (79%)	24 (21%)	1 6
19	S	119/132 (90%)	95 (80%)	24 (20%)	1 7
20	T	113/116 (97%)	87 (77%)	26 (23%)	1 4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
21	U	94/107 (88%)	74 (79%)	20 (21%)	1 6
22	V	67/68 (98%)	50 (75%)	17 (25%)	0 3
23	W	112/113 (99%)	98 (88%)	14 (12%)	4 19
24	X	114/115 (99%)	91 (80%)	23 (20%)	1 7
25	Y	108/115 (94%)	85 (79%)	23 (21%)	1 6
26	Z	66/103 (64%)	53 (80%)	13 (20%)	1 8
27	a	91/99 (92%)	76 (84%)	15 (16%)	2 12
28	b	76/76 (100%)	63 (83%)	13 (17%)	2 11
29	c	57/62 (92%)	46 (81%)	11 (19%)	1 8
30	d	47/49 (96%)	35 (74%)	12 (26%)	0 3
31	e	49/106 (46%)	26 (53%)	23 (47%)	0 0
32	f	64/140 (46%)	43 (67%)	21 (33%)	0 2
33	g	272/275 (99%)	224 (82%)	48 (18%)	2 11
37	n	66/123 (54%)	48 (73%)	18 (27%)	0 3
All	All	4274/4833 (88%)	3316 (78%)	958 (22%)	1 5

All (958) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	5	LEU
1	A	7	VAL
1	A	10	MET
1	A	12	GLU
1	A	13	GLU
1	A	17	LYS
1	A	19	LEU
1	A	25	LEU
1	A	36	GLN
1	A	40	LYS
1	A	42	LYS
1	A	44	ASP
1	A	52	LYS
1	A	58	LEU
1	A	63	ARG
1	A	73	ASP
1	A	88	LEU
1	A	89	LYS

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Mol	Chain	Res	Type
1	A	102	ARG
1	A	117	ARG
1	A	128	ARG
1	A	139	TYR
1	A	147	LEU
1	A	155	ARG
1	A	159	ILE
1	A	169	HIS
1	A	181	GLU
1	A	186	ARG
1	A	188	THR
1	A	191	ARG
1	A	195	TRP
1	A	196	GLU
1	A	198	MET
1	A	204	TYR
1	A	207	PRO
2	B	19	LYS
2	B	20	LYS
2	B	21	VAL
2	B	22	VAL
2	B	34	LYS
2	B	41	ILE
2	B	48	LEU
2	B	52	THR
2	B	55	THR
2	B	56	LYS
2	B	75	GLN
2	B	78	GLU
2	B	82	ARG
2	B	83	LYS
2	B	89	GLU
2	B	94	LYS
2	B	115	LYS
2	B	116	LYS
2	B	131	ASP
2	B	138	PHE
2	B	144	LYS
2	B	148	ASN
2	B	150	ILE
2	B	151	ARG
2	B	158	HIS

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Mol	Chain	Res	Type
2	B	162	ARG
2	B	165	ARG
2	B	166	LYS
2	B	172	MET
2	B	181	LEU
2	B	182	LYS
2	B	195	LYS
2	B	208	HIS
2	B	211	PHE
2	B	213	ARG
2	B	214	LYS
2	B	219	LYS
2	B	222	LYS
2	B	223	PHE
2	B	227	LYS
2	B	229	MET
3	C	43	LYS
3	C	48	VAL
3	C	49	THR
3	C	50	LYS
3	C	51	LEU
3	C	56	LYS
3	C	58	MET
3	C	59	LYS
3	C	61	LYS
3	C	79	ILE
3	C	89	ASP
3	C	95	MET
3	C	99	LYS
3	C	100	GLN
3	C	101	THR
3	C	105	GLN
3	C	119	ASN
3	C	127	LYS
3	C	131	GLU
3	C	145	LEU
3	C	151	ARG
3	C	152	ARG
3	C	157	ASN
3	C	158	LYS
3	C	168	LYS
3	C	169	VAL

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Mol	Chain	Res	Type
3	C	196	LYS
3	C	197	LYS
3	C	201	MET
3	C	221	PHE
3	C	223	LYS
3	C	235	TYR
3	C	242	LYS
3	C	244	THR
3	C	246	PHE
3	C	247	THR
3	C	248	LYS
3	C	252	GLN
3	C	256	ASP
3	C	260	LYS
4	D	8	LYS
4	D	10	LYS
4	D	18	LYS
4	D	21	LEU
4	D	27	ARG
4	D	31	GLU
4	D	35	SER
4	D	44	THR
4	D	56	GLN
4	D	64	ARG
4	D	67	ARG
4	D	74	GLN
4	D	76	ARG
4	D	79	PHE
4	D	89	GLU
4	D	90	LYS
4	D	94	ARG
4	D	97	CYS
4	D	103	GLU
4	D	113	LEU
4	D	120	TYR
4	D	127	MET
4	D	129	SER
4	D	146	ARG
4	D	151	LYS
4	D	156	LEU
4	D	157	MET
4	D	158	ILE

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Mol	Chain	Res	Type
4	D	176	LEU
4	D	177	LEU
4	D	178	ARG
4	D	187	LYS
4	D	190	LEU
4	D	192	TRP
4	D	198	ILE
4	D	202	LYS
4	D	206	ASP
4	D	207	HIS
4	D	211	VAL
4	D	212	GLU
4	D	214	LYS
4	D	215	ASP
4	D	216	GLU
4	D	218	LEU
4	D	220	THR
4	D	226	GLN
5	E	1	MET
5	E	6	LYS
5	E	7	LYS
5	E	9	LEU
5	E	10	LYS
5	E	38	LEU
5	E	39	ARG
5	E	48	LEU
5	E	49	ARG
5	E	56	LEU
5	E	65	CYS
5	E	67	GLN
5	E	68	ARG
5	E	77	ARG
5	E	94	LYS
5	E	97	GLU
5	E	106	LYS
5	E	118	GLU
5	E	120	LYS
5	E	122	LYS
5	E	123	LEU
5	E	125	LYS
5	E	128	LYS
5	E	130	PHE

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Mol	Chain	Res	Type
5	E	133	THR
5	E	136	ILE
5	E	145	ARG
5	E	147	ILE
5	E	148	ARG
5	E	151	ASP
5	E	153	LEU
5	E	164	LEU
5	E	165	GLU
5	E	168	LYS
5	E	174	LYS
5	E	175	PHE
5	E	180	LEU
5	E	181	CYS
5	E	198	ARG
5	E	200	ARG
5	E	202	PRO
5	E	211	LYS
5	E	212	ASP
5	E	221	ARG
5	E	222	LEU
5	E	237	SER
5	E	240	ARG
5	E	242	LYS
5	E	245	ARG
5	E	246	LEU
5	E	259	LYS
5	E	260	GLN
6	F	15	PRO
6	F	18	LYS
6	F	29	GLN
6	F	36	GLN
6	F	37	ASP
6	F	38	TYR
6	F	41	VAL
6	F	42	LYS
6	F	43	GLU
6	F	44	LYS
6	F	47	LYS
6	F	49	LEU
6	F	60	ARG
6	F	62	ARG

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Mol	Chain	Res	Type
6	F	63	LYS
6	F	65	GLN
6	F	71	ARG
6	F	76	MET
6	F	78	MET
6	F	85	LYS
6	F	88	MET
6	F	91	ARG
6	F	94	LYS
6	F	98	GLU
6	F	110	GLN
6	F	116	ILE
6	F	122	ARG
6	F	125	SER
6	F	127	ARG
6	F	128	ILE
6	F	130	ARG
6	F	136	ARG
6	F	145	ARG
6	F	164	ARG
6	F	167	LYS
6	F	173	LEU
6	F	175	ASP
6	F	177	LEU
6	F	182	LYS
6	F	186	ASN
6	F	190	ILE
6	F	192	LYS
6	F	195	GLU
6	F	202	SER
6	F	204	ARG
7	G	1	MET
7	G	2	LYS
7	G	13	GLN
7	G	17	GLU
7	G	19	ASP
7	G	29	GLU
7	G	30	LYS
7	G	31	ARG
7	G	32	MET
7	G	44	GLU
7	G	58	LYS

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Mol	Chain	Res	Type
7	G	64	LYS
7	G	74	ARG
7	G	76	LEU
7	G	77	LEU
7	G	79	LYS
7	G	88	ARG
7	G	94	ARG
7	G	98	ARG
7	G	115	LYS
7	G	116	LYS
7	G	120	ASP
7	G	121	ILE
7	G	126	ASP
7	G	127	THR
7	G	128	THR
7	G	131	ARG
7	G	133	LEU
7	G	137	ARG
7	G	142	ARG
7	G	143	LYS
7	G	145	PHE
7	G	150	GLU
7	G	158	VAL
7	G	159	ARG
7	G	164	LYS
7	G	168	LYS
7	G	170	ARG
7	G	172	LYS
7	G	175	LYS
7	G	179	LEU
7	G	180	VAL
7	G	191	ARG
7	G	196	LYS
7	G	198	ARG
7	G	218	LYS
7	G	219	GLU
7	G	224	ARG
7	G	230	LYS
7	G	233	ARG
8	H	9	VAL
8	H	10	LYS
8	H	11	PRO

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Mol	Chain	Res	Type
8	H	14	GLU
8	H	15	LYS
8	H	16	PRO
8	H	17	ASP
8	H	23	ILE
8	H	32	MET
8	H	34	SER
8	H	36	LEU
8	H	37	LYS
8	H	40	LEU
8	H	57	ARG
8	H	58	LYS
8	H	61	ILE
8	H	69	LEU
8	H	72	PHE
8	H	74	LYS
8	H	78	ARG
8	H	81	ARG
8	H	82	GLU
8	H	85	LYS
8	H	87	PHE
8	H	93	VAL
8	H	99	ARG
8	H	105	THR
8	H	107	LYS
8	H	109	ARG
8	H	111	LYS
8	H	112	ASN
8	H	113	LYS
8	H	116	ARG
8	H	118	ARG
8	H	120	ARG
8	H	122	LEU
8	H	131	GLU
8	H	143	ARG
8	H	145	ARG
8	H	157	HIS
8	H	158	LEU
8	H	160	LYS
8	H	163	GLN
8	H	179	LYS
8	H	185	VAL

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Mol	Chain	Res	Type
8	H	193	GLN
9	I	3	ILE
9	I	5	ARG
9	I	6	ASP
9	I	13	LYS
9	I	19	LYS
9	I	23	LYS
9	I	25	ARG
9	I	37	LYS
9	I	41	ARG
9	I	49	ARG
9	I	56	ARG
9	I	70	GLU
9	I	74	ARG
9	I	100	CYS
9	I	110	ARG
9	I	117	TYR
9	I	119	LEU
9	I	123	ARG
9	I	124	LYS
9	I	125	LYS
9	I	140	LYS
9	I	141	ARG
9	I	143	LYS
9	I	144	LYS
9	I	148	LYS
9	I	150	ASP
9	I	154	LYS
9	I	155	ASN
9	I	158	ILE
9	I	161	LEU
9	I	167	GLN
9	I	191	GLU
9	I	202	ILE
9	I	205	ARG
9	I	206	LYS
10	J	8	VAL
10	J	10	ARG
10	J	17	ARG
10	J	18	ARG
10	J	29	LEU
10	J	38	ARG

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Mol	Chain	Res	Type
10	J	42	GLU
10	J	50	LEU
10	J	58	ARG
10	J	66	LYS
10	J	69	ARG
10	J	79	ARG
10	J	89	GLU
10	J	93	LYS
10	J	101	LYS
10	J	108	ARG
10	J	109	ARG
10	J	110	LEU
10	J	119	LEU
10	J	121	LYS
10	J	127	ARG
10	J	139	LYS
10	J	143	ASN
10	J	162	ARG
10	J	165	TYR
10	J	172	ARG
10	J	174	LYS
10	J	176	LYS
10	J	180	LYS
11	K	1	MET
11	K	2	LEU
11	K	3	MET
11	K	5	LYS
11	K	13	GLU
11	K	16	PHE
11	K	17	LYS
11	K	20	VAL
11	K	31	LYS
11	K	34	GLU
11	K	35	LEU
11	K	37	ASP
11	K	38	LYS
11	K	43	LEU
11	K	53	LYS
11	K	55	ARG
11	K	65	ARG
11	K	66	HIS
11	K	69	TRP

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Mol	Chain	Res	Type
11	K	74	GLU
11	K	84	HIS
11	K	85	LEU
11	K	89	ILE
11	K	93	THR
11	K	94	LEU
11	K	95	ARG
11	K	96	ARG
11	K	98	ARG
12	L	1	MET
12	L	4	ILE
12	L	7	GLU
12	L	8	ARG
12	L	12	LYS
12	L	15	THR
12	L	18	GLN
12	L	20	LYS
12	L	22	ARG
12	L	25	LEU
12	L	30	LYS
12	L	40	ILE
12	L	49	GLU
12	L	56	ILE
12	L	69	ARG
12	L	71	ARG
12	L	79	LYS
12	L	80	MET
12	L	82	MET
12	L	83	GLN
12	L	89	ARG
12	L	97	ARG
12	L	99	TYR
12	L	100	ASN
12	L	101	ARG
12	L	102	PHE
12	L	105	ARG
12	L	118	ARG
12	L	121	GLN
12	L	136	LYS
12	L	147	LYS
12	L	151	THR
12	L	153	LYS

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Mol	Chain	Res	Type
12	L	155	PHE
12	L	156	GLN
12	L	157	LYS
12	L	158	PHE
13	M	12	MET
13	M	13	ASP
13	M	18	LEU
13	M	20	GLU
13	M	26	LEU
13	M	28	HIS
13	M	33	ARG
13	M	36	ARG
13	M	40	LYS
13	M	43	ASP
13	M	45	ARG
13	M	71	GLU
13	M	76	LEU
13	M	77	ILE
13	M	78	LYS
13	M	83	LYS
13	M	85	LEU
13	M	91	LEU
13	M	94	ILE
13	M	101	ARG
13	M	102	LYS
13	M	127	TYR
13	M	128	PHE
14	N	3	ARG
14	N	9	LYS
14	N	16	LEU
14	N	21	SER
14	N	27	LYS
14	N	49	GLN
14	N	50	ILE
14	N	53	ILE
14	N	56	ASP
14	N	64	ARG
14	N	73	ARG
14	N	76	LYS
14	N	78	LYS
14	N	80	LEU
14	N	94	LYS

