Full wwPDB X-ray Structure Validation Report (i)

Jun 22, 2024 – 11:27 AM EDT

PDB ID	:	4V9I
Title	:	Crystal structure of thermus thermophilus 70S in complex with tRNAs and mRNA containing a pseudouridine in a stop codon
Authors	:	Fernandez, I.S.; Ng, C.L.; Kelley, A.C.; Guowei, W.; Yu, Y.T.; Ramakrishnan, V.
Deposited on	:	2013-04-04
Resolution	:	3.30 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 (i)) were used in the production of this report:

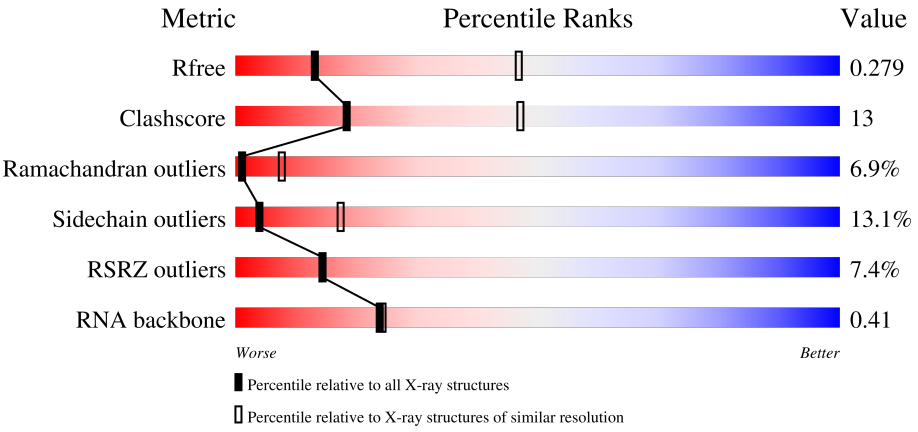
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.37.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.37.1

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 3.30 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1149 (3.34-3.26)
Clashscore	141614	1205 (3.34-3.26)
Ramachandran outliers	138981	1183 (3.34-3.26)
Sidechain outliers	138945	1182 (3.34-3.26)
RSRZ outliers	127900	1115 (3.34-3.26)
RNA backbone	3102	1117 (3.70-2.90)

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	AA	1504	4% 51% 39% 10%
1	CA	1504	6% 52% 39% 9%
2	AB	234	5% 64% 32% .
2	CB	234	15% 65% 30% 5%

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Mol	Chain	Length	Quality of chain
3	AC	206	2% 64% 30%
3	CC	206	15% 62% 34%
4	AD	208	3% 62% 31% 5%
4	CD	208	% 61% 33% 5%
5	AE	150	67% 27% 6%
5	CE	150	3% 63% 33%
6	AF	101	72% 26%
6	CF	101	2% 73% 25%
7	AG	155	5% 75% 21%
7	CG	155	9% 81% 17%
8	AH	138	69% 30%
8	CH	138	2% 75% 22%
9	AI	127	6% 69% 26% 6%
9	CI	127	25% 68% 29%
10	AJ	98	12% 55% 36% 8%
10	CJ	98	27% 58% 34% 7%
11	AK	119	3% 61% 36%
11	CK	119	9% 72% 25%
12	AL	124	6% 68% 29%
12	CL	124	6% 69% 26% 5%
13	AM	124	10% 60% 31% 9%
13	CM	124	24% 67% 27% 6%
14	AN	60	62% 33% 5%
14	CN	60	12% 65% 28% 7%
15	AO	88	% 66% 27% 6%

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Mol	Chain	Length	Quality of chain
15	CO	88	2% 69% 24% 7%
16	AP	83	2% 64% 33%
16	CP	83	65% 25% 8%
17	AQ	99	68% 28%
17	CQ	99	2% 76% 21%
18	AR	70	% 69% 26%
18	CR	70	3% 70% 26%
19	AS	78	8% 49% 40% 9%
19	CS	78	35% 65% 28% 6%
20	AT	99	4% 68% 24% 8%
20	CT	99	2% 74% 21% 5%
21	AU	24	58% 38%
21	CU	24	58% 67% 33%
22	AV	77	% 51% 32% 16%
22	CV	77	10% 48% 34% 18%
23	AW	76	43% 37% 42% 20%
23	CW	76	58% 47% 41% 12%
24	AY	75	40% 5% 37% 47% 11%
24	CY	75	52% 5% 37% 47% 11%
25	AX	7	43% 43% 14%
26	BA	2915	3% 42% 37% 15%
26	DA	2915	4% 45% 38% 13%
27	BB	119	49% 33% 18%
27	DB	119	7% 47% 43% 10%
28	BC	206	58% 65% 23% 8%

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Mol	Chain	Length	Quality of chain
29	BD	271	46% 40% 11%
29	DD	271	55% 35% 7%
30	BE	204	50% 37% 11%
30	DE	204	52% 39% 9%
31	BF	207	56% 31% 12%
31	DF	207	57% 36% 7%
32	BG	181	58% 32% 8%
32	DG	181	54% 41% 6%
33	BH	159	52% 33% 11%
33	DH	159	73% 19% 6%
34	BI	145	66% 27% 6%
34	DI	145	61% 34% 5%
35	BJ	130	78% 19%
35	DJ	130	76% 18% 5%
36	BN	138	43% 42% 13%
36	DN	138	56% 30% 12%
37	BO	122	64% 34%
37	DO	122	67% 30%
38	BP	146	38% 29% 25% 8%
38	DP	146	34% 42% 19% 5%
39	BQ	141	62% 30% 8%
39	DQ	141	72% 23%
40	BR	117	49% 40% 9%
40	DR	117	46% 48% 6%
41	BS	98	40% 40% 17%

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Mol	Chain	Length	Quality of chain
41	DS	98	3% 56% 33% 8%
42	BT	137	4% 36% 42% 20%
42	DT	137	4% 39% 41% 18%
43	BU	117	56% 32% 9%
43	DU	117	4% 62% 30% 8%
44	BV	101	% 49% 32% 14% 6%
44	DV	101	11% 51% 35% 11%
45	BW	113	% 54% 40% 5%
45	DW	113	4% 63% 30% 6%
46	BX	92	66% 25% 9%
46	DX	92	64% 26% 8%
47	BY	100	10% 29% 42% 23% 6%
47	DY	100	13% 39% 41% 17%
48	BZ	176	31% 76% 20%
48	DZ	176	38% 70% 27%
49	B0	84	61% 36%
49	D0	84	8% 62% 37%
50	B1	93	3% 61% 33% 5%
50	D1	93	2% 59% 34%
51	B2	71	3% 51% 35% 13%
51	D2	71	% 73% 20% 6%
52	B3	59	3% 53% 44%
52	D3	59	8% 73% 25%
53	B4	30	3% 43% 47% 7%
53	D4	30	7% 60% 37%

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Mol	Chain	Length	Quality of chain
54	B5	59	5% 41% 41% 15%
54	D5	59	5% 59% 22% 15%
55	B6	44	5% 7% 55% 27% 11%
55	D6	44	2% 11% 55% 30% 5%
56	B7	48	2% 63% 35%
56	D7	48	2% 58% 38%
57	B8	63	30% 49% 17%
57	D8	63	3% 46% 44% 6%
58	B9	36	47% 42% 8%
58	D9	36	11% 75% 19% 6%
59	CX	4	25% 25% 25% 50%
60	DC	196	73% 72% 21%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
25	PSU	AX	19	-	-	X	-

2 Entry composition (i)

There are 60 unique types of molecules in this entry. The entry contains 295724 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 RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1504	Total	C	N	O	P	0	0	0
			32329	14390	5992	10444	1503			
1	CA	1504	Total	C	N	O	P	0	0	0
			32329	14390	5992	10444	1503			

- Molecule 2 is a protein called 30S Ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	234	Total	C	N	O	S	0	0	0
			1901	1213	341	342	5			
2	CB	234	Total	C	N	O	S	0	0	0
			1901	1213	341	342	5			

- Molecule 3 is a protein called 30S Ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	206	Total	C	N	O	S	0	0	0
			1613	1016	314	282	1			
3	CC	206	Total	C	N	O	S	0	0	0
			1613	1016	314	282	1			

- Molecule 4 is a protein called 30S Ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AD	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			
4	CD	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

- Molecule 5 is a protein called 30S Ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	150	Total	C	N	O	S	0	0	0
			1147	724	217	202	4			
5	CE	150	Total	C	N	O	S	0	0	0
			1147	724	217	202	4			

- Molecule 6 is a protein called 30S Ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			
6	CF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 7 is a protein called 30S Ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			
7	CG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

- Molecule 8 is a protein called 30S Ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			
8	CH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 9 is a protein called 30S Ribosomal protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	AI	127	Total	C	N	O	0	0	0
			1011	639	198	174			
9	CI	127	Total	C	N	O	0	0	0
			1011	639	198	174			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AI	58	ARG	HIS	CONFLICT	UNP P80374
CI	58	ARG	HIS	CONFLICT	UNP P80374

- Molecule 10 is a protein called 30S Ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AJ	98	Total	C	N	O	S	0	0	0
			795	499	156	139	1			
10	CJ	98	Total	C	N	O	S	0	0	0
			795	499	156	139	1			

- Molecule 11 is a protein called 30S Ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AK	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			
11	CK	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			

- Molecule 12 is a protein called 30S Ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AL	124	Total	C	N	O	S	0	0	0
			971	611	195	164	1			
12	CL	124	Total	C	N	O	S	0	0	0
			971	611	195	164	1			

- Molecule 13 is a protein called 30S Ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	124	Total	C	N	O	S	0	0	0
			988	611	205	170	2			
13	CM	124	Total	C	N	O	S	0	0	0
			988	611	205	170	2			

- Molecule 14 is a protein called 30S Ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AN	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			
14	CN	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			

- Molecule 15 is a protein called 30S Ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AO	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			
15	CO	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			

- Molecule 16 is a protein called 30S Ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AP	83	Total	C	N	O	S	0	0	0
			701	443	139	118	1			
16	CP	83	Total	C	N	O	S	0	0	0
			701	443	139	118	1			

- Molecule 17 is a protein called 30S Ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	99	Total	C	N	O	S	0	0	0
			824	528	151	143	2			
17	CQ	99	Total	C	N	O	S	0	0	0
			824	528	151	143	2			

- Molecule 18 is a protein called 30S Ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	AR	70	Total	C	N	O	0	0	0
			574	367	112	95			
18	CR	70	Total	C	N	O	0	0	0
			574	367	112	95			

- Molecule 19 is a protein called 30S Ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	78	Total	C	N	O	S	0	0	0
			630	403	114	111	2			
19	CS	78	Total	C	N	O	S	0	0	0
			630	403	114	111	2			

- Molecule 20 is a protein called 30S Ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AT	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	CT	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			

- Molecule 21 is a protein called 30S Ribosomal protein THX.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	AU	24	Total	C	N	O	0	0	0
			209	128	50	31			
21	CU	24	Total	C	N	O	0	0	0
			209	128	50	31			

- Molecule 22 is a RNA chain called P-SITE tRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AV	77	Total	C	N	O	P	0	0	0
			1640	732	297	535	76			
22	CV	77	Total	C	N	O	P	0	0	0
			1640	732	297	535	76			

- Molecule 23 is a RNA chain called E-SITE tRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AW	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
23	CW	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			

- Molecule 24 is a RNA chain called A-SITE tRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	AY	75	Total	C	N	O	P	0	0	0
			1619	722	309	514	74			
24	CY	75	Total	C	N	O	P	0	0	0
			1619	722	309	514	74			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AY	?	-	C	DELETION	GB 443419838
CY	?	-	C	DELETION	GB 443419838

- Molecule 25 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	AX	7	Total	C	N	O	P	0	0	0
			151	68	29	47	7			

- Molecule 26 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	BA	2807	Total	C	N	O	P	0	0	0
			60459	26907	11311	19435	2806			
26	DA	2807	Total	C	N	O	P	0	0	0
			60459	26907	11311	19435	2806			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BA	1151	A	G	CONFLICT	GB 55771382
DA	1151	A	G	CONFLICT	GB 55771382

- Molecule 27 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			
27	DB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			

- Molecule 28 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
28	BC	190	Total	C	N	O	0	0	0
			1157	706	220	231			

- Molecule 29 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	BD	271	Total	C	N	O	S	0	0	0
			2105	1329	416	357	3			
29	DD	271	Total	C	N	O	S	0	0	0
			2105	1329	416	357	3			

- Molecule 30 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	BE	204	Total	C	N	O	S	0	0	0
			1564	988	299	271	6			
30	DE	204	Total	C	N	O	S	0	0	0
			1564	988	299	271	6			

- Molecule 31 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	BF	207	Total	C	N	O	S	0	0	0
			1624	1035	303	283	3			
31	DF	207	Total	C	N	O	S	0	0	0
			1624	1035	303	283	3			

- Molecule 32 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			
32	DG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			

- Molecule 33 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	BH	159	Total	C	N	O	S	0	0	0
			1223	773	228	221	1			
33	DH	159	Total	C	N	O	S	0	0	0
			1223	773	228	221	1			

- Molecule 34 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BI	145	Total	C	N	O	S	0	0	0
			1132	723	200	208	1			
34	DI	145	Total	C	N	O	S	0	0	0
			1132	723	200	208	1			

- Molecule 35 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
35	BJ	130	Total	C	N	O	0	0	0
			651	390	130	131			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
35	DJ	130	Total 651	C 390	N 130	O 131	0	0	0

- Molecule 36 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	BN	138	Total 1105	C 712	N 206	O 183	S 4	0	0	0
36	DN	138	Total 1105	C 712	N 206	O 183	S 4	0	0	0

- Molecule 37 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BO	122	Total 933	C 588	N 171	O 170	S 4	0	0	0
37	DO	122	Total 933	C 588	N 171	O 170	S 4	0	0	0

- Molecule 38 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BP	146	Total 1114	C 692	N 227	O 193	S 2	0	0	0
38	DP	146	Total 1114	C 692	N 227	O 193	S 2	0	0	0

- Molecule 39 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BQ	141	Total 1122	C 715	N 212	O 188	S 7	0	0	0
39	DQ	141	Total 1122	C 715	N 212	O 188	S 7	0	0	0

- Molecule 40 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
40	BR	117	Total 960	C 599	N 202	O 159	0	0	0
40	DR	117	Total 960	C 599	N 202	O 159	0	0	0

- Molecule 41 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
41	BS	98	Total	C	N	O	0	0	0
			771	486	154	131			
41	DS	98	Total	C	N	O	0	0	0
			771	486	154	131			

- Molecule 42 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BT	137	Total	C	N	O	S	0	0	0
			1142	710	234	197	1			
42	DT	137	Total	C	N	O	S	0	0	0
			1142	710	234	197	1			

- Molecule 43 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BU	117	Total	C	N	O	S	0	0	0
			958	604	202	151	1			
43	DU	117	Total	C	N	O	S	0	0	0
			958	604	202	151	1			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BU	32	ALA	PHE	CONFLICT	UNP P60491
DU	32	ALA	PHE	CONFLICT	UNP P60491

- Molecule 44 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	BV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			
44	DV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 45 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BW	113	Total	C	N	O	S	0	0	0
			896	563	176	155	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	DW	113	Total	C	N	O	S	0	0	0
			896	563	176	155	2			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BW	113	ALA	LYS	CONFLICT	UNP Q5SHP3
DW	113	ALA	LYS	CONFLICT	UNP Q5SHP3

- Molecule 46 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
46	BX	92	Total	C	N	O	0	0	0
			726	471	131	124			
46	DX	92	Total	C	N	O	0	0	0
			726	471	131	124			

- Molecule 47 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BY	100	Total	C	N	O	S	0	0	0
			776	500	148	124	4			
47	DY	100	Total	C	N	O	S	0	0	0
			776	500	148	124	4			

- Molecule 48 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	BZ	176	Total	C	N	O	S	0	0	0
			1404	897	252	253	2			
48	DZ	176	Total	C	N	O	S	0	0	0
			1404	897	252	253	2			

- Molecule 49 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	B0	84	Total	C	N	O	S	0	0	0
			662	410	140	111	1			
49	D0	84	Total	C	N	O	S	0	0	0
			662	410	140	111	1			

- Molecule 50 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	B1	93	Total	C	N	O	S	0	0	0
			734	460	147	126	1			
50	D1	93	Total	C	N	O	S	0	0	0
			734	460	147	126	1			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B1	81	ARG	LYS	CONFLICT	UNP P60494
D1	81	ARG	LYS	CONFLICT	UNP P60494

- Molecule 51 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	B2	71	Total	C	N	O	S	0	0	0
			598	370	121	106	1			
51	D2	71	Total	C	N	O	S	0	0	0
			598	370	121	106	1			

- Molecule 52 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	B3	59	Total	C	N	O	S	0	0	0
			468	298	90	79	1			
52	D3	59	Total	C	N	O	S	0	0	0
			468	298	90	79	1			

- Molecule 53 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	B4	30	Total	C	N	O	S	0	0	0
			226	142	36	44	4			
53	D4	30	Total	C	N	O	S	0	0	0
			226	142	36	44	4			

- Molecule 54 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	B5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			
54	D5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			

- Molecule 55 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	B6	44	Total	C	N	O	S	0	0	0
			381	235	77	65	4			
55	D6	44	Total	C	N	O	S	0	0	0
			381	235	77	65	4			

- Molecule 56 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	B7	48	Total	C	N	O	S	0	0	0
			419	257	104	56	2			
56	D7	48	Total	C	N	O	S	0	0	0
			419	257	104	56	2			

- Molecule 57 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	B8	63	Total	C	N	O	S	0	0	0
			508	326	101	79	2			
57	D8	63	Total	C	N	O	S	0	0	0
			508	326	101	79	2			

- Molecule 58 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
58	B9	36	Total	C	N	O	S	0	0	0
			299	183	67	46	3			
58	D9	36	Total	C	N	O	S	0	0	0
			299	183	67	46	3			

- Molecule 59 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
59	CX	4	Total	C	N	O	P	0	0	0
			85	38	14	29	4			

- Molecule 60 is a protein called 50S Ribosomal protein L1.

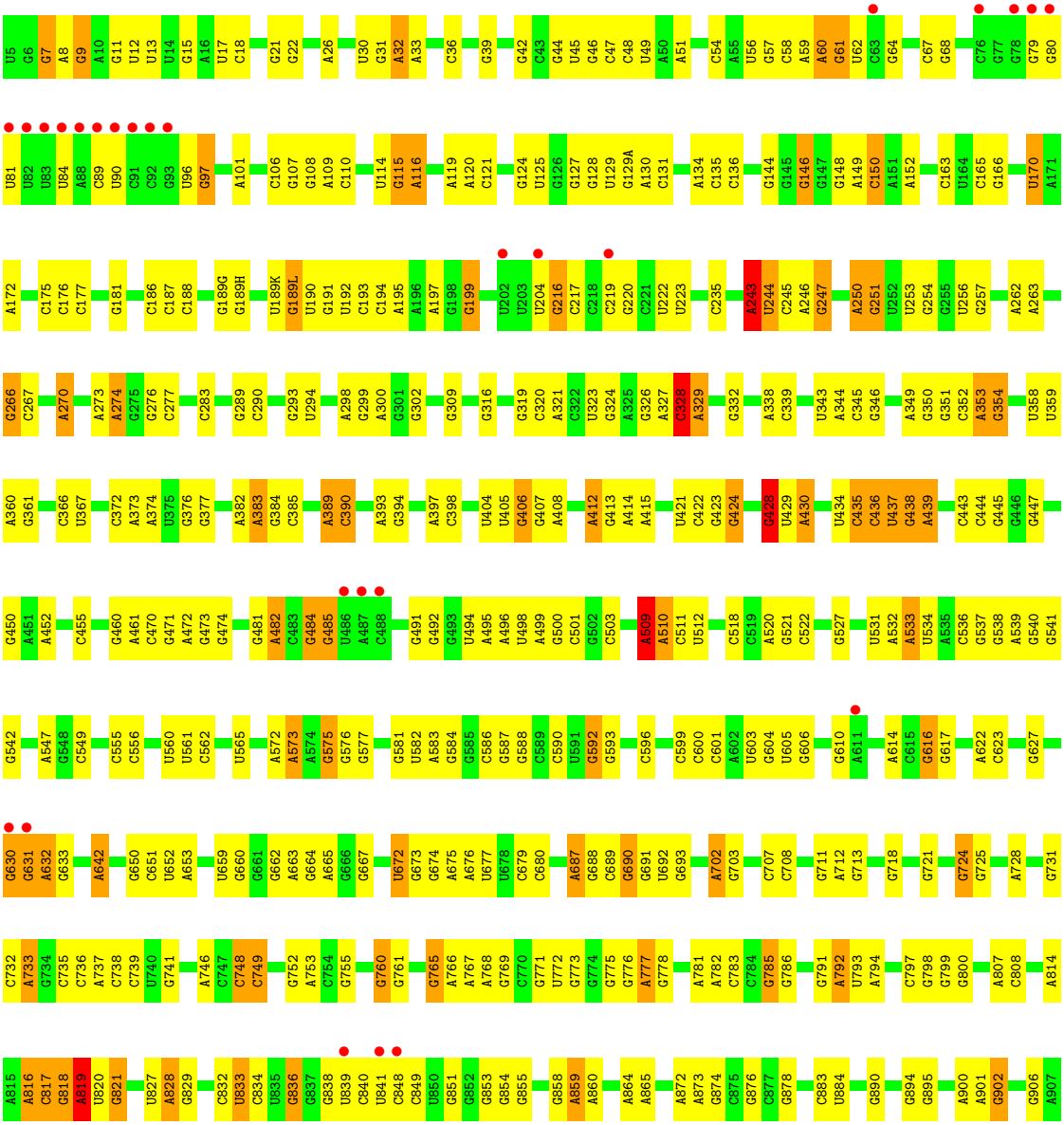
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
60	DC	190	Total	C	N	O	0	0	0
			1157	706	220	231			

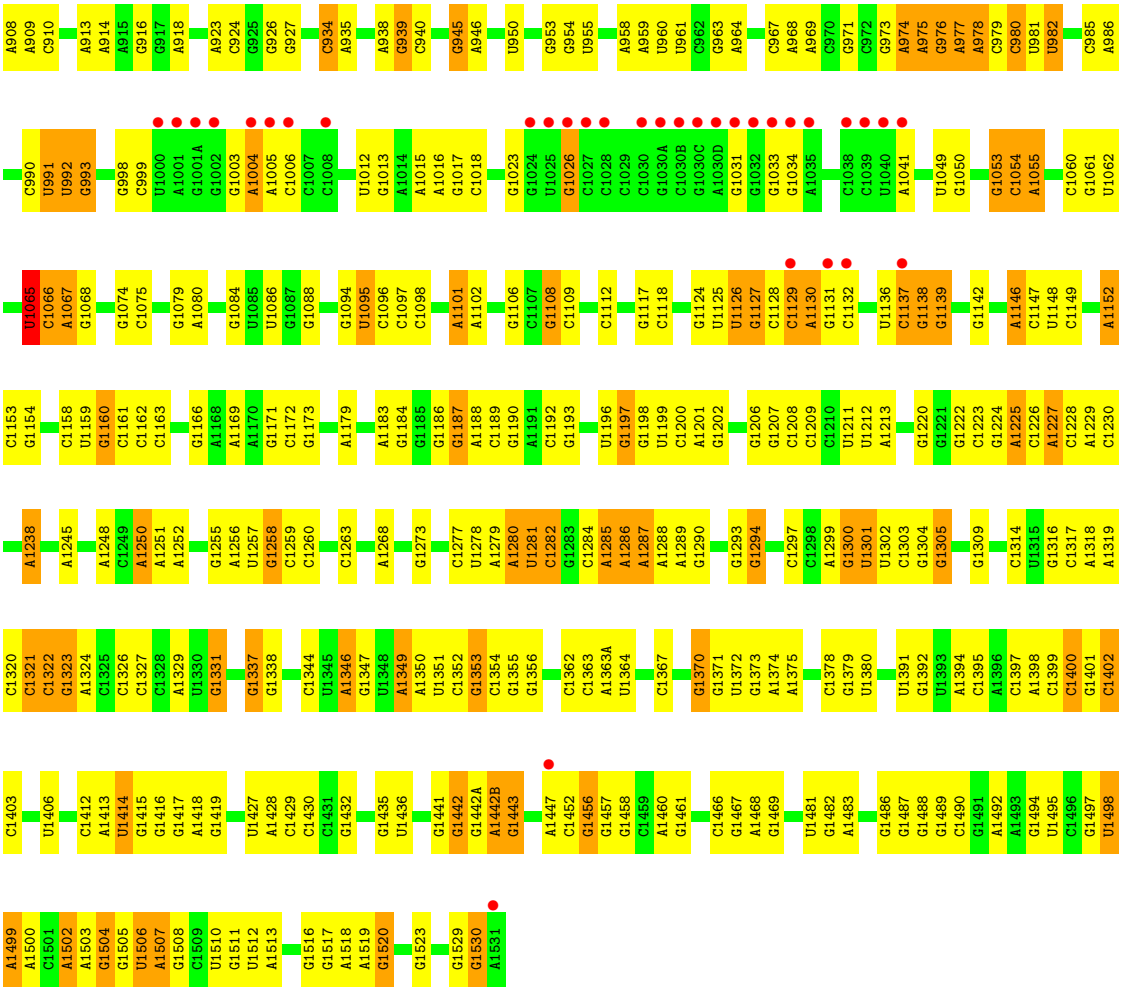
3 Residue-property plots (i)

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: 16S ribosomal RNA

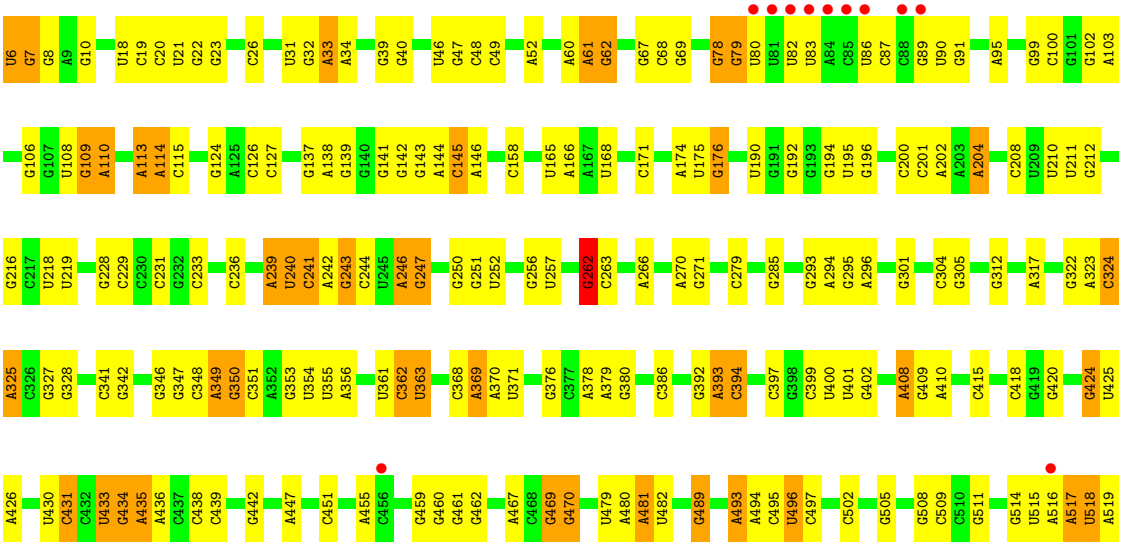
Chain AA: 

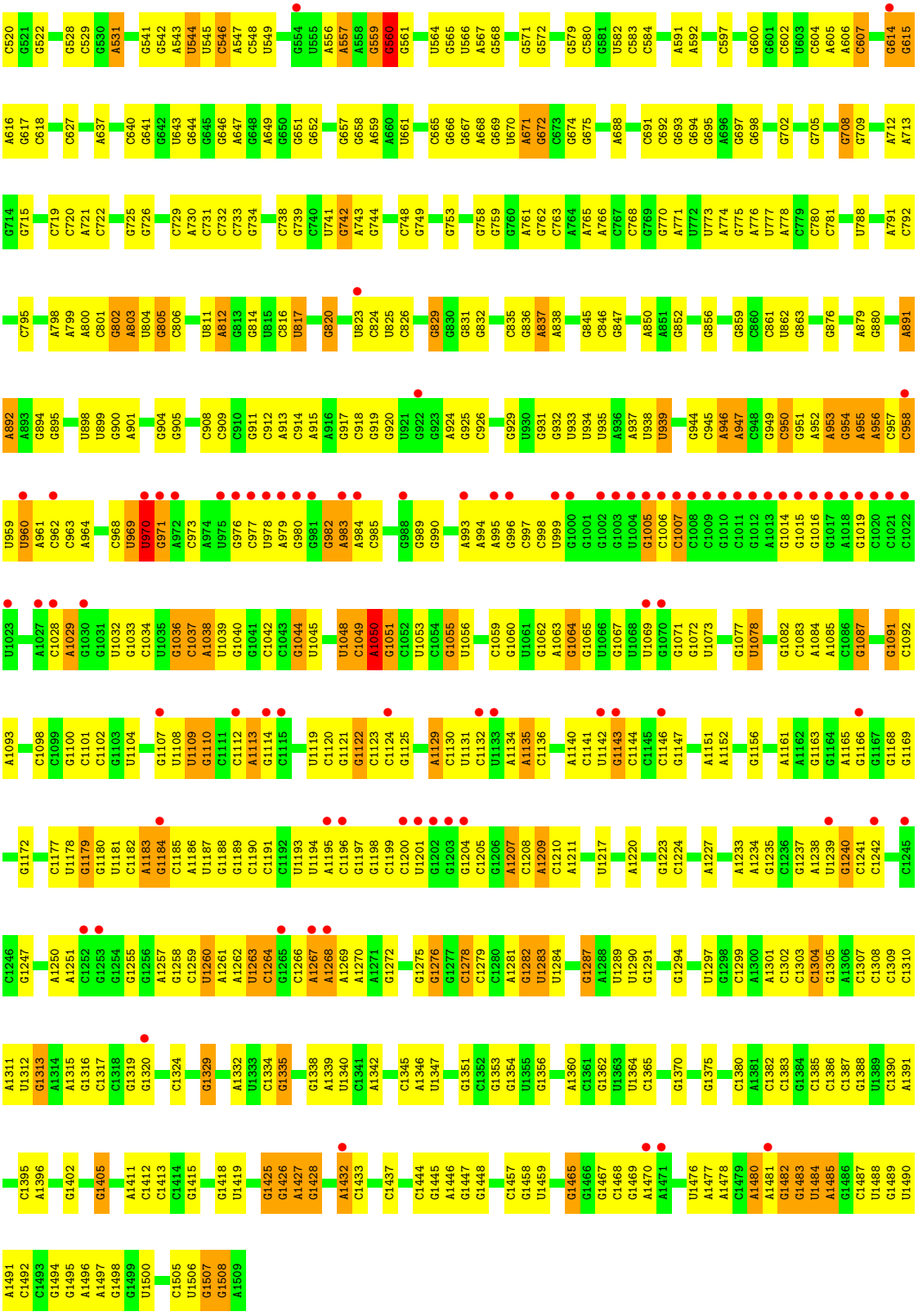




• Molecule 1: 16S ribosomal RNA

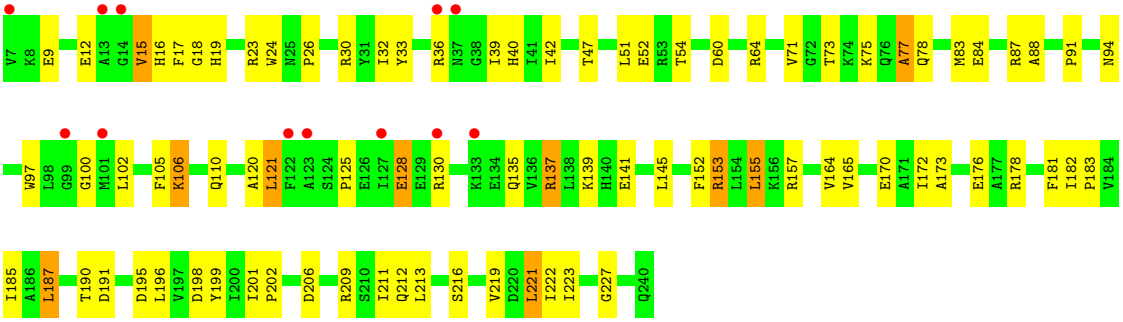
Chain CA:





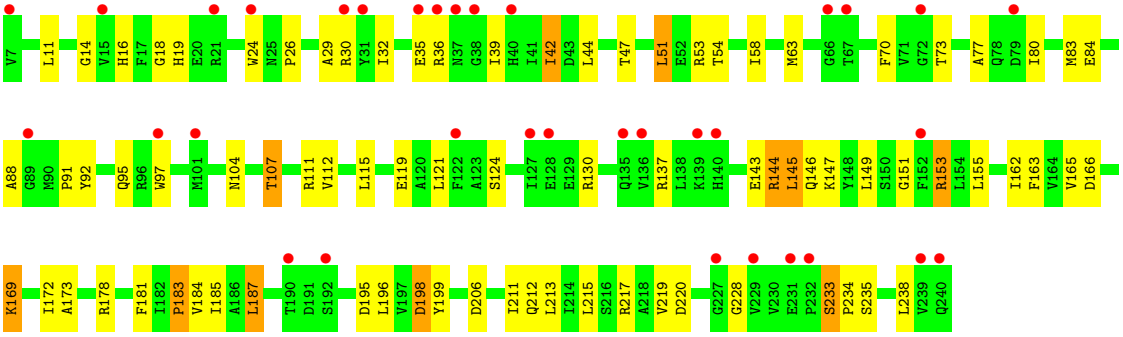
• Molecule 2: 30S Ribosomal protein S2

Chain AB:



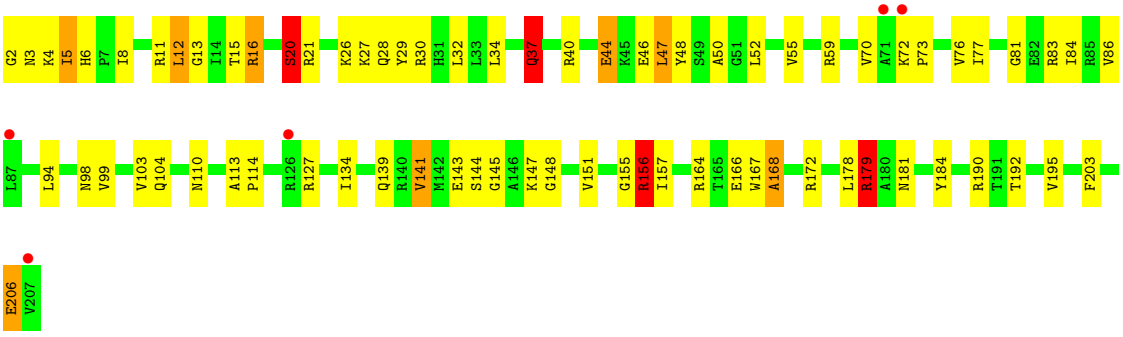
• Molecule 2: 30S Ribosomal protein S2

Chain CB:



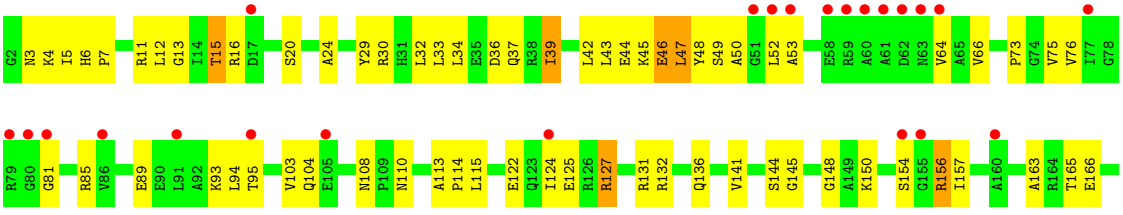
• Molecule 3: 30S Ribosomal protein S3

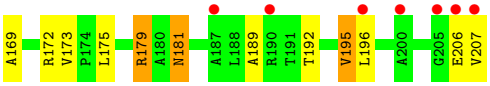
Chain AC:



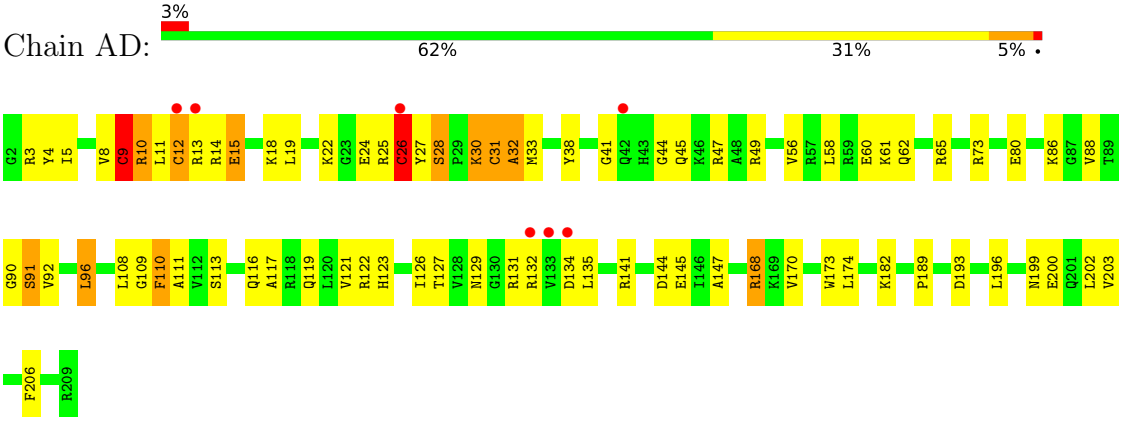
• Molecule 3: 30S Ribosomal protein S3

Chain CC:

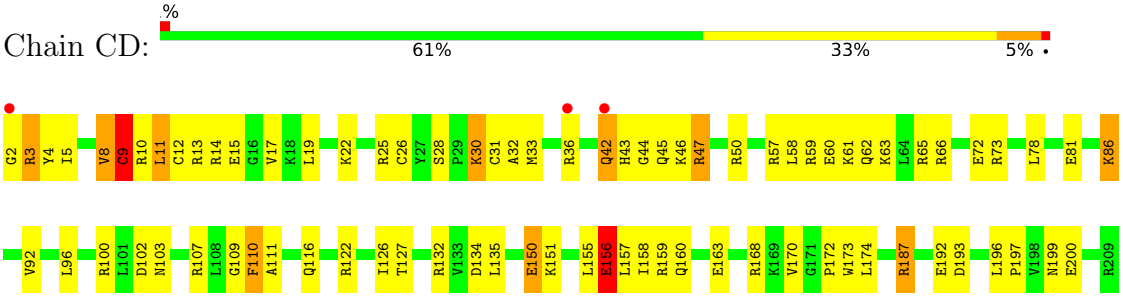




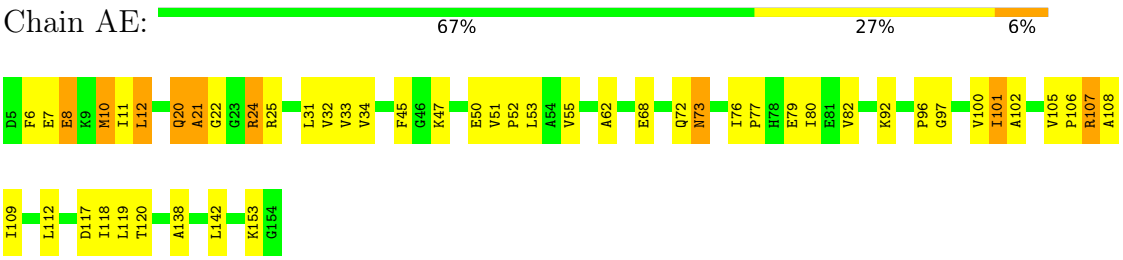
• Molecule 4: 30S Ribosomal protein S4



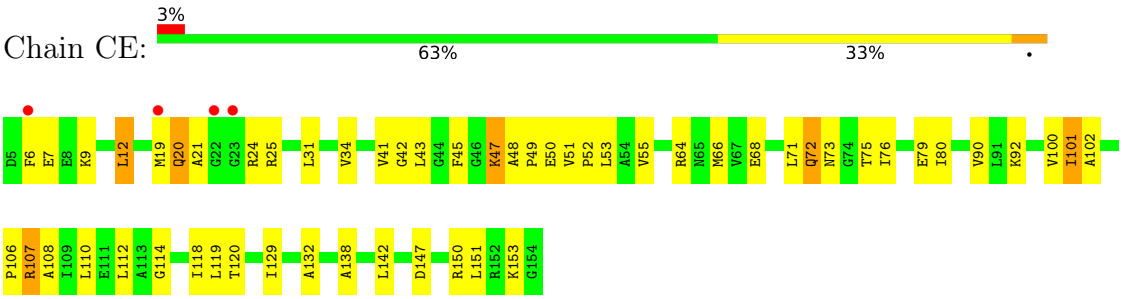
• Molecule 4: 30S Ribosomal protein S4



• Molecule 5: 30S Ribosomal protein S5

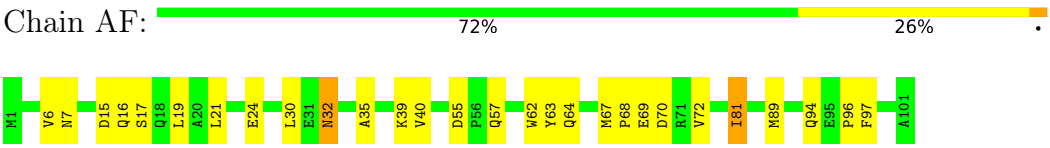


• Molecule 5: 30S Ribosomal protein S5



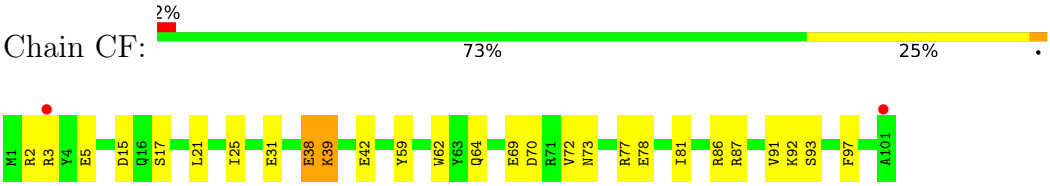
• Molecule 6: 30S Ribosomal protein S6

Chain AF:



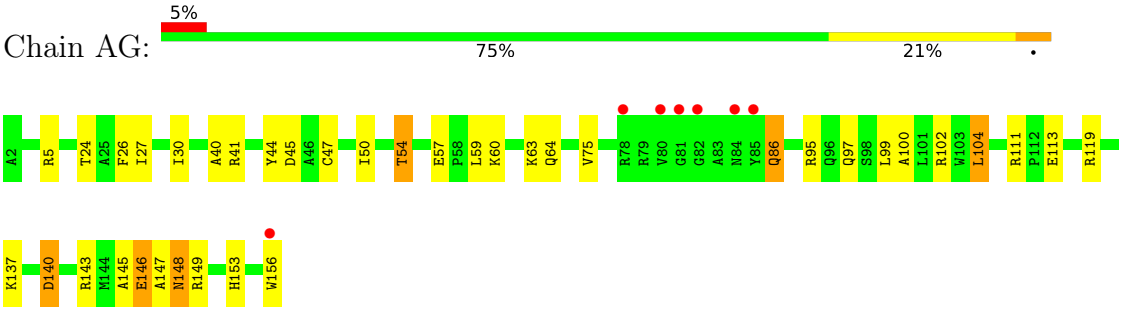
• Molecule 6: 30S Ribosomal protein S6

Chain CF:



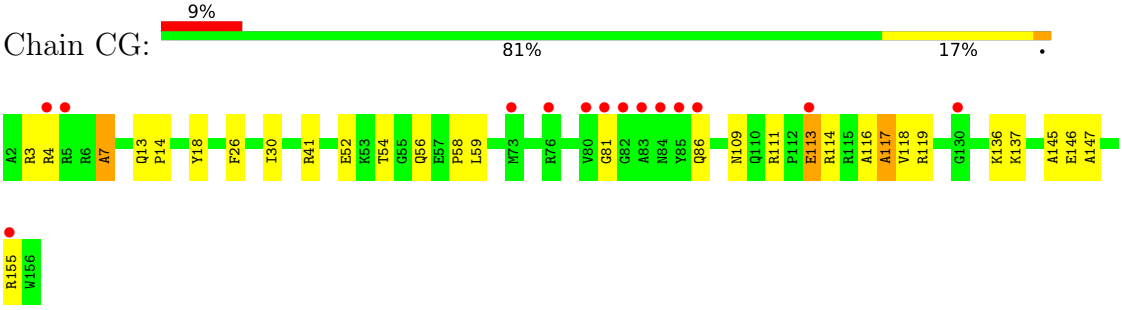
• Molecule 7: 30S Ribosomal protein S7

Chain AG:



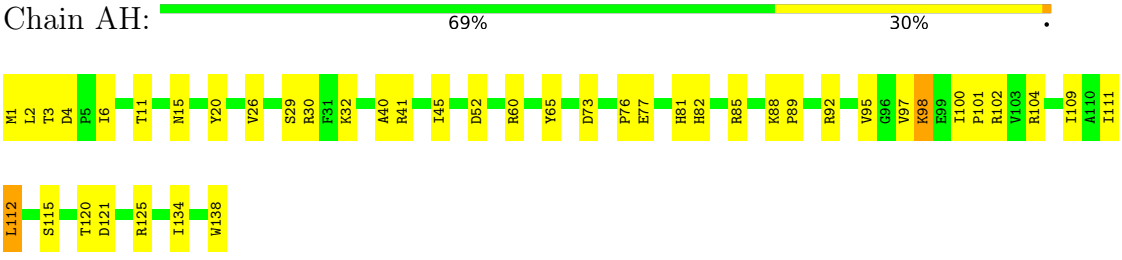
• Molecule 7: 30S Ribosomal protein S7

Chain CG:



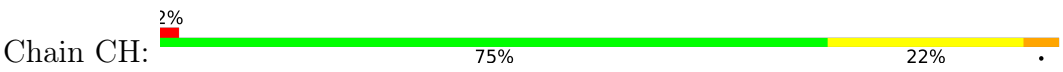
• Molecule 8: 30S Ribosomal protein S8

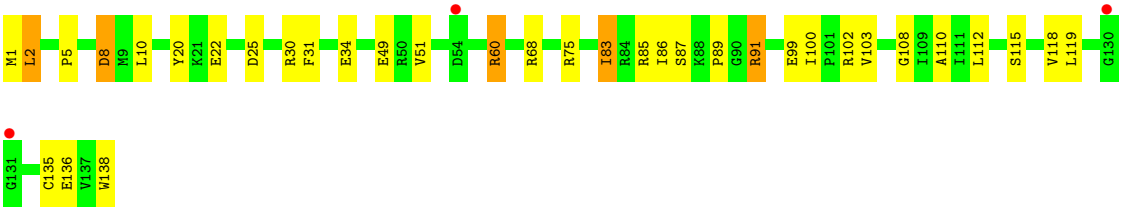
Chain AH:



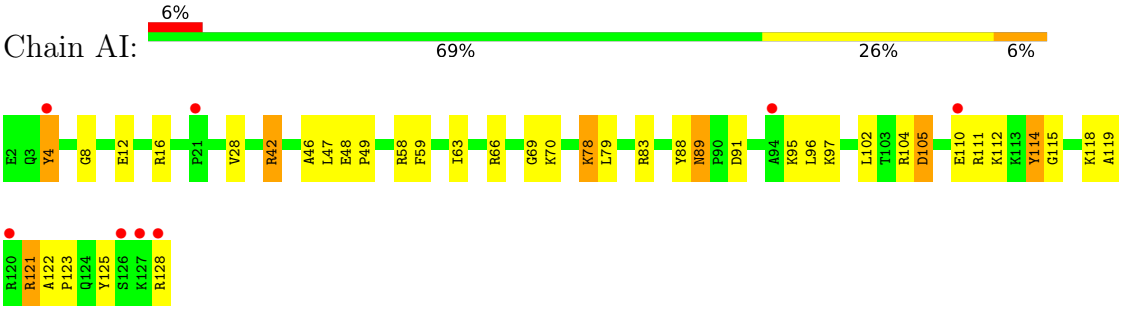
• Molecule 8: 30S Ribosomal protein S8

Chain CH:

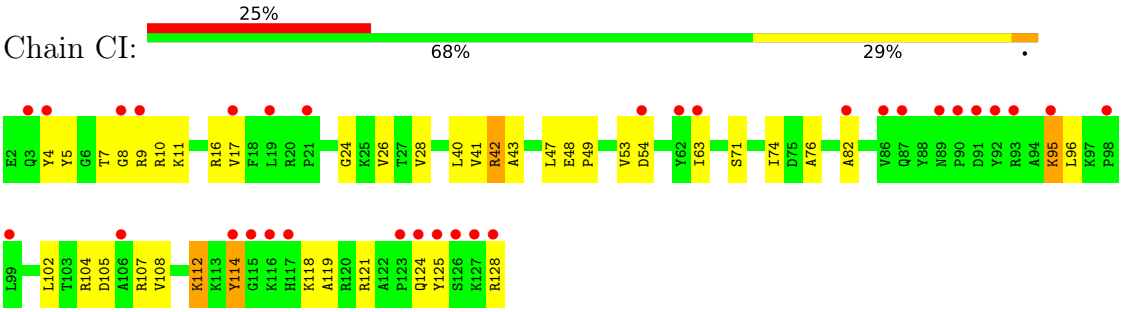




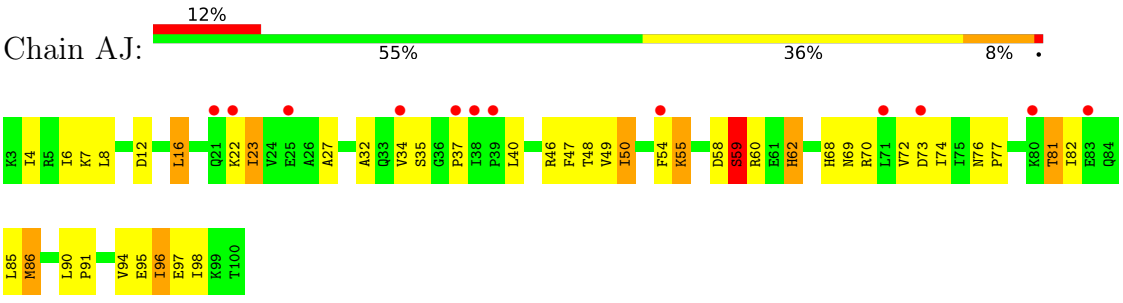
• Molecule 9: 30S Ribosomal protein S9



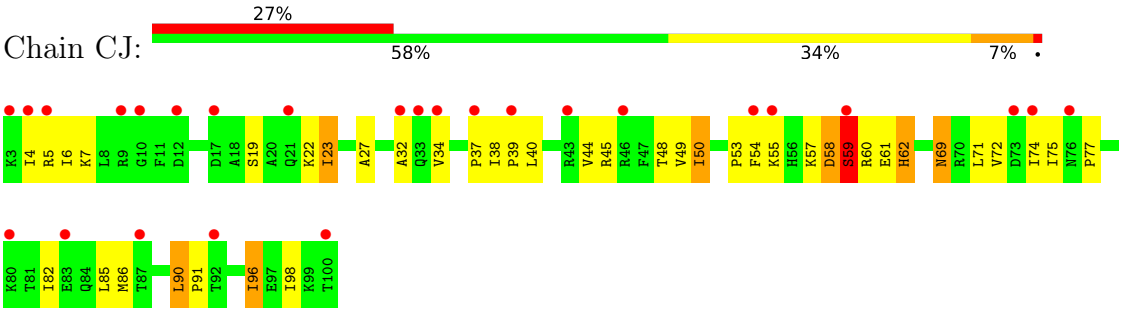
• Molecule 9: 30S Ribosomal protein S9



• Molecule 10: 30S Ribosomal protein S10

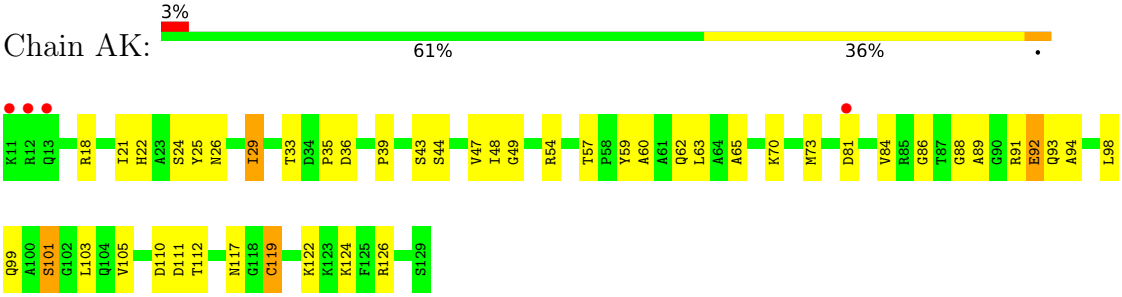


• Molecule 10: 30S Ribosomal protein S10



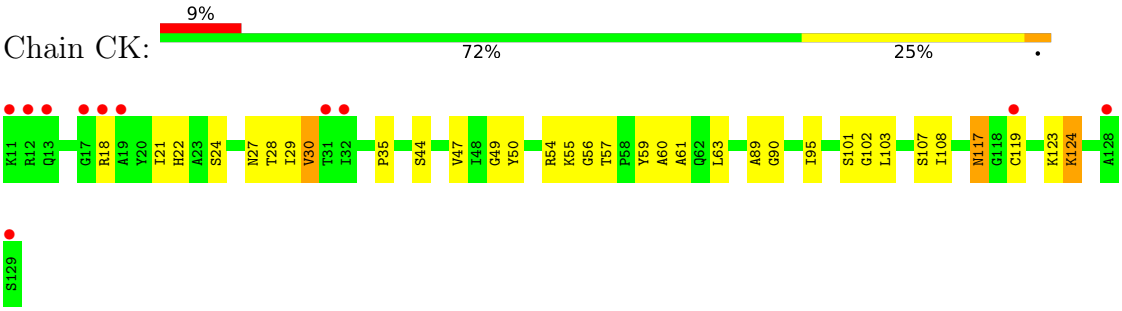
• Molecule 11: 30S Ribosomal protein S11

Chain AK:



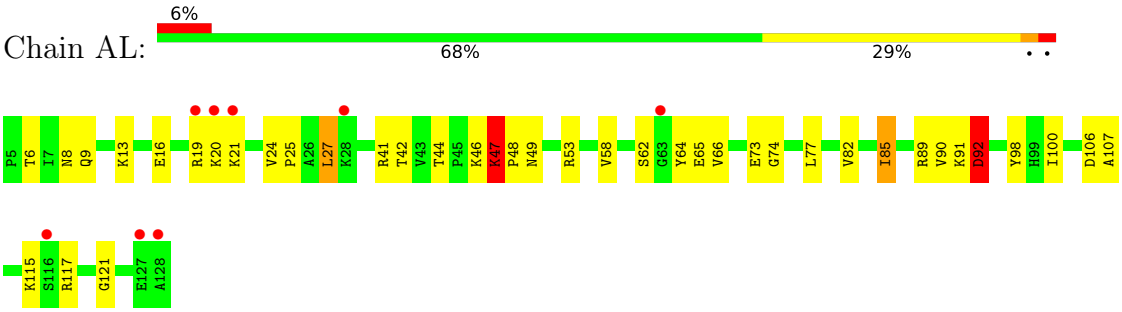
• Molecule 11: 30S Ribosomal protein S11

Chain CK:



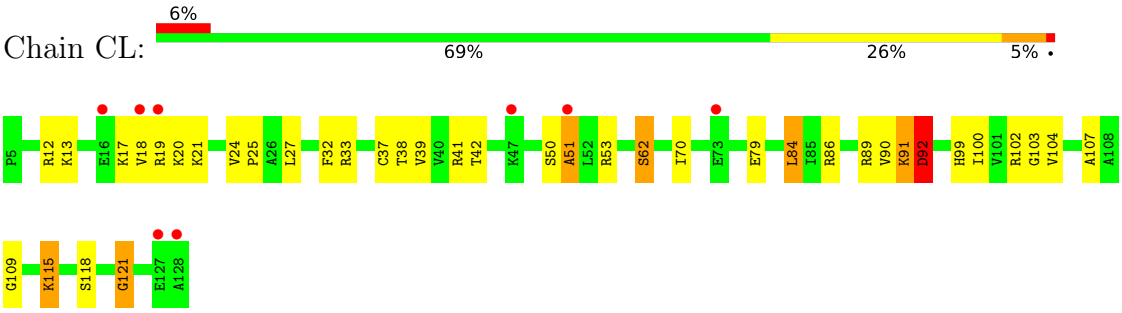
• Molecule 12: 30S Ribosomal protein S12

Chain AL:



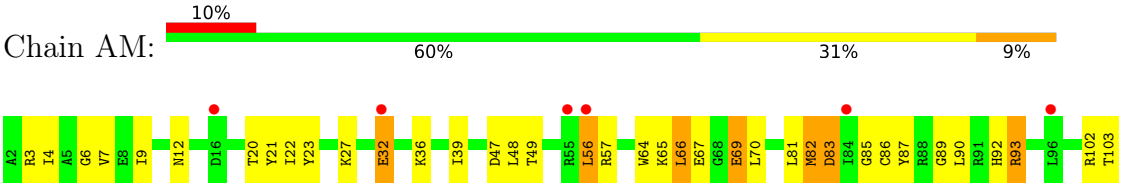
• Molecule 12: 30S Ribosomal protein S12

Chain CL:



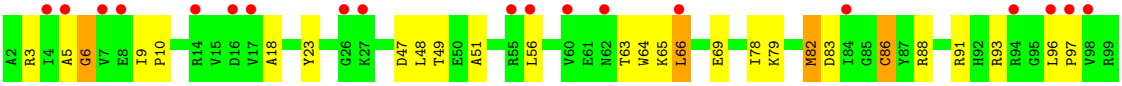
• Molecule 13: 30S Ribosomal protein S13

Chain AM:



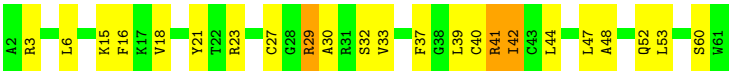
• Molecule 13: 30S Ribosomal protein S13

Chain CM:



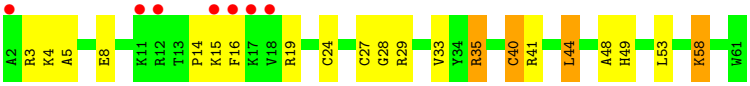
• Molecule 14: 30S Ribosomal protein S14

Chain AN:



• Molecule 14: 30S Ribosomal protein S14

Chain CN:



• Molecule 15: 30S Ribosomal protein S15

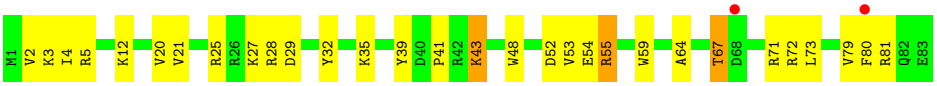
Chain AO:

• Molecule 15: 30S Ribosomal protein S15

Chain CO:

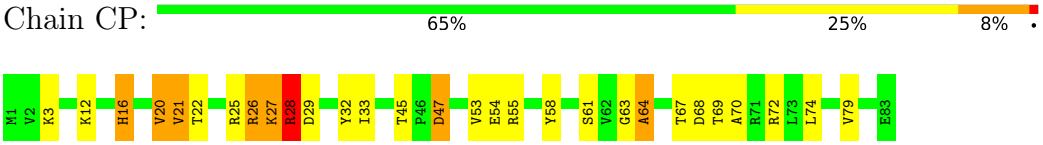
• Molecule 16: 30S Ribosomal protein S16

Chain AP:



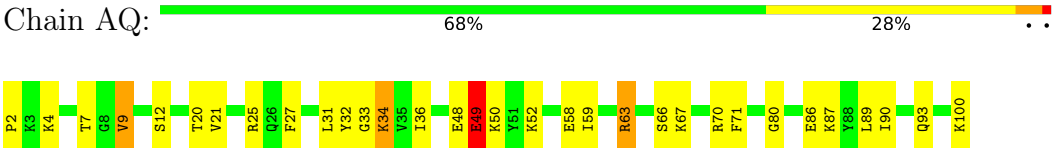
• Molecule 16: 30S Ribosomal protein S16

Chain CP:



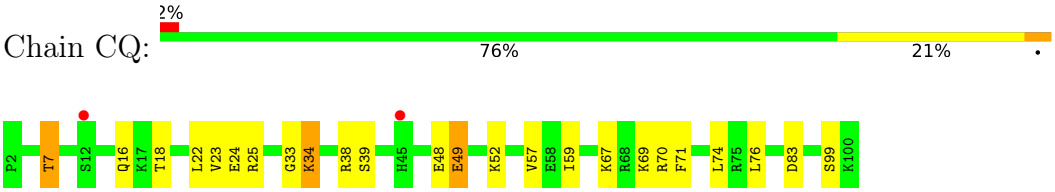
• Molecule 17: 30S Ribosomal protein S17

Chain AQ:



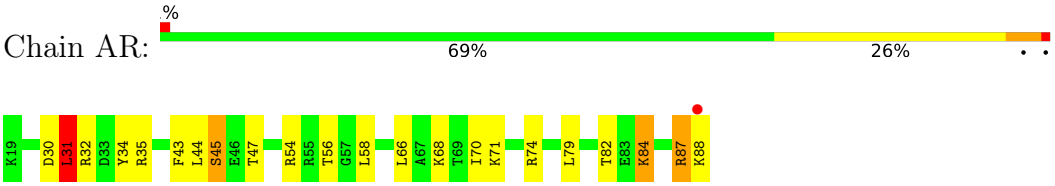
• Molecule 17: 30S Ribosomal protein S17

Chain CQ:



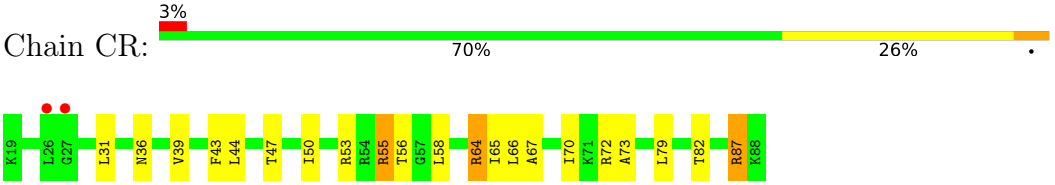
• Molecule 18: 30S Ribosomal protein S18

Chain AR:



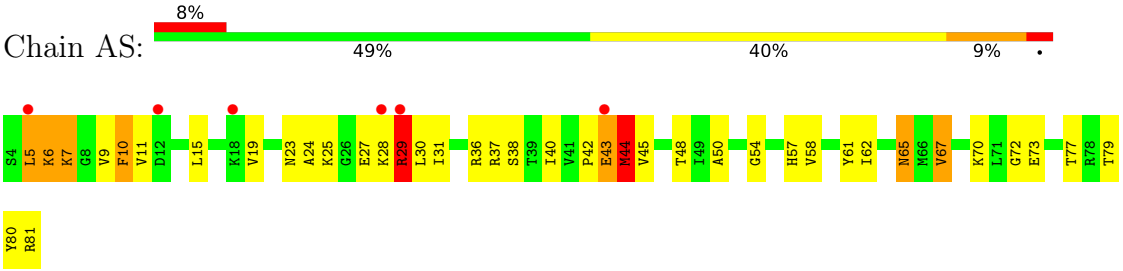
• Molecule 18: 30S Ribosomal protein S18

Chain CR:



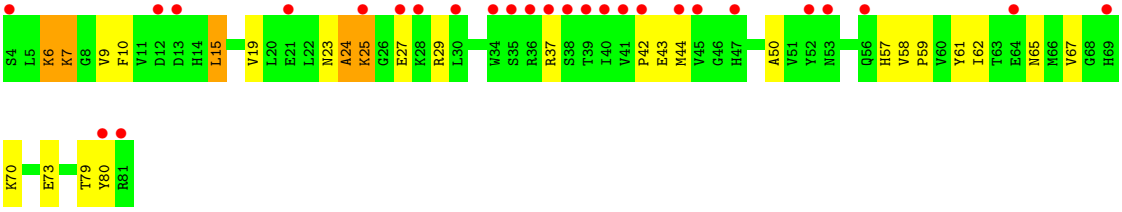
• Molecule 19: 30S Ribosomal protein S19

Chain AS:

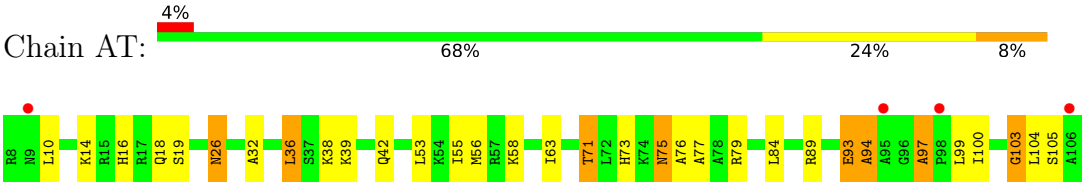


• Molecule 19: 30S Ribosomal protein S19

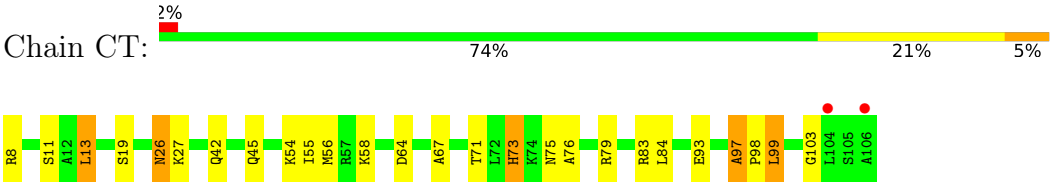
Chain CS:



• Molecule 20: 30S Ribosomal protein S20

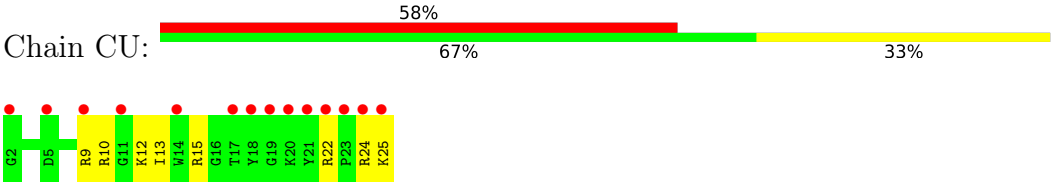


• Molecule 20: 30S Ribosomal protein S20

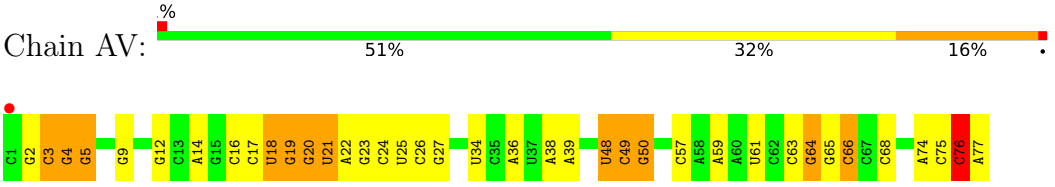


• Molecule 21: 30S Ribosomal protein THX

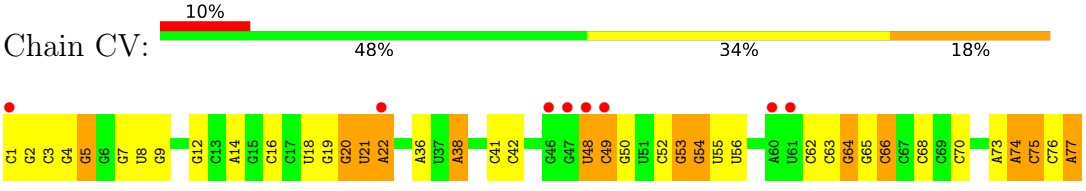
• Molecule 21: 30S Ribosomal protein THX