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Mol	Chain	Res	Type
14	N	104	ARG
14	N	107	LYS
14	N	112	LYS
14	N	114	ARG
14	N	119	GLU
14	N	121	ARG
14	N	125	LEU
14	N	130	LYS
14	N	133	ARG
14	N	134	VAL
14	N	141	TYR
14	N	142	GLU
15	O	23	GLU
15	O	25	GLU
15	O	28	PHE
15	O	34	PHE
15	O	65	ASP
15	O	66	ARG
15	O	72	TYR
15	O	90	ILE
15	O	103	ASN
15	O	116	LEU
15	O	117	ARG
15	O	121	ARG
15	O	125	LYS
15	O	128	ARG
15	O	129	ILE
15	O	138	ASP
15	O	141	ARG
15	O	146	ARG
15	O	150	ARG
16	P	5	GLU
16	P	6	GLN
16	P	7	LYS
16	P	10	ARG
16	P	12	PHE
16	P	13	ARG
16	P	14	LYS
16	P	15	PHE
16	P	17	TYR
16	P	34	MET
16	P	40	ARG

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Mol	Chain	Res	Type
16	P	41	GLN
16	P	43	ARG
16	P	50	ARG
16	P	51	ARG
16	P	52	LYS
16	P	61	ARG
16	P	64	LYS
16	P	71	GLU
16	P	72	LYS
16	P	74	GLU
16	P	84	ILE
16	P	86	LEU
16	P	88	GLU
16	P	89	MET
16	P	100	LYS
16	P	104	GLN
16	P	110	GLU
16	P	111	MET
16	P	122	THR
16	P	124	LYS
16	P	127	LYS
17	Q	6	PRO
17	Q	7	LEU
17	Q	13	PHE
17	Q	17	LYS
17	Q	20	THR
17	Q	24	HIS
17	Q	26	LYS
17	Q	33	LYS
17	Q	37	ARG
17	Q	41	MET
17	Q	56	LEU
17	Q	62	ARG
17	Q	73	LYS
17	Q	101	ASP
17	Q	102	GLU
17	Q	105	LYS
17	Q	107	GLU
17	Q	115	TYR
17	Q	117	ARG
17	Q	120	LEU
17	Q	126	ARG

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Mol	Chain	Res	Type
17	Q	130	LYS
17	Q	131	LYS
17	Q	135	PRO
17	Q	140	ARG
17	Q	142	GLN
17	Q	145	TYR
17	Q	146	ARG
18	R	1	MET
18	R	8	THR
18	R	26	ASN
18	R	32	LYS
18	R	47	ARG
18	R	59	LYS
18	R	63	ARG
18	R	69	ILE
18	R	78	ARG
18	R	83	ASN
18	R	87	GLU
18	R	88	VAL
18	R	89	SER
18	R	91	LEU
18	R	93	GLN
18	R	94	GLU
18	R	95	ILE
18	R	103	LYS
18	R	105	MET
18	R	111	PHE
18	R	118	GLN
18	R	120	THR
18	R	121	GLN
18	R	123	THR
19	S	7	GLU
19	S	8	LYS
19	S	9	PHE
19	S	11	HIS
19	S	12	ILE
19	S	17	ASN
19	S	34	LYS
19	S	36	VAL
19	S	39	ARG
19	S	59	LEU
19	S	63	GLU

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Mol	Chain	Res	Type
19	S	71	MET
19	S	78	LYS
19	S	86	ARG
19	S	87	GLN
19	S	92	ASP
19	S	94	LYS
19	S	118	ARG
19	S	125	HIS
19	S	130	ARG
19	S	132	ARG
19	S	134	GLN
19	S	137	LYS
19	S	142	ARG
20	T	11	GLN
20	T	16	ARG
20	T	21	PHE
20	T	23	LYS
20	T	28	LEU
20	T	29	LYS
20	T	38	LYS
20	T	41	LYS
20	T	42	HIS
20	T	44	GLU
20	T	62	ARG
20	T	64	LEU
20	T	67	ARG
20	T	83	GLN
20	T	84	ARG
20	T	88	MET
20	T	91	HIS
20	T	93	SER
20	T	94	ARG
20	T	97	LYS
20	T	102	ARG
20	T	121	ARG
20	T	130	ASP
20	T	133	ARG
20	T	143	LYS
20	T	144	LYS
21	U	19	ARG
21	U	20	ILE
21	U	21	ARG

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Mol	Chain	Res	Type
21	U	24	LEU
21	U	33	GLU
21	U	44	LYS
21	U	47	ASN
21	U	48	LEU
21	U	49	LYS
21	U	51	LYS
21	U	62	ARG
21	U	68	THR
21	U	72	GLU
21	U	75	LYS
21	U	85	HIS
21	U	87	ARG
21	U	104	ILE
21	U	106	ILE
21	U	108	PRO
21	U	111	GLU
22	V	1	MET
22	V	7	GLU
22	V	16	LYS
22	V	24	ILE
22	V	31	SER
22	V	32	ILE
22	V	40	ASP
22	V	41	LYS
22	V	43	THR
22	V	45	ARG
22	V	49	GLN
22	V	51	LYS
22	V	52	THR
22	V	61	ARG
22	V	64	GLU
22	V	74	LYS
22	V	78	ILE
23	W	3	ARG
23	W	4	MET
23	W	18	GLU
23	W	20	ARG
23	W	23	ARG
23	W	52	ILE
23	W	64	ASN
23	W	84	LYS

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Mol	Chain	Res	Type
23	W	98	GLN
23	W	103	VAL
23	W	114	GLU
23	W	124	LYS
23	W	128	PHE
23	W	129	PHE
24	X	1	MET
24	X	3	LYS
24	X	5	ARG
24	X	7	LEU
24	X	12	LYS
24	X	21	LYS
24	X	29	LYS
24	X	37	LYS
24	X	67	ARG
24	X	68	LYS
24	X	71	ARG
24	X	75	ILE
24	X	80	LYS
24	X	91	LEU
24	X	98	ASP
24	X	101	LEU
24	X	107	ARG
24	X	108	LYS
24	X	110	HIS
24	X	115	ILE
24	X	135	LYS
24	X	141	PRO
24	X	142	ARG
25	Y	16	ARG
25	Y	20	ARG
25	Y	21	LYS
25	Y	23	MET
25	Y	29	HIS
25	Y	32	LYS
25	Y	35	VAL
25	Y	46	LYS
25	Y	58	PHE
25	Y	61	ARG
25	Y	64	PHE
25	Y	68	LYS
25	Y	93	ARG

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Mol	Chain	Res	Type
25	Y	96	LEU
25	Y	97	TYR
25	Y	98	GLU
25	Y	99	LYS
25	Y	100	LYS
25	Y	101	LYS
25	Y	102	THR
25	Y	111	LYS
25	Y	118	ARG
25	Y	122	LYS
26	Z	44	LEU
26	Z	50	PHE
26	Z	52	LYS
26	Z	65	TYR
26	Z	85	ARG
26	Z	91	LEU
26	Z	94	LYS
26	Z	102	LYS
26	Z	103	HIS
26	Z	104	ARG
26	Z	107	VAL
26	Z	112	ASN
26	Z	114	LYS
27	a	10	ARG
27	a	15	ARG
27	a	26	CYS
27	a	38	LYS
27	a	41	ILE
27	a	44	ILE
27	a	50	VAL
27	a	51	ARG
27	a	60	ASP
27	a	63	VAL
27	a	70	LYS
27	a	82	LYS
27	a	85	ARG
27	a	94	ASP
27	a	95	ARG
28	b	3	LEU
28	b	5	LYS
28	b	16	LYS
28	b	20	LYS

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Mol	Chain	Res	Type
28	b	23	ARG
28	b	26	GLN
28	b	41	TYR
28	b	42	LYS
28	b	49	HIS
28	b	51	GLN
28	b	53	VAL
28	b	83	GLN
28	b	84	HIS
29	c	5	ARG
29	c	7	GLN
29	c	13	ARG
29	c	35	MET
29	c	42	ILE
29	c	47	LYS
29	c	51	ARG
29	c	62	GLU
29	c	63	ARG
29	c	67	ARG
29	c	68	LEU
30	d	7	TYR
30	d	10	HIS
30	d	16	GLN
30	d	19	ARG
30	d	27	ARG
30	d	30	LEU
30	d	33	LYS
30	d	39	CYS
30	d	44	ARG
30	d	46	TYR
30	d	53	ILE
30	d	56	ASP
31	e	76	VAL
31	e	80	LEU
31	e	85	LYS
31	e	87	ARG
31	e	92	LYS
31	e	95	LYS
31	e	97	GLU
31	e	98	LYS
31	e	99	LYS
31	e	100	LYS

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Mol	Chain	Res	Type
31	e	103	THR
31	e	105	ARG
31	e	108	ARG
31	e	110	MET
31	e	114	ARG
31	e	115	ARG
31	e	118	ASN
31	e	120	VAL
31	e	122	THR
31	e	123	PHE
31	e	125	LYS
31	e	126	LYS
31	e	127	LYS
32	f	86	THR
32	f	88	PRO
32	f	89	LYS
32	f	90	LYS
32	f	94	LYS
32	f	95	ARG
32	f	96	LYS
32	f	97	LYS
32	f	104	LYS
32	f	109	ASP
32	f	110	GLU
32	f	111	ASN
32	f	113	LYS
32	f	116	ARG
32	f	118	ARG
32	f	121	CYS
32	f	130	VAL
32	f	135	HIS
32	f	136	PHE
32	f	139	HIS
32	f	150	PHE
33	g	8	ARG
33	g	24	THR
33	g	25	PRO
33	g	36	ARG
33	g	42	MET
33	g	44	LYS
33	g	47	ARG
33	g	50	THR

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Mol	Chain	Res	Type
33	g	51	ASN
33	g	57	ARG
33	g	60	ARG
33	g	64	HIS
33	g	68	ASP
33	g	74	ASP
33	g	76	GLN
33	g	87	LEU
33	g	88	ARG
33	g	91	ASP
33	g	93	THR
33	g	100	ARG
33	g	118	ARG
33	g	119	GLN
33	g	131	LEU
33	g	139	LYS
33	g	140	TYR
33	g	143	GLN
33	g	145	GLU
33	g	146	SER
33	g	149	GLU
33	g	156	PHE
33	g	161	SER
33	g	175	LYS
33	g	183	LYS
33	g	185	LYS
33	g	192	THR
33	g	203	ASP
33	g	225	LYS
33	g	246	TYR
33	g	259	TRP
33	g	264	LYS
33	g	271	LYS
33	g	275	ILE
33	g	276	SER
33	g	277	THR
33	g	279	SER
33	g	280	LYS
33	g	289	LEU
33	g	294	ASP
37	n	34	GLU
37	n	35	TYR

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Mol	Chain	Res	Type
37	n	39	ILE
37	n	48	GLU
37	n	62	ARG
37	n	66	ARG
37	n	69	VAL
37	n	71	ILE
37	n	74	SER
37	n	78	LEU
37	n	81	LEU
37	n	83	ASP
37	n	85	GLN
37	n	95	TYR
37	n	101	ARG
37	n	102	SER
37	n	103	LEU
37	n	109	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (117) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	24	HIS
1	A	36	GLN
1	A	50	ASN
1	A	81	ASN
1	A	132	GLN
1	A	141	ASN
1	A	169	HIS
2	B	75	GLN
2	B	76	ASN
2	B	101	HIS
2	B	118	GLN
2	B	124	HIS
2	B	147	ASN
2	B	148	ASN
2	B	179	ASN
2	B	186	ASN
2	B	202	GLN
2	B	232	HIS
3	C	100	GLN
3	C	157	ASN
4	D	74	GLN
4	D	179	GLN

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Mol	Chain	Res	Type
4	D	226	GLN
5	E	50	ASN
5	E	98	ASN
5	E	142	HIS
5	E	188	ASN
5	E	209	HIS
6	F	29	GLN
6	F	65	GLN
6	F	83	ASN
6	F	186	ASN
6	F	203	ASN
7	G	56	ASN
7	G	65	GLN
7	G	81	HIS
7	G	187	HIS
8	H	12	ASN
8	H	73	GLN
8	H	163	GLN
8	H	168	HIS
9	I	22	HIS
9	I	84	ASN
9	I	99	ASN
9	I	165	GLN
11	K	7	ASN
11	K	28	HIS
11	K	39	ASN
11	K	44	HIS
11	K	50	GLN
11	K	66	HIS
12	L	18	GLN
12	L	19	ASN
12	L	65	ASN
12	L	121	GLN
12	L	156	GLN
13	M	19	GLN
13	M	28	HIS
13	M	75	ASN
13	M	82	ASN
14	N	5	HIS
14	N	62	GLN
14	N	101	HIS
14	N	123	HIS

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Mol	Chain	Res	Type
15	O	20	GLN
16	P	41	GLN
16	P	53	GLN
16	P	79	HIS
16	P	103	ASN
16	P	114	HIS
16	P	128	HIS
17	Q	80	GLN
18	R	74	GLN
18	R	121	GLN
19	S	11	HIS
19	S	42	HIS
19	S	87	GLN
20	T	11	GLN
20	T	42	HIS
20	T	63	HIS
20	T	83	GLN
20	T	85	ASN
20	T	126	GLN
20	T	128	GLN
21	U	18	HIS
21	U	47	ASN
22	V	47	ASN
22	V	76	HIS
23	W	15	ASN
23	W	44	HIS
23	W	64	ASN
23	W	98	GLN
24	X	39	ASN
24	X	46	HIS
25	Y	29	HIS
25	Y	85	ASN
25	Y	89	HIS
25	Y	94	HIS
26	Z	103	HIS
27	a	80	HIS
28	b	49	HIS
28	b	83	GLN
28	b	84	HIS
29	c	26	GLN
30	d	26	ASN
30	d	28	HIS

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Mol	Chain	Res	Type
31	e	77	HIS
32	f	151	ASN
33	g	20	GLN
33	g	64	HIS
33	g	76	GLN
33	g	119	GLN
33	g	143	GLN
33	g	162	ASN
33	g	226	HIS
33	g	237	ASN
37	n	112	HIS

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
34	i	1720/1863 (92%)	496 (28%)	0
35	j	74/75 (98%)	17 (22%)	0
36	k	12/24 (50%)	3 (25%)	0
All	All	1806/1962 (92%)	516 (28%)	0

All (516) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
34	i	2	A
34	i	3	C
34	i	4	C
34	i	8	U
34	i	16	G
34	i	25	A
34	i	26	U
34	i	32	U
34	i	33	G
34	i	41	G
34	i	44	U
34	i	45	A
34	i	46	A
34	i	50	A
34	i	56	G
34	i	59	U
34	i	66	G
34	i	67	C

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Mol	Chain	Res	Type
34	i	68	A
34	i	70	G
34	i	72	C
34	i	73	C
34	i	74	G
34	i	75	G
34	i	76	U
34	i	77	A
34	i	78	C
34	i	79	A
34	i	80	G
34	i	99	A
34	i	103	A
34	i	113	G
34	i	126	G
34	i	139	C
34	i	140	U
34	i	141	A
34	i	142	C
34	i	143	U
34	i	147	A
34	i	148	U
34	i	155	G
34	i	160	U
34	i	161	U
34	i	162	C
34	i	170	A
34	i	176	U
34	i	182	C
34	i	183	G
34	i	187	C
34	i	188	U
34	i	189	G
34	i	190	A
34	i	191	C
34	i	197	U
34	i	198	U
34	i	199	G
34	i	203	G
34	i	205	G
34	i	206	A
34	i	212	G