• Molecule 22: P-SITE tRNA

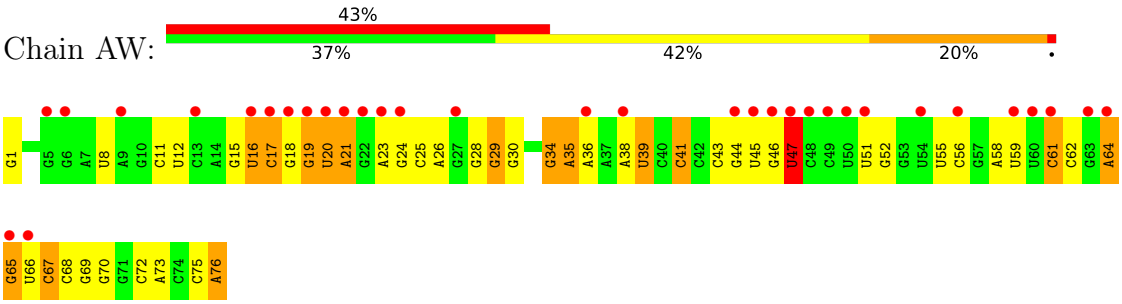


• Molecule 22: P-SITE tRNA



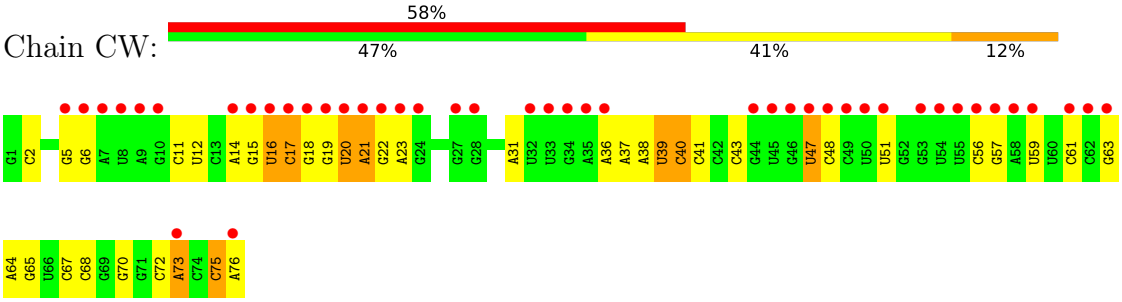
• Molecule 23: E-SITE tRNA

Chain AW:



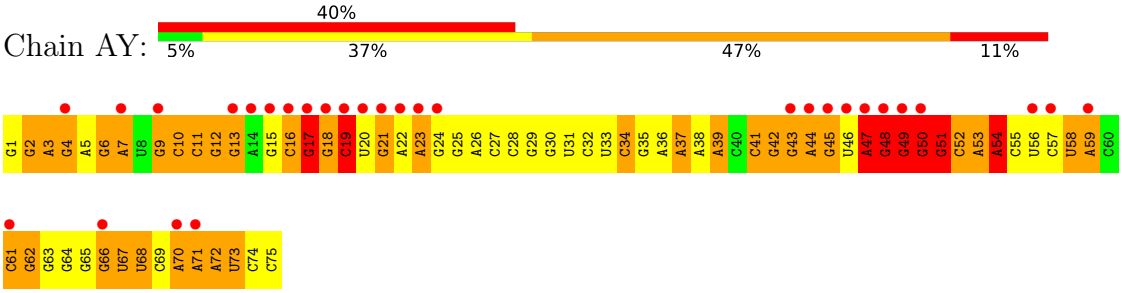
• Molecule 23: E-SITE tRNA

Chain CW:



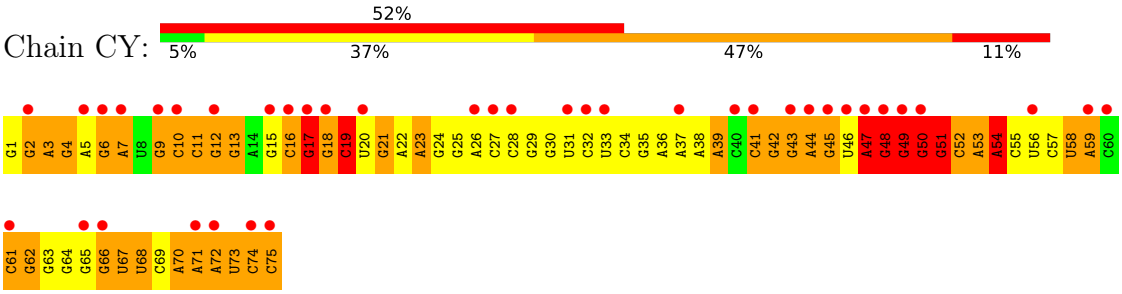
• Molecule 24: A-SITE tRNA

Chain AY:



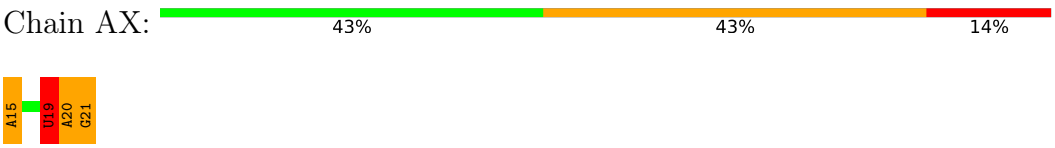
• Molecule 24: A-SITE tRNA

Chain CY:



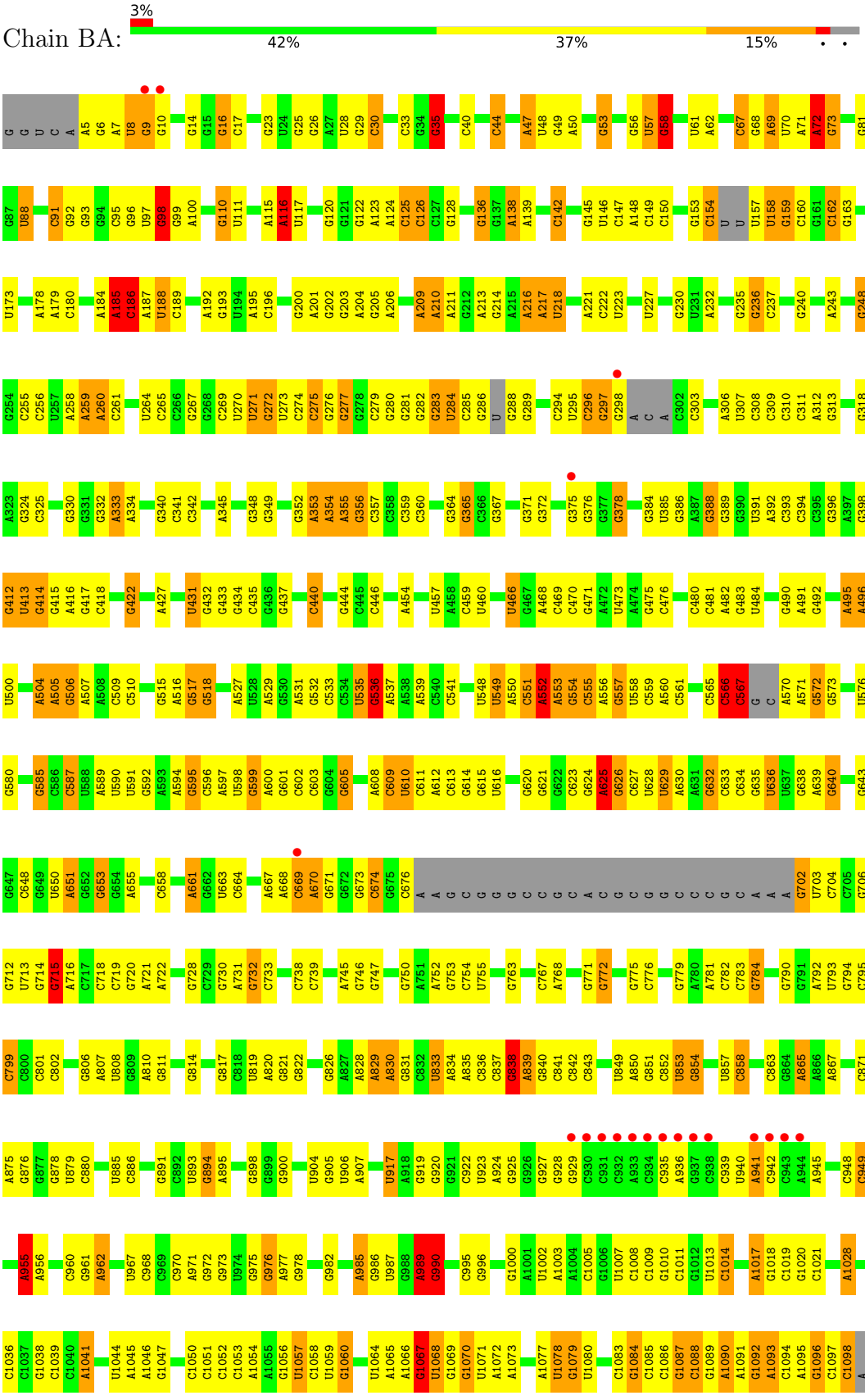
• Molecule 25: mRNA

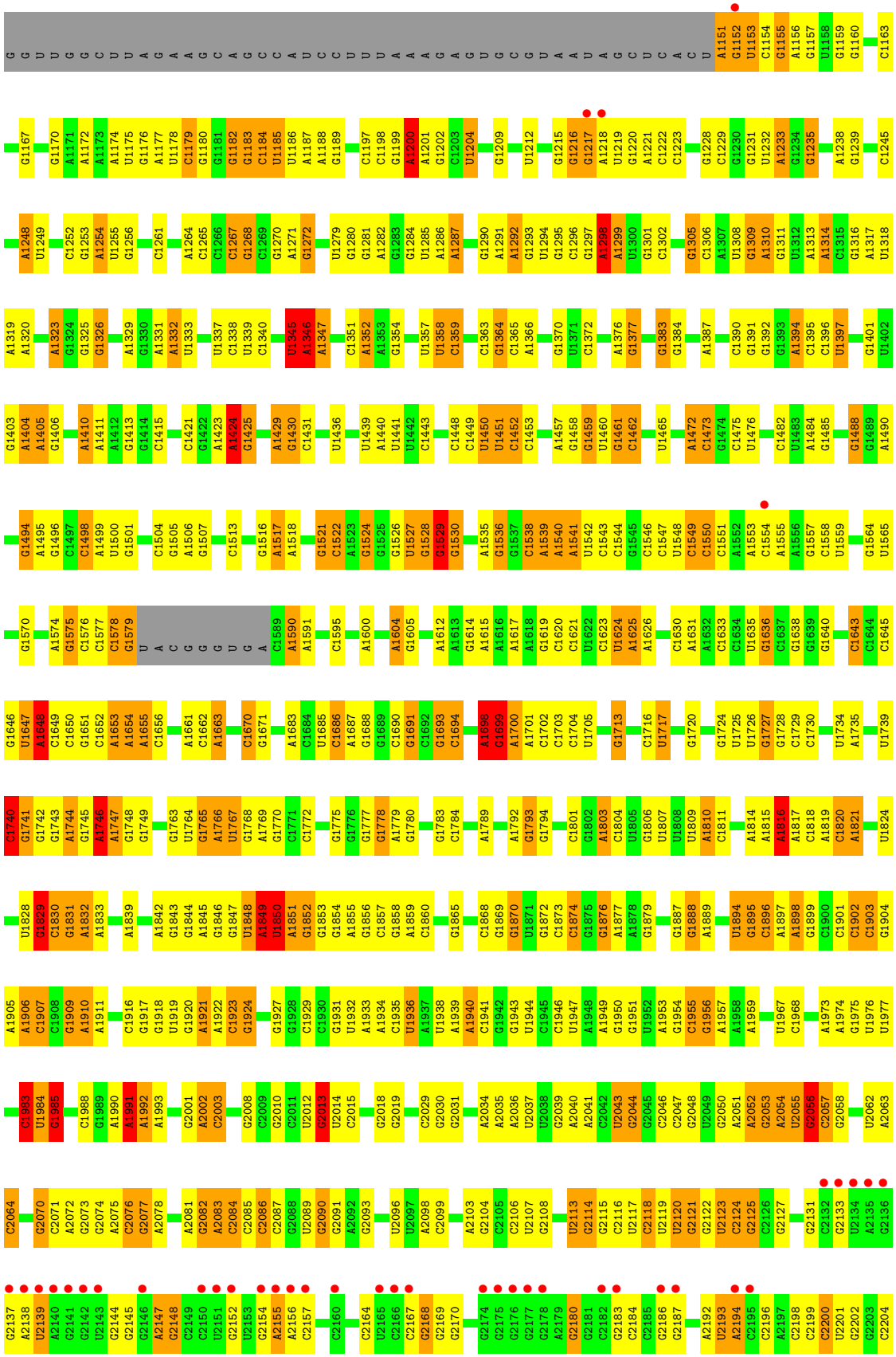
Chain AX:

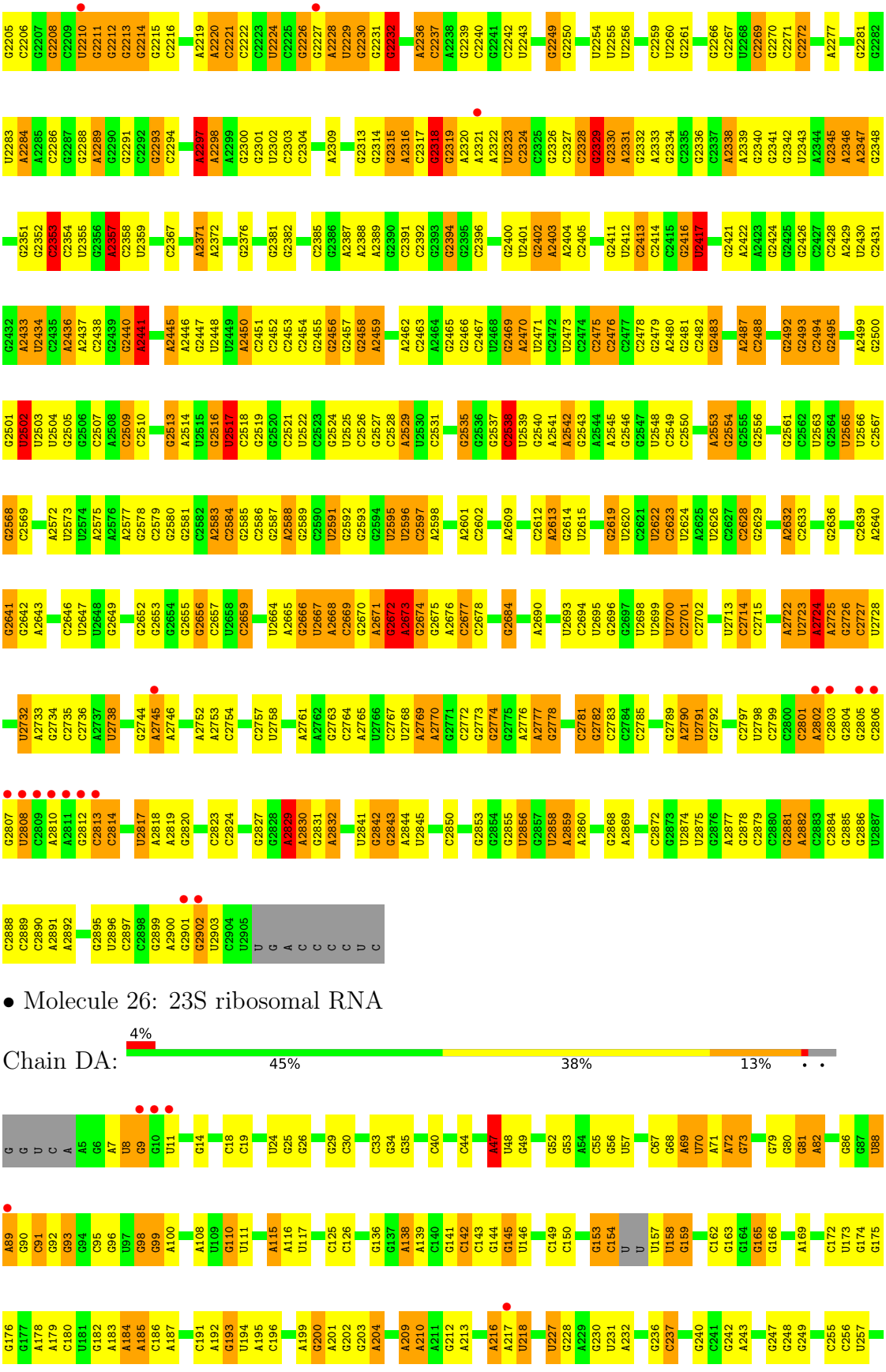


• Molecule 26: 23S ribosomal RNA

Chain BA:

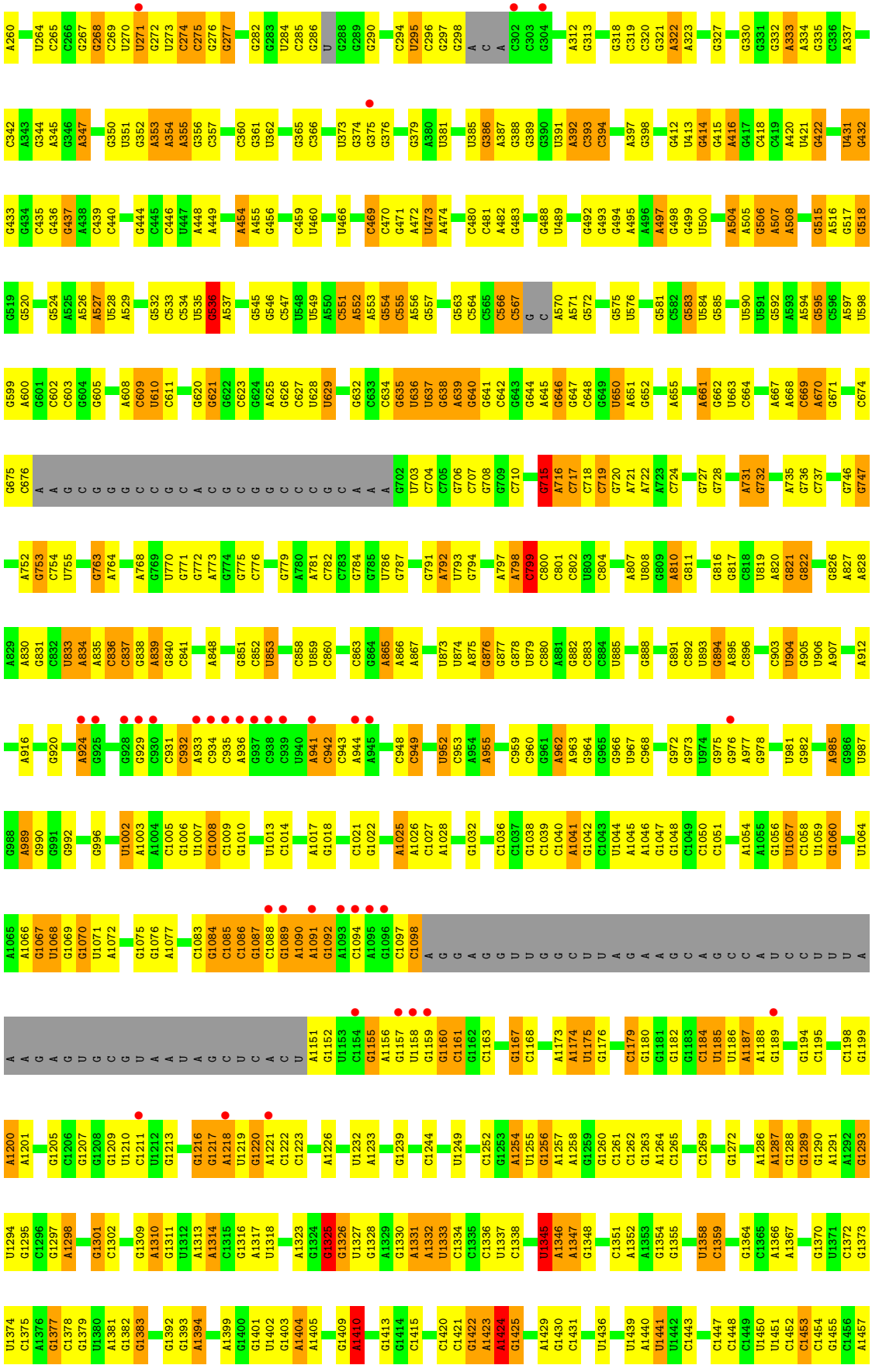


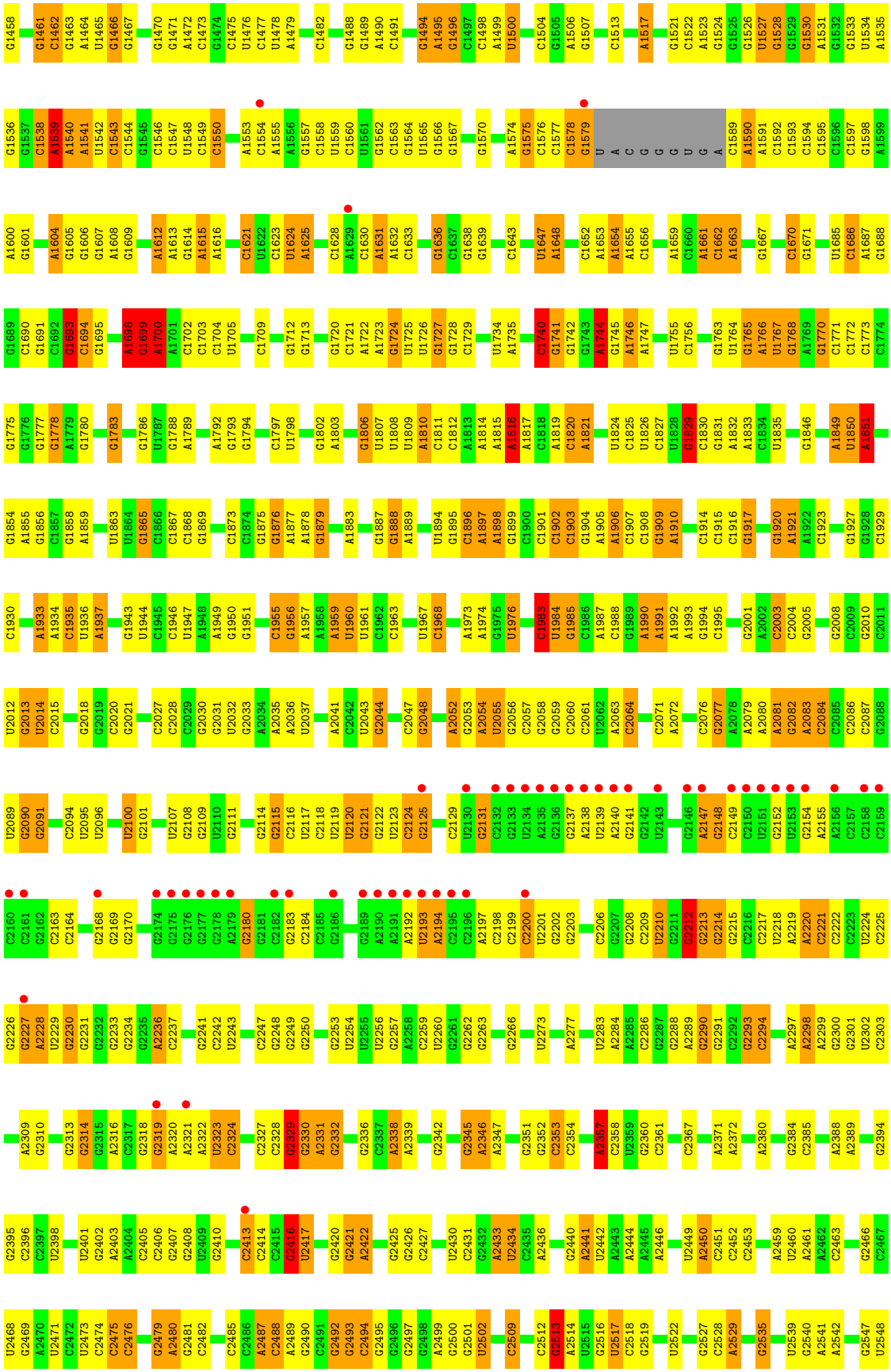


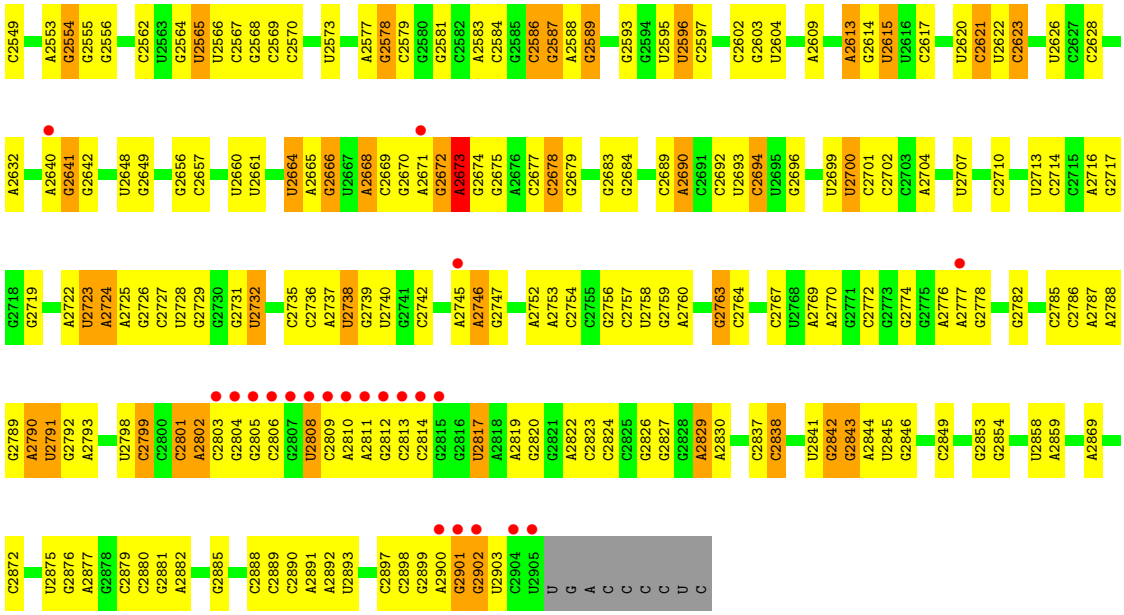


• Molecule 26: 23S ribosomal RNA

Chain DA:

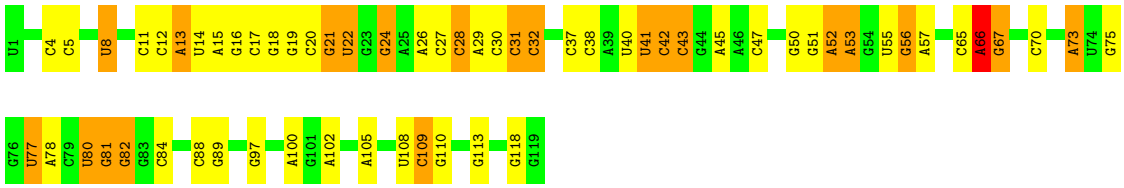






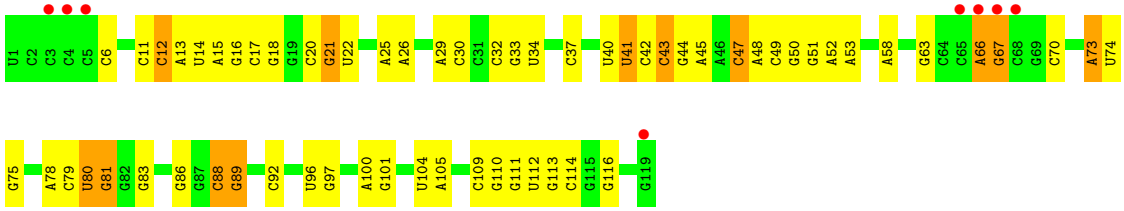
• Molecule 27: 5S ribosomal RNA

Chain BB:



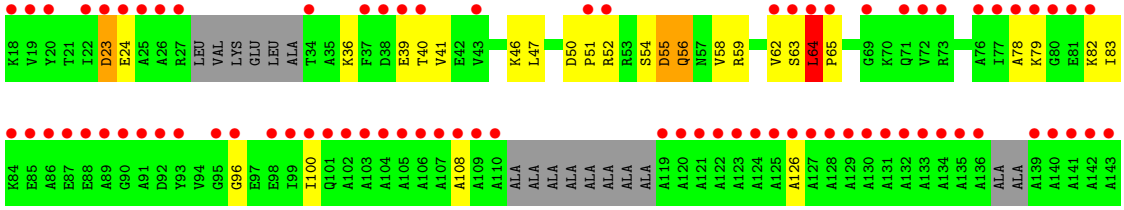
• Molecule 27: 5S ribosomal RNA

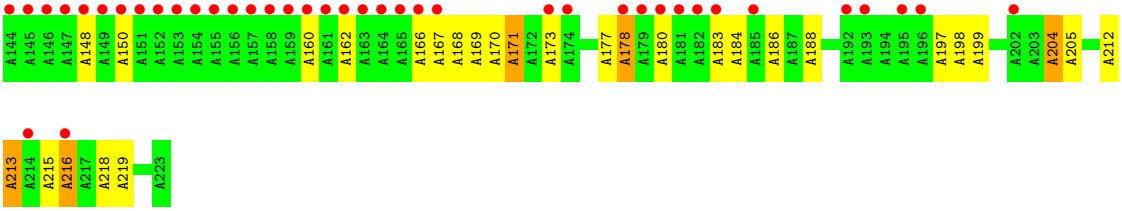
Chain DB:



• Molecule 28: 50S ribosomal protein L1

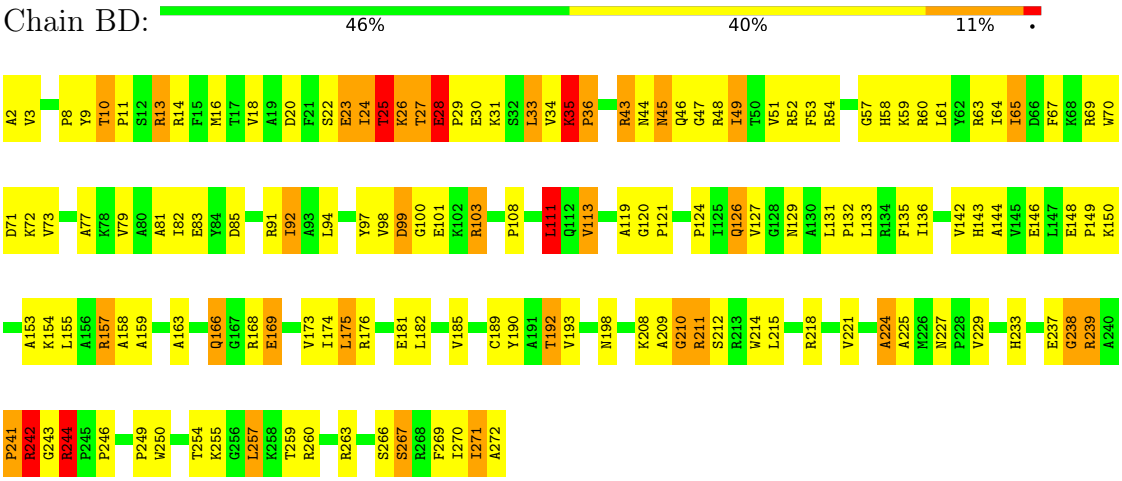
Chain BC:





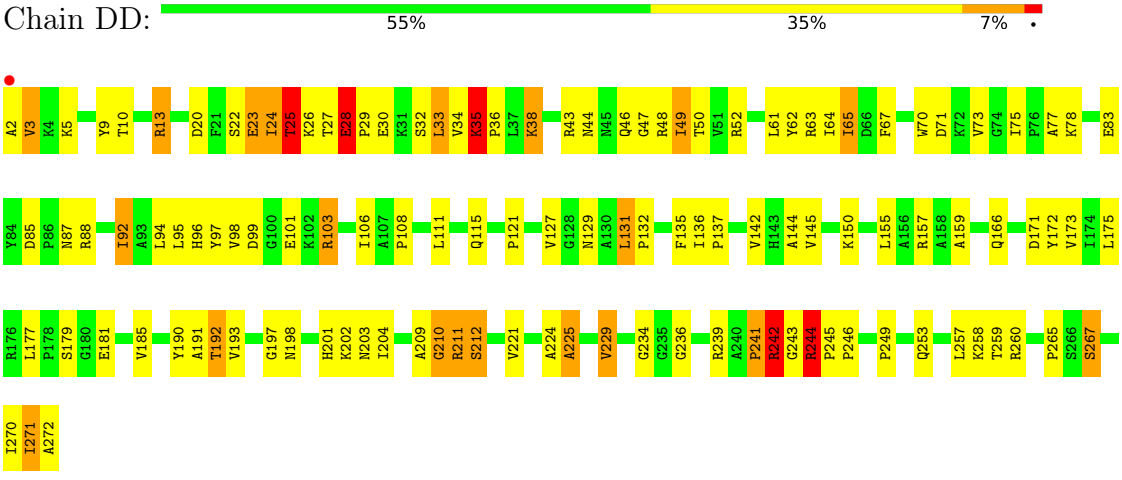
• Molecule 29: 50S ribosomal protein L2

Chain BD:



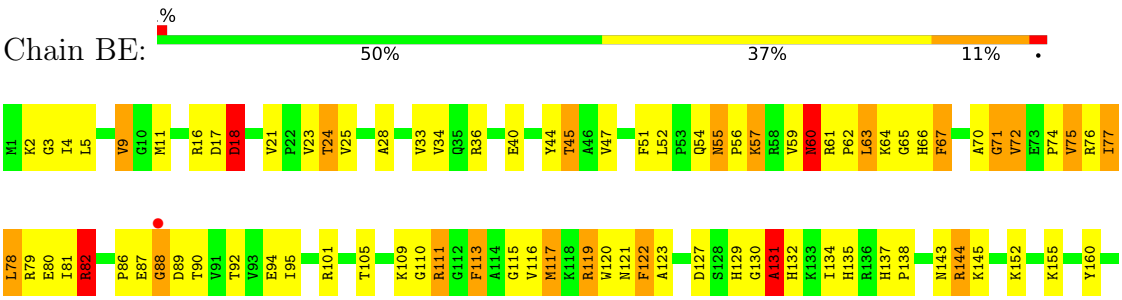
• Molecule 29: 50S ribosomal protein L2

Chain DD:



• Molecule 30: 50S ribosomal protein L3

Chain BE:

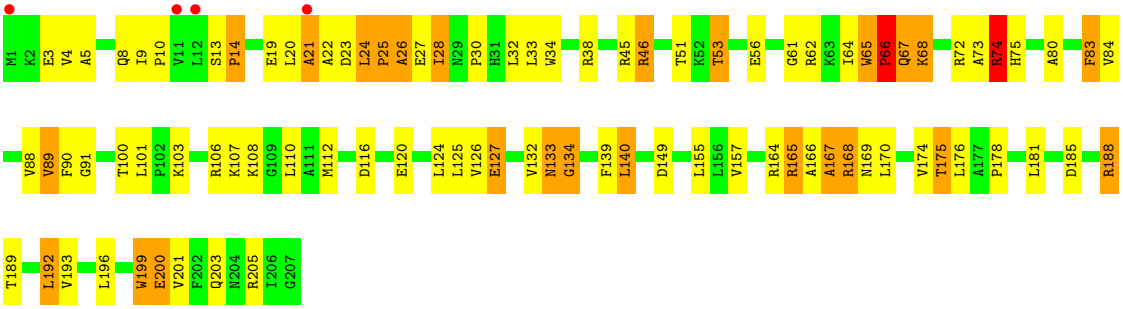


• Molecule 30: 50S ribosomal protein L3

Chain DE:

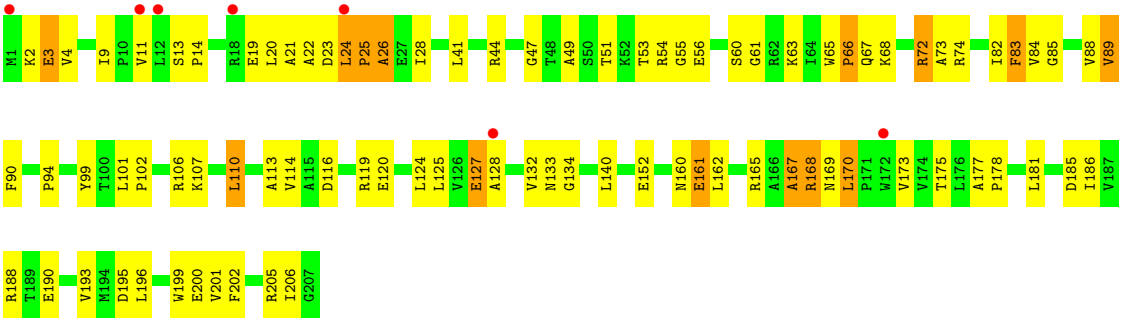
• Molecule 31: 50S ribosomal protein L4

Chain BF:



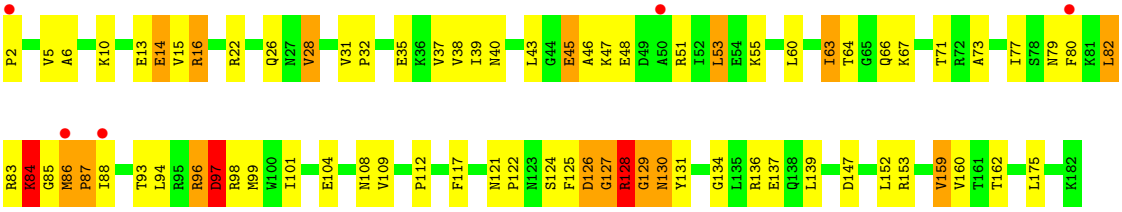
• Molecule 31: 50S ribosomal protein L4

Chain DF:



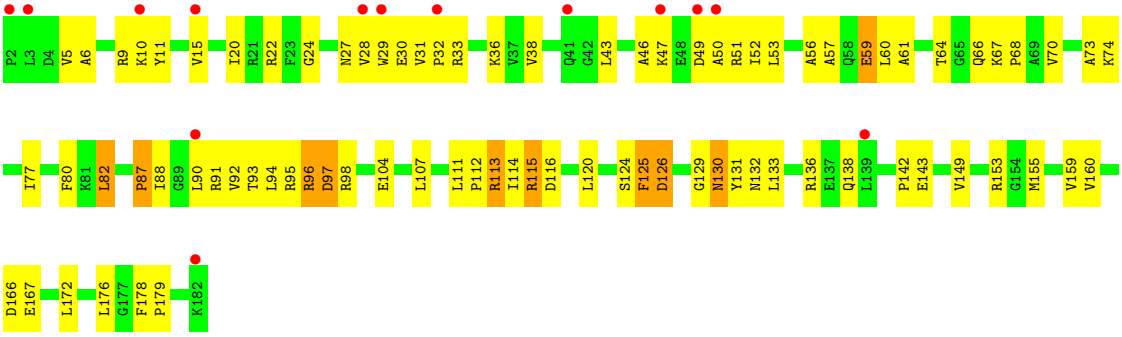
• Molecule 32: 50S ribosomal protein L5

Chain BG:



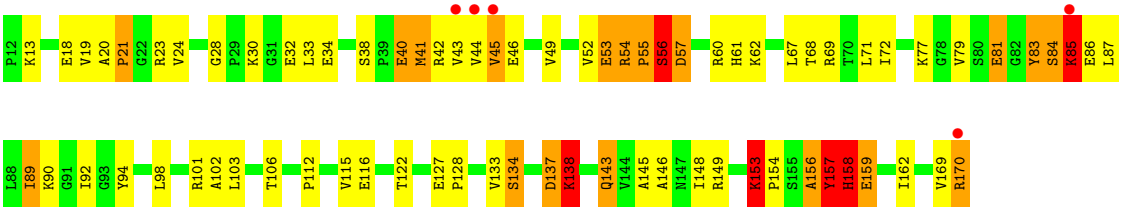
• Molecule 32: 50S ribosomal protein L5

Chain DG:



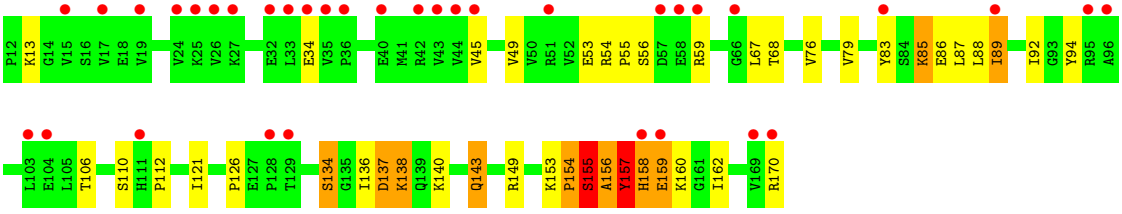
• Molecule 33: 50S ribosomal protein L6

Chain BH:



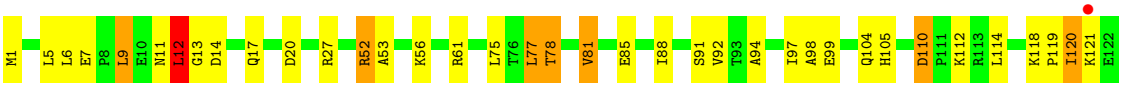
• Molecule 33: 50S ribosomal protein L6

Chain DH:



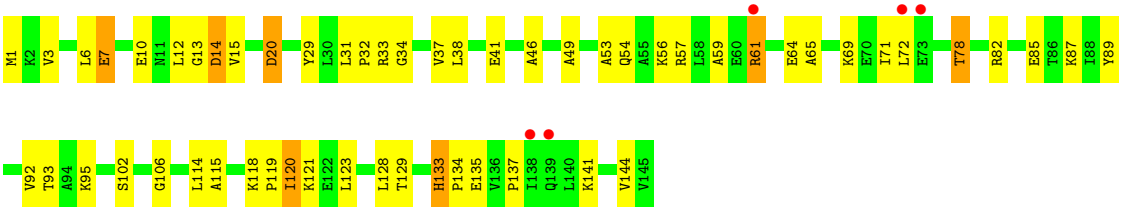
• Molecule 34: 50S ribosomal protein L9

Chain BI:



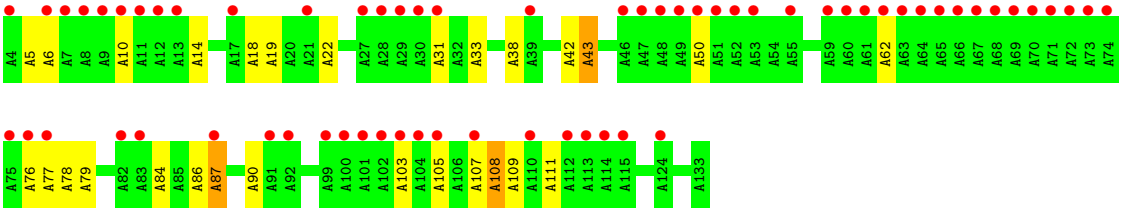
• Molecule 34: 50S ribosomal protein L9

Chain DI:



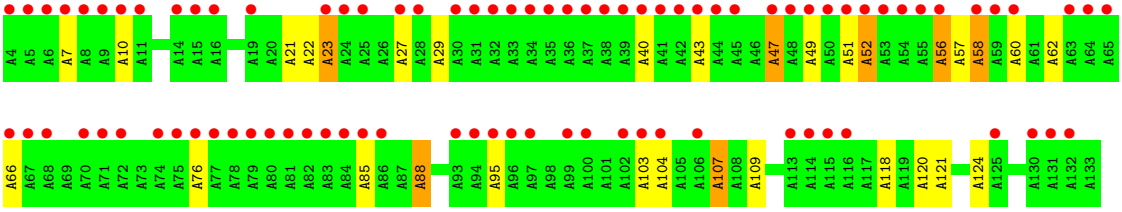
• Molecule 35: 50S ribosomal protein L10

Chain BJ:



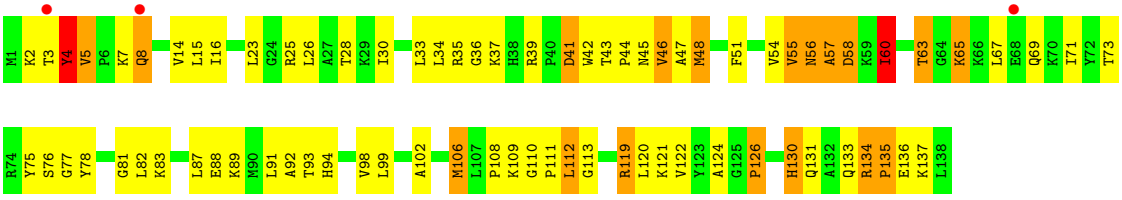
• Molecule 35: 50S ribosomal protein L10

Chain DJ:



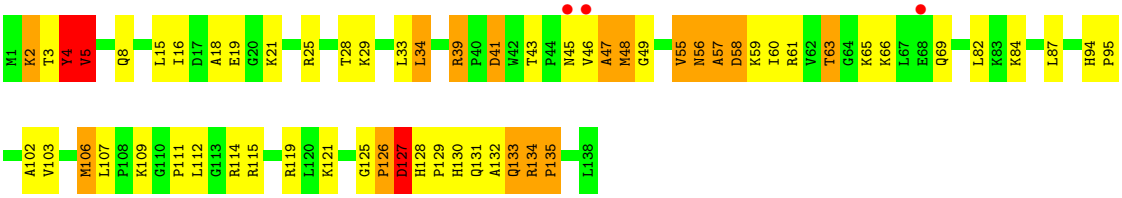
• Molecule 36: 50S ribosomal protein L13

Chain BN:



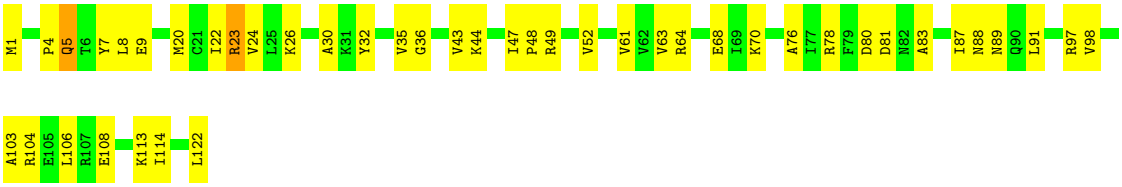
• Molecule 36: 50S ribosomal protein L13

Chain DN:



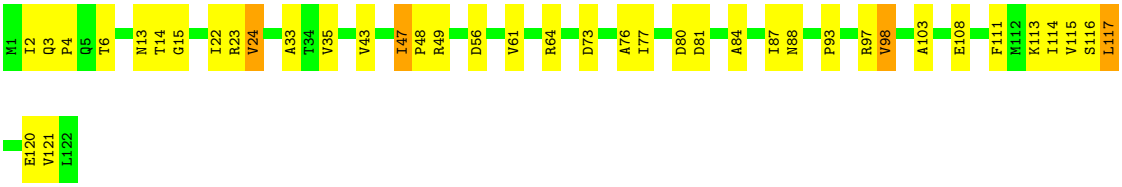
• Molecule 37: 50S ribosomal protein L14

Chain BO:



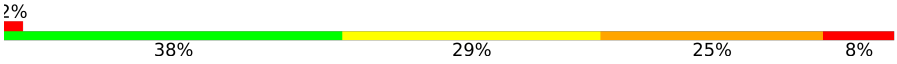
• Molecule 37: 50S ribosomal protein L14

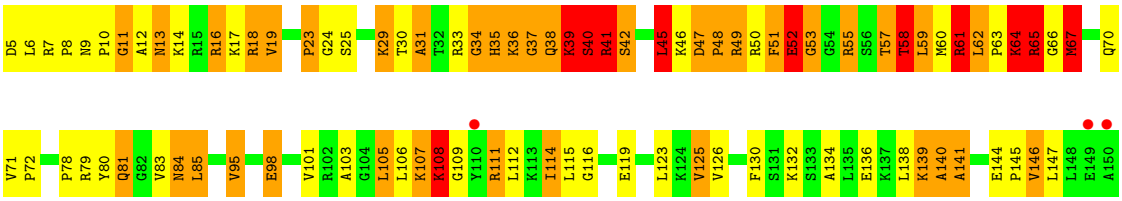
Chain DO:



• Molecule 38: 50S ribosomal protein L15

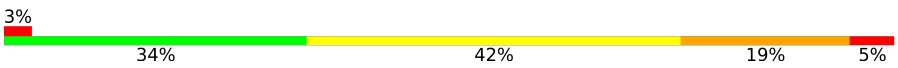
Chain BP:

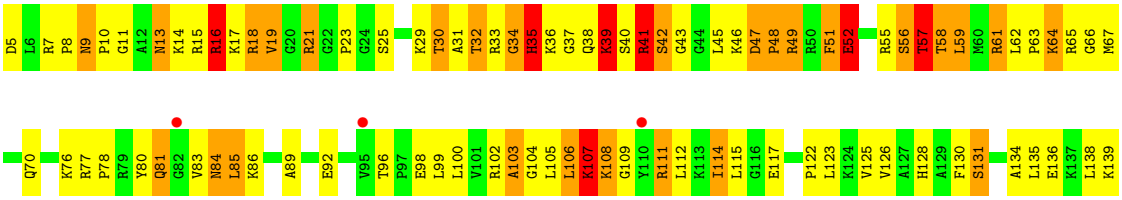


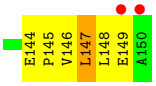


• Molecule 38: 50S ribosomal protein L15

Chain DP:

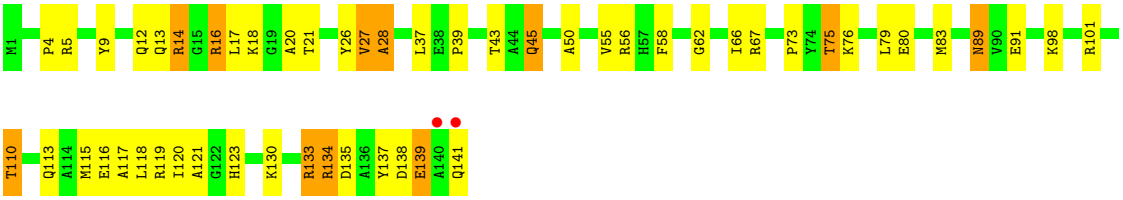






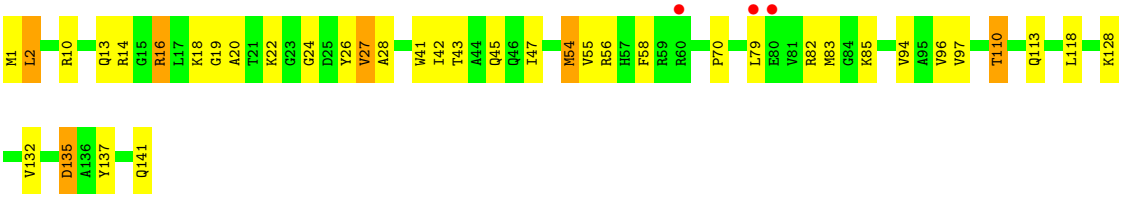
• Molecule 39: 50S ribosomal protein L16

Chain BQ:



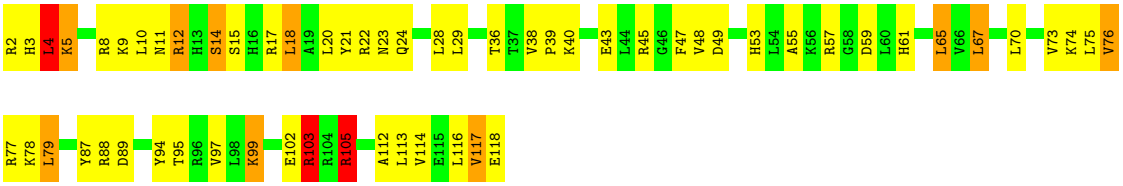
• Molecule 39: 50S ribosomal protein L16

Chain DQ:



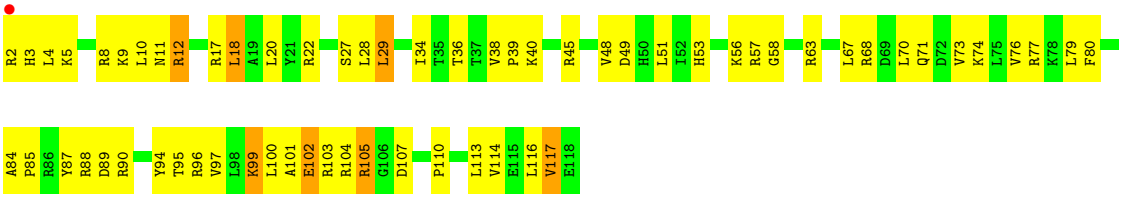
• Molecule 40: 50S ribosomal protein L17

Chain BR:



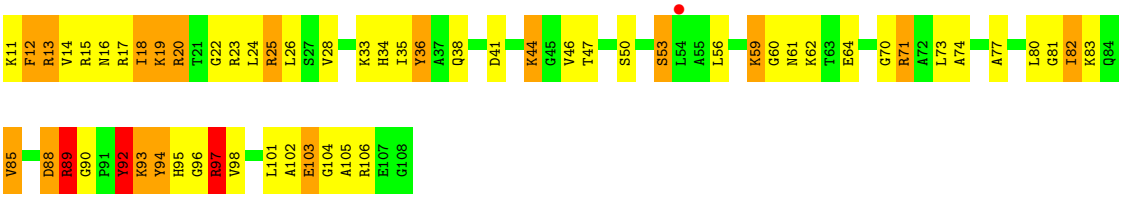
• Molecule 40: 50S ribosomal protein L17

Chain DR:



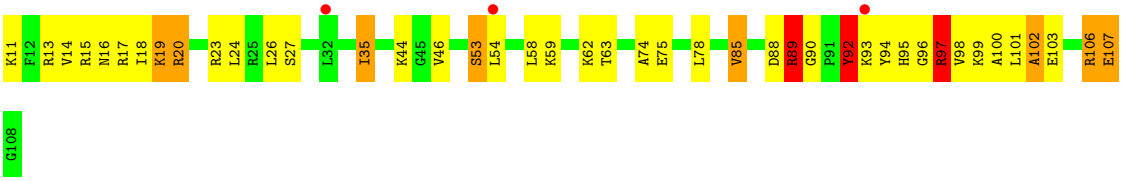
• Molecule 41: 50S ribosomal protein L18

Chain BS:



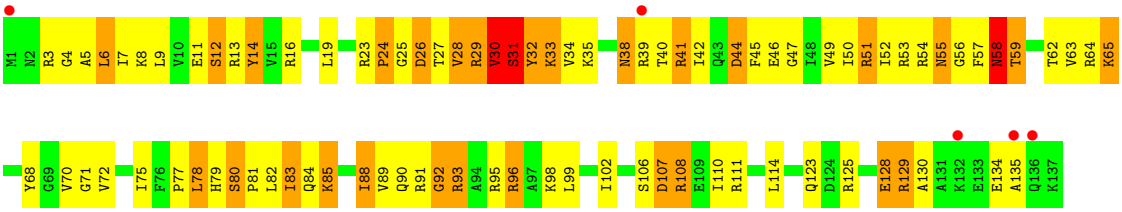
• Molecule 41: 50S ribosomal protein L18

Chain DS:



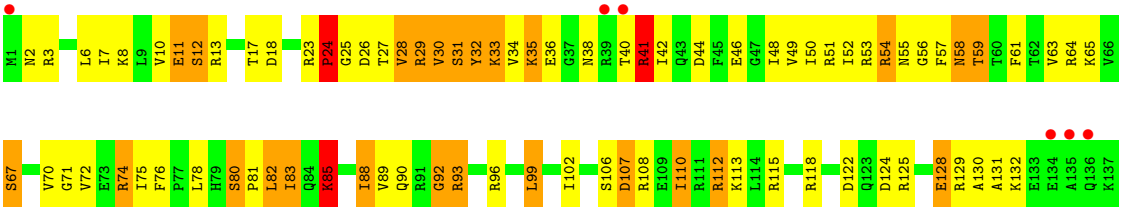
• Molecule 42: 50S ribosomal protein L19

Chain BT:



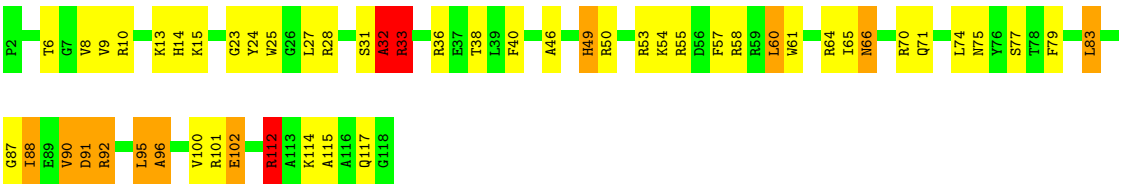
• Molecule 42: 50S ribosomal protein L19

Chain DT:



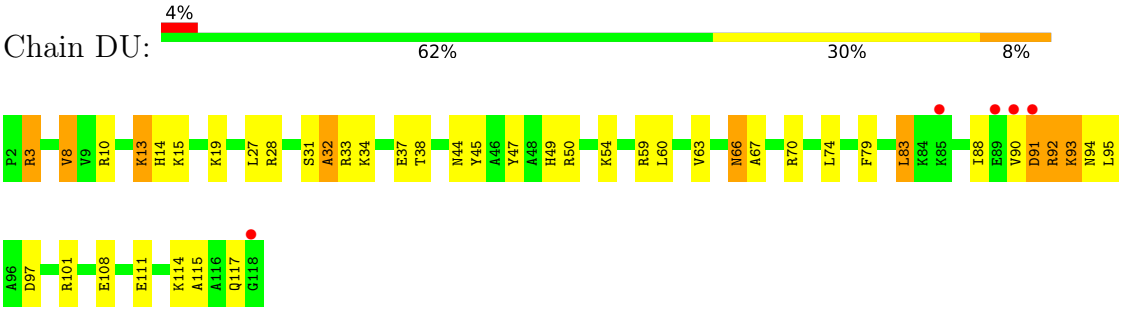
• Molecule 43: 50S ribosomal protein L20

Chain BU:



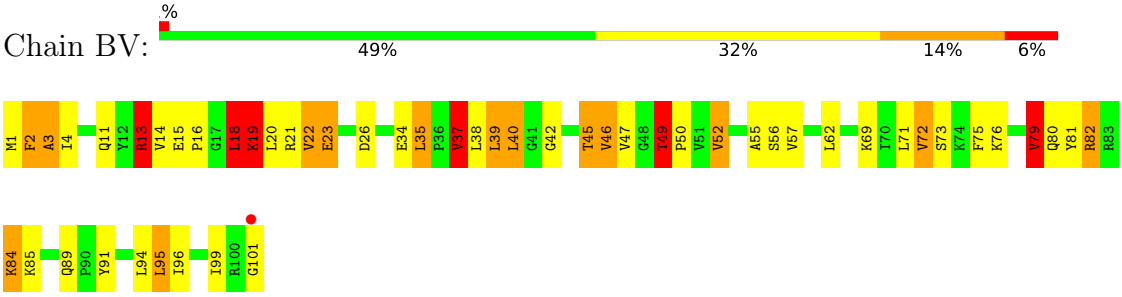
• Molecule 43: 50S ribosomal protein L20

Chain DU:



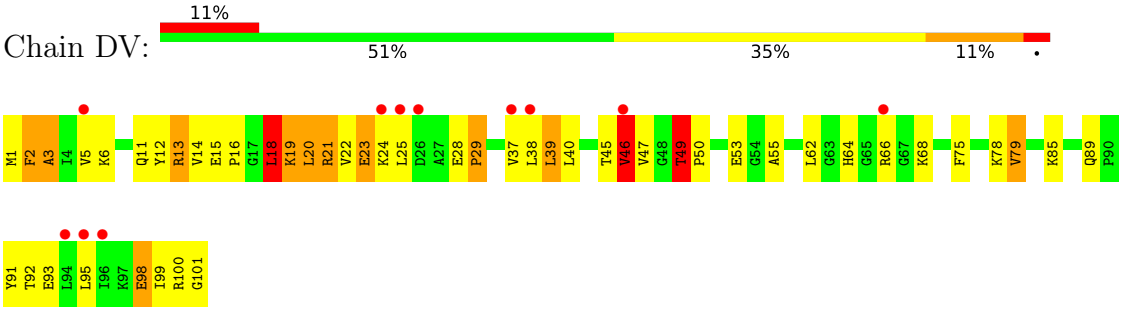
• Molecule 44: 50S ribosomal protein L21

Chain BV:



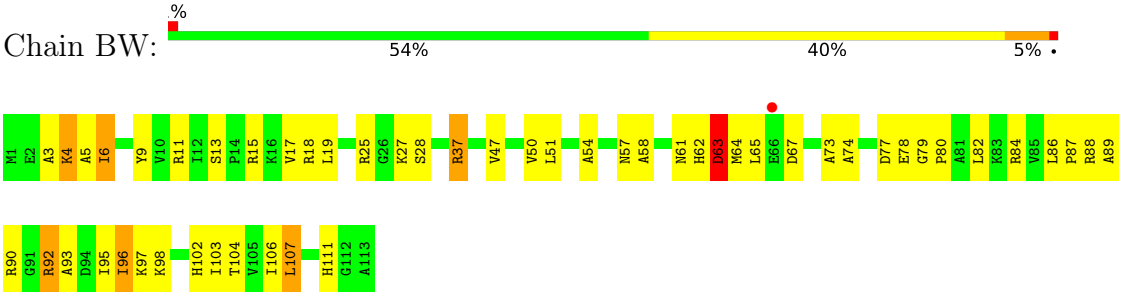
• Molecule 44: 50S ribosomal protein L21

Chain DV:



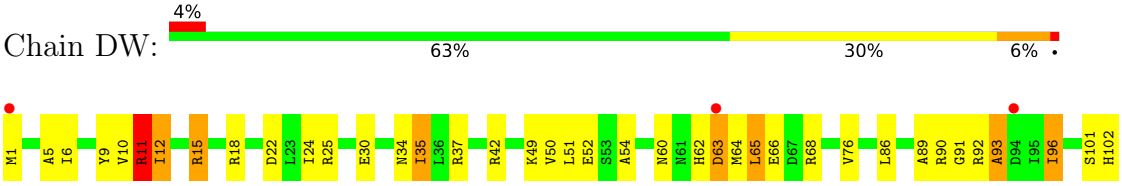
• Molecule 45: 50S ribosomal protein L22

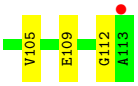
Chain BW:



• Molecule 45: 50S ribosomal protein L22

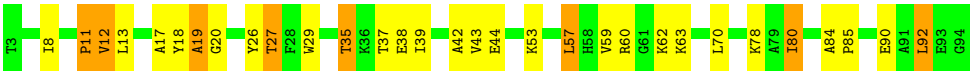
Chain DW:





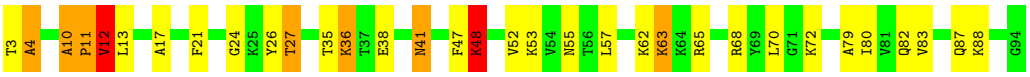
• Molecule 46: 50S ribosomal protein L23

Chain BX:



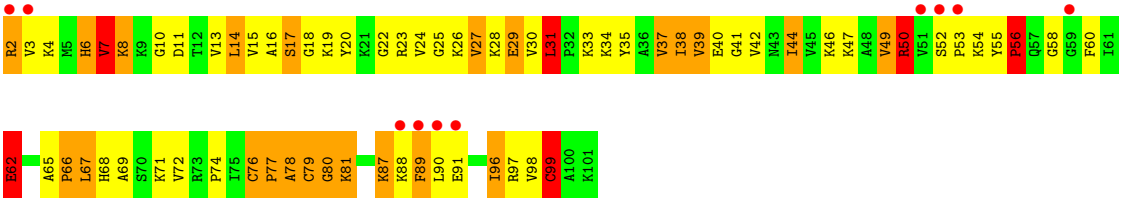
• Molecule 46: 50S ribosomal protein L23

Chain DX:



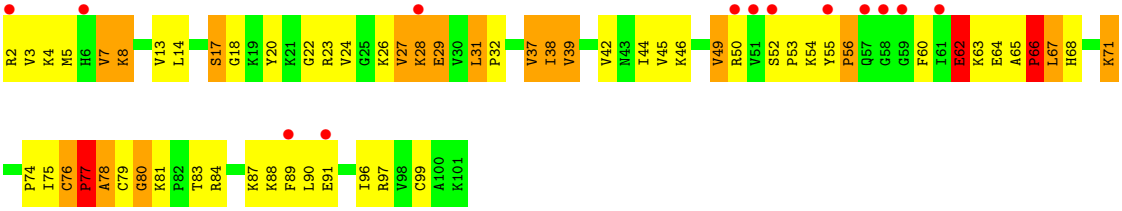
• Molecule 47: 50S ribosomal protein L24

Chain BY:



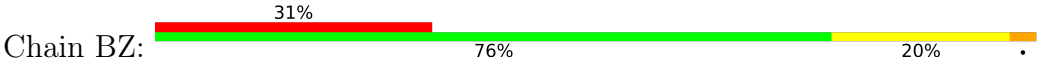
• Molecule 47: 50S ribosomal protein L24

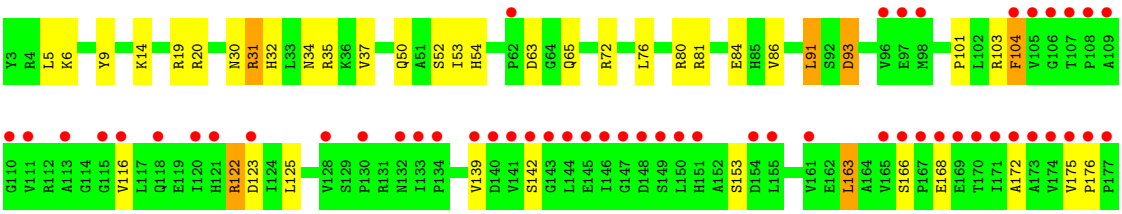
Chain DY:



• Molecule 48: 50S ribosomal protein L25

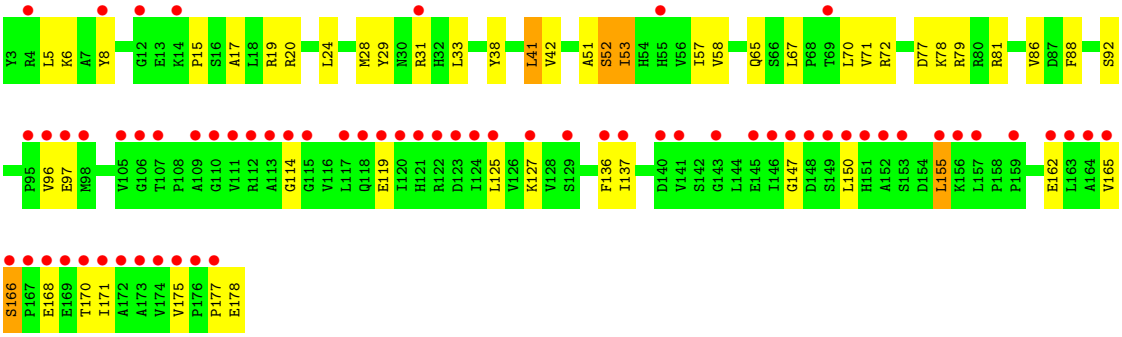
Chain BZ:





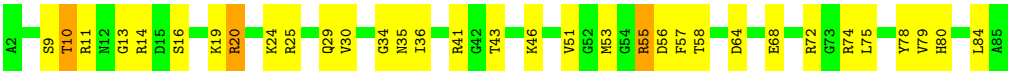
• Molecule 48: 50S ribosomal protein L25

Chain DZ:



• Molecule 49: 50S ribosomal protein L27

Chain B0:

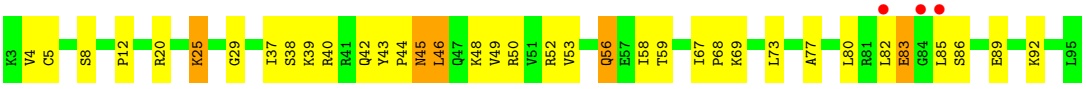


• Molecule 49: 50S ribosomal protein L27

Chain D0:

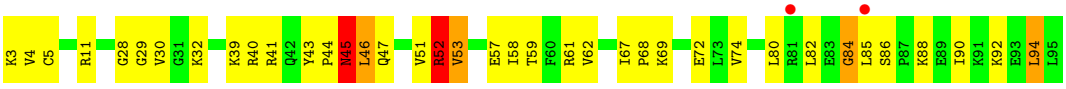
• Molecule 50: 50S ribosomal protein L28

Chain B1:



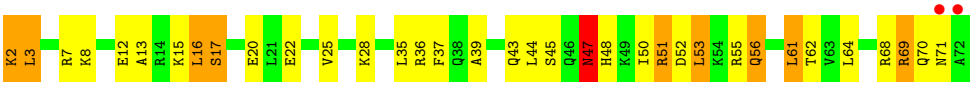
• Molecule 50: 50S ribosomal protein L28

Chain D1:



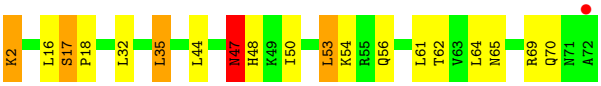
• Molecule 51: 50S ribosomal protein L29

Chain B2:



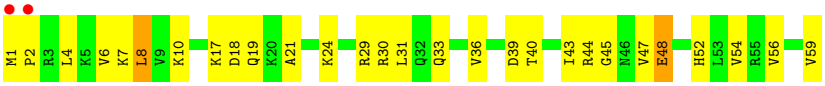
• Molecule 51: 50S ribosomal protein L29

Chain D2:



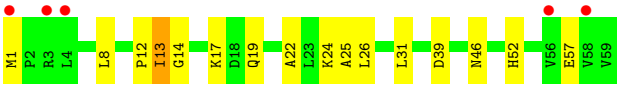
• Molecule 52: 50S ribosomal protein L30

Chain B3:



• Molecule 52: 50S ribosomal protein L30

Chain D3:

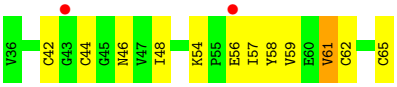


• Molecule 53: 50S ribosomal protein L31

Chain B4:

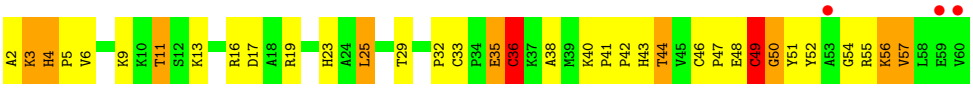
• Molecule 53: 50S ribosomal protein L31

Chain D4:



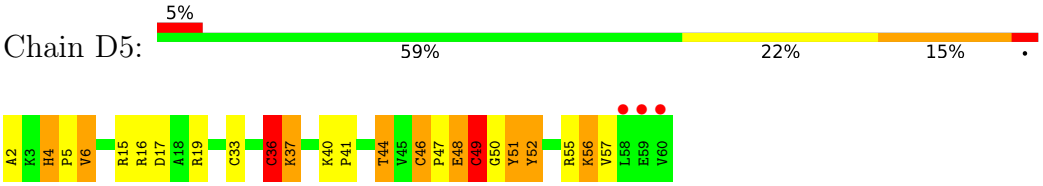
• Molecule 54: 50S ribosomal protein L32

Chain B5:



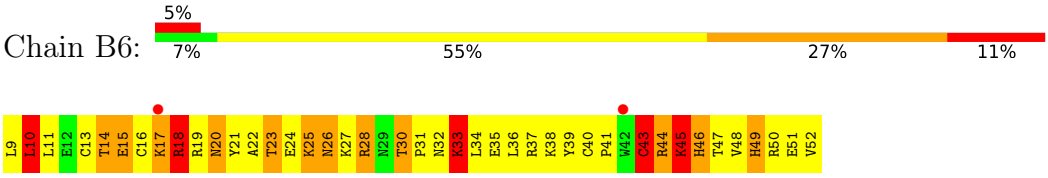
• Molecule 54: 50S ribosomal protein L32

Chain D5:



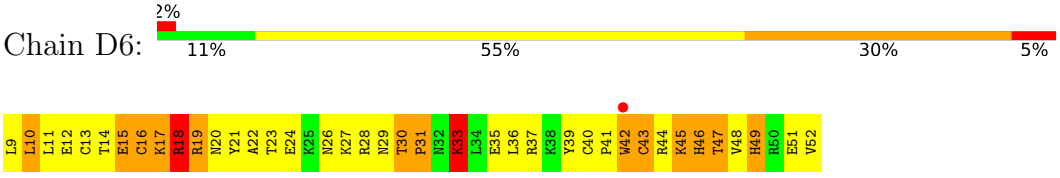
• Molecule 55: 50S ribosomal protein L33

Chain B6:



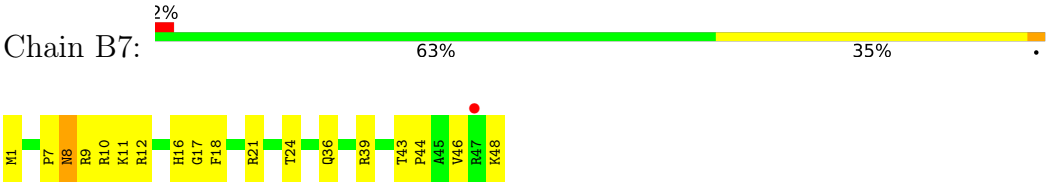
• Molecule 55: 50S ribosomal protein L33

Chain D6:



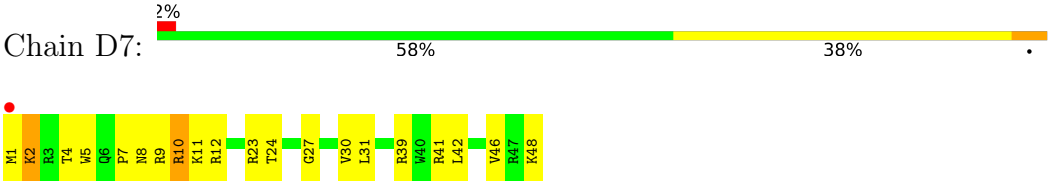
• Molecule 56: 50S ribosomal protein L34

Chain B7:



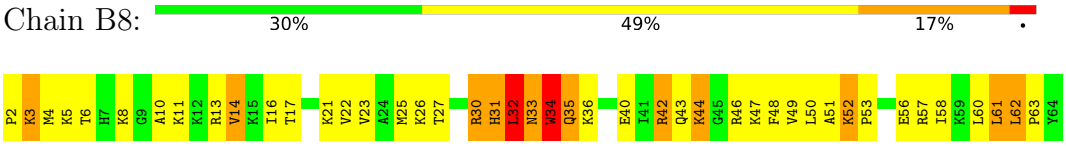
• Molecule 56: 50S ribosomal protein L34

Chain D7:



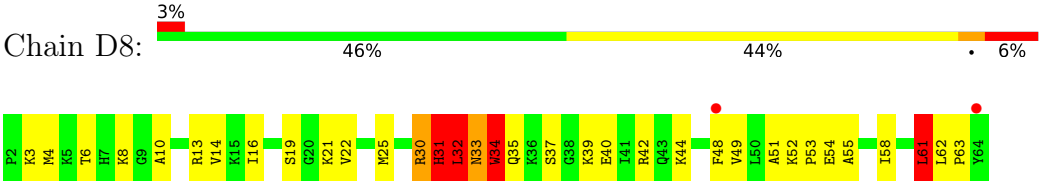
• Molecule 57: 50S ribosomal protein L35

Chain B8:



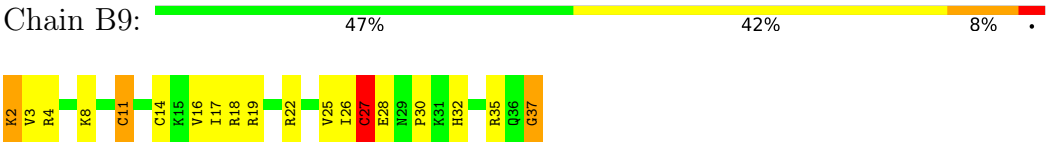
• Molecule 57: 50S ribosomal protein L35

Chain D8:



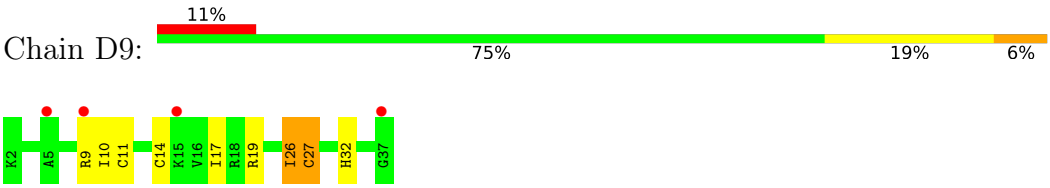
• Molecule 58: 50S ribosomal protein L36

Chain B9:



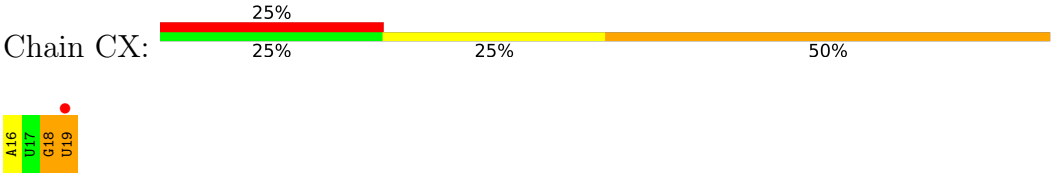
• Molecule 58: 50S ribosomal protein L36

Chain D9:



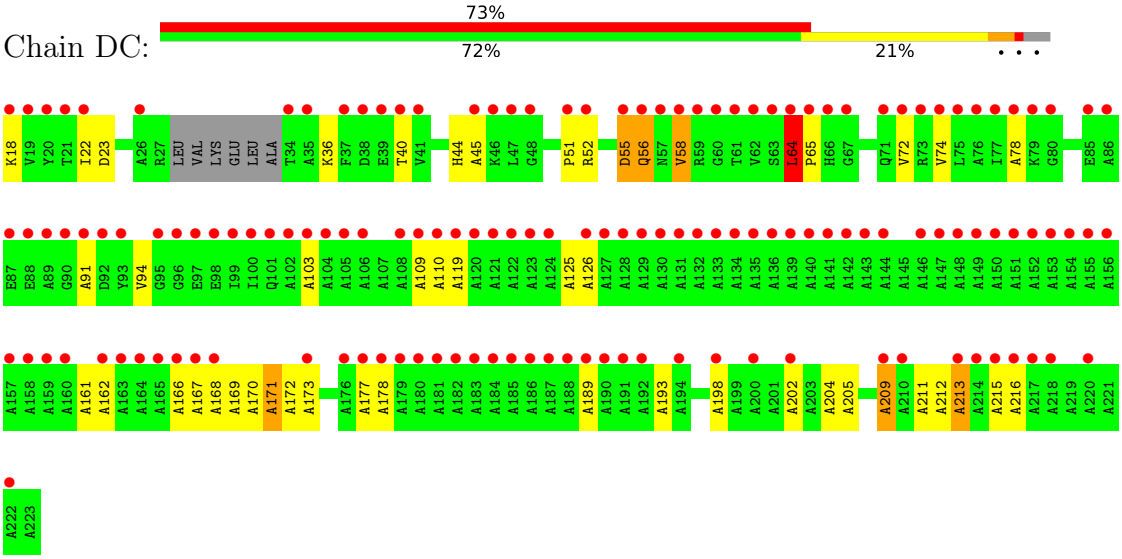
• Molecule 59: mRNA

Chain CX:



• Molecule 60: 50S Ribosomal protein L1

Chain DC:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	209.92Å 449.90Å 624.90Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	39.57 – 3.30 39.57 – 3.30	Depositor EDS
% Data completeness (in resolution range)	95.6 (39.57-3.30) 95.6 (39.57-3.30)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.81 (at 3.32Å)	Xtriage
Refinement program	REFMAC 5.8.0031	Depositor
R, R_{free}	0.225 , 0.279 0.230 , 0.279	Depositor DCC
R_{free} test set	41956 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å^2)	63.7	Xtriage
Anisotropy	0.062	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.28 , 66.5	EDS
L-test for twinning[2]	$< \|L\| > = 0.37$, $< L^2 > = 0.19$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.88	EDS
Total number of atoms	295724	wwPDB-VP
Average B, all atoms (Å^2)	81.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.64% 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

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: PSU

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	AA	0.42	4/36190 (0.0%)	0.75	26/56486 (0.0%)
1	CA	0.40	1/36190 (0.0%)	0.73	17/56486 (0.0%)
2	AB	0.43	0/1936	0.67	0/2609
2	CB	0.44	0/1936	0.64	0/2609
3	AC	0.49	0/1637	0.71	0/2205
3	CC	0.44	0/1637	0.67	0/2205
4	AD	0.54	0/1733	0.84	4/2318 (0.2%)
4	CD	0.52	0/1733	0.77	1/2318 (0.0%)
5	AE	0.45	0/1163	0.76	0/1564
5	CE	0.46	0/1163	0.72	0/1564
6	AF	0.49	0/856	0.77	1/1154 (0.1%)
6	CF	0.48	0/856	0.75	0/1154
7	AG	0.43	0/1276	0.65	0/1709
7	CG	0.40	0/1276	0.64	0/1709
8	AH	0.47	0/1136	0.72	0/1527
8	CH	0.45	0/1136	0.69	0/1527
9	AI	0.48	0/1029	0.71	0/1378
9	CI	0.42	0/1029	0.68	0/1378
10	AJ	0.47	0/808	0.76	0/1085
10	CJ	0.46	0/808	0.68	0/1085
11	AK	0.49	0/900	0.71	0/1213
11	CK	0.45	0/900	0.70	0/1213
12	AL	0.55	0/987	0.81	0/1320
12	CL	0.50	0/987	0.77	0/1320
13	AM	0.45	0/999	0.78	0/1336
13	CM	0.43	0/999	0.68	0/1336
14	AN	0.50	0/501	0.88	1/664 (0.2%)
14	CN	0.46	0/501	0.74	0/664
15	AO	0.46	0/745	0.70	0/992
15	CO	0.40	0/745	0.64	0/992
16	AP	0.47	0/717	0.74	0/963
16	CP	0.50	0/717	0.78	1/963 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AQ	0.44	0/837	0.70	0/1117
17	CQ	0.46	0/837	0.72	0/1117
18	AR	0.47	0/579	0.79	0/768
18	CR	0.47	0/579	0.69	0/768
19	AS	0.47	0/643	0.68	0/865
19	CS	0.43	0/643	0.61	0/865
20	AT	0.45	0/765	0.70	0/1007
20	CT	0.43	0/765	0.71	0/1007
21	AU	0.52	0/213	0.71	0/277
21	CU	0.53	0/213	0.68	0/277
22	AV	0.40	0/1832	0.75	1/2855 (0.0%)
22	CV	0.38	0/1832	0.72	0/2855
23	AW	0.29	0/1809	0.68	2/2819 (0.1%)
23	CW	0.27	0/1809	0.70	1/2819 (0.0%)
24	AY	0.86	17/1815 (0.9%)	0.94	1/2833 (0.0%)
24	CY	0.86	17/1815 (0.9%)	0.94	1/2833 (0.0%)
25	AX	0.31	0/147	0.72	0/227
26	BA	0.57	22/67709 (0.0%)	0.91	196/105690 (0.2%)
26	DA	0.45	5/67709 (0.0%)	0.80	93/105690 (0.1%)
27	BB	0.45	0/2853	0.81	3/4451 (0.1%)
27	DB	0.35	0/2853	0.72	0/4451
28	BC	0.46	0/1160	0.59	0/1584
29	BD	0.71	0/2155	0.95	1/2905 (0.0%)
29	DD	0.60	0/2155	0.85	0/2905
30	BE	0.70	1/1597 (0.1%)	0.91	1/2153 (0.0%)
30	DE	0.56	1/1597 (0.1%)	0.83	2/2153 (0.1%)
31	BF	0.68	0/1659	0.88	1/2244 (0.0%)
31	DF	0.52	0/1659	0.75	0/2244
32	BG	0.49	0/1499	0.74	0/2016
32	DG	0.44	0/1499	0.67	0/2016
33	BH	0.64	1/1246 (0.1%)	0.88	2/1682 (0.1%)
33	DH	0.47	0/1246	0.67	1/1682 (0.1%)
34	BI	0.48	0/1147	0.75	1/1551 (0.1%)
34	DI	0.47	0/1147	0.72	0/1551
35	BJ	0.51	0/650	0.55	0/907
35	DJ	0.44	0/650	0.53	0/907
36	BN	0.70	0/1132	0.96	0/1525
36	DN	0.49	0/1132	0.77	0/1525
37	BO	0.57	0/943	0.81	0/1269
37	DO	0.53	0/943	0.78	0/1269
38	BP	0.71	0/1131	1.09	3/1504 (0.2%)
38	DP	0.57	0/1131	0.98	2/1504 (0.1%)
39	BQ	0.58	0/1143	0.85	1/1527 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
39	DQ	0.46	0/1143	0.68	0/1527
40	BR	0.70	0/974	0.98	1/1302 (0.1%)
40	DR	0.54	0/974	0.87	0/1302
41	BS	0.60	0/779	0.98	0/1036
41	DS	0.48	0/779	0.79	0/1036
42	BT	0.59	0/1156	0.97	1/1542 (0.1%)
42	DT	0.58	0/1156	0.95	0/1542
43	BU	0.76	0/975	0.98	1/1297 (0.1%)
43	DU	0.50	0/975	0.75	0/1297
44	BV	0.69	0/790	1.03	4/1057 (0.4%)
44	DV	0.47	0/790	0.76	0/1057
45	BW	0.65	0/907	0.95	1/1216 (0.1%)
45	DW	0.52	0/907	0.77	0/1216
46	BX	0.67	0/740	0.94	1/993 (0.1%)
46	DX	0.52	0/740	0.74	0/993
47	BY	0.68	0/789	0.99	3/1051 (0.3%)
47	DY	0.53	0/789	0.83	0/1051
48	BZ	0.49	0/1436	0.72	0/1949
48	DZ	0.44	0/1436	0.66	0/1949
49	B0	0.61	0/671	0.85	0/892
49	D0	0.51	0/671	0.76	0/892
50	B1	0.62	0/741	0.84	0/984
50	D1	0.53	0/741	0.84	1/984 (0.1%)
51	B2	0.57	0/600	0.86	0/793
51	D2	0.48	0/600	0.79	0/793
52	B3	0.55	0/473	0.87	0/634
52	D3	0.44	0/473	0.70	0/634
53	B4	0.53	0/229	0.79	0/309
53	D4	0.49	0/229	0.75	0/309
54	B5	0.73	0/473	1.08	0/639
54	D5	0.57	0/473	0.88	0/639
55	B6	0.96	1/388 (0.3%)	2.06	4/518 (0.8%)
55	D6	0.83	0/388	1.06	2/518 (0.4%)
56	B7	0.73	0/427	0.96	0/561
56	D7	0.58	0/427	0.85	0/561
57	B8	0.75	0/516	1.12	2/679 (0.3%)
57	D8	0.54	0/516	0.88	1/679 (0.1%)
58	B9	0.69	0/302	1.00	2/397 (0.5%)
58	D9	0.45	0/302	0.73	0/397
59	CX	0.52	0/94	0.72	0/144
60	DC	0.48	0/1160	0.55	0/1584
All	All	0.50	70/321233 (0.0%)	0.81	388/480213 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	AA	1	0
1	CA	1	0
2	AB	0	1
13	AM	0	1
13	CM	0	1
23	AW	1	0
23	CW	1	0
26	BA	22	0
26	DA	20	0
29	BD	0	3
29	DD	0	2
30	BE	0	2
30	DE	0	1
33	BH	0	1
38	BP	0	10
38	DP	0	4
40	BR	0	2
40	DR	0	1
41	BS	0	1
42	BT	0	3
43	BU	0	3
44	BV	0	2
47	BY	0	1
55	B6	0	1
55	D6	0	1
57	B8	0	1
All	All	46	42

All (70) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	B6	47	THR	C-N	8.32	1.53	1.34
24	AY	50	G	C1'-N9	-6.96	1.37	1.46
24	CY	50	G	C1'-N9	-6.95	1.37	1.46
26	BA	1816	A	O3'-P	6.86	1.69	1.61
24	CY	66	G	C1'-N9	-6.73	1.37	1.46
24	AY	66	G	C1'-N9	-6.71	1.37	1.46
24	AY	51	G	C1'-N9	-6.68	1.37	1.46
24	CY	51	G	C1'-N9	-6.66	1.37	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	BA	1346	A	O3'-P	6.58	1.69	1.61
24	CY	62	G	C1'-N9	-6.46	1.37	1.46
24	AY	4	G	C1'-N9	-6.46	1.37	1.46
24	CY	4	G	C1'-N9	-6.45	1.37	1.46
24	AY	62	G	C1'-N9	-6.43	1.37	1.46
24	AY	54	A	C1'-N9	-6.11	1.38	1.46
24	CY	54	A	C1'-N9	-6.09	1.38	1.46
24	CY	17	G	C1'-N9	-6.07	1.38	1.46
24	CY	48	G	C1'-N9	-6.04	1.38	1.46
24	AY	17	G	C1'-N9	-6.03	1.38	1.46
24	AY	48	G	C1'-N9	-6.03	1.38	1.46
26	DA	1851	A	O3'-P	-6.02	1.53	1.61
26	BA	1200	A	O3'-P	5.96	1.68	1.61
26	DA	1987	A	O3'-P	-5.96	1.54	1.61
33	BH	157	TYR	CB-CG	5.93	1.60	1.51
30	BE	127	ASP	CB-CG	5.83	1.64	1.51
24	CY	49	G	O3'-P	5.83	1.68	1.61
24	AY	49	G	O3'-P	5.82	1.68	1.61
24	AY	73	U	C1'-N1	5.79	1.57	1.48
26	BA	483	G	O3'-P	-5.79	1.54	1.61
24	CY	73	U	C1'-N1	5.78	1.57	1.48
26	DA	2234	G	O3'-P	-5.77	1.54	1.61
26	BA	2517	U	O3'-P	5.75	1.68	1.61
1	CA	788	U	O3'-P	5.75	1.68	1.61
26	BA	1365	C	O3'-P	-5.73	1.54	1.61
26	BA	86	G	O3'-P	-5.71	1.54	1.61
26	BA	1429	A	O3'-P	-5.71	1.54	1.61
1	AA	575	G	O3'-P	5.64	1.68	1.61
26	DA	839	A	O3'-P	-5.63	1.54	1.61
30	DE	127	ASP	CB-CG	5.59	1.63	1.51
24	AY	39	A	C1'-N9	-5.55	1.39	1.46
24	CY	39	A	C1'-N9	-5.53	1.39	1.46
1	AA	1349	A	O3'-P	-5.49	1.54	1.61
24	CY	10	C	C1'-N1	5.44	1.56	1.48
24	AY	10	C	C1'-N1	5.43	1.56	1.48
26	BA	1500	U	O3'-P	-5.43	1.54	1.61
26	BA	2700	U	O3'-P	5.42	1.67	1.61
24	AY	49	G	C1'-N9	-5.41	1.39	1.46
26	BA	2456	G	O3'-P	-5.40	1.54	1.61
24	CY	49	G	C1'-N9	-5.39	1.39	1.46
24	CY	47	A	C1'-N9	-5.39	1.39	1.46
24	AY	47	A	C1'-N9	-5.37	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	BA	853	U	O3'-P	5.33	1.67	1.61
1	AA	676	A	O3'-P	-5.30	1.54	1.61
1	AA	1398	A	O3'-P	-5.28	1.54	1.61
26	BA	783	C	O3'-P	-5.26	1.54	1.61
26	BA	1713	G	O3'-P	-5.24	1.54	1.61
26	BA	2353	C	O3'-P	-5.23	1.54	1.61
24	AY	59	A	C1'-N9	-5.20	1.39	1.46
24	CY	59	A	C1'-N9	-5.17	1.39	1.46
26	BA	236	G	O3'-P	-5.15	1.54	1.61
24	CY	58	U	C1'-N1	5.12	1.56	1.48
24	AY	58	U	C1'-N1	5.10	1.56	1.48
26	BA	2724	A	O3'-P	-5.10	1.55	1.61
26	BA	2659	C	O3'-P	-5.09	1.55	1.61
26	DA	2838	C	O3'-P	-5.09	1.55	1.61
26	BA	1590	A	O3'-P	5.08	1.67	1.61
26	BA	2086	C	O3'-P	-5.07	1.55	1.61
26	BA	587	C	O3'-P	-5.03	1.55	1.61
26	BA	1309	G	O3'-P	5.02	1.67	1.61
24	AY	19	C	C1'-N1	5.01	1.56	1.48
24	CY	19	C	C1'-N1	5.00	1.56	1.48

All (388) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	B6	45	LYS	O-C-N	-30.98	73.14	122.70
55	B6	45	LYS	CA-C-N	22.24	166.13	117.20
26	BA	2513	G	O5'-P-OP1	-13.46	93.59	105.70
26	BA	1850	U	O5'-P-OP1	-12.67	94.30	105.70
26	BA	1955	C	C2'-C3'-O3'	12.16	136.24	109.50
26	DA	1345	U	C2'-C3'-O3'	11.83	135.53	109.50
26	BA	2297	A	N9-C1'-C2'	11.76	129.29	114.00
26	BA	1424	A	N9-C1'-C2'	11.62	129.10	114.00
26	DA	989	A	N9-C1'-C2'	11.32	128.72	114.00
26	BA	1529	G	C2'-C3'-O3'	11.20	134.14	109.50
26	DA	2013	G	C2'-C3'-O3'	11.20	134.14	109.50
26	DA	2297	A	N9-C1'-C2'	11.08	128.41	114.00
26	DA	1955	C	C2'-C3'-O3'	10.95	133.58	109.50
26	BA	2013	G	C2'-C3'-O3'	10.88	133.44	109.50
26	DA	715	G	C2'-C3'-O3'	10.78	133.21	109.50
26	BA	1233	A	O5'-P-OP1	-10.58	96.18	105.70
26	DA	1590	A	N9-C1'-C2'	10.42	127.55	114.00
26	DA	98	G	N9-C1'-C2'	10.24	127.31	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	BA	1740	C	C2'-C3'-O3'	10.16	131.85	109.50
26	BA	2236	A	C2'-C3'-O3'	10.15	131.84	109.50
26	DA	1983	C	N1-C1'-C2'	9.91	126.88	114.00
26	BA	1698	A	C2'-C3'-O3'	9.82	131.10	109.50
26	DA	839	A	O5'-P-OP2	-9.70	96.97	105.70
26	DA	2587	G	O5'-P-OP2	-9.67	97.00	105.70
26	DA	1345	U	N1-C1'-C2'	9.43	126.26	114.00
26	BA	1693	G	O5'-P-OP1	-9.40	97.24	105.70
26	BA	354	A	C2'-C3'-O3'	9.34	130.06	109.50
26	BA	715	G	C4'-C3'-O3'	9.30	131.60	113.00
26	BA	1590	A	N9-C1'-C2'	9.20	125.96	114.00
14	AN	40	CYS	CA-CB-SG	9.19	130.54	114.00
26	BA	1345	U	N1-C1'-C2'	9.11	125.84	114.00
26	BA	2212	G	C2'-C3'-O3'	8.95	129.19	109.50
26	BA	2013	G	O5'-P-OP1	-8.94	97.65	105.70
26	DA	497	A	C2'-C3'-O3'	8.81	128.89	109.50
26	BA	1983	C	N1-C1'-C2'	8.80	125.45	114.00
23	CW	47	U	N1-C1'-C2'	8.77	125.40	114.00
26	BA	1699	G	C2'-C3'-O3'	8.75	128.75	109.50
26	BA	2517	U	C2'-C3'-O3'	8.72	128.69	109.50
26	BA	2808	U	N1-C1'-C2'	8.71	125.33	114.00
26	DA	1662	C	O5'-P-OP1	-8.65	97.91	105.70
26	DA	1740	C	C4'-C3'-O3'	8.65	130.29	113.00
26	BA	854	G	O5'-P-OP2	-8.61	97.95	105.70
4	AD	12	CYS	CA-CB-SG	8.58	129.44	114.00
1	CA	560	G	O5'-P-OP2	-8.55	98.01	105.70
26	DA	2623	C	O5'-P-OP2	-8.54	98.02	105.70
26	BA	1345	U	C5'-C4'-C3'	8.50	129.60	116.00
26	DA	2673	A	N9-C1'-C2'	8.49	125.04	114.00
26	BA	2417	U	O5'-P-OP2	-8.45	98.09	105.70
1	AA	1498	U	C2'-C3'-O3'	8.43	128.04	109.50
26	DA	715	G	N9-C1'-C2'	8.39	124.91	114.00
26	DA	536	G	O5'-P-OP1	-8.35	98.19	105.70
26	DA	2212	G	C2'-C3'-O3'	8.32	127.81	109.50
4	AD	9	CYS	CA-CB-SG	8.27	128.89	114.00
26	BA	598	U	O5'-P-OP2	-8.24	98.28	105.70
26	BA	1643	C	C2'-C3'-O3'	8.24	127.62	109.50
26	BA	72	A	O5'-P-OP2	8.23	120.58	110.70
55	D6	10	LEU	CA-CB-CG	8.23	134.23	115.30
26	BA	497	A	C4'-C3'-O3'	8.21	129.42	113.00
26	DA	715	G	C5'-C4'-O4'	8.16	118.89	109.10
22	AV	76	C	O5'-P-OP1	-8.15	98.37	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	DA	1740	C	C2'-C3'-O3'	8.10	127.33	109.50
26	DA	2236	A	C2'-C3'-O3'	8.10	127.32	109.50
26	BA	2076	C	O5'-P-OP2	-8.07	98.44	105.70
1	CA	262	G	C2'-C3'-O3'	8.06	127.24	109.50
26	BA	1816	A	O4'-C1'-C2'	-8.05	97.75	105.80
26	DA	534	C	O5'-P-OP2	-8.04	98.47	105.70
26	BA	1983	C	C5'-C4'-O4'	8.03	118.73	109.10
26	BA	772	G	O5'-P-OP1	-7.80	98.68	105.70
26	BA	2655	G	C2'-C3'-O3'	7.79	126.63	109.50
1	AA	819	A	O5'-P-OP1	-7.78	98.70	105.70
26	BA	2509	C	O5'-P-OP1	-7.77	98.71	105.70
26	BA	589	A	O5'-P-OP2	-7.73	98.74	105.70
26	DA	2212	G	C4'-C3'-O3'	7.66	128.32	113.00
26	BA	497	A	C2'-C3'-O3'	7.63	126.30	109.50
26	DA	1829	G	C2'-C3'-O3'	7.56	126.13	109.50
26	BA	873	U	O5'-P-OP2	-7.55	98.90	105.70
26	BA	1693	G	O5'-P-OP2	7.53	119.74	110.70
1	AA	1067	A	C2'-C3'-O3'	7.53	126.07	109.50
26	BA	2029	C	O5'-P-OP2	-7.53	98.92	105.70
26	BA	990	G	O5'-P-OP1	7.46	119.65	110.70
26	DA	1424	A	N9-C1'-C2'	7.46	123.69	114.00
26	BA	1345	U	C5'-C4'-O4'	7.45	118.03	109.10
26	BA	1849	A	C2'-C3'-O3'	7.44	125.87	109.50
26	BA	702	G	O5'-P-OP1	7.42	119.61	110.70
26	BA	2586	C	O5'-P-OP1	-7.40	99.04	105.70
26	BA	1345	U	C4'-C3'-O3'	7.34	127.67	113.00
26	BA	2232	G	C2'-C3'-O3'	7.31	125.58	109.50
26	DA	1699	G	C2'-C3'-O3'	7.31	125.58	109.50
26	BA	1294	U	O5'-P-OP2	-7.29	99.13	105.70
26	BA	2513	G	O5'-P-OP2	7.26	119.41	110.70
23	AW	47	U	N1-C1'-C2'	7.24	123.41	114.00
4	CD	9	CYS	CA-CB-SG	7.23	127.01	114.00
26	BA	1202	G	O5'-P-OP2	-7.22	99.20	105.70
55	B6	10	LEU	CA-CB-CG	7.21	131.88	115.30
26	DA	833	U	O5'-P-OP1	7.20	119.34	110.70
26	DA	2609	A	O5'-P-OP2	-7.19	99.23	105.70
1	AA	412	A	N9-C1'-C2'	7.19	123.35	114.00
26	BA	1985	G	O5'-P-OP1	-7.19	99.23	105.70
26	BA	1233	A	O5'-P-OP2	7.18	119.31	110.70
26	BA	2673	A	N9-C1'-C2'	7.16	123.31	114.00
55	D6	46	HIS	N-CA-C	7.15	130.30	111.00
26	DA	497	A	C4'-C3'-O3'	7.14	127.28	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	BA	1717	U	O5'-P-OP1	-7.13	99.28	105.70
1	AA	266	G	C2'-C3'-O3'	7.13	125.18	109.50
1	CA	493	A	C2'-C3'-O3'	7.13	125.18	109.50
26	BA	2509	C	O5'-P-OP2	7.12	119.24	110.70
26	BA	1991	A	O5'-P-OP2	-7.06	99.35	105.70
26	BA	625	A	C2'-C3'-O3'	7.05	125.02	109.50
26	DA	2517	U	C2'-C3'-O3'	7.01	124.92	109.50
4	AD	26	CYS	CA-CB-SG	6.98	126.56	114.00
26	BA	16	G	O5'-P-OP2	-6.97	99.42	105.70
26	BA	2623	C	O5'-P-OP2	6.97	119.06	110.70
26	DA	1700	A	O5'-P-OP1	-6.96	99.43	105.70
26	BA	2609	A	O5'-P-OP2	-6.94	99.45	105.70
26	BA	2514	A	O5'-P-OP2	-6.94	99.46	105.70
26	BA	1648	A	O5'-P-OP1	-6.93	99.46	105.70
57	B8	32	LEU	CA-CB-CG	6.92	131.22	115.30
26	BA	1067	G	C2'-C3'-O3'	6.92	124.77	113.70
26	BA	2043	U	O5'-P-OP2	-6.92	99.47	105.70
26	DA	2623	C	O5'-P-OP1	6.91	118.99	110.70
26	BA	1345	U	O4'-C1'-N1	6.91	113.73	108.20
26	DA	1983	C	C2'-C3'-O3'	6.86	124.68	113.70
26	BA	989	A	N9-C1'-C2'	6.86	122.92	114.00
26	DA	536	G	O5'-P-OP2	6.81	118.88	110.70
1	CA	408	A	N9-C1'-C2'	6.81	122.85	114.00
26	BA	185	A	O5'-P-OP1	-6.79	99.59	105.70
26	BA	2458	G	O5'-P-OP1	-6.79	99.59	105.70
26	BA	2829	A	C4'-C3'-O3'	-6.79	95.15	109.40
1	CA	1050	A	C2'-C3'-O3'	6.78	124.55	113.70
26	BA	2609	A	O5'-P-OP1	6.77	118.83	110.70
26	BA	186	C	O5'-P-OP1	-6.77	99.61	105.70
26	BA	719	C	O5'-P-OP2	-6.75	99.62	105.70
26	BA	2588	A	O5'-P-OP2	-6.73	99.64	105.70
26	BA	186	C	O5'-P-OP2	6.73	118.77	110.70
26	DA	2449	U	O5'-P-OP2	-6.72	99.65	105.70
26	BA	72	A	O5'-P-OP1	-6.71	99.66	105.70
47	BY	31	LEU	C-N-CD	-6.70	105.87	120.60
46	BX	57	LEU	CA-CB-CG	6.68	130.66	115.30
26	BA	2329	G	C2'-C3'-O3'	6.67	124.37	113.70
26	BA	2082	G	O5'-P-OP1	-6.63	99.73	105.70
44	BV	13	ARG	NE-CZ-NH1	6.63	123.61	120.30
1	CA	6	U	C5'-C4'-O4'	6.63	117.06	109.10
26	BA	858	C	O5'-P-OP1	-6.59	99.77	105.70
26	BA	1302	C	O5'-P-OP2	-6.57	99.78	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	509	A	C2'-C3'-O3'	6.56	124.19	113.70
26	BA	2672	G	N9-C1'-C2'	6.53	122.49	114.00
26	BA	2058	G	O5'-P-OP2	-6.51	99.84	105.70
26	BA	1017	A	O5'-P-OP1	-6.50	99.85	105.70
26	BA	1816	A	N9-C1'-C2'	6.50	122.45	114.00
26	BA	1829	G	C2'-C3'-O3'	6.49	124.09	113.70
26	DA	1802	G	N9-C1'-C2'	-6.47	104.88	112.00
26	BA	2595	U	C2'-C3'-O3'	-6.46	95.30	109.50
26	BA	1694	C	O5'-P-OP1	-6.45	99.90	105.70
30	DE	127	ASP	CB-CG-OD2	6.45	124.10	118.30
26	BA	1656	C	O5'-P-OP2	-6.44	99.90	105.70
26	BA	535	U	O5'-P-OP1	-6.43	99.91	105.70
26	BA	2623	C	O5'-P-OP1	-6.42	99.92	105.70
26	BA	536	G	O4'-C1'-N9	6.41	113.33	108.20
27	BB	66	A	C2'-C3'-O3'	6.38	123.90	113.70
1	AA	785	G	C2'-C3'-O3'	6.37	123.89	113.70
26	DA	799	C	O5'-P-OP2	-6.36	99.98	105.70
26	BA	413	U	C4'-C3'-O3'	6.36	125.71	113.00
26	BA	1248	A	C4'-C3'-O3'	-6.35	96.07	109.40
1	CA	560	G	O5'-P-OP1	6.34	118.31	110.70
26	BA	2212	G	C4'-C3'-O3'	6.32	125.64	113.00
26	DA	787	G	O5'-P-OP2	-6.32	100.01	105.70
27	BB	19	G	C2'-C3'-O3'	6.32	123.81	113.70
26	DA	2100	U	O5'-P-OP1	-6.31	100.02	105.70
26	BA	2808	U	O4'-C1'-N1	6.30	113.24	108.20
26	BA	1424	A	O4'-C1'-N9	6.30	113.24	108.20
26	BA	2538	C	C2'-C3'-O3'	6.29	123.76	113.70
26	BA	1746	A	C2'-C3'-O3'	6.29	123.76	113.70
26	DA	715	G	C5'-C4'-C3'	6.28	126.04	116.00
26	DA	2115	G	C2'-C3'-O3'	6.27	123.73	113.70
26	BA	1991	A	C1'-O4'-C4'	-6.22	104.92	109.90
26	DA	1983	C	C5'-C4'-O4'	6.22	116.56	109.10
1	AA	243	A	C2'-C3'-O3'	6.17	123.57	113.70
26	BA	2271	C	O5'-P-OP2	-6.17	100.15	105.70
26	BA	30	C	O5'-P-OP2	-6.15	100.16	105.70
26	DA	191	C	C2'-C3'-O3'	6.15	123.54	113.70
1	AA	1065	U	C2'-C3'-O3'	6.12	123.50	113.70
26	BA	259	A	C2'-C3'-O3'	6.12	123.49	113.70
26	BA	1850	U	O5'-P-OP2	6.11	118.03	110.70
26	DA	1810	A	O5'-P-OP1	6.11	118.03	110.70
26	BA	2272	C	O5'-P-OP2	-6.10	100.21	105.70
39	BQ	14	ARG	NE-CZ-NH1	6.10	123.35	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	BA	1054	A	O5'-P-OP1	-6.09	100.22	105.70
1	AA	509	A	O5'-P-OP1	-6.09	100.22	105.70
26	BA	955	A	O5'-P-OP2	-6.08	100.22	105.70
38	BP	58	THR	N-CA-C	-6.08	94.59	111.00
26	DA	1955	C	C4'-C3'-O3'	6.08	125.15	113.00
26	DA	549	U	C2'-C3'-O3'	6.07	123.42	113.70
26	BA	960	C	C5'-C4'-O4'	6.06	116.37	109.10
26	DA	1410	A	C5'-C4'-O4'	6.04	116.35	109.10
50	D1	46	LEU	CA-CB-CG	6.04	129.20	115.30
1	AA	21	G	O5'-P-OP2	-6.03	100.27	105.70
26	BA	833	U	O5'-P-OP2	-6.03	100.27	105.70
26	BA	838	G	O5'-P-OP2	-6.03	100.27	105.70
26	DA	98	G	O4'-C1'-N9	6.00	113.00	108.20
26	BA	2672	G	O4'-C1'-N9	6.00	113.00	108.20
26	BA	1698	A	C4'-C3'-O3'	5.99	124.99	113.00
26	BA	567	C	O5'-P-OP1	-5.98	100.32	105.70
26	BA	2106	C	O5'-P-OP1	5.96	117.86	110.70
44	BV	13	ARG	NE-CZ-NH2	-5.94	117.33	120.30
26	DA	1744	A	C4'-C3'-O3'	-5.93	96.94	109.40
26	BA	2082	G	O5'-P-OP2	5.93	117.81	110.70
26	BA	1424	A	O4'-C1'-C2'	5.93	112.93	107.60
42	BT	30	VAL	CB-CA-C	-5.91	100.18	111.40
38	BP	41	ARG	N-CA-C	-5.89	95.09	111.00
26	DA	1044	U	O5'-P-OP1	-5.88	100.41	105.70
47	BY	99	CYS	CA-CB-SG	5.87	124.56	114.00
26	BA	2670	G	C2'-C3'-O3'	5.86	123.07	113.70
1	AA	900	A	O5'-P-OP2	5.82	117.69	110.70
26	BA	2502	U	O5'-P-OP1	-5.82	100.46	105.70
26	DA	833	U	O5'-P-OP2	-5.82	100.46	105.70
26	BA	2639	C	O5'-P-OP1	5.81	117.67	110.70
1	CA	408	A	O4'-C1'-C2'	5.81	112.83	107.60
26	BA	1054	A	O5'-P-OP2	5.80	117.66	110.70
26	BA	1649	C	O5'-P-OP1	-5.79	100.49	105.70
26	DA	2621	C	C4'-C3'-O3'	-5.79	97.24	109.40
26	BA	1397	U	O5'-P-OP2	-5.78	100.49	105.70
26	BA	715	G	C5'-C4'-O4'	5.78	116.04	109.10
26	DA	1740	C	C5'-C4'-C3'	5.78	125.24	116.00
26	BA	2591	U	C4'-C3'-O3'	-5.74	97.35	109.40
33	BH	69	ARG	NE-CZ-NH1	5.73	123.17	120.30
26	BA	719	C	O5'-P-OP1	5.72	117.57	110.70
58	B9	37	GLY	N-CA-C	-5.72	98.79	113.10
26	BA	2457	G	O5'-P-OP2	-5.70	100.57	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	DA	1820	C	O5'-P-OP2	5.70	117.54	110.70
1	AA	690	G	O5'-P-OP2	-5.69	100.58	105.70
26	DA	2329	G	C2'-C3'-O3'	5.68	122.79	113.70
26	BA	2456	G	O5'-P-OP1	-5.67	100.60	105.70
26	DA	1740	C	C5'-C4'-O4'	5.67	115.90	109.10
26	BA	1204	U	C4'-C3'-O3'	-5.66	97.50	109.40
33	BH	41	MET	CG-SD-CE	5.66	109.26	100.20
58	B9	27	CYS	CA-CB-SG	5.64	124.15	114.00
26	BA	1305	G	C2'-C3'-O3'	5.63	122.71	113.70
26	BA	2357	A	C1'-O4'-C4'	-5.63	105.40	109.90
26	DA	1693	G	O5'-P-OP1	-5.61	100.65	105.70
26	BA	552	A	C1'-C2'-O2'	5.61	127.42	110.60
26	DA	2028	C	O5'-P-OP2	-5.61	100.65	105.70
26	BA	1810	A	O5'-P-OP1	5.61	117.43	110.70
29	BD	210	GLY	N-CA-C	-5.60	99.10	113.10
26	BA	2261	G	C2'-C3'-O3'	5.60	122.66	113.70
1	AA	575	G	P-O3'-C3'	5.59	126.41	119.70
1	AA	428	G	C2'-C3'-O3'	5.59	122.64	113.70
26	BA	2628	C	O5'-P-OP2	-5.59	100.67	105.70
26	DA	2259	C	O5'-P-OP2	5.59	117.40	110.70
26	DA	2513	G	O5'-P-OP1	-5.58	100.67	105.70
26	DA	1810	A	O5'-P-OP2	-5.58	100.68	105.70
26	BA	116	A	N9-C1'-C2'	5.57	121.24	114.00
26	BA	2272	C	O5'-P-OP1	5.56	117.37	110.70
26	DA	1345	U	C5'-C4'-O4'	5.56	115.77	109.10
26	DA	1726	U	C2'-C3'-O3'	5.55	122.58	113.70
26	BA	1352	A	O5'-P-OP1	-5.55	100.70	105.70
26	BA	2431	C	O5'-P-OP1	-5.54	100.71	105.70
26	DA	1544	C	C2'-C3'-O3'	5.54	122.56	113.70
6	AF	81	ILE	CB-CA-C	-5.53	100.54	111.60
26	DA	1661	A	O4'-C1'-C2'	-5.53	100.27	105.80
1	CA	970	U	C2'-C3'-O3'	5.52	122.53	113.70
27	BB	77	U	C2'-C3'-O3'	5.51	122.51	113.70
26	BA	1080	U	C2'-C3'-O3'	5.51	122.51	113.70
1	CA	891	A	C2'-C3'-O3'	5.50	122.51	113.70
26	BA	2428	C	O5'-P-OP1	5.49	117.29	110.70
26	BA	718	C	O5'-P-OP2	-5.48	100.77	105.70
26	BA	1035	A	C4'-C3'-O3'	-5.48	97.90	109.40
26	BA	1488	G	C2'-C3'-O3'	5.47	122.45	113.70
30	BE	117	MET	CA-CB-CG	5.47	122.59	113.30
26	DA	1325	G	C2'-C3'-O3'	5.45	122.42	113.70
26	BA	829	A	C4'-C3'-O3'	5.45	123.90	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	BA	829	A	O5'-P-OP1	-5.44	100.80	105.70
26	BA	1820	C	O5'-P-OP2	5.44	117.22	110.70
26	BA	2070	G	O5'-P-OP1	-5.43	100.81	105.70
1	AA	1508	G	O5'-P-OP1	5.43	117.22	110.70
26	BA	2289	A	C5'-C4'-O4'	5.43	115.62	109.10
26	DA	1698	A	C4'-C3'-O3'	5.43	123.86	113.00
26	DA	1816	A	O4'-C1'-C2'	-5.43	100.37	105.80
26	BA	2629	G	O5'-P-OP2	5.42	117.20	110.70
26	BA	98	G	N9-C1'-C2'	5.41	121.03	114.00
26	BA	2357	A	O4'-C1'-C2'	-5.40	100.40	105.80
26	DA	598	U	O5'-P-OP2	-5.39	100.84	105.70
26	BA	2428	C	O5'-P-OP2	-5.39	100.85	105.70
40	BR	103	ARG	NE-CZ-NH1	5.39	122.99	120.30
26	BA	2587	G	O5'-P-OP1	5.38	117.16	110.70
26	BA	1233	A	C2'-C3'-O3'	5.38	122.31	113.70
26	BA	1323	A	O5'-P-OP2	-5.38	100.86	105.70
26	BA	1983	C	C5'-C4'-C3'	5.37	124.59	116.00
26	BA	2357	A	N9-C1'-C2'	5.37	120.97	114.00
26	BA	58	G	O5'-P-OP2	-5.36	100.88	105.70
26	DA	2416	G	C2'-C3'-O3'	5.36	122.27	113.70
26	BA	2115	G	C2'-C3'-O3'	5.35	122.27	113.70
26	DA	1709	C	C2'-C3'-O3'	5.35	122.26	113.70
26	BA	1298	A	N9-C1'-C2'	5.35	120.95	114.00
1	AA	1406	U	O5'-P-OP1	5.34	117.11	110.70
26	DA	1643	C	C2'-C3'-O3'	5.34	122.25	113.70
34	BI	27	ARG	NE-CZ-NH1	5.34	122.97	120.30
26	BA	35	G	O5'-P-OP2	-5.34	100.89	105.70
26	BA	2457	G	O5'-P-OP1	5.33	117.10	110.70
26	BA	2832	A	C2'-C3'-O3'	5.33	122.23	113.70
38	DP	16	ARG	NE-CZ-NH1	5.33	122.96	120.30
26	BA	625	A	P-O3'-C3'	5.33	126.09	119.70
26	DA	1392	G	C2'-C3'-O3'	5.33	122.22	113.70
26	BA	536	G	C1'-O4'-C4'	-5.32	105.65	109.90
26	DA	2829	A	N9-C1'-C2'	5.31	120.91	114.00
26	DA	47	A	C2'-C3'-O3'	5.31	122.19	113.70
23	AW	47	U	O4'-C1'-N1	5.29	112.43	108.20
26	BA	492	G	C2'-C3'-O3'	5.28	122.15	113.70
26	BA	2056	G	O5'-P-OP2	-5.28	100.95	105.70
43	BU	112	ARG	NE-CZ-NH1	5.28	122.94	120.30
1	CA	408	A	O4'-C1'-N9	5.28	112.42	108.20
1	AA	1406	U	O5'-P-OP2	-5.27	100.96	105.70
26	BA	1007	U	O5'-P-OP1	-5.27	100.96	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	DA	534	C	O5'-P-OP1	5.26	117.02	110.70
26	DA	715	G	C4'-C3'-O3'	5.26	123.52	113.00
57	D8	32	LEU	CA-CB-CG	5.26	127.39	115.30
1	AA	900	A	O5'-P-OP1	-5.25	100.97	105.70
26	BA	2281	G	O5'-P-OP1	-5.25	100.97	105.70
26	BA	715	G	N9-C1'-C2'	5.25	120.82	114.00
26	DA	1991	A	C1'-O4'-C4'	-5.24	105.71	109.90
1	AA	328	C	C2'-C3'-O3'	5.24	122.09	113.70
26	DA	2259	C	O5'-P-OP1	-5.24	100.98	105.70
26	DA	2357	A	C1'-O4'-C4'	-5.24	105.71	109.90
26	BA	2586	C	O5'-P-OP2	5.24	116.98	110.70
26	BA	1726	U	C2'-C3'-O3'	5.23	122.07	113.70
1	CA	584	C	O5'-P-OP2	-5.23	101.00	105.70
24	CY	62	G	C2'-C3'-O3'	5.22	122.06	113.70
45	BW	51	LEU	CA-CB-CG	5.22	127.31	115.30
24	AY	62	G	C2'-C3'-O3'	5.22	122.05	113.70
1	CA	424	G	C2'-C3'-O3'	5.21	122.04	113.70
26	DA	1345	U	C5'-C4'-C3'	5.21	124.34	116.00
26	BA	2561	G	O5'-P-OP2	-5.21	101.01	105.70
26	DA	2587	G	O5'-P-OP1	5.21	116.96	110.70
26	BA	713	U	N1-C1'-C2'	-5.21	106.27	112.00
26	BA	2318	G	C2'-C3'-O3'	5.20	122.02	113.70
26	DA	839	A	O5'-P-OP1	5.20	116.94	110.70
1	AA	533	A	C2'-C3'-O3'	5.20	122.01	113.70
26	BA	413	U	P-O3'-C3'	5.19	125.93	119.70
44	BV	13	ARG	CG-CD-NE	5.19	122.71	111.80
26	DA	2449	U	O5'-P-OP1	5.19	116.93	110.70
26	BA	2237	C	O5'-P-OP2	-5.18	101.04	105.70
16	CP	28	ARG	NE-CZ-NH1	5.18	122.89	120.30
26	BA	360	C	O5'-P-OP2	-5.18	101.04	105.70
26	BA	752	A	C2'-C3'-O3'	5.18	121.98	113.70
26	BA	142	C	C2'-C3'-O3'	5.17	121.97	113.70
1	AA	687	A	C2'-C3'-O3'	5.17	121.97	113.70
26	BA	1410	A	O4'-C4'-C3'	-5.17	98.83	104.00
1	CA	617	G	C2'-C3'-O3'	5.17	121.97	113.70
26	BA	1200	A	C5'-C4'-O4'	-5.17	102.90	109.10
30	DE	44	TYR	N-CA-C	5.17	124.95	111.00
1	AA	1285	A	C2'-C3'-O3'	5.16	121.96	113.70
26	BA	253	A	N9-C1'-C2'	5.16	120.71	114.00
26	BA	1302	C	O5'-P-OP1	5.16	116.89	110.70
26	BA	2441	A	O5'-P-OP1	-5.15	101.06	105.70
26	DA	1539	A	C2'-C3'-O3'	5.15	121.94	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	DA	1174	A	C5'-C4'-O4'	5.15	115.28	109.10
4	AD	31	CYS	CA-CB-SG	-5.15	104.74	114.00
26	BA	598	U	O5'-P-OP1	5.15	116.88	110.70
1	AA	1400	C	O5'-P-OP1	-5.14	101.07	105.70
55	B6	45	LYS	N-CA-C	5.14	124.88	111.00
26	BA	566	C	C2'-C3'-O3'	5.14	121.92	113.70
47	BY	31	LEU	C-N-CA	5.13	143.57	122.00
26	BA	128	G	O5'-P-OP2	-5.13	101.09	105.70
26	BA	2587	G	O5'-P-OP2	-5.13	101.09	105.70
1	AA	389	A	C5'-C4'-O4'	5.12	115.25	109.10
26	BA	1529	G	C4'-C3'-O3'	5.12	123.24	113.00
44	BV	18	LEU	CA-CB-CG	5.12	127.07	115.30
26	BA	599	G	O5'-P-OP2	5.12	116.84	110.70
1	CA	1267	A	C2'-C3'-O3'	5.11	121.88	113.70
1	AA	1414	U	O5'-P-OP2	-5.11	101.10	105.70
26	BA	2076	C	O5'-P-OP1	5.11	116.83	110.70
38	DP	41	ARG	N-CA-C	-5.10	97.22	111.00
26	DA	2425	G	C2'-C3'-O3'	5.10	121.86	113.70
26	BA	2099	C	O5'-P-OP2	5.10	116.82	110.70
26	BA	125	C	C4'-C3'-O3'	5.09	123.18	113.00
26	DA	1811	C	C4'-C3'-O3'	-5.09	98.72	109.40
31	BF	74	ARG	NE-CZ-NH1	5.08	122.84	120.30
26	DA	2586	C	O5'-P-OP2	5.08	116.80	110.70
26	BA	2727	C	O5'-P-OP2	-5.08	101.13	105.70
26	BA	839	A	O5'-P-OP2	-5.07	101.14	105.70
1	CA	493	A	O5'-P-OP2	5.06	116.78	110.70
26	DA	2596	U	C4'-C3'-O3'	-5.06	98.77	109.40
57	B8	42	ARG	NE-CZ-NH2	-5.06	117.77	120.30
38	BP	60	MET	CA-CB-CG	5.05	121.89	113.30
33	DH	155	SER	N-CA-C	5.05	124.63	111.00
26	BA	2402	G	O5'-P-OP2	-5.04	101.17	105.70
26	BA	1284	G	C3'-C2'-O2'	-5.03	98.70	113.30
1	CA	742	G	C2'-C3'-O3'	5.02	121.74	113.70
26	DA	2609	A	O5'-P-OP1	5.00	116.70	110.70

All (46) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	AA	412	A	C1'
23	AW	47	U	C1'
26	BA	98	G	C1'
26	BA	497	A	C3'

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Mol	Chain	Res	Type	Atom
26	BA	715	G	C1',C4',C3'
26	BA	989	A	C1'
26	BA	1345	U	C1',C4',C3'
26	BA	1424	A	C1'
26	BA	1529	G	C3'
26	BA	1590	A	C1'
26	BA	1698	A	C3'
26	BA	1740	C	C4',C3'
26	BA	1955	C	C3'
26	BA	1983	C	C1',C4'
26	BA	2212	G	C3'
26	BA	2297	A	C1'
26	BA	2673	A	C1'
26	BA	2808	U	C1'
1	CA	408	A	C1'
23	CW	47	U	C1'
26	DA	98	G	C1'
26	DA	497	A	C3'
26	DA	715	G	C1',C4',C3'
26	DA	989	A	C1'
26	DA	1345	U	C1',C4',C3'
26	DA	1424	A	C1'
26	DA	1590	A	C1'
26	DA	1740	C	C4',C3'
26	DA	1955	C	C3'
26	DA	1983	C	C1',C4'
26	DA	2212	G	C3'
26	DA	2297	A	C1'
26	DA	2673	A	C1'
26	DA	2808	U	C1'

All (42) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	AB	23	ARG	Peptide
13	AM	69	GLU	Peptide
55	B6	45	LYS	Peptide
57	B8	27	THR	Peptide
29	BD	224	ALA	Peptide
29	BD	244	ARG	Peptide
29	BD	36	PRO	Peptide
30	BE	115	GLY	Peptide

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Mol	Chain	Res	Type	Group
30	BE	131	ALA	Peptide
33	BH	158	HIS	Peptide
38	BP	29	LYS	Peptide
38	BP	37	GLY	Peptide
38	BP	40	SER	Peptide
38	BP	45	LEU	Peptide
38	BP	51	PHE	Peptide
38	BP	52	GLU	Peptide
38	BP	53	GLY	Peptide
38	BP	57	THR	Peptide
38	BP	61	ARG	Peptide
38	BP	9	ASN	Peptide
40	BR	4	LEU	Peptide
40	BR	5	LYS	Peptide
41	BS	88	ASP	Peptide
42	BT	31	SER	Peptide
42	BT	79	HIS	Peptide
42	BT	92	GLY	Peptide
43	BU	32	ALA	Peptide
43	BU	33	ARG	Peptide
43	BU	96	ALA	Peptide
44	BV	1	MET	Peptide
44	BV	52	VAL	Peptide
47	BY	16	ALA	Peptide
13	CM	69	GLU	Peptide
55	D6	45	LYS	Peptide
29	DD	197	GLY	Peptide
29	DD	244	ARG	Peptide
30	DE	131	ALA	Peptide
38	DP	41	ARG	Peptide
38	DP	51	PHE	Peptide
38	DP	52	GLU	Peptide
38	DP	57	THR	Peptide
40	DR	4	LEU	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32329	0	16318	494	1
1	CA	32329	0	16318	469	0
2	AB	1901	0	1951	42	0
2	CB	1901	0	1951	43	0
3	AC	1613	0	1677	43	0
3	CC	1613	0	1677	46	0
4	AD	1703	0	1763	64	0
4	CD	1703	0	1763	50	0
5	AE	1147	0	1207	44	0
5	CE	1147	0	1207	35	0
6	AF	843	0	857	14	0
6	CF	843	0	857	18	0
7	AG	1257	0	1296	20	0
7	CG	1257	0	1296	12	0
8	AH	1116	0	1177	28	0
8	CH	1116	0	1177	17	0
9	AI	1011	0	1043	31	0
9	CI	1011	0	1043	27	0
10	AJ	795	0	840	36	0
10	CJ	795	0	840	36	0
11	AK	885	0	904	31	0
11	CK	885	0	904	17	0
12	AL	971	0	1057	16	0
12	CL	971	0	1057	19	0
13	AM	988	0	1059	35	0
13	CM	988	0	1059	26	0
14	AN	492	0	529	14	0
14	CN	492	0	529	21	0
15	AO	734	0	771	17	0
15	CO	734	0	771	21	0
16	AP	701	0	720	22	0
16	CP	701	0	720	17	0
17	AQ	824	0	891	23	0
17	CQ	824	0	891	13	0
18	AR	574	0	644	16	0
18	CR	574	0	644	16	0
19	AS	630	0	652	30	0
19	CS	630	0	652	12	0
20	AT	763	0	861	26	0
20	CT	763	0	861	14	0
21	AU	209	0	221	4	0
21	CU	209	0	221	3	0
22	AV	1640	0	837	29	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	CV	1640	0	837	27	0
23	AW	1619	0	822	58	0
23	CW	1619	0	822	21	0
24	AY	1619	0	792	222	0
24	CY	1619	0	792	241	0
25	AX	151	0	76	15	0
26	BA	60459	0	30488	1163	0
26	DA	60459	0	30487	1024	0
27	BB	2551	0	1295	38	0
27	DB	2551	0	1295	35	0
28	BC	1157	0	1160	27	0
29	BD	2105	0	2182	126	0
29	DD	2105	0	2182	89	0
30	BE	1564	0	1629	97	0
30	DE	1564	0	1629	66	0
31	BF	1624	0	1677	72	0
31	DF	1624	0	1677	63	0
32	BG	1474	0	1535	53	0
32	DG	1474	0	1535	49	0
33	BH	1223	0	1282	48	0
33	DH	1223	0	1282	22	0
34	BI	1132	0	1218	30	0
34	DI	1132	0	1218	29	1
35	BJ	651	0	649	10	0
35	DJ	651	0	649	14	0
36	BN	1105	0	1180	62	0
36	DN	1105	0	1180	42	0
37	BO	933	0	996	33	0
37	DO	933	0	996	30	0
38	BP	1114	0	1187	141	0
38	DP	1114	0	1187	82	0
39	BQ	1122	0	1179	35	0
39	DQ	1122	0	1179	31	0
40	BR	960	0	1021	47	0
40	DR	960	0	1021	46	0
41	BS	771	0	832	46	0
41	DS	771	0	832	33	0
42	BT	1142	0	1202	92	0
42	DT	1142	0	1202	72	0
43	BU	958	0	1018	57	0
43	DU	958	0	1018	52	0
44	BV	779	0	852	54	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	DV	779	0	852	39	0
45	BW	896	0	956	40	0
45	DW	896	0	956	23	0
46	BX	726	0	778	26	0
46	DX	726	0	778	20	0
47	BY	776	0	868	79	0
47	DY	776	0	870	45	0
48	BZ	1404	0	1432	20	0
48	DZ	1404	0	1432	34	0
49	B0	662	0	688	18	0
49	D0	662	0	688	20	0
50	B1	734	0	808	22	0
50	D1	734	0	808	21	0
51	B2	598	0	653	24	0
51	D2	598	0	653	13	0
52	B3	468	0	523	20	0
52	D3	468	0	523	12	0
53	B4	226	0	229	8	0
53	D4	226	0	229	4	0
54	B5	459	0	477	48	0
54	D5	459	0	478	21	0
55	B6	381	0	390	52	0
55	D6	381	0	391	30	0
56	B7	419	0	467	12	0
56	D7	419	0	467	15	0
57	B8	508	0	576	58	0
57	D8	508	0	576	33	0
58	B9	299	0	324	19	0
58	D9	299	0	324	7	0
59	CX	85	0	43	7	0
60	DC	1157	0	1160	22	0
All	All	295724	0	201402	6566	1

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 13.