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Mol	Chain	Res	Type
34	i	213	C
34	i	223	A
34	i	224	U
34	i	225	C
34	i	226	A
34	i	229	A
34	i	230	C
34	i	232	A
34	i	233	A
34	i	234	C
34	i	235	C
34	i	238	G
34	i	273	G
34	i	275	C
34	i	276	U
34	i	277	U
34	i	278	U
34	i	279	G
34	i	286	C
34	i	287	U
34	i	298	G
34	i	299	G
34	i	300	G
34	i	303	G
34	i	304	A
34	i	307	G
34	i	309	A
34	i	311	C
34	i	313	C
34	i	314	U
34	i	315	C
34	i	316	C
34	i	317	G
34	i	318	U
34	i	320	G
34	i	322	G
34	i	326	A
34	i	332	C
34	i	337	G
34	i	339	A
34	i	346	C
34	i	352	C

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Mol	Chain	Res	Type
34	i	354	A
34	i	357	U
34	i	359	C
34	i	375	G
34	i	376	C
34	i	379	A
34	i	382	A
34	i	390	C
34	i	397	G
34	i	398	A
34	i	399	C
34	i	416	A
34	i	438	A
34	i	440	C
34	i	442	G
34	i	449	C
34	i	454	A
34	i	456	G
34	i	460	G
34	i	461	G
34	i	462	C
34	i	463	A
34	i	464	G
34	i	466	A
34	i	472	G
34	i	477	U
34	i	482	C
34	i	484	C
34	i	486	C
34	i	515	A
34	i	521	A
34	i	522	C
34	i	523	A
34	i	525	G
34	i	537	G
34	i	539	C
34	i	541	U
34	i	542	G
34	i	543	U
34	i	546	U
34	i	547	U
34	i	549	G

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Mol	Chain	Res	Type
34	i	550	A
34	i	554	A
34	i	555	G
34	i	566	A
34	i	574	A
34	i	576	G
34	i	578	G
34	i	580	A
34	i	581	U
34	i	582	C
34	i	583	C
34	i	586	U
34	i	590	G
34	i	595	A
34	i	596	G
34	i	597	U
34	i	598	C
34	i	600	G
34	i	604	G
34	i	609	A
34	i	610	G
34	i	618	A
34	i	619	A
34	i	624	A
34	i	631	A
34	i	632	U
34	i	633	A
34	i	634	G
34	i	645	A
34	i	658	A
34	i	659	A
34	i	660	A
34	i	661	A
34	i	662	A
34	i	669	A
34	i	678	U
34	i	679	U
34	i	683	G
34	i	684	A
34	i	685	G
34	i	686	G
34	i	687	G

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Mol	Chain	Res	Type
34	i	689	G
34	i	691	G
34	i	725	C
34	i	727	G
34	i	728	U
34	i	729	C
34	i	730	C
34	i	731	C
34	i	734	C
34	i	735	C
34	i	736	C
34	i	740	G
34	i	743	U
34	i	744	C
34	i	793	C
34	i	794	G
34	i	795	U
34	i	806	A
34	i	807	A
34	i	808	A
34	i	814	A
34	i	817	G
34	i	818	U
34	i	826	A
34	i	827	G
34	i	830	C
34	i	831	C
34	i	832	G
34	i	833	A
34	i	834	G
34	i	835	C
34	i	836	C
34	i	838	C
34	i	839	C
34	i	841	G
34	i	843	A
34	i	849	C
34	i	860	A
34	i	864	G
34	i	865	A
34	i	866	A
34	i	867	U

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Mol	Chain	Res	Type
34	i	869	G
34	i	870	G
34	i	871	A
34	i	872	C
34	i	873	C
34	i	874	G
34	i	877	G
34	i	882	A
34	i	883	U
34	i	884	U
34	i	886	U
34	i	890	G
34	i	891	G
34	i	893	U
34	i	899	A
34	i	900	A
34	i	907	C
34	i	909	A
34	i	910	U
34	i	916	A
34	i	917	G
34	i	929	G
34	i	947	C
34	i	951	A
34	i	962	U
34	i	965	U
34	i	966	G
34	i	967	G
34	i	972	G
34	i	974	G
34	i	986	A
34	i	988	A
34	i	995	G
34	i	997	A
34	i	1004	A
34	i	1013	U
34	i	1019	A
34	i	1021	U
34	i	1027	A
34	i	1035	C
34	i	1041	U
34	i	1045	A

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Mol	Chain	Res	Type
34	i	1046	A
34	i	1047	G
34	i	1048	A
34	i	1050	G
34	i	1056	A
34	i	1057	U
34	i	1058	A
34	i	1068	U
34	i	1069	U
34	i	1073	A
34	i	1074	C
34	i	1079	A
34	i	1092	G
34	i	1093	G
34	i	1105	C
34	i	1106	G
34	i	1107	U
34	i	1111	U
34	i	1112	C
34	i	1113	C
34	i	1114	C
34	i	1116	U
34	i	1119	C
34	i	1127	G
34	i	1132	U
34	i	1134	C
34	i	1136	G
34	i	1137	G
34	i	1139	A
34	i	1144	A
34	i	1145	A
34	i	1146	A
34	i	1149	C
34	i	1150	U
34	i	1151	U
34	i	1153	G
34	i	1154	G
34	i	1157	U
34	i	1162	G
34	i	1164	G
34	i	1199	G
34	i	1202	G

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Mol	Chain	Res	Type
34	i	1204	A
34	i	1205	A
34	i	1208	G
34	i	1210	A
34	i	1211	C
34	i	1212	C
34	i	1213	A
34	i	1217	G
34	i	1220	G
34	i	1232	G
34	i	1233	C
34	i	1238	U
34	i	1241	G
34	i	1247	A
34	i	1249	A
34	i	1250	C
34	i	1252	G
34	i	1253	G
34	i	1255	A
34	i	1256	A
34	i	1259	U
34	i	1260	C
34	i	1270	G
34	i	1271	G
34	i	1272	A
34	i	1274	A
34	i	1279	C
34	i	1280	A
34	i	1281	G
34	i	1296	U
34	i	1297	A
34	i	1299	C
34	i	1303	U
34	i	1304	U
34	i	1310	U
34	i	1311	U
34	i	1312	C
34	i	1313	U
34	i	1320	G
34	i	1325	U
34	i	1338	U
34	i	1339	U

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Mol	Chain	Res	Type
34	i	1344	G
34	i	1354	U
34	i	1367	U
34	i	1368	U
34	i	1369	C
34	i	1374	A
34	i	1390	G
34	i	1391	C
34	i	1392	A
34	i	1393	U
34	i	1394	G
34	i	1397	A
34	i	1398	A
34	i	1400	U
34	i	1402	G
34	i	1403	U
34	i	1405	A
34	i	1406	C
34	i	1408	C
34	i	1413	C
34	i	1414	C
34	i	1415	C
34	i	1422	U
34	i	1426	C
34	i	1431	C
34	i	1433	C
34	i	1445	G
34	i	1448	A
34	i	1450	A
34	i	1452	G
34	i	1455	G
34	i	1458	U
34	i	1461	A
34	i	1470	A
34	i	1471	G
34	i	1472	A
34	i	1473	U
34	i	1474	U
34	i	1485	A
34	i	1486	G
34	i	1489	C
34	i	1490	U

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Mol	Chain	Res	Type
34	i	1491	G
34	i	1504	A
34	i	1506	G
34	i	1507	U
34	i	1508	C
34	i	1511	G
34	i	1514	U
34	i	1515	G
34	i	1516	C
34	i	1519	G
34	i	1528	A
34	i	1530	U
34	i	1532	A
34	i	1535	G
34	i	1539	C
34	i	1540	A
34	i	1545	G
34	i	1546	U
34	i	1547	G
34	i	1548	C
34	i	1549	C
34	i	1551	A
34	i	1552	C
34	i	1553	C
34	i	1558	G
34	i	1559	C
34	i	1565	G
34	i	1573	U
34	i	1575	A
34	i	1577	C
34	i	1580	U
34	i	1582	G
34	i	1583	A
34	i	1593	G
34	i	1594	U
34	i	1595	G
34	i	1597	U
34	i	1599	G
34	i	1616	U
34	i	1617	U
34	i	1618	A
34	i	1627	G

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Mol	Chain	Res	Type
34	i	1628	A
34	i	1632	A
34	i	1633	G
34	i	1634	G
34	i	1643	G
34	i	1649	G
34	i	1652	G
34	i	1660	G
34	i	1675	G
34	i	1683	C
34	i	1690	A
34	i	1694	A
34	i	1696	C
34	i	1697	G
34	i	1716	U
34	i	1717	G
34	i	1722	G
34	i	1724	U
34	i	1741	U
34	i	1743	G
34	i	1745	C
34	i	1747	C
34	i	1748	G
34	i	1749	C
34	i	1750	C
34	i	1751	G
34	i	1755	U
34	i	1774	G
34	i	1775	A
34	i	1776	G
34	i	1777	C
34	i	1778	G
34	i	1779	C
34	i	1780	U
34	i	1790	G
34	i	1792	C
34	i	1799	G
34	i	1818	A
34	i	1819	A
34	i	1820	G
34	i	1822	C
34	i	1823	G

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Mol	Chain	Res	Type
34	i	1825	A
34	i	1826	A
34	i	1829	A
34	i	1832	U
34	i	1833	U
34	i	1843	G
34	i	1845	A
34	i	1846	C
34	i	1852	G
34	i	1855	G
34	i	1856	G
34	i	1857	A
34	i	1858	U
34	i	1859	C
34	i	1861	U
34	i	1863	A
35	j	4	A
35	j	5	G
35	j	8	U
35	j	16	C
35	j	17	G
35	j	18	G
35	j	19	A
35	j	20	A
35	j	46	U
35	j	47	C
35	j	48	G
35	j	52	G
35	j	66	U
35	j	70	C
35	j	72	A
35	j	74	C
35	j	75	A
36	k	14	A
36	k	15	A
36	k	22	C

There are no RNA pucker outliers to report.

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
34	i	11
10	J	3
19	S	2
4	D	1
31	e	1
9	I	1
21	U	1
3	C	1
7	G	1
18	R	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	i	326:A	O3'	327:C	P	9.94
1	i	309:A	O3'	310:G	P	7.21
1	i	209:C	O3'	210:G	P	6.66
1	i	1826:A	O3'	1827:C	P	5.44
1	i	304:A	O3'	305:U	P	4.93
1	i	1206:G	O3'	1207:G	P	4.13
1	i	1698:C	O3'	1699:C	P	3.74
1	i	183:G	O3'	184:G	P	3.17
1	i	550:A	O3'	551:A	P	2.80
1	i	515:A	O3'	516:A	P	2.53
1	i	1683:C	O3'	1684:C	P	2.23

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	D	5:ILE	C	6:SER	N	1.82
1	e	95:LYS	C	96:GLN	N	1.76
1	J	118:GLY	C	119:LEU	N	1.73
1	I	43:ILE	C	44:HIS	N	1.67
1	J	146:SER	C	147:PHE	N	1.61
1	U	93:SER	C	94:PRO	N	1.61
1	S	141:ARG	C	142:ARG	N	1.60
1	C	93:LYS	C	94:ILE	N	1.18
1	G	130:PRO	C	131:ARG	N	1.16
1	R	1:MET	C	2:GLY	N	1.13
1	S	40:TYR	C	41:ALA	N	1.09
1	J	85:GLY	C	86:VAL	N	0.95

6 Fit of model and data (i)

6.1 Protein, DNA and RNA chains (i)

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	208/295 (70%)	0.77	40 (19%)	1	3	188, 273, 325, 347	0
2	B	215/264 (81%)	1.44	75 (34%)	0	2	140, 249, 309, 321	0
3	C	226/278 (81%)	2.76	109 (48%)	0	1	76, 163, 267, 284	0
4	D	227/243 (93%)	4.76	165 (72%)	0	0	110, 175, 253, 280	0
5	E	263/263 (100%)	2.66	135 (51%)	0	1	38, 138, 196, 225	0
6	F	191/204 (93%)	5.07	154 (80%)	0	0	133, 175, 212, 224	0
7	G	237/249 (95%)	1.41	73 (30%)	0	2	68, 198, 289, 311	0
8	H	190/194 (97%)	0.10	22 (11%)	4	8	129, 278, 329, 340	0
9	I	206/208 (99%)	3.73	119 (57%)	0	1	17, 164, 268, 289	0
10	J	182/194 (93%)	0.70	34 (18%)	1	4	73, 158, 221, 259	0
11	K	98/165 (59%)	1.83	29 (29%)	0	2	167, 238, 289, 308	0
12	L	158/158 (100%)	1.68	62 (39%)	0	1	22, 90, 224, 255	0
13	M	124/132 (93%)	-0.16	5 (4%)	38	34	280, 347, 384, 417	0
14	N	150/151 (99%)	0.74	23 (15%)	2	5	46, 118, 251, 261	0
15	O	136/151 (90%)	2.04	52 (38%)	0	1	45, 205, 320, 353	0
16	P	127/145 (87%)	3.24	71 (55%)	0	1	163, 254, 297, 310	0
17	Q	141/146 (96%)	1.87	49 (34%)	0	2	108, 200, 225, 231	0
18	R	126/135 (93%)	0.07	14 (11%)	5	9	130, 194, 302, 306	0
19	S	137/152 (90%)	0.95	24 (17%)	1	4	151, 218, 239, 249	0
20	T	141/145 (97%)	0.10	7 (4%)	28	28	161, 214, 230, 234	0
21	U	104/119 (87%)	3.99	64 (61%)	0	0	116, 213, 258, 269	0
22	V	82/83 (98%)	0.66	12 (14%)	2	6	175, 237, 316, 328	0
23	W	129/130 (99%)	1.72	47 (36%)	0	1	75, 141, 196, 216	0
24	X	142/143 (99%)	2.43	62 (43%)	0	1	22, 54, 84, 93	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
25	Y	126/133 (94%)	0.28	9 (7%) 16 16	85, 153, 198, 218	0
26	Z	75/125 (60%)	0.84	13 (17%) 1 4	197, 207, 217, 225	0
27	a	107/115 (93%)	1.57	27 (25%) 0 2	55, 111, 285, 317	0
28	b	84/84 (100%)	0.05	6 (7%) 16 16	156, 236, 276, 286	0
29	c	64/69 (92%)	2.52	36 (56%) 0 1	125, 173, 216, 221	0
30	d	53/56 (94%)	1.75	21 (39%) 0 1	136, 159, 235, 256	0
31	e	59/133 (44%)	0.73	12 (20%) 1 3	63, 136, 177, 192	0
32	f	71/156 (45%)	-0.55	0 100 100	145, 320, 392, 408	0
33	g	313/317 (98%)	0.39	37 (11%) 4 8	190, 248, 277, 291	0
34	i	1797/1863 (96%)	1.40	476 (26%) 0 2	13, 142, 348, 527	0
35	j	75/75 (100%)	1.24	21 (28%) 0 2	308, 379, 421, 436	0
36	k	13/24 (54%)	3.58	12 (92%) 0 0	186, 317, 324, 325	0
37	n	82/144 (56%)	1.71	31 (37%) 0 1	212, 216, 222, 224	0
All	All	6859/7641 (89%)	1.63	2148 (31%) 0 2	13, 190, 328, 527	0