All (6566) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:10:C:H41	24:AY:45:G:N2	1.03	1.51
24:CY:7:A:N1	24:CY:66:G:N2	1.61	1.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:7:A:N1	24:AY:66:G:N2	1.61	1.46
24:CY:10:C:H41	24:CY:45:G:N2	1.03	1.46
24:CY:9:G:H21	24:CY:11:C:N4	1.02	1.45
24:AY:9:G:H21	24:AY:11:C:N4	1.03	1.44
24:CY:11:C:N3	24:CY:25:G:N2	1.62	1.43
24:AY:7:A:N6	24:AY:66:G:H1	1.14	1.42
24:AY:11:C:N3	24:AY:25:G:N2	1.62	1.42
24:CY:7:A:N1	24:CY:66:G:C2	1.89	1.40
24:CY:7:A:C2	24:CY:66:G:N2	1.87	1.40
24:AY:7:A:C2	24:AY:66:G:N2	1.86	1.40
24:CY:7:A:N6	24:CY:66:G:H1	1.14	1.39
24:AY:7:A:N1	24:AY:66:G:C2	1.89	1.39
47:BY:79:CYS:SG	47:BY:80:GLY:N	1.98	1.35
24:AY:49:G:C6	24:AY:66:G:C2	2.18	1.32
24:AY:9:G:N2	24:AY:11:C:N4	1.78	1.30
24:CY:49:G:C6	24:CY:66:G:C2	2.17	1.30
24:AY:11:C:C4	24:AY:25:G:N2	2.00	1.30
24:CY:11:C:C4	24:CY:25:G:N2	2.00	1.28
24:CY:9:G:N2	24:CY:11:C:N4	1.78	1.27
55:B6:15:GLU:OE2	55:B6:43:CYS:SG	1.94	1.26
24:CY:75:C:O2	26:DA:2518:C:O2'	1.54	1.23
24:CY:71:A:H5'	26:DA:1963:C:O2'	1.10	1.22
24:CY:10:C:N4	24:CY:45:G:N2	1.87	1.21
24:AY:9:G:N2	24:AY:12:G:O6	1.73	1.20
24:AY:10:C:N4	24:AY:45:G:N2	1.87	1.20
55:B6:15:GLU:OE1	55:B6:43:CYS:SG	2.00	1.19
24:CY:9:G:N2	24:CY:12:G:O6	1.73	1.19
24:AY:7:A:N6	24:AY:66:G:N1	1.90	1.19
24:CY:7:A:N6	24:CY:66:G:N1	1.90	1.16
24:CY:71:A:C5'	26:DA:1963:C:O2'	1.92	1.16
24:CY:75:C:N4	26:DA:2564:G:H1	1.42	1.16
24:CY:12:G:N1	24:CY:24:G:C2	2.15	1.15
24:AY:42:G:H2'	24:AY:43:G:H5"	1.16	1.15
24:AY:9:G:N2	24:AY:11:C:H42	1.39	1.15
38:BP:58:THR:O	38:BP:61:ARG:NE	1.79	1.14
24:AY:12:G:N1	24:AY:24:G:C2	2.15	1.14
30:BE:130:GLY:O	30:BE:131:ALA:O	1.66	1.14
24:AY:49:G:C6	24:AY:66:G:N2	2.17	1.13
26:DA:1331:A:O2'	26:DA:1333:U:OP2	1.62	1.13
24:AY:49:G:N1	24:AY:66:G:C2	2.17	1.13
24:CY:9:G:N2	24:CY:11:C:H42	1.39	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:B6:15:GLU:CD	55:B6:43:CYS:SG	2.27	1.13
24:CY:49:G:N1	24:CY:66:G:C2	2.17	1.13
24:CY:75:C:N4	26:DA:2564:G:N1	1.97	1.12
24:CY:49:G:C6	24:CY:66:G:N2	2.17	1.11
26:BA:790:G:OP1	30:BE:132:HIS:HB3	1.51	1.10
24:CY:12:G:C2	24:CY:24:G:C2	2.40	1.10
24:AY:12:G:C2	24:AY:24:G:C2	2.40	1.09
30:BE:105:THR:OG1	30:BE:199:ARG:NH2	1.86	1.09
4:CD:9:CYS:SG	4:CD:31:CYS:O	2.10	1.09
24:CY:42:G:H2'	24:CY:43:G:H5"	1.16	1.08
31:BF:66:PRO:O	31:BF:67:GLN:HB3	1.53	1.08
24:CY:43:G:H2'	24:CY:44:A:C8	1.89	1.08
24:AY:9:G:C2	24:AY:12:G:O6	2.07	1.08
26:BA:1346:A:O2'	26:BA:1347:A:H2'	1.54	1.08
24:AY:43:G:H2'	24:AY:44:A:C8	1.89	1.07
24:CY:9:G:C2	24:CY:12:G:O6	2.07	1.07
24:AY:48:G:N1	24:AY:59:A:C2	2.24	1.05
24:CY:48:G:N1	24:CY:59:A:C2	2.24	1.05
24:AY:11:C:N4	24:AY:25:G:N2	2.05	1.04
58:B9:14:CYS:SG	58:B9:32:HIS:ND1	2.29	1.04
24:CY:11:C:N4	24:CY:25:G:N2	2.05	1.04
26:BA:2657:C:OP2	26:BA:2744:G:O2'	1.73	1.02
23:CW:75:C:O2'	23:CW:76:A:N7	1.92	1.02
26:DA:1377:G:N2	26:DA:1654:A:O2'	1.90	1.02
24:AY:7:A:C6	24:AY:66:G:N1	2.26	1.02
38:BP:58:THR:O	38:BP:61:ARG:CZ	2.06	1.02
29:BD:24:ILE:O	29:BD:25:THR:O	1.77	1.02
24:CY:12:G:N1	24:CY:24:G:N1	2.08	1.01
58:D9:11:CYS:HB3	58:D9:14:CYS:SG	1.99	1.01
24:AY:12:G:N1	24:AY:24:G:N1	2.08	1.01
24:CY:55:C:OP2	48:DZ:178:GLU:C	2.00	1.01
26:BA:1377:G:N2	26:BA:1654:A:O2'	1.94	1.00
24:AY:49:G:C5	24:AY:66:G:N2	2.29	1.00
32:BG:28:VAL:O	32:BG:31:VAL:HG12	1.61	1.00
24:CY:7:A:C6	24:CY:66:G:N1	2.26	1.00
24:CY:49:G:C5	24:CY:66:G:N2	2.29	1.00
24:CY:75:C:N4	26:DA:2564:G:C6	2.29	1.00
24:CY:42:G:H2'	24:CY:43:G:C5'	1.92	1.00
26:DA:1424:A:O2'	26:DA:1425:G:OP1	1.78	1.00
24:AY:42:G:H2'	24:AY:43:G:C5'	1.92	1.00
24:AY:48:G:N1	24:AY:59:A:N3	2.10	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:4:G:C2	24:AY:70:A:C6	2.50	0.99
24:CY:4:G:C2	24:CY:70:A:C6	2.50	0.99
26:DA:2492:G:O2'	26:DA:2493:G:OP2	1.79	0.99
22:CV:53:G:HO2'	22:CV:54:G:H8	1.06	0.98
26:BA:185:A:C8	26:BA:185:A:H5'	1.99	0.98
58:B9:27:CYS:SG	58:B9:32:HIS:ND1	2.37	0.98
24:CY:48:G:N1	24:CY:59:A:N3	2.10	0.97
24:AY:9:G:H22	24:AY:24:G:H1	0.99	0.97
26:DA:2273:U:OP2	49:D0:16:SER:OG	1.80	0.97
24:AY:49:G:N1	24:AY:66:G:N3	2.13	0.96
24:AY:10:C:N4	24:AY:45:G:H21	1.55	0.96
24:AY:7:A:N1	24:AY:66:G:N1	2.14	0.96
23:AW:34:G:O6	23:AW:35:A:C6	2.19	0.95
26:BA:2672:G:H2'	26:BA:2673:A:N3	1.81	0.95
24:CY:49:G:N1	24:CY:66:G:N3	2.13	0.95
26:DA:26:G:N2	26:DA:536:G:O2'	1.99	0.95
24:AY:1:G:H2'	24:AY:2:G:C8	2.01	0.95
1:CA:1048:U:O2'	1:CA:1049:C:OP2	1.83	0.95
24:CY:10:C:N4	24:CY:45:G:H21	1.55	0.95
24:CY:1:G:H2'	24:CY:2:G:C8	2.01	0.94
26:DA:893:U:OP2	26:DA:973:G:O6	1.85	0.94
26:DA:2001:G:O2'	26:DA:2003:C:OP2	1.85	0.94
24:CY:7:A:N1	24:CY:66:G:N1	2.14	0.94
37:DO:35:VAL:HG11	37:DO:103:ALA:HB3	1.50	0.94
24:CY:9:G:H22	24:CY:24:G:H1	0.99	0.94
24:AY:10:C:H41	24:AY:45:G:H22	1.07	0.94
1:AA:110:C:O2'	16:AP:25:ARG:O	1.84	0.93
24:AY:3:A:C2	24:AY:71:A:N1	2.31	0.93
26:BA:1261:C:OP2	43:BU:15:LYS:NZ	2.00	0.93
26:BA:1920:G:H22	26:BA:1923:C:H41	0.96	0.93
1:AA:1281:U:H4'	1:AA:1282:C:OP2	1.69	0.93
22:CV:52:C:H2'	22:CV:53:G:H5'	1.51	0.93
26:BA:1809:U:H5	26:BA:1814:A:N7	1.65	0.93
24:CY:2:G:N2	24:CY:72:A:N3	2.00	0.92
24:CY:75:C:N3	26:DA:2564:G:N2	2.17	0.92
24:CY:74:C:H5	26:DA:2565:U:O2	1.49	0.92
29:BD:65:ILE:HD11	29:BD:67:PHE:CD1	2.05	0.92
24:CY:10:C:H41	24:CY:45:G:H22	1.07	0.92
26:BA:26:G:N2	26:BA:536:G:O2'	2.02	0.91
26:BA:1828:U:H5'	29:BD:259:THR:HG22	1.51	0.91
26:DA:1067:G:O2'	26:DA:1068:U:OP2	1.87	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:7:A:C6	24:AY:66:G:N2	2.38	0.91
24:AY:3:A:C2	24:AY:70:A:N6	2.39	0.91
26:BA:2089:U:H3	26:BA:2441:A:H2	1.14	0.90
24:CY:18:G:N1	24:CY:57:C:C5	2.38	0.90
24:CY:3:A:C2	24:CY:70:A:N6	2.39	0.90
26:BA:355:A:O2'	26:BA:357:C:OP2	1.89	0.90
24:AY:51:G:O6	24:AY:63:G:O6	1.89	0.90
24:CY:51:G:O6	24:CY:63:G:O6	1.89	0.90
31:BF:185:ASP:HA	31:BF:188:ARG:HD3	1.54	0.90
24:CY:7:A:C6	24:CY:66:G:N2	2.38	0.90
24:AY:42:G:C2'	24:AY:43:G:H5"	2.02	0.90
11:AK:18:ARG:NH2	11:AK:35:PRO:O	2.05	0.90
24:AY:18:G:N1	24:AY:57:C:C5	2.38	0.90
26:BA:1346:A:O2'	26:BA:1347:A:C2'	2.18	0.90
41:DS:89:ARG:HG2	41:DS:92:TYR:HA	1.50	0.90
1:AA:438:G:H4'	1:AA:439:A:OP1	1.71	0.90
24:CY:3:A:C2	24:CY:71:A:N1	2.31	0.90
24:CY:42:G:C2'	24:CY:43:G:H5"	2.02	0.89
26:BA:722:A:H8	26:BA:2090:G:H21	0.93	0.89
24:CY:50:G:N2	24:CY:51:G:H1'	1.88	0.89
24:CY:64:G:H4'	26:DA:2494:C:OP1	1.73	0.89
24:CY:6:G:N2	24:CY:67:U:O2	2.05	0.89
24:AY:50:G:N2	24:AY:51:G:H1'	1.88	0.89
24:AY:49:G:O6	24:AY:66:G:N1	2.06	0.89
24:CY:55:C:OP2	48:DZ:178:GLU:O	1.90	0.89
26:DA:1704:C:OP1	30:DE:132:HIS:O	1.91	0.89
26:BA:559:C:O3'	43:BU:53:ARG:NH1	2.06	0.88
24:AY:6:G:N2	24:AY:67:U:O2	2.05	0.88
26:DA:2043:U:OP2	54:D5:15:ARG:NH2	2.06	0.88
43:DU:90:VAL:HG21	44:DV:47:VAL:HG21	1.54	0.88
29:BD:27:THR:HG21	29:BD:81:ALA:HB1	1.55	0.88
26:BA:2405:C:OP1	38:BP:63:PRO:HD2	1.73	0.88
26:BA:92:G:N3	51:B2:47:ASN:ND2	2.20	0.88
26:BA:1833:A:O2'	29:BD:259:THR:HG21	1.73	0.88
55:B6:43:CYS:SG	55:B6:43:CYS:O	2.31	0.88
24:CY:49:G:O6	24:CY:66:G:N1	2.06	0.88
27:DB:66:A:O2'	27:DB:67:G:OP2	1.91	0.88
40:DR:10:LEU:HB3	40:DR:17:ARG:NE	1.89	0.88
4:AD:26:CYS:HA	4:AD:31:CYS:HB2	1.52	0.88
26:BA:1704:C:OP1	30:BE:132:HIS:ND1	2.05	0.88
54:D5:46:CYS:SG	54:D5:48:GLU:HG2	2.14	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:987:U:OP2	38:BP:38:GLN:OE1	1.92	0.87
4:CD:9:CYS:SG	4:CD:31:CYS:C	2.53	0.87
26:BA:1539:A:H2'	26:BA:1540:A:H5"	1.55	0.87
26:DA:996:G:P	39:DQ:16:ARG:HH22	1.98	0.87
38:DP:59:LEU:HA	38:DP:61:ARG:NH1	1.90	0.87
26:BA:2036:A:H1'	54:B5:2:ALA:HA	1.57	0.87
1:AA:979:C:H3'	1:AA:980:C:H5"	1.54	0.86
13:AM:125:ARG:C	24:AY:38:A:O2'	2.13	0.86
26:BA:185:A:H5'	26:BA:185:A:H8	1.37	0.86
11:AK:54:ARG:O	11:AK:57:THR:HG22	1.74	0.86
1:AA:992:U:H4'	1:AA:993:G:O5'	1.75	0.86
24:CY:75:C:N4	26:DA:2564:G:O6	2.07	0.86
26:DA:518:G:O2'	45:DW:5:ALA:O	1.92	0.86
24:AY:2:G:N2	24:AY:72:A:N3	2.00	0.86
26:BA:230:G:H5"	57:B8:62:LEU:HD13	1.55	0.86
24:CY:12:G:C5	24:CY:24:G:N2	2.44	0.86
59:CX:18:G:H3'	59:CX:19:U:H5"	1.56	0.86
24:CY:74:C:C6	26:DA:2566:U:C2	2.62	0.86
24:AY:2:G:O6	24:AY:72:A:N6	1.81	0.86
26:DA:1875:G:C2'	26:DA:1876:G:H5'	2.06	0.86
24:AY:12:G:C5	24:AY:24:G:N2	2.43	0.86
26:BA:1346:A:HO2'	26:BA:1347:A:H2'	1.41	0.86
24:CY:6:G:O2'	24:CY:7:A:C5'	2.24	0.86
26:BA:1067:G:N2	26:BA:1187:A:C2	2.44	0.86
26:DA:2416:G:O2'	26:DA:2422:A:N6	2.08	0.85
28:BC:56:GLN:HE22	28:BC:168:ALA:HB2	1.42	0.85
26:DA:138:A:C8	26:DA:1453:C:O2'	2.27	0.85
3:CC:73:PRO:O	3:CC:76:VAL:HG22	1.75	0.85
24:AY:13:G:H1	24:AY:22:A:H61	1.23	0.85
24:CY:12:G:C6	24:CY:24:G:N2	2.44	0.85
24:CY:13:G:H1	24:CY:22:A:H61	1.23	0.85
24:AY:7:A:H61	24:AY:66:G:H1	0.98	0.85
1:AA:1225:A:OP1	13:AM:102:ARG:HA	1.77	0.85
4:AD:31:CYS:O	4:AD:31:CYS:SG	2.35	0.85
32:BG:128:ARG:O	32:BG:129:GLY:O	1.94	0.85
24:CY:71:A:C5'	26:DA:1963:C:HO2'	1.83	0.84
23:AW:34:G:C6	23:AW:35:A:C5	2.65	0.84
24:AY:6:G:O2'	24:AY:7:A:C5'	2.24	0.84
24:AY:12:G:C6	24:AY:24:G:N2	2.44	0.84
26:DA:1875:G:H2'	26:DA:1876:G:H5'	1.57	0.84
26:BA:1920:G:N2	26:BA:1923:C:H41	1.75	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:B6:11:LEU:HD21	55:B6:51:GLU:HB2	1.59	0.84
26:DA:552:A:O2'	26:DA:553:A:H5'	1.75	0.84
31:BF:66:PRO:O	31:BF:67:GLN:CB	2.24	0.84
1:AA:127:G:HO2'	17:AQ:2:PRO:N	1.74	0.84
24:AY:43:G:H2'	24:AY:44:A:H8	1.39	0.84
24:CY:54:A:C6	24:CY:55:C:C5	2.66	0.84
59:CX:18:G:H3'	59:CX:19:U:C5'	2.08	0.84
23:AW:64:A:H2'	23:AW:65:G:C8	2.13	0.84
24:AY:54:A:C6	24:AY:55:C:C5	2.66	0.83
26:BA:2643:A:O2'	30:BE:61:ARG:NH2	2.11	0.83
24:AY:50:G:O6	24:AY:64:G:O6	1.96	0.83
24:CY:50:G:O6	24:CY:64:G:O6	1.96	0.83
26:BA:2402:G:OP1	57:B8:32:LEU:HD12	1.77	0.83
1:CA:392:G:O2'	1:CA:394:C:OP1	1.95	0.83
26:DA:1724:G:N2	26:DA:2010:G:H22	1.75	0.83
26:DA:1777:G:H2'	26:DA:1778:G:H5'	1.59	0.83
26:DA:2694:C:OP1	42:DT:53:ARG:NH2	2.12	0.83
26:DA:2819:A:O2'	30:DE:61:ARG:NH1	2.11	0.83
26:DA:138:A:H8	26:DA:1453:C:O2'	1.58	0.83
24:CY:9:G:N2	24:CY:24:G:H1	1.76	0.83
24:CY:43:G:H2'	24:CY:44:A:H8	1.39	0.83
4:AD:12:CYS:SG	4:AD:19:LEU:O	2.37	0.83
24:AY:10:C:H41	24:AY:45:G:H21	0.85	0.83
1:CA:657:G:H2'	1:CA:658:G:C8	2.14	0.83
24:AY:7:A:C6	24:AY:66:G:C2	2.66	0.83
42:DT:27:THR:O	42:DT:28:VAL:HG23	1.79	0.83
30:DE:111:ARG:HG3	40:DR:2:ARG:HE	1.43	0.82
26:BA:1735:A:H62	26:BA:1744:A:H2	1.28	0.82
26:BA:2824:C:O2'	54:B5:43:HIS:CD2	2.32	0.82
31:BF:8:GLN:HB3	31:BF:126:VAL:HA	1.60	0.82
41:BS:89:ARG:HB3	41:BS:92:TYR:HB3	1.62	0.82
24:CY:12:G:C6	24:CY:24:G:N1	2.47	0.82
26:DA:1704:C:OP1	30:DE:132:HIS:ND1	2.13	0.82
36:DN:57:ALA:O	36:DN:58:ASP:O	1.96	0.82
24:CY:10:C:H41	24:CY:45:G:H21	0.84	0.82
26:DA:1346:A:O2'	26:DA:1347:A:H2'	1.79	0.82
23:AW:34:G:N1	23:AW:35:A:C4	2.48	0.82
24:AY:9:G:N2	24:AY:24:G:H1	1.76	0.82
24:CY:52:C:H4'	39:DQ:56:ARG:NH1	1.95	0.82
26:DA:1464:A:O2'	26:DA:1466:G:N7	2.11	0.82
1:CA:640:C:O2'	15:CO:28:GLN:OE1	1.97	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:44:A:C6	24:AY:45:G:C2	2.68	0.81
38:BP:64:LYS:O	38:BP:66:GLY:N	2.12	0.81
40:BR:11:ASN:OD1	40:BR:12:ARG:N	2.13	0.81
1:CA:434:G:O2'	1:CA:479:U:O4	1.98	0.81
45:BW:25:ARG:NH2	45:BW:74:ALA:O	2.14	0.81
1:AA:1321:C:H3'	1:AA:1322:C:H5"	1.63	0.81
24:AY:11:C:H42	24:AY:25:G:N2	1.78	0.81
24:AY:12:G:C6	24:AY:24:G:N1	2.47	0.81
26:BA:1309:G:H3'	26:BA:1310:A:H5"	1.62	0.81
26:DA:2131:G:O2'	26:DA:2141:G:OP2	1.99	0.81
26:BA:2319:G:O6	26:BA:2321:A:H2'	1.81	0.81
26:BA:2416:G:O2'	26:BA:2417:U:OP2	1.98	0.81
26:BA:2089:U:N3	26:BA:2441:A:H2	1.77	0.81
24:CY:44:A:C6	24:CY:45:G:C2	2.68	0.81
26:DA:144:G:H2'	26:DA:145:G:H5'	1.62	0.81
24:CY:11:C:H42	24:CY:25:G:N2	1.78	0.81
12:CL:37:CYS:O	12:CL:79:GLU:O	1.99	0.81
26:DA:2723:U:H5'	26:DA:2723:U:O2	1.81	0.81
1:CA:1395:C:H2'	1:CA:1396:A:C8	2.15	0.81
13:AM:123:ALA:HA	24:AY:39:A:H4'	1.63	0.81
26:BA:1991:A:H5"	26:BA:1992:A:OP1	1.81	0.80
24:CY:12:G:C6	24:CY:24:G:C2	2.69	0.80
26:DA:1185:U:OP2	36:DN:63:THR:OG1	1.98	0.80
1:AA:1331:G:OP2	13:AM:23:TYR:HD2	1.65	0.80
24:AY:12:G:C6	24:AY:24:G:C2	2.69	0.80
27:BB:21:G:O2'	27:BB:22:U:O4'	1.97	0.80
1:CA:958:C:H4'	14:CN:19:ARG:CZ	2.12	0.80
26:BA:1067:G:O2'	26:BA:1068:U:OP2	1.98	0.80
26:BA:2824:C:O2'	54:B5:43:HIS:HD2	1.63	0.80
26:BA:893:U:OP2	26:BA:973:G:O6	1.99	0.80
24:CY:71:A:H5'	26:DA:1963:C:HO2'	1.00	0.80
26:BA:2672:G:H2'	26:BA:2673:A:C2	2.15	0.80
26:DA:2475:C:O2'	26:DA:2476:C:O5'	1.99	0.80
12:CL:32:PHE:HB3	12:CL:84:LEU:HD21	1.62	0.80
26:DA:708:G:OP1	38:DP:18:ARG:HD2	1.82	0.80
26:DA:2487:A:N3	26:DA:2488:C:H5"	1.96	0.80
24:AY:6:G:O2'	24:AY:7:A:H5'	1.83	0.79
26:BA:2298:A:H62	26:BA:2355:U:H3	1.29	0.79
26:DA:836:C:O2'	26:DA:837:C:OP1	1.98	0.79
26:DA:1290:G:OP1	38:DP:16:ARG:NE	2.14	0.79
43:DU:114:LYS:HA	43:DU:117:GLN:HB2	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:299:G:H2'	1:AA:300:A:C8	2.17	0.79
24:AY:36:A:H2	25:AX:19:PSU:HN3	1.29	0.79
26:BA:1441:U:O2	26:BA:1441:U:H2'	1.81	0.79
42:BT:88:ILE:HG22	42:BT:89:VAL:HG23	1.65	0.79
24:CY:74:C:C5	26:DA:2565:U:O2	2.34	0.79
16:AP:53:VAL:HG12	16:AP:79:VAL:HG22	1.65	0.79
29:BD:210:GLY:O	29:BD:211:ARG:HB3	1.81	0.79
55:B6:51:GLU:O	55:B6:52:VAL:HG23	1.83	0.79
26:DA:1833:A:O3'	29:DD:259:THR:HG21	1.81	0.79
42:DT:50:ILE:HD11	42:DT:102:ILE:HD11	1.65	0.79
55:D6:47:THR:OG1	55:D6:48:VAL:N	2.15	0.79
29:DD:44:ASN:HB3	29:DD:49:ILE:HA	1.64	0.79
44:BV:35:LEU:O	44:BV:37:VAL:O	2.01	0.79
24:CY:9:G:N2	24:CY:11:C:C4	2.36	0.78
26:BA:1700:A:P	40:BR:3:HIS:HB2	2.23	0.78
40:BR:10:LEU:HB3	40:BR:17:ARG:NE	1.97	0.78
55:D6:15:GLU:OE1	55:D6:43:CYS:SG	2.41	0.78
26:BA:2829:A:O2'	26:BA:2830:A:OP1	2.00	0.78
27:BB:80:U:H2'	27:BB:81:G:H21	1.46	0.78
40:BR:53:HIS:CD2	40:BR:94:TYR:OH	2.36	0.78
54:B5:54:GLY:O	54:B5:56:LYS:NZ	2.13	0.78
1:CA:469:G:H4'	1:CA:470:G:O5'	1.82	0.78
10:CJ:48:THR:HA	10:CJ:62:HIS:HB3	1.64	0.78
47:DY:2:ARG:O	47:DY:4:LYS:N	2.17	0.78
24:CY:9:G:N1	24:CY:12:G:O6	2.16	0.78
13:AM:65:LYS:HA	13:AM:66:LEU:HB2	1.64	0.78
24:AY:20:U:H5	24:AY:59:A:H61	1.30	0.78
19:AS:19:VAL:HG11	19:AS:44:MET:HG3	1.65	0.78
26:BA:2723:U:O2'	26:BA:2724:A:OP2	2.02	0.78
24:CY:2:G:O6	24:CY:72:A:N6	1.81	0.78
55:D6:16:CYS:SG	55:D6:48:VAL:HG22	2.23	0.78
26:BA:2120:U:H2'	26:BA:2120:U:O2	1.84	0.78
44:BV:19:LYS:HG3	44:BV:20:LEU:N	1.99	0.78
1:CA:1102:C:OP2	9:CI:9:ARG:NH2	2.16	0.78
24:CY:6:G:O2'	24:CY:7:A:H5'	1.83	0.78
26:DA:1903:C:H5'	26:DA:1904:G:OP2	1.84	0.78
24:AY:9:G:N1	24:AY:12:G:O6	2.16	0.78
26:DA:2548:U:H2'	26:DA:2549:C:C6	2.17	0.78
23:AW:55:U:HO2'	23:AW:56:C:H5	1.29	0.77
24:AY:54:A:N1	24:AY:55:C:C5	2.52	0.77
24:AY:54:A:N6	24:AY:55:C:N4	2.32	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1482:G:O2'	1:CA:1483:G:OP2	2.01	0.77
29:DD:77:ALA:HB2	29:DD:97:TYR:CD2	2.19	0.77
11:AK:99:GLN:HG2	11:AK:105:VAL:HG21	1.65	0.77
47:BY:35:TYR:CD2	47:BY:69:ALA:HB3	2.20	0.77
47:BY:81:LYS:NZ	47:BY:99:CYS:SG	2.56	0.77
26:BA:1920:G:H22	26:BA:1923:C:N4	1.79	0.77
26:BA:2736:C:OP2	40:BR:2:ARG:NH2	2.18	0.77
49:D0:12:ASN:O	49:D0:14:ARG:N	2.17	0.77
24:CY:54:A:N1	24:CY:55:C:C5	2.52	0.77
24:CY:54:A:N6	24:CY:55:C:N4	2.33	0.77
24:AY:9:G:N2	24:AY:11:C:C4	2.36	0.77
45:BW:6:ILE:HA	45:BW:103:ILE:O	1.85	0.77
29:DD:35:LYS:HE2	29:DD:36:PRO:HB3	1.65	0.77
24:AY:48:G:C6	24:AY:59:A:C4	2.73	0.77
26:BA:2430:U:O4	57:B8:30:ARG:CZ	2.33	0.77
26:DA:1160:G:H2'	26:DA:1161:C:C6	2.20	0.77
1:AA:973:G:O4'	10:AJ:55:LYS:HG3	1.85	0.76
26:BA:987:U:OP2	38:BP:38:GLN:CD	2.23	0.76
26:BA:2089:U:N3	26:BA:2441:A:C2	2.52	0.76
1:CA:899:U:O2'	5:CE:19:MET:O	2.02	0.76
24:CY:18:G:N1	24:CY:57:C:C4	2.53	0.76
32:DG:77:ILE:HG22	32:DG:80:PHE:H	1.49	0.76
24:AY:2:G:N2	24:AY:72:A:C4	2.52	0.76
24:AY:12:G:C4	24:AY:24:G:N2	2.54	0.76
44:BV:47:VAL:HB	44:BV:49:THR:O	1.83	0.76
5:CE:80:ILE:HD11	5:CE:138:ALA:HB1	1.66	0.76
24:CY:12:G:C4	24:CY:24:G:N2	2.54	0.76
26:DA:508:A:H4'	47:DY:49:VAL:HG22	1.67	0.76
26:BA:82:A:N1	26:BA:96:G:O2'	2.18	0.76
1:CA:1181:U:H4'	10:CJ:54:PHE:CE1	2.19	0.76
26:BA:1889:A:N6	26:BA:1904:G:O2'	2.19	0.76
36:BN:2:LYS:O	36:BN:4:TYR:CZ	2.39	0.76
42:BT:32:TYR:CD2	42:BT:81:PRO:HB2	2.21	0.76
12:CL:90:VAL:O	12:CL:92:ASP:N	2.19	0.76
14:CN:27:CYS:O	14:CN:29:ARG:N	2.15	0.76
50:D1:5:CYS:SG	50:D1:62:VAL:HG23	2.25	0.76
23:AW:34:G:C6	23:AW:35:A:C6	2.74	0.76
24:AY:18:G:N1	24:AY:57:C:C4	2.53	0.76
26:DA:144:G:C2'	26:DA:145:G:H5'	2.15	0.76
26:BA:644:G:H5"	26:BA:644:G:N3	1.99	0.76
36:BN:76:SER:O	36:BN:78:TYR:N	2.19	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:B6:40:CYS:HA	55:B6:46:HIS:HB2	1.66	0.76
24:CY:20:U:H5	24:CY:59:A:H61	1.30	0.76
24:CY:54:A:N6	24:CY:55:C:H41	1.84	0.76
47:BY:7:VAL:HG21	47:BY:8:LYS:HZ1	1.51	0.75
26:DA:718:C:C2'	26:DA:719:C:H5'	2.16	0.75
42:BT:29:ARG:CB	42:BT:85:LYS:HA	2.16	0.75
26:DA:1527:U:H5'	26:DA:1528:G:OP2	1.86	0.75
23:AW:20:U:H2'	23:AW:21:A:H4'	1.68	0.75
24:AY:4:G:C2	24:AY:70:A:N1	2.54	0.75
26:BA:1704:C:OP1	30:BE:132:HIS:CE1	2.39	0.75
1:AA:1084:G:OP1	1:AA:1086:U:C4	2.40	0.75
47:BY:50:ARG:HB2	47:BY:56:PRO:O	1.86	0.75
40:DR:38:VAL:HB	40:DR:39:PRO:HD3	1.68	0.75
38:BP:23:PRO:HB2	38:BP:33:ARG:CD	2.16	0.75
58:B9:14:CYS:HA	58:B9:27:CYS:HA	1.69	0.75
31:DF:101:LEU:O	31:DF:106:ARG:NH1	2.20	0.75
24:AY:49:G:C6	24:AY:66:G:N1	2.54	0.75
26:BA:1057:U:O4	36:BN:28:THR:HG21	1.86	0.75
31:BF:108:LYS:O	31:BF:112:MET:HG3	1.86	0.75
33:BH:158:HIS:NE2	33:BH:170:ARG:O	2.20	0.75
1:CA:1251:A:N1	1:CA:1294:G:O2'	2.19	0.75
45:DW:18:ARG:NH1	45:DW:76:VAL:O	2.18	0.75
24:AY:54:A:N6	24:AY:55:C:H41	1.84	0.75
27:BB:21:G:O2'	27:BB:22:U:O5'	2.04	0.75
41:BS:96:GLY:O	41:BS:98:VAL:N	2.20	0.75
45:BW:84:ARG:HB2	45:BW:96:ILE:HG22	1.66	0.75
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	1.68	0.75
24:CY:48:G:C6	24:CY:59:A:C4	2.73	0.75
24:CY:75:C:N3	26:DA:2564:G:N1	2.35	0.75
26:DA:2323:U:H2'	26:DA:2324:C:H5'	1.69	0.75
30:DE:11:MET:HB2	30:DE:23:VAL:O	1.86	0.75
47:BY:7:VAL:HG21	47:BY:8:LYS:NZ	2.02	0.75
1:CA:434:G:H4'	1:CA:435:A:OP1	1.85	0.74
26:BA:1064:U:HO2'	26:BA:1066:A:H2	1.35	0.74
1:CA:231:C:H5'	17:CQ:70:ARG:HG2	1.69	0.74
1:AA:832:C:O2'	1:AA:833:U:OP2	2.05	0.74
26:BA:2824:C:O2'	54:B5:42:PRO:HG2	1.87	0.74
23:CW:39:U:H4'	23:CW:39:U:OP1	1.85	0.74
24:CY:4:G:C2	24:CY:70:A:N1	2.54	0.74
26:DA:1821:A:N6	26:DA:1858:G:O2'	2.19	0.74
26:BA:1038:G:OP1	43:BU:50:ARG:NH2	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:2456:G:OP1	31:BF:74:ARG:NH2	2.19	0.74
26:BA:353:A:H2	26:BA:1254:A:H2'	1.52	0.74
1:CA:911:G:N7	7:CG:3:ARG:NH2	2.36	0.74
13:CM:65:LYS:HA	13:CM:66:LEU:HB2	1.69	0.74
1:AA:673:G:H2'	1:AA:674:G:C8	2.22	0.74
55:D6:43:CYS:SG	55:D6:43:CYS:O	2.45	0.74
26:BA:996:G:OP1	39:BQ:16:ARG:NH2	2.21	0.74
41:BS:16:ASN:OD1	41:BS:17:ARG:N	2.21	0.74
54:B5:16:ARG:NH1	54:B5:17:ASP:OD1	2.21	0.74
1:CA:1481:A:O2'	1:CA:1482:G:O5'	2.06	0.74
26:BA:1578:C:O2'	26:BA:1579:G:C2	2.40	0.73
26:BA:2492:G:O2'	26:BA:2493:G:P	2.44	0.73
43:BU:31:SER:O	43:BU:33:ARG:N	2.16	0.73
54:B5:3:LYS:O	54:B5:4:HIS:C	2.26	0.73
26:BA:333:A:OP1	47:BY:18:GLY:HA2	1.86	0.73
26:BA:518:G:O2'	45:BW:5:ALA:O	2.03	0.73
38:BP:17:LYS:O	38:BP:19:VAL:N	2.21	0.73
27:DB:41:U:N3	32:DG:70:VAL:O	2.20	0.73
6:CF:97:PHE:O	18:CR:31:LEU:HD23	1.87	0.73
47:DY:79:CYS:SG	47:DY:80:GLY:N	2.62	0.73
24:AY:43:G:O2'	24:AY:44:A:O4'	2.06	0.73
26:BA:2302:U:O2'	26:BA:2385:C:O2	2.06	0.73
47:BY:20:TYR:O	47:BY:23:ARG:HG2	1.88	0.73
24:CY:43:G:O2'	24:CY:44:A:O4'	2.06	0.73
1:AA:250:A:H4'	1:AA:251:G:O5'	1.88	0.73
34:BI:81:VAL:HG13	34:BI:143:SER:O	1.89	0.73
46:DX:12:VAL:HG13	46:DX:27:THR:O	1.87	0.73
26:BA:2723:U:H2'	26:BA:2723:U:O2	1.88	0.73
15:CO:23:GLY:O	15:CO:24:SER:HB3	1.88	0.73
26:DA:798:A:O2'	26:DA:799:C:OP2	2.04	0.73
26:BA:91:C:H5'	26:BA:92:G:OP2	1.87	0.73
26:BA:2475:C:O2'	26:BA:2476:C:O4'	2.07	0.73
22:CV:52:C:C2'	22:CV:53:G:H5'	2.18	0.73
26:DA:82:A:N1	26:DA:96:G:O2'	2.21	0.73
26:DA:2492:G:O2'	26:DA:2493:G:P	2.46	0.73
16:CP:20:VAL:HG21	16:CP:32:TYR:CD1	2.24	0.73
24:CY:55:C:C5	24:CY:58:U:H5	2.07	0.73
38:DP:83:VAL:HG11	38:DP:112:LEU:HD21	1.71	0.73
26:BA:1232:U:O2'	26:BA:1233:A:H5'	1.88	0.73
32:BG:86:MET:N	32:BG:87:PRO:HD2	2.04	0.73
32:DG:28:VAL:O	32:DG:31:VAL:HG12	1.89	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:66:SER:O	17:AQ:70:ARG:NH1	2.22	0.72
26:BA:2543:G:O2'	26:BA:2668:A:N6	2.23	0.72
40:BR:53:HIS:HD2	40:BR:94:TYR:OH	1.71	0.72
50:D1:29:GLY:O	50:D1:30:VAL:HG22	1.89	0.72
24:AY:12:G:N2	24:AY:23:A:C6	2.58	0.72
26:BA:2147:A:H4'	26:BA:2148:G:O5'	1.89	0.72
26:BA:2735:C:OP1	40:BR:2:ARG:NH1	2.22	0.72
29:BD:44:ASN:HB3	29:BD:49:ILE:HA	1.71	0.72
26:DA:715:G:H4'	26:DA:716:A:OP2	1.89	0.72
13:AM:65:LYS:HA	13:AM:66:LEU:CB	2.20	0.72
26:BA:722:A:H8	26:BA:2090:G:N2	1.79	0.72
26:BA:2057:C:H5'	26:BA:2057:C:C6	2.24	0.72
26:DA:879:U:O2	38:DP:55:ARG:NH1	2.23	0.72
26:DA:987:U:OP2	38:DP:38:GLN:CD	2.27	0.72
26:BA:2802:A:H2'	26:BA:2802:A:N3	2.05	0.72
38:DP:64:LYS:O	38:DP:66:GLY:N	2.21	0.72
27:BB:37:C:C5	27:BB:38:C:C5	2.78	0.72
36:BN:47:ALA:HB2	36:BN:112:LEU:HD11	1.72	0.72
42:DT:55:ASN:HD22	42:DT:58:ASN:HD21	1.38	0.72
9:CI:16:ARG:O	9:CI:63:ILE:HG23	1.90	0.72
26:DA:1002:U:OP2	39:DQ:14:ARG:NH1	2.23	0.72
26:BA:1064:U:O2'	26:BA:1066:A:H2	1.72	0.72
26:DA:1448:C:H5"	26:DA:1517:A:H1'	1.72	0.72
11:CK:22:HIS:HB3	11:CK:29:ILE:HG23	1.72	0.71
41:DS:74:ALA:HB1	41:DS:103:GLU:HB2	1.72	0.71
26:BA:879:U:O2	38:BP:55:ARG:NH1	2.23	0.71
40:DR:11:ASN:OD1	40:DR:12:ARG:N	2.22	0.71
24:AY:55:C:C5	24:AY:58:U:H5	2.07	0.71
26:BA:26:G:N2	26:BA:536:G:HO2'	1.84	0.71
26:BA:1346:A:O2'	26:BA:1347:A:C3'	2.38	0.71
24:CY:12:G:N2	24:CY:23:A:C6	2.58	0.71
1:AA:1502:A:H2	1:AA:1505:G:H1	1.38	0.71
24:AY:48:G:C2	24:AY:59:A:N3	2.58	0.71
26:BA:69:A:C8	26:BA:69:A:H5'	2.26	0.71
26:BA:2168:G:H2'	26:BA:2169:G:O4'	1.90	0.71
24:CY:5:A:N1	24:CY:6:G:O6	2.23	0.71
24:CY:10:C:N4	24:CY:45:G:H22	1.70	0.71
24:AY:4:G:C6	24:AY:5:A:C5	2.79	0.71
54:B5:3:LYS:O	54:B5:4:HIS:O	2.09	0.71
55:B6:41:PRO:HD2	55:B6:46:HIS:HB2	1.72	0.71
1:CA:1425:G:C6	1:CA:1427:A:H2	2.08	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B1:56:GLN:HA	50:B1:56:GLN:HE21	1.54	0.71
41:DS:96:GLY:O	41:DS:98:VAL:N	2.23	0.71
42:DT:30:VAL:HA	42:DT:44:ASP:HA	1.72	0.71
24:AY:5:A:N1	24:AY:6:G:O6	2.23	0.71
26:BA:1539:A:N3	26:BA:1539:A:H5'	2.06	0.71
1:CA:1186:A:OP2	14:CN:3:ARG:NH1	2.23	0.71
1:CA:1405:G:O2'	37:DO:49:ARG:NH2	2.23	0.71
16:CP:53:VAL:HG12	16:CP:79:VAL:HG22	1.73	0.71
26:DA:1054:A:H5"	43:DU:63:VAL:HG21	1.73	0.71
47:DY:2:ARG:C	47:DY:4:LYS:H	1.93	0.71
4:AD:26:CYS:HA	4:AD:31:CYS:CB	2.21	0.71
43:BU:28:ARG:NH1	43:BU:38:THR:OG1	2.23	0.71
24:CY:48:G:C2	24:CY:59:A:N3	2.58	0.71
32:BG:51:ARG:NE	32:BG:51:ARG:HA	2.06	0.71
5:AE:76:ILE:HD11	5:AE:142:LEU:HD21	1.72	0.71
23:AW:38:A:H3'	23:AW:39:U:H5"	1.73	0.71
43:BU:91:ASP:OD2	43:BU:96:ALA:HB2	1.89	0.71
29:BD:9:TYR:CZ	29:BD:13:ARG:HD3	2.25	0.70
34:BI:5:LEU:HD12	34:BI:17:GLN:HB2	1.72	0.70
41:BS:28:VAL:HB	41:BS:89:ARG:HB2	1.72	0.70
42:BT:23:ARG:O	42:BT:25:GLY:N	2.24	0.70
54:B5:42:PRO:HB2	54:B5:43:HIS:CD2	2.26	0.70
26:DA:609:C:C5	38:DP:33:ARG:HD3	2.26	0.70
26:DA:1549:C:O2'	26:DA:1550:C:O5'	2.08	0.70
30:DE:4:ILE:HD13	30:DE:28:ALA:HB1	1.71	0.70
37:DO:80:ASP:OD1	42:DT:64:ARG:NH2	2.23	0.70
38:DP:58:THR:O	38:DP:61:ARG:NE	2.24	0.70
26:BA:2475:C:O2'	26:BA:2476:C:O5'	2.08	0.70
1:CA:856:G:H5'	8:CH:89:PRO:HG2	1.72	0.70
24:CY:49:G:O6	24:CY:66:G:C2	2.43	0.70
24:CY:53:A:H61	24:CY:61:C:H42	1.39	0.70
47:BY:60:PHE:HA	47:BY:62:GLU:OE2	1.90	0.70
24:CY:49:G:C6	24:CY:66:G:N1	2.54	0.70
42:DT:23:ARG:O	42:DT:25:GLY:N	2.24	0.70
55:D6:40:CYS:HA	55:D6:46:HIS:CB	2.21	0.70
29:BD:79:VAL:HG21	29:BD:111:LEU:HD11	1.73	0.70
42:BT:27:THR:OG1	42:BT:28:VAL:N	2.24	0.70
1:CA:60:A:H5'	1:CA:61:A:H5"	1.72	0.70
1:AA:434:U:H2'	1:AA:435:C:C6	2.25	0.70
24:CY:1:G:H2'	24:CY:2:G:H8	1.53	0.70
26:BA:2057:C:H5'	26:BA:2057:C:H6	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DP:61:ARG:NH1	57:D8:13:ARG:HD2	2.06	0.70
24:AY:54:A:C6	24:AY:55:C:C4	2.80	0.70
49:B0:24:LYS:O	49:B0:25:ARG:HD3	1.91	0.70
26:DA:230:G:H5"	57:D8:62:LEU:HD13	1.73	0.70
26:DA:1450:U:H2'	26:DA:1451:U:C6	2.27	0.70
26:BA:1346:A:H4'	26:BA:1347:A:OP1	1.90	0.70
26:BA:1549:C:O2'	26:BA:1550:C:H5'	1.92	0.70
26:BA:2298:A:N6	26:BA:2355:U:H3	1.89	0.70
45:BW:64:MET:O	45:BW:65:LEU:HB3	1.91	0.70
24:CY:4:G:C6	24:CY:5:A:C5	2.79	0.70
42:DT:13:ARG:CZ	42:DT:13:ARG:HA	2.22	0.70
24:AY:35:G:H1	25:AX:20:A:N6	1.90	0.70
26:BA:2583:A:C8	30:BE:144:ARG:HD2	2.27	0.70
38:BP:16:ARG:NH1	38:BP:16:ARG:HB2	2.06	0.70
24:CY:49:G:N2	24:CY:65:G:H22	1.90	0.70
1:AA:1495:U:O2'	26:BA:1940:A:N1	2.25	0.70
24:AY:49:G:C2	24:AY:66:G:N3	2.60	0.69
26:BA:1254:A:H5'	26:BA:1254:A:H8	1.56	0.69
26:DA:355:A:O2'	26:DA:357:C:OP2	2.08	0.69
26:DA:2672:G:H3'	26:DA:2673:A:O4'	1.92	0.69
24:AY:53:A:H61	24:AY:61:C:H42	1.39	0.69
26:BA:1777:G:H2'	26:BA:1778:G:H5'	1.72	0.69
31:BF:22:ALA:O	31:BF:26:ALA:HB2	1.91	0.69
33:BH:41:MET:CE	33:BH:43:VAL:HG13	2.22	0.69
24:CY:54:A:C6	24:CY:55:C:C4	2.80	0.69
41:DS:20:ARG:NE	41:DS:20:ARG:HA	2.06	0.69
46:BX:12:VAL:HG22	46:BX:27:THR:O	1.92	0.69
26:DA:2405:C:OP1	38:DP:63:PRO:HD2	1.92	0.69
1:AA:1054:C:O2'	1:AA:1055:A:H5"	1.92	0.69
24:AY:49:G:N2	24:AY:65:G:H22	1.90	0.69
26:BA:2054:A:H4'	26:BA:2055:U:OP1	1.92	0.69
26:BA:2842:G:H3'	26:BA:2843:G:C5'	2.22	0.69
24:AY:55:C:H3'	24:AY:55:C:O2	1.93	0.69
26:BA:591:U:O2'	26:BA:1028:A:N1	2.24	0.69
26:BA:2885:G:O2'	42:BT:3:ARG:CZ	2.40	0.69
16:CP:28:ARG:HH11	16:CP:28:ARG:HG2	1.54	0.69
1:AA:376:G:OP2	16:AP:67:THR:HG21	1.93	0.69
4:AD:24:GLU:O	4:AD:27:TYR:HB2	1.91	0.69
55:B6:41:PRO:HD2	55:B6:46:HIS:HA	1.75	0.69
1:CA:1418:G:H2'	1:CA:1419:U:C6	2.28	0.69
26:DA:865:A:C4	26:DA:1233:A:C2	2.81	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:1308:U:O2'	54:B5:11:THR:HG23	1.93	0.69
29:BD:108:PRO:HB3	29:BD:143:HIS:CE1	2.28	0.69
29:BD:181:GLU:HA	29:BD:272:ALA:HB3	1.74	0.69
31:BF:139:PHE:HB2	31:BF:166:ALA:HB1	1.75	0.69
55:D6:40:CYS:HA	55:D6:46:HIS:HB3	1.74	0.69
1:AA:520:A:O2'	12:AL:73:GLU:OE2	2.11	0.69
1:AA:1259:C:C4	1:AA:1260:C:O2	2.45	0.69
11:AK:98:LEU:O	11:AK:101:SER:OG	2.09	0.69
26:BA:1538:C:C4	26:BA:2226:G:O2'	2.45	0.69
36:BN:67:LEU:HB3	36:BN:88:GLU:CG	2.22	0.69
42:BT:50:ILE:HD11	42:BT:102:ILE:HD11	1.74	0.69
57:B8:31:HIS:O	57:B8:32:LEU:C	2.30	0.69
1:CA:1263:U:H4'	1:CA:1264:C:OP2	1.91	0.69
5:CE:76:ILE:HD11	5:CE:142:LEU:HD21	1.73	0.69
24:CY:49:G:C2	24:CY:66:G:N3	2.60	0.69
26:DA:718:C:O2'	26:DA:719:C:H5'	1.92	0.69
26:DA:1346:A:H4'	26:DA:1347:A:OP1	1.92	0.69
30:DE:111:ARG:HG3	40:DR:2:ARG:NE	2.08	0.69
38:DP:107:LYS:O	38:DP:109:GLY:N	2.25	0.69
41:DS:89:ARG:CG	41:DS:92:TYR:HA	2.23	0.69
1:AA:832:C:O2'	1:AA:833:U:P	2.51	0.69
1:AA:1137:C:H4'	1:AA:1138:G:C2	2.27	0.69
24:AY:1:G:H2'	24:AY:2:G:H8	1.53	0.69
26:BA:2817:U:H5'	26:BA:2899:G:O6	1.92	0.69
1:CA:614:G:H2'	1:CA:615:G:H5'	1.75	0.69
26:DA:775:G:OP2	29:DD:13:ARG:NH1	2.26	0.69
38:DP:23:PRO:HB2	38:DP:33:ARG:CD	2.23	0.69
9:AI:88:TYR:O	9:AI:89:ASN:HB2	1.93	0.69
26:BA:1254:A:H5'	26:BA:1254:A:C8	2.28	0.69
43:BU:90:VAL:O	43:BU:92:ARG:N	2.26	0.69
1:CA:324:C:H4'	1:CA:325:A:H5'	1.75	0.69
26:DA:852:C:OP2	38:DP:39:LYS:HD3	1.93	0.69
57:D8:54:GLU:O	57:D8:58:ILE:HG12	1.93	0.69
4:AD:8:VAL:O	4:AD:10:ARG:N	2.26	0.68
15:AO:78:TYR:O	15:AO:82:ILE:HG22	1.92	0.68
30:BE:4:ILE:HD13	30:BE:28:ALA:HB1	1.73	0.68
20:CT:26:ASN:HB2	20:CT:71:THR:HG23	1.76	0.68
38:DP:58:THR:O	38:DP:61:ARG:CZ	2.41	0.68
37:BO:114:ILE:H	37:BO:114:ILE:HD12	1.58	0.68
24:CY:55:C:C6	24:CY:58:U:H5	2.10	0.68
26:DA:139:A:C8	26:DA:1453:C:H1'	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DD:44:ASN:CB	29:DD:49:ILE:HA	2.23	0.68
32:DG:20:ILE:O	32:DG:24:GLY:HA2	1.93	0.68
24:AY:55:C:C6	24:AY:58:U:H5	2.10	0.68
31:BF:83:PHE:O	31:BF:84:VAL:HB	1.93	0.68
32:BG:98:ARG:O	32:BG:101:ILE:HG13	1.93	0.68
26:DA:634:C:H2'	26:DA:635:G:H5"	1.73	0.68
26:DA:1712:G:HO2'	37:DO:6:THR:HG1	1.40	0.68
26:BA:721:A:N3	26:BA:2454:C:O2'	2.27	0.68
36:BN:4:TYR:N	36:BN:4:TYR:CD1	2.60	0.68
41:BS:97:ARG:HH21	41:BS:98:VAL:HA	1.59	0.68
26:DA:95:C:H5"	51:D2:2:LYS:HB2	1.75	0.68
60:DC:78:ALA:HB3	60:DC:94:VAL:HG13	1.75	0.68
22:CV:76:C:OP1	26:DA:2613:A:OP1	2.11	0.68
23:CW:75:C:C2'	23:CW:76:A:N7	2.51	0.68
26:DA:2672:G:H2'	26:DA:2673:A:N3	2.08	0.68
3:AC:148:GLY:HA3	3:AC:172:ARG:O	1.93	0.68
26:BA:1067:G:H22	26:BA:1187:A:H2	1.34	0.68
47:BY:26:LYS:O	47:BY:27:VAL:O	2.11	0.68
26:DA:276:G:O2'	26:DA:277:G:H8	1.76	0.68
26:DA:2147:A:H4'	26:DA:2148:G:O5'	1.94	0.68
26:BA:1809:U:C5	26:BA:1814:A:N7	2.56	0.68
24:CY:48:G:C6	24:CY:59:A:N3	2.62	0.68
26:DA:2030:G:H1'	40:DR:107:ASP:O	1.93	0.68
31:DF:53:THR:HG22	31:DF:56:GLU:OE2	1.93	0.68
1:AA:1300:G:O2'	1:AA:1301:U:OP2	2.12	0.68
26:BA:814:G:O2'	26:BA:1424:A:N6	2.26	0.68
26:BA:2487:A:N1	26:BA:2488:C:C5	2.62	0.68
30:BE:120:TRP:CE3	30:BE:155:LYS:HD3	2.29	0.68
47:BY:76:CYS:SG	47:BY:77:PRO:HD2	2.34	0.68
24:AY:6:G:H1	24:AY:67:U:H3	1.42	0.68
57:B8:52:LYS:N	57:B8:53:PRO:HD2	2.09	0.68
1:CA:1187:U:O2'	3:CC:195:VAL:HG23	1.94	0.68
26:DA:276:G:HO2'	26:DA:277:G:H8	1.42	0.68
1:AA:484:G:H4'	1:AA:485:G:O5'	1.93	0.68
38:BP:23:PRO:O	38:BP:33:ARG:NH1	2.27	0.68
26:DA:260:A:N1	26:DA:290:G:O2'	2.23	0.68
26:DA:1232:U:O2'	26:DA:1233:A:H5'	1.94	0.68
37:DO:114:ILE:HD12	37:DO:114:ILE:H	1.57	0.68
23:AW:55:U:O2'	23:AW:56:C:H5	1.77	0.67
26:BA:985:A:H4'	38:BP:35:HIS:CE1	2.29	0.67
24:CY:55:C:O2	24:CY:55:C:H3'	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DA:1888:G:O2'	26:DA:1905:A:N6	2.26	0.67
42:DT:7:ILE:O	42:DT:10:VAL:HB	1.94	0.67
24:AY:36:A:N1	25:AX:19:PSU:O2	2.27	0.67
26:BA:1451:U:H2'	26:BA:1452:C:C6	2.29	0.67
1:CA:1303:C:H3'	1:CA:1304:C:H5"	1.75	0.67
26:DA:1185:U:OP1	36:DN:25:ARG:NH1	2.27	0.67
26:DA:1628:C:O2'	26:DA:1631:A:C8	2.47	0.67
1:AA:1226:C:H4'	1:AA:1227:A:OP1	1.93	0.67
24:AY:48:G:C6	24:AY:59:A:N3	2.62	0.67
38:BP:47:ASP:HB3	38:BP:48:PRO:O	1.94	0.67
16:CP:58:TYR:O	16:CP:61:SER:OG	2.10	0.67
24:CY:1:G:N1	24:CY:72:A:N1	2.33	0.67
54:D5:33:CYS:HB2	54:D5:40:LYS:HE3	1.75	0.67
26:BA:708:G:OP1	38:BP:18:ARG:HD2	1.94	0.67
26:DA:1441:U:O2	26:DA:1441:U:H2'	1.94	0.67
42:DT:88:ILE:HG22	42:DT:89:VAL:HG23	1.76	0.67
43:DU:31:SER:O	43:DU:33:ARG:N	2.27	0.67
4:AD:26:CYS:CA	4:AD:31:CYS:HB2	2.25	0.67
8:AH:112:LEU:HA	8:AH:134:ILE:HG12	1.76	0.67
17:AQ:59:ILE:CG2	17:AQ:71:PHE:HB3	2.25	0.67
55:B6:11:LEU:HD12	55:B6:24:GLU:HB2	1.75	0.67
13:CM:65:LYS:HA	13:CM:66:LEU:CB	2.24	0.67
26:DA:1851:A:OP1	29:DD:201:HIS:NE2	2.26	0.67
4:AD:9:CYS:HA	4:AD:12:CYS:HB2	1.77	0.67
26:BA:670:A:N3	26:BA:670:A:H5'	2.10	0.67
44:BV:16:PRO:O	44:BV:96:ILE:O	2.13	0.67
24:CY:2:G:N2	24:CY:72:A:C4	2.52	0.67
30:DE:119:ARG:HD2	30:DE:120:TRP:NE1	2.10	0.67
33:DH:106:THR:HG22	33:DH:112:PRO:HB3	1.76	0.67
1:AA:923:A:H2'	1:AA:924:C:C6	2.29	0.67
1:AA:953:G:N7	13:AM:104:ARG:NH2	2.42	0.67
26:BA:967:U:H2'	26:BA:968:C:C6	2.30	0.67
26:BA:2352:G:H2'	26:BA:2353:C:C6	2.30	0.67
50:B1:86:SER:HB2	50:B1:89:GLU:HB2	1.75	0.67
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.77	0.67
26:DA:1354:G:HO2'	26:DA:1656:C:HO2'	1.43	0.67
29:DD:24:ILE:O	29:DD:25:THR:O	2.12	0.67
1:AA:1053:G:N7	1:AA:1200:C:H5"	2.10	0.67
24:AY:33:U:O2'	24:AY:35:G:N7	2.21	0.67
26:BA:1539:A:H2'	26:BA:1540:A:C5'	2.25	0.67
42:BT:106:SER:C	42:BT:107:ASP:OD1	2.33	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:86:GLY:N	11:AK:112:THR:OG1	2.25	0.67
29:BD:182:LEU:O	29:BD:271:ILE:HG13	1.94	0.67
38:BP:23:PRO:HB2	38:BP:33:ARG:HD2	1.77	0.67
1:CA:342:G:OP1	42:DT:41:ARG:NH2	2.27	0.67
31:DF:165:ARG:HA	31:DF:168:ARG:HD3	1.77	0.67
55:D6:18:ARG:HD2	55:D6:43:CYS:SG	2.34	0.67
1:AA:443:C:H2'	1:AA:444:C:C6	2.30	0.67
1:AA:1499:A:H1'	1:AA:1520:G:H5'	1.76	0.67
18:AR:44:LEU:O	18:AR:45:SER:O	2.12	0.67
24:AY:12:G:C2	24:AY:24:G:N2	2.63	0.67
46:BX:12:VAL:HG23	46:BX:13:LEU:H	1.60	0.67
1:CA:802:G:O2'	1:CA:803:A:H5'	1.94	0.67
2:CB:44:LEU:HA	2:CB:47:THR:OG1	1.94	0.67
40:BR:9:LYS:O	40:BR:10:LEU:HD23	1.94	0.66
48:BZ:30:ASN:O	48:BZ:32:HIS:N	2.28	0.66
26:DA:2420:G:H2'	26:DA:2421:G:O4'	1.95	0.66
34:DI:133:HIS:HB2	34:DI:134:PRO:CD	2.25	0.66
24:AY:49:G:O6	24:AY:66:G:C2	2.43	0.66
27:BB:66:A:O2'	27:BB:67:G:OP2	2.09	0.66
37:BO:7:TYR:C	37:BO:8:LEU:HD22	2.15	0.66
57:B8:50:LEU:O	57:B8:51:ALA:HB3	1.95	0.66
24:CY:56:U:H5"	26:DA:941:A:O2'	1.96	0.66
26:DA:47:A:H5"	26:DA:49:G:O4'	1.94	0.66
26:DA:202:G:H1'	26:DA:204:A:O2'	1.95	0.66
26:DA:209:A:H4'	26:DA:210:A:O5'	1.94	0.66
31:DF:185:ASP:OD1	31:DF:188:ARG:NH1	2.27	0.66
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.28	0.66
1:CA:1303:C:H5"	1:CA:1304:C:H5"	1.78	0.66
24:CY:6:G:H1	24:CY:67:U:H3	1.42	0.66
24:CY:33:U:O2'	24:CY:35:G:N7	2.21	0.66
27:DB:21:G:O2'	27:DB:22:U:O5'	2.14	0.66
29:BD:65:ILE:HD13	29:BD:65:ILE:C	2.15	0.66
1:CA:658:G:H2'	1:CA:659:A:H8	1.60	0.66
4:CD:8:VAL:C	4:CD:10:ARG:H	1.98	0.66
26:DA:1850:U:H4'	26:DA:1851:A:OP2	1.95	0.66
26:BA:1185:U:OP2	36:BN:63:THR:OG1	2.13	0.66
1:CA:1395:C:H2'	1:CA:1396:A:H8	1.60	0.66
29:BD:30:GLU:HG3	29:BD:63:ARG:CZ	2.25	0.66
42:BT:125:ARG:O	42:BT:128:GLU:HG3	1.95	0.66
26:DA:985:A:H4'	38:DP:35:HIS:CE1	2.30	0.66
26:DA:2220:A:H3'	26:DA:2221:C:H6	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DA:2221:C:H5'	26:DA:2222:C:OP2	1.95	0.66
26:BA:640:G:O2'	31:BF:205:ARG:NH2	2.28	0.66
26:BA:2054:A:O2'	26:BA:2056:G:OP2	2.12	0.66
40:BR:20:LEU:HD21	40:BR:40:LYS:HD3	1.77	0.66
24:CY:12:G:C2	24:CY:24:G:N2	2.63	0.66
1:AA:977:A:H2'	1:AA:978:A:H5'	1.78	0.66
38:BP:85:LEU:HD23	38:BP:85:LEU:H	1.59	0.66
47:BY:96:ILE:HD12	47:BY:99:CYS:SG	2.36	0.66
2:CB:104:ASN:OD1	2:CB:107:THR:OG1	2.14	0.66
24:CY:56:U:OP2	48:DZ:178:GLU:OXT	2.14	0.66
26:DA:524:G:N1	26:DA:527:A:OP2	2.27	0.66
26:DA:2885:G:H4'	42:DT:3:ARG:HE	1.60	0.66
30:DE:112:GLY:O	30:DE:159:HIS:HA	1.96	0.66
29:BD:43:ARG:HD2	29:BD:44:ASN:OD1	1.96	0.66
10:CJ:48:THR:HA	10:CJ:62:HIS:CB	2.25	0.66
2:AB:91:PRO:CG	2:AB:155:LEU:HD23	2.26	0.66
7:AG:24:THR:HA	7:AG:27:ILE:HD12	1.78	0.66
23:AW:16:U:O2	23:AW:19:G:H5"	1.96	0.66
24:AY:12:G:C2	24:AY:24:G:N3	2.64	0.66
26:BA:1541:A:C8	26:BA:1623:C:O2'	2.48	0.66
27:BB:12:C:O2'	27:BB:13:A:OP2	2.10	0.66
26:DA:108:A:O3'	51:D2:69:ARG:NH2	2.28	0.66
1:AA:328:C:H4'	1:AA:329:A:O5'	1.96	0.65
9:AI:122:ALA:HB1	9:AI:123:PRO:HD2	1.78	0.65
26:BA:1332:A:OP1	40:BR:105:ARG:O	2.13	0.65
26:BA:1536:G:O4'	29:BD:99:ASP:OD2	2.14	0.65
33:BH:156:ALA:O	33:BH:157:TYR:C	2.33	0.65
26:DA:91:C:H5'	26:DA:92:G:OP2	1.95	0.65
4:AD:30:LYS:C	4:AD:32:ALA:H	1.98	0.65
26:BA:1401:G:N2	26:BA:1421:C:C2	2.63	0.65
31:BF:188:ARG:HA	38:BP:7:ARG:HD3	1.76	0.65
49:B0:43:THR:HG23	49:B0:43:THR:O	1.94	0.65
24:CY:12:G:C2	24:CY:24:G:N3	2.64	0.65
31:DF:24:LEU:O	31:DF:26:ALA:N	2.30	0.65
26:BA:2416:G:O2'	26:BA:2422:A:N6	2.29	0.65
40:BR:10:LEU:HD22	40:BR:17:ARG:HD2	1.76	0.65
24:CY:4:G:C4	24:CY:5:A:C8	2.85	0.65
49:D0:51:VAL:HG21	49:D0:79:VAL:O	1.97	0.65
55:D6:35:GLU:OE1	55:D6:36:LEU:N	2.30	0.65
36:BN:2:LYS:O	36:BN:4:TYR:CE1	2.49	0.65
26:DA:1724:G:H22	26:DA:2010:G:H22	1.45	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:1:G:N1	24:AY:72:A:N1	2.33	0.65
26:BA:806:G:H2'	26:BA:807:A:O4'	1.96	0.65
58:B9:27:CYS:HB2	58:B9:32:HIS:HB2	1.79	0.65
24:CY:12:G:O5'	24:CY:12:G:H8	1.80	0.65
24:CY:74:C:C1'	26:DA:2566:U:O2	2.45	0.65
26:DA:92:G:N3	51:D2:47:ASN:ND2	2.44	0.65
26:DA:1920:G:N2	26:DA:1923:C:H41	1.93	0.65
27:DB:21:G:O2'	27:DB:22:U:O4'	2.13	0.65
1:AA:191:G:C4	20:AT:105:SER:HB3	2.31	0.65
1:AA:1250:A:N3	1:AA:1370:G:O2'	2.30	0.65
23:AW:66:U:H2'	23:AW:67:C:C6	2.32	0.65
26:BA:1793:G:OP1	26:BA:1793:G:H4'	1.94	0.65
50:B1:52:ARG:O	50:B1:56:GLN:O	2.15	0.65
1:CA:250:G:OP1	17:CQ:67:LYS:O	2.14	0.65
30:DE:30:PRO:O	30:DE:32:PRO:HD3	1.96	0.65
38:BP:16:ARG:HD3	38:BP:18:ARG:H	1.60	0.65
38:BP:64:LYS:HB3	57:B8:25:MET:HG3	1.78	0.65
17:AQ:89:LEU:O	17:AQ:93:GLN:N	2.29	0.65
26:BA:1687:A:H2'	26:BA:1688:G:O4'	1.97	0.65
26:BA:2673:A:O2'	26:BA:2674:G:OP1	2.14	0.65
20:AT:14:LYS:O	20:AT:18:GLN:HB2	1.97	0.65
26:BA:2492:G:HO2'	26:BA:2493:G:P	2.19	0.65
24:CY:11:C:H2'	24:CY:12:G:C8	2.32	0.65
26:DA:1210:U:H2'	26:DA:1211:C:C6	2.32	0.65
47:DY:75:ILE:HA	47:DY:79:CYS:O	1.97	0.65
11:AK:59:TYR:CE2	11:AK:63:LEU:HD11	2.32	0.65
24:AY:4:G:C4	24:AY:5:A:C8	2.85	0.65
24:AY:10:C:H2'	24:AY:11:C:C5	2.32	0.65
42:BT:83:ILE:HD11	42:BT:84:GLN:HE21	1.61	0.65
1:CA:1425:G:C6	1:CA:1427:A:C2	2.85	0.65
54:D5:33:CYS:O	54:D5:36:CYS:O	2.15	0.65
24:AY:12:G:H8	24:AY:12:G:O5'	1.80	0.64
26:BA:1064:U:O2'	26:BA:1066:A:C2	2.45	0.64
26:BA:2228:A:H1'	26:BA:2230:G:C4	2.31	0.64
1:CA:719:C:O2'	1:CA:720:C:H5'	1.97	0.64
3:CC:108:ASN:HD21	3:CC:144:SER:HB2	1.62	0.64
26:DA:852:C:OP2	38:DP:39:LYS:HB3	1.96	0.64
26:DA:948:C:C2'	26:DA:949:C:H5'	2.27	0.64
30:DE:81:ILE:O	30:DE:81:ILE:HG22	1.97	0.64
31:DF:110:LEU:HD21	31:DF:181:LEU:HG	1.78	0.64
26:BA:567:C:O2'	26:BA:570:A:P	2.55	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:646:G:O2'	1:CA:820:G:H5'	1.98	0.64
24:CY:75:C:N3	26:DA:2564:G:C2	2.64	0.64
26:DA:2656:G:H3'	26:DA:2657:C:H5'	1.79	0.64
38:DP:126:VAL:HG12	38:DP:148:LEU:HD11	1.78	0.64
1:AA:438:G:C4'	1:AA:439:A:OP1	2.43	0.64
5:AE:102:ALA:HB1	5:AE:106:PRO:HG2	1.79	0.64
26:BA:1540:A:N3	26:BA:1541:A:C2	2.65	0.64
26:BA:1685:U:O2'	26:BA:1686:C:H5"	1.98	0.64
26:BA:1922:A:OP2	29:BD:255:LYS:HE3	1.96	0.64
1:CA:931:G:N7	13:CM:104:ARG:NH2	2.45	0.64
20:CT:11:SER:HA	20:CT:13:LEU:HD12	1.79	0.64
26:DA:2354:C:HO2'	26:DA:2384:G:HO2'	1.36	0.64
26:DA:2475:C:O2'	26:DA:2476:C:P	2.55	0.64
32:DG:120:LEU:N	32:DG:179:PRO:O	2.30	0.64
1:AA:939:G:H2'	1:AA:940:C:C6	2.33	0.64
24:AY:10:C:N4	24:AY:45:G:H22	1.70	0.64
26:BA:601:G:H2'	26:BA:602:C:C6	2.32	0.64
26:BA:1857:C:H5'	26:BA:1992:A:H4'	1.79	0.64
29:BD:65:ILE:HD11	29:BD:67:PHE:CE1	2.32	0.64
38:DP:23:PRO:HB2	38:DP:33:ARG:HD2	1.79	0.64
54:D5:41:PRO:O	54:D5:44:THR:OG1	2.11	0.64
24:AY:11:C:H2'	24:AY:12:G:C8	2.32	0.64
26:BA:2568:G:H2'	26:BA:2569:C:C6	2.33	0.64
54:B5:46:CYS:SG	54:B5:47:PRO:HD2	2.37	0.64
6:CF:69:GLU:O	6:CF:72:VAL:HG12	1.98	0.64
47:DY:17:SER:HB2	47:DY:71:LYS:HE2	1.79	0.64
26:BA:138:A:H8	26:BA:1453:C:HO2'	1.41	0.64
33:BH:158:HIS:CE1	33:BH:170:ARG:HA	2.32	0.64
44:BV:62:LEU:HD21	44:BV:95:LEU:HB2	1.79	0.64
26:DA:1540:A:H2'	26:DA:1540:A:N3	2.11	0.64
34:DI:118:LYS:HG2	34:DI:119:PRO:HD2	1.79	0.64
45:DW:86:LEU:HD22	45:DW:96:ILE:HD12	1.79	0.64
26:BA:69:A:H5'	26:BA:69:A:H8	1.61	0.64
26:BA:414:G:O2'	26:BA:415:G:N7	2.28	0.64
26:BA:1067:G:N2	26:BA:1187:A:H2	1.91	0.64
26:BA:1539:A:C2'	26:BA:1540:A:H5"	2.26	0.64
26:BA:1973:A:C5	37:BO:22:ILE:HD12	2.33	0.64
29:BD:85:ASP:HB2	29:BD:92:ILE:HD12	1.80	0.64
38:BP:45:LEU:HG	38:BP:46:LYS:H	1.63	0.64
2:CB:24:TRP:CZ3	2:CB:26:PRO:HA	2.33	0.64
10:CJ:50:ILE:HA	10:CJ:60:ARG:HB2	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:27:ASN:OD1	11:CK:55:LYS:HB3	1.97	0.64
26:DA:1041:A:C2	26:DA:1042:G:C8	2.85	0.64
27:DB:104:U:H5"	39:DQ:141:GLN:OE1	1.97	0.64
26:BA:2402:G:O6	26:BA:2436:A:H8	1.80	0.64
47:BY:39:VAL:HG12	47:BY:40:GLU:H	1.63	0.64
57:B8:33:ASN:H	57:B8:33:ASN:ND2	1.96	0.64
1:CA:1387:C:H2'	1:CA:1388:G:C8	2.32	0.64
26:DA:88:U:H2'	26:DA:88:U:O2	1.98	0.64
26:DA:158:U:H4'	26:DA:159:G:C8	2.33	0.64
26:DA:1013:U:OP1	52:D3:17:LYS:HG2	1.97	0.64
1:AA:542:G:OP1	4:AD:10:ARG:NH2	2.30	0.64
1:AA:768:A:N3	1:AA:1512:U:O2'	2.29	0.64
24:AY:16:C:H3'	24:AY:17:G:H5'	1.79	0.64
26:DA:718:C:H2'	26:DA:719:C:H5'	1.79	0.64
26:DA:2469:G:O2'	26:DA:2471:U:O4	2.14	0.64
1:AA:1300:G:O2'	1:AA:1301:U:P	2.55	0.64
5:AE:101:ILE:HD11	5:AE:119:LEU:HD23	1.79	0.64
26:BA:1002:U:OP2	39:BQ:14:ARG:NH1	2.31	0.64
26:BA:2405:C:OP1	38:BP:63:PRO:CD	2.44	0.64
26:BA:2646:C:OP1	30:BE:77:ILE:HG21	1.98	0.64
41:BS:38:GLN:OE1	41:BS:47:THR:HG21	1.98	0.64
1:CA:541:G:H2'	1:CA:542:G:C8	2.33	0.64
15:CO:82:ILE:O	15:CO:86:GLY:N	2.30	0.64
24:CY:10:C:H2'	24:CY:11:C:C5	2.32	0.64
42:DT:102:ILE:HB	42:DT:110:ILE:HD13	1.78	0.64
1:AA:818:G:C3'	1:AA:819:A:H5'	2.28	0.63
26:BA:353:A:C2	26:BA:1254:A:H2'	2.33	0.63
26:BA:1345:U:O2'	26:BA:1671:G:C2	2.47	0.63
38:BP:47:ASP:HB3	38:BP:48:PRO:CA	2.28	0.63
20:CT:67:ALA:O	20:CT:73:HIS:CE1	2.51	0.63
43:DU:97:ASP:OD2	43:DU:101:ARG:NH1	2.31	0.63
18:AR:56:THR:HB	18:AR:58:LEU:HD13	1.80	0.63
29:BD:44:ASN:HB2	29:BD:48:ARG:O	1.98	0.63
29:BD:65:ILE:HD13	29:BD:65:ILE:O	1.98	0.63
55:B6:28:ARG:HA	55:B6:32:ASN:HD22	1.63	0.63
23:CW:64:A:H2'	23:CW:65:G:C8	2.33	0.63
26:DA:566:C:H2'	26:DA:567:C:OP1	1.98	0.63
26:DA:2120:U:O2	26:DA:2120:U:H2'	1.97	0.63
46:DX:12:VAL:CG1	46:DX:17:ALA:HB1	2.27	0.63
12:AL:90:VAL:O	12:AL:92:ASP:N	2.32	0.63
23:AW:34:G:O6	23:AW:35:A:N6	2.30	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:116:ALA:O	7:CG:119:ARG:N	2.31	0.63
24:CY:16:C:H3'	24:CY:17:G:H5'	1.79	0.63
26:DA:1041:A:OP2	43:DU:92:ARG:NH2	2.32	0.63
26:DA:1286:A:C2'	26:DA:1287:A:O5'	2.46	0.63
43:DU:83:LEU:HD12	43:DU:88:ILE:HD11	1.80	0.63
11:AK:59:TYR:CZ	11:AK:63:LEU:HD21	2.33	0.63
32:BG:73:ALA:H	32:BG:87:PRO:HB2	1.62	0.63
29:DD:30:GLU:HB3	29:DD:35:LYS:HG3	1.79	0.63
36:DN:58:ASP:O	36:DN:60:ILE:N	2.31	0.63
44:DV:55:ALA:HA	44:DV:101:GLY:HA2	1.79	0.63
13:AM:125:ARG:OXT	24:AY:38:A:O2'	2.16	0.63
1:CA:721:A:H2'	1:CA:722:C:C6	2.33	0.63
24:CY:4:G:N2	24:CY:70:A:C6	2.66	0.63
26:DA:663:U:H2'	26:DA:664:C:C6	2.33	0.63
26:DA:1182:G:N2	36:DN:106:MET:SD	2.69	0.63
26:DA:1309:G:H3'	26:DA:1310:A:H5"	1.81	0.63
26:DA:1777:G:C2'	26:DA:1778:G:H5'	2.28	0.63
3:AC:37:GLN:NE2	14:AN:52:GLN:OE1	2.31	0.63
6:AF:6:VAL:HB	6:AF:63:TYR:HB2	1.81	0.63
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.80	0.63
26:BA:6:G:H2'	26:BA:7:A:O4'	1.97	0.63
24:CY:7:A:C6	24:CY:66:G:C2	2.66	0.63
26:DA:139:A:H8	26:DA:1453:C:H1'	1.63	0.63
26:DA:552:A:O2'	26:DA:553:A:C5'	2.44	0.63
24:AY:4:G:N1	24:AY:70:A:N6	2.46	0.63
26:BA:5:A:O2'	36:BN:130:HIS:HB3	1.98	0.63
26:BA:1059:U:C2'	26:BA:1060:G:H5'	2.29	0.63
27:BB:40:U:H3'	27:BB:41:U:H5"	1.81	0.63
1:CA:1291:G:OP1	13:CM:88:ARG:NH2	2.29	0.63
2:CB:84:GLU:HB3	2:CB:219:VAL:HG21	1.81	0.63
24:CY:4:G:N1	24:CY:70:A:N6	2.46	0.63
26:DA:230:G:C5'	57:D8:62:LEU:HD13	2.29	0.63
26:DA:422:G:O2'	50:D1:43:TYR:O	2.14	0.63
26:DA:2666:G:O2'	26:DA:2675:G:N1	2.31	0.63
60:DC:56:GLN:NE2	60:DC:168:ALA:HB2	2.13	0.63
1:AA:428:G:O4'	1:AA:430:A:C8	2.51	0.63
5:AE:6:PHE:HB2	5:AE:34:VAL:HG22	1.79	0.63
11:AK:43:SER:HA	11:AK:47:VAL:HG21	1.80	0.63
32:BG:127:GLY:O	32:BG:129:GLY:N	2.32	0.63
53:B4:42:CYS:HB3	53:B4:44:CYS:SG	2.39	0.63
26:DA:1269:C:HO2'	44:DV:85:LYS:HA	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DA:1897:A:H2'	26:DA:1898:A:C8	2.34	0.63
44:DV:62:LEU:HD21	44:DV:95:LEU:HB2	1.81	0.63
24:AY:4:G:N2	24:AY:70:A:C6	2.66	0.63
26:BA:1323:A:OP1	40:BR:36:THR:HG22	1.98	0.63
26:BA:1923:C:H2'	26:BA:1924:G:O5'	1.99	0.63
42:BT:13:ARG:CZ	42:BT:13:ARG:HA	2.29	0.63
42:BT:102:ILE:HB	42:BT:110:ILE:CD1	2.29	0.63
43:BU:33:ARG:HA	43:BU:36:ARG:HB3	1.81	0.63
26:DA:1475:C:H2'	26:DA:1476:U:C6	2.34	0.63
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.81	0.62
1:AA:1054:C:C4	24:AY:34:C:H1'	2.34	0.62
24:AY:45:G:H8	24:AY:45:G:O5'	1.82	0.62
26:BA:2503:U:H2'	26:BA:2504:U:C6	2.34	0.62
30:BE:101:ARG:HD3	30:BE:171:GLU:HA	1.80	0.62
36:BN:67:LEU:HB3	36:BN:88:GLU:HG2	1.79	0.62
42:BT:29:ARG:HG2	42:BT:85:LYS:HA	1.81	0.62
1:CA:719:C:H2'	1:CA:720:C:H6	1.64	0.62
1:CA:1187:U:O2'	3:CC:195:VAL:CG2	2.47	0.62
26:DA:505:A:O4'	47:DY:44:ILE:HG21	1.98	0.62
26:DA:644:G:H5"	26:DA:644:G:N3	2.13	0.62
26:DA:1820:C:H5"	26:DA:1821:A:OP1	1.99	0.62
36:DN:57:ALA:O	36:DN:58:ASP:C	2.37	0.62
38:DP:83:VAL:CG1	38:DP:112:LEU:HD21	2.29	0.62
24:AY:56:U:H5"	26:BA:941:A:H2'	1.81	0.62
26:BA:552:A:O2'	26:BA:553:A:H5'	1.99	0.62
26:BA:1984:U:H4'	26:BA:1985:G:OP1	1.99	0.62
29:BD:13:ARG:NH1	29:BD:16:MET:SD	2.72	0.62
24:CY:53:A:H2'	24:CY:53:A:N3	2.14	0.62
26:BA:1066:A:H3'	26:BA:1066:A:C8	2.33	0.62
26:BA:2254:U:O2	26:BA:2445:A:C2	2.52	0.62
1:CA:78:G:O2'	1:CA:79:G:O5'	2.13	0.62
1:CA:982:G:H2'	1:CA:983:A:H4'	1.81	0.62
44:DV:2:PHE:O	44:DV:14:VAL:O	2.18	0.62
26:BA:154:C:H5	26:BA:159:G:H1	1.47	0.62
35:BJ:87:ALA:HB3	35:BJ:90:ALA:HB3	1.80	0.62
26:DA:1920:G:H22	26:DA:1923:C:N4	1.97	0.62
26:DA:2209:C:H2'	26:DA:2210:U:C1'	2.30	0.62
1:AA:1208:C:H2'	1:AA:1209:C:C6	2.34	0.62
26:BA:1013:U:OP1	52:B3:17:LYS:HG2	1.98	0.62
26:BA:2696:G:H5'	37:BO:68:GLU:OE1	1.98	0.62
32:BG:32:PRO:HA	32:BG:162:THR:HB	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1425:G:C5	1:CA:1427:A:H2	2.17	0.62
5:CE:107:ARG:O	5:CE:110:LEU:N	2.32	0.62
26:DA:906:U:H5	26:DA:962:A:N7	1.97	0.62
42:DT:27:THR:OG1	42:DT:28:VAL:N	2.29	0.62
1:AA:316:G:OP2	1:AA:351:G:O2'	2.17	0.62
15:AO:23:GLY:O	15:AO:24:SER:HB3	1.99	0.62
26:BA:139:A:C8	26:BA:1453:C:H1'	2.34	0.62
26:BA:154:C:O2	26:BA:154:C:O4'	2.17	0.62
26:BA:1724:G:N2	26:BA:2010:G:H22	1.97	0.62
30:BE:24:THR:HG22	30:BE:186:GLY:HA2	1.81	0.62
42:BT:80:SER:HB3	42:BT:81:PRO:HD3	1.80	0.62
46:BX:8:ILE:O	51:B2:36:ARG:NH2	2.32	0.62
1:CA:1259:C:H2'	1:CA:1260:U:H5'	1.81	0.62
1:CA:1426:G:H2'	42:DT:118:ARG:HD2	1.81	0.62
30:DE:87:GLU:HG3	30:DE:87:GLU:O	1.99	0.62
1:AA:986:A:H1'	19:AS:54:GLY:O	1.99	0.62
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.82	0.62
24:AY:53:A:H2'	24:AY:53:A:N3	2.14	0.62
26:BA:720:G:H1'	31:BF:74:ARG:HD2	1.82	0.62
26:BA:2842:G:H3'	26:BA:2843:G:H5'	1.80	0.62
36:BN:57:ALA:C	36:BN:58:ASP:O	2.33	0.62
26:DA:25:G:C6	26:DA:26:G:N1	2.68	0.62
26:DA:952:U:OP1	39:DQ:24:GLY:N	2.31	0.62
30:DE:16:ARG:O	30:DE:18:ASP:N	2.32	0.62
1:AA:674:G:H2'	1:AA:675:A:H8	1.62	0.62
46:BX:27:THR:HB	46:BX:80:ILE:HB	1.82	0.62
47:BY:76:CYS:SG	47:BY:77:PRO:CD	2.88	0.62
4:CD:30:LYS:C	4:CD:32:ALA:H	2.01	0.62
26:DA:473:U:O4	26:DA:605:G:H1'	1.99	0.62
26:DA:1541:A:C8	26:DA:1623:C:O2'	2.53	0.62
26:DA:2535:G:H5"	26:DA:2535:G:H8	1.65	0.62
31:DF:101:LEU:HD12	31:DF:102:PRO:HD2	1.79	0.62
40:DR:10:LEU:HD22	40:DR:17:ARG:HD2	1.82	0.62
24:AY:12:G:N1	24:AY:24:G:N2	2.48	0.62
26:BA:209:A:H4'	26:BA:210:A:O5'	2.00	0.62
33:BH:41:MET:SD	33:BH:53:GLU:O	2.58	0.62
33:BH:148:ILE:O	33:BH:162:ILE:HD11	1.99	0.62
54:B5:4:HIS:HB3	54:B5:5:PRO:CD	2.30	0.62
1:CA:729:C:OP1	1:CA:829:G:O2'	2.17	0.62
26:DA:1269:C:O2'	44:DV:85:LYS:HA	2.00	0.62
29:DD:210:GLY:O	29:DD:211:ARG:HB3	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:D1:67:ILE:N	50:D1:68:PRO:HD2	2.15	0.62
6:AF:97:PHE:N	18:AR:30:ASP:OD1	2.32	0.62
32:BG:64:THR:HG23	32:BG:66:GLN:H	1.65	0.62
1:CA:1260:U:H5"	1:CA:1261:A:O4'	1.99	0.62
24:CY:24:G:C6	24:CY:25:G:C6	2.88	0.62
60:DC:55:ASP:HB2	60:DC:56:GLN:HE21	1.65	0.62
32:DG:46:ALA:HB2	32:DG:88:ILE:HG12	1.82	0.62
1:AA:1106:G:H5"	3:AC:172:ARG:HG2	1.82	0.61
4:AD:13:ARG:O	4:AD:15:GLU:N	2.33	0.61
26:BA:88:U:O2	26:BA:88:U:H2'	1.98	0.61
26:BA:1270:G:C2	26:BA:1271:A:C2	2.88	0.61
26:BA:1320:A:N1	26:BA:1340:C:O2'	2.27	0.61
36:BN:41:ASP:O	36:BN:42:TRP:C	2.38	0.61
38:DP:107:LYS:C	38:DP:109:GLY:H	2.03	0.61
46:DX:63:LYS:HA	46:DX:72:LYS:HA	1.82	0.61
1:AA:130:A:C8	17:AQ:63:ARG:HG3	2.35	0.61
26:BA:7:A:H2'	26:BA:8:U:C5	2.35	0.61
26:BA:1765:G:C2	26:BA:1767:U:OP2	2.53	0.61
26:BA:2455:G:OP2	31:BF:68:LYS:HE2	2.00	0.61
38:BP:7:ARG:HA	38:BP:7:ARG:HH11	1.65	0.61
1:CA:955:A:H2'	1:CA:956:A:H5'	1.80	0.61
24:CY:45:G:O5'	24:CY:45:G:H8	1.82	0.61
26:DA:2054:A:O2'	26:DA:2056:G:OP2	2.12	0.61
26:DA:2529:A:H5'	26:DA:2529:A:C8	2.35	0.61
1:AA:677:U:H3	1:AA:713:G:H22	1.48	0.61
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.00	0.61
7:AG:145:ALA:O	7:AG:147:ALA:N	2.32	0.61
26:BA:2752:A:H2'	26:BA:2753:A:C8	2.35	0.61
42:BT:29:ARG:HG2	42:BT:85:LYS:CA	2.30	0.61
44:BV:19:LYS:HB3	44:BV:94:LEU:O	2.00	0.61
26:DA:353:A:H2	26:DA:1254:A:H2'	1.64	0.61
26:DA:820:A:O2'	26:DA:821:G:OP2	2.16	0.61
1:AA:114:U:H2'	1:AA:115:G:C8	2.35	0.61
1:AA:974:A:H8	1:AA:974:A:OP1	1.84	0.61
5:AE:82:VAL:HG21	5:AE:138:ALA:HA	1.81	0.61
24:AY:24:G:C6	24:AY:25:G:C6	2.88	0.61
24:AY:52:C:H2'	24:AY:52:C:O2	1.99	0.61
26:BA:25:G:OP1	45:BW:80:PRO:HB3	2.01	0.61
26:BA:2057:C:H6	26:BA:2057:C:C5'	2.12	0.61
30:BE:134:ILE:C	30:BE:134:ILE:HD12	2.21	0.61
47:BY:27:VAL:O	47:BY:29:GLU:OE1	2.18	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1190:C:H2'	1:CA:1191:C:C6	2.35	0.61
26:DA:493:G:N7	56:D7:39:ARG:NH2	2.47	0.61
42:DT:24:PRO:HA	42:DT:49:VAL:HG13	1.81	0.61
26:BA:629:U:H3	26:BA:645:A:H2	1.44	0.61
26:BA:1066:A:H3'	26:BA:1066:A:H8	1.66	0.61
26:DA:1092:G:H4'	26:DA:1092:G:OP1	2.00	0.61
26:DA:1920:G:H22	26:DA:1923:C:H41	1.49	0.61
32:DG:51:ARG:HA	32:DG:51:ARG:HE	1.64	0.61
55:D6:16:CYS:SG	55:D6:47:THR:OG1	2.57	0.61
22:AV:75:C:H2'	22:AV:76:C:H5'	1.82	0.61
24:AY:9:G:C2	24:AY:11:C:N4	2.67	0.61
26:BA:730:G:OP1	56:B7:16:HIS:ND1	2.33	0.61
38:BP:23:PRO:O	38:BP:33:ARG:HD2	1.99	0.61
38:BP:78:PRO:HB2	38:BP:111:ARG:HD2	1.82	0.61
24:CY:52:C:O2	24:CY:52:C:H2'	1.99	0.61
26:DA:1765:G:C2	26:DA:1767:U:OP2	2.53	0.61
42:DT:58:ASN:C	42:DT:58:ASN:HD22	2.04	0.61
1:AA:818:G:H3'	1:AA:819:A:H5'	1.83	0.61
13:AM:106:ASN:O	13:AM:107:ALA:HB3	1.99	0.61
22:AV:3:C:O2	22:AV:3:C:H2'	1.99	0.61
22:AV:24:C:H2'	22:AV:25:U:C6	2.35	0.61
24:AY:4:G:C2	24:AY:70:A:N6	2.68	0.61
26:DA:987:U:OP2	38:DP:38:GLN:OE1	2.19	0.61
26:DA:1069:G:H3'	26:DA:1070:G:H5"	1.81	0.61
1:AA:630:G:H2'	1:AA:631:G:H5'	1.82	0.61
15:AO:36:ILE:O	15:AO:40:SER:N	2.28	0.61
26:BA:2487:A:C2	26:BA:2488:C:C6	2.88	0.61
33:BH:44:VAL:O	33:BH:45:VAL:C	2.39	0.61
39:BQ:43:THR:HB	39:BQ:45:GLN:HE21	1.64	0.61
54:B5:54:GLY:O	54:B5:56:LYS:HD3	2.00	0.61
1:CA:113:A:O2'	1:CA:114:A:OP2	2.15	0.61
1:CA:251:G:O6	1:CA:262:G:O6	2.19	0.61
15:CO:56:LEU:O	15:CO:60:VAL:HG23	2.01	0.61
18:CR:36:ASN:O	18:CR:39:VAL:HB	2.00	0.61
26:DA:819:U:H4'	29:DD:47:GLY:HA2	1.82	0.61
26:DA:1051:C:C2	26:DA:1182:G:N2	2.69	0.61
26:DA:1740:C:O2'	26:DA:1741:G:C4	2.54	0.61
29:DD:65:ILE:HD13	29:DD:65:ILE:H	1.64	0.61
42:DT:90:GLN:NE2	42:DT:124:ASP:OD2	2.34	0.61
11:AK:59:TYR:O	11:AK:63:LEU:HG	2.01	0.61
23:AW:34:G:N1	23:AW:35:A:C2	2.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:2725:A:OP1	40:BR:14:SER:OG	2.19	0.61
29:BD:30:GLU:HG3	29:BD:63:ARG:NH2	2.15	0.61
38:BP:50:ARG:O	38:BP:57:THR:HG22	2.00	0.61
44:BV:45:THR:O	44:BV:46:VAL:HG12	2.00	0.61
52:B3:4:LEU:O	52:B3:36:VAL:HA	2.00	0.61
55:B6:37:ARG:O	55:B6:48:VAL:O	2.18	0.61
57:B8:61:LEU:CD1	57:B8:62:LEU:HD12	2.31	0.61
1:CA:1491:A:H2'	1:CA:1492:C:C6	2.36	0.61
20:CT:97:ALA:O	20:CT:99:LEU:N	2.34	0.61
26:DA:2228:A:H1'	26:DA:2230:G:C5	2.36	0.61
42:DT:29:ARG:HB3	42:DT:85:LYS:HA	1.82	0.61
12:AL:6:THR:H	12:AL:9:GLN:HE21	1.49	0.61
13:AM:81:LEU:HD22	13:AM:86:CYS:SG	2.41	0.61
38:BP:71:VAL:CG1	38:BP:72:PRO:HD3	2.31	0.61
2:CB:84:GLU:HG3	2:CB:215:LEU:HB3	1.83	0.61
26:DA:670:A:H2'	26:DA:671:G:O4'	2.01	0.61
26:DA:1064:U:HO2'	26:DA:1066:A:H2	1.44	0.61
26:DA:2672:G:H2'	26:DA:2673:A:C4	2.35	0.61
48:DZ:53:ILE:HG21	48:DZ:71:VAL:O	2.01	0.61
1:AA:1187:G:O2'	9:AI:111:ARG:NH1	2.33	0.60
26:BA:418:C:H5"	26:BA:435:C:H5"	1.83	0.60
26:BA:894:G:H2'	26:BA:895:A:C8	2.36	0.60
26:BA:2526:C:O2'	26:BA:2527:G:H5'	2.01	0.60
32:BG:53:LEU:C	32:BG:55:LYS:H	2.04	0.60
45:BW:73:ALA:HB3	45:BW:106:ILE:HD11	1.82	0.60
18:CR:73:ALA:HB3	18:CR:79:LEU:HD12	1.81	0.60
24:CY:52:C:H4'	39:DQ:56:ARG:HH11	1.65	0.60
26:BA:2799:C:O2	26:BA:2799:C:H2'	2.01	0.60
27:BB:52:A:O2'	27:BB:53:A:N7	2.34	0.60
40:BR:97:VAL:HG22	40:BR:114:VAL:HG22	1.82	0.60
51:B2:25:VAL:HG21	51:B2:61:LEU:CD1	2.30	0.60
1:CA:929:G:OP2	13:CM:102:ARG:NH1	2.34	0.60
1:CA:1122:G:N2	1:CA:1125:G:O6	2.34	0.60
24:CY:4:G:C2	24:CY:70:A:N6	2.68	0.60
24:CY:48:G:C6	24:CY:59:A:C2	2.88	0.60
26:DA:1091:A:H1'	35:DJ:10:ALA:HB3	1.83	0.60
24:AY:48:G:C6	24:AY:59:A:C2	2.88	0.60
26:BA:566:C:C2'	26:BA:567:C:OP1	2.48	0.60
26:BA:852:C:OP2	38:BP:39:LYS:HB3	2.01	0.60
32:DG:96:ARG:O	32:DG:98:ARG:N	2.34	0.60
26:BA:2433:A:H4'	26:BA:2434:U:OP1	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BC:183:ALA:HB1	28:BC:186:ALA:HB3	1.83	0.60
56:B7:12:ARG:HG2	56:B7:46:VAL:HG21	1.84	0.60
12:CL:70:ILE:HG12	12:CL:100:ILE:HD12	1.84	0.60
14:CN:27:CYS:C	14:CN:29:ARG:H	2.04	0.60
24:CY:24:G:C6	24:CY:25:G:N1	2.70	0.60
26:DA:605:G:OP2	43:DU:10:ARG:HD2	2.01	0.60
26:DA:2488:C:O2	26:DA:2492:G:O6	2.19	0.60
38:DP:8:PRO:C	38:DP:10:PRO:HD2	2.22	0.60
44:BV:19:LYS:HG3	44:BV:20:LEU:O	2.01	0.60
44:BV:49:THR:HB	44:BV:50:PRO:CD	2.31	0.60
1:CA:932:G:H2'	1:CA:933:U:C6	2.36	0.60
26:DA:2077:G:H2'	26:DA:2077:G:N3	2.16	0.60
57:D8:51:ALA:C	57:D8:53:PRO:HD2	2.22	0.60
26:BA:1309:G:H5'	54:B5:11:THR:HG21	1.83	0.60
26:BA:2139:U:P	26:BA:2168:G:HO2'	2.25	0.60
55:B6:22:ALA:HB2	55:B6:39:TYR:CE2	2.36	0.60
24:CY:9:G:O2'	24:CY:10:C:C5	2.54	0.60
27:DB:50:G:OP1	41:DS:63:THR:HG23	2.00	0.60
43:DU:31:SER:C	43:DU:33:ARG:H	2.03	0.60
1:AA:135:C:H2'	1:AA:136:C:H5'	1.83	0.60
1:AA:679:C:O2'	1:AA:680:C:H5'	2.02	0.60
1:AA:1054:C:OP2	1:AA:1197:G:OP2	2.20	0.60
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.37	0.60
24:AY:9:G:O2'	24:AY:10:C:C5	2.54	0.60
26:BA:651:A:C6	26:BA:661:A:C8	2.89	0.60
26:BA:2666:G:O2'	26:BA:2667:U:OP2	2.20	0.60
26:BA:2902:G:H2'	26:BA:2902:G:N3	2.16	0.60
38:BP:71:VAL:HG12	38:BP:72:PRO:HD3	1.84	0.60
47:BY:79:CYS:SG	47:BY:80:GLY:CA	2.88	0.60
55:B6:41:PRO:HD2	55:B6:46:HIS:CB	2.32	0.60
1:CA:110:A:O5'	1:CA:110:A:H8	1.85	0.60
8:CH:85:ARG:NH1	8:CH:87:SER:O	2.35	0.60
26:DA:1403:G:O2'	26:DA:1404:A:H5"	2.00	0.60
26:DA:2402:G:OP1	57:D8:32:LEU:HD13	2.02	0.60
38:DP:85:LEU:HD23	38:DP:85:LEU:H	1.65	0.60
1:AA:109:A:H2'	1:AA:326:G:N2	2.17	0.60
26:BA:466:U:O2	31:BF:46:ARG:NH2	2.34	0.60
26:BA:1078:U:H4'	26:BA:1079:G:OP1	2.01	0.60
26:BA:2113:U:H4'	26:BA:2114:G:O5'	2.00	0.60
26:BA:2668:A:H2'	26:BA:2669:C:O5'	2.02	0.60
58:B9:27:CYS:HB2	58:B9:32:HIS:CB	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:100:VAL:HG12	5:CE:118:ILE:HG22	1.83	0.60
26:DA:655:A:OP1	38:DP:64:LYS:HE2	2.02	0.60
42:DT:82:LEU:HD12	42:DT:82:LEU:H	1.67	0.60
55:D6:22:ALA:O	55:D6:23:THR:OG1	2.16	0.60
1:AA:343:U:O2'	1:AA:346:G:O6	2.09	0.60
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.37	0.60
8:AH:100:ILE:HG23	8:AH:101:PRO:HD2	1.83	0.60
13:AM:106:ASN:O	13:AM:107:ALA:CB	2.49	0.60
17:AQ:27:PHE:CE1	17:AQ:36:ILE:HD11	2.37	0.60
26:BA:1337:U:H2'	26:BA:1338:C:C6	2.37	0.60
26:BA:1472:A:H4'	26:BA:1473:C:O5'	2.02	0.60
44:BV:46:VAL:HG13	44:BV:47:VAL:N	2.16	0.60
55:D6:37:ARG:O	55:D6:48:VAL:O	2.19	0.60
1:AA:878:G:H5'	8:AH:89:PRO:HG2	1.84	0.60
1:AA:975:A:H4'	1:AA:976:G:H5"	1.83	0.60
1:AA:1118:C:OP1	9:AI:104:ARG:NE	2.34	0.60
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.16	0.60
20:AT:26:ASN:CB	20:AT:71:THR:HG23	2.32	0.60
26:BA:1441:U:O2	26:BA:1441:U:C2'	2.49	0.60
26:BA:2326:G:H21	32:BG:128:ARG:HD3	1.66	0.60
26:BA:2588:A:H5"	26:BA:2589:G:H5'	1.84	0.60
43:BU:112:ARG:HH11	43:BU:112:ARG:HG3	1.67	0.60
1:CA:246:A:H4'	1:CA:247:G:O5'	2.01	0.60
30:DE:111:ARG:HB2	30:DE:160:TYR:O	2.02	0.60
33:DH:156:ALA:O	33:DH:157:TYR:C	2.40	0.60
1:AA:1494:G:O3'	13:AM:125:ARG:NH1	2.34	0.59
24:AY:24:G:C6	24:AY:25:G:N1	2.70	0.59
24:AY:50:G:N2	24:AY:51:G:C1'	2.65	0.59
33:BH:153:LYS:HD3	33:BH:153:LYS:N	2.17	0.59
52:B3:8:LEU:HD13	52:B3:31:LEU:HD23	1.83	0.59
55:B6:14:THR:O	55:B6:49:HIS:HA	2.02	0.59
1:CA:218:U:H2'	1:CA:219:U:C6	2.37	0.59
1:CA:1488:U:H2'	1:CA:1489:G:C8	2.37	0.59
26:DA:142:C:H4'	46:DX:38:GLU:OE2	2.01	0.59
26:DA:391:U:H5'	26:DA:392:A:OP2	2.02	0.59
26:DA:1346:A:O2'	26:DA:1347:A:C2'	2.48	0.59
26:DA:2735:C:OP1	40:DR:2:ARG:NH1	2.35	0.59
60:DC:78:ALA:HB3	60:DC:94:VAL:CG1	2.32	0.59
34:DI:133:HIS:O	34:DI:135:GLU:HG3	2.01	0.59
42:DT:23:ARG:HA	42:DT:52:ILE:HD11	1.84	0.59
42:DT:28:VAL:O	42:DT:29:ARG:HD3	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DV:28:GLU:HB3	44:DV:29:PRO:HD2	1.84	0.59
54:D5:16:ARG:NH1	54:D5:17:ASP:OD1	2.35	0.59
1:AA:832:C:N4	1:AA:855:G:O6	2.35	0.59
26:BA:1073:A:N6	26:BA:1170:G:H2'	2.17	0.59
49:B0:51:VAL:HG21	49:B0:79:VAL:O	2.02	0.59
1:CA:386:C:O3'	16:CP:28:ARG:NH2	2.35	0.59
26:DA:2036:A:O2'	54:D5:2:ALA:HA	2.01	0.59
60:DC:51:PRO:HB3	60:DC:204:ALA:HB2	1.83	0.59
39:DQ:2:LEU:O	39:DQ:70:PRO:HG2	2.02	0.59
1:AA:662:G:O2'	1:AA:836:G:H5'	2.02	0.59
11:AK:21:ILE:N	11:AK:21:ILE:HD12	2.18	0.59
26:BA:1538:C:H4'	26:BA:1539:A:OP1	2.02	0.59
32:BG:13:GLU:O	32:BG:14:GLU:HB2	2.02	0.59
40:BR:70:LEU:HD13	40:BR:75:LEU:HD12	1.83	0.59
49:B0:24:LYS:HG3	49:B0:36:ILE:HD11	1.83	0.59
1:CA:1198:G:H5"	14:CN:5:ALA:HB2	1.83	0.59
24:CY:6:G:O2'	24:CY:7:A:O4'	2.20	0.59
24:CY:13:G:H1	24:CY:22:A:N6	1.88	0.59
24:AY:44:A:N1	24:AY:45:G:C2	2.71	0.59
26:BA:7:A:H2'	26:BA:8:U:C6	2.38	0.59
37:BO:76:ALA:HB3	42:BT:75:ILE:HD12	1.85	0.59
38:BP:16:ARG:HB2	38:BP:16:ARG:HH11	1.66	0.59
57:B8:14:VAL:HG21	57:B8:22:VAL:HG13	1.82	0.59
24:CY:9:G:N2	24:CY:25:G:N2	2.51	0.59
24:CY:44:A:N1	24:CY:45:G:C2	2.71	0.59
26:DA:595:G:N1	26:DA:2052:A:OP2	2.28	0.59
26:DA:1207:G:H4'	44:DV:24:LYS:HB2	1.84	0.59
26:DA:1920:G:O2'	26:DA:1921:A:OP2	2.20	0.59
26:DA:2889:C:O3'	40:DR:90:ARG:NH1	2.35	0.59
30:DE:132:HIS:HA	30:DE:135:HIS:CE1	2.38	0.59
37:DO:111:PHE:HB3	37:DO:114:ILE:HD13	1.84	0.59
10:AJ:50:ILE:HA	10:AJ:60:ARG:HB2	1.84	0.59
26:BA:275:C:O2'	26:BA:276:G:H5'	2.03	0.59
26:BA:956:A:H2'	39:BQ:9:TYR:OH	2.02	0.59
26:BA:1457:A:H2'	26:BA:1458:G:O4'	2.03	0.59
26:BA:2071:C:H2'	26:BA:2072:A:O4'	2.02	0.59
26:BA:2595:U:O2	26:BA:2595:U:O5'	2.20	0.59
29:BD:79:VAL:HG12	29:BD:113:VAL:HA	1.85	0.59
43:BU:14:HIS:CD2	43:BU:32:ALA:HB1	2.37	0.59
3:CC:53:ALA:HB2	3:CC:115:LEU:HG	1.85	0.59
26:DA:2095:U:H2'	26:DA:2096:U:C6	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DG:95:ARG:O	32:DG:96:ARG:HG2	2.02	0.59
38:DP:64:LYS:HD2	57:D8:25:MET:SD	2.43	0.59
55:D6:33:LYS:HE2	55:D6:33:LYS:HA	1.84	0.59
23:AW:67:C:H2'	23:AW:68:C:C6	2.37	0.59
26:BA:97:U:OP1	26:BA:98:G:H2'	2.03	0.59
26:BA:1363:C:H3'	26:BA:1364:G:H5"	1.84	0.59
38:BP:125:VAL:CG1	38:BP:138:LEU:HD21	2.33	0.59
54:B5:4:HIS:CB	54:B5:5:PRO:CD	2.80	0.59
26:DA:154:C:O2	26:DA:154:C:O4'	2.18	0.59
26:DA:590:U:O2'	26:DA:592:G:N7	2.28	0.59
26:DA:906:U:O2	26:DA:906:U:O4'	2.20	0.59
26:DA:948:C:H2'	26:DA:949:C:H5'	1.85	0.59
26:DA:1685:U:O2'	26:DA:1686:C:H5"	2.02	0.59
26:DA:1833:A:O3'	29:DD:259:THR:CG2	2.50	0.59
38:DP:59:LEU:HA	38:DP:61:ARG:CZ	2.32	0.59
57:D8:33:ASN:O	57:D8:34:TRP:HB3	2.02	0.59
3:AC:12:LEU:O	3:AC:16:ARG:O	2.19	0.59
24:AY:13:G:H1	24:AY:22:A:N6	1.88	0.59
26:BA:1231:G:H5"	44:BV:81:TYR:CE2	2.38	0.59
26:BA:2168:G:H2'	26:BA:2169:G:C4'	2.32	0.59
42:BT:29:ARG:CG	42:BT:85:LYS:HA	2.33	0.59
47:BY:2:ARG:C	47:BY:4:LYS:H	2.06	0.59
26:DA:1450:U:H2'	26:DA:1451:U:H6	1.68	0.59
26:DA:1690:C:H2'	26:DA:1690:C:O2	2.01	0.59
26:DA:2893:U:O2	54:D5:52:TYR:OH	2.21	0.59
29:DD:108:PRO:HD2	29:DD:111:LEU:HG	1.85	0.59
1:AA:192:U:H4'	20:AT:103:GLY:H	1.66	0.59
16:AP:28:ARG:HG2	16:AP:29:ASP:OD2	2.03	0.59
26:BA:468:A:N7	31:BF:45:ARG:HG2	2.18	0.59
26:BA:610:U:H2'	26:BA:611:C:C6	2.37	0.59
26:BA:1700:A:OP2	40:BR:3:HIS:HB2	2.02	0.59
30:BE:24:THR:HG21	30:BE:188:VAL:HG12	1.83	0.59
57:B8:60:LEU:C	57:B8:63:PRO:HD2	2.23	0.59
1:CA:1338:G:H2'	1:CA:1339:A:C8	2.38	0.59
4:CD:31:CYS:C	4:CD:33:MET:H	2.06	0.59
38:DP:21:ARG:HD3	38:DP:29:LYS:HE3	1.85	0.59
44:DV:64:HIS:ND1	44:DV:92:THR:HG22	2.17	0.59
47:DY:90:LEU:HG	47:DY:91:GLU:HG2	1.84	0.59
17:AQ:59:ILE:HG22	17:AQ:71:PHE:HB3	1.85	0.59
26:BA:1039:C:H3'	43:BU:54:LYS:HE3	1.85	0.59
52:B3:7:LYS:HA	52:B3:33:GLN:O	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:712:A:H2'	1:CA:713:A:C8	2.38	0.59
1:CA:1143:G:O6	1:CA:1163:G:C6	2.56	0.59
10:CJ:34:VAL:HG22	10:CJ:74:ILE:HG22	1.85	0.59
26:DA:1075:G:OP2	39:DQ:128:LYS:NZ	2.27	0.59
26:DA:2885:G:H4'	42:DT:3:ARG:NE	2.18	0.59
37:DO:87:ILE:HG22	37:DO:88:ASN:O	2.01	0.59
4:AD:31:CYS:C	4:AD:33:MET:H	2.06	0.59
24:AY:6:G:O2'	24:AY:7:A:O4'	2.20	0.59
26:BA:1703:C:H2'	26:BA:1704:C:H6	1.67	0.59
36:BN:120:LEU:HD11	36:BN:122:VAL:HG23	1.85	0.59
42:BT:54:ARG:HA	42:BT:59:THR:HB	1.85	0.59
31:DF:178:PRO:HB2	31:DF:201:VAL:HG11	1.85	0.59
32:DG:29:TRP:O	32:DG:33:ARG:NH1	2.36	0.59
26:BA:613:C:O2	57:B8:2:PRO:HA	2.02	0.58
29:BD:30:GLU:HB3	29:BD:35:LYS:HG3	1.84	0.58
39:BQ:21:THR:CG2	39:BQ:101:ARG:HD2	2.34	0.58
42:BT:26:ASP:O	42:BT:26:ASP:OD2	2.21	0.58
47:BY:8:LYS:HB2	47:BY:28:LYS:CE	2.33	0.58
26:DA:415:G:O5'	26:DA:415:G:H8	1.86	0.58
26:DA:483:G:O2'	56:D7:39:ARG:HD3	2.03	0.58
26:DA:594:A:OP2	44:DV:78:LYS:NZ	2.35	0.58
26:DA:2107:U:H2'	26:DA:2108:G:C8	2.37	0.58
26:DA:2433:A:H4'	26:DA:2434:U:OP1	2.02	0.58
36:DN:2:LYS:O	36:DN:4:TYR:CZ	2.56	0.58
40:DR:10:LEU:HD22	40:DR:17:ARG:CD	2.33	0.58
1:AA:1225:A:H2'	1:AA:1225:A:N3	2.18	0.58
23:AW:34:G:C2	23:AW:35:A:C4	2.91	0.58
26:BA:1703:C:H2'	26:BA:1704:C:C6	2.38	0.58
44:BV:38:LEU:C	44:BV:39:LEU:HD13	2.24	0.58
26:DA:628:U:H4'	26:DA:704:C:H4'	1.85	0.58
29:DD:44:ASN:HB2	29:DD:48:ARG:O	2.03	0.58
30:DE:59:VAL:HG13	30:DE:63:LEU:HG	1.84	0.58
13:AM:3:ARG:HG2	13:AM:9:ILE:HG12	1.85	0.58
24:AY:9:G:N2	24:AY:25:G:N2	2.51	0.58
26:BA:345:A:OP2	31:BF:169:ASN:HB2	2.03	0.58
26:BA:885:U:H2'	26:BA:886:C:C6	2.38	0.58
26:BA:1346:A:O2'	26:BA:1347:A:H3'	2.03	0.58
26:BA:2671:A:H5'	26:BA:2672:G:N3	2.17	0.58
30:BE:16:ARG:O	30:BE:18:ASP:N	2.37	0.58
31:BF:24:LEU:HB3	31:BF:25:PRO:HD2	1.84	0.58
45:BW:9:TYR:H	45:BW:102:HIS:HD2	1.51	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:B5:33:CYS:HB2	54:B5:40:LYS:HE3	1.85	0.58
24:CY:9:G:C2	24:CY:11:C:N4	2.67	0.58
24:CY:49:G:H1	24:CY:65:G:H1	1.51	0.58
26:DA:72:A:H4'	26:DA:73:G:O5'	2.03	0.58
26:DA:232:A:C2	26:DA:243:A:C4	2.90	0.58
44:DV:98:GLU:OE1	44:DV:100:ARG:HB3	2.04	0.58
1:AA:444:C:H2'	1:AA:445:G:H8	1.67	0.58
4:AD:109:GLY:O	4:AD:111:ALA:N	2.37	0.58
4:AD:173:TRP:CD2	4:AD:189:PRO:HB3	2.38	0.58
31:BF:53:THR:HG22	31:BF:56:GLU:OE2	2.03	0.58
32:BG:128:ARG:C	32:BG:129:GLY:O	2.40	0.58
36:BN:42:TRP:CZ2	36:BN:44:PRO:HA	2.38	0.58
36:BN:67:LEU:HB3	36:BN:88:GLU:HG3	1.85	0.58
38:BP:107:LYS:C	38:BP:109:GLY:H	2.05	0.58
44:BV:22:VAL:O	44:BV:23:GLU:HB2	2.03	0.58
15:CO:36:ILE:HG23	15:CO:56:LEU:HD11	1.84	0.58
26:DA:1039:C:OP2	43:DU:54:LYS:NZ	2.31	0.58
38:DP:84:ASN:HA	38:DP:115:LEU:O	2.04	0.58
57:D8:52:LYS:N	57:D8:53:PRO:HD2	2.18	0.58
1:AA:1456:G:O3'	20:AT:39:LYS:NZ	2.33	0.58
23:AW:34:G:N1	23:AW:35:A:C5	2.72	0.58
26:BA:359:C:HO2'	47:BY:35:TYR:HH	1.45	0.58
26:BA:996:G:P	39:BQ:16:ARG:NH2	2.76	0.58
27:BB:40:U:H3'	27:BB:41:U:C5'	2.33	0.58
31:BF:185:ASP:OD1	31:BF:188:ARG:NH1	2.37	0.58
34:BI:133:HIS:HB2	34:BI:134:PRO:CD	2.33	0.58
38:BP:47:ASP:HB3	38:BP:48:PRO:HA	1.85	0.58
1:CA:606:A:C8	1:CA:607:C:C6	2.91	0.58
1:CA:1351:G:OP2	9:CI:112:LYS:HD3	2.04	0.58
26:DA:180:C:O2'	26:DA:848:A:N3	2.35	0.58
26:DA:1050:C:O2'	36:DN:28:THR:OG1	2.22	0.58
30:DE:7:VAL:HA	30:DE:194:GLY:O	2.04	0.58
38:DP:32:THR:HG21	38:DP:37:GLY:HA2	1.85	0.58
38:DP:56:SER:O	38:DP:58:THR:N	2.31	0.58
19:AS:44:MET:N	19:AS:44:MET:SD	2.76	0.58
26:BA:579:U:H2'	26:BA:580:G:H8	1.69	0.58
26:BA:1820:C:H2'	26:BA:1821:A:C5	2.38	0.58
26:BA:2228:A:H1'	26:BA:2230:G:C5	2.39	0.58
29:BD:44:ASN:CB	29:BD:49:ILE:HA	2.33	0.58
33:BH:41:MET:HE2	33:BH:43:VAL:HG13	1.84	0.58
38:BP:6:LEU:HG	38:BP:8:PRO:O	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:528:G:OP2	4:CD:66:ARG:NH2	2.37	0.58
26:DA:489:U:H4'	56:D7:5:TRP:CZ3	2.38	0.58
41:DS:20:ARG:HA	41:DS:20:ARG:HE	1.66	0.58
24:AY:24:G:N1	24:AY:25:G:C2	2.72	0.58
26:BA:88:U:O2	26:BA:88:U:C2'	2.51	0.58
26:BA:355:A:H4'	26:BA:356:G:OP1	2.03	0.58
26:BA:952:U:O2'	39:BQ:101:ARG:NH2	2.34	0.58
26:BA:2773:G:H1'	33:BH:143:GLN:OE1	2.04	0.58
31:BF:132:VAL:HG22	31:BF:133:ASN:H	1.69	0.58
47:BY:25:GLY:HA3	47:BY:39:VAL:CG1	2.34	0.58
24:CY:24:G:N1	24:CY:25:G:C2	2.72	0.58
26:DA:859:U:H2'	26:DA:860:C:C6	2.39	0.58
26:DA:1087:G:H2'	26:DA:1087:G:N3	2.19	0.58
26:DA:1770:G:N7	26:DA:1771:C:C4	2.72	0.58
40:DR:2:ARG:HD2	40:DR:5:LYS:HE2	1.86	0.58
47:DY:66:PRO:O	47:DY:67:LEU:HB3	2.03	0.58
54:D5:40:LYS:NZ	54:D5:49:CYS:SG	2.75	0.58
20:AT:73:HIS:O	20:AT:76:ALA:HB3	2.04	0.58
26:BA:264:U:H2'	26:BA:265:C:C6	2.38	0.58
38:BP:98:GLU:HA	38:BP:101:VAL:HG22	1.86	0.58
26:DA:149:C:H2'	26:DA:150:C:C6	2.39	0.58
26:DA:1698:A:H3'	26:DA:1699:G:C8	2.37	0.58
26:DA:2479:G:N2	26:DA:2492:G:O2'	2.36	0.58
55:D6:13:CYS:O	55:D6:21:TYR:HA	2.04	0.58
1:AA:977:A:H1'	1:AA:982:U:O4	2.03	0.58
26:BA:570:A:H2'	26:BA:570:A:N3	2.19	0.58
55:B6:41:PRO:CD	55:B6:46:HIS:HB2	2.33	0.58
1:CA:914:C:H2'	1:CA:915:A:O4'	2.04	0.58
26:DA:955:A:C8	39:DQ:13:GLN:HG3	2.39	0.58
26:DA:2817:U:H5'	26:DA:2899:G:O6	2.03	0.58
31:DF:65:TRP:CZ3	31:DF:72:ARG:HB2	2.39	0.58
50:D1:51:VAL:O	50:D1:57:GLU:O	2.22	0.58
1:AA:1331:G:OP2	13:AM:23:TYR:CD2	2.52	0.58
1:AA:1442(B):A:HO2'	1:AA:1443:G:H8	1.50	0.58
8:AH:109:ILE:HD11	8:AH:120:THR:CG2	2.34	0.58
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.86	0.58
23:AW:72:C:H2'	23:AW:73:A:O4'	2.03	0.58
26:BA:2538:C:H5'	58:B9:30:PRO:HB2	1.85	0.58
26:BA:2666:G:O2'	26:BA:2675:G:N1	2.35	0.58
33:BH:19:VAL:HG21	33:BH:44:VAL:HA	1.84	0.58
37:BO:68:GLU:OE2	37:BO:78:ARG:NH1	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1293:G:O2'	1:AA:1294:G:P	2.61	0.57
26:BA:572:G:H2'	26:BA:573:G:O4'	2.04	0.57
26:BA:948:C:C2'	26:BA:949:C:H5'	2.34	0.57
26:BA:2754:C:OP1	58:B9:35:ARG:HD3	2.04	0.57
47:BY:6:HIS:HE1	47:BY:30:VAL:HG11	1.69	0.57
5:CE:72:GLN:O	5:CE:75:THR:HG22	2.04	0.57
26:DA:267:G:O2'	26:DA:268:G:OP2	2.21	0.57
24:AY:24:G:C2	24:AY:25:G:C2	2.92	0.57
24:AY:35:G:N1	25:AX:20:A:N6	2.51	0.57
24:AY:44:A:H8	24:AY:44:A:O5'	1.87	0.57
26:BA:276:G:O2'	26:BA:277:G:OP2	2.19	0.57
38:BP:125:VAL:HG11	38:BP:138:LEU:HD21	1.86	0.57
1:CA:1185:C:H2'	1:CA:1186:A:O4'	2.04	0.57
1:CA:1223:G:H2'	1:CA:1224:C:C6	2.39	0.57
9:CI:48:GLU:N	9:CI:49:PRO:HD2	2.19	0.57
23:CW:48:C:C6	23:CW:59:U:H1'	2.38	0.57
1:AA:376:G:C2	1:AA:389:A:C2	2.92	0.57
1:AA:1079:G:C6	1:AA:1080:A:N6	2.71	0.57
13:AM:65:LYS:HA	13:AM:66:LEU:CG	2.34	0.57
26:BA:609:C:C5	38:BP:33:ARG:HD3	2.39	0.57
26:BA:1077:A:OP1	58:B9:8:LYS:HE3	2.03	0.57
26:BA:1384:G:N2	26:BA:1648:A:H1'	2.20	0.57
26:BA:1538:C:O2	26:BA:1538:C:C2'	2.53	0.57
26:BA:2612:C:O5'	26:BA:2612:C:H6	1.88	0.57
29:BD:10:THR:HG23	29:BD:13:ARG:HB3	1.86	0.57
29:BD:249:PRO:HG2	29:BD:250:TRP:CZ3	2.39	0.57
30:BE:70:ALA:O	30:BE:71:GLY:C	2.43	0.57
31:BF:4:VAL:HA	31:BF:19:GLU:HB3	1.86	0.57
36:BN:102:ALA:O	36:BN:106:MET:HG3	2.04	0.57
37:BO:35:VAL:HG11	37:BO:103:ALA:HB3	1.85	0.57
42:BT:24:PRO:HA	42:BT:49:VAL:HG13	1.85	0.57
42:BT:50:ILE:HA	42:BT:99:LEU:HD11	1.86	0.57
47:BY:35:TYR:CE2	47:BY:69:ALA:HB3	2.39	0.57
1:CA:753:G:H4'	1:CA:1491:A:H4'	1.87	0.57
26:DA:2263:G:O6	49:D0:4:LYS:HD3	2.05	0.57
26:DA:2499:A:O2'	26:DA:2500:G:H5'	2.04	0.57
44:DV:19:LYS:HG3	44:DV:20:LEU:N	2.19	0.57
57:D8:21:LYS:HD3	57:D8:48:PHE:CZ	2.39	0.57
24:AY:36:A:C2	25:AX:20:A:N6	2.72	0.57
26:BA:185:A:H8	26:BA:185:A:C5'	2.13	0.57
26:BA:1831:G:OP2	29:BD:154:LYS:NZ	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:1888:G:H2'	26:BA:1904:G:H22	1.70	0.57
26:BA:2478:C:H4'	39:BQ:123:HIS:CD2	2.39	0.57
28:BC:59:ARG:HB2	28:BC:62:VAL:HG22	1.87	0.57
31:BF:8:GLN:HB2	31:BF:124:LEU:HD11	1.85	0.57
38:BP:59:LEU:HA	38:BP:61:ARG:NH1	2.19	0.57
1:CA:239:A:H4'	1:CA:240:U:O5'	2.04	0.57
1:CA:955:A:C2'	1:CA:956:A:H5'	2.35	0.57
1:CA:1060:G:N1	1:CA:1064:G:C6	2.72	0.57
24:CY:44:A:H8	24:CY:44:A:O5'	1.87	0.57
26:DA:620:G:H2'	26:DA:621:G:O4'	2.04	0.57
26:DA:1735:A:H62	26:DA:1744:A:H2	1.51	0.57
42:DT:10:VAL:O	42:DT:13:ARG:HG2	2.05	0.57
1:AA:190:U:O2	20:AT:105:SER:HB2	2.04	0.57
1:AA:1367:C:OP1	9:AI:115:GLY:N	2.25	0.57
24:AY:1:G:C2	24:AY:2:G:C6	2.91	0.57
26:BA:1083:C:H3'	26:BA:1084:G:H5"	1.87	0.57
26:BA:1377:G:N2	26:BA:1654:A:HO2'	1.99	0.57
43:BU:91:ASP:O	43:BU:92:ARG:O	2.22	0.57
47:BY:66:PRO:O	47:BY:67:LEU:HB3	2.04	0.57
1:CA:831:G:H2'	1:CA:832:G:H8	1.70	0.57
23:CW:72:C:H2'	23:CW:73:A:O4'	2.03	0.57
26:DA:2121:G:C6	26:DA:2122:G:C6	2.93	0.57
38:DP:49:ARG:HA	57:D8:55:ALA:HB1	1.85	0.57
4:AD:108:LEU:HB3	4:AD:110:PHE:HE1	1.69	0.57
24:AY:10:C:H2'	24:AY:11:C:C6	2.40	0.57
26:BA:154:C:O3'	26:BA:157:U:P	2.63	0.57
26:BA:185:A:C8	26:BA:185:A:C5'	2.80	0.57
26:BA:867:A:O2'	26:BA:990:G:OP2	2.21	0.57
26:BA:1777:G:H2'	26:BA:1778:G:C5'	2.34	0.57
26:BA:2229:U:O2'	50:B1:52:ARG:NH2	2.38	0.57
26:BA:2589:G:OP2	26:BA:2589:G:H4'	2.04	0.57
52:B3:19:GLN:HE22	52:B3:52:HIS:CE1	2.22	0.57
1:CA:1332:A:OP2	9:CI:118:LYS:NZ	2.38	0.57
26:DA:138:A:H8	26:DA:1453:C:HO2'	0.76	0.57
26:DA:2799:C:O2	30:DE:61:ARG:NH1	2.38	0.57
27:DB:29:A:O2'	27:DB:58:A:N1	2.38	0.57
30:DE:4:ILE:HG12	30:DE:5:LEU:O	2.04	0.57
36:DN:125:GLY:HA3	36:DN:126:PRO:O	2.03	0.57
15:AO:39:LEU:CD1	15:AO:56:LEU:HB2	2.35	0.57
24:AY:16:C:H42	24:AY:19:C:N4	2.03	0.57
24:AY:42:G:C2'	24:AY:43:G:C5'	2.73	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:1185:U:OP1	36:BN:25:ARG:NH1	2.37	0.57
26:BA:1849:A:H5"	29:BD:158:ALA:HB3	1.87	0.57
26:BA:1920:G:O2'	26:BA:1921:A:OP2	2.18	0.57
27:BB:21:G:O2'	27:BB:22:U:P	2.63	0.57
36:BN:75:TYR:HA	36:BN:81:GLY:O	2.05	0.57
44:BV:49:THR:HB	44:BV:50:PRO:HD2	1.87	0.57
1:CA:567:A:H2'	1:CA:568:G:O4'	2.04	0.57
1:CA:1282:G:O2'	1:CA:1283:U:P	2.62	0.57
23:CW:31:A:C2	23:CW:40:C:N3	2.73	0.57
24:CY:4:G:C6	24:CY:70:A:N6	2.73	0.57
24:CY:10:C:H2'	24:CY:11:C:C6	2.40	0.57
24:CY:16:C:H42	24:CY:19:C:N4	2.03	0.57
26:DA:2613:A:H4'	26:DA:2614:G:C5'	2.34	0.57
38:DP:57:THR:OG1	38:DP:59:LEU:HB2	2.05	0.57
42:DT:28:VAL:HG22	42:DT:46:GLU:HA	1.85	0.57
1:AA:247:G:OP2	17:AQ:100:LYS:N	2.35	0.57
1:AA:539:A:H2'	1:AA:540:G:C8	2.40	0.57
5:AE:10:MET:HB2	5:AE:32:VAL:HG22	1.86	0.57
24:AY:4:G:C6	24:AY:70:A:N6	2.73	0.57
26:BA:495:A:H2'	26:BA:496:A:O4'	2.05	0.57
26:BA:2053:G:OP2	26:BA:2465:G:O2'	2.20	0.57
26:BA:2074:G:OP1	30:BE:144:ARG:HG2	2.05	0.57
41:BS:28:VAL:O	41:BS:89:ARG:HD2	2.05	0.57
55:B6:33:LYS:O	55:B6:35:GLU:N	2.38	0.57
26:DA:1973:A:C6	26:DA:1974:A:N1	2.73	0.57
51:D2:65:ASN:HB3	51:D2:69:ARG:NH2	2.19	0.57
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.40	0.57
10:AJ:6:ILE:HG13	10:AJ:72:VAL:O	2.05	0.57
17:AQ:7:THR:HG22	17:AQ:58:GLU:HG2	1.87	0.57
26:BA:1051:C:C2	26:BA:1182:G:N2	2.73	0.57
26:BA:1895:G:H5'	26:BA:1896:C:OP2	2.05	0.57
26:BA:2503:U:H2'	26:BA:2504:U:H6	1.69	0.57
29:BD:35:LYS:HG2	29:BD:63:ARG:HG3	1.85	0.57
45:BW:37:ARG:NH2	54:B5:48:GLU:OE2	2.33	0.57
1:CA:1241:C:C4	1:CA:1242:C:O2	2.58	0.57
2:CB:181:PHE:O	2:CB:183:PRO:HD3	2.05	0.57
2:CB:185:ILE:HG22	2:CB:199:TYR:HB2	1.87	0.57
15:CO:83:GLU:O	15:CO:85:LEU:N	2.33	0.57
26:DA:2227:G:H3'	26:DA:2227:G:N3	2.20	0.57
31:DF:113:ALA:HB1	31:DF:186:ILE:HG21	1.87	0.57
57:D8:61:LEU:HD12	57:D8:62:LEU:H	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:718:G:H5'	11:AK:117:ASN:HB2	1.87	0.57
1:AA:1147:C:O2	9:AI:16:ARG:NH1	2.34	0.57
8:AH:11:THR:HG22	8:AH:15:ASN:ND2	2.20	0.57
20:AT:32:ALA:O	20:AT:36:LEU:HB2	2.04	0.57
26:BA:273:U:O2'	34:BI:52:ARG:NH1	2.37	0.57
26:BA:286:G:O3'	26:BA:288:G:OP2	2.23	0.57
26:BA:2298:A:H2	26:BA:2357:A:N1	2.02	0.57
27:BB:28:C:OP1	41:BS:36:TYR:OH	2.21	0.57
30:BE:119:ARG:HD2	30:BE:120:TRP:NE1	2.20	0.57
36:BN:56:ASN:C	36:BN:57:ALA:O	2.41	0.57
40:BR:103:ARG:HG2	40:BR:103:ARG:HH11	1.69	0.57
1:CA:945:C:H2'	1:CA:946:A:C8	2.40	0.57
1:CA:995:A:HO2'	1:CA:1199:C:HO2'	1.48	0.57
1:CA:1092:C:H2'	1:CA:1093:A:O4'	2.05	0.57
1:CA:1101:C:H1'	1:CA:1161:A:C4	2.39	0.57
1:CA:1444:C:H2'	1:CA:1445:G:O4'	2.05	0.57
1:CA:1483:G:H4'	1:CA:1484:U:H5"	1.87	0.57
3:CC:15:THR:CG2	3:CC:181:ASN:HA	2.35	0.57
24:CY:42:G:C2'	24:CY:43:G:C5'	2.73	0.57
26:DA:2566:U:C5	26:DA:2567:C:C2	2.93	0.57
26:DA:2845:U:H2'	26:DA:2846:G:C8	2.40	0.57
30:DE:61:ARG:HB3	30:DE:62:PRO:HD3	1.87	0.57
35:DJ:21:ALA:HB3	35:DJ:88:ALA:O	2.05	0.57
1:AA:674:G:H2'	1:AA:675:A:C8	2.40	0.56
1:AA:1268:A:N3	1:AA:1326:C:O2'	2.37	0.56
5:AE:11:ILE:HG21	5:AE:105:VAL:HG22	1.87	0.56
8:AH:88:LYS:O	8:AH:92:ARG:HD2	2.05	0.56
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.40	0.56
26:BA:158:U:H4'	26:BA:159:G:C8	2.40	0.56
39:BQ:116:GLU:O	39:BQ:117:ALA:C	2.43	0.56
1:CA:433:U:H2'	1:CA:434:G:O4'	2.04	0.56
1:CA:1040:G:H5"	3:CC:154:SER:HB2	1.87	0.56
24:CY:12:G:N1	24:CY:23:A:N6	2.53	0.56
24:CY:24:G:C2	24:CY:25:G:C2	2.92	0.56
26:DA:2032:U:OP1	45:DW:42:ARG:NH1	2.37	0.56
26:DA:2648:U:OP1	30:DE:82:ARG:NE	2.37	0.56
31:DF:65:TRP:HB3	31:DF:66:PRO:HD2	1.86	0.56
31:DF:89:VAL:HG12	31:DF:90:PHE:N	2.19	0.56
4:AD:126:ILE:HD12	4:AD:126:ILE:N	2.19	0.56
10:AJ:23:ILE:HG22	10:AJ:23:ILE:O	2.05	0.56
24:AY:6:G:HO2'	24:AY:7:A:C4'	2.17	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:1216:G:H5'	26:BA:1217:G:OP2	2.05	0.56
26:BA:2019:G:HO2'	26:BA:2736:C:HO2'	1.53	0.56
26:BA:2155:A:N3	26:BA:2155:A:H2'	2.19	0.56
26:BA:2884:C:O2'	42:BT:5:ALA:HB3	2.05	0.56
1:CA:324:C:H4'	1:CA:325:A:C5'	2.35	0.56
3:CC:131:ARG:NH1	5:CE:50:GLU:HG2	2.19	0.56
22:CV:21:U:H5"	22:CV:22:A:OP2	2.05	0.56
24:CY:6:G:O2'	24:CY:7:A:C4'	2.53	0.56
24:CY:49:G:N2	24:CY:65:G:N2	2.53	0.56
26:DA:1553:A:N3	26:DA:1553:A:H2'	2.20	0.56
26:DA:2200:C:N4	26:DA:2203:G:O6	2.38	0.56
26:DA:2656:G:H3'	26:DA:2657:C:C5'	2.35	0.56
26:DA:2802:A:H2'	26:DA:2802:A:N3	2.20	0.56
34:DI:129:THR:HA	34:DI:137:PRO:HA	1.85	0.56
40:DR:9:LYS:O	40:DR:10:LEU:HD23	2.05	0.56
42:DT:28:VAL:HG13	42:DT:46:GLU:HA	1.87	0.56
48:DZ:150:LEU:HG	48:DZ:171:ILE:HD11	1.86	0.56
50:D1:90:ILE:O	50:D1:94:LEU:HB2	2.04	0.56
55:D6:26:ASN:O	55:D6:27:LYS:HD3	2.06	0.56
1:AA:1061:G:OP2	3:AC:2:GLY:O	2.24	0.56
1:AA:1329:A:N7	21:AU:7:ARG:NH2	2.53	0.56
1:AA:1349:A:H2'	1:AA:1350:A:H8	1.69	0.56
23:AW:34:G:C6	25:AX:15:A:N1	2.73	0.56
26:BA:720:G:H1'	31:BF:74:ARG:CD	2.35	0.56
26:BA:986:G:O2'	26:BA:987:U:H5'	2.06	0.56
26:BA:1292:A:OP2	38:BP:18:ARG:NH2	2.38	0.56
26:BA:1849:A:H5"	29:BD:158:ALA:CB	2.35	0.56
26:BA:2317:C:C5	26:BA:2318:G:O2'	2.57	0.56
26:BA:2886:G:H5'	42:BT:3:ARG:NH2	2.20	0.56
36:BN:89:LYS:HA	36:BN:92:ALA:HB3	1.87	0.56
38:BP:39:LYS:O	38:BP:40:SER:CB	2.54	0.56
42:BT:5:ALA:O	42:BT:8:LYS:N	2.38	0.56
43:BU:102:GLU:HG3	44:BV:2:PHE:CE1	2.40	0.56
55:B6:13:CYS:O	55:B6:21:TYR:HA	2.04	0.56
55:B6:15:GLU:CD	55:B6:18:ARG:HE	2.08	0.56
57:B8:51:ALA:N	57:B8:53:PRO:HD2	2.20	0.56
1:CA:1425:G:C5	1:CA:1427:A:C2	2.94	0.56
4:CD:122:ARG:NH1	4:CD:134:ASP:O	2.38	0.56
24:CY:12:G:H4'	26:DA:1937:A:OP1	2.04	0.56
26:DA:1543:C:O4'	26:DA:1623:C:H4'	2.04	0.56
31:DF:24:LEU:HB3	31:DF:25:PRO:HD2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DS:88:ASP:OD2	41:DS:89:ARG:N	2.38	0.56
26:BA:1059:U:O2'	26:BA:1060:G:H5'	2.04	0.56
26:BA:2230:G:O2'	26:BA:2231:G:H5'	2.05	0.56
26:BA:2649:G:OP2	30:BE:82:ARG:NH2	2.38	0.56
29:BD:209:ALA:O	29:BD:212:SER:HB2	2.06	0.56
38:BP:84:ASN:HA	38:BP:115:LEU:O	2.05	0.56
47:BY:30:VAL:HG12	47:BY:31:LEU:N	2.20	0.56
54:B5:4:HIS:HB3	54:B5:5:PRO:HD3	1.86	0.56
55:B6:41:PRO:CD	55:B6:46:HIS:HA	2.35	0.56
1:AA:262:A:H2'	1:AA:263:A:C8	2.40	0.56
5:AE:92:LYS:O	5:AE:118:ILE:HD12	2.05	0.56
23:AW:35:A:C2	23:AW:36:A:C2	2.94	0.56
24:AY:18:G:C6	24:AY:57:C:N4	2.74	0.56
24:AY:55:C:C6	24:AY:58:U:C5	2.93	0.56
26:BA:359:C:O2'	47:BY:35:TYR:OH	2.18	0.56
26:BA:1574:A:H3'	26:BA:1575:G:H5"	1.85	0.56
26:BA:1973:A:C2	37:BO:22:ILE:HG23	2.41	0.56
26:BA:2819:A:O2'	30:BE:61:ARG:NH1	2.39	0.56
30:BE:65:GLY:HA2	30:BE:70:ALA:CB	2.35	0.56
47:BY:20:TYR:O	47:BY:23:ARG:CG	2.54	0.56
53:B4:53:THR:O	53:B4:54:LYS:HG2	2.04	0.56