All (2148) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
34	i	697	G	34.6
34	i	698	G	32.3
4	D	95	GLY	24.0
34	i	696	G	22.1
34	i	695	C	22.1
9	I	58	LEU	19.8
24	X	69	CYS	18.5
11	K	21	MET	16.0
11	K	20	VAL	15.9
34	i	694	G	15.8
4	D	88	ALA	15.5
6	F	189	ALA	15.5
4	D	186	VAL	15.3
9	I	173	ALA	15.3
3	C	87	LEU	15.2
5	E	73	ASP	14.8
9	I	104	ILE	14.7
9	I	95	THR	14.3
6	F	39	ILE	14.1

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Mol	Chain	Res	Type	RSRZ
9	I	36	THR	14.0
4	D	35	SER	14.0
4	D	101	GLN	13.8
5	E	74	GLY	13.7
4	D	50	ILE	13.6
3	C	84	GLY	13.4
4	D	96	LEU	13.4
6	F	66	CYS	13.3
21	U	25	THR	13.2
16	P	105	VAL	13.1
17	Q	53	GLU	13.1
4	D	98	ALA	13.1
21	U	26	SER	12.6
4	D	97	CYS	12.6
6	F	108	PRO	12.5
9	I	101	ILE	12.5
3	C	149	PRO	12.4
4	D	188	ILE	12.3
6	F	41	VAL	12.3
6	F	157	GLY	12.3
17	Q	54	PRO	12.2
24	X	83	ALA	12.2
6	F	40	ALA	12.2
4	D	19	ALA	12.2
4	D	36	GLY	12.2
4	D	52	ALA	12.1
6	F	64	ALA	12.1
15	O	129	ILE	12.1
16	P	87	PRO	12.0
21	U	110	VAL	12.0
9	I	100	CYS	12.0
9	I	57	ALA	11.9
4	D	70	THR	11.7
6	F	155	CYS	11.7
21	U	32	LEU	11.7
4	D	32	ASP	11.6
6	F	68	ILE	11.6
34	i	722	C	11.5
6	F	158	ALA	11.4
21	U	24	LEU	11.4
6	F	71	ARG	11.4
21	U	36	CYS	11.4

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Mol	Chain	Res	Type	RSRZ
9	I	81	VAL	11.3
6	F	106	GLU	11.3
6	F	109	LEU	11.3
16	P	94	VAL	11.2
5	E	88	ASP	11.2
11	K	22	VAL	11.2
4	D	33	GLY	11.2
6	F	107	ASN	11.1
5	E	91	SER	11.1
17	Q	50	LYS	11.0
4	D	91	VAL	11.0
9	I	105	ASP	11.0
9	I	63	GLY	10.9
6	F	111	VAL	10.9
4	D	136	VAL	10.9
6	F	183	GLY	10.9
9	I	102	VAL	10.9
3	C	121	HIS	10.8
5	E	69	PHE	10.8
6	F	154	LEU	10.7
11	K	68	TYR	10.7
3	C	147	ILE	10.7
4	D	102	ALA	10.7
9	I	174	CYS	10.6
7	G	36	VAL	10.6
2	B	100	PHE	10.6
6	F	113	VAL	10.5
9	I	186	ASP	10.5
6	F	73	THR	10.5
21	U	85	HIS	10.4
6	F	119	SER	10.4
3	C	150	VAL	10.4
4	D	94	ARG	10.4
6	F	70	GLU	10.3
11	K	63	ALA	10.3
16	P	95	GLY	10.3
9	I	76	THR	10.3
4	D	71	ALA	10.2
16	P	76	VAL	10.2
9	I	133	GLU	10.2
21	U	87	ARG	10.1
34	i	1419	C	10.1

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Mol	Chain	Res	Type	RSRZ
9	I	84	ASN	10.0
4	D	34	TYR	10.0
5	E	89	VAL	10.0
34	i	693	A	10.0
6	F	190	ILE	10.0
4	D	68	GLU	9.9
3	C	120	GLY	9.9
4	D	100	ALA	9.8
6	F	18	LYS	9.8
9	I	60	LEU	9.8
6	F	63	LYS	9.7
9	I	59	ARG	9.7
37	n	71	ILE	9.7
4	D	74	GLN	9.6
6	F	115	ALA	9.6
5	E	102	ILE	9.6
6	F	50	PRO	9.6
3	C	122	VAL	9.6
34	i	249	C	9.5
5	E	87	MET	9.5
3	C	116	GLY	9.5
16	P	88	GLU	9.5
5	E	86	PHE	9.4
4	D	51	LEU	9.4
24	X	82	THR	9.4
34	i	1762	A	9.4
3	C	148	VAL	9.4
6	F	29	GLN	9.4
6	F	110	GLN	9.3
6	F	67	PRO	9.3
21	U	112	VAL	9.3
34	i	1758	G	9.3
4	D	184	ILE	9.3
9	I	80	ASP	9.3
15	O	116	LEU	9.2
15	O	95	ILE	9.2
34	i	720	A	9.2
3	C	224	ALA	9.1
9	I	185	ALA	9.1
34	i	1580	U	9.1
4	D	20	GLU	9.1
34	i	1420	G	9.1

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Mol	Chain	Res	Type	RSRZ
21	U	39	LEU	9.1
6	F	181	ALA	9.0
15	O	113	GLN	9.0
24	X	85	VAL	9.0
11	K	62	PHE	8.9
9	I	190	LEU	8.9
7	G	41	LEU	8.9
4	D	93	THR	8.8
9	I	83	TYR	8.8
6	F	75	SER	8.8
6	F	31	ASN	8.8
21	U	22	ILE	8.8
3	C	228	ALA	8.8
4	D	49	ILE	8.8
4	D	15	GLY	8.8
4	D	75	LYS	8.7
9	I	96	LEU	8.7
6	F	178	ILE	8.7
3	C	85	ALA	8.7
9	I	78	ILE	8.6
15	O	130	GLU	8.6
34	i	723	G	8.6
5	E	143	ASP	8.6
6	F	193	LYS	8.6
3	C	86	ALA	8.6
3	C	123	GLY	8.6
6	F	177	LEU	8.6
21	U	23	THR	8.6
4	D	66	ILE	8.6
27	a	45	VAL	8.5
6	F	112	LEU	8.5
3	C	220	ASN	8.5
4	D	175	VAL	8.5
4	D	53	THR	8.5
21	U	40	ILE	8.5
16	P	106	GLU	8.5
6	F	114	ASN	8.4
4	D	72	VAL	8.4
4	D	183	GLY	8.4
21	U	86	LYS	8.4
3	C	169	VAL	8.4
16	P	6	GLN	8.4

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Mol	Chain	Res	Type	RSRZ
21	U	111	GLU	8.4
6	F	150	ALA	8.4
17	Q	57	LEU	8.3
15	O	131	ASP	8.3
9	I	129	LEU	8.3
34	i	1652	G	8.3
24	X	118	VAL	8.3
5	E	85	GLY	8.2
14	N	149	LEU	8.2
5	E	122	LYS	8.2
6	F	48	TYR	8.2
9	I	131	PRO	8.2
34	i	1653	G	8.2
34	i	1651	G	8.2
17	Q	112	LEU	8.2
5	E	71	LYS	8.1
24	X	115	ILE	8.1
3	C	198	LEU	8.1
4	D	30	ALA	8.1
11	K	70	TYR	8.1
3	C	89	ASP	8.1
6	F	151	ILE	8.1
16	P	89	MET	8.1
4	D	89	GLU	8.1
3	C	114	ALA	8.1
16	P	5	GLU	8.0
4	D	29	LEU	8.0
3	C	232	THR	8.0
34	i	1421	G	8.0
17	Q	115	TYR	8.0
9	I	38	ILE	8.0
21	U	89	ILE	8.0
6	F	116	ILE	8.0
4	D	22	ASN	7.9
9	I	189	VAL	7.9
24	X	67	ARG	7.9
4	D	119	CYS	7.9
21	U	114	VAL	7.9
7	G	18	VAL	7.9
34	i	125	C	7.9
16	P	86	LEU	7.9
6	F	184	SER	7.9

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Mol	Chain	Res	Type	RSRZ
5	E	65	CYS	7.9
9	I	85	ALA	7.8
9	I	43	ILE	7.8
5	E	237	SER	7.8
9	I	171	LEU	7.8
4	D	190	LEU	7.8
9	I	128	LYS	7.8
25	Y	17	LEU	7.8
24	X	70	VAL	7.7
5	E	60	GLU	7.7
3	C	202	ALA	7.7
4	D	103	GLU	7.7
6	F	118	ASN	7.7
4	D	73	VAL	7.7
21	U	21	ARG	7.7
4	D	86	LEU	7.7
14	N	146	ALA	7.7
6	F	180	ALA	7.6
5	E	72	ILE	7.6
9	I	39	GLY	7.6
19	S	67	VAL	7.6
3	C	226	PHE	7.6
3	C	225	THR	7.6
17	Q	58	LEU	7.6
3	C	201	MET	7.6
3	C	203	GLY	7.6
6	F	28	VAL	7.6
6	F	187	SER	7.6
3	C	117	ASP	7.6
21	U	35	VAL	7.6
3	C	230	SER	7.6
3	C	151	ARG	7.6
15	O	127	GLY	7.5
6	F	30	ILE	7.5
7	G	95	LYS	7.5
5	E	100	ARG	7.5
6	F	105	GLY	7.5
9	I	65	PHE	7.5
8	H	193	GLN	7.4
3	C	229	ILE	7.4
5	E	70	ILE	7.4
15	O	20	GLN	7.4

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Mol	Chain	Res	Type	RSRZ
9	I	61	ASP	7.4
23	W	103	VAL	7.4
9	I	121	LEU	7.4
34	i	1254	A	7.4
4	D	87	TYR	7.4
2	B	99	ASN	7.4
5	E	145	ARG	7.3
6	F	69	VAL	7.3
15	O	112	ALA	7.3
9	I	126	GLY	7.3
4	D	104	SER	7.3
24	X	117	GLY	7.3
5	E	238	LEU	7.3
5	E	43	PRO	7.3
16	P	113	GLY	7.3
4	D	180	GLY	7.3
6	F	117	ILE	7.3
9	I	103	LEU	7.2
5	E	90	ILE	7.2
6	F	176	GLU	7.2
24	X	130	LEU	7.2
4	D	137	VAL	7.2
4	D	38	GLU	7.2
19	S	117	ILE	7.2
4	D	24	PHE	7.2
6	F	46	ALA	7.2
7	G	50	VAL	7.2
34	i	1759	C	7.2
21	U	56	MET	7.1
16	P	10	ARG	7.1
34	i	1760	C	7.1
7	G	113	ILE	7.1
24	X	55	VAL	7.1
2	B	121	ILE	7.1
3	C	83	LEU	7.1
9	I	97	VAL	7.1
34	i	296	U	7.1
21	U	118	ASP	7.1
4	D	222	PRO	7.0
4	D	21	LEU	7.0
21	U	43	ALA	7.0
21	U	105	SER	7.0

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Mol	Chain	Res	Type	RSRZ
27	a	49	ALA	7.0
21	U	101	ILE	7.0
9	I	184	ARG	7.0
6	F	32	ASP	7.0
4	D	152	PHE	7.0
4	D	122	VAL	7.0
16	P	93	MET	7.0
24	X	10	ALA	7.0
2	B	156	ALA	6.9
4	D	135	GLU	6.9
4	D	37	VAL	6.9
6	F	123	GLU	6.9
9	I	64	ASN	6.9
29	c	65	ALA	6.9
34	i	248	C	6.9
10	J	74	GLY	6.9
21	U	115	THR	6.9
11	K	64	TRP	6.9
6	F	76	MET	6.8
3	C	119	ASN	6.8
24	X	84	PHE	6.8
34	i	1650	C	6.8
9	I	172	LEU	6.8
6	F	153	LEU	6.8
34	i	1493	G	6.8
7	G	37	ALA	6.8
11	K	67	PHE	6.8
16	P	27	ASP	6.8
15	O	21	VAL	6.8
3	C	168	LYS	6.7
5	E	64	ILE	6.7
29	c	64	GLU	6.7
34	i	3	C	6.7
7	G	96	SER	6.7
4	D	6	SER	6.7
34	i	1475	G	6.7
4	D	118	ALA	6.7
9	I	37	LYS	6.7
19	S	118	ARG	6.7
3	C	191	SER	6.7
33	g	32	LEU	6.7
17	Q	59	GLY	6.7

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Mol	Chain	Res	Type	RSRZ
24	X	94	ILE	6.6
12	L	103	GLU	6.6
3	C	115	ILE	6.6
6	F	72	LEU	6.6
3	C	167	CYS	6.6
24	X	116	PRO	6.6
29	c	46	VAL	6.6
16	P	9	LYS	6.6
6	F	74	ASN	6.6
1	A	19	LEU	6.6
4	D	58	VAL	6.6
4	D	69	LEU	6.6
4	D	25	LEU	6.5
5	E	101	LEU	6.5
16	P	114	HIS	6.5
3	C	207	CYS	6.5
34	i	1662	U	6.5
34	i	1582	G	6.5
6	F	104	THR	6.5
11	K	61	GLN	6.5
21	U	117	ALA	6.5
4	D	221	THR	6.4
11	K	66	HIS	6.4
10	J	72	PHE	6.4
6	F	194	ASP	6.4
4	D	189	MET	6.4
23	W	129	PHE	6.4
35	j	31	C	6.4
27	a	36	ILE	6.4
5	E	61	VAL	6.4
16	P	26	LEU	6.4
5	E	84	ALA	6.4
4	D	28	GLU	6.4
7	G	97	VAL	6.4
4	D	67	ARG	6.3
6	F	124	ASP	6.3
6	F	100	ILE	6.3
4	D	65	ARG	6.3
6	F	38	TYR	6.3
5	E	182	MET	6.3
6	F	49	LEU	6.3
2	B	80	ALA	6.3