57:B8:42:ARG:O	57:B8:44:LYS:N	2.32	0.56
1:CA:722:C:OP1	6:CF:2:ARG:NH1	2.38	0.56
1:CA:1005:G:H2'	1:CA:1005:G:N3	2.20	0.56
24:CY:18:G:C6	24:CY:57:C:N4	2.74	0.56
24:CY:44:A:N6	24:CY:45:G:C2	2.73	0.56
26:DA:2213:G:H2'	26:DA:2214:G:H5'	1.88	0.56
29:DD:129:ASN:O	29:DD:193:VAL:HG12	2.06	0.56
33:DH:149:ARG:HA	33:DH:162:ILE:HD11	1.87	0.56
36:DN:102:ALA:O	36:DN:106:MET:HG3	2.05	0.56
42:DT:42:ILE:HD13	42:DT:83:ILE:HD11	1.86	0.56
8:AH:4:ASP:OD2	8:AH:85:ARG:NH2	2.39	0.56
23:AW:34:G:N1	23:AW:35:A:N3	2.53	0.56
25:AX:19:PSU:C2'	25:AX:20:A:H5'	2.36	0.56
26:BA:10:G:O5'	26:BA:10:G:H8	1.88	0.56
26:BA:935:C:O2	26:BA:935:C:O4'	2.23	0.56
26:BA:1079:G:H5'	58:B9:18:ARG:HE	1.69	0.56
26:BA:2698:U:H2'	26:BA:2699:U:O4'	2.06	0.56
28:BC:213:ALA:HB3	28:BC:218:ALA:HA	1.87	0.56
33:BH:137:ASP:OD1	33:BH:138:LYS:N	2.38	0.56
42:BT:23:ARG:HA	42:BT:52:ILE:HD11	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BY:50:ARG:HG2	47:BY:58:GLY:CA	2.36	0.56
1:CA:658:G:H2'	1:CA:659:A:C8	2.41	0.56
1:CA:720:C:H2'	1:CA:721:A:C8	2.40	0.56
12:CL:103:GLY:N	12:CL:107:ALA:O	2.38	0.56
26:DA:639:A:N3	26:DA:640:G:H1'	2.21	0.56
26:DA:1098:C:O3'	26:DA:1151:A:P	2.64	0.56
26:DA:1424:A:O2'	26:DA:1425:G:P	2.63	0.56
26:DA:1539:A:H2'	26:DA:1540:A:H5"	1.87	0.56
26:DA:2826:G:OP1	40:DR:99:LYS:NZ	2.39	0.56
7:AG:100:ALA:O	7:AG:104:LEU:HD23	2.05	0.56
23:AW:55:U:O2'	23:AW:56:C:C5	2.52	0.56
26:BA:775:G:C6	29:BD:208:LYS:HB2	2.41	0.56
26:BA:1313:A:C2	26:BA:2034:A:C4	2.94	0.56
26:BA:2283:U:H5"	26:BA:2284:A:OP1	2.05	0.56
29:BD:210:GLY:O	29:BD:211:ARG:CB	2.50	0.56
1:CA:1375:G:H21	1:CA:1480:A:H8	1.52	0.56
26:DA:770:U:H2'	26:DA:771:G:O4'	2.05	0.56
26:DA:2193:U:H1'	26:DA:2194:A:OP1	2.06	0.56
27:DB:14:U:OP2	27:DB:70:C:O2'	2.20	0.56
27:DB:66:A:C2'	27:DB:67:G:OP2	2.54	0.56
35:DJ:62:ALA:O	35:DJ:66:ALA:HB3	2.06	0.56
1:AA:963:G:N2	10:AJ:55:LYS:HD2	2.21	0.56
4:AD:170:VAL:HG12	4:AD:174:LEU:HB2	1.88	0.56
12:AL:77:LEU:HD21	12:AL:107:ALA:HA	1.87	0.56
17:AQ:33:GLY:O	17:AQ:34:LYS:C	2.42	0.56
23:AW:61:C:H2'	23:AW:62:C:C6	2.40	0.56
24:AY:6:G:O2'	24:AY:7:A:C4'	2.53	0.56
26:BA:26:G:C4	26:BA:536:G:N2	2.74	0.56
26:BA:794:G:C8	45:BW:89:ALA:HB1	2.41	0.56
26:BA:1297:G:C2	26:BA:1298:A:C2	2.94	0.56
38:BP:64:LYS:C	38:BP:66:GLY:N	2.59	0.56
57:B8:61:LEU:HD12	57:B8:62:LEU:HD12	1.88	0.56
1:CA:251:G:H2'	1:CA:252:U:C6	2.41	0.56
1:CA:1482:G:OP1	1:CA:1485:A:O3'	2.23	0.56
8:CH:20:TYR:HE2	8:CH:75:ARG:HD2	1.71	0.56
26:DA:1727:G:OP2	26:DA:1727:G:H8	1.88	0.56
29:DD:71:ASP:OD2	29:DD:103:ARG:NH2	2.37	0.56
31:DF:107:LYS:HD2	31:DF:205:ARG:O	2.06	0.56
36:DN:18:ALA:HB1	36:DN:21:LYS:HB2	1.88	0.56
1:AA:1054:C:OP1	1:AA:1198:G:OP2	2.23	0.56
4:AD:92:VAL:O	4:AD:96:LEU:HD13	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:25:G:H2'	24:AY:26:A:H8	1.71	0.56
24:AY:44:A:N6	24:AY:45:G:C2	2.73	0.56
26:BA:1000:G:OP2	39:BQ:14:ARG:NH2	2.39	0.56
26:BA:1297:G:O4'	43:BU:33:ARG:CZ	2.54	0.56
26:BA:1739:U:OP2	26:BA:1740:C:H5	1.89	0.56
29:BD:2:ALA:HB3	29:BD:20:ASP:HB3	1.86	0.56
30:BE:134:ILE:C	30:BE:134:ILE:CD1	2.74	0.56
1:CA:1291:G:H5'	13:CM:78:ILE:HD11	1.88	0.56
23:CW:36:A:H2'	23:CW:37:A:O4'	2.06	0.56
26:DA:1824:U:H1'	26:DA:1921:A:N3	2.21	0.56
31:DF:9:ILE:HA	31:DF:13:SER:O	2.04	0.56
1:AA:165:C:H2'	1:AA:166:G:C8	2.42	0.56
1:AA:1095:U:H5"	1:AA:1109:C:O2	2.06	0.56
2:AB:88:ALA:HB2	2:AB:219:VAL:CG1	2.35	0.56
26:BA:2492:G:O2'	26:BA:2493:G:OP2	2.23	0.56
47:BY:15:VAL:HG13	47:BY:17:SER:HB3	1.87	0.56
1:CA:672:G:O2'	1:CA:688:A:N1	2.33	0.56
1:CA:901:A:OP1	5:CE:21:ALA:HB2	2.06	0.56
1:CA:1303:C:C3'	1:CA:1304:C:H5"	2.36	0.56
24:CY:18:G:H2'	24:CY:19:C:C5	2.41	0.56
26:DA:276:G:O2'	26:DA:277:G:P	2.64	0.56
26:DA:2214:G:C4	26:DA:2215:G:C8	2.93	0.56
26:DA:2221:C:C5'	26:DA:2222:C:OP2	2.54	0.56
47:DY:46:LYS:H	47:DY:62:GLU:HG2	1.71	0.56
48:DZ:24:LEU:HD21	48:DZ:86:VAL:HG23	1.88	0.56
57:D8:14:VAL:HG21	57:D8:22:VAL:HG13	1.86	0.56
1:AA:17:U:H2'	1:AA:18:C:C6	2.41	0.55
1:AA:188:C:O4'	20:AT:89:ARG:NH2	2.39	0.55
1:AA:193:C:H2'	1:AA:194:C:C6	2.42	0.55
26:BA:707:C:O2'	38:BP:16:ARG:O	2.16	0.55
27:BB:14:U:OP2	27:BB:70:C:O2'	2.16	0.55
27:BB:55:U:H2'	27:BB:56:G:O4'	2.06	0.55
28:BC:78:ALA:HB1	28:BC:82:LYS:HB2	1.88	0.55
36:BN:56:ASN:O	36:BN:57:ALA:O	2.23	0.55
52:B3:43:ILE:O	52:B3:47:VAL:HG23	2.05	0.55
57:B8:14:VAL:CG2	57:B8:22:VAL:HG13	2.36	0.55
12:CL:24:VAL:O	12:CL:24:VAL:HG12	2.05	0.55
26:DA:1685:U:C2'	26:DA:1686:C:H5"	2.37	0.55
26:DA:1863:U:O2'	26:DA:1990:A:N1	2.35	0.55
26:DA:2492:G:HO2'	26:DA:2493:G:P	2.17	0.55
8:AH:11:THR:HG22	8:AH:15:ASN:HD21	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:40:LEU:HB2	10:AJ:69:ASN:HB2	1.88	0.55
26:BA:1648:A:H5'	26:BA:1648:A:H8	1.71	0.55
1:CA:697:G:H2'	1:CA:698:G:C8	2.42	0.55
1:CA:901:A:O2'	1:CA:1382:C:OP2	2.24	0.55
55:D6:17:LYS:O	55:D6:18:ARG:HB3	2.06	0.55
1:AA:967:C:HO2'	9:AI:125:TYR:HH	1.51	0.55
1:AA:1399:C:C2	1:AA:1502:A:N6	2.75	0.55
26:BA:567:C:HO2'	26:BA:570:A:P	2.29	0.55
26:BA:602:C:H2'	26:BA:603:C:H6	1.72	0.55
26:BA:1172:A:N6	26:BA:2499:A:N3	2.55	0.55
26:BA:1285:U:O2'	26:BA:1286:A:H5'	2.07	0.55
26:BA:2818:A:C2	26:BA:2900:A:N3	2.75	0.55
27:BB:77:U:P	48:BZ:19:ARG:HH22	2.30	0.55
43:BU:66:ASN:ND2	43:BU:70:ARG:HE	2.04	0.55
1:CA:378:A:H2'	1:CA:379:A:C8	2.41	0.55
8:CH:20:TYR:CE2	8:CH:75:ARG:HD2	2.42	0.55
24:CY:74:C:N1	26:DA:2566:U:O2	2.39	0.55
26:DA:1393:G:H2'	26:DA:1394:A:H5'	1.88	0.55
27:DB:74:U:H2'	27:DB:75:G:O4'	2.06	0.55
34:DI:6:LEU:O	34:DI:7:GLU:C	2.43	0.55
39:DQ:41:TRP:CD1	39:DQ:96:VAL:HG22	2.42	0.55
1:AA:923:A:C5'	5:AE:21:ALA:HB2	2.36	0.55
8:AH:82:HIS:HB3	8:AH:138:TRP:CZ2	2.41	0.55
16:AP:3:LYS:O	16:AP:21:VAL:HA	2.06	0.55
16:AP:72:ARG:HH21	16:AP:73:LEU:HD21	1.70	0.55
24:AY:18:G:H2'	24:AY:19:C:C5	2.42	0.55
26:BA:1704:C:OP1	30:BE:132:HIS:O	2.23	0.55
26:BA:2319:G:N3	32:BG:80:PHE:HE2	2.04	0.55
47:BY:10:GLY:HA2	47:BY:27:VAL:HG13	1.87	0.55
54:B5:3:LYS:C	54:B5:4:HIS:O	2.45	0.55
7:CG:54:THR:OG1	7:CG:56:GLN:HG2	2.06	0.55
8:CH:86:ILE:HG12	8:CH:135:CYS:HA	1.89	0.55
26:DA:2212:G:H2'	26:DA:2212:G:N3	2.21	0.55
36:DN:58:ASP:C	36:DN:60:ILE:H	2.10	0.55
1:AA:977:A:C2'	1:AA:978:A:H5'	2.37	0.55
1:AA:1220:G:O3'	19:AS:36:ARG:HD3	2.06	0.55
23:AW:34:G:O6	25:AX:15:A:N1	2.38	0.55
26:BA:25:G:C6	26:BA:26:G:N1	2.75	0.55
26:BA:1540:A:C2	26:BA:1541:A:C2	2.95	0.55
29:BD:144:ALA:HB3	29:BD:192:THR:HG23	1.89	0.55
30:BE:75:VAL:C	30:BE:77:ILE:H	2.10	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:571:G:N2	1:CA:738:C:OP2	2.38	0.55
26:DA:141:G:H4'	46:DX:35:THR:HG21	1.89	0.55
26:DA:344:G:O4'	31:DF:165:ARG:NH1	2.39	0.55
26:DA:853:U:O2'	26:DA:2081:A:N1	2.37	0.55
26:DA:2262:G:OP1	39:DQ:82:ARG:NH1	2.36	0.55
26:DA:2502:U:H4'	26:DA:2581:G:OP1	2.06	0.55
34:DI:13:GLY:O	34:DI:14:ASP:C	2.44	0.55
12:AL:58:VAL:O	12:AL:65:GLU:HA	2.06	0.55
26:BA:550:A:N1	26:BA:2636:G:O2'	2.34	0.55
26:BA:790:G:OP1	30:BE:132:HIS:CB	2.40	0.55
26:BA:2072:A:OP2	26:BA:2072:A:H8	1.90	0.55
26:BA:2466:G:H2'	26:BA:2467:C:C6	2.42	0.55
42:BT:26:ASP:HB3	42:BT:89:VAL:O	2.07	0.55
42:BT:29:ARG:HB3	42:BT:85:LYS:HA	1.88	0.55
48:BZ:52:SER:OG	48:BZ:53:ILE:N	2.39	0.55
1:CA:108:U:H2'	1:CA:109:G:C8	2.42	0.55
6:CF:15:ASP:OD1	6:CF:17:SER:N	2.39	0.55
32:DG:51:ARG:HA	32:DG:51:ARG:NE	2.21	0.55
56:D7:5:TRP:CD1	56:D7:7:PRO:HD3	2.42	0.55
22:AV:25:U:H2'	22:AV:26:C:C6	2.42	0.55
24:AY:12:G:N1	24:AY:23:A:N6	2.53	0.55
26:BA:628:U:H4'	26:BA:704:C:H4'	1.89	0.55
26:BA:1085:C:O2'	26:BA:1086:C:O4'	2.21	0.55
26:BA:1383:G:O6	46:BX:62:LYS:NZ	2.38	0.55
31:BF:51:THR:HB	31:BF:88:VAL:HG11	1.87	0.55
42:BT:62:THR:HG22	42:BT:75:ILE:HG23	1.88	0.55
44:BV:39:LEU:HD12	44:BV:50:PRO:O	2.07	0.55
1:CA:1405:G:H4'	37:DO:49:ARG:NH1	2.21	0.55
24:CY:55:C:C2	24:CY:57:C:OP2	2.60	0.55
26:DA:154:C:O3'	26:DA:157:U:P	2.65	0.55
26:DA:454:A:H3'	26:DA:455:A:H8	1.70	0.55
26:DA:967:U:H2'	26:DA:968:C:C6	2.42	0.55
26:DA:1314:A:O2'	26:DA:1370:G:O6	2.25	0.55
30:DE:117:MET:HA	30:DE:122:PHE:N	2.21	0.55
42:DT:102:ILE:HB	42:DT:110:ILE:CD1	2.37	0.55
55:D6:51:GLU:O	55:D6:52:VAL:HG23	2.05	0.55
1:AA:1277:C:H3'	1:AA:1277:C:H6	1.72	0.55
5:AE:100:VAL:HG12	5:AE:118:ILE:HG22	1.88	0.55
23:AW:68:C:H2'	23:AW:69:G:H8	1.72	0.55
26:BA:1098:C:O3'	26:BA:1151:A:P	2.64	0.55
26:BA:1549:C:O2'	26:BA:1550:C:C5'	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:2388:A:H2'	26:BA:2389:A:C8	2.42	0.55
29:BD:175:LEU:HD12	29:BD:185:VAL:HG21	1.88	0.55
38:BP:114:ILE:O	38:BP:130:PHE:HA	2.07	0.55
46:BX:12:VAL:HG21	46:BX:17:ALA:HB1	1.88	0.55
1:CA:1240:G:H2'	1:CA:1241:C:C6	2.41	0.55
1:CA:1303:C:H5"	1:CA:1304:C:C5'	2.37	0.55
26:DA:644:G:H4'	26:DA:645:A:OP1	2.06	0.55
26:DA:1286:A:H2'	26:DA:1287:A:O5'	2.06	0.55
26:DA:1920:G:C2'	26:DA:1921:A:OP2	2.55	0.55
29:DD:65:ILE:HD11	29:DD:67:PHE:CE1	2.42	0.55
29:DD:65:ILE:HG13	29:DD:67:PHE:CZ	2.41	0.55
29:DD:121:PRO:HB3	29:DD:135:PHE:CE1	2.42	0.55
31:DF:185:ASP:HA	31:DF:188:ARG:HD3	1.88	0.55
38:DP:96:THR:O	38:DP:99:LEU:HB3	2.06	0.55
47:DY:76:CYS:SG	47:DY:77:PRO:HD2	2.46	0.55
1:AA:1399:C:H4'	1:AA:1400:C:O5'	2.07	0.55
4:AD:121:VAL:HA	4:AD:126:ILE:HD13	1.89	0.55
13:AM:39:ILE:HD12	13:AM:56:LEU:HD23	1.89	0.55
19:AS:43:GLU:C	19:AS:45:VAL:H	2.10	0.55
24:AY:4:G:C5	24:AY:5:A:N7	2.75	0.55
26:BA:1777:G:C2'	26:BA:1778:G:C5'	2.85	0.55
30:BE:185:LYS:O	30:BE:186:GLY:O	2.24	0.55
32:BG:60:LEU:O	32:BG:63:ILE:HG23	2.07	0.55
34:BI:133:HIS:HB2	34:BI:134:PRO:HD2	1.88	0.55
42:BT:28:VAL:HG22	42:BT:46:GLU:HA	1.89	0.55
43:BU:90:VAL:O	43:BU:91:ASP:C	2.45	0.55
1:CA:835:C:H2'	1:CA:836:G:O4'	2.07	0.55
26:DA:231:U:OP1	57:D8:6:THR:CG2	2.55	0.55
60:DC:169:ALA:O	60:DC:171:ALA:N	2.39	0.55
40:DR:29:LEU:HD23	40:DR:70:LEU:HD11	1.88	0.55
47:DY:87:LYS:O	47:DY:88:LYS:HB2	2.07	0.55
52:D3:1:MET:HE2	52:D3:39:ASP:HB3	1.89	0.55
1:AA:49:U:C2	1:AA:361:G:N2	2.75	0.55
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.25	0.55
13:AM:32:GLU:O	13:AM:36:LYS:HG2	2.07	0.55
22:AV:20:G:H4'	22:AV:21:U:OP2	2.06	0.55
26:BA:1973:A:C2	37:BO:22:ILE:CG2	2.90	0.55
30:BE:111:ARG:HD2	30:BE:160:TYR:CE1	2.42	0.55
32:BG:10:LYS:HE2	32:BG:175:LEU:O	2.07	0.55
38:BP:115:LEU:HA	38:BP:134:ALA:CB	2.37	0.55
26:DA:274:C:O2'	26:DA:275:C:C6	2.57	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DG:32:PRO:HB2	32:DG:172:LEU:HD13	1.88	0.55
5:AE:11:ILE:HD11	5:AE:33:VAL:CG2	2.37	0.54
26:BA:1923:C:H1'	29:BD:244:ARG:HG3	1.89	0.54
28:BC:56:GLN:NE2	28:BC:168:ALA:HB2	2.17	0.54
30:BE:119:ARG:HD2	30:BE:120:TRP:CE2	2.42	0.54
38:BP:48:PRO:O	38:BP:50:ARG:N	2.39	0.54
45:BW:86:LEU:HD12	45:BW:87:PRO:HD2	1.87	0.54
1:CA:1037:C:OP1	1:CA:1180:G:OP2	2.24	0.54
13:CM:65:LYS:HA	13:CM:66:LEU:CG	2.37	0.54
18:CR:66:LEU:HG	18:CR:70:ILE:HD11	1.87	0.54
24:CY:1:G:C2	24:CY:2:G:C6	2.91	0.54
24:CY:6:G:HO2'	24:CY:7:A:C4'	2.20	0.54
26:DA:610:U:H1'	31:DF:90:PHE:CG	2.42	0.54
26:DA:1541:A:H8	26:DA:1623:C:O2'	1.90	0.54
29:DD:85:ASP:HB2	29:DD:92:ILE:HD12	1.89	0.54
1:AA:1188:A:H2'	1:AA:1189:C:O4'	2.07	0.54
2:AB:91:PRO:HG3	2:AB:155:LEU:HD23	1.89	0.54
5:AE:100:VAL:HG12	5:AE:118:ILE:CG2	2.37	0.54
26:BA:283:G:C2	26:BA:284:U:O4	2.59	0.54
26:BA:1200:A:OP2	43:BU:58:ARG:NH1	2.40	0.54
26:BA:1270:G:N2	26:BA:1271:A:C2	2.74	0.54
26:BA:1953:A:H2'	26:BA:1954:G:O4'	2.07	0.54
26:BA:2885:G:H4'	42:BT:3:ARG:HD3	1.89	0.54
37:BO:4:PRO:O	37:BO:5:GLN:HB2	2.07	0.54
38:BP:98:GLU:O	38:BP:101:VAL:HG22	2.07	0.54
44:BV:18:LEU:HD22	44:BV:19:LYS:HA	1.89	0.54
47:BY:88:LYS:O	47:BY:89:PHE:HB2	2.06	0.54
55:B6:11:LEU:HD21	55:B6:51:GLU:CB	2.36	0.54
1:CA:60:A:C5'	1:CA:61:A:H5"	2.37	0.54
5:CE:43:LEU:HD21	5:CE:132:ALA:HB1	1.90	0.54
26:DA:1067:G:N2	26:DA:1187:A:C2	2.72	0.54
26:DA:1184:C:OP2	36:DN:66:LYS:NZ	2.38	0.54
26:DA:1579:G:O3'	26:DA:1589:C:P	2.65	0.54
26:DA:1636:G:H5"	26:DA:1636:G:H8	1.71	0.54
26:DA:2413:C:C2'	26:DA:2414:C:H5'	2.37	0.54
34:DI:53:ALA:O	34:DI:57:ARG:HB2	2.06	0.54
40:DR:2:ARG:CD	40:DR:5:LYS:HE2	2.37	0.54
40:DR:103:ARG:NH1	40:DR:110:PRO:HD3	2.23	0.54
1:AA:115:G:H1'	1:AA:116:A:N7	2.23	0.54
24:AY:49:G:N2	24:AY:65:G:N2	2.53	0.54
25:AX:20:A:O2'	25:AX:21:G:O5'	2.25	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:906:U:O2	26:BA:906:U:O4'	2.24	0.54
31:BF:3:GLU:HA	31:BF:24:LEU:CB	2.37	0.54
36:BN:46:VAL:O	36:BN:47:ALA:HB3	2.06	0.54
37:BO:43:VAL:HG21	37:BO:52:VAL:CG1	2.38	0.54
1:CA:480:A:H4'	1:CA:481:A:OP1	2.06	0.54
1:CA:962:C:H2'	1:CA:963:C:C6	2.41	0.54
13:CM:106:ASN:O	13:CM:107:ALA:HB3	2.07	0.54
24:CY:55:C:C6	24:CY:58:U:C5	2.93	0.54
24:CY:75:C:C2	26:DA:2518:C:O2'	2.52	0.54
26:DA:79:G:HO2'	26:DA:318:G:HO2'	1.53	0.54
26:DA:2487:A:N1	26:DA:2488:C:C5	2.75	0.54
41:DS:24:LEU:HB3	41:DS:85:VAL:HG12	1.88	0.54
3:AC:73:PRO:O	3:AC:76:VAL:HG22	2.07	0.54
4:AD:108:LEU:HB3	4:AD:110:PHE:CE1	2.42	0.54
26:BA:1154:C:C5	26:BA:1155:G:C6	2.95	0.54
29:BD:129:ASN:O	29:BD:193:VAL:HG12	2.07	0.54
33:BH:84:SER:O	33:BH:133:VAL:O	2.25	0.54
35:BJ:62:ALA:HB1	35:BJ:78:ALA:HB1	1.90	0.54
36:BN:108:PRO:O	36:BN:113:GLY:HA3	2.08	0.54
38:BP:13:ASN:C	38:BP:13:ASN:HD22	2.11	0.54
45:BW:86:LEU:HD12	45:BW:87:PRO:CD	2.37	0.54
1:CA:438:C:H2'	1:CA:439:C:C6	2.43	0.54
1:CA:508:G:H2'	1:CA:509:C:C6	2.42	0.54
4:CD:107:ARG:HD2	4:CD:173:TRP:HZ2	1.73	0.54
24:CY:25:G:H2'	24:CY:26:A:H8	1.71	0.54
26:DA:237:C:OP2	26:DA:2405:C:O2'	2.25	0.54
26:DA:275:C:O2'	26:DA:276:G:H5'	2.06	0.54
26:DA:1254:A:H5"	26:DA:1256:G:O4'	2.08	0.54
26:DA:1824:U:H1'	26:DA:1921:A:C2	2.43	0.54
29:DD:34:VAL:O	29:DD:35:LYS:C	2.44	0.54
30:DE:36:ARG:HH21	30:DE:88:GLY:HA2	1.72	0.54
41:DS:27:SER:HA	41:DS:88:ASP:HB3	1.88	0.54
57:D8:51:ALA:N	57:D8:53:PRO:HD2	2.22	0.54
26:BA:1624:U:H2'	26:BA:1625:A:H5'	1.89	0.54
26:BA:1636:G:H5"	26:BA:1636:G:H8	1.73	0.54
26:BA:1683:A:H4'	26:BA:2722:A:O2'	2.07	0.54
26:BA:2573:U:H1'	37:BO:23:ARG:HH11	1.71	0.54
27:BB:40:U:C2	27:BB:43:C:OP2	2.60	0.54
38:BP:59:LEU:HG	38:BP:61:ARG:NH1	2.22	0.54
50:B1:40:ARG:NH2	50:B1:42:GLN:HG2	2.23	0.54
55:B6:41:PRO:HD2	55:B6:46:HIS:CA	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:708:G:C2	1:CA:709:G:C8	2.96	0.54
1:CA:958:C:H4'	14:CN:19:ARG:NH1	2.23	0.54
4:CD:170:VAL:HG12	4:CD:174:LEU:HB2	1.88	0.54
5:CE:48:ALA:HB1	5:CE:49:PRO:HD2	1.90	0.54
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.90	0.54
26:DA:975:G:O3'	52:D3:24:LYS:NZ	2.40	0.54
26:DA:1083:C:H3'	26:DA:1084:G:H5"	1.89	0.54
26:DA:2293:G:H5"	26:DA:2294:C:O4'	2.07	0.54
1:AA:323:U:H2'	1:AA:324:G:O4'	2.07	0.54
1:AA:1053:G:N7	1:AA:1199:U:H3'	2.22	0.54
2:AB:135:GLN:O	2:AB:139:LYS:HG2	2.08	0.54
2:AB:221:LEU:HD13	2:AB:221:LEU:O	2.07	0.54
13:AM:7:VAL:O	13:AM:7:VAL:HG12	2.08	0.54
40:BR:87:TYR:O	40:BR:89:ASP:N	2.37	0.54
47:BY:27:VAL:HG12	47:BY:29:GLU:OE1	2.07	0.54
1:CA:1143:G:O6	1:CA:1163:G:O6	2.26	0.54
26:DA:896:C:O2'	52:D3:46:ASN:ND2	2.41	0.54
26:DA:2197:A:HO2'	60:DC:44:HIS:CE1	2.25	0.54
26:DA:2475:C:HO2'	26:DA:2476:C:P	2.30	0.54
46:DX:26:TYR:OH	46:DX:88:LYS:HB2	2.08	0.54
26:BA:1041:A:H4'	43:BU:92:ARG:NE	2.23	0.54
26:BA:1973:A:C6	37:BO:22:ILE:HD12	2.43	0.54
27:BB:20:C:H2'	27:BB:21:G:C5'	2.37	0.54
38:BP:45:LEU:HG	38:BP:46:LYS:N	2.22	0.54
1:CA:168:U:H5"	1:CA:204:A:O4'	2.08	0.54
10:CJ:37:PRO:HA	10:CJ:72:VAL:HG22	1.90	0.54
24:CY:4:G:C5	24:CY:5:A:N7	2.75	0.54
26:DA:583:G:O2'	43:DU:45:TYR:OH	2.04	0.54
26:DA:1443:C:OP1	46:DX:53:LYS:NZ	2.41	0.54
32:DG:61:ALA:HB2	32:DG:68:PRO:HD3	1.90	0.54
38:DP:8:PRO:O	38:DP:9:ASN:CB	2.55	0.54
1:AA:346:G:H2'	1:AA:346:G:N3	2.22	0.54
1:AA:677:U:H1'	11:AK:119:CYS:SG	2.48	0.54
1:AA:979:C:H3'	1:AA:980:C:C5'	2.35	0.54
13:AM:90:LEU:HA	13:AM:93:ARG:HB2	1.90	0.54
38:BP:7:ARG:HA	38:BP:7:ARG:NH1	2.23	0.54
40:BR:55:ALA:CB	40:BR:79:LEU:HD22	2.38	0.54
49:B0:56:ASP:O	49:B0:57:PHE:HB2	2.08	0.54
57:B8:60:LEU:HB3	57:B8:63:PRO:HG2	1.88	0.54
1:CA:1036:G:N7	1:CA:1182:C:H5"	2.23	0.54
26:DA:185:A:H5'	26:DA:185:A:H8	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DA:439:C:H4'	26:DA:1901:C:O2'	2.07	0.54
26:DA:1090:A:O2'	35:DJ:60:ALA:HB1	2.08	0.54
26:DA:1441:U:O2	26:DA:1441:U:C2'	2.54	0.54
26:DA:2302:U:H2'	26:DA:2303:C:C6	2.43	0.54
31:DF:124:LEU:O	31:DF:193:VAL:HA	2.08	0.54
1:AA:96:U:O2'	1:AA:97:G:P	2.66	0.54
1:AA:460:G:C2	1:AA:473:G:O6	2.61	0.54
10:AJ:47:PHE:CZ	14:AN:37:PHE:HE2	2.25	0.54
24:AY:55:C:C2	24:AY:57:C:OP2	2.60	0.54
26:BA:817:G:OP1	56:B7:10:ARG:NH1	2.40	0.54
26:BA:826:G:H21	26:BA:829:A:H62	1.55	0.54
26:BA:1401:G:C2	26:BA:1421:C:C2	2.96	0.54
26:BA:2120:U:O2	26:BA:2120:U:C2'	2.56	0.54
36:BN:51:PHE:CZ	36:BN:119:ARG:HD2	2.43	0.54
40:BR:2:ARG:HB2	40:BR:5:LYS:HE2	1.90	0.54
42:BT:27:THR:O	42:BT:28:VAL:HG23	2.08	0.54
49:B0:11:ARG:O	49:B0:14:ARG:NH2	2.41	0.54
24:CY:50:G:N2	24:CY:51:G:C1'	2.65	0.54
24:CY:64:G:C4'	26:DA:2494:C:OP1	2.53	0.54
24:CY:68:U:H2'	24:CY:69:C:H6	1.73	0.54
26:DA:1935:C:O2	26:DA:1935:C:O4'	2.26	0.54
26:DA:2084:C:O2	26:DA:2461:A:N1	2.41	0.54
29:DD:201:HIS:O	29:DD:203:ASN:N	2.41	0.54
1:AA:818:G:O2'	1:AA:819:A:H5"	2.08	0.54
1:AA:1442:G:C5	1:AA:1442(B):A:C2	2.96	0.54
4:AD:117:ALA:O	4:AD:121:VAL:HG23	2.07	0.54
10:AJ:54:PHE:CE2	10:AJ:55:LYS:HE3	2.43	0.54
24:AY:1:G:C2'	24:AY:2:G:C8	2.86	0.54
26:BA:1046:A:H2'	26:BA:1047:G:O4'	2.08	0.54
26:BA:1829:G:N2	26:BA:1848:U:O2'	2.41	0.54
26:BA:2744:G:H3'	26:BA:2745:A:C5'	2.37	0.54
57:B8:23:VAL:HG12	57:B8:46:ARG:HB3	1.90	0.54
1:CA:430:U:H2'	1:CA:431:C:C6	2.43	0.54
1:CA:1334:C:H2'	1:CA:1335:G:C8	2.43	0.54
26:DA:1008:C:O2'	26:DA:2284:A:N3	2.26	0.54
26:DA:1538:C:O2	26:DA:1538:C:C2'	2.54	0.54
47:DY:17:SER:OG	47:DY:18:GLY:N	2.35	0.54
3:AC:155:GLY:O	3:AC:156:ARG:HB2	2.07	0.53
24:AY:54:A:N3	24:AY:58:U:O4	2.24	0.53
26:BA:667:A:O2'	26:BA:668:A:H5'	2.07	0.53
26:BA:793:U:C4	26:BA:2624:U:C4	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:2429:A:H2'	26:BA:2430:U:O4'	2.08	0.53
26:BA:2492:G:O2'	26:BA:2493:G:O5'	2.25	0.53
26:BA:2507:C:OP1	39:BQ:83:MET:HG2	2.08	0.53
29:BD:30:GLU:HB2	29:BD:35:LYS:HE3	1.89	0.53
30:BE:81:ILE:O	30:BE:81:ILE:HG22	2.08	0.53
38:BP:58:THR:O	38:BP:61:ARG:NH2	2.42	0.53
42:BT:32:TYR:CG	42:BT:81:PRO:HB2	2.43	0.53
47:BY:98:VAL:O	47:BY:99:CYS:SG	2.66	0.53
1:CA:1062:G:H2'	1:CA:1063:A:C8	2.43	0.53
26:DA:863:C:O2'	26:DA:885:U:H5"	2.08	0.53
26:DA:1920:G:O2'	26:DA:1921:A:P	2.65	0.53
26:DA:2058:G:H2'	26:DA:2059:G:C8	2.43	0.53
26:DA:2323:U:C2'	26:DA:2324:C:H5'	2.36	0.53
26:DA:2728:U:O2'	26:DA:2729:G:H5'	2.07	0.53
26:DA:2849:C:H5"	40:DR:53:HIS:CD2	2.44	0.53
29:DD:85:ASP:OD2	29:DD:88:ARG:NH1	2.41	0.53
1:AA:1418:A:C2	1:AA:1483:A:C2	2.96	0.53
2:AB:73:THR:OG1	2:AB:170:GLU:OE2	2.19	0.53
5:AE:82:VAL:HG21	5:AE:138:ALA:CA	2.38	0.53
20:AT:26:ASN:HB3	20:AT:71:THR:HG23	1.90	0.53
24:AY:68:U:H2'	24:AY:69:C:H6	1.73	0.53
26:BA:922:C:H2'	26:BA:923:U:O4'	2.08	0.53
26:BA:1557:G:H2'	26:BA:1558:C:C6	2.42	0.53
26:BA:1923:C:OP1	29:BD:242:ARG:HD3	2.07	0.53
26:BA:2338:A:H2'	26:BA:2339:A:C8	2.44	0.53
33:BH:106:THR:HG22	33:BH:112:PRO:HB3	1.90	0.53
40:BR:103:ARG:HG2	40:BR:103:ARG:NH1	2.24	0.53
49:B0:34:GLY:O	49:B0:35:ASN:C	2.47	0.53
55:B6:20:ASN:O	55:B6:21:TYR:CG	2.61	0.53
1:CA:1250:A:N3	1:CA:1308:C:O2'	2.42	0.53
26:DA:708:G:P	38:DP:18:ARG:HD2	2.47	0.53
26:DA:1947:U:O2	26:DA:1949:A:C8	2.61	0.53
26:DA:2854:G:OP1	42:DT:56:GLY:N	2.37	0.53
36:DN:57:ALA:C	36:DN:58:ASP:O	2.45	0.53
42:DT:28:VAL:O	42:DT:29:ARG:HB2	2.08	0.53
52:D3:52:HIS:H	52:D3:52:HIS:CD2	2.24	0.53
1:AA:702:A:H3'	1:AA:703:G:H5'	1.90	0.53
1:AA:1149:C:O2'	1:AA:1280:A:N1	2.37	0.53
1:AA:1321:C:C3'	1:AA:1322:C:H5"	2.37	0.53
5:AE:105:VAL:HB	5:AE:106:PRO:HD3	1.90	0.53
26:BA:798:A:O2'	26:BA:799:C:OP2	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BD:224:ALA:HB2	29:BD:233:HIS:HB3	1.90	0.53
42:BT:58:ASN:C	42:BT:58:ASN:HD22	2.11	0.53
12:CL:27:LEU:HG	12:CL:62:SER:HB3	1.90	0.53
18:CR:56:THR:OG1	18:CR:58:LEU:HD13	2.08	0.53
26:DA:650:U:O2	38:DP:105:LEU:HG	2.07	0.53
26:DA:1540:A:P	26:DA:1540:A:O4'	2.66	0.53
26:DA:2228:A:H1'	26:DA:2230:G:C4	2.43	0.53
1:AA:423:G:H2'	1:AA:424:G:O4'	2.08	0.53
1:AA:690:G:H2'	1:AA:691:G:C8	2.44	0.53
12:AL:8:ASN:HD22	17:AQ:34:LYS:HE2	1.73	0.53
24:AY:11:C:H2'	24:AY:11:C:O2	2.08	0.53
26:BA:138:A:H8	26:BA:1453:C:O2'	1.90	0.53
26:BA:139:A:H8	26:BA:1453:C:H1'	1.74	0.53
26:BA:1039:C:O2'	26:BA:1041:A:OP1	2.27	0.53
26:BA:1228:G:OP1	52:B3:29:ARG:NH1	2.41	0.53
26:BA:1504:C:H4'	26:BA:1505:G:O5'	2.08	0.53
26:BA:2516:G:HO2'	26:BA:2517:U:H6	1.55	0.53
28:BC:23:ASP:OD2	28:BC:188:ALA:HB2	2.09	0.53
32:BG:47:LYS:HB3	32:BG:82:LEU:HD12	1.89	0.53
34:BI:9:LEU:H	34:BI:13:GLY:HA2	1.73	0.53
38:BP:62:LEU:HD23	38:BP:62:LEU:H	1.74	0.53
38:BP:83:VAL:HG11	38:BP:112:LEU:HD21	1.90	0.53
39:BQ:55:VAL:HG22	39:BQ:56:ARG:N	2.23	0.53
1:CA:557:A:N3	1:CA:861:C:O2'	2.35	0.53
1:CA:1199:C:P	14:CN:5:ALA:HB1	2.48	0.53
57:D8:61:LEU:CD1	57:D8:62:LEU:HD12	2.38	0.53
1:AA:1126:U:O4'	1:AA:1126:U:OP1	2.27	0.53
26:BA:1703:C:O2'	26:BA:1704:C:H5'	2.09	0.53
26:BA:1717:U:H6	26:BA:1717:U:O5'	1.92	0.53
26:BA:1939:A:O2'	26:BA:1941:C:N4	2.41	0.53
29:BD:35:LYS:O	29:BD:64:ILE:HG22	2.09	0.53
32:BG:77:ILE:HG22	32:BG:80:PHE:H	1.73	0.53
55:B6:17:LYS:O	55:B6:18:ARG:HB3	2.09	0.53
55:B6:27:LYS:HB2	55:B6:30:THR:OG1	2.09	0.53
55:B6:51:GLU:O	55:B6:52:VAL:CG2	2.55	0.53
1:CA:602:C:N3	1:CA:606:A:N6	2.57	0.53
1:CA:1415:G:OP1	42:DT:107:ASP:HB2	2.07	0.53
26:DA:69:A:H5'	26:DA:69:A:C8	2.43	0.53
26:DA:2014:U:H2'	26:DA:2015:C:O4'	2.09	0.53
27:DB:20:C:H2'	27:DB:21:G:H5'	1.89	0.53
29:DD:145:VAL:HG13	29:DD:191:ALA:HB2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DG:124:SER:HB2	32:DG:131:TYR:CE1	2.43	0.53
33:DH:76:VAL:O	33:DH:79:VAL:HG22	2.09	0.53
38:DP:81:GLN:HG2	38:DP:106:LEU:HA	1.90	0.53
1:AA:382:A:H2'	1:AA:383:A:C8	2.44	0.53
1:AA:1112:C:C4	3:AC:178:LEU:HD23	2.43	0.53
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.91	0.53
3:AC:167:TRP:O	3:AC:168:ALA:HB3	2.09	0.53
19:AS:36:ARG:HB2	19:AS:72:GLY:HA3	1.91	0.53
26:BA:1844:G:H4'	29:BD:51:VAL:HG21	1.90	0.53
26:BA:2509:C:OP2	26:BA:2510:C:OP2	2.26	0.53
26:BA:2799:C:H1'	30:BE:61:ARG:CD	2.39	0.53
28:BC:197:ALA:O	28:BC:199:ALA:N	2.41	0.53
34:BI:129:THR:HA	34:BI:137:PRO:HA	1.90	0.53
47:BY:50:ARG:HG2	47:BY:58:GLY:HA2	1.91	0.53
1:CA:961:A:N1	1:CA:1204:G:N2	2.56	0.53
6:CF:72:VAL:HG13	6:CF:73:ASN:ND2	2.24	0.53
26:DA:216:A:H2'	26:DA:218:U:O4'	2.08	0.53
26:DA:1346:A:O2'	26:DA:1347:A:H3'	2.09	0.53
26:DA:1824:U:O4'	26:DA:1921:A:C2	2.62	0.53
26:DA:1902:C:C6	26:DA:1902:C:H5"	2.44	0.53
37:DO:120:GLU:OE1	42:DT:67:SER:OG	2.25	0.53
38:DP:115:LEU:HA	38:DP:134:ALA:HB2	1.90	0.53
43:DU:111:GLU:O	43:DU:115:ALA:N	2.42	0.53
2:AB:100:GLY:N	2:AB:176:GLU:OE2	2.39	0.53
25:AX:20:A:H2'	25:AX:21:G:C8	2.44	0.53
26:BA:154:C:C3'	26:BA:157:U:P	2.97	0.53
26:BA:1653:A:O2'	26:BA:1655:A:OP2	2.25	0.53
26:BA:2591:U:H4'	30:BE:130:GLY:HA2	1.89	0.53
26:BA:2668:A:C2'	26:BA:2669:C:O5'	2.56	0.53
26:BA:2694:C:O2	37:BO:70:LYS:HE2	2.07	0.53
31:BF:116:ASP:OD2	38:BP:5:ASP:N	2.42	0.53
38:BP:8:PRO:C	38:BP:10:PRO:HD2	2.29	0.53
47:BY:29:GLU:OE1	47:BY:29:GLU:N	2.42	0.53
48:BZ:63:ASP:HB2	48:BZ:65:GLN:OE1	2.09	0.53
24:CY:4:G:N3	24:CY:70:A:N1	2.57	0.53
26:DA:1819:A:H2'	26:DA:1820:C:O4'	2.09	0.53
26:DA:2220:A:H3'	26:DA:2221:C:C6	2.41	0.53
26:DA:2573:U:O2'	37:DO:23:ARG:HD3	2.07	0.53
29:DD:30:GLU:HG3	29:DD:63:ARG:CZ	2.38	0.53
44:DV:38:LEU:C	44:DV:39:LEU:HD13	2.29	0.53
49:D0:53:MET:HG3	49:D0:59:LEU:HD23	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.90	0.53
4:AD:173:TRP:CZ3	4:AD:193:ASP:HB3	2.44	0.53
18:AR:44:LEU:O	18:AR:45:SER:C	2.47	0.53
26:BA:1443:C:OP1	46:BX:53:LYS:NZ	2.41	0.53
26:BA:2199:C:H4'	28:BC:46:LYS:HD2	1.91	0.53
29:BD:22:SER:O	29:BD:23:GLU:C	2.47	0.53
38:BP:7:ARG:HB2	38:BP:8:PRO:HD2	1.90	0.53
41:BS:83:LYS:HE3	41:BS:105:ALA:CB	2.38	0.53
44:BV:2:PHE:O	44:BV:14:VAL:O	2.27	0.53
54:B5:35:GLU:O	54:B5:36:CYS:CB	2.57	0.53
1:CA:774:A:C6	1:CA:775:G:C6	2.96	0.53
1:CA:1496:A:H2'	1:CA:1497:A:C8	2.44	0.53
5:CE:106:PRO:O	5:CE:110:LEU:HG	2.09	0.53
26:DA:69:A:OP2	26:DA:69:A:H3'	2.08	0.53
26:DA:493:G:H2'	26:DA:494:G:O4'	2.08	0.53
26:DA:515:G:O6	45:DW:49:LYS:HD3	2.09	0.53
26:DA:566:C:C2'	26:DA:567:C:OP1	2.56	0.53
30:DE:4:ILE:CD1	30:DE:28:ALA:HB1	2.38	0.53
30:DE:101:ARG:HD2	30:DE:169:ASN:ND2	2.24	0.53
42:DT:46:GLU:O	42:DT:65:LYS:HD2	2.09	0.53
44:DV:2:PHE:O	44:DV:3:ALA:HB3	2.09	0.53
46:DX:12:VAL:HB	46:DX:17:ALA:HB1	1.91	0.53
1:AA:690:G:C6	1:AA:691:G:C6	2.97	0.53
1:AA:1128:C:H1'	1:AA:1146:A:H61	1.73	0.53
1:AA:1346:A:N1	1:AA:1374:A:H5"	2.23	0.53
26:BA:1652:C:H4'	26:BA:1653:A:O5'	2.08	0.53
26:BA:1833:A:H4'	29:BD:259:THR:HG23	1.90	0.53
40:BR:21:TYR:HB3	40:BR:47:PHE:CD2	2.43	0.53
1:CA:99:G:H2'	1:CA:100:C:C6	2.44	0.53
1:CA:1109:U:OP2	1:CA:1263:U:O2	2.26	0.53
3:CC:132:ARG:O	3:CC:136:GLN:HB2	2.09	0.53
10:CJ:90:LEU:N	10:CJ:91:PRO:CD	2.72	0.53
23:CW:63:G:H2'	23:CW:64:A:O4'	2.09	0.53
24:CY:11:C:H2'	24:CY:11:C:O2	2.08	0.53
30:DE:87:GLU:O	30:DE:89:ASP:N	2.41	0.53
34:DI:92:VAL:HG13	34:DI:120:ILE:HB	1.91	0.53
4:AD:25:ARG:C	4:AD:27:TYR:H	2.13	0.53
11:AK:111:ASP:OD2	18:AR:84:LYS:HE2	2.09	0.53
14:AN:23:ARG:NH1	14:AN:30:ALA:HB2	2.24	0.53
22:AV:4:G:O2'	22:AV:5:G:P	2.67	0.53
26:BA:849:U:O2'	26:BA:850:A:H5'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:2537:G:O2'	58:B9:2:LYS:NZ	2.39	0.53
30:BE:9:VAL:HG22	30:BE:25:VAL:HB	1.90	0.53
30:BE:17:ASP:O	42:BT:39:ARG:NH1	2.42	0.53
31:BF:200:GLU:O	31:BF:203:GLN:HB2	2.08	0.53
41:BS:89:ARG:CB	41:BS:92:TYR:HB3	2.38	0.53
1:CA:669:G:C2	1:CA:670:U:C4	2.97	0.53
1:CA:1040:G:C5	1:CA:1186:A:C2	2.96	0.53
1:CA:1375:G:N2	1:CA:1480:A:H8	2.06	0.53
6:CF:97:PHE:HD2	18:CR:31:LEU:HD21	1.74	0.53
26:DA:1895:G:H5'	26:DA:1896:C:P	2.49	0.53
55:D6:40:CYS:HA	55:D6:46:HIS:HB2	1.90	0.53
4:AD:9:CYS:HA	4:AD:12:CYS:CB	2.38	0.52
10:AJ:81:THR:HG22	10:AJ:85:LEU:HD12	1.90	0.52
26:BA:1056:G:H5"	43:BU:77:SER:OG	2.10	0.52
26:BA:1070:G:H8	26:BA:1070:G:OP1	1.92	0.52
26:BA:1528:G:O6	26:BA:1551:C:N4	2.42	0.52
26:BA:1727:G:OP2	26:BA:1727:G:H8	1.92	0.52
26:BA:2502:U:H4'	26:BA:2581:G:OP1	2.10	0.52
26:BA:2733:A:H2'	26:BA:2734:G:O4'	2.09	0.52
26:BA:2842:G:C3'	26:BA:2843:G:C5'	2.88	0.52
33:BH:85:LYS:HD2	33:BH:145:ALA:HB2	1.91	0.52
1:CA:1385:C:P	59:CX:19:U:O2'	2.67	0.52
10:CJ:23:ILE:HG23	10:CJ:85:LEU:HD22	1.90	0.52
26:DA:610:U:H1'	31:DF:90:PHE:CD1	2.44	0.52
26:DA:935:C:O2	26:DA:935:C:O4'	2.25	0.52
26:DA:1025:A:N3	26:DA:2058:G:O2'	2.36	0.52
26:DA:1038:G:N3	44:DV:89:GLN:NE2	2.57	0.52
26:DA:1254:A:H5'	26:DA:1254:A:H8	1.74	0.52
26:DA:1765:G:N1	26:DA:1767:U:OP2	2.42	0.52
26:DA:1920:G:N2	26:DA:1923:C:N4	2.55	0.52
26:DA:2089:U:N3	26:DA:2441:A:H2	2.07	0.52
60:DC:103:ALA:HB1	60:DC:110:ALA:HB2	1.91	0.52
29:DD:83:GLU:HG3	29:DD:92:ILE:HD11	1.91	0.52
35:DJ:57:ALA:O	35:DJ:58:ALA:HB2	2.10	0.52
42:DT:32:TYR:CD2	42:DT:81:PRO:HB2	2.44	0.52
1:AA:963:G:H21	10:AJ:55:LYS:HD2	1.74	0.52
4:AD:9:CYS:HB3	4:AD:31:CYS:O	2.09	0.52
8:AH:109:ILE:HD11	8:AH:120:THR:HB	1.92	0.52
11:AK:21:ILE:HB	11:AK:84:VAL:HG12	1.91	0.52
22:AV:14:A:C5	22:AV:23:G:C6	2.98	0.52
26:BA:95:C:H5"	51:B2:2:LYS:HB2	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:650:U:O2	38:BP:105:LEU:HG	2.09	0.52
26:BA:715:G:H5'	26:BA:715:G:C8	2.43	0.52
26:BA:1038:G:C6	26:BA:1039:C:N4	2.78	0.52
26:BA:1828:U:H5'	29:BD:259:THR:CG2	2.32	0.52
26:BA:2077:G:C2	26:BA:2078:A:C8	2.96	0.52
26:BA:2155:A:C2	26:BA:2180:G:H1'	2.44	0.52
30:BE:36:ARG:HH21	30:BE:88:GLY:HA2	1.75	0.52
55:B6:11:LEU:CD2	55:B6:51:GLU:HB2	2.36	0.52
1:CA:1385:C:OP1	59:CX:19:U:O2'	2.27	0.52
19:CS:58:VAL:HG23	19:CS:58:VAL:O	2.08	0.52
26:DA:172:C:H2'	26:DA:173:U:C6	2.44	0.52
26:DA:894:G:H2'	26:DA:895:A:C8	2.44	0.52
26:DA:1381:A:O2'	26:DA:1382:G:H5'	2.09	0.52
36:DN:134:ARG:O	36:DN:135:PRO:C	2.46	0.52
49:D0:26:TYR:O	49:D0:29:GLN:HB2	2.09	0.52
1:AA:1054:C:N3	24:AY:34:C:H1'	2.24	0.52
13:AM:83:ASP:OD2	13:AM:85:GLY:N	2.40	0.52
26:BA:47:A:H5"	26:BA:49:G:O4'	2.08	0.52
26:BA:989:A:C5	26:BA:2459:A:C2	2.97	0.52
26:BA:2269:C:H4'	26:BA:2270:G:OP2	2.08	0.52
36:BN:57:ALA:O	36:BN:58:ASP:C	2.47	0.52
37:BO:88:ASN:O	37:BO:91:LEU:N	2.41	0.52
54:B5:54:GLY:O	54:B5:56:LYS:CD	2.57	0.52
2:CB:198:ASP:OD2	2:CB:198:ASP:N	2.43	0.52
7:CG:18:TYR:CE2	7:CG:59:LEU:HB2	2.45	0.52
13:CM:79:LYS:O	13:CM:82:MET:SD	2.67	0.52
16:CP:25:ARG:O	16:CP:26:ARG:O	2.27	0.52
22:CV:41:C:H2'	22:CV:42:C:H6	1.74	0.52
22:CV:73:A:N6	22:CV:74:A:C6	2.78	0.52
26:DA:545:G:H2'	26:DA:546:G:C8	2.45	0.52
44:DV:5:VAL:HG22	44:DV:6:LYS:N	2.24	0.52
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.44	0.52
1:AA:1277:C:H2'	1:AA:1278:U:H5'	1.90	0.52
4:AD:30:LYS:C	4:AD:32:ALA:N	2.63	0.52
26:BA:550:A:O2'	26:BA:2064:C:O2	2.27	0.52
26:BA:1088:C:H2'	26:BA:1089:G:C8	2.45	0.52
26:BA:1319:A:N1	26:BA:1690:C:O2'	2.32	0.52
26:BA:2210:U:H2'	26:BA:2211:G:H5'	1.91	0.52
26:BA:2677:C:H5"	26:BA:2678:C:OP2	2.10	0.52
29:BD:35:LYS:HE2	29:BD:36:PRO:HB3	1.91	0.52
38:BP:7:ARG:HB2	38:BP:8:PRO:CD	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BP:13:ASN:C	38:BP:13:ASN:ND2	2.63	0.52
40:BR:45:ARG:HG3	40:BR:95:THR:HG23	1.90	0.52
47:BY:6:HIS:CE1	47:BY:30:VAL:HG11	2.44	0.52
1:CA:195:U:H2'	1:CA:196:G:C8	2.44	0.52
1:CA:543:A:H4'	1:CA:544:U:H5"	1.91	0.52
1:CA:559:G:OP1	1:CA:559:G:H4'	2.10	0.52
4:CD:100:ARG:HB3	4:CD:102:ASP:OD1	2.09	0.52
24:CY:17:G:H4'	24:CY:17:G:OP2	2.10	0.52
26:DA:1021:C:H5'	26:DA:1201:A:N6	2.24	0.52
26:DA:2799:C:O2	26:DA:2799:C:H2'	2.10	0.52
29:DD:70:TRP:CH2	29:DD:150:LYS:HA	2.45	0.52
33:DH:137:ASP:O	33:DH:138:LYS:HB2	2.10	0.52
38:DP:16:ARG:HD3	38:DP:18:ARG:H	1.73	0.52
1:AA:130:A:N3	1:AA:263:A:O2'	2.41	0.52
22:AV:76:C:OP1	26:BA:2613:A:OP1	2.28	0.52
24:AY:17:G:OP2	24:AY:17:G:H4'	2.10	0.52
26:BA:865:A:C4	26:BA:1233:A:C2	2.97	0.52
26:BA:1575:G:H2'	26:BA:1575:G:N3	2.24	0.52
26:BA:1910:A:H2'	26:BA:1911:A:O4'	2.09	0.52
26:BA:1923:C:C2'	26:BA:1924:G:O5'	2.56	0.52
26:BA:2124:C:C3'	26:BA:2125:G:H5"	2.39	0.52
26:BA:2328:C:H2'	26:BA:2329:G:H5'	1.92	0.52
54:B5:16:ARG:HH11	54:B5:16:ARG:HG2	1.74	0.52
1:CA:312:G:OP2	1:CA:347:G:O2'	2.28	0.52
1:CA:376:G:C2	1:CA:380:G:C6	2.97	0.52
1:CA:1287:G:N2	1:CA:1313:G:O2'	2.38	0.52
4:CD:17:VAL:HG11	4:CD:197:PRO:HB2	1.91	0.52
26:DA:92:G:H2'	26:DA:93:G:O4'	2.10	0.52
26:DA:1345:U:O2'	26:DA:1671:G:C2	2.61	0.52
26:DA:2487:A:C2	26:DA:2488:C:C6	2.97	0.52
29:DD:35:LYS:HG2	29:DD:63:ARG:HG3	1.90	0.52
29:DD:159:ALA:HB1	29:DD:198:ASN:O	2.10	0.52
31:DF:51:THR:HB	31:DF:88:VAL:CG1	2.39	0.52
1:AA:353:A:H2'	1:AA:354:G:OP2	2.10	0.52
1:AA:438:G:O2'	1:AA:494:U:O4	2.17	0.52
26:BA:670:A:H2'	26:BA:671:G:O4'	2.09	0.52
26:BA:1333:U:C2	26:BA:1372:C:O2	2.63	0.52
26:BA:1765:G:N2	26:BA:1767:U:OP2	2.43	0.52
26:BA:1824:U:H1'	26:BA:1921:A:N3	2.25	0.52
30:BE:75:VAL:O	30:BE:77:ILE:N	2.42	0.52
33:BH:43:VAL:HG11	33:BH:52:VAL:HG22	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BH:67:LEU:O	33:BH:71:LEU:HD13	2.10	0.52
39:BQ:76:LYS:HB3	39:BQ:91:GLU:HG3	1.92	0.52
42:BT:108:ARG:HB2	42:BT:111:ARG:NH1	2.25	0.52
1:CA:963:C:H2'	1:CA:964:A:C8	2.45	0.52
1:CA:1233:A:H2'	1:CA:1234:A:C8	2.45	0.52
1:CA:1425:G:H2'	1:CA:1426:G:C5'	2.39	0.52
7:CG:109:ASN:OD1	7:CG:119:ARG:NH2	2.42	0.52
8:CH:10:LEU:HD13	8:CH:83:ILE:HD11	1.92	0.52
10:CJ:23:ILE:HG22	10:CJ:23:ILE:O	2.10	0.52
26:DA:563:G:H2'	26:DA:564:C:C6	2.44	0.52
26:DA:836:C:O2'	26:DA:837:C:P	2.67	0.52
26:DA:1064:U:O2'	26:DA:1066:A:C2	2.57	0.52
26:DA:1326:G:C5'	26:DA:1326:G:H8	2.23	0.52
26:DA:1815:A:O2'	26:DA:1816:A:H2'	2.09	0.52
30:DE:111:ARG:HD2	30:DE:160:TYR:CD1	2.45	0.52
36:DN:28:THR:HG23	36:DN:29:LYS:N	2.25	0.52
36:DN:65:LYS:O	36:DN:69:GLN:HG3	2.08	0.52
40:DR:87:TYR:O	40:DR:89:ASP:N	2.41	0.52
1:AA:61:G:H2'	1:AA:62:U:O4'	2.10	0.52
1:AA:945:G:N1	1:AA:1337:G:C2	2.77	0.52
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.44	0.52
23:AW:21:A:N6	23:AW:46:G:C4	2.78	0.52
26:BA:333:A:P	47:BY:18:GLY:HA2	2.50	0.52
26:BA:587:C:OP1	44:BV:82:ARG:NH2	2.43	0.52
26:BA:1450:U:H2'	26:BA:1451:U:C6	2.45	0.52
26:BA:1540:A:N3	26:BA:1540:A:H2'	2.24	0.52
26:BA:2077:G:N3	26:BA:2077:G:H2'	2.24	0.52
29:BD:11:PRO:O	29:BD:13:ARG:N	2.42	0.52
29:BD:131:LEU:HB2	29:BD:136:ILE:HD11	1.91	0.52
36:BN:58:ASP:O	36:BN:60:ILE:N	2.41	0.52
36:BN:134:ARG:O	36:BN:135:PRO:C	2.46	0.52
1:CA:137:G:H2'	1:CA:138:A:C8	2.45	0.52
26:DA:1218:A:OP1	26:DA:1220:G:N7	2.43	0.52
26:DA:1770:G:N7	26:DA:1771:C:N3	2.58	0.52
26:DA:2288:G:OP2	49:D0:10:THR:HG21	2.09	0.52
26:DA:2450:A:H5'	26:DA:2450:A:C8	2.44	0.52
26:DA:2578:G:H2'	26:DA:2579:C:C6	2.45	0.52
38:DP:102:ARG:O	38:DP:103:ALA:HB2	2.09	0.52
1:AA:736:C:H2'	1:AA:737:A:C8	2.45	0.52
11:AK:59:TYR:CE1	11:AK:63:LEU:HD21	2.45	0.52
26:BA:605:G:OP2	43:BU:10:ARG:HD2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:1811:C:O2	26:BA:1811:C:O4'	2.28	0.52
26:BA:2677:C:C5'	26:BA:2678:C:OP2	2.58	0.52
34:BI:91:SER:HB2	34:BI:119:PRO:HB2	1.92	0.52
38:BP:107:LYS:O	38:BP:109:GLY:N	2.41	0.52
57:B8:30:ARG:O	57:B8:30:ARG:HD3	2.10	0.52
1:CA:1078:U:P	1:CA:1091:G:H1	2.32	0.52
4:CD:107:ARG:HD2	4:CD:173:TRP:CZ2	2.44	0.52
9:CI:114:TYR:HD1	10:CJ:60:ARG:HG2	1.75	0.52
14:CN:24:CYS:HB3	14:CN:27:CYS:O	2.09	0.52
23:CW:64:A:H2'	23:CW:65:G:H8	1.73	0.52
26:DA:2086:C:H2'	26:DA:2087:C:C6	2.45	0.52
31:DF:178:PRO:CB	31:DF:201:VAL:HG11	2.40	0.52
58:D9:14:CYS:HA	58:D9:27:CYS:HA	1.92	0.52
1:AA:376:G:P	16:AP:67:THR:HG21	2.50	0.52
1:AA:473:G:H2'	1:AA:474:G:H8	1.75	0.52
3:AC:157:ILE:HD13	3:AC:166:GLU:HB2	1.92	0.52
7:AG:64:GLN:OE1	7:AG:64:GLN:HA	2.10	0.52
15:AO:39:LEU:HD12	15:AO:56:LEU:HB2	1.92	0.52
24:AY:4:G:N3	24:AY:70:A:N1	2.57	0.52
26:BA:173:U:H4'	26:BA:206:A:H4'	1.90	0.52
26:BA:201:A:H2'	26:BA:202:G:O4'	2.09	0.52
26:BA:661:A:P	38:BP:116:GLY:HA2	2.50	0.52
26:BA:1364:G:H5"	26:BA:1364:G:H8	1.75	0.52
26:BA:1626:A:H8	26:BA:1626:A:OP2	1.93	0.52
26:BA:1855:A:OP1	29:BD:249:PRO:HD3	2.09	0.52
26:BA:2753:A:OP1	58:B9:22:ARG:NH2	2.41	0.52
42:BT:45:PHE:HE2	42:BT:63:VAL:HG12	1.74	0.52
8:CH:118:VAL:O	8:CH:119:LEU:HD23	2.10	0.52
26:DA:69:A:H5"	26:DA:71:A:C8	2.44	0.52
26:DA:2345:G:N3	41:DS:18:ILE:HD11	2.24	0.52
60:DC:40:THR:HG23	60:DC:215:ALA:HB3	1.92	0.52
31:DF:65:TRP:CZ3	31:DF:73:ALA:O	2.62	0.52
32:DG:36:LYS:HD2	32:DG:160:VAL:HG21	1.91	0.52
39:DQ:110:THR:HG23	39:DQ:113:GLN:HB2	1.92	0.52
1:AA:814:A:N7	1:AA:816:A:C4	2.79	0.52
3:AC:99:VAL:HG23	3:AC:99:VAL:O	2.09	0.52
6:AF:30:LEU:O	6:AF:35:ALA:HB3	2.09	0.52
9:AI:104:ARG:O	9:AI:105:ASP:HB2	2.10	0.52
9:AI:118:LYS:O	9:AI:119:ALA:HB3	2.09	0.52
26:BA:853:U:OP2	38:BP:39:LYS:HG3	2.10	0.52
26:BA:2402:G:OP1	57:B8:32:LEU:CD1	2.54	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BE:63:LEU:O	30:BE:64:LYS:C	2.49	0.52
32:BG:47:LYS:HG3	32:BG:48:GLU:N	2.25	0.52
26:DA:552:A:C2	26:DA:2064:C:H4'	2.45	0.52
26:DA:1039:C:H3'	43:DU:54:LYS:HE3	1.92	0.52
26:DA:1040:C:OP2	43:DU:54:LYS:HE3	2.09	0.52
34:DI:78:THR:HA	34:DI:141:LYS:O	2.09	0.52
49:D0:43:THR:HG23	49:D0:43:THR:O	2.10	0.52
1:AA:735:C:O2'	1:AA:736:C:H5'	2.09	0.51
1:AA:820:U:H4'	1:AA:821:G:OP2	2.10	0.51
3:AC:192:THR:O	3:AC:192:THR:HG22	2.10	0.51
10:AJ:90:LEU:N	10:AJ:91:PRO:CD	2.73	0.51
17:AQ:48:GLU:O	17:AQ:49:GLU:C	2.47	0.51
26:BA:552:A:O2'	26:BA:553:A:C5'	2.58	0.51
26:BA:1377:G:H22	26:BA:1654:A:C2'	2.21	0.51
26:BA:1553:A:H2'	26:BA:1553:A:N3	2.24	0.51
26:BA:2035:A:O2'	45:BW:92:ARG:NH2	2.43	0.51
29:BD:163:ALA:HB1	29:BD:175:LEU:HD22	1.91	0.51
30:BE:77:ILE:HG22	30:BE:78:LEU:HD12	1.92	0.51
40:BR:38:VAL:HB	40:BR:39:PRO:HD3	1.92	0.51
40:BR:116:LEU:O	40:BR:117:VAL:HB	2.10	0.51
47:BY:26:LYS:O	47:BY:27:VAL:C	2.48	0.51
1:CA:18:U:H2'	1:CA:19:C:C6	2.44	0.51
1:CA:989:G:C2	1:CA:999:U:H1'	2.46	0.51
11:CK:18:ARG:NH2	11:CK:35:PRO:O	2.44	0.51
24:CY:55:C:OP2	48:DZ:178:GLU:CA	2.56	0.51
26:DA:1326:G:C5'	26:DA:1326:G:C8	2.92	0.51
26:DA:1824:U:C1'	26:DA:1921:A:C2	2.93	0.51
36:DN:34:LEU:O	36:DN:49:GLY:HA3	2.11	0.51
38:DP:136:GLU:O	38:DP:139:LYS:HB2	2.10	0.51
53:D4:42:CYS:SG	53:D4:62:CYS:HB3	2.49	0.51
1:AA:437:U:H2'	1:AA:438:G:O4'	2.10	0.51
1:AA:1095:U:P	1:AA:1108:G:H1	2.33	0.51
7:AG:41:ARG:NH1	7:AG:45:ASP:OD1	2.43	0.51
11:AK:57:THR:HG23	11:AK:60:ALA:H	1.75	0.51
12:AL:82:VAL:N	12:AL:106:ASP:OD2	2.37	0.51
26:BA:550:A:C2	26:BA:2636:G:N3	2.78	0.51
26:BA:1364:G:C8	26:BA:1364:G:C5'	2.93	0.51
26:BA:1777:G:C2'	26:BA:1778:G:H5"	2.40	0.51
26:BA:2037:U:H1'	54:B5:6:VAL:CG1	2.41	0.51
26:BA:2074:G:H5'	30:BE:144:ARG:O	2.10	0.51
26:BA:2469:G:O2'	26:BA:2471:U:O4	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:2492:G:C2'	26:BA:2493:G:OP2	2.59	0.51
29:BD:144:ALA:HB3	29:BD:192:THR:CG2	2.40	0.51
38:BP:126:VAL:HA	38:BP:145:PRO:HB2	1.91	0.51
46:BX:18:TYR:O	46:BX:19:ALA:C	2.49	0.51
54:B5:48:GLU:HB2	54:B5:49:CYS:SG	2.50	0.51
1:CA:1270:A:N1	1:CA:1354:G:H1'	2.26	0.51
23:CW:20:U:H2'	23:CW:21:A:H4'	1.92	0.51
24:CY:49:G:H22	24:CY:66:G:H1'	1.75	0.51
26:DA:1355:G:OP2	56:D7:9:ARG:NE	2.36	0.51
26:DA:1489:G:H2'	26:DA:1491:C:C5	2.45	0.51
41:DS:17:ARG:HA	41:DS:20:ARG:NH1	2.25	0.51
24:AY:63:G:H2'	24:AY:64:G:C8	2.46	0.51
26:BA:732:G:OP1	56:B7:11:LYS:NZ	2.42	0.51
26:BA:1383:G:O6	46:BX:62:LYS:CE	2.58	0.51
26:BA:2147:A:O2'	26:BA:2148:G:OP2	2.24	0.51
29:BD:35:LYS:HD2	29:BD:36:PRO:CA	2.40	0.51
30:BE:55:ASN:O	30:BE:57:LYS:N	2.42	0.51
31:BF:165:ARG:HA	31:BF:168:ARG:HD3	1.92	0.51
44:BV:22:VAL:O	44:BV:23:GLU:CB	2.59	0.51
1:CA:103:A:C6	1:CA:322:G:C6	2.99	0.51
1:CA:349:A:H2'	1:CA:350:G:OP2	2.09	0.51
1:CA:1468:C:O2'	1:CA:1469:G:H5'	2.11	0.51
3:CC:11:ARG:O	3:CC:13:GLY:N	2.43	0.51
22:CV:20:G:H4'	22:CV:21:U:OP2	2.11	0.51
23:CW:15:G:N3	23:CW:15:G:H2'	2.26	0.51
23:CW:38:A:H3'	23:CW:39:U:H5"	1.92	0.51
26:DA:195:A:H2'	26:DA:196:C:O4'	2.11	0.51