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Mol	Chain	Res	Type	RSRZ
2	B	227	LYS	6.3
4	D	171	ALA	6.3
17	Q	51	LEU	6.3
34	i	1664	G	6.3
5	E	54	TYR	6.3
34	i	1761	C	6.3
6	F	174	ALA	6.3
2	B	43	ASN	6.3
21	U	102	THR	6.3
21	U	84	ILE	6.3
29	c	45	ASN	6.3
4	D	48	ILE	6.3
8	H	192	PHE	6.2
9	I	175	ILE	6.2
16	P	4	VAL	6.2
6	F	156	THR	6.2
17	Q	55	VAL	6.2
9	I	183	GLY	6.2
34	i	1579	G	6.2
5	E	236	ILE	6.2
16	P	53	GLN	6.2
3	C	204	ILE	6.2
9	I	99	ASN	6.2
7	G	35	GLU	6.2
5	E	92	ILE	6.2
6	F	185	SER	6.2
24	X	122	VAL	6.2
3	C	233	TYR	6.2
34	i	1661	C	6.2
34	i	1659	A	6.2
33	g	22	ALA	6.1
6	F	121	PRO	6.1
16	P	112	ILE	6.1
6	F	159	ARG	6.1
34	i	1252	G	6.1
17	Q	108	ILE	6.1
4	D	187	LYS	6.1
16	P	103	ASN	6.1
6	F	182	LYS	6.1
15	O	94	HIS	6.1
7	G	45	TRP	6.1
29	c	63	ARG	6.1

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Mol	Chain	Res	Type	RSRZ
10	J	94	LEU	6.1
16	P	24	GLN	6.1
16	P	104	GLN	6.1
34	i	250	G	6.1
5	E	124	CYS	6.1
34	i	1763	C	6.1
3	C	195	PRO	6.1
15	O	115	ALA	6.1
27	a	84	VAL	6.1
34	i	1649	G	6.0
21	U	90	ASP	6.0
4	D	220	THR	6.0
11	K	69	TRP	6.0
7	G	38	ALA	6.0
4	D	11	PHE	6.0
9	I	134	GLU	6.0
10	J	76	ALA	5.9
8	H	191	GLU	5.9
16	P	107	ILE	5.9
33	g	31	ILE	5.9
23	W	94	LEU	5.9
24	X	125	VAL	5.9
4	D	99	ILE	5.9
9	I	158	ILE	5.9
29	c	61	SER	5.9
5	E	141	THR	5.9
5	E	119	ALA	5.9
4	D	179	GLN	5.9
34	i	1057	U	5.9
7	G	17	GLU	5.9
4	D	12	VAL	5.9
9	I	86	SER	5.9
9	I	106	SER	5.8
18	R	111	PHE	5.8
24	X	100	VAL	5.8
36	k	18	G	5.8
16	P	111	MET	5.8
4	D	105	LEU	5.8
27	a	44	ILE	5.8
17	Q	111	ILE	5.8
2	B	46	LYS	5.8
4	D	16	ILE	5.8

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Mol	Chain	Res	Type	RSRZ
6	F	140	ASP	5.8
15	O	25	GLU	5.8
34	i	824	G	5.8
24	X	56	GLY	5.7
4	D	191	PRO	5.7
34	i	1693	C	5.7
5	E	123	LEU	5.7
7	G	44	GLU	5.7
34	i	251	C	5.7
4	D	7	LYS	5.7
6	F	173	LEU	5.7
15	O	119	LEU	5.7
12	L	142	VAL	5.7
24	X	114	ASP	5.7
7	G	153	VAL	5.7
11	K	19	GLY	5.7
14	N	147	SER	5.7
3	C	209	THR	5.7
17	Q	92	LEU	5.7
6	F	93	VAL	5.7
4	D	76	ARG	5.7
29	c	30	VAL	5.7
6	F	122	ARG	5.7
6	F	42	LYS	5.7
16	P	11	THR	5.7
27	a	46	GLU	5.7
5	E	97	GLU	5.7
9	I	90	LEU	5.7
12	L	143	LEU	5.7
23	W	72	CYS	5.7
34	i	1663	U	5.7
6	F	47	LYS	5.7
11	K	60	GLU	5.7
34	i	253	G	5.7
16	P	119	PHE	5.7
3	C	152	ARG	5.6
9	I	177	SER	5.6
21	U	88	LEU	5.6
16	P	92	SER	5.6
34	i	721	C	5.6
4	D	138	VAL	5.6
11	K	71	LEU	5.6

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Mol	Chain	Res	Type	RSRZ
3	C	199	LEU	5.6
10	J	95	ASP	5.6
5	E	110	ALA	5.6
3	C	190	ILE	5.6
4	D	26	THR	5.6
9	I	130	THR	5.6
14	N	143	SER	5.6
4	D	131	ALA	5.6
5	E	42	LEU	5.6
21	U	82	MET	5.6
24	X	68	LYS	5.5
4	D	185	LYS	5.5
24	X	54	LYS	5.5
3	C	222	ALA	5.5
12	L	124	ASP	5.5
4	D	23	GLU	5.5
24	X	9	THR	5.5
12	L	109	MET	5.5
30	d	51	GLY	5.5
23	W	95	PRO	5.5
16	P	96	VAL	5.5
29	c	62	GLU	5.5
23	W	100	GLY	5.4
16	P	25	LEU	5.4
16	P	56	LEU	5.4
24	X	86	PRO	5.4
1	A	61	ALA	5.4
15	O	62	VAL	5.4
34	i	133	C	5.4
2	B	217	MET	5.4
29	c	50	VAL	5.4
15	O	26	ASN	5.4
6	F	197	GLU	5.4
23	W	102	ILE	5.4
9	I	187	GLY	5.4
6	F	27	ASP	5.4
16	P	85	ILE	5.4
5	E	44	LEU	5.4
34	i	1253	G	5.4
5	E	164	LEU	5.4
5	E	45	ILE	5.4
30	d	50	ILE	5.4

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Mol	Chain	Res	Type	RSRZ
34	i	739	U	5.3
5	E	82	TYR	5.3
4	D	18	LYS	5.3
5	E	109	PHE	5.3
34	i	1654	U	5.3
2	B	69	VAL	5.3
12	L	120	VAL	5.3
5	E	99	PHE	5.3
30	d	47	ALA	5.3
9	I	79	ILE	5.3
34	i	4	C	5.3
7	G	16	ILE	5.3
12	L	128	VAL	5.3
33	g	30	MET	5.3
5	E	160	ILE	5.3
6	F	97	PHE	5.3
14	N	150	VAL	5.3
3	C	180	LEU	5.3
34	i	299	G	5.3
5	E	239	PRO	5.3
3	C	192	ALA	5.3
34	i	397	G	5.2
4	D	17	PHE	5.2
4	D	129	SER	5.2
5	E	139	LEU	5.2
8	H	161	ALA	5.2
9	I	127	ALA	5.2
10	J	78	LEU	5.2
4	D	14	ASP	5.2
4	D	55	THR	5.2
34	i	679	U	5.2
34	i	126	G	5.2
9	I	162	LEU	5.2
21	U	33	GLU	5.2
16	P	90	VAL	5.2
23	W	101	PHE	5.2
7	G	49	VAL	5.2
24	X	57	VAL	5.2
22	V	10	ASP	5.2
4	D	163	PRO	5.2
4	D	134	CYS	5.2
27	a	47	ALA	5.2

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Mol	Chain	Res	Type	RSRZ
4	D	10	LYS	5.1
3	C	219	GLY	5.1
16	P	108	LYS	5.1
34	i	1860	A	5.1
9	I	42	ARG	5.1
15	O	117	ARG	5.1
4	D	158	ILE	5.1
4	D	130	GLY	5.1
16	P	91	GLY	5.1
17	Q	85	ARG	5.1
4	D	13	ALA	5.1
3	C	223	LYS	5.1
7	G	83	CYS	5.1
18	R	110	ASP	5.1
34	i	1249	A	5.1
34	i	1474	U	5.1
11	K	65	ARG	5.1
27	a	37	LYS	5.1
21	U	113	GLU	5.1
15	O	96	LYS	5.1
7	G	19	ASP	5.1
7	G	191	ARG	5.1
5	E	35	PRO	5.1
2	B	101	HIS	5.1
2	B	226	GLY	5.0
9	I	120	PRO	5.0
9	I	139	LYS	5.0
34	i	823	A	5.0
24	X	81	ILE	5.0
12	L	145	VAL	5.0
24	X	111	ALA	5.0
34	i	1476	A	5.0
3	C	63	LEU	5.0
10	J	97	ILE	5.0
15	O	72	TYR	5.0
16	P	83	MET	5.0
34	i	298	G	5.0
4	D	9	ARG	5.0
6	F	25	THR	5.0
34	i	1581	U	5.0
3	C	178	VAL	5.0
15	O	128	ARG	5.0

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Mol	Chain	Res	Type	RSRZ
34	i	1092	G	5.0
23	W	127	GLY	5.0
24	X	90	CYS	5.0
12	L	80	MET	5.0
1	A	3	GLY	4.9
8	H	159	ASP	4.9
16	P	57	LEU	4.9
19	S	63	GLU	4.9
7	G	48	TYR	4.9
24	X	53	GLU	4.9
2	B	44	ILE	4.9
34	i	1655	C	4.9
5	E	129	ILE	4.9
6	F	20	PHE	4.9
17	Q	144	SER	4.9
34	i	1255	A	4.9
15	O	67	ASP	4.9
6	F	51	HIS	4.9
5	E	147	ILE	4.9
9	I	137	LEU	4.9
5	E	47	PHE	4.9
3	C	88	LYS	4.9
12	L	126	VAL	4.9
16	P	23	ASP	4.9
11	K	23	ALA	4.9
3	C	170	THR	4.8
6	F	169	ILE	4.8
34	i	130	G	4.8
6	F	17	ILE	4.8
19	S	64	VAL	4.8
12	L	9	ALA	4.8
27	a	79	ILE	4.8
9	I	44	HIS	4.8
7	G	121	ILE	4.8
6	F	148	ASN	4.8
14	N	148	ALA	4.8
34	i	9	U	4.8
11	K	15	LEU	4.8
4	D	90	LYS	4.8
2	B	45	GLY	4.8
4	D	63	GLY	4.8
6	F	139	VAL	4.8

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Mol	Chain	Res	Type	RSRZ
6	F	89	THR	4.8
4	D	182	LEU	4.8
5	E	95	THR	4.8
2	B	223	PHE	4.8
22	V	11	LEU	4.8
34	i	1736	U	4.8
4	D	181	VAL	4.8
30	d	9	SER	4.8
6	F	120	GLY	4.8
4	D	77	PHE	4.7
9	I	109	TYR	4.7
5	E	118	GLU	4.7
7	G	73	VAL	4.7
4	D	126	ILE	4.7
7	G	27	PHE	4.7
34	i	94	G	4.7
34	i	687	G	4.7
34	i	1530	U	4.7
1	A	65	ILE	4.7
24	X	126	ALA	4.7
16	P	84	ILE	4.7
6	F	204	ARG	4.7
7	G	84	TYR	4.7
33	g	33	SER	4.7
34	i	462	C	4.7
5	E	36	HIS	4.7
17	Q	117	ARG	4.7
34	i	441	G	4.7
5	E	55	ALA	4.7
4	D	173	ARG	4.7
17	Q	89	SER	4.7
34	i	1541	G	4.7
3	C	171	GLY	4.7
4	D	121	GLY	4.7
21	U	27	ARG	4.7
5	E	83	PRO	4.7
34	i	1251	G	4.6
9	I	94	LYS	4.6
9	I	124	LYS	4.6
34	i	736	C	4.6
6	F	191	LYS	4.6
7	G	120	ASP	4.6

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Mol	Chain	Res	Type	RSRZ
5	E	98	ASN	4.6
34	i	1665	C	4.6
3	C	113	VAL	4.6
15	O	31	CYS	4.6
21	U	116	ILE	4.6
18	R	89	SER	4.6
9	I	166	PHE	4.6
34	i	22	A	4.6
17	Q	6	PRO	4.6
21	U	50	VAL	4.6
33	g	58	ALA	4.6
16	P	28	MET	4.6
34	i	1544	U	4.6
34	i	1093	G	4.6
34	i	1390	G	4.6
34	i	295	C	4.6
5	E	157	ASN	4.6
9	I	62	VAL	4.6
5	E	121	TYR	4.6
36	k	20	U	4.6
5	E	77	ARG	4.6
7	G	114	VAL	4.6
37	n	92	ILE	4.6
16	P	110	GLU	4.6
12	L	7	GLU	4.6
34	i	2	A	4.6
4	D	167	TYR	4.6
7	G	42	GLY	4.5
14	N	144	SER	4.5
34	i	294	C	4.5
21	U	42	GLY	4.5
9	I	179	PRO	4.5
1	A	60	LEU	4.5
12	L	73	LEU	4.5
37	n	91	VAL	4.5
27	a	48	ALA	4.5
3	C	221	PHE	4.5
9	I	122	GLY	4.5
29	c	60	GLU	4.5
4	D	108	LYS	4.5
3	C	173	CYS	4.5
24	X	124	LYS	4.5

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Mol	Chain	Res	Type	RSRZ
34	i	23	G	4.5
12	L	8	ARG	4.5
23	W	9	ASP	4.5
1	A	63	ARG	4.5
34	i	434	G	4.4
5	E	48	LEU	4.4
16	P	78	THR	4.4
36	k	13	C	4.4
36	k	11	A	4.4
6	F	15	PRO	4.4
15	O	97	LEU	4.4
3	C	235	TYR	4.4
34	i	1250	C	4.4
5	E	226	PHE	4.4
34	i	659	A	4.4
9	I	82	VAL	4.4
35	j	73	C	4.4
26	Z	87	ALA	4.4
6	F	52	SER	4.4
20	T	35	ASP	4.4
6	F	90	VAL	4.4
34	i	375	G	4.4
21	U	38	ASP	4.4
23	W	61	ILE	4.4
34	i	1083	A	4.4
6	F	170	ALA	4.4
34	i	93	U	4.4
6	F	24	SER	4.4
34	i	1666	G	4.4
9	I	87	ASN	4.4
34	i	1485	A	4.4
16	P	109	PRO	4.4
34	i	1543	G	4.4
7	G	82	SER	4.4
15	O	22	ALA	4.4
34	i	302	C	4.4
17	Q	48	GLN	4.4
8	H	163	GLN	4.3
14	N	84	LEU	4.3
14	N	145	THR	4.3
16	P	116	LEU	4.3
14	N	141	TYR	4.3