26:DA:736:G:H2'	26:DA:737:C:C6	2.45	0.51
26:DA:1200:A:OP1	43:DU:59:ARG:NH2	2.43	0.51
26:DA:2225:C:O2	26:DA:2231:G:C2	2.63	0.51
26:DA:2319:G:O6	26:DA:2321:A:H2'	2.10	0.51
26:DA:2694:C:N3	26:DA:2739:G:O2'	2.37	0.51
30:DE:9:VAL:HG13	30:DE:25:VAL:O	2.10	0.51
32:DG:20:ILE:O	32:DG:24:GLY:CA	2.58	0.51
32:DG:46:ALA:HB3	32:DG:82:LEU:HD11	1.91	0.51
1:AA:165:C:H2'	1:AA:166:G:H8	1.75	0.51
1:AA:444:C:H2'	1:AA:445:G:C8	2.45	0.51
1:AA:828:A:H2'	1:AA:829:G:O4'	2.10	0.51
9:AI:97:LYS:HD2	9:AI:102:LEU:HD13	1.91	0.51
20:AT:97:ALA:O	20:AT:99:LEU:HG	2.10	0.51
26:BA:322:A:O2'	26:BA:342:C:H4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:2404:A:O2'	57:B8:13:ARG:NH1	2.43	0.51
27:BB:50:G:OP1	41:BS:62:LYS:HB2	2.09	0.51
38:BP:50:ARG:HG3	38:BP:51:PHE:N	2.26	0.51
41:BS:61:ASN:OD1	41:BS:64:GLU:OE2	2.29	0.51
43:BU:88:ILE:HG13	43:BU:88:ILE:O	2.10	0.51
50:B1:25:LYS:HA	50:B1:29:GLY:HA2	1.93	0.51
1:CA:929:G:OP2	13:CM:102:ARG:CZ	2.59	0.51
1:CA:1050:A:H8	1:CA:1050:A:O5'	1.94	0.51
1:CA:1447:G:H2'	1:CA:1448:G:C8	2.46	0.51
3:CC:20:SER:OG	3:CC:36:ASP:OD1	2.23	0.51
11:CK:108:ILE:O	18:CR:87:ARG:HA	2.09	0.51
22:CV:62:C:H2'	22:CV:63:C:H6	1.76	0.51
26:DA:669:C:O2	26:DA:669:C:O4'	2.26	0.51
26:DA:2786:C:H2'	26:DA:2787:A:O4'	2.11	0.51
29:DD:65:ILE:H	29:DD:65:ILE:CD1	2.23	0.51
29:DD:108:PRO:HG2	29:DD:111:LEU:HB2	1.92	0.51
1:AA:128:G:C6	1:AA:129:U:C4	2.99	0.51
1:AA:1016:A:H2'	1:AA:1017:G:O4'	2.09	0.51
3:AC:134:ILE:HG23	3:AC:151:VAL:HB	1.93	0.51
10:AJ:58:ASP:O	10:AJ:59:SER:C	2.48	0.51
19:AS:42:PRO:O	19:AS:44:MET:SD	2.69	0.51
26:BA:841:C:H2'	26:BA:842:C:C6	2.45	0.51
26:BA:919:G:C2	26:BA:950:U:O2	2.64	0.51
26:BA:1066:A:C8	26:BA:1066:A:C3'	2.94	0.51
26:BA:2220:A:OP2	26:BA:2221:C:H5	1.94	0.51
38:BP:39:LYS:O	38:BP:40:SER:HB2	2.09	0.51
43:BU:101:ARG:C	43:BU:102:GLU:HG2	2.30	0.51
1:CA:241:C:O2	1:CA:279:C:N3	2.44	0.51
3:CC:33:LEU:HD21	14:CN:53:LEU:CD2	2.41	0.51
11:CK:57:THR:HG23	11:CK:60:ALA:H	1.75	0.51
26:DA:345:A:H3'	31:DF:169:ASN:HD21	1.76	0.51
26:DA:1039:C:O2'	26:DA:1041:A:OP1	2.28	0.51
29:DD:265:PRO:O	29:DD:267:SER:O	2.29	0.51
41:DS:99:LYS:O	41:DS:101:LEU:N	2.43	0.51
49:D0:53:MET:HA	49:D0:58:THR:O	2.10	0.51
26:BA:1548:U:C4	26:BA:1549:C:N4	2.77	0.51
26:BA:2052:A:C6	26:BA:2509:C:H1'	2.46	0.51
26:BA:2167:C:H4'	26:BA:2168:G:C8	2.46	0.51
26:BA:2859:A:OP2	26:BA:2875:U:H5	1.93	0.51
29:BD:27:THR:CG2	29:BD:81:ALA:HB1	2.35	0.51
36:BN:73:THR:HG23	36:BN:82:LEU:HD11	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BY:7:VAL:HB	47:BY:8:LYS:CD	2.40	0.51
1:CA:61:A:H4'	1:CA:62:G:O5'	2.10	0.51
4:CD:61:LYS:CE	4:CD:62:GLN:HE21	2.22	0.51
24:CY:63:G:H2'	24:CY:64:G:C8	2.46	0.51
24:CY:75:C:H1'	26:DA:2518:C:O2'	2.11	0.51
26:DA:2020:C:H2'	26:DA:2021:G:O4'	2.11	0.51
26:DA:2089:U:H3	26:DA:2441:A:H2	1.57	0.51
26:DA:2649:G:OP2	30:DE:82:ARG:NH2	2.43	0.51
40:DR:87:TYR:OH	40:DR:117:VAL:O	2.27	0.51
1:AA:622:A:C8	1:AA:623:C:C6	2.99	0.51
1:AA:1166:G:H2'	1:AA:1169:A:OP2	2.11	0.51
4:AD:12:CYS:HA	4:AD:19:LEU:H	1.76	0.51
7:AG:57:GLU:OE1	7:AG:57:GLU:N	2.44	0.51
26:BA:211:A:O2'	26:BA:446:C:O2	2.27	0.51
26:BA:602:C:H2'	26:BA:603:C:C6	2.45	0.51
26:BA:620:G:H2'	26:BA:621:G:O4'	2.10	0.51
26:BA:1088:C:H2'	26:BA:1089:G:H8	1.76	0.51
26:BA:1946:C:O2'	26:BA:1947:U:H5'	2.10	0.51
26:BA:2723:U:O2	26:BA:2723:U:H5'	2.11	0.51
27:BB:8:U:O3'	41:BS:25:ARG:NH2	2.43	0.51
30:BE:77:ILE:HG22	30:BE:78:LEU:H	1.76	0.51
38:BP:49:ARG:CD	57:B8:58:ILE:HG22	2.41	0.51
42:BT:70:VAL:HG12	42:BT:71:GLY:O	2.10	0.51
45:BW:47:VAL:HA	45:BW:50:VAL:HG12	1.93	0.51
47:BY:46:LYS:H	47:BY:62:GLU:HG2	1.76	0.51
1:CA:346:G:O2'	1:CA:347:G:H5'	2.10	0.51
1:CA:661:U:H1'	11:CK:119:CYS:SG	2.51	0.51
26:DA:966:G:C6	26:DA:967:U:C4	2.99	0.51
26:DA:1614:G:OP1	29:DD:63:ARG:NH1	2.41	0.51
26:DA:2767:C:C4	58:D9:19:ARG:NH1	2.79	0.51
1:AA:36:C:O2'	1:AA:501:C:OP1	2.28	0.51
1:AA:993:G:N3	1:AA:993:G:H2'	2.26	0.51
1:AA:1207:G:H2'	1:AA:1208:C:C6	2.46	0.51
1:AA:1293:G:O2'	1:AA:1294:G:OP2	2.28	0.51
3:AC:139:GLN:O	3:AC:143:GLU:HB2	2.10	0.51
5:AE:12:LEU:HD13	5:AE:31:LEU:HB3	1.92	0.51
26:BA:625:A:H4'	26:BA:626:G:O5'	2.10	0.51
26:BA:875:A:N7	26:BA:2259:C:H5'	2.25	0.51
26:BA:1065:A:N1	26:BA:1185:U:H1'	2.26	0.51
40:BR:99:LYS:HA	40:BR:112:ALA:HA	1.93	0.51
49:B0:53:MET:HA	49:B0:58:THR:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:B8:33:ASN:ND2	57:B8:33:ASN:N	2.56	0.51
1:CA:959:U:H5	1:CA:960:U:HO2'	1.57	0.51
22:CV:65:G:H2'	22:CV:66:C:C6	2.46	0.51
26:DA:634:C:C2'	26:DA:635:G:H5"	2.40	0.51
26:DA:820:A:O2'	26:DA:821:G:P	2.68	0.51
26:DA:1068:U:OP2	26:DA:1069:G:N7	2.43	0.51
26:DA:1856:G:H4'	29:DD:242:ARG:HH21	1.74	0.51
26:DA:1906:A:H3'	26:DA:1907:C:C6	2.45	0.51
26:DA:2535:G:H8	26:DA:2535:G:C5'	2.23	0.51
27:DB:37:C:O2	41:DS:95:HIS:NE2	2.39	0.51
36:DN:56:ASN:O	36:DN:57:ALA:O	2.28	0.51
50:D1:3:LYS:HG3	50:D1:4:VAL:HG12	1.93	0.51
15:AO:64:ARG:O	15:AO:65:ARG:C	2.49	0.51
24:AY:49:G:H22	24:AY:65:G:N2	2.09	0.51
26:BA:92:G:H21	51:B2:47:ASN:HD22	1.59	0.51
26:BA:707:C:H4'	38:BP:16:ARG:NH1	2.26	0.51
26:BA:830:A:C8	26:BA:838:G:C5	2.99	0.51
26:BA:2001:G:O2'	26:BA:2003:C:OP2	2.25	0.51
26:BA:2077:G:OP2	26:BA:2078:A:OP2	2.29	0.51
26:BA:2221:C:H5"	26:BA:2221:C:H6	1.76	0.51
26:BA:2400:G:H5"	26:BA:2401:U:O4'	2.11	0.51
35:BJ:42:ALA:O	35:BJ:43:ALA:HB2	2.10	0.51
38:BP:81:GLN:HG2	38:BP:106:LEU:HA	1.92	0.51
54:B5:55:ARG:HD3	54:B5:56:LYS:H	1.74	0.51
1:CA:591:A:O2'	1:CA:592:A:H5'	2.11	0.51
3:CC:15:THR:HG23	3:CC:181:ASN:HA	1.92	0.51
24:CY:50:G:C2	24:CY:51:G:C4	2.99	0.51
26:DA:1261:C:OP2	43:DU:15:LYS:NZ	2.23	0.51
26:DA:1548:U:C4	26:DA:1549:C:N4	2.79	0.51
26:DA:1574:A:N7	26:DA:1575:G:C8	2.79	0.51
26:DA:2338:A:H2'	26:DA:2339:A:C8	2.46	0.51
33:DH:85:LYS:CE	33:DH:87:LEU:HG	2.41	0.51
41:DS:13:ARG:O	41:DS:15:ARG:HG3	2.10	0.51
10:AJ:23:ILE:HG23	10:AJ:85:LEU:HD22	1.92	0.51
26:BA:1685:U:C2'	26:BA:1686:C:H5"	2.41	0.51
26:BA:1766:A:C6	26:BA:1769:A:N1	2.80	0.51
26:BA:2563:U:C2	26:BA:2565:U:C5'	2.94	0.51
26:BA:2738:U:O2	26:BA:2738:U:O4'	2.29	0.51
31:BF:89:VAL:O	31:BF:91:GLY:N	2.37	0.51
34:BI:94:ALA:O	34:BI:98:ALA:N	2.43	0.51
4:CD:9:CYS:HA	4:CD:12:CYS:CB	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:100:VAL:O	5:CE:107:ARG:NH2	2.43	0.51
26:DA:231:U:OP1	57:D8:6:THR:HG21	2.11	0.51
26:DA:347:A:N6	26:DA:362:U:O4'	2.44	0.51
26:DA:1346:A:O2'	26:DA:1347:A:C3'	2.59	0.51
26:DA:1346:A:HO2'	26:DA:1347:A:P	2.33	0.51
26:DA:2876:G:O2'	26:DA:2877:A:OP2	2.29	0.51
30:DE:36:ARG:HH21	30:DE:88:GLY:CA	2.24	0.51
41:DS:97:ARG:NH2	41:DS:98:VAL:HA	2.25	0.51
55:D6:14:THR:O	55:D6:49:HIS:HA	2.10	0.51
1:AA:294:U:OP1	1:AA:610:G:O2'	2.28	0.50
10:AJ:32:ALA:CB	10:AJ:76:ASN:HB3	2.41	0.50
26:BA:318:G:O5'	47:BY:2:ARG:NH2	2.44	0.50
26:BA:1297:G:N3	43:BU:33:ARG:NH2	2.59	0.50
26:BA:1430:G:O2'	26:BA:1441:U:C6	2.64	0.50
26:BA:1548:U:H2'	26:BA:1549:C:C6	2.46	0.50
26:BA:1704:C:H2'	26:BA:1705:U:C6	2.46	0.50
26:BA:1975:G:O2'	26:BA:1977:U:O4	2.18	0.50
26:BA:2341:G:H2'	26:BA:2342:G:O4'	2.11	0.50
26:BA:2813:C:H2'	26:BA:2814:C:C6	2.46	0.50
29:BD:73:VAL:HG13	29:BD:120:GLY:HA2	1.92	0.50
34:BI:5:LEU:O	34:BI:6:LEU:HD23	2.11	0.50
36:BN:41:ASP:OD1	36:BN:41:ASP:N	2.43	0.50
24:CY:49:G:H22	24:CY:65:G:N2	2.09	0.50
24:CY:49:G:C4	24:CY:66:G:N2	2.78	0.50
26:DA:545:G:H2'	26:DA:546:G:H8	1.75	0.50
26:DA:933:A:H1'	26:DA:935:C:N3	2.27	0.50
26:DA:1557:G:H2'	26:DA:1558:C:C6	2.45	0.50
34:DI:46:ALA:O	34:DI:49:ALA:HB3	2.12	0.50
1:AA:939:G:H2'	1:AA:940:C:H6	1.77	0.50
2:AB:47:THR:O	2:AB:51:LEU:HD12	2.11	0.50
24:AY:12:G:H1	24:AY:23:A:N6	2.09	0.50
24:AY:30:G:C2	24:AY:41:C:N3	2.80	0.50
24:AY:46:U:O2'	24:AY:47:A:O5'	2.30	0.50
26:BA:2030:G:C6	26:BA:2031:G:N7	2.79	0.50
31:BF:9:ILE:HA	31:BF:13:SER:O	2.11	0.50
46:BX:8:ILE:CD1	46:BX:42:ALA:HB1	2.40	0.50
1:CA:243:G:C6	1:CA:244:C:C5	2.99	0.50
11:CK:56:GLY:O	11:CK:89:ALA:HB3	2.12	0.50
26:DA:2044:G:H5'	26:DA:2628:C:H4'	1.93	0.50
26:DA:2613:A:H2'	26:DA:2613:A:N3	2.27	0.50
26:DA:2817:U:O2	26:DA:2900:A:N6	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DE:132:HIS:CD2	30:DE:135:HIS:CE1	3.00	0.50
55:D6:39:TYR:O	55:D6:46:HIS:HB2	2.11	0.50
1:AA:818:G:C3'	1:AA:819:A:C5'	2.88	0.50
3:AC:6:HIS:HD2	3:AC:8:ILE:H	1.58	0.50
4:AD:60:GLU:OE2	4:AD:199:ASN:N	2.44	0.50
26:BA:2144:G:H2'	26:BA:2145:G:O4'	2.11	0.50
26:BA:2355:U:H3'	55:B6:38:LYS:O	2.11	0.50
26:BA:2412:U:OP1	55:B6:19:ARG:NH2	2.44	0.50
26:BA:2479:G:O2'	26:BA:2487:A:H8	1.94	0.50
26:BA:2563:U:C2	26:BA:2565:U:H5'	2.46	0.50
26:BA:2777:A:H3'	26:BA:2777:A:N3	2.25	0.50
29:BD:108:PRO:HB3	29:BD:143:HIS:HE1	1.75	0.50
29:BD:166:GLN:CA	29:BD:166:GLN:HE21	2.25	0.50
30:BE:116:VAL:HG21	30:BE:122:PHE:CD2	2.46	0.50
33:BH:156:ALA:C	33:BH:158:HIS:N	2.65	0.50
41:BS:89:ARG:HG2	41:BS:92:TYR:CA	2.41	0.50
41:BS:101:LEU:HD13	41:BS:103:GLU:HB2	1.93	0.50
47:BY:77:PRO:O	47:BY:78:ALA:CB	2.59	0.50
58:B9:27:CYS:CB	58:B9:32:HIS:HB2	2.40	0.50
1:CA:702:G:H5'	11:CK:117:ASN:HB2	1.93	0.50
1:CA:1042:C:O2'	10:CJ:53:PRO:HD3	2.12	0.50
1:CA:1491:A:H2'	1:CA:1492:C:H6	1.76	0.50
24:CY:24:G:N1	24:CY:25:G:N1	2.60	0.50
26:DA:1659:A:H62	45:DW:93:ALA:HB2	1.75	0.50
26:DA:2613:A:H4'	26:DA:2614:G:H5"	1.93	0.50
53:D4:44:CYS:SG	53:D4:65:CYS:SG	3.09	0.50
13:AM:87:TYR:H	19:AS:73:GLU:HG2	1.76	0.50
18:AR:43:PHE:O	18:AR:44:LEU:HD12	2.12	0.50
24:AY:49:G:H22	24:AY:66:G:H1'	1.75	0.50
26:BA:398:G:OP2	50:B1:69:LYS:HE3	2.12	0.50
26:BA:1070:G:C4	26:BA:1179:C:H1'	2.46	0.50
26:BA:2297:A:H2	55:B6:25:LYS:O	1.95	0.50
30:BE:130:GLY:C	30:BE:131:ALA:O	2.47	0.50
31:BF:74:ARG:O	31:BF:75:HIS:CG	2.64	0.50
36:BN:36:GLY:O	36:BN:42:TRP:HE3	1.94	0.50
36:BN:57:ALA:O	36:BN:58:ASP:O	2.29	0.50
36:BN:134:ARG:O	36:BN:136:GLU:N	2.44	0.50
38:BP:136:GLU:O	38:BP:139:LYS:HE3	2.11	0.50
46:BX:84:ALA:HB1	46:BX:85:PRO:HD2	1.93	0.50
55:B6:17:LYS:O	55:B6:18:ARG:NH1	2.44	0.50
1:CA:1242:C:H4'	1:CA:1266:C:H5'	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:11:LEU:C	4:CD:13:ARG:N	2.60	0.50
5:CE:9:LYS:HB3	5:CE:112:LEU:HD11	1.93	0.50
26:DA:183:A:H5"	26:DA:184:A:OP2	2.10	0.50
26:DA:1565:U:H2'	26:DA:1566:G:O4'	2.12	0.50
26:DA:1780:G:O2'	26:DA:2869:A:N1	2.40	0.50
26:DA:1806:G:C2	26:DA:1807:U:C6	2.99	0.50
26:DA:2529:A:H5'	26:DA:2529:A:H8	1.76	0.50
41:DS:15:ARG:O	41:DS:18:ILE:HB	2.12	0.50
1:AA:990:C:H2'	1:AA:991:U:C6	2.47	0.50
1:AA:1060:C:C5	3:AC:2:GLY:HA2	2.47	0.50
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.46	0.50
8:AH:121:ASP:O	8:AH:125:ARG:HB2	2.12	0.50
19:AS:36:ARG:HB2	19:AS:72:GLY:CA	2.41	0.50
26:BA:28:U:H2'	26:BA:29:G:C8	2.47	0.50
26:BA:271:U:H4'	26:BA:272:G:C2	2.47	0.50
26:BA:1216:G:H3'	26:BA:1217:G:O4'	2.12	0.50
26:BA:1309:G:H3'	26:BA:1310:A:C5'	2.36	0.50
26:BA:1765:G:H5'	26:BA:1766:A:OP2	2.11	0.50
26:BA:2057:C:C6	26:BA:2057:C:C5'	2.91	0.50
47:BY:27:VAL:C	47:BY:29:GLU:OE1	2.49	0.50
1:CA:7:G:H4'	1:CA:294:A:H4'	1.93	0.50
1:CA:582:U:H2'	1:CA:583:C:C6	2.46	0.50
1:CA:802:G:C3'	1:CA:803:A:H5'	2.42	0.50
1:CA:820:G:C6	1:CA:829:G:C6	3.00	0.50
6:CF:5:GLU:HG3	6:CF:93:SER:OG	2.11	0.50
20:CT:75:ASN:O	20:CT:79:ARG:N	2.42	0.50
24:CY:1:G:C2	24:CY:2:G:C5	3.00	0.50
26:DA:720:G:H1'	31:DF:74:ARG:HD3	1.93	0.50
26:DA:876:G:H4'	26:DA:877:G:OP2	2.11	0.50
26:DA:2689:C:H2'	26:DA:2690:A:O4'	2.11	0.50
26:DA:2752:A:H2'	26:DA:2753:A:C8	2.47	0.50
33:DH:155:SER:O	33:DH:157:TYR:N	2.44	0.50
1:AA:393:A:C2	1:AA:394:G:C8	2.99	0.50
1:AA:939:G:H5"	7:AG:102:ARG:NH2	2.27	0.50
1:AA:963:G:N2	10:AJ:55:LYS:CD	2.74	0.50
4:AD:61:LYS:HD3	4:AD:206:PHE:CD2	2.46	0.50
5:AE:8:GLU:HB2	5:AE:34:VAL:HG23	1.93	0.50
6:AF:39:LYS:H	6:AF:64:GLN:HB3	1.76	0.50
10:AJ:48:THR:HA	10:AJ:62:HIS:HB3	1.93	0.50
20:AT:55:ILE:O	20:AT:56:MET:C	2.50	0.50
24:AY:3:A:H2	24:AY:70:A:N6	2.05	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:4:G:N2	24:AY:70:A:C2	2.80	0.50
24:AY:24:G:N1	24:AY:25:G:N1	2.60	0.50
26:BA:2298:A:C2	26:BA:2357:A:C2	2.99	0.50
26:BA:2566:U:H2'	26:BA:2567:C:O4'	2.12	0.50
27:BB:30:C:H2'	27:BB:31:C:O5'	2.12	0.50
41:BS:70:GLY:O	41:BS:71:ARG:C	2.50	0.50
41:BS:89:ARG:HG2	41:BS:92:TYR:HA	1.94	0.50
41:BS:95:HIS:CG	41:BS:96:GLY:N	2.79	0.50
47:BY:10:GLY:CA	47:BY:27:VAL:HG13	2.41	0.50
57:B8:61:LEU:N	57:B8:63:PRO:HD2	2.26	0.50
1:CA:451:C:N3	1:CA:462:G:C2	2.79	0.50
20:CT:56:MET:HG3	20:CT:84:LEU:HD12	1.94	0.50
26:DA:459:C:C4	26:DA:460:U:O4	2.65	0.50
26:DA:602:C:H2'	26:DA:603:C:C6	2.47	0.50
26:DA:1809:U:H5	26:DA:1814:A:N7	2.09	0.50
26:DA:1875:G:O2'	26:DA:1876:G:H5'	2.12	0.50
26:DA:2197:A:HO2'	60:DC:44:HIS:CG	2.30	0.50
29:DD:30:GLU:HB2	29:DD:35:LYS:HE3	1.93	0.50
31:DF:83:PHE:O	31:DF:85:GLY:N	2.43	0.50
23:AW:39:U:O2	23:AW:39:U:C5'	2.60	0.50
24:AY:50:G:C2	24:AY:51:G:C4	2.99	0.50
26:BA:288:G:O2'	26:BA:289:G:O4'	2.25	0.50
26:BA:879:U:H2'	26:BA:880:C:C6	2.47	0.50
26:BA:2316:A:H5"	32:BG:134:GLY:HA3	1.94	0.50
26:BA:2487:A:N3	26:BA:2488:C:H5"	2.26	0.50
26:BA:2734:G:O2'	40:BR:5:LYS:HB2	2.11	0.50
29:BD:70:TRP:CZ3	29:BD:146:GLU:OE2	2.65	0.50
29:BD:133:LEU:HG	29:BD:189:CYS:O	2.12	0.50
29:BD:148:GLU:C	29:BD:189:CYS:SG	2.90	0.50
31:BF:101:LEU:O	31:BF:106:ARG:NH1	2.45	0.50
36:BN:91:LEU:HD23	36:BN:98:VAL:HG21	1.93	0.50
36:BN:120:LEU:CD1	36:BN:122:VAL:HG23	2.41	0.50
38:BP:146:VAL:HG22	38:BP:147:LEU:H	1.77	0.50
39:BQ:133:ARG:O	39:BQ:134:ARG:HG2	2.12	0.50
45:BW:78:GLU:HG2	45:BW:79:GLY:O	2.12	0.50
46:BX:35:THR:O	46:BX:39:ILE:HG12	2.12	0.50
1:CA:665:C:O2'	1:CA:666:G:H5'	2.12	0.50
26:DA:489:U:C4'	56:D7:5:TRP:CZ3	2.95	0.50
26:DA:920:G:H5"	48:DZ:175:VAL:HG11	1.94	0.50
26:DA:2699:U:O5'	26:DA:2699:U:O2	2.29	0.50
26:DA:2756:G:N2	33:DH:143:GLN:OE1	2.38	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DD:35:LYS:HD3	29:DD:63:ARG:HD2	1.92	0.50
31:DF:53:THR:HG23	31:DF:55:GLY:H	1.77	0.50
31:DF:132:VAL:HG22	31:DF:133:ASN:H	1.76	0.50
31:DF:167:ALA:O	31:DF:169:ASN:N	2.44	0.50
37:DO:2:ILE:HB	37:DO:33:ALA:HB3	1.93	0.50
57:D8:19:SER:HB2	57:D8:21:LYS:HD2	1.93	0.50
1:AA:60:A:H4'	1:AA:61:G:O5'	2.11	0.50
1:AA:583:A:H2'	1:AA:584:G:O4'	2.11	0.50
1:AA:748:C:H4'	1:AA:749:C:O5'	2.11	0.50
1:AA:1158:C:O2	1:AA:1158:C:C2'	2.60	0.50
26:BA:1093:A:N6	26:BA:1151:A:C8	2.80	0.50
26:BA:2318:G:N3	26:BA:2318:G:H5"	2.26	0.50
34:BI:11:ASN:HB3	34:BI:12:LEU:HD23	1.93	0.50
45:BW:5:ALA:HB2	45:BW:54:ALA:HB2	1.93	0.50
1:CA:1390:C:O2'	26:DA:1933:A:N1	2.33	0.50
1:CA:1411:A:H2'	1:CA:1412:C:C6	2.47	0.50
26:DA:1041:A:N6	26:DA:1205:G:C6	2.80	0.50
26:DA:2309:A:H2'	26:DA:2310:G:O4'	2.12	0.50
26:DA:2819:A:O2'	30:DE:61:ARG:CZ	2.60	0.50
31:DF:65:TRP:HZ3	31:DF:73:ALA:O	1.95	0.50
41:DS:97:ARG:HH21	41:DS:98:VAL:HA	1.76	0.50
42:DT:29:ARG:CB	42:DT:85:LYS:HA	2.40	0.50
1:AA:1158:C:O2	1:AA:1158:C:H2'	2.11	0.50
10:AJ:37:PRO:HA	10:AJ:72:VAL:HG22	1.94	0.50
23:AW:25:C:H2'	23:AW:26:A:H8	1.77	0.50
24:AY:44:A:N6	24:AY:45:G:N1	2.60	0.50
26:BA:179:A:H2'	26:BA:180:C:C6	2.47	0.50
26:BA:2653:G:H5"	36:BN:78:TYR:CD2	2.47	0.50
30:BE:87:GLU:O	30:BE:89:ASP:N	2.43	0.50
31:BF:116:ASP:O	31:BF:120:GLU:HG2	2.11	0.50
42:BT:6:LEU:HG	42:BT:9:LEU:HD12	1.93	0.50
45:BW:9:TYR:H	45:BW:102:HIS:CD2	2.30	0.50
49:B0:72:ARG:HB2	49:B0:75:LEU:HB2	1.93	0.50
2:CB:18:GLY:HA2	2:CB:42:ILE:HG22	1.93	0.50
7:CG:26:PHE:O	7:CG:30:ILE:HG12	2.12	0.50
7:CG:145:ALA:O	7:CG:147:ALA:N	2.42	0.50
10:CJ:82:ILE:O	10:CJ:86:MET:HB3	2.11	0.50
26:DA:609:C:C5	26:DA:717:C:H1'	2.46	0.50
26:DA:1313:A:OP1	26:DA:2027:C:OP1	2.30	0.50
26:DA:1878:A:C2'	26:DA:1879:G:O5'	2.60	0.50
31:DF:167:ALA:HB1	31:DF:173:VAL:HG11	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DZ:70:LEU:O	48:DZ:88:PHE:HA	2.11	0.50
1:AA:7:G:O2'	5:AE:120:THR:O	2.27	0.49
1:AA:11:G:C6	1:AA:12:U:C4	3.00	0.49
1:AA:1152:A:C5'	10:AJ:70:ARG:HH22	2.24	0.49
4:AD:61:LYS:HA	4:AD:203:VAL:HG22	1.94	0.49
16:AP:4:ILE:HD11	16:AP:64:ALA:HB1	1.93	0.49
16:AP:71:ARG:HG3	16:AP:80:PHE:HZ	1.77	0.49
26:BA:750:G:N2	26:BA:772:G:C4	2.79	0.49
26:BA:907:A:C2	26:BA:962:A:C4	3.00	0.49
26:BA:1935:C:H2'	26:BA:1936:U:O4'	2.12	0.49
26:BA:2298:A:C2	26:BA:2357:A:N1	2.79	0.49
26:BA:2315:G:H5"	26:BA:2316:A:OP2	2.12	0.49
26:BA:2583:A:OP1	26:BA:2585:G:O2'	2.25	0.49
26:BA:2597:C:C5	26:BA:2619:G:N2	2.80	0.49
26:BA:2801:C:N3	26:BA:2902:G:O6	2.45	0.49
29:BD:267:SER:C	29:BD:269:PHE:H	2.16	0.49
30:BE:132:HIS:HA	30:BE:135:HIS:CE1	2.47	0.49
41:BS:41:ASP:OD2	41:BS:44:LYS:HB2	2.12	0.49
44:BV:4:ILE:HD12	44:BV:40:LEU:HG	1.94	0.49
47:BY:11:ASP:N	47:BY:27:VAL:HA	2.26	0.49
57:B8:16:ILE:HD11	57:B8:57:ARG:HG2	1.92	0.49
1:CA:21:U:H2'	1:CA:22:G:O4'	2.12	0.49
2:CB:80:ILE:HG22	2:CB:80:ILE:O	2.12	0.49
3:CC:50:ALA:HB2	3:CC:75:VAL:HB	1.92	0.49
26:DA:2089:U:N3	26:DA:2441:A:C2	2.77	0.49
26:DA:2808:U:O2	26:DA:2808:U:O4'	2.28	0.49
60:DC:45:ALA:HA	60:DC:209:ALA:O	2.12	0.49
38:DP:86:LYS:HB2	38:DP:117:GLU:O	2.12	0.49
43:DU:92:ARG:O	43:DU:95:LEU:N	2.38	0.49
1:AA:191:G:N3	20:AT:105:SER:HB3	2.27	0.49
1:AA:573:A:N3	1:AA:883:C:O2'	2.35	0.49
4:AD:8:VAL:C	4:AD:10:ARG:H	2.15	0.49
4:AD:49:ARG:NE	4:AD:49:ARG:HA	2.28	0.49
8:AH:11:THR:O	8:AH:15:ASN:N	2.41	0.49
17:AQ:32:TYR:O	17:AQ:34:LYS:N	2.44	0.49
23:AW:46:G:H3'	23:AW:46:G:OP1	2.12	0.49
24:AY:49:G:C4	24:AY:66:G:N2	2.78	0.49
26:BA:673:G:H2'	26:BA:674:C:C6	2.47	0.49
26:BA:1084:G:C6	26:BA:1085:C:C4	3.00	0.49
26:BA:1175:U:O2	26:BA:2046:C:H5"	2.12	0.49
26:BA:2083:A:C2'	26:BA:2084:C:O5'	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:2403:A:C2	26:BA:2440:G:C2	3.00	0.49
26:BA:2567:C:C2'	26:BA:2568:G:O5'	2.60	0.49
29:BD:10:THR:HG23	29:BD:13:ARG:CB	2.41	0.49
29:BD:159:ALA:HB1	29:BD:198:ASN:O	2.12	0.49
44:BV:19:LYS:HG2	44:BV:94:LEU:HB2	1.93	0.49
55:B6:46:HIS:CD2	55:B6:46:HIS:C	2.85	0.49
1:CA:791:A:H2'	1:CA:792:C:C6	2.47	0.49
4:CD:160:GLN:O	4:CD:163:GLU:HB3	2.12	0.49
26:DA:312:A:H2'	26:DA:313:G:O4'	2.11	0.49
26:DA:2004:C:H4'	26:DA:2617:C:O3'	2.12	0.49
26:DA:2589:G:OP2	26:DA:2589:G:H4'	2.11	0.49
26:DA:2753:A:H2'	26:DA:2754:C:O4'	2.11	0.49
31:DF:66:PRO:O	31:DF:67:GLN:HB3	2.13	0.49
34:DI:133:HIS:HB2	34:DI:134:PRO:HD2	1.93	0.49
41:DS:85:VAL:HG22	41:DS:106:ARG:HB2	1.94	0.49
1:AA:1206:G:O6	1:AA:1207:G:C6	2.66	0.49
1:AA:1245:A:N6	1:AA:1293:G:O6	2.45	0.49
1:AA:1413:A:C2	1:AA:1488:G:C2	3.00	0.49
1:AA:1500:A:OP2	1:AA:1505:G:OP2	2.30	0.49
3:AC:52:LEU:H	3:AC:52:LEU:HD23	1.77	0.49
10:AJ:91:PRO:HB2	10:AJ:94:VAL:HB	1.95	0.49
24:AY:48:G:C4	24:AY:59:A:H1'	2.47	0.49
26:BA:53:G:O2'	26:BA:124:A:N1	2.36	0.49
26:BA:801:C:H2'	26:BA:802:C:C6	2.47	0.49
26:BA:842:C:H2'	26:BA:843:C:C6	2.47	0.49
26:BA:2272:C:H3'	49:B0:16:SER:OG	2.12	0.49
26:BA:2671:A:H5'	26:BA:2672:G:C2	2.47	0.49
38:BP:47:ASP:HB3	38:BP:48:PRO:C	2.32	0.49
43:BU:92:ARG:CZ	44:BV:11:GLN:H	2.25	0.49
54:B5:46:CYS:SG	54:B5:47:PRO:CD	3.00	0.49
1:CA:257:U:OP2	20:CT:79:ARG:NH2	2.45	0.49
1:CA:831:G:N3	1:CA:832:G:C8	2.80	0.49
1:CA:1048:U:O2'	1:CA:1049:C:P	2.70	0.49
22:CV:3:C:O2'	22:CV:4:G:H5'	2.12	0.49
24:CY:12:G:H1	24:CY:23:A:N6	2.09	0.49
24:CY:44:A:N6	24:CY:45:G:N1	2.60	0.49
32:DG:114:ILE:O	32:DG:115:ARG:C	2.50	0.49
1:AA:605:U:H2'	1:AA:606:G:O4'	2.12	0.49
1:AA:1206:G:C6	1:AA:1207:G:C5	3.00	0.49
1:AA:1319:A:OP2	19:AS:5:LEU:HD23	2.12	0.49
2:AB:24:TRP:CZ3	2:AB:26:PRO:HA	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:1:G:C2	24:AY:2:G:C5	3.00	0.49
26:BA:708:G:OP1	38:BP:18:ARG:NH1	2.42	0.49
26:BA:2797:C:H2'	26:BA:2798:U:O4'	2.12	0.49
27:BB:24:G:N7	27:BB:56:G:H2'	2.26	0.49
38:BP:16:ARG:HD3	38:BP:17:LYS:N	2.28	0.49
40:BR:48:VAL:O	40:BR:49:ASP:C	2.51	0.49
46:BX:39:ILE:O	46:BX:43:VAL:HG23	2.11	0.49
1:CA:1181:U:H4'	10:CJ:54:PHE:CD1	2.47	0.49
1:CA:1198:G:O3'	14:CN:5:ALA:HB1	2.12	0.49
10:CJ:32:ALA:HB1	10:CJ:75:ILE:CG1	2.43	0.49
22:CV:62:C:H2'	22:CV:63:C:C6	2.47	0.49
24:CY:12:G:N2	24:CY:24:G:C4	2.81	0.49
24:CY:54:A:N3	24:CY:58:U:O4	2.24	0.49
24:CY:75:C:O2	26:DA:2518:C:C2'	2.55	0.49
26:DA:1533:G:H5'	26:DA:1534:U:OP2	2.13	0.49
26:DA:1724:G:N2	26:DA:2010:G:N2	2.52	0.49
26:DA:2155:A:C2	26:DA:2180:G:H1'	2.46	0.49
27:DB:44:G:C2	27:DB:48:A:C2	3.00	0.49
32:DG:38:VAL:HG22	32:DG:93:THR:HG23	1.93	0.49
42:DT:11:GLU:O	42:DT:13:ARG:N	2.45	0.49
42:DT:56:GLY:O	42:DT:59:THR:CG2	2.60	0.49
46:DX:65:ARG:HD3	46:DX:70:LEU:HD12	1.94	0.49
1:AA:799:G:C6	1:AA:800:G:C4	3.01	0.49
1:AA:1229:A:H2'	1:AA:1230:C:C6	2.47	0.49
3:AC:147:LYS:HB2	3:AC:203:PHE:CD2	2.47	0.49
20:AT:26:ASN:HB2	20:AT:71:THR:HG23	1.95	0.49
24:AY:4:G:N2	24:AY:70:A:N1	2.60	0.49
24:AY:50:G:C2	24:AY:51:G:N9	2.81	0.49
26:BA:232:A:C2	26:BA:243:A:C4	3.00	0.49
26:BA:1177:A:H2'	26:BA:1178:U:C6	2.48	0.49
26:BA:1830:C:OP1	29:BD:266:SER:OG	2.28	0.49
26:BA:2050:G:H2'	26:BA:2052:A:OP2	2.12	0.49
26:BA:2353:C:O2'	26:BA:2385:C:H5"	2.12	0.49
26:BA:2450:A:H5'	26:BA:2450:A:C8	2.47	0.49
29:BD:58:HIS:HD2	29:BD:59:LYS:O	1.96	0.49
32:BG:6:ALA:HB3	32:BG:104:GLU:OE2	2.11	0.49
38:BP:71:VAL:HG13	38:BP:72:PRO:N	2.27	0.49
39:BQ:20:ALA:O	39:BQ:98:LYS:HB3	2.12	0.49
47:BY:90:LEU:HG	47:BY:91:GLU:HG2	1.95	0.49
1:CA:293:G:N2	1:CA:295:G:H3'	2.28	0.49
1:CA:798:A:H2'	1:CA:800:A:H5"	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:73:HIS:O	20:CT:76:ALA:HB3	2.13	0.49
24:CY:30:G:C2	24:CY:41:C:N3	2.80	0.49
24:CY:54:A:C6	24:CY:55:C:N4	2.80	0.49
26:DA:1549:C:O2'	26:DA:1550:C:P	2.70	0.49
26:DA:2277:A:C2	26:DA:2283:U:C5	3.01	0.49
30:DE:107:THR:O	30:DE:190:GLY:HA2	2.12	0.49
32:DG:56:ALA:HB1	32:DG:153:ARG:CZ	2.42	0.49
32:DG:107:LEU:HD11	32:DG:178:PHE:CE1	2.48	0.49
42:DT:106:SER:HA	42:DT:110:ILE:CG1	2.43	0.49
44:DV:64:HIS:CE1	44:DV:92:THR:HG22	2.47	0.49
54:D5:55:ARG:NE	54:D5:55:ARG:HA	2.28	0.49
55:D6:30:THR:O	55:D6:31:PRO:C	2.51	0.49
1:AA:1468:A:H2'	1:AA:1469:G:O4'	2.13	0.49
4:AD:8:VAL:C	4:AD:10:ARG:N	2.63	0.49
6:AF:69:GLU:O	6:AF:72:VAL:HG12	2.12	0.49
26:BA:2426:G:H4'	38:BP:67:MET:N	2.28	0.49
32:BG:126:ASP:O	32:BG:128:ARG:N	2.46	0.49
33:BH:98:LEU:HD12	33:BH:102:ALA:O	2.13	0.49
34:BI:92:VAL:HG12	34:BI:120:ILE:HB	1.95	0.49
34:BI:94:ALA:HA	34:BI:97:ILE:HD12	1.94	0.49
46:BX:43:VAL:O	46:BX:44:GLU:C	2.51	0.49
1:CA:531:A:OP2	4:CD:2:GLY:N	2.45	0.49
1:CA:1048:U:C2'	1:CA:1049:C:OP2	2.61	0.49
3:CC:6:HIS:CG	14:CN:49:HIS:HB3	2.47	0.49
11:CK:54:ARG:O	11:CK:57:THR:HG22	2.13	0.49
12:CL:50:SER:O	12:CL:51:ALA:HB2	2.12	0.49
24:CY:4:G:N2	24:CY:70:A:C2	2.80	0.49
24:CY:38:A:H2'	24:CY:39:A:O4'	2.13	0.49
24:CY:48:G:C4	24:CY:59:A:H1'	2.47	0.49
30:DE:119:ARG:HD2	30:DE:120:TRP:CE2	2.47	0.49
36:DN:47:ALA:HB2	36:DN:112:LEU:HD11	1.94	0.49
40:DR:10:LEU:HB3	40:DR:17:ARG:CD	2.42	0.49
42:DT:8:LYS:O	42:DT:11:GLU:N	2.45	0.49
45:DW:5:ALA:HB2	45:DW:54:ALA:HB2	1.95	0.49
1:AA:430:A:OP2	4:AD:8:VAL:HG22	2.12	0.49
23:AW:21:A:C6	23:AW:46:G:C4	3.01	0.49
24:AY:16:C:H3'	24:AY:17:G:C5'	2.43	0.49
26:BA:67:C:O2	26:BA:71:A:O2'	2.27	0.49
26:BA:81:G:N2	26:BA:100:A:OP2	2.38	0.49
26:BA:217:A:H5"	26:BA:218:U:H5'	1.95	0.49
26:BA:793:U:C4	54:B5:2:ALA:N	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:920:G:H5"	48:BZ:175:VAL:HG11	1.94	0.49
26:BA:1887:G:O2'	26:BA:1906:A:N6	2.46	0.49
28:BC:51:PRO:HB3	28:BC:204:ALA:HB2	1.95	0.49
33:BH:90:LYS:HB3	33:BH:159:GLU:OE2	2.12	0.49
42:BT:102:ILE:HB	42:BT:110:ILE:HD13	1.94	0.49
47:BY:17:SER:OG	47:BY:18:GLY:N	2.39	0.49
1:CA:1490:U:H2'	1:CA:1491:A:C8	2.48	0.49
2:CB:144:ARG:HA	2:CB:147:LYS:HB3	1.94	0.49
6:CF:62:TRP:CH2	6:CF:64:GLN:HB2	2.48	0.49
20:CT:55:ILE:O	20:CT:58:LYS:N	2.46	0.49
26:DA:1297:G:C2	26:DA:1298:A:C2	3.00	0.49
26:DA:2301:G:C2	26:DA:2354:C:O2	2.65	0.49
32:DG:56:ALA:HB1	32:DG:153:ARG:NH1	2.27	0.49
38:DP:77:ARG:HB2	38:DP:78:PRO:HD2	1.93	0.49
38:DP:115:LEU:HA	38:DP:134:ALA:CB	2.42	0.49
42:DT:58:ASN:O	42:DT:58:ASN:ND2	2.45	0.49
44:DV:22:VAL:O	44:DV:23:GLU:CB	2.60	0.49
1:AA:728:A:N7	15:AO:54:ARG:HD2	2.27	0.49
1:AA:953:G:H2'	1:AA:954:G:O4'	2.12	0.49
1:AA:1319:A:OP1	19:AS:10:PHE:CD1	2.66	0.49
2:AB:32:ILE:HD11	2:AB:40:HIS:HB3	1.95	0.49
5:AE:105:VAL:HB	5:AE:106:PRO:CD	2.43	0.49
24:AY:55:C:C5	24:AY:58:U:C5	2.96	0.49
26:BA:1845:A:C5	26:BA:1847:G:C6	3.01	0.49
26:BA:2127:G:C2	26:BA:2205:G:C2	3.01	0.49
26:BA:2224:U:O2	26:BA:2232:G:C2	2.66	0.49
26:BA:2301:G:H4'	26:BA:2392:C:O2'	2.12	0.49
26:BA:2535:G:H5"	26:BA:2535:G:H8	1.78	0.49
38:BP:71:VAL:HG13	38:BP:72:PRO:CD	2.43	0.49
43:BU:112:ARG:HH11	43:BU:112:ARG:CG	2.26	0.49
47:BY:42:VAL:HG12	47:BY:65:ALA:HB3	1.95	0.49
47:BY:52:SER:O	47:BY:54:LYS:N	2.46	0.49
53:B4:61:VAL:HG13	53:B4:65:CYS:SG	2.53	0.49
1:CA:1036:G:C6	1:CA:1181:U:H2'	2.48	0.49
3:CC:113:ALA:HB3	3:CC:114:PRO:HD3	1.93	0.49
5:CE:47:LYS:O	5:CE:48:ALA:HB2	2.12	0.49
26:DA:1685:U:H4'	26:DA:2710:C:H4'	1.94	0.49
26:DA:1740:C:O2	26:DA:1740:C:C2'	2.58	0.49
26:DA:2293:G:O2'	26:DA:2401:U:O4	2.29	0.49
26:DA:2331:A:H2'	26:DA:2331:A:N3	2.27	0.49
27:DB:17:C:H2'	27:DB:18:G:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DF:114:VAL:HG21	31:DF:202:PHE:CZ	2.47	0.49
33:DH:88:LEU:HD22	33:DH:88:LEU:N	2.28	0.49
36:DN:46:VAL:O	36:DN:47:ALA:HB3	2.13	0.49
43:DU:83:LEU:CD1	43:DU:88:ILE:HD11	2.43	0.49
50:D1:4:VAL:HB	50:D1:11:ARG:HB3	1.93	0.49
1:AA:503:C:O5'	1:AA:503:C:H6	1.96	0.49
1:AA:765:G:H5"	1:AA:766:A:OP1	2.12	0.49
1:AA:976:G:OP1	14:AN:32:SER:N	2.46	0.49
1:AA:1305:G:C2	1:AA:1331:G:N3	2.81	0.49
1:AA:1378:C:H2'	1:AA:1378:C:O2	2.13	0.49
5:AE:72:GLN:O	5:AE:73:ASN:HB2	2.13	0.49
14:AN:41:ARG:NE	14:AN:42:ILE:CD1	2.76	0.49
17:AQ:90:ILE:HA	17:AQ:93:GLN:HB3	1.93	0.49
26:BA:550:A:H2	26:BA:2636:G:N3	2.11	0.49
26:BA:1065:A:C2	26:BA:1185:U:C2	3.00	0.49
26:BA:1541:A:H8	26:BA:1623:C:O2'	1.93	0.49
26:BA:1614:G:H5'	29:BD:60:ARG:HA	1.94	0.49
27:BB:14:U:O3'	27:BB:108:U:O2'	2.31	0.49
30:BE:130:GLY:O	30:BE:131:ALA:C	2.48	0.49
32:BG:121:ASN:HD22	32:BG:122:PRO:HD2	1.78	0.49
43:BU:65:ILE:O	43:BU:66:ASN:C	2.50	0.49
46:BX:18:TYR:O	46:BX:20:GLY:N	2.46	0.49
1:CA:89:G:O2'	1:CA:90:U:H5'	2.13	0.49
1:CA:1412:C:H2'	1:CA:1413:C:C6	2.48	0.49
2:CB:145:LEU:HD13	2:CB:149:LEU:HD12	1.94	0.49
24:CY:4:G:N2	24:CY:70:A:N1	2.60	0.49
24:CY:5:A:C6	24:CY:6:G:O6	2.66	0.49
24:CY:50:G:C2	24:CY:51:G:N9	2.81	0.49
26:DA:257:U:O2	26:DA:257:U:H2'	2.13	0.49
26:DA:661:A:H2'	38:DP:117:GLU:OE2	2.13	0.49
26:DA:797:A:H5'	45:DW:90:ARG:HA	1.95	0.49
26:DA:2111:G:H21	50:D1:45:ASN:HD21	1.59	0.49
26:DA:2214:G:C5	26:DA:2215:G:N7	2.81	0.49
60:DC:74:VAL:HB	60:DC:91:ALA:HB2	1.94	0.49
42:DT:36:GLU:HG2	42:DT:36:GLU:O	2.12	0.49
48:DZ:38:TYR:O	48:DZ:38:TYR:HD1	1.96	0.49
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.48	0.49
1:AA:1499:A:C1'	1:AA:1520:G:H5'	2.43	0.49
13:AM:69:GLU:OE1	13:AM:69:GLU:HA	2.13	0.49
13:AM:125:ARG:C	24:AY:38:A:HO2'	2.11	0.49
24:AY:5:A:C6	24:AY:6:G:O6	2.66	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:28:C:H2'	24:AY:29:G:H8	1.78	0.49
26:BA:216:A:H2'	26:BA:218:U:O4'	2.13	0.49
26:BA:580:G:P	36:BN:111:PRO:HG2	2.53	0.49
26:BA:797:A:H5'	45:BW:90:ARG:HA	1.95	0.49
26:BA:1093:A:N6	26:BA:1151:A:N7	2.61	0.49
26:BA:1280:G:C6	26:BA:1281:G:N1	2.80	0.49
26:BA:2774:G:H5"	26:BA:2774:G:H8	1.77	0.49
41:BS:85:VAL:HG22	41:BS:106:ARG:HB2	1.95	0.49
42:BT:91:ARG:O	42:BT:93:ARG:N	2.45	0.49
51:B2:48:HIS:O	51:B2:52:ASP:HB2	2.13	0.49
56:B7:17:GLY:O	56:B7:21:ARG:HG2	2.13	0.49
1:CA:109:G:H4'	1:CA:110:A:O5'	2.13	0.49
1:CA:1289:U:O4'	13:CM:109:THR:HG21	2.13	0.49
4:CD:46:LYS:O	4:CD:47:ARG:C	2.51	0.49
26:DA:7:A:H2'	26:DA:8:U:C6	2.48	0.49
26:DA:1336:C:H2'	26:DA:1337:U:C6	2.48	0.49
26:DA:2487:A:C2	26:DA:2488:C:H5"	2.48	0.49
37:DO:93:PRO:HD3	37:DO:114:ILE:HD11	1.94	0.49
38:DP:25:SER:O	38:DP:30:THR:HG23	2.13	0.49
38:DP:33:ARG:O	38:DP:34:GLY:C	2.52	0.49
38:DP:63:PRO:HB3	57:D8:13:ARG:HB3	1.95	0.49
43:DU:92:ARG:HB2	44:DV:11:GLN:OE1	2.13	0.49
1:AA:245:C:O2	1:AA:283:C:N3	2.46	0.48
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.48	0.48
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.94	0.48
5:AE:11:ILE:HD11	5:AE:33:VAL:HG23	1.95	0.48
15:AO:33:THR:HG21	15:AO:85:LEU:HD21	1.94	0.48
19:AS:6:LYS:HG2	19:AS:7:LYS:HE3	1.95	0.48
24:AY:10:C:N3	24:AY:11:C:N4	2.61	0.48
24:AY:12:G:N2	24:AY:24:G:C4	2.81	0.48
25:AX:19:PSU:H2'	25:AX:20:A:H5'	1.94	0.48
26:BA:58:G:N2	26:BA:86:G:N7	2.56	0.48
26:BA:296:C:C2'	26:BA:297:G:OP1	2.60	0.48
26:BA:1298:A:H3'	26:BA:1299:A:H5'	1.95	0.48
26:BA:1538:C:O2	26:BA:1538:C:H2'	2.12	0.48
26:BA:1647:U:H3'	26:BA:1648:A:C5'	2.43	0.48
26:BA:1777:G:O2'	26:BA:1778:G:H5"	2.13	0.48
27:BB:78:A:C2	27:BB:100:A:C4	3.01	0.48
29:BD:98:VAL:C	29:BD:100:GLY:H	2.16	0.48
30:BE:89:ASP:O	30:BE:90:THR:HB	2.12	0.48
37:BO:4:PRO:O	37:BO:5:GLN:CB	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BT:28:VAL:O	42:BT:29:ARG:HD3	2.12	0.48
42:BT:82:LEU:N	42:BT:82:LEU:HD12	2.28	0.48
52:B3:19:GLN:HE22	52:B3:52:HIS:HE1	1.59	0.48
55:B6:28:ARG:HA	55:B6:32:ASN:HB3	1.94	0.48
12:CL:91:LYS:HG3	12:CL:91:LYS:O	2.13	0.48
15:CO:25:THR:HG21	15:CO:70:LEU:HB2	1.95	0.48
18:CR:56:THR:CB	18:CR:58:LEU:HD13	2.43	0.48
26:DA:1069:G:C3'	26:DA:1070:G:H5"	2.42	0.48
26:DA:1574:A:H3'	26:DA:1575:G:H5"	1.95	0.48
26:DA:2660:U:H2'	26:DA:2661:U:C6	2.48	0.48
1:AA:1248:A:O2'	9:AI:70:LYS:NZ	2.45	0.48
1:AA:1372:U:C4	1:AA:1373:G:C5	3.02	0.48
1:AA:1372:U:H2'	1:AA:1373:G:O4'	2.13	0.48
13:AM:65:LYS:CA	13:AM:66:LEU:HB2	2.39	0.48
22:AV:18:U:H5"	22:AV:19:G:OP2	2.13	0.48
26:BA:1424:A:O2'	26:BA:1425:G:OP1	2.26	0.48
26:BA:1766:A:H2	26:BA:1768:G:H2'	1.79	0.48
26:BA:2455:G:OP1	31:BF:67:GLN:NE2	2.44	0.48
29:BD:71:ASP:OD2	29:BD:103:ARG:NH2	2.45	0.48
29:BD:241:PRO:O	29:BD:243:GLY:N	2.46	0.48
30:BE:109:LYS:HE2	30:BE:191:PRO:HB3	1.95	0.48
30:BE:137:HIS:HB3	30:BE:138:PRO:CD	2.42	0.48
38:BP:7:ARG:CB	38:BP:8:PRO:CD	2.91	0.48
57:B8:2:PRO:O	57:B8:3:LYS:CB	2.61	0.48
1:CA:863:G:O2'	1:CA:892:A:N1	2.32	0.48
6:CF:17:SER:O	6:CF:21:LEU:HD23	2.13	0.48
24:CY:4:G:N1	24:CY:70:A:C6	2.80	0.48
26:DA:29:G:H2'	26:DA:30:C:C6	2.47	0.48
26:DA:722:A:H8	26:DA:2090:G:H21	1.59	0.48
26:DA:1056:G:OP2	43:DU:66:ASN:OD1	2.31	0.48
26:DA:1835:U:O2	29:DD:50:THR:HB	2.13	0.48
31:DF:152:GLU:HA	31:DF:190:GLU:OE2	2.13	0.48
44:DV:21:ARG:HG2	44:DV:91:TYR:CD2	2.48	0.48
46:DX:10:ALA:HB1	46:DX:11:PRO:CD	2.43	0.48
1:AA:711:G:O2'	1:AA:712:A:H5'	2.13	0.48
1:AA:737:A:H2'	1:AA:738:C:C6	2.49	0.48
4:AD:9:CYS:SG	4:AD:22:LYS:HD2	2.52	0.48
4:AD:119:GLN:HG2	4:AD:123:HIS:CD2	2.48	0.48
4:AD:147:ALA:HA	4:AD:182:LYS:HA	1.95	0.48
6:AF:62:TRP:CD1	18:AR:35:ARG:NH2	2.81	0.48
8:AH:40:ALA:HA	8:AH:45:ILE:HG13	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:422:G:O3'	50:B1:44:PRO:HA	2.13	0.48
26:BA:559:C:C2'	26:BA:560:A:H5'	2.43	0.48
26:BA:1876:G:H5"	26:BA:1876:G:H8	1.78	0.48
26:BA:2124:C:H3'	26:BA:2125:G:H5"	1.96	0.48
27:BB:20:C:H2'	27:BB:21:G:H5"	1.94	0.48
30:BE:116:VAL:CG2	30:BE:122:PHE:CG	2.96	0.48
30:BE:171:GLU:O	30:BE:184:VAL:HA	2.13	0.48
33:BH:61:HIS:O	33:BH:62:LYS:C	2.50	0.48
39:BQ:27:VAL:O	39:BQ:28:ALA:HB3	2.13	0.48
42:BT:26:ASP:OD2	42:BT:26:ASP:C	2.52	0.48
45:BW:19:LEU:HD23	54:B5:25:LEU:HD21	1.95	0.48
47:BY:40:GLU:CD	47:BY:40:GLU:N	2.66	0.48
48:BZ:103:ARG:O	48:BZ:139:VAL:HG22	2.14	0.48
1:CA:773:U:O2'	1:CA:775:G:N7	2.36	0.48
10:CJ:40:LEU:HB2	10:CJ:69:ASN:HB2	1.96	0.48
24:CY:55:C:C5	24:CY:58:U:C5	2.96	0.48
26:DA:88:U:O2	26:DA:88:U:C2'	2.60	0.48
26:DA:179:A:HO2'	26:DA:724:C:HO2'	1.60	0.48
26:DA:2298:A:C2	26:DA:2357:A:N1	2.81	0.48
31:DF:51:THR:HB	31:DF:88:VAL:HG11	1.95	0.48
38:DP:9:ASN:O	38:DP:10:PRO:C	2.48	0.48
42:DT:80:SER:HB3	42:DT:81:PRO:HD3	1.95	0.48
47:DY:76:CYS:HB3	47:DY:96:ILE:HD11	1.95	0.48
1:AA:650:G:C2	1:AA:651:C:C6	3.00	0.48
1:AA:1017:G:H2'	1:AA:1018:C:C6	2.49	0.48
4:AD:122:ARG:HD2	4:AD:134:ASP:O	2.12	0.48
11:AK:22:HIS:HB3	11:AK:29:ILE:HG23	1.94	0.48
13:AM:112:GLY:O	13:AM:113:PRO:O	2.32	0.48
19:AS:9:VAL:O	19:AS:11:VAL:N	2.47	0.48
26:BA:434:G:H8	26:BA:434:G:O5'	1.95	0.48
26:BA:535:U:C5	26:BA:536:G:C5	3.00	0.48
26:BA:989:A:C4	26:BA:2459:A:C2	3.01	0.48
26:BA:1200:A:O3'	43:BU:55:ARG:NH1	2.43	0.48
26:BA:1690:C:C2'	26:BA:1691:G:H5'	2.44	0.48
26:BA:2213:G:C2'	26:BA:2214:G:H5'	2.43	0.48
26:BA:2656:G:H3'	26:BA:2657:C:C5'	2.42	0.48
26:BA:2723:U:HO2'	26:BA:2724:A:P	2.34	0.48
26:BA:2789:G:H5"	26:BA:2790:A:H5'	1.94	0.48
26:BA:2874:U:C4	26:BA:2875:U:C4	3.02	0.48
31:BF:155:LEU:HB2	31:BF:189:THR:HG21	1.94	0.48
34:BI:94:ALA:HA	34:BI:97:ILE:HB	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BP:51:PHE:HB3	38:BP:52:GLU:HG2	1.94	0.48
44:BV:21:ARG:O	44:BV:22:VAL:HG13	2.14	0.48
1:CA:165:U:O2'	1:CA:166:A:H5'	2.12	0.48
1:CA:802:G:C2'	1:CA:803:A:H5'	2.44	0.48
1:CA:1067:G:H5'	1:CA:1085:A:OP2	2.13	0.48
4:CD:60:GLU:OE2	4:CD:199:ASN:N	2.44	0.48
15:CO:23:GLY:O	15:CO:24:SER:CB	2.61	0.48
23:CW:67:C:H2'	23:CW:68:C:C6	2.48	0.48
26:DA:274:C:O2'	26:DA:275:C:H6	1.95	0.48
26:DA:1217:G:H3'	26:DA:1218:A:C5'	2.43	0.48
26:DA:2535:G:C5'	26:DA:2535:G:C8	2.96	0.48
26:DA:2716:A:H2'	26:DA:2717:G:O4'	2.13	0.48
29:DD:22:SER:O	29:DD:23:GLU:C	2.51	0.48
48:DZ:97:GLU:CG	48:DZ:125:LEU:HD11	2.43	0.48
1:AA:592:G:H2'	1:AA:593:G:H8	1.78	0.48
13:AM:116:THR:O	13:AM:117:VAL:C	2.52	0.48
26:BA:917:U:OP1	39:BQ:4:PRO:HA	2.12	0.48
26:BA:1088:C:C5	35:BJ:5:ALA:HB3	2.48	0.48
26:BA:1448:C:H5"	26:BA:1517:A:H1'	1.94	0.48
26:BA:2013:G:H5'	26:BA:2015:C:H41	1.79	0.48
26:BA:2043:U:O2'	26:BA:2628:C:H5'	2.14	0.48
26:BA:2726:G:C6	26:BA:2727:C:C4	3.02	0.48
29:BD:35:LYS:HD3	29:BD:63:ARG:HD2	1.96	0.48
43:BU:92:ARG:O	43:BU:95:LEU:N	2.42	0.48
43:BU:112:ARG:CZ	44:BV:46:VAL:HG11	2.43	0.48
45:BW:73:ALA:O	45:BW:106:ILE:HG12	2.13	0.48
50:B1:20:ARG:HG2	50:B1:20:ARG:HH11	1.79	0.48
52:B3:18:ASP:N	52:B3:18:ASP:OD1	2.47	0.48
1:CA:831:G:C4	1:CA:832:G:C8	3.01	0.48
1:CA:931:G:H2'	1:CA:932:G:O4'	2.14	0.48
1:CA:1312:U:H4'	13:CM:23:TYR:CE2	2.49	0.48
9:CI:40:LEU:O	9:CI:42:ARG:N	2.46	0.48
26:DA:2020:C:H4'	26:DA:2735:C:O2	2.13	0.48
26:DA:2131:G:O2'	26:DA:2141:G:H5'	2.14	0.48
27:DB:81:G:O6	27:DB:96:U:O2	2.31	0.48
29:DD:70:TRP:CD1	29:DD:70:TRP:C	2.87	0.48
29:DD:175:LEU:HD12	29:DD:185:VAL:HG21	1.94	0.48
45:DW:64:MET:O	45:DW:65:LEU:HB3	2.13	0.48
47:DY:60:PHE:HA	47:DY:62:GLU:OE2	2.14	0.48
1:AA:344:A:O2'	1:AA:346:G:N7	2.40	0.48
3:AC:32:LEU:HB3	3:AC:59:ARG:NH2	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:3:ARG:O	14:AN:6:LEU:HB2	2.14	0.48
20:AT:55:ILE:O	20:AT:58:LYS:N	2.46	0.48
25:AX:19:PSU:O2'	25:AX:20:A:H5'	2.14	0.48
26:BA:139:A:H8	26:BA:1640:G:H21	1.59	0.48
26:BA:364:G:C6	26:BA:365:G:C5	3.02	0.48
26:BA:1057:U:C4	36:BN:28:THR:HG21	2.48	0.48
26:BA:2309:A:H62	26:BA:2329:G:H8	1.61	0.48
26:BA:2714:C:O2'	26:BA:2715:C:H5'	2.13	0.48
27:BB:21:G:O2'	27:BB:22:U:C5'	2.62	0.48
28:BC:64:LEU:HD22	28:BC:65:PRO:HD2	1.96	0.48
29:BD:10:THR:C	29:BD:11:PRO:O	2.52	0.48
31:BF:3:GLU:HA	31:BF:24:LEU:CG	2.43	0.48
33:BH:13:LYS:HA	33:BH:13:LYS:CE	2.44	0.48
51:B2:47:ASN:OD1	51:B2:47:ASN:N	2.45	0.48
55:B6:19:ARG:O	55:B6:20:ASN:O	2.31	0.48
1:CA:1124:C:H2'	1:CA:1125:G:C8	2.49	0.48
13:CM:106:ASN:O	13:CM:107:ALA:CB	2.62	0.48
24:CY:20:U:H5	24:CY:59:A:N6	2.07	0.48
24:CY:55:C:O2	24:CY:55:C:C3'	2.61	0.48
24:CY:74:C:C6	26:DA:2566:U:O2	2.65	0.48
26:DA:570:A:H2'	26:DA:570:A:N3	2.28	0.48
26:DA:1615:A:H2'	26:DA:1616:A:C8	2.48	0.48
26:DA:1826:U:H2'	26:DA:1827:C:C6	2.49	0.48
26:DA:1889:A:C2	26:DA:1905:A:H1'	2.49	0.48
26:DA:2052:A:C6	26:DA:2509:C:H1'	2.48	0.48
26:DA:2791:U:H1'	26:DA:2793:A:C6	2.48	0.48
1:AA:407:G:O2'	4:AD:116:GLN:HG3	2.14	0.48
24:AY:30:G:N2	24:AY:41:C:C2	2.82	0.48
26:BA:793:U:O2	26:BA:2035:A:H1'	2.13	0.48
26:BA:1095:A:C2	26:BA:2763:G:C4	3.02	0.48
26:BA:2328:C:C2'	26:BA:2329:G:H5'	2.44	0.48
28:BC:212:ALA:O	28:BC:213:ALA:HB3	2.13	0.48
31:BF:32:LEU:C	31:BF:32:LEU:HD23	2.34	0.48
33:BH:20:ALA:HB1	33:BH:21:PRO:CD	2.43	0.48
36:BN:5:VAL:O	36:BN:5:VAL:HG13	2.14	0.48
41:BS:59:LYS:HG2	41:BS:60:GLY:N	2.27	0.48
43:BU:102:GLU:HG3	44:BV:2:PHE:HE1	1.77	0.48
49:B0:68:GLU:HG3	49:B0:80:HIS:HB2	1.95	0.48
1:CA:542:G:H2'	1:CA:543:A:C2	2.48	0.48
1:CA:958:C:H5'	1:CA:959:U:C5	2.49	0.48
3:CC:64:VAL:HG12	3:CC:66:VAL:HG23	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:30:LYS:C	4:CD:32:ALA:N	2.67	0.48
23:CW:5:G:H2'	23:CW:6:G:O4'	2.14	0.48
24:CY:72:A:OP1	26:DA:1963:C:H4'	2.14	0.48
26:DA:636:U:O2	26:DA:636:U:O4'	2.28	0.48
26:DA:996:G:C6	26:DA:1010:G:C6	3.02	0.48
26:DA:2122:G:H2'	26:DA:2123:U:O4'	2.14	0.48
26:DA:2602:C:H2'	26:DA:2603:G:C8	2.49	0.48
26:DA:2678:C:H2'	26:DA:2679:G:O4'	2.14	0.48
29:DD:132:PRO:HG3	29:DD:190:TYR:CE1	2.48	0.48
42:DT:125:ARG:O	42:DT:128:GLU:HG3	2.13	0.48
43:DU:28:ARG:NH1	43:DU:38:THR:OG1	2.41	0.48
48:DZ:24:LEU:HB2	48:DZ:41:LEU:HD23	1.96	0.48
1:AA:642:A:C5	8:AH:115:SER:HA	2.49	0.48
1:AA:938:A:C6	1:AA:939:G:C5	3.02	0.48
1:AA:1084:G:OP1	1:AA:1086:U:N3	2.46	0.48
1:AA:1456:G:H2'	1:AA:1457:G:O4'	2.13	0.48
3:AC:179:ARG:NH2	3:AC:206:GLU:OE2	2.46	0.48
9:AI:122:ALA:HB1	9:AI:123:PRO:CD	2.44	0.48
24:AY:38:A:H2'	24:AY:39:A:O4'	2.13	0.48
26:BA:92:G:N2	51:B2:47:ASN:HD22	2.11	0.48
26:BA:312:A:H2'	26:BA:313:G:O4'	2.14	0.48
26:BA:1765:G:C6	26:BA:1767:U:H5'	2.49	0.48
26:BA:1977:U:H1'	26:BA:2563:U:OP1	2.13	0.48
26:BA:2044:G:H5'	26:BA:2628:C:H4'	1.96	0.48
26:BA:2331:A:N3	26:BA:2331:A:H2'	2.28	0.48
26:BA:2732:U:O2	26:BA:2732:U:H2'	2.13	0.48
44:BV:55:ALA:HA	44:BV:101:GLY:HA2	1.94	0.48
46:BX:26:TYR:HB3	46:BX:92:LEU:HD12	1.96	0.48
54:B5:51:TYR:HD2	54:B5:52:TYR:CZ	2.30	0.48
1:CA:846:C:H2'	1:CA:847:G:O4'	2.14	0.48
2:CB:233:SER:HB2	2:CB:234:PRO:CD	2.43	0.48
11:CK:21:ILE:HG13	11:CK:30:VAL:HG12	1.94	0.48
12:CL:109:GLY:HA3	12:CL:121:GLY:O	2.14	0.48
13:CM:65:LYS:CA	13:CM:66:LEU:HB2	2.40	0.48
16:CP:20:VAL:HG21	16:CP:32:TYR:CG	2.48	0.48
22:CV:38:A:C2	59:CX:16:A:C6	3.01	0.48
23:CW:56:C:C5	23:CW:57:G:N7	2.82	0.48