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Mol	Chain	Res	Type	RSRZ
21	U	108	PRO	4.3
17	Q	52	LEU	4.3
27	a	78	ALA	4.3
34	i	1153	G	4.3
4	D	169	ASP	4.3
6	F	186	ASN	4.3
5	E	117	GLU	4.3
7	G	34	THR	4.3
10	J	73	GLU	4.3
34	i	303	G	4.3
34	i	1855	G	4.3
3	C	175	SER	4.3
12	L	110	SER	4.3
3	C	208	TYR	4.3
2	B	135	LEU	4.3
9	I	136	ILE	4.3
10	J	57	ALA	4.3
29	c	56	LEU	4.3
34	i	206	A	4.3
5	E	63	LYS	4.3
6	F	96	ALA	4.3
29	c	44	ARG	4.3
2	B	215	VAL	4.3
12	L	141	ASN	4.3
16	P	60	LEU	4.3
34	i	129	C	4.3
34	i	509	A	4.3
2	B	81	PHE	4.3
27	a	72	HIS	4.3
7	G	152	ASP	4.2
34	i	1548	C	4.2
4	D	64	ARG	4.2
34	i	293	A	4.2
10	J	75	ASN	4.2
34	i	37	C	4.2
34	i	1089	A	4.2
34	i	1496	G	4.2
6	F	92	ILE	4.2
19	S	71	MET	4.2
6	F	172	CYS	4.2
6	F	147	VAL	4.2
34	i	1746	C	4.2

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Mol	Chain	Res	Type	RSRZ
1	A	57	LYS	4.2
6	F	149	GLN	4.2
31	e	76	VAL	4.2
34	i	1757	G	4.2
23	W	112	ASP	4.2
3	C	156	GLY	4.2
34	i	177	G	4.2
34	i	733	G	4.2
21	U	53	PRO	4.2
6	F	179	ASN	4.2
31	e	87	ARG	4.2
34	i	132	U	4.2
37	n	94	LYS	4.2
34	i	1540	A	4.2
34	i	378	U	4.2
3	C	200	LEU	4.2
15	O	70	SER	4.2
4	D	8	LYS	4.2
4	D	107	TYR	4.2
9	I	34	ALA	4.2
7	G	3	LEU	4.2
34	i	618	A	4.2
2	B	230	GLU	4.2
34	i	1647	G	4.2
37	n	47	LEU	4.2
5	E	67	GLN	4.1
4	D	54	ARG	4.1
6	F	21	GLY	4.1
34	i	366	A	4.1
34	i	657	U	4.1
5	E	155	LYS	4.1
8	H	189	PHE	4.1
3	C	182	PRO	4.1
7	G	75	LEU	4.1
12	L	75	GLY	4.1
34	i	301	C	4.1
36	k	10	C	4.1
4	D	174	HIS	4.1
28	b	24	LEU	4.1
37	n	69	VAL	4.1
34	i	1573	U	4.1
5	E	140	VAL	4.1

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Mol	Chain	Res	Type	RSRZ
6	F	141	VAL	4.1
16	P	75	VAL	4.1
6	F	33	ILE	4.1
6	F	138	ALA	4.1
9	I	145	ILE	4.1
19	S	116	LYS	4.1
3	C	176	VAL	4.1
5	E	248	ILE	4.1
5	E	259	LYS	4.1
5	E	46	ILE	4.1
7	G	77	LEU	4.1
23	W	10	ALA	4.1
8	H	190	PRO	4.1
15	O	126	ILE	4.1
34	i	212	G	4.1
34	i	50	A	4.1
34	i	1486	G	4.1
6	F	14	THR	4.1
12	L	140	PHE	4.1
4	D	92	ALA	4.1
21	U	109	GLY	4.1
34	i	688	U	4.1
24	X	113	GLY	4.0
34	i	1088	G	4.1
7	G	180	VAL	4.0
4	D	84	VAL	4.0
2	B	151	ARG	4.0
12	L	101	ARG	4.0
5	E	144	ALA	4.0
9	I	165	GLN	4.0
19	S	48	ALA	4.0
6	F	37	ASP	4.0
34	i	440	C	4.0
5	E	249	ALA	4.0
4	D	177	LEU	4.0
6	F	23	TRP	4.0
21	U	37	ALA	4.0
5	E	252	ARG	4.0
5	E	162	ILE	4.0
22	V	82	ASN	4.0
23	W	128	PHE	4.0
34	i	367	G	4.0

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Mol	Chain	Res	Type	RSRZ
5	E	159	THR	4.0
24	X	71	ARG	4.0
24	X	66	ILE	4.0
1	A	62	ALA	4.0
34	i	405	A	4.0
24	X	58	GLU	4.0
6	F	61	PHE	4.0
36	k	19	U	4.0
34	i	609	A	4.0
4	D	168	VAL	4.0
23	W	37	PHE	4.0
34	i	810	U	4.0
6	F	161	ALA	4.0
17	Q	135	PRO	4.0
28	b	23	ARG	4.0
37	n	70	TRP	4.0
1	A	2	SER	4.0
6	F	171	GLU	4.0
5	E	169	ILE	3.9
34	i	1539	C	3.9
1	A	94	THR	3.9
9	I	93	THR	3.9
34	i	734	C	3.9
23	W	53	ILE	3.9
5	E	154	ILE	3.9
8	H	162	GLN	3.9
1	A	66	VAL	3.9
24	X	93	PHE	3.9
34	i	692	U	3.9
4	D	57	ASN	3.9
27	a	12	LYS	3.9
5	E	76	VAL	3.9
3	C	111	ALA	3.9
17	Q	88	ILE	3.9
37	n	93	LEU	3.9
18	R	87	GLU	3.9
34	i	365	U	3.9
30	d	23	VAL	3.9
15	O	28	PHE	3.9
17	Q	56	LEU	3.9
23	W	126	LEU	3.9
37	n	59	CYS	3.9

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Mol	Chain	Res	Type	RSRZ
12	L	111	VAL	3.9
34	i	1542	C	3.9
34	i	339	A	3.9
33	g	92	LEU	3.9
34	i	252	C	3.9
35	j	32	C	3.9
12	L	94	HIS	3.9
34	i	610	G	3.9
34	i	1400	U	3.9
8	H	142	LYS	3.8
34	i	438	A	3.8
17	Q	119	LEU	3.8
21	U	20	ILE	3.8
23	W	104	LEU	3.8
34	i	497	G	3.8
4	D	79	PHE	3.8
9	I	156	ALA	3.8
34	i	330	C	3.8
34	i	825	C	3.8
34	i	411	G	3.8
9	I	108	PRO	3.8
33	g	257	LYS	3.8
29	c	43	ILE	3.8
24	X	134	TYR	3.8
2	B	39	PHE	3.8
34	i	1648	U	3.8
3	C	112	PHE	3.8
4	D	151	LYS	3.8
6	F	152	TRP	3.8
15	O	27	VAL	3.8
28	b	25	VAL	3.8
12	L	108	ASN	3.8
6	F	35	LEU	3.8
16	P	7	LYS	3.8
4	D	139	SER	3.8
15	O	114	SER	3.8
5	E	52	LEU	3.8
2	B	102	GLY	3.8
35	j	75	A	3.8
8	H	137	SER	3.8
16	P	45	LEU	3.8
4	D	4	GLN	3.8

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Mol	Chain	Res	Type	RSRZ
2	B	84	PHE	3.8
9	I	163	GLU	3.7
9	I	159	SER	3.7
12	L	74	SER	3.7
16	P	71	GLU	3.7
34	i	439	A	3.7
12	L	129	GLY	3.7
37	n	65	LEU	3.7
3	C	79	ILE	3.7
7	G	52	ILE	3.7
12	L	21	LYS	3.7
34	i	404	A	3.7
34	i	729	C	3.7
12	L	86	ILE	3.7
16	P	21	ASP	3.7
34	i	1538	U	3.7
34	i	1861	U	3.7
16	P	77	LYS	3.7
34	i	1082	G	3.7
3	C	73	ILE	3.7
19	S	50	ILE	3.7
37	n	72	ASN	3.7
34	i	1859	C	3.7
29	c	58	LEU	3.7
2	B	32	ASP	3.7
5	E	112	HIS	3.7
34	i	338	A	3.7
6	F	56	TYR	3.7
6	F	78	MET	3.7
34	i	403	G	3.7
5	E	18	TRP	3.7
9	I	188	TYR	3.7
22	V	27	LYS	3.7
34	i	1583	A	3.7
5	E	251	GLU	3.7
7	G	192	ILE	3.7
29	c	42	ILE	3.7
34	i	987	G	3.7
33	g	55	PRO	3.7
9	I	35	ASN	3.7
17	Q	134	GLY	3.7
4	D	31	GLU	3.7

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Mol	Chain	Res	Type	RSRZ
21	U	91	LEU	3.7
7	G	74	ARG	3.7
21	U	70	CYS	3.7
12	L	105	ARG	3.7
9	I	67	TRP	3.7
34	i	329	A	3.7
34	i	1482	A	3.7
34	i	1818	A	3.7
34	i	1523	G	3.7
12	L	68	ILE	3.7
7	G	179	LEU	3.6
34	i	660	A	3.6
14	N	82	PRO	3.6
29	c	57	THR	3.6
17	Q	93	VAL	3.6
23	W	124	LYS	3.6
16	P	41	GLN	3.6
4	D	157	MET	3.6
30	d	38	MET	3.6
21	U	107	GLU	3.6
7	G	5	ILE	3.6
34	i	243	C	3.6
1	A	59	LEU	3.6
34	i	1355	U	3.6
1	A	67	ALA	3.6
7	G	1	MET	3.6
34	i	1491	G	3.6
7	G	51	ARG	3.6
2	B	153	THR	3.6
5	E	120	LYS	3.6
28	b	16	LYS	3.6
10	J	61	LEU	3.6
9	I	138	ASN	3.6
1	A	15	VAL	3.6
6	F	192	LYS	3.6
17	Q	46	THR	3.6
34	i	1578	C	3.6
9	I	148	LYS	3.6
33	g	21	ILE	3.6
4	D	208	VAL	3.6
30	d	37	ASN	3.6
34	i	1090	C	3.6

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Mol	Chain	Res	Type	RSRZ
5	E	146	THR	3.6
34	i	813	G	3.6
34	i	1389	G	3.6
34	i	1586	C	3.6
2	B	86	LEU	3.6
2	B	141	GLY	3.6
34	i	658	A	3.5
16	P	20	VAL	3.5
24	X	87	ASN	3.5
9	I	132	GLU	3.5
33	g	42	MET	3.5
34	i	814	A	3.5
23	W	60	LYS	3.5
34	i	1487	G	3.5
4	D	223	ILE	3.5
8	H	160	LYS	3.5
23	W	13	SER	3.5
4	D	46	THR	3.5
34	i	176	U	3.5
9	I	75	LYS	3.5
24	X	6	GLY	3.5
34	i	1205	A	3.5
34	i	268	G	3.5
23	W	27	ILE	3.5
12	L	119	ASP	3.5
12	L	88	ILE	3.5
34	i	682	G	3.5
34	i	1138	G	3.5
34	i	207	U	3.5
30	d	52	PHE	3.5
1	A	58	LEU	3.5
2	B	133	TYR	3.5
34	i	208	G	3.5
36	k	12	A	3.5
2	B	140	VAL	3.5
5	E	81	THR	3.5
15	O	19	PRO	3.5
34	i	1549	C	3.5
35	j	70	C	3.5
29	c	8	PRO	3.5
9	I	155	ASN	3.5
30	d	22	ARG	3.5

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Mol	Chain	Res	Type	RSRZ
34	i	1445	G	3.5
3	C	189	ILE	3.5
19	S	68	ILE	3.5
29	c	47	LYS	3.5
4	D	39	VAL	3.5
23	W	125	ILE	3.5
15	O	73	ALA	3.5
21	U	97	ILE	3.5
34	i	258	G	3.5
3	C	179	ARG	3.4
9	I	91	VAL	3.5
5	E	225	ILE	3.4
21	U	31	SER	3.4
27	a	16	GLY	3.4
23	W	40	VAL	3.4
15	O	93	LEU	3.4
10	J	66	LYS	3.4
31	e	88	GLY	3.4
33	g	231	ASP	3.4
34	i	254	G	3.4
34	i	364	G	3.4
34	i	1352	G	3.4
34	i	1134	C	3.4
2	B	224	GLU	3.4
37	n	90	ASP	3.4
4	D	125	PHE	3.4
23	W	130	PHE	3.4
9	I	140	LYS	3.4
34	i	735	C	3.4
5	E	161	GLN	3.4
14	N	142	GLU	3.4
13	M	95	ASP	3.4
33	g	23	THR	3.4
37	n	40	LYS	3.4
2	B	92	GLN	3.4
34	i	1658	A	3.4
3	C	174	GLY	3.4
10	J	87	LEU	3.4
10	J	93	LYS	3.4
34	i	21	U	3.4
34	i	1745	C	3.4
24	X	91	LEU	3.4

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Mol	Chain	Res	Type	RSRZ
24	X	133	LEU	3.4
34	i	644	A	3.4
16	P	70	MET	3.4
30	d	46	TYR	3.4
2	B	73	ASP	3.4
6	F	44	LYS	3.4
9	I	40	PRO	3.4
34	i	549	G	3.4
34	i	209	C	3.4
34	i	1081	C	3.4
1	A	18	PHE	3.4
8	H	165	ASN	3.3
34	i	1418	G	3.3
4	D	141	LYS	3.3
6	F	175	ASP	3.3
34	i	13	C	3.3
34	i	435	A	3.3
5	E	142	HIS	3.3
6	F	95	HIS	3.3
29	c	14	VAL	3.3
34	i	244	C	3.3
17	Q	114	GLN	3.3
4	D	40	ARG	3.3
15	O	120	ALA	3.3
10	J	16	PRO	3.3
37	n	111	GLU	3.3
23	W	76	SER	3.3
34	i	328	G	3.3
34	i	1392	A	3.3
2	B	78	GLU	3.3
5	E	228	ILE	3.3
2	B	181	LEU	3.3
29	c	31	ARG	3.3
34	i	997	A	3.3
16	P	33	LEU	3.3
1	A	4	ALA	3.3
33	g	41	ILE	3.3
3	C	217	THR	3.3
9	I	169	GLY	3.3
34	i	730	C	3.3
36	k	22	C	3.3
2	B	207	LEU	3.3

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Mol	Chain	Res	Type	RSRZ
15	O	40	THR	3.3
7	G	112	VAL	3.3
34	i	724	C	3.3
34	i	1058	A	3.3
2	B	225	LEU	3.3
2	B	212	VAL	3.3
12	L	134	LEU	3.3
34	i	297	C	3.3
20	T	36	THR	3.3
4	D	81	GLU	3.3
6	F	45	TYR	3.3
34	i	385	G	3.3
34	i	436	G	3.3
31	e	124	GLY	3.3
34	i	14	C	3.3
34	i	1735	C	3.3
29	c	41	SER	3.3
34	i	1852	G	3.3
34	i	996	C	3.3
34	i	53	C	3.3
24	X	112	VAL	3.2
34	i	175	A	3.2
34	i	1817	A	3.2
8	H	143	ARG	3.2
9	I	170	LYS	3.2
29	c	59	LEU	3.2
10	J	96	TYR	3.2
16	P	69	PRO	3.2
34	i	1094	C	3.2
6	F	43	GLU	3.2
1	A	178	LEU	3.2
2	B	209	ASP	3.2
33	g	272	GLN	3.2
34	i	636	G	3.2
24	X	102	VAL	3.2
34	i	1228	U	3.2
18	R	91	LEU	3.2
33	g	56	GLN	3.2
24	X	129	SER	3.2
29	c	66	ARG	3.2
3	C	124	LEU	3.2
7	G	76	LEU	3.2

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Mol	Chain	Res	Type	RSRZ
6	F	130	ARG	3.2
24	X	141	PRO	3.2
34	i	309	A	3.2
2	B	211	PHE	3.2
5	E	41	CYS	3.2
34	i	1484	C	3.2
37	n	77	ILE	3.2
1	A	161	ILE	3.2
34	i	1191	A	3.2
34	i	1483	A	3.2
29	c	7	GLN	3.2
3	C	181	ILE	3.2
17	Q	49	TYR	3.2
34	i	467	G	3.2
17	Q	102	GLU	3.2
31	e	123	PHE	3.2
1	A	51	LEU	3.2
4	D	123	LEU	3.2
12	L	87	VAL	3.2
18	R	90	ALA	3.2
12	L	106	HIS	3.2
19	S	123	LEU	3.2
29	c	54	ASP	3.2
1	A	186	ARG	3.2
2	B	82	ARG	3.2
5	E	258	ALA	3.2
34	i	1853	A	3.2
34	i	468	G	3.2
21	U	57	PRO	3.2
23	W	34	ILE	3.2
17	Q	110	ASP	3.2
2	B	70	SER	3.2
2	B	154	SER	3.2
3	C	165	VAL	3.2
34	i	396	U	3.2
34	i	1151	U	3.2
34	i	822	A	3.2
34	i	1190	A	3.2
6	F	103	LEU	3.2
5	E	257	ALA	3.2
18	R	112	GLY	3.2
21	U	106	ILE	3.2

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Mol	Chain	Res	Type	RSRZ
9	I	198	TYR	3.1
3	C	126	MET	3.1
10	J	98	LEU	3.1
5	E	165	GLU	3.1
5	E	21	ASP	3.1
8	H	187	PHE	3.1
34	i	49	C	3.1
10	J	92	MET	3.1
33	g	57	ARG	3.1
7	G	109	LEU	3.1
34	i	307	G	3.1
3	C	197	LYS	3.1
24	X	119	ARG	3.1
31	e	122	THR	3.1
34	i	637	U	3.1
34	i	32	U	3.1
34	i	1495	U	3.1
23	W	110	ILE	3.1
34	i	876	G	3.1
27	a	62	TYR	3.1
34	i	662	A	3.1
12	L	112	HIS	3.1
7	G	115	LYS	3.1
7	G	116	LYS	3.1
34	i	202	U	3.1
34	i	1858	U	3.1
31	e	90	THR	3.1
33	g	250	ALA	3.1
7	G	93	LYS	3.1
9	I	56	ARG	3.1
15	O	23	GLU	3.1
34	i	1470	A	3.1
1	A	145	ILE	3.1
15	O	58	GLY	3.1
4	D	106	ARG	3.1
34	i	247	C	3.1
34	i	10	G	3.1
9	I	135	GLU	3.1
24	X	123	VAL	3.1
27	a	20	PRO	3.1
34	i	1327	C	3.1
34	i	1737	C	3.1

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Mol	Chain	Res	Type	RSRZ
5	E	253	ASP	3.1
34	i	1584	A	3.1
35	j	72	A	3.1
4	D	27	ARG	3.1
9	I	110	ARG	3.1
12	L	59	LYS	3.1
2	B	122	GLU	3.1
10	J	71	LEU	3.1
35	j	37	A	3.1
33	g	249	CYS	3.1
27	a	65	PRO	3.0
34	i	811	U	3.0
34	i	1139	A	3.0
1	A	64	ALA	3.0
3	C	227	ASP	3.0
6	F	26	ASP	3.0
8	H	158	LEU	3.0
3	C	91	VAL	3.0
31	e	75	LYS	3.0
14	N	20	ARG	3.0
34	i	1350	G	3.0
7	G	24	LEU	3.0
9	I	114	GLU	3.0
10	J	91	LYS	3.0
11	K	25	LYS	3.0
12	L	77	VAL	3.0
6	F	36	GLN	3.0
2	B	143	THR	3.0
9	I	182	CYS	3.0
19	S	6	PRO	3.0
24	X	11	ARG	3.0
27	a	86	ASN	3.0
30	d	6	LEU	3.0
30	d	36	LEU	3.0
3	C	164	THR	3.0
5	E	138	HIS	3.0
34	i	1324	G	3.0
34	i	1497	C	3.0
6	F	188	TYR	3.0
23	W	38	LEU	3.0
26	Z	108	ILE	3.0
34	i	1642	A	3.0

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Mol	Chain	Res	Type	RSRZ
34	i	331	C	3.0
34	i	1524	C	3.0
12	L	79	LYS	3.0
30	d	49	ASP	3.0
37	n	60	HIS	3.0
5	E	175	PHE	3.0
34	i	1494	A	3.0
7	G	117	GLY	3.0
12	L	130	GLU	3.0
34	i	1150	U	3.0
5	E	126	VAL	3.0
17	Q	63	PHE	3.0
24	X	127	ASN	3.0
34	i	548	G	3.0
2	B	229	MET	3.0
34	i	379	A	3.0
10	J	90	GLY	3.0
1	A	24	HIS	3.0
6	F	146	ARG	3.0
34	i	1764	G	3.0
34	i	1843	G	3.0
25	Y	50	THR	3.0
34	i	1587	C	3.0
3	C	205	ASP	3.0
34	i	1477	G	3.0
34	i	1585	C	3.0
2	B	36	PRO	3.0
3	C	125	GLY	3.0
26	Z	50	PHE	3.0
29	c	32	VAL	3.0
37	n	67	LYS	3.0
14	N	81	ALA	3.0
15	O	111	GLY	3.0
20	T	118	ASP	3.0
25	Y	18	LEU	3.0
33	g	78	ALA	3.0
9	I	41	ARG	3.0
36	k	17	U	3.0
34	i	1353	A	2.9
35	j	71	U	2.9
6	F	57	ALA	2.9
34	i	944	C	2.9

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Mol	Chain	Res	Type	RSRZ
34	i	995	G	2.9
34	i	1575	A	2.9
34	i	1660	G	2.9
12	L	113	LEU	2.9
34	i	656	U	2.9
34	i	1657	U	2.9
6	F	201	LYS	2.9
4	D	5	ILE	2.9
34	i	410	G	2.9
34	i	645	A	2.9
5	E	227	VAL	2.9
10	J	70	ARG	2.9
11	K	42	ASN	2.9
5	E	103	TYR	2.9
27	a	19	GLN	2.9
34	i	5	U	2.9
34	i	128	U	2.9
17	Q	39	LEU	2.9
19	S	49	ASP	2.9
37	n	78	LEU	2.9
34	i	1133	U	2.9
34	i	459	A	2.9
5	E	75	LYS	2.9
34	i	1447	G	2.9
34	i	1354	U	2.9
23	W	96	SER	2.9
34	i	1212	C	2.9
2	B	221	PRO	2.9
12	L	22	ARG	2.9
17	Q	47	LEU	2.9
23	W	6	VAL	2.9
1	A	159	ILE	2.9
24	X	120	PHE	2.9
4	D	61	GLU	2.9
34	i	643	A	2.9
27	a	95	ARG	2.9
31	e	79	SER	2.9
11	K	59	LYS	2.9
15	O	61	LYS	2.9
17	Q	103	ALA	2.9
34	i	43	U	2.9
34	i	833	A	2.9

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Mol	Chain	Res	Type	RSRZ
23	W	77	PRO	2.9
21	U	51	LYS	2.9
26	Z	69	THR	2.9
33	g	43	TRP	2.9
9	I	77	ARG	2.8
17	Q	104	SER	2.8
21	U	29	VAL	2.8
19	S	42	HIS	2.8
19	S	127	TRP	2.8
16	P	17	TYR	2.8
15	O	132	VAL	2.8
21	U	54	VAL	2.8
34	i	1547	G	2.8
3	C	196	LYS	2.8
4	D	59	LEU	2.8
4	D	62	LYS	2.8
37	n	79	VAL	2.8
3	C	80	ASP	2.8
34	i	100	U	2.8
34	i	982	G	2.8
27	a	53	ILE	2.8
4	D	109	LEU	2.8
4	D	164	VAL	2.8
33	g	290	ALA	2.8
21	U	100	GLN	2.8
24	X	41	PHE	2.8
14	N	83	ASP	2.8
37	n	80	GLY	2.8
6	F	99	ILE	2.8
23	W	111	MET	2.8
24	X	128	VAL	2.8
37	n	48	GLU	2.8
10	J	19	PRO	2.8
14	N	139	TRP	2.8
34	i	300	G	2.8
34	i	506	A	2.8
34	i	832	G	2.8
34	i	1856	G	2.8
1	A	56	GLU	2.8
5	E	66	MET	2.8
24	X	99	GLU	2.8
26	Z	101	SER	2.8

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Mol	Chain	Res	Type	RSRZ
35	j	55	C	2.8
6	F	34	SER	2.8
29	c	52	GLU	2.8
10	J	77	LEU	2.8
23	W	11	LEU	2.8
4	D	85	GLU	2.8
12	L	127	THR	2.8
36	k	16	A	2.8
7	G	150	GLU	2.8
37	n	73	THR	2.8
3	C	160	GLY	2.8
34	i	1422	U	2.8
15	O	71	PRO	2.8
11	K	37	ASP	2.8
20	T	90	SER	2.8
9	I	66	SER	2.8
17	Q	130	LYS	2.8
1	A	16	LEU	2.8
5	E	80	ILE	2.8
34	i	203	G	2.8
34	i	415	G	2.8
2	B	228	LEU	2.8
4	D	170	THR	2.8
21	U	44	LYS	2.8
34	i	424	G	2.8
34	i	877	G	2.8
34	i	1446	G	2.8
15	O	24	GLY	2.8
7	G	78	SER	2.8
2	B	95	ASN	2.7
5	E	167	GLY	2.7
5	E	158	ASP	2.7
12	L	117	PHE	2.7
34	i	24	C	2.7
34	i	1135	C	2.7
34	i	1161	G	2.7
29	c	15	THR	2.7
34	i	389	C	2.7
9	I	23	LYS	2.7
22	V	80	SER	2.7
33	g	93	THR	2.7
4	D	132	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
26	Z	43	LYS	2.7
23	W	73	GLY	2.7
34	i	36	U	2.7
3	C	194	VAL	2.7
12	L	147	LYS	2.7
19	S	119	ALA	2.7
36	k	14	A	2.7
34	i	269	C	2.7
34	i	578	G	2.7
34	i	699	C	2.7
34	i	855	G	2.7
4	D	153	VAL	2.7
29	c	16	LYS	2.7
24	X	139	GLU	2.7
9	I	176	ALA	2.7
20	T	37	VAL	2.7
34	i	306	C	2.7
34	i	340	C	2.7
34	i	1522	C	2.7
34	i	62	G	2.7
34	i	204	G	2.7
7	G	43	GLU	2.7
7	G	125	THR	2.7
7	G	188	LYS	2.7
34	i	117	C	2.7
5	E	255	ARG	2.7
24	X	142	ARG	2.7
34	i	613	G	2.7
34	i	808	A	2.7
34	i	1154	G	2.7
34	i	1744	G	2.7
23	W	14	ILE	2.7
35	j	34	A	2.7
4	D	219	PRO	2.7
4	D	117	ARG	2.7
10	J	157	ILE	2.7
34	i	1698	C	2.7
3	C	183	ALA	2.7
31	e	77	HIS	2.7
27	a	64	LEU	2.7
1	A	55	TRP	2.7
34	i	118	C	2.7

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Mol	Chain	Res	Type	RSRZ
21	U	83	ARG	2.7
22	V	81	GLN	2.7
18	R	88	VAL	2.7
7	G	195	LYS	2.6
34	i	11	A	2.6
33	g	255	SER	2.6
34	i	1344	G	2.6
5	E	262	SER	2.6
2	B	103	MET	2.6
7	G	176	ILE	2.6
21	U	61	LEU	2.6
33	g	71	ILE	2.6
17	Q	136	GLY	2.6
5	E	183	VAL	2.6
6	F	86	LYS	2.6
6	F	142	SER	2.6
15	O	33	ILE	2.6
34	i	505	G	2.6
12	L	146	THR	2.6
5	E	125	LYS	2.6
16	P	125	PRO	2.6
19	S	78	LYS	2.6
35	j	38	C	2.6
4	D	128	GLU	2.6
34	i	1229	G	2.6
34	i	1443	G	2.6
2	B	74	LEU	2.6
30	d	34	TYR	2.6
34	i	292	A	2.6
34	i	1091	U	2.6
34	i	1198	U	2.6
34	i	1537	C	2.6
13	M	129	LYS	2.6
14	N	151	ALA	2.6
24	X	98	ASP	2.6
14	N	88	LEU	2.6
33	g	13	GLY	2.6
4	D	120	TYR	2.6
27	a	71	LEU	2.6
34	i	377	C	2.6
5	E	57	THR	2.6
30	d	11	PRO	2.6

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Mol	Chain	Res	Type	RSRZ
34	i	257	G	2.6
14	N	92	ILE	2.6
6	F	94	LYS	2.6
2	B	79	VAL	2.6
2	B	119	THR	2.6
34	i	1554	C	2.6
34	i	1708	C	2.6
6	F	19	LEU	2.6
34	i	77	A	2.6
12	L	11	GLN	2.6
3	C	215	THR	2.6
5	E	163	ASP	2.6
16	P	30	TYR	2.6
7	G	154	ARG	2.6
26	Z	49	LEU	2.6
35	j	15	G	2.6
2	B	98	THR	2.6
12	L	85	THR	2.6
25	Y	44	LEU	2.6
34	i	92	A	2.5
34	i	260	G	2.5
34	i	903	G	2.5
34	i	1454	G	2.5
12	L	4	ILE	2.5
3	C	82	PHE	2.5
25	Y	52	PRO	2.5
34	i	725	C	2.5
2	B	47	THR	2.5
16	P	80	LEU	2.5
25	Y	47	MET	2.5
34	i	1351	C	2.5
19	S	44	VAL	2.5
22	V	79	VAL	2.5
34	i	1854	A	2.5
7	G	122	PRO	2.5
1	A	52	LYS	2.5
3	C	188	GLY	2.5
12	L	78	THR	2.5
6	F	143	PRO	2.5
34	i	1160	G	2.5
7	G	39	ASP	2.5
7	G	187	HIS	2.5

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Mol	Chain	Res	Type	RSRZ
34	i	1679	C	2.5
34	i	510	A	2.5
5	E	261	SER	2.5
34	i	945	G	2.5
15	O	121	ARG	2.5
25	Y	51	THR	2.5
8	H	139	ILE	2.5
33	g	232	GLY	2.5
7	G	138	ALA	2.5
7	G	151	ASP	2.5
34	i	131	C	2.5
34	i	608	C	2.5
34	i	1060	C	2.5
34	i	1846	C	2.5
8	H	156	VAL	2.5
2	B	139	CYS	2.5
10	J	137	VAL	2.5
34	i	220	C	2.5
3	C	72	PRO	2.5
1	A	53	ARG	2.5
6	F	135	ARG	2.5
29	c	29	GLN	2.5
3	C	166	ARG	2.5
14	N	41	ALA	2.5
34	i	221	A	2.5
34	i	580	A	2.5
5	E	24	THR	2.5
34	i	425	A	2.5
34	i	310	G	2.5
34	i	341	G	2.5
3	C	210	SER	2.5
4	D	114	ALA	2.5
16	P	44	ARG	2.5
13	M	9	GLY	2.5
23	W	123	GLY	2.5
26	Z	67	LEU	2.5
37	n	74	SER	2.5
34	i	494	G	2.5
34	i	929	G	2.5
35	j	30	G	2.5
17	Q	91	ALA	2.5
34	i	1056	A	2.5

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Mol	Chain	Res	Type	RSRZ
2	B	231	LEU	2.5
16	P	118	GLU	2.4
18	R	86	PRO	2.4
37	n	89	ALA	2.4
5	E	150	PRO	2.4
7	G	102	VAL	2.4
12	L	144	LYS	2.4
19	S	115	LYS	2.4
26	Z	100	VAL	2.4
29	c	17	VAL	2.4
18	R	92	ASP	2.4
17	Q	107	GLU	2.4
23	W	29	PRO	2.4
30	d	35	GLY	2.4
34	i	54	A	2.4
3	C	118	TYR	2.4
34	i	174	C	2.4
34	i	376	C	2.4
35	j	16	C	2.4
34	i	33	G	2.4
34	i	428	G	2.4
34	i	1039	G	2.4
10	J	79	ARG	2.4
1	A	174	MET	2.4
3	C	62	SER	2.4
2	B	19	LYS	2.4
27	a	35	ALA	2.4
34	i	508	G	2.4
3	C	144	LYS	2.4
6	F	203	ASN	2.4
34	i	487	C	2.4
6	F	134	VAL	2.4
33	g	256	ILE	2.4
5	E	111	VAL	2.4
22	V	70	LEU	2.4
34	i	95	G	2.4
34	i	1105	C	2.4
34	i	1468	C	2.4
34	i	1577	C	2.4
2	B	105	LEU	2.4
4	D	200	PRO	2.4
7	G	111	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
34	i	1667	U	2.4
5	E	192	ILE	2.4
17	Q	96	TYR	2.4
17	Q	131	LYS	2.4
22	V	12	TYR	2.4
34	i	395	G	2.4
11	K	49	MET	2.4
23	W	113	HIS	2.4
34	i	1336	U	2.4
12	L	96	ILE	2.4
27	a	75	VAL	2.4
9	I	180	GLY	2.4
25	Y	53	ASP	2.4
34	i	305	U	2.4
37	n	95	TYR	2.4
21	U	58	THR	2.4
18	R	93	GLN	2.4
34	i	99	A	2.4
34	i	194	C	2.4
34	i	612	C	2.4
34	i	1646	A	2.4
5	E	115	THR	2.4
16	P	36	LEU	2.4
31	e	81	ALA	2.4
24	X	51	VAL	2.4
34	i	363	G	2.4
34	i	917	G	2.4
4	D	116	ARG	2.4
4	D	47	GLU	2.4
2	B	77	ASP	2.4
33	g	299	PHE	2.4
34	i	1747	C	2.4
33	g	271	LYS	2.4
36	k	21	U	2.4
37	n	61	ILE	2.4
12	L	137	THR	2.4
5	E	34	GLY	2.4
17	Q	105	LYS	2.3
34	i	674	G	2.4
34	i	1330	G	2.4
34	i	1743	G	2.4
27	a	11	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
34	i	107	A	2.3
34	i	1391	C	2.3
37	n	66	ARG	2.3
2	B	93	GLY	2.3
6	F	196	LEU	2.3
21	U	59	LYS	2.3
13	M	130	CYS	2.3
17	Q	116	ASP	2.3
19	S	65	GLU	2.3
34	i	834	G	2.3
34	i	863	G	2.3
5	E	31	PRO	2.3
6	F	101	HIS	2.3
37	n	62	ARG	2.3
8	H	112	ASN	2.3
5	E	78	ALA	2.3
3	C	214	CYS	2.3
33	g	40	ILE	2.3
34	i	943	G	2.3
34	i	1325	U	2.3
34	i	1243	C	2.3
34	i	1643	G	2.3
1	A	175	TRP	2.3
17	Q	81	ILE	2.3
29	c	28	THR	2.3
34	i	719	C	2.3
34	i	1395	C	2.3
34	i	1536	G	2.3
35	j	12	G	2.3
3	C	211	ALA	2.3
7	G	62	PRO	2.3
7	G	40	ALA	2.3
34	i	486	C	2.3
12	L	5	GLN	2.3
4	D	2	ALA	2.3
34	i	458	A	2.3
34	i	826	A	2.3
34	i	386	U	2.3
34	i	879	U	2.3
30	d	43	PHE	2.3
21	U	96	GLU	2.3
34	i	90	G	2.3

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Mol	Chain	Res	Type	RSRZ
34	i	545	A	2.3
34	i	1167	G	2.3
6	F	133	THR	2.3
34	i	1084	U	2.3
11	K	72	THR	2.3
5	E	93	ASP	2.3
21	U	103	SER	2.3
34	i	8	U	2.3
34	i	812	A	2.3
34	i	1079	A	2.3
34	i	1469	G	2.3
11	K	11	ILE	2.3
18	R	41	ILE	2.3
3	C	92	LEU	2.3
16	P	22	LEU	2.3
22	V	37	ALA	2.3
31	e	82	ARG	2.3
34	i	1707	A	2.3
34	i	1722	G	2.3
6	F	54	GLY	2.3
3	C	90	LYS	2.3
3	C	193	PRO	2.3
33	g	289	LEU	2.3
5	E	184	THR	2.3
10	J	141	VAL	2.3
15	O	148	GLY	2.3
34	i	809	A	2.3
15	O	35	ALA	2.3
30	d	33	LYS	2.3
34	i	579	G	2.3
34	i	587	G	2.3
37	n	56	LYS	2.3
23	W	105	THR	2.3
16	P	59	ARG	2.3
24	X	59	ALA	2.3
34	i	1481	U	2.3
3	C	130	LYS	2.3
7	G	23	LYS	2.3
16	P	115	TYR	2.3
24	X	101	LEU	2.3
34	i	861	A	2.3
4	D	124	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
34	i	360	G	2.3
34	i	1337	C	2.3
34	i	1836	C	2.3
35	j	13	C	2.3
8	H	141	GLY	2.3
15	O	92	ALA	2.3
2	B	210	VAL	2.3
4	D	41	VAL	2.3
30	d	31	ILE	2.2
1	A	93	ALA	2.2
20	T	32	GLU	2.2
23	W	41	MET	2.2
24	X	140	ARG	2.2
34	i	891	G	2.2
34	i	991	G	2.2
34	i	1137	G	2.2
34	i	1842	U	2.2
27	a	67	LEU	2.2
7	G	85	ARG	2.2
10	J	153	SER	2.2
1	A	5	LEU	2.2
34	i	966	G	2.2
4	D	60	GLY	2.2
15	O	29	GLY	2.2
29	c	55	VAL	2.2
18	R	109	LEU	2.2
12	L	83	GLN	2.2
33	g	254	PRO	2.2
10	J	60	LEU	2.2
34	i	492	C	2.2
34	i	1142	C	2.2
15	O	89	GLY	2.2
5	E	29	PRO	2.2
6	F	137	GLN	2.2
34	i	406	U	2.2
9	I	88	ASN	2.2
34	i	1140	A	2.2
5	E	168	LYS	2.2
6	F	65	GLN	2.2
14	N	103	GLU	2.2
15	O	91	THR	2.2
4	D	172	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
15	O	108	PRO	2.2
16	P	8	LYS	2.2
34	i	1678	C	2.2
34	i	124	U	2.2
10	J	86	VAL	2.2
14	N	19	ARG	2.2
34	i	817	G	2.2
34	i	1162	G	2.2
35	j	33	C	2.2
34	i	1507	U	2.2
21	U	99	LYS	2.2
34	i	1040	G	2.2
9	I	146	GLN	2.2
12	L	26	GLY	2.2
34	i	38	A	2.2
3	C	231	LYS	2.2
34	i	383	U	2.2
4	D	133	GLY	2.2
9	I	107	THR	2.2
26	Z	88	LEU	2.2
24	X	65	ALA	2.2
29	c	51	ARG	2.2
34	i	267	G	2.2
4	D	176	LEU	2.2
34	i	1826	A	2.2
23	W	75	ILE	2.2
34	i	12	U	2.2
34	i	859	U	2.2
9	I	141	ARG	2.2
5	E	50	ASN	2.2
33	g	69	VAL	2.2
4	D	218	LEU	2.2
5	E	49	ARG	2.2
6	F	144	LEU	2.2
26	Z	58	LEU	2.2
34	i	282	G	2.2
34	i	946	C	2.2
26	Z	70	PRO	2.2
2	B	113	MET	2.2
15	O	145	GLY	2.2
30	d	45	GLN	2.2
34	i	314	U	2.2

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Mol	Chain	Res	Type	RSRZ
34	i	607	G	2.2
34	i	1455	G	2.2
34	i	1478	C	2.2
34	i	1492	U	2.2
8	H	188	GLU	2.2
9	I	74	ARG	2.2
22	V	78	ILE	2.2
5	E	156	MET	2.2
14	N	36	GLN	2.2
16	P	120	SER	2.2
5	E	68	ARG	2.2
19	S	21	ASP	2.2
34	i	1835	C	2.2
5	E	250	GLU	2.1
12	L	61	PRO	2.1
3	C	107	THR	2.1
23	W	54	ASP	2.1
7	G	190	ARG	2.1
12	L	138	VAL	2.1
13	M	100	PRO	2.1
34	i	106	C	2.1
34	i	1087	C	2.1
2	B	109	LYS	2.1
16	P	14	LYS	2.1
19	S	62	ASP	2.1
2	B	213	ARG	2.1
4	D	78	GLY	2.1
33	g	70	VAL	2.1
7	G	156	TYR	2.1
18	R	94	GLU	2.1
3	C	159	ILE	2.1
28	b	4	ALA	2.1
29	c	10	LYS	2.1
29	c	12	ALA	2.1
12	L	70	GLY	2.1
5	E	232	ASN	2.1
9	I	113	TYR	2.1
1	A	68	ILE	2.1
21	U	46	LYS	2.1
22	V	69	ILE	2.1
3	C	146	SER	2.1
19	S	46	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
34	i	433	U	2.1
34	i	902	U	2.1
9	I	117	TYR	2.1
9	I	149	TYR	2.1
23	W	30	CYS	2.1
34	i	1444	A	2.1
2	B	164	ILE	2.1
12	L	6	THR	2.1
17	Q	34	VAL	2.1
34	i	201	G	2.1
34	i	1396	U	2.1
30	d	42	CYS	2.1
5	E	116	PRO	2.1
25	Y	40	ILE	2.1
10	J	65	GLU	2.1
34	i	1399	C	2.1
34	i	1656	A	2.1
35	j	49	A	2.1
34	i	172	U	2.1
34	i	818	U	2.1
2	B	83	LYS	2.1
34	i	400	G	2.1
34	i	1721	G	2.1
1	A	36	GLN	2.1
17	Q	70	VAL	2.1
28	b	12	PRO	2.1
3	C	110	LYS	2.1
34	i	1242	A	2.1
34	i	1479	A	2.1
34	i	1551	A	2.1
35	j	14	A	2.1
9	I	152	ARG	2.1
23	W	8	ALA	2.1
17	Q	42	ILE	2.1
37	n	63	GLY	2.1
17	Q	146	ARG	2.1
10	J	100	LEU	2.1
11	K	46	MET	2.1
11	K	45	VAL	2.1
4	D	150	MET	2.1
34	i	242	G	2.1
34	i	261	G	2.1

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Mol	Chain	Res	Type	RSRZ
15	O	42	VAL	2.1
34	i	1328	A	2.1
1	A	23	THR	2.1
11	K	58	VAL	2.1
26	Z	59	CYS	2.1
34	i	1393	U	2.1
6	F	91	ARG	2.1
33	g	288	SER	2.1
10	J	188	GLY	2.1
8	H	154	ILE	2.1
2	B	68	GLU	2.1
12	L	66	VAL	2.1
3	C	218	LEU	2.1
6	F	53	ALA	2.1
34	i	1394	G	2.1
34	i	1571	G	2.1
12	L	102	PHE	2.1
11	K	79	LEU	2.1
2	B	38	MET	2.1
19	S	45	LEU	2.1
34	i	1334	G	2.1
7	G	141	ILE	2.1
34	i	382	A	2.1
34	i	1857	A	2.1
12	L	81	LYS	2.1
24	X	40	PRO	2.1
34	i	216	U	2.1
1	A	20	ALA	2.1
34	i	1163	G	2.0
34	i	160	U	2.0
1	A	182	VAL	2.0
5	E	128	LYS	2.0
35	j	67	C	2.0
37	n	75	ASP	2.0
6	F	16	ASP	2.0
34	i	634	G	2.0
2	B	71	LEU	2.0
23	W	7	LEU	2.0
2	B	233	GLY	2.0
9	I	15	GLY	2.0
21	U	71	GLY	2.0
2	B	205	TYR	2.0

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Mol	Chain	Res	Type	RSRZ
6	F	125	SER	2.0
5	E	62	LYS	2.0
2	B	120	MET	2.0
3	C	206	ASP	2.0
12	L	135	SER	2.0
34	i	337	G	2.0
20	T	99	VAL	2.0
34	i	1553	C	2.0
5	E	2	ALA	2.0
1	A	12	GLU	2.0
6	F	195	GLU	2.0
2	B	188	LEU	2.0
4	D	112	GLY	2.0
6	F	162	ALA	2.0
23	W	28	ARG	2.0
33	g	75	GLY	2.0
35	j	36	A	2.0
34	i	635	C	2.0
34	i	1639	C	2.0
5	E	256	LEU	2.0
9	I	55	TYR	2.0
34	i	91	A	2.0
34	i	1038	A	2.0
9	I	125	LYS	2.0
34	i	139	C	2.0
7	G	181	THR	2.0
16	P	101	THR	2.0
2	B	37	ALA	2.0
9	I	13	LYS	2.0

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

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

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

There are no ligands in this entry.

6.5 Other polymers (i)

There are no such residues in this entry.