24:CY:30:G:N2	24:CY:41:C:C2	2.82	0.48
26:DA:393:C:H2'	26:DA:394:C:H5'	1.94	0.48
26:DA:721:A:OP1	31:DF:63:LYS:HE2	2.14	0.48
26:DA:1393:G:H2'	26:DA:1394:A:C5'	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DA:1659:A:N1	45:DW:91:GLY:HA2	2.29	0.48
26:DA:1973:A:C5	37:DO:22:ILE:HD12	2.48	0.48
26:DA:2480:A:O2'	39:DQ:56:ARG:CZ	2.62	0.48
26:DA:2732:U:H2'	26:DA:2732:U:O2	2.14	0.48
30:DE:196:VAL:HG23	30:DE:196:VAL:O	2.13	0.48
32:DG:6:ALA:HB3	32:DG:104:GLU:OE2	2.14	0.48
35:DJ:103:ALA:O	35:DJ:109:ALA:HA	2.13	0.48
37:DO:114:ILE:H	37:DO:114:ILE:CD1	2.27	0.48
42:DT:34:VAL:HG12	42:DT:35:LYS:N	2.29	0.48
57:D8:62:LEU:N	57:D8:63:PRO:HD2	2.28	0.48
1:AA:152:A:N6	1:AA:170:U:C2	2.82	0.48
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.48	0.48
24:AY:37:A:C2	25:AX:19:PSU:C2	3.02	0.48
26:BA:655:A:OP1	38:BP:64:LYS:HE3	2.14	0.48
41:BS:35:ILE:H	41:BS:53:SER:HB2	1.78	0.48
45:BW:88:ARG:HB2	45:BW:92:ARG:HB3	1.96	0.48
47:BY:31:LEU:N	47:BY:31:LEU:HD22	2.29	0.48
51:B2:16:LEU:O	51:B2:17:SER:HB3	2.14	0.48
57:B8:62:LEU:N	57:B8:63:PRO:CD	2.77	0.48
1:CA:174:A:H2'	1:CA:175:U:C6	2.49	0.48
2:CB:54:THR:HG22	2:CB:58:ILE:HD11	1.96	0.48
5:CE:76:ILE:HD11	5:CE:142:LEU:CD2	2.42	0.48
11:CK:61:ALA:CB	11:CK:90:GLY:HA3	2.43	0.48
17:CQ:18:THR:OG1	17:CQ:69:LYS:NZ	2.30	0.48
24:CY:28:C:H2'	24:CY:29:G:H8	1.78	0.48
26:DA:1070:G:C4	26:DA:1179:C:H1'	2.49	0.48
26:DA:1538:C:O2	26:DA:1538:C:H2'	2.13	0.48
29:DD:172:TYR:HD1	29:DD:185:VAL:C	2.16	0.48
34:DI:3:VAL:HB	34:DI:37:VAL:O	2.14	0.48
58:D9:27:CYS:HB2	58:D9:32:HIS:HB2	1.96	0.48
1:AA:992:U:C4'	1:AA:993:G:O5'	2.54	0.48
1:AA:1300:G:C2'	1:AA:1301:U:OP2	2.61	0.48
1:AA:1432:G:OP1	42:BT:107:ASP:HB2	2.14	0.48
2:AB:97:TRP:CH2	2:AB:173:ALA:HA	2.49	0.48
26:BA:248:G:C6	26:BA:249:G:N7	2.82	0.48
26:BA:1154:C:C5	26:BA:1155:G:C5	3.02	0.48
26:BA:1504:C:H5'	26:BA:1505:G:C8	2.49	0.48
26:BA:1543:C:O4'	26:BA:1623:C:H4'	2.13	0.48
26:BA:1784:C:N3	26:BA:2728:U:O2'	2.45	0.48
54:B5:51:TYR:CD2	54:B5:52:TYR:CE2	3.02	0.48
1:CA:968:C:C2	1:CA:1198:G:C2	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1181:U:H4'	10:CJ:54:PHE:CZ	2.48	0.48
1:CA:1278:C:H5"	1:CA:1279:C:OP2	2.13	0.48
2:CB:213:LEU:HD23	2:CB:213:LEU:C	2.34	0.48
10:CJ:50:ILE:HA	10:CJ:60:ARG:CB	2.43	0.48
10:CJ:50:ILE:HG12	14:CN:41:ARG:CD	2.44	0.48
26:DA:1943:G:H2'	26:DA:1944:U:O4'	2.14	0.48
26:DA:2083:A:HO2'	26:DA:2084:C:C5'	2.27	0.48
26:DA:2121:G:H2'	26:DA:2122:G:O4'	2.13	0.48
35:DJ:47:ALA:HB1	35:DJ:95:ALA:HB2	1.95	0.48
36:DN:94:HIS:N	36:DN:95:PRO:CD	2.77	0.48
45:DW:34:ASN:O	45:DW:35:ILE:C	2.52	0.48
47:DY:42:VAL:CG1	47:DY:65:ALA:HB3	2.44	0.48
1:AA:642:A:N7	8:AH:115:SER:HA	2.28	0.47
1:AA:659:U:C2	1:AA:660:G:C8	3.01	0.47
1:AA:1128:C:O2'	1:AA:1130:A:C8	2.58	0.47
6:AF:15:ASP:OD1	6:AF:15:ASP:O	2.31	0.47
7:AG:148:ASN:HD22	7:AG:148:ASN:N	2.12	0.47
20:AT:89:ARG:NH2	20:AT:104:LEU:HD21	2.29	0.47
22:AV:38:A:H3'	22:AV:39:A:H8	1.79	0.47
24:AY:4:G:N1	24:AY:70:A:C6	2.80	0.47
24:AY:49:G:H1	24:AY:65:G:H1	1.51	0.47
24:AY:54:A:C6	24:AY:55:C:N4	2.80	0.47
26:BA:554:G:C5	26:BA:2043:U:H5"	2.48	0.47
26:BA:2799:C:O2	30:BE:61:ARG:NH1	2.42	0.47
30:BE:70:ALA:O	30:BE:72:VAL:N	2.47	0.47
30:BE:171:GLU:HB3	30:BE:185:LYS:HG2	1.96	0.47
42:BT:55:ASN:H	42:BT:59:THR:HG22	1.79	0.47
45:BW:84:ARG:O	45:BW:95:ILE:HA	2.14	0.47
54:B5:35:GLU:O	54:B5:36:CYS:HB3	2.14	0.47
57:B8:50:LEU:O	57:B8:51:ALA:CB	2.59	0.47
1:CA:876:G:N2	1:CA:879:A:OP2	2.44	0.47
2:CB:166:ASP:CG	2:CB:169:LYS:HB2	2.35	0.47
9:CI:8:GLY:HA3	9:CI:76:ALA:O	2.14	0.47
15:CO:74:ASP:OD2	15:CO:77:ARG:N	2.47	0.47
17:CQ:57:VAL:HG12	17:CQ:76:LEU:HA	1.96	0.47
19:CS:9:VAL:O	19:CS:9:VAL:HG12	2.13	0.47
24:CY:55:C:H1'	24:CY:57:C:H5	1.79	0.47
26:DA:2668:A:O2'	33:DH:160:LYS:NZ	2.38	0.47
26:DA:2842:G:H3'	26:DA:2843:G:H5'	1.96	0.47
26:DA:2890:C:H2'	26:DA:2891:A:O4'	2.13	0.47
31:DF:47:GLY:O	31:DF:94:PRO:HA	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DI:102:SER:O	34:DI:106:GLY:N	2.47	0.47
38:DP:80:TYR:CE1	38:DP:111:ARG:HB3	2.48	0.47
43:DU:31:SER:C	43:DU:33:ARG:N	2.67	0.47
1:AA:59:A:H1'	1:AA:354:G:N2	2.29	0.47
1:AA:1015:A:C6	1:AA:1016:A:C6	3.02	0.47
10:AJ:97:GLU:O	10:AJ:98:ILE:HD12	2.13	0.47
19:AS:6:LYS:HG2	19:AS:7:LYS:CE	2.44	0.47
26:BA:17:C:O3'	43:BU:23:GLY:HA2	2.14	0.47
26:BA:1529:G:H2'	26:BA:1530:G:O5'	2.13	0.47
26:BA:1792:A:O5'	26:BA:1792:A:H8	1.97	0.47
26:BA:2221:C:H5"	26:BA:2221:C:C6	2.48	0.47
28:BC:58:VAL:HG21	28:BC:166:ALA:N	2.28	0.47
31:BF:89:VAL:HG12	31:BF:90:PHE:N	2.29	0.47
33:BH:44:VAL:O	33:BH:45:VAL:O	2.32	0.47
38:BP:23:PRO:HD2	38:BP:33:ARG:NH2	2.29	0.47
38:BP:23:PRO:HD2	38:BP:33:ARG:HH21	1.79	0.47
42:BT:89:VAL:CG1	42:BT:91:ARG:HG3	2.44	0.47
47:BY:7:VAL:HB	47:BY:8:LYS:CE	2.43	0.47
55:B6:26:ASN:OD1	55:B6:26:ASN:N	2.44	0.47
55:B6:36:LEU:HD13	55:B6:50:ARG:NH2	2.29	0.47
57:B8:34:TRP:O	57:B8:35:GLN:HB2	2.13	0.47
1:CA:725:G:H2'	1:CA:726:G:O4'	2.14	0.47
1:CA:1141:C:N3	1:CA:1163:G:N2	2.58	0.47
4:CD:12:CYS:SG	4:CD:19:LEU:O	2.72	0.47
15:CO:83:GLU:C	15:CO:85:LEU:H	2.17	0.47
24:CY:74:C:O4'	26:DA:2566:U:O2	2.33	0.47
26:DA:267:G:O2'	26:DA:268:G:H8	1.97	0.47
26:DA:504:A:H4'	26:DA:505:A:OP1	2.14	0.47
26:DA:1217:G:H3'	26:DA:1218:A:H5'	1.96	0.47
26:DA:1821:A:H61	26:DA:1858:G:HO2'	1.59	0.47
29:DD:65:ILE:HD11	29:DD:67:PHE:CD1	2.49	0.47
1:AA:1258:G:C6	1:AA:1259:C:N4	2.82	0.47
1:AA:1278:U:H5"	1:AA:1279:A:O4'	2.14	0.47
1:AA:1530:G:OP1	1:AA:1530:G:H4'	2.14	0.47
2:AB:152:PHE:O	2:AB:153:ARG:HB2	2.14	0.47
21:AU:12:LYS:HB3	21:AU:22:ARG:HD2	1.96	0.47
22:AV:68:C:O2	22:AV:68:C:H2'	2.15	0.47
26:BA:653:G:H5'	26:BA:674:C:O2'	2.14	0.47
26:BA:731:A:O2'	26:BA:819:U:O4	2.26	0.47
26:BA:906:U:H5	26:BA:962:A:N7	2.11	0.47
26:BA:1326:G:H5"	26:BA:1326:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:1740:C:O2'	26:BA:1741:G:C4	2.66	0.47
26:BA:1850:U:H4'	26:BA:1851:A:OP2	2.14	0.47
26:BA:1905:A:H2'	26:BA:1906:A:H5"	1.94	0.47
32:BG:31:VAL:HG13	32:BG:31:VAL:O	2.14	0.47
43:BU:46:ALA:O	43:BU:50:ARG:HG3	2.13	0.47
43:BU:57:PHE:O	43:BU:58:ARG:C	2.52	0.47
44:BV:14:VAL:HB	44:BV:96:ILE:HG13	1.96	0.47
55:B6:27:LYS:CB	55:B6:30:THR:OG1	2.62	0.47
57:B8:47:LYS:HD2	57:B8:48:PHE:O	2.14	0.47
57:B8:52:LYS:N	57:B8:53:PRO:CD	2.75	0.47
1:CA:256:G:OP2	20:CT:83:ARG:NH1	2.47	0.47
1:CA:641:G:C2	1:CA:734:G:C5	3.02	0.47
9:CI:5:TYR:HH	9:CI:7:THR:HG1	1.61	0.47
24:CY:6:G:H2'	24:CY:7:A:C8	2.49	0.47
24:CY:10:C:N3	24:CY:11:C:N4	2.61	0.47
26:DA:373:U:H2'	26:DA:374:G:O4'	2.13	0.47
26:DA:641:G:H2'	26:DA:642:C:O4'	2.15	0.47
26:DA:1301:G:C6	26:DA:1302:C:C4	3.01	0.47
26:DA:1367:A:N1	26:DA:1378:C:O2'	2.39	0.47
26:DA:1421:C:C2'	26:DA:1422:G:O5'	2.63	0.47
26:DA:2108:G:C2'	26:DA:2109:G:H5'	2.44	0.47
26:DA:2595:U:O2	26:DA:2595:U:O5'	2.33	0.47
26:DA:2700:U:P	26:DA:2731:G:H22	2.37	0.47
30:DE:137:HIS:HB3	30:DE:138:PRO:HD2	1.96	0.47
36:DN:3:THR:O	36:DN:5:VAL:N	2.47	0.47
37:DO:116:SER:OG	37:DO:117:LEU:N	2.46	0.47
47:DY:74:PRO:O	47:DY:80:GLY:HA2	2.15	0.47
50:D1:84:GLY:O	50:D1:86:SER:N	2.47	0.47
57:D8:54:GLU:O	57:D8:58:ILE:CG1	2.62	0.47
1:AA:964:A:OP1	1:AA:1199:U:OP1	2.32	0.47
1:AA:979:C:C3'	1:AA:980:C:H5"	2.35	0.47
1:AA:1061:G:C5	1:AA:1062:U:C5	3.03	0.47
2:AB:19:HIS:O	2:AB:39:ILE:HG23	2.14	0.47
5:AE:107:ARG:O	5:AE:108:ALA:C	2.53	0.47
11:AK:54:ARG:NH2	23:AW:39:U:O3'	2.48	0.47
23:AW:44:G:H2'	23:AW:45:U:O4'	2.14	0.47
24:AY:6:G:H2'	24:AY:7:A:C8	2.49	0.47
26:BA:136:G:N2	46:BX:44:GLU:OE1	2.28	0.47
26:BA:576:U:C4	26:BA:577:U:C4	3.03	0.47
26:BA:636:U:O2	26:BA:636:U:O4'	2.29	0.47
26:BA:2086:C:H2'	26:BA:2087:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:2332:G:N3	26:BA:2332:G:H2'	2.29	0.47
26:BA:2505:G:O4'	39:BQ:80:GLU:OE2	2.33	0.47
26:BA:2613:A:H4'	26:BA:2614:G:C5'	2.45	0.47
30:BE:111:ARG:HD2	30:BE:160:TYR:HE1	1.78	0.47
36:BN:42:TRP:CE3	36:BN:48:MET:HE1	2.49	0.47
38:BP:140:ALA:O	38:BP:141:ALA:HB3	2.14	0.47
49:B0:43:THR:O	49:B0:43:THR:CG2	2.63	0.47
54:B5:32:PRO:HA	54:B5:38:ALA:O	2.15	0.47
1:CA:771:A:C2	1:CA:780:C:N3	2.82	0.47
1:CA:837:A:H2'	1:CA:838:A:O4'	2.13	0.47
1:CA:1038:A:C6	1:CA:1188:G:C5	3.02	0.47
5:CE:76:ILE:HG13	5:CE:142:LEU:HD13	1.96	0.47
26:DA:227:U:H2'	26:DA:228:G:O4'	2.14	0.47
26:DA:575:G:C5	26:DA:576:U:C5	3.02	0.47
26:DA:1700:A:P	40:DR:3:HIS:HB2	2.54	0.47
26:DA:1906:A:H3'	26:DA:1907:C:H6	1.79	0.47
26:DA:2430:U:O4	57:D8:30:ARG:CZ	2.62	0.47
29:DD:2:ALA:O	29:DD:3:VAL:HB	2.15	0.47
29:DD:245:PRO:O	29:DD:246:PRO:C	2.52	0.47
38:DP:17:LYS:O	38:DP:19:VAL:N	2.47	0.47
40:DR:10:LEU:HB3	40:DR:17:ARG:CZ	2.43	0.47
42:DT:128:GLU:O	42:DT:130:ALA:N	2.47	0.47
43:DU:92:ARG:O	43:DU:94:ASN:N	2.47	0.47
9:AI:88:TYR:O	9:AI:89:ASN:CB	2.62	0.47
16:AP:20:VAL:HG23	16:AP:35:LYS:HA	1.96	0.47
26:BA:627:C:H2'	26:BA:628:U:O4'	2.14	0.47
26:BA:1540:A:O4'	26:BA:1540:A:OP1	2.33	0.47
26:BA:2074:G:C2	26:BA:2075:A:C8	3.03	0.47
26:BA:2319:G:N3	32:BG:80:PHE:CE2	2.81	0.47
26:BA:2403:A:OP2	57:B8:31:HIS:HE1	1.97	0.47
26:BA:2597:C:O2'	26:BA:2598:A:H5'	2.14	0.47
26:BA:2622:U:O2	54:B5:3:LYS:HG3	2.14	0.47
26:BA:2656:G:H3'	26:BA:2657:C:H5'	1.95	0.47
29:BD:98:VAL:O	29:BD:100:GLY:N	2.48	0.47
58:B9:11:CYS:HB3	58:B9:32:HIS:CE1	2.49	0.47
1:CA:233:C:O3'	17:CQ:25:ARG:NH2	2.47	0.47
1:CA:765:A:O2'	1:CA:1500:U:O2	2.31	0.47
1:CA:1179:G:OP1	1:CA:1180:G:OP2	2.32	0.47
1:CA:1207:A:H2'	1:CA:1207:A:N3	2.30	0.47
4:CD:42:GLN:O	4:CD:42:GLN:HG2	2.15	0.47
4:CD:126:ILE:HG22	4:CD:127:THR:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:32:PHE:HB3	12:CL:84:LEU:CD2	2.40	0.47
24:CY:1:G:C2'	24:CY:2:G:C8	2.86	0.47
26:DA:1543:C:O4'	26:DA:1623:C:C4'	2.63	0.47
26:DA:2823:C:C5	26:DA:2824:C:C5	3.02	0.47
29:DD:34:VAL:HG23	29:DD:35:LYS:N	2.29	0.47
29:DD:177:LEU:HD12	29:DD:181:GLU:HB3	1.96	0.47
32:DG:94:LEU:HD22	32:DG:98:ARG:HB2	1.96	0.47
42:DT:28:VAL:HG22	42:DT:46:GLU:HG3	1.96	0.47
43:DU:90:VAL:HG21	44:DV:47:VAL:CG2	2.36	0.47
1:AA:1460:A:H2'	1:AA:1461:G:O4'	2.13	0.47
2:AB:155:LEU:HD12	2:AB:157:ARG:O	2.15	0.47
6:AF:19:LEU:O	6:AF:19:LEU:HD23	2.13	0.47
19:AS:48:THR:HG22	19:AS:61:TYR:HA	1.97	0.47
23:AW:19:G:C6	26:BA:2133:G:C5	3.02	0.47
24:AY:55:C:H1'	24:AY:57:C:H5	1.79	0.47
26:BA:551:C:OP2	26:BA:2791:U:H5	1.97	0.47
26:BA:1524:G:HO2'	26:BA:1604:A:H2	1.61	0.47
26:BA:1743:G:OP2	26:BA:1744:A:H2'	2.14	0.47
26:BA:2037:U:H1'	54:B5:6:VAL:HG13	1.96	0.47
26:BA:2568:G:H2'	26:BA:2569:C:H6	1.79	0.47
26:BA:2859:A:C2	26:BA:2860:A:C4	3.02	0.47
32:BG:86:MET:N	32:BG:87:PRO:CD	2.77	0.47
42:BT:23:ARG:HA	42:BT:52:ILE:CD1	2.45	0.47
43:BU:90:VAL:HG12	43:BU:91:ASP:N	2.29	0.47
47:BY:8:LYS:CE	47:BY:72:VAL:HG23	2.45	0.47
54:B5:50:GLY:HA3	54:B5:56:LYS:HB3	1.96	0.47
55:B6:28:ARG:O	55:B6:32:ASN:HB3	2.15	0.47
1:CA:970:U:H4'	1:CA:971:G:O5'	2.15	0.47
3:CC:53:ALA:HB2	3:CC:115:LEU:CD2	2.44	0.47
15:CO:61:GLY:O	15:CO:65:ARG:HD3	2.14	0.47
26:DA:200:G:C2'	26:DA:201:A:H5'	2.44	0.47
26:DA:276:G:O2'	26:DA:277:G:OP2	2.33	0.47
26:DA:1152:G:OP1	35:DJ:56:ALA:O	2.32	0.47
26:DA:1935:C:H2'	26:DA:1936:U:O4'	2.14	0.47
26:DA:2746:A:H5"	26:DA:2747:G:OP2	2.13	0.47
29:DD:78:LYS:N	29:DD:96:HIS:O	2.36	0.47
34:DI:71:ILE:HG13	34:DI:72:LEU:HG	1.96	0.47
55:D6:15:GLU:CD	55:D6:43:CYS:SG	2.93	0.47
1:AA:146:G:N2	1:AA:177:C:C2	2.82	0.47
1:AA:586:C:O2'	1:AA:587:G:H5'	2.14	0.47
1:AA:739:C:O2'	15:AO:42:HIS:ND1	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1316:G:N1	1:AA:1319:A:OP2	2.47	0.47
1:AA:1318:A:H4'	19:AS:10:PHE:HB2	1.96	0.47
5:AE:82:VAL:HG21	5:AE:138:ALA:CB	2.44	0.47
6:AF:16:GLN:CD	6:AF:16:GLN:H	2.18	0.47
10:AJ:12:ASP:O	10:AJ:16:LEU:HB2	2.15	0.47
11:AK:62:GLN:O	11:AK:65:ALA:N	2.47	0.47
17:AQ:86:GLU:O	17:AQ:87:LYS:C	2.52	0.47
22:AV:63:C:H2'	22:AV:64:G:O4'	2.15	0.47
26:BA:227:U:O2'	26:BA:646:G:H4'	2.15	0.47
26:BA:470:C:H2'	26:BA:471:G:O4'	2.15	0.47
26:BA:630:A:C8	26:BA:643:G:N2	2.83	0.47
26:BA:663:U:H2'	26:BA:664:C:C6	2.50	0.47
26:BA:885:U:H2'	26:BA:886:C:H6	1.78	0.47
26:BA:1253:G:O2'	26:BA:1282:A:N1	2.43	0.47
26:BA:1830:C:O2	26:BA:1832:A:C8	2.66	0.47
26:BA:2084:C:C5	26:BA:2085:C:C5	3.03	0.47
26:BA:2333:A:H2'	26:BA:2334:G:O4'	2.14	0.47
26:BA:2470:A:C4	26:BA:2471:U:C6	3.03	0.47
26:BA:2567:C:H2'	26:BA:2568:G:O5'	2.15	0.47
26:BA:2652:G:OP2	36:BN:83:LYS:NZ	2.44	0.47
26:BA:2842:G:H2'	26:BA:2843:G:H5"	1.96	0.47
29:BD:77:ALA:HB2	29:BD:97:TYR:HA	1.96	0.47
29:BD:83:GLU:O	29:BD:92:ILE:HD13	2.15	0.47
29:BD:132:PRO:HD3	29:BD:190:TYR:CZ	2.50	0.47
30:BE:3:GLY:HA2	30:BE:198:VAL:O	2.15	0.47
32:BG:85:GLY:C	32:BG:87:PRO:HD2	2.35	0.47
38:BP:30:THR:HG22	38:BP:31:ALA:N	2.30	0.47
38:BP:101:VAL:C	38:BP:103:ALA:H	2.18	0.47
40:BR:10:LEU:HB3	40:BR:17:ARG:CD	2.44	0.47
44:BV:2:PHE:O	44:BV:3:ALA:HB3	2.14	0.47
47:BY:8:LYS:HD3	47:BY:72:VAL:HG23	1.97	0.47
1:CA:109:G:H1'	1:CA:110:A:N7	2.29	0.47
1:CA:304:C:H2'	1:CA:305:G:H8	1.80	0.47
1:CA:651:G:O2'	15:CO:49:ASP:OD1	2.15	0.47
1:CA:799:A:C2	1:CA:1507:G:C4	3.02	0.47
1:CA:1351:G:H5'	9:CI:112:LYS:O	2.15	0.47
5:CE:7:GLU:HG2	5:CE:112:LEU:HD22	1.95	0.47
5:CE:12:LEU:C	5:CE:12:LEU:HD22	2.35	0.47
10:CJ:61:GLU:HG3	14:CN:58:LYS:CE	2.45	0.47
16:CP:20:VAL:CG2	16:CP:32:TYR:CG	2.97	0.47
18:CR:64:ARG:O	18:CR:66:LEU:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:12:LYS:HB3	21:CU:22:ARG:HD2	1.97	0.47
22:CV:1:C:H42	22:CV:73:A:H61	1.62	0.47
24:CY:13:G:N1	24:CY:22:A:N6	2.37	0.47
24:CY:51:G:O6	24:CY:63:G:C6	2.59	0.47
24:CY:72:A:P	26:DA:1963:C:H4'	2.55	0.47
26:DA:183:A:H61	26:DA:186:C:H3'	1.80	0.47
26:DA:186:C:O5'	26:DA:186:C:H6	1.98	0.47
26:DA:454:A:H3'	26:DA:455:A:C8	2.48	0.47
26:DA:581:G:H22	43:DU:49:HIS:CD2	2.32	0.47
26:DA:667:A:N1	26:DA:2380:A:O2'	2.46	0.47
26:DA:1409:G:OP2	50:D1:3:LYS:HD3	2.14	0.47
26:DA:1606:G:OP1	26:DA:1607:G:OP2	2.32	0.47
26:DA:2163:C:H2'	26:DA:2164:C:C6	2.49	0.47
26:DA:2885:G:O5'	42:DT:2:ASN:O	2.33	0.47
29:DD:24:ILE:HG12	29:DD:25:THR:N	2.30	0.47
29:DD:209:ALA:C	29:DD:210:GLY:O	2.53	0.47
31:DF:22:ALA:HB1	31:DF:26:ALA:HB2	1.96	0.47
32:DG:57:ALA:O	32:DG:60:LEU:HB3	2.15	0.47
32:DG:149:VAL:HG13	32:DG:149:VAL:O	2.15	0.47
33:DH:121:ILE:HA	33:DH:134:SER:O	2.14	0.47
37:DO:15:GLY:O	37:DO:47:ILE:HB	2.15	0.47
37:DO:64:ARG:NH1	37:DO:81:ASP:OD1	2.47	0.47
38:DP:61:ARG:HH11	57:D8:13:ARG:HD2	1.78	0.47
40:DR:97:VAL:HG22	40:DR:114:VAL:HG22	1.95	0.47
43:DU:90:VAL:O	43:DU:91:ASP:C	2.53	0.47
43:DU:115:ALA:C	43:DU:117:GLN:H	2.17	0.47
47:DY:2:ARG:C	47:DY:4:LYS:N	2.62	0.47
47:DY:38:ILE:HG13	47:DY:64:GLU:HB3	1.96	0.47
48:DZ:52:SER:OG	48:DZ:53:ILE:N	2.47	0.47
1:AA:838:G:N2	1:AA:849:C:C2	2.83	0.47
1:AA:975:A:N6	1:AA:1367:C:O4'	2.47	0.47
1:AA:1286:A:H2'	1:AA:1287:A:H4'	1.96	0.47
2:AB:185:ILE:HG22	2:AB:199:TYR:HB2	1.96	0.47
9:AI:8:GLY:HA2	9:AI:79:LEU:HD12	1.96	0.47
19:AS:6:LYS:C	19:AS:7:LYS:HE3	2.34	0.47
30:BE:11:MET:HB2	30:BE:23:VAL:O	2.15	0.47
35:BJ:107:ALA:O	35:BJ:108:ALA:HB2	2.13	0.47
44:BV:91:TYR:CD1	44:BV:91:TYR:C	2.87	0.47
47:BY:42:VAL:CG1	47:BY:65:ALA:HB3	2.44	0.47
1:CA:968:C:H2'	1:CA:969:U:C6	2.49	0.47
1:CA:1037:C:OP2	1:CA:1179:G:OP2	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:5:GLU:N	6:CF:91:VAL:O	2.37	0.47
26:DA:72:A:OP1	51:D2:54:LYS:NZ	2.38	0.47
26:DA:819:U:H4'	29:DD:47:GLY:CA	2.44	0.47
26:DA:1064:U:O2'	26:DA:1066:A:H2	1.95	0.47
27:DB:73:A:C4	27:DB:105:A:C2	3.03	0.47
27:DB:83:G:H4'	52:D3:52:HIS:CG	2.50	0.47
31:DF:60:SER:OG	31:DF:61:GLY:N	2.48	0.47
39:DQ:141:GLN:O	48:DZ:72:ARG:HD3	2.14	0.47
43:DU:97:ASP:C	43:DU:97:ASP:OD1	2.53	0.47
54:D5:36:CYS:SG	54:D5:49:CYS:SG	3.11	0.47
57:D8:10:ALA:O	57:D8:14:VAL:HG12	2.14	0.47
1:AA:64:G:N2	1:AA:67:C:C4	2.83	0.47
1:AA:767:A:H2'	1:AA:768:A:O4'	2.15	0.47
1:AA:1414:U:H2'	1:AA:1415:G:H8	1.79	0.47
4:AD:8:VAL:O	4:AD:11:LEU:N	2.39	0.47
12:AL:25:PRO:C	12:AL:27:LEU:H	2.18	0.47
15:AO:10:LYS:O	15:AO:14:GLU:HB2	2.15	0.47
15:AO:66:LEU:O	15:AO:67:LEU:C	2.53	0.47
16:AP:4:ILE:HD11	16:AP:64:ALA:CB	2.45	0.47
26:BA:29:G:H2'	26:BA:30:C:C6	2.50	0.47
26:BA:307:U:H2'	26:BA:308:C:C6	2.50	0.47
26:BA:468:A:H1'	26:BA:1245:C:O4'	2.14	0.47
26:BA:707:C:H2'	26:BA:708:G:C8	2.50	0.47
26:BA:995:C:O2'	26:BA:996:G:H5'	2.15	0.47
26:BA:1154:C:H5	26:BA:1155:G:C6	2.33	0.47
26:BA:1357:U:C2	26:BA:1648:A:C2	3.03	0.47
26:BA:1889:A:C2	26:BA:1905:A:H1'	2.49	0.47
26:BA:2204:C:H2'	26:BA:2205:G:O5'	2.15	0.47
26:BA:2735:C:H2'	26:BA:2736:C:O5'	2.15	0.47
28:BC:212:ALA:O	28:BC:219:ALA:O	2.33	0.47
29:BD:52:ARG:HB2	29:BD:53:PHE:CD2	2.49	0.47
30:BE:60:ASN:N	30:BE:60:ASN:ND2	2.62	0.47
38:BP:38:GLN:HG3	38:BP:39:LYS:H	1.80	0.47
47:BY:28:LYS:O	47:BY:38:ILE:N	2.48	0.47
47:BY:68:HIS:O	47:BY:71:LYS:HG2	2.14	0.47
51:B2:12:GLU:O	51:B2:13:ALA:C	2.53	0.47
1:CA:604:C:H2'	1:CA:605:A:O4'	2.14	0.47
1:CA:900:G:H4'	5:CE:20:GLN:HA	1.97	0.47
1:CA:946:A:H4'	1:CA:947:A:OP2	2.15	0.47
1:CA:1007:C:N4	1:CA:1016:G:O6	2.48	0.47
12:CL:32:PHE:CB	12:CL:84:LEU:HD21	2.41	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DA:437:G:OP2	26:DA:2417:U:O2'	2.31	0.47
26:DA:720:G:H1'	31:DF:74:ARG:CD	2.45	0.47
26:DA:1541:A:H8	26:DA:1623:C:HO2'	1.51	0.47
26:DA:1908:C:H2'	26:DA:1909:G:C5'	2.45	0.47
26:DA:1960:U:OP1	26:DA:2615:U:O2'	2.23	0.47
26:DA:2214:G:C6	26:DA:2215:G:C5	3.03	0.47
26:DA:2351:G:O2'	26:DA:2352:G:H5'	2.14	0.47
60:DC:212:ALA:O	60:DC:213:ALA:CB	2.63	0.47
38:DP:13:ASN:HD22	38:DP:13:ASN:C	2.18	0.47
54:D5:51:TYR:CD2	54:D5:52:TYR:CZ	3.03	0.47
55:D6:40:CYS:SG	55:D6:45:LYS:HD3	2.55	0.47
1:AA:945:G:O2'	1:AA:946:A:H5'	2.15	0.47
4:AD:109:GLY:O	4:AD:110:PHE:C	2.54	0.47
6:AF:32:ASN:HD22	6:AF:32:ASN:N	2.12	0.47
26:BA:57:U:O2'	26:BA:72:A:OP2	2.22	0.47
26:BA:1747:A:H5"	26:BA:1748:G:OP2	2.15	0.47
26:BA:1947:U:O2	26:BA:1949:A:C8	2.68	0.47
26:BA:2331:A:N3	26:BA:2331:A:C2'	2.78	0.47
28:BC:39:GLU:HG2	28:BC:180:ALA:HA	1.95	0.47
32:BG:2:PRO:HD2	53:B4:51:TYR:CD2	2.49	0.47
34:BI:75:LEU:HD11	34:BI:105:HIS:NE2	2.30	0.47
37:BO:122:LEU:CD1	42:BT:72:VAL:HG11	2.45	0.47
38:BP:71:VAL:CG1	38:BP:72:PRO:CD	2.93	0.47
41:BS:20:ARG:NE	41:BS:20:ARG:HA	2.29	0.47
41:BS:101:LEU:HD12	41:BS:101:LEU:O	2.15	0.47
42:BT:31:SER:HB2	42:BT:32:TYR:CD2	2.50	0.47
44:BV:47:VAL:CB	44:BV:49:THR:O	2.59	0.47
48:BZ:30:ASN:O	48:BZ:31:ARG:C	2.53	0.47
1:CA:362:C:O2'	1:CA:363:U:O5'	2.30	0.47
1:CA:994:A:H2	1:CA:1200:C:O2	1.97	0.47
1:CA:1382:C:C2	1:CA:1480:A:N6	2.83	0.47
1:CA:1426:G:O2'	42:DT:122:ASP:OD2	2.32	0.47
1:CA:1428:G:H2'	1:CA:1428:G:N3	2.29	0.47
2:CB:213:LEU:HD23	2:CB:213:LEU:O	2.14	0.47
26:DA:295:U:OP2	26:DA:295:U:C6	2.68	0.47
26:DA:810:A:C6	26:DA:827:A:C2	3.03	0.47
26:DA:888:G:N2	26:DA:981:U:C2	2.83	0.47
26:DA:1194:G:H2'	26:DA:1195:C:C6	2.50	0.47
26:DA:1326:G:H8	26:DA:1326:G:H5"	1.79	0.47
26:DA:1500:U:OP1	40:DR:77:ARG:HD3	2.15	0.47
26:DA:1703:C:H2'	26:DA:1704:C:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DE:126:PRO:HB2	30:DE:128:SER:O	2.14	0.47
32:DG:91:ARG:HD2	32:DG:92:VAL:N	2.30	0.47
32:DG:130:ASN:HB3	32:DG:160:VAL:HA	1.97	0.47
34:DI:1:MET:O	34:DI:20:ASP:HA	2.15	0.47
1:AA:499:A:H4'	1:AA:500:G:OP1	2.15	0.46
1:AA:973:G:O4'	10:AJ:55:LYS:CG	2.62	0.46
3:AC:15:THR:HG21	3:AC:181:ASN:HA	1.97	0.46
20:AT:93:GLU:OE1	20:AT:94:ALA:N	2.48	0.46
24:AY:4:G:C5	24:AY:5:A:C8	3.03	0.46
24:AY:55:C:O2	24:AY:55:C:C3'	2.61	0.46
26:BA:552:A:C2	26:BA:2064:C:H4'	2.50	0.46
26:BA:558:U:O2'	43:BU:49:HIS:CD2	2.68	0.46
26:BA:579:U:H2'	26:BA:580:G:C8	2.50	0.46
26:BA:1394:A:H2'	26:BA:1395:C:OP1	2.16	0.46
26:BA:2859:A:N7	26:BA:2877:A:O2'	2.42	0.46
28:BC:83:ILE:O	28:BC:83:ILE:HG22	2.15	0.46
30:BE:181:LEU:HD21	42:BT:7:ILE:HG23	1.97	0.46
31:BF:126:VAL:HG23	31:BF:127:GLU:N	2.30	0.46
55:B6:13:CYS:HA	55:B6:50:ARG:O	2.15	0.46
57:B8:32:LEU:O	57:B8:33:ASN:O	2.33	0.46
1:CA:200:C:O2'	20:CT:64:ASP:OD2	2.27	0.46
1:CA:1055:G:H2'	1:CA:1056:U:C6	2.50	0.46
1:CA:1072:G:C6	1:CA:1073:U:C4	3.03	0.46
1:CA:1131:U:H2'	1:CA:1132:C:O4'	2.15	0.46
1:CA:1446:A:H2'	1:CA:1447:G:O4'	2.16	0.46
5:CE:9:LYS:CB	5:CE:112:LEU:HD11	2.45	0.46
17:CQ:23:VAL:HG12	17:CQ:24:GLU:O	2.15	0.46
17:CQ:67:LYS:HA	17:CQ:70:ARG:HH12	1.80	0.46
24:CY:4:G:C5	24:CY:5:A:C8	3.03	0.46
26:DA:474:A:OP1	31:DF:84:VAL:O	2.33	0.46
26:DA:623:C:O2	26:DA:627:C:H4'	2.15	0.46
26:DA:879:U:H2'	26:DA:880:C:C6	2.50	0.46
26:DA:1378:C:H2'	26:DA:1379:G:H8	1.80	0.46
27:DB:92:C:O3'	48:DZ:79:ARG:NH2	2.48	0.46
30:DE:55:ASN:O	30:DE:57:LYS:N	2.46	0.46
42:DT:57:PHE:CG	42:DT:58:ASN:N	2.83	0.46
44:DV:49:THR:HB	44:DV:50:PRO:HD2	1.96	0.46
1:AA:15:G:H4'	5:AE:24:ARG:NH1	2.31	0.46
1:AA:872:A:N3	1:AA:872:A:H2'	2.31	0.46
1:AA:1279:A:O2'	1:AA:1282:C:N4	2.48	0.46
24:AY:7:A:C2	24:AY:66:G:C2	2.71	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:260:A:H5"	26:BA:261:C:OP2	2.15	0.46
26:BA:324:G:C4	26:BA:325:C:C5	3.02	0.46
26:BA:1084:G:C6	26:BA:1085:C:N4	2.83	0.46
26:BA:1766:A:N1	26:BA:1769:A:C6	2.84	0.46
26:BA:2277:A:C2	26:BA:2283:U:C5	3.04	0.46
26:BA:2323:U:H2'	26:BA:2324:C:H5'	1.97	0.46
26:BA:2487:A:C2	26:BA:2488:C:H6	2.32	0.46
29:BD:49:ILE:HD11	29:BD:52:ARG:HA	1.97	0.46
30:BE:116:VAL:HG22	30:BE:122:PHE:HB2	1.96	0.46
30:BE:137:HIS:HB3	30:BE:138:PRO:HD2	1.98	0.46
36:BN:46:VAL:CG1	36:BN:48:MET:HG3	2.45	0.46
42:BT:29:ARG:HG3	42:BT:30:VAL:HG13	1.97	0.46
45:BW:78:GLU:HG2	45:BW:79:GLY:N	2.30	0.46
47:BY:7:VAL:HB	47:BY:8:LYS:HE3	1.97	0.46
47:BY:38:ILE:CG2	47:BY:39:VAL:N	2.78	0.46
55:B6:11:LEU:O	55:B6:23:THR:HA	2.15	0.46
2:CB:97:TRP:CH2	2:CB:173:ALA:HA	2.51	0.46
7:CG:116:ALA:O	7:CG:117:ALA:C	2.53	0.46
11:CK:21:ILE:HD12	11:CK:21:ILE:N	2.31	0.46
24:CY:16:C:H3'	24:CY:17:G:C5'	2.43	0.46
24:CY:18:G:H2'	24:CY:19:C:C6	2.50	0.46
26:DA:7:A:H2'	26:DA:8:U:C5	2.50	0.46
26:DA:992:G:C2	26:DA:1014:C:O2	2.69	0.46
26:DA:1333:U:H4'	26:DA:1334:C:OP2	2.15	0.46
26:DA:1495:A:H5'	26:DA:1496:G:OP2	2.15	0.46
30:DE:63:LEU:O	30:DE:64:LYS:C	2.54	0.46
38:DP:51:PHE:O	38:DP:52:GLU:HB2	2.15	0.46
38:DP:115:LEU:HB2	38:DP:131:SER:HB3	1.96	0.46
57:D8:61:LEU:HD13	57:D8:62:LEU:HD12	1.97	0.46
1:AA:660:G:C2	1:AA:746:A:C2	3.04	0.46
1:AA:1505:G:H5"	1:AA:1506:U:H5"	1.97	0.46
4:AD:122:ARG:HA	4:AD:134:ASP:HB2	1.97	0.46
10:AJ:7:LYS:O	10:AJ:96:ILE:HA	2.15	0.46
11:AK:48:ILE:HG22	11:AK:49:GLY:N	2.30	0.46
17:AQ:86:GLU:O	17:AQ:90:ILE:HG12	2.16	0.46
22:AV:4:G:O2'	22:AV:5:G:H8	1.98	0.46
26:BA:44:C:O2	26:BA:167:G:N2	2.38	0.46
26:BA:92:G:H1'	51:B2:47:ASN:HD21	1.81	0.46
26:BA:378:G:H5"	26:BA:378:G:H8	1.80	0.46
26:BA:541:C:OP1	54:B5:16:ARG:NH2	2.48	0.46
26:BA:629:U:C5	26:BA:644:G:C6	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:1154:C:H5”	26:BA:1155:G:OP2	2.16	0.46
26:BA:1245:C:C2	26:BA:1290:G:C2	3.03	0.46
26:BA:1286:A:H2’	26:BA:1287:A:O5’	2.16	0.46
26:BA:1763:G:C6	26:BA:1764:U:C4	3.04	0.46
26:BA:2221:C:OP1	50:B1:50:ARG:HG3	2.14	0.46
28:BC:169:ALA:HB3	28:BC:173:ALA:HA	1.97	0.46
34:BI:77:LEU:O	34:BI:104:GLN:NE2	2.48	0.46
43:BU:87:GLY:O	44:BV:50:PRO:HG3	2.15	0.46
47:BY:52:SER:C	47:BY:54:LYS:H	2.18	0.46
57:B8:4:MET:HB2	57:B8:61:LEU:HD13	1.98	0.46
1:CA:349:A:C2’	1:CA:350:G:OP2	2.63	0.46
1:CA:496:U:H2’	1:CA:497:C:C6	2.51	0.46
1:CA:812:A:C2	1:CA:837:A:O4’	2.68	0.46
1:CA:1490:U:H2’	1:CA:1491:A:H8	1.80	0.46
9:CI:118:LYS:O	9:CI:119:ALA:HB3	2.16	0.46
14:CN:27:CYS:C	14:CN:29:ARG:N	2.67	0.46
22:CV:36:A:C2	59:CX:18:G:C2	3.03	0.46
26:DA:230:G:N2	26:DA:242:G:H2’	2.30	0.46
26:DA:1740:C:O2’	26:DA:1741:G:N3	2.48	0.46
26:DA:1797:C:H2’	26:DA:1798:U:O4’	2.15	0.46
26:DA:2124:C:H3’	26:DA:2125:G:H5”	1.97	0.46
26:DA:2124:C:C3’	26:DA:2125:G:H5”	2.46	0.46
29:DD:267:SER:HA	29:DD:270:ILE:HG13	1.98	0.46
30:DE:54:GLN:O	30:DE:75:VAL:HG23	2.16	0.46
33:DH:13:LYS:HA	33:DH:13:LYS:CE	2.45	0.46
38:DP:34:GLY:O	38:DP:35:HIS:CG	2.68	0.46
44:DV:24:LYS:HA	44:DV:92:THR:HG23	1.97	0.46
46:DX:41:ASN:HD22	46:DX:41:ASN:N	2.13	0.46
1:AA:346:G:N3	1:AA:346:G:C2’	2.78	0.46
1:AA:998:G:C6	1:AA:999:C:N4	2.84	0.46
1:AA:1441:G:O5’	1:AA:1441:G:H8	1.98	0.46
4:AD:127:THR:HG23	4:AD:147:ALA:HB3	1.98	0.46
23:AW:55:U:O2	23:AW:55:U:O5’	2.34	0.46
26:BA:172:C:O2’	26:BA:205:G:N3	2.43	0.46
26:BA:592:G:H2’	26:BA:2051:A:C5	2.51	0.46
26:BA:894:G:H5’	26:BA:894:G:H8	1.80	0.46
26:BA:985:A:C2	26:BA:986:G:C4	3.04	0.46
26:BA:1619:G:H2’	26:BA:1620:C:H5’	1.96	0.46
26:BA:2302:U:H2’	26:BA:2303:C:C6	2.51	0.46
30:BE:44:TYR:O	30:BE:45:THR:HB	2.16	0.46
31:BF:168:ARG:CG	31:BF:175:THR:HG21	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BH:83:TYR:HB3	33:BH:134:SER:HA	1.97	0.46
33:BH:89:ILE:C	33:BH:89:ILE:HD12	2.35	0.46
36:BN:65:LYS:CD	36:BN:69:GLN:HE21	2.28	0.46
37:BO:9:GLU:O	37:BO:83:ALA:HA	2.15	0.46
41:BS:16:ASN:O	41:BS:19:LYS:HB3	2.16	0.46
41:BS:74:ALA:HB1	41:BS:103:GLU:HB3	1.98	0.46
42:BT:78:LEU:O	42:BT:78:LEU:HD23	2.14	0.46
50:B1:37:ILE:HG22	50:B1:38:SER:N	2.30	0.46
51:B2:50:ILE:O	51:B2:51:ARG:C	2.54	0.46
58:B9:16:VAL:HG22	58:B9:25:VAL:HG22	1.97	0.46
1:CA:1036:G:O6	1:CA:1181:U:H2'	2.14	0.46
1:CA:1183:A:H1'	1:CA:1184:G:OP2	2.16	0.46
1:CA:1287:G:C2	1:CA:1313:G:N3	2.83	0.46
1:CA:1467:G:H2'	1:CA:1468:C:O4'	2.15	0.46
4:CD:110:PHE:H	4:CD:110:PHE:HD1	1.64	0.46
10:CJ:7:LYS:O	10:CJ:96:ILE:HA	2.16	0.46
24:CY:46:U:O2'	24:CY:47:A:O5'	2.30	0.46
24:CY:55:C:H2'	24:CY:56:U:H3'	1.98	0.46
26:DA:563:G:H2'	26:DA:564:C:H6	1.80	0.46
26:DA:1297:G:N2	43:DU:37:GLU:OE2	2.35	0.46
26:DA:1401:G:H2'	26:DA:1402:U:O4'	2.14	0.46
26:DA:1476:U:O2'	26:DA:1477:C:H5'	2.15	0.46
26:DA:2298:A:N1	26:DA:2357:A:C2	2.83	0.46
60:DC:64:LEU:HD22	60:DC:65:PRO:HD2	1.96	0.46
32:DG:73:ALA:N	32:DG:87:PRO:HG3	2.31	0.46
36:DN:132:ALA:O	36:DN:133:GLN:CB	2.62	0.46
42:DT:28:VAL:HG22	42:DT:46:GLU:CA	2.45	0.46
42:DT:61:PHE:CE2	42:DT:76:PHE:HB2	2.51	0.46
1:AA:192:U:H4'	20:AT:103:GLY:N	2.31	0.46
1:AA:1350:A:C5	1:AA:1351:U:C4	3.04	0.46
3:AC:28:GLN:O	3:AC:29:TYR:C	2.54	0.46
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.97	0.46
4:AD:61:LYS:CE	4:AD:62:GLN:HE21	2.27	0.46
20:AT:16:HIS:O	20:AT:19:SER:N	2.48	0.46
24:AY:55:C:H2'	24:AY:56:U:H3'	1.98	0.46
26:BA:1235:G:OP1	38:BP:35:HIS:CE1	2.68	0.46
26:BA:1498:C:N3	26:BA:1505:G:O6	2.48	0.46
26:BA:2699:U:O2	26:BA:2699:U:H3'	2.15	0.46
26:BA:2881:G:C2	26:BA:2882:A:N6	2.83	0.46
30:BE:71:GLY:O	30:BE:72:VAL:C	2.52	0.46
36:BN:133:GLN:O	36:BN:134:ARG:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BQ:75:THR:HA	39:BQ:89:ASN:O	2.16	0.46
47:BY:28:LYS:O	47:BY:29:GLU:O	2.33	0.46
50:B1:49:VAL:O	50:B1:59:THR:HA	2.15	0.46
1:CA:1241:C:C5	1:CA:1242:C:O2	2.68	0.46
4:CD:170:VAL:CG1	4:CD:174:LEU:HB2	2.46	0.46
8:CH:108:GLY:HA3	8:CH:138:TRP:HB3	1.97	0.46
13:CM:112:GLY:O	13:CM:113:PRO:O	2.34	0.46
26:DA:330:G:N1	26:DA:333:A:OP2	2.48	0.46
26:DA:473:U:C4	26:DA:605:G:H1'	2.50	0.46
26:DA:2371:A:H2'	26:DA:2372:A:O4'	2.15	0.46
26:DA:2802:A:O2'	26:DA:2901:G:N2	2.48	0.46
34:DI:56:LYS:O	34:DI:59:ALA:N	2.48	0.46
1:AA:799:G:O6	1:AA:800:G:C2	2.69	0.46
1:AA:963:G:H21	10:AJ:55:LYS:CD	2.28	0.46
4:AD:90:GLY:O	4:AD:91:SER:C	2.53	0.46
5:AE:112:LEU:HD23	5:AE:112:LEU:N	2.29	0.46
10:AJ:6:ILE:HD11	10:AJ:72:VAL:HG23	1.98	0.46
19:AS:29:ARG:O	19:AS:31:ILE:HG22	2.15	0.46
20:AT:55:ILE:O	20:AT:58:LYS:HB3	2.16	0.46
22:AV:26:C:O5'	22:AV:26:C:H6	1.97	0.46
26:BA:69:A:H5"	26:BA:71:A:C8	2.51	0.46
26:BA:206:A:C2	26:BA:223:U:H4'	2.50	0.46
26:BA:594:A:H2'	26:BA:595:G:O4'	2.15	0.46
26:BA:798:A:H4'	26:BA:799:C:O5'	2.15	0.46
26:BA:1052:C:OP1	36:BN:37:LYS:NZ	2.49	0.46
26:BA:1298:A:C3'	26:BA:1299:A:H5'	2.46	0.46
26:BA:1403:G:O2'	26:BA:1404:A:H5"	2.16	0.46
26:BA:2831:G:OP2	30:BE:110:GLY:O	2.33	0.46
30:BE:95:ILE:HD13	30:BE:95:ILE:N	2.30	0.46
37:BO:64:ARG:NH1	37:BO:81:ASP:OD1	2.49	0.46
1:CA:1044:G:C5	1:CA:1045:U:C5	3.04	0.46
1:CA:1309:C:H2'	1:CA:1310:C:C6	2.50	0.46
2:CB:233:SER:CB	2:CB:234:PRO:CD	2.93	0.46
3:CC:3:ASN:N	3:CC:3:ASN:OD1	2.49	0.46
4:CD:8:VAL:O	4:CD:10:ARG:N	2.49	0.46
23:CW:14:A:N3	23:CW:14:A:H2'	2.30	0.46
26:DA:731:A:C4	26:DA:735:A:N6	2.84	0.46
26:DA:794:G:C8	45:DW:89:ALA:HB1	2.51	0.46
26:DA:1479:A:H61	26:DA:1604:A:H62	1.64	0.46
26:DA:2421:G:C2	26:DA:2422:A:H1'	2.50	0.46
26:DA:2539:U:H2'	26:DA:2541:A:O5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DH:158:HIS:O	33:DH:159:GLU:HB3	2.16	0.46
38:DP:144:GLU:N	38:DP:145:PRO:CD	2.79	0.46
40:DR:18:LEU:HD22	40:DR:22:ARG:HG3	1.98	0.46
42:DT:42:ILE:O	42:DT:42:ILE:HG13	2.16	0.46
48:DZ:96:VAL:HG22	48:DZ:97:GLU:H	1.81	0.46
54:D5:46:CYS:SG	54:D5:47:PRO:HD2	2.55	0.46
1:AA:1129:C:H5"	1:AA:1139:G:O6	2.15	0.46
1:AA:1309:G:C6	1:AA:1329:A:C2	3.04	0.46
3:AC:155:GLY:O	3:AC:156:ARG:CB	2.64	0.46
14:AN:23:ARG:HD3	14:AN:29:ARG:O	2.16	0.46
24:AY:18:G:H2'	24:AY:19:C:C6	2.50	0.46
26:BA:280:G:O2'	26:BA:281:G:H5'	2.16	0.46
26:BA:509:C:H2'	26:BA:510:C:C6	2.51	0.46
26:BA:841:C:H2'	26:BA:842:C:H6	1.81	0.46
26:BA:1051:C:H1'	36:BN:106:MET:HB3	1.98	0.46
26:BA:1852:G:O3'	29:BD:54:ARG:NH2	2.48	0.46
26:BA:2215:G:C6	26:BA:2216:C:C4	3.03	0.46
26:BA:2494:C:H5"	26:BA:2495:G:OP2	2.16	0.46
26:BA:2832:A:OP1	30:BE:113:PHE:HB2	2.16	0.46
37:BO:1:MET:HE2	37:BO:32:TYR:CD2	2.51	0.46
41:BS:17:ARG:HA	41:BS:20:ARG:NH1	2.30	0.46
42:BT:128:GLU:O	42:BT:130:ALA:N	2.49	0.46
43:BU:90:VAL:HG21	44:BV:47:VAL:HG21	1.98	0.46
48:BZ:9:TYR:CE2	48:BZ:35:ARG:CZ	2.98	0.46
1:CA:397:C:O5'	1:CA:397:C:H6	1.98	0.46
1:CA:1135:A:H2'	1:CA:1136:C:H6	1.81	0.46
1:CA:1282:G:O2'	1:CA:1283:U:O5'	2.30	0.46
1:CA:1385:C:OP2	59:CX:19:U:O2'	2.33	0.46
4:CD:43:HIS:O	4:CD:45:GLN:N	2.48	0.46
5:CE:107:ARG:O	5:CE:108:ALA:C	2.54	0.46
5:CE:129:ILE:O	5:CE:132:ALA:HB3	2.14	0.46
26:DA:332:G:O3'	47:DY:18:GLY:HA2	2.16	0.46
26:DA:906:U:O2'	26:DA:907:A:H5'	2.15	0.46
26:DA:1914:C:C5	26:DA:1915:C:C5	3.04	0.46
26:DA:2289:A:C2'	26:DA:2290:G:O5'	2.63	0.46
58:D9:14:CYS:SG	58:D9:32:HIS:ND1	2.89	0.46
1:AA:724:G:O2'	1:AA:725:G:H5'	2.16	0.46
1:AA:791:G:C6	1:AA:792:A:N7	2.84	0.46
1:AA:1429:C:H2'	1:AA:1430:C:H6	1.80	0.46
2:AB:223:ILE:O	2:AB:227:GLY:N	2.40	0.46
5:AE:82:VAL:HG21	5:AE:138:ALA:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:66:LEU:HG	18:AR:70:ILE:HD11	1.98	0.46
26:BA:214:G:N3	26:BA:216:A:N6	2.64	0.46
26:BA:1974:A:H2'	26:BA:1975:G:H5'	1.98	0.46
26:BA:2601:A:OP2	29:BD:238:GLY:HA2	2.14	0.46
28:BC:212:ALA:O	28:BC:213:ALA:CB	2.64	0.46
41:BS:61:ASN:OD1	41:BS:62:LYS:N	2.48	0.46
42:BT:16:ARG:NH1	42:BT:19:LEU:HD21	2.29	0.46
46:BX:8:ILE:HD11	46:BX:42:ALA:HB1	1.98	0.46
1:CA:496:U:H2'	1:CA:497:C:H6	1.80	0.46
1:CA:627:C:H5'	8:CH:31:PHE:CE1	2.51	0.46
4:CD:13:ARG:O	4:CD:15:GLU:N	2.48	0.46
4:CD:86:LYS:HA	4:CD:86:LYS:HE3	1.96	0.46
5:CE:51:VAL:O	5:CE:55:VAL:HG23	2.16	0.46
10:CJ:48:THR:HG23	10:CJ:62:HIS:HB3	1.97	0.46
19:CS:50:ALA:HA	19:CS:59:PRO:HA	1.97	0.46
24:CY:52:C:H4'	39:DQ:56:ARG:HH12	1.74	0.46
26:DA:8:U:C5	26:DA:2640:A:N6	2.84	0.46
26:DA:551:C:O4'	26:DA:551:C:O2	2.33	0.46
26:DA:554:G:N1	26:DA:2043:U:OP1	2.49	0.46
26:DA:610:U:H2'	26:DA:611:C:C6	2.50	0.46
26:DA:718:C:O2'	26:DA:719:C:C5'	2.61	0.46
26:DA:771:G:C6	26:DA:772:G:N1	2.84	0.46
26:DA:799:C:O5'	26:DA:799:C:H6	1.97	0.46
26:DA:1067:G:H22	26:DA:1187:A:H2	1.56	0.46
26:DA:1540:A:O4'	26:DA:1540:A:OP1	2.33	0.46
26:DA:2398:U:H4'	49:D0:41:ARG:NH2	2.31	0.46
26:DA:2849:C:H4'	40:DR:53:HIS:CD2	2.50	0.46
40:DR:94:TYR:O	40:DR:116:LEU:O	2.34	0.46
43:DU:92:ARG:HD3	43:DU:94:ASN:HB3	1.97	0.46
48:DZ:8:TYR:HB2	48:DZ:38:TYR:CE1	2.51	0.46
48:DZ:53:ILE:HG22	48:DZ:70:LEU:HD22	1.98	0.46
1:AA:45:U:H2'	1:AA:46:G:C8	2.51	0.46
1:AA:243:A:H4'	1:AA:244:U:O5'	2.16	0.46
1:AA:339:C:OP2	37:BO:97:ARG:NH1	2.49	0.46
1:AA:359:U:H2'	1:AA:360:A:C8	2.51	0.46
1:AA:377:G:OP1	16:AP:3:LYS:HD2	2.16	0.46
1:AA:447:G:H2'	1:AA:485:G:N2	2.31	0.46
1:AA:945:G:N2	1:AA:1337:G:N2	2.64	0.46
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.98	0.46
4:AD:173:TRP:CE2	4:AD:189:PRO:HB3	2.51	0.46
11:AK:24:SER:C	11:AK:26:ASN:H	2.19	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:39:LEU:HD11	14:AN:47:LEU:HD12	1.98	0.46
23:AW:61:C:H2'	23:AW:62:C:H6	1.80	0.46
26:BA:793:U:C4	26:BA:2624:U:C5	3.03	0.46
26:BA:1449:C:C2'	26:BA:1450:U:H5'	2.46	0.46
26:BA:1820:C:H3'	26:BA:1858:G:N2	2.31	0.46
26:BA:2040:A:N7	54:B5:9:LYS:NZ	2.61	0.46
26:BA:2213:G:C3'	26:BA:2214:G:H5'	2.46	0.46
29:BD:142:VAL:HG23	29:BD:192:THR:C	2.36	0.46
33:BH:158:HIS:HE1	33:BH:169:VAL:C	2.19	0.46
38:BP:30:THR:CG2	38:BP:31:ALA:H	2.29	0.46
38:BP:33:ARG:O	38:BP:34:GLY:C	2.55	0.46
1:CA:845:G:C2	1:CA:846:C:C6	3.03	0.46
1:CA:1040:G:H5"	3:CC:154:SER:CB	2.46	0.46
1:CA:1177:C:H2'	1:CA:1179:G:O4'	2.16	0.46
1:CA:1329:G:N2	1:CA:1356:G:H2'	2.31	0.46
19:CS:19:VAL:O	19:CS:23:ASN:N	2.49	0.46
26:DA:1198:C:H2'	26:DA:1199:G:O4'	2.16	0.46
26:DA:1612:A:OP1	29:DD:211:ARG:NH1	2.48	0.46
26:DA:2820:G:OP1	30:DE:60:ASN:HB2	2.16	0.46
26:DA:2822:A:C6	26:DA:2823:C:C4	3.03	0.46
27:DB:66:A:O2'	27:DB:67:G:P	2.74	0.46
60:DC:58:VAL:HG21	60:DC:166:ALA:N	2.30	0.46
31:DF:4:VAL:HA	31:DF:19:GLU:HB3	1.98	0.46
34:DI:92:VAL:CG1	34:DI:120:ILE:HB	2.46	0.46
56:D7:31:LEU:HD23	56:D7:42:LEU:HB3	1.98	0.46
1:AA:501:C:H1'	1:AA:549:C:H1'	1.98	0.46
1:AA:616:G:C2	1:AA:617:G:C8	3.04	0.46
1:AA:616:G:C2	1:AA:617:G:N7	2.84	0.46
1:AA:901:A:C5	1:AA:902:G:H1'	2.51	0.46
4:AD:9:CYS:HB2	4:AD:22:LYS:HD2	1.98	0.46
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.98	0.46
7:AG:59:LEU:O	7:AG:63:LYS:HB2	2.15	0.46
12:AL:8:ASN:ND2	17:AQ:34:LYS:HE2	2.31	0.46
12:AL:27:LEU:HD21	12:AL:64:TYR:CE1	2.51	0.46
26:BA:230:G:C5'	57:B8:62:LEU:HD22	2.46	0.46
26:BA:388:G:H2'	26:BA:388:G:N3	2.31	0.46
26:BA:2083:A:H2'	26:BA:2084:C:O5'	2.16	0.46
26:BA:2387:A:H2'	26:BA:2388:A:O4'	2.16	0.46
26:BA:2475:C:HO2'	26:BA:2476:C:C5'	2.28	0.46
26:BA:2819:A:O2'	30:BE:61:ARG:CZ	2.64	0.46
38:BP:6:LEU:CG	38:BP:8:PRO:O	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BP:30:THR:CG2	38:BP:31:ALA:N	2.79	0.46
38:BP:80:TYR:CZ	38:BP:111:ARG:HD3	2.51	0.46
40:BR:87:TYR:O	40:BR:88:ARG:HB3	2.16	0.46
42:BT:57:PHE:O	42:BT:58:ASN:ND2	2.46	0.46
43:BU:31:SER:C	43:BU:33:ARG:H	2.12	0.46
44:BV:38:LEU:O	44:BV:39:LEU:HD13	2.16	0.46
51:B2:64:LEU:O	51:B2:64:LEU:HD23	2.16	0.46
52:B3:44:ARG:O	52:B3:48:GLU:HG2	2.16	0.46
1:CA:459:G:H2'	1:CA:460:G:H8	1.81	0.46
1:CA:932:G:H21	1:CA:1209:A:H62	1.64	0.46
1:CA:1275:G:O2'	1:CA:1276:G:P	2.74	0.46
2:CB:115:LEU:O	2:CB:119:GLU:HB2	2.16	0.46
3:CC:110:ASN:O	3:CC:141:VAL:HG22	2.16	0.46
6:CF:97:PHE:O	18:CR:31:LEU:CD2	2.61	0.46
10:CJ:5:ARG:HG2	10:CJ:71:LEU:HD11	1.98	0.46
11:CK:102:GLY:C	11:CK:103:LEU:HD22	2.36	0.46
26:DA:81:G:H5'	47:DY:5:MET:SD	2.55	0.46
26:DA:552:A:C2	26:DA:2063:A:H2'	2.51	0.46
26:DA:552:A:N1	26:DA:2064:C:O5'	2.49	0.46
26:DA:2426:G:H4'	38:DP:67:MET:N	2.31	0.46
26:DA:2788:A:H4'	26:DA:2789:G:H5"	1.98	0.46
27:DB:11:C:H3'	27:DB:12:C:C6	2.51	0.46
30:DE:117:MET:HA	30:DE:122:PHE:H	1.81	0.46
36:DN:103:VAL:O	36:DN:107:LEU:HG	2.16	0.46
41:DS:24:LEU:O	41:DS:85:VAL:HB	2.16	0.46
42:DT:28:VAL:O	42:DT:29:ARG:CB	2.62	0.46
42:DT:55:ASN:HD22	42:DT:58:ASN:ND2	2.09	0.46
43:DU:44:ASN:HD21	44:DV:75:PHE:HB3	1.80	0.46
1:AA:833:U:H2'	1:AA:834:C:C6	2.51	0.45
1:AA:959:A:C2	1:AA:1222:G:O4'	2.69	0.45
1:AA:1190:G:OP1	3:AC:5:ILE:HD12	2.17	0.45
26:BA:110:G:H5"	26:BA:111:U:OP1	2.16	0.45
26:BA:504:A:H4'	26:BA:505:A:H5'	1.97	0.45
26:BA:1279:U:H2'	26:BA:1280:G:O4'	2.16	0.45
26:BA:1943:G:H2'	26:BA:1944:U:O4'	2.16	0.45
26:BA:2403:A:C2	26:BA:2440:G:N3	2.84	0.45
26:BA:2414:C:H2'	26:BA:2414:C:O2	2.16	0.45
26:BA:2528:C:C2	26:BA:2553:A:N6	2.84	0.45
26:BA:2554:G:H5'	26:BA:2554:G:H8	1.80	0.45
31:BF:34:TRP:CZ2	38:BP:12:ALA:HB2	2.51	0.45
31:BF:133:ASN:O	31:BF:134:GLY:C	2.55	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BP:136:GLU:O	38:BP:139:LYS:HB3	2.16	0.45
40:BR:20:LEU:HD21	40:BR:40:LYS:CD	2.45	0.45
42:BT:50:ILE:HG22	42:BT:51:ARG:HB3	1.98	0.45
42:BT:56:GLY:O	42:BT:59:THR:HG23	2.16	0.45
49:B0:46:LYS:O	49:B0:78:TYR:HA	2.16	0.45
52:B3:52:HIS:CD2	52:B3:52:HIS:H	2.34	0.45
55:B6:40:CYS:SG	55:B6:45:LYS:CD	3.04	0.45
1:CA:20:C:O2	1:CA:895:G:C2	2.69	0.45
1:CA:566:U:C2	1:CA:744:G:C6	3.04	0.45
1:CA:845:G:O2'	1:CA:846:C:H5'	2.16	0.45
1:CA:1134:A:C4'	10:CJ:39:PRO:HB2	2.46	0.45
1:CA:1181:U:H5'	10:CJ:54:PHE:CZ	2.51	0.45
1:CA:1427:A:N3	1:CA:1427:A:C2'	2.78	0.45
1:CA:1480:A:H2	1:CA:1483:G:N1	2.13	0.45
2:CB:73:THR:HG22	2:CB:95:GLN:O	2.16	0.45
3:CC:173:VAL:HG12	3:CC:175:LEU:HG	1.98	0.45
4:CD:157:LEU:O	4:CD:158:ILE:C	2.51	0.45
9:CI:42:ARG:NH1	9:CI:71:SER:OG	2.48	0.45
22:CV:41:C:H2'	22:CV:42:C:C6	2.51	0.45
26:DA:323:A:OP1	47:DY:84:ARG:NH2	2.49	0.45
26:DA:2416:G:O2'	26:DA:2417:U:P	2.73	0.45
29:DD:241:PRO:O	29:DD:243:GLY:N	2.48	0.45
35:DJ:27:ALA:HB3	35:DJ:85:ALA:HB3	1.98	0.45
45:DW:9:TYR:H	45:DW:102:HIS:HD2	1.64	0.45
51:D2:35:LEU:HD22	51:D2:50:ILE:HG13	1.97	0.45
52:D3:19:GLN:HE22	52:D3:52:HIS:CE1	2.34	0.45
1:AA:781:A:OP1	1:AA:1523:G:H5'	2.16	0.45
5:AE:31:LEU:HD23	5:AE:45:PHE:HB2	1.98	0.45
11:AK:44:SER:OG	11:AK:47:VAL:HG23	2.16	0.45
15:AO:61:GLY:O	15:AO:62:GLN:C	2.52	0.45
26:BA:1069:G:H3'	26:BA:1070:G:H5"	1.97	0.45
26:BA:1902:C:H5'	26:BA:1903:C:OP2	2.16	0.45
27:BB:37:C:C5	27:BB:38:C:C4	3.04	0.45
35:BJ:14:ALA:O	35:BJ:18:ALA:HB3	2.16	0.45
35:BJ:103:ALA:HB2	35:BJ:111:ALA:HB3	1.98	0.45
38:BP:34:GLY:O	38:BP:35:HIS:HB2	2.16	0.45
40:BR:73:VAL:O	40:BR:76:VAL:HG12	2.16	0.45
1:CA:951:G:O4'	10:CJ:55:LYS:HG3	2.16	0.45
24:CY:3:A:C2	24:CY:71:A:C2	3.02	0.45
26:DA:143:C:H2'	26:DA:144:G:H8	1.81	0.45
26:DA:752:A:H2'	26:DA:753:G:O5'	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DA:955:A:C4	39:DQ:13:GLN:NE2	2.84	0.45
26:DA:1045:A:N6	26:DA:1200:A:C8	2.84	0.45
26:DA:1624:U:H2'	26:DA:1625:A:H5'	1.98	0.45
26:DA:2107:U:H2'	26:DA:2108:G:H8	1.82	0.45
26:DA:2723:U:O2'	26:DA:2724:A:OP2	2.30	0.45
26:DA:2791:U:H1'	26:DA:2793:A:C5	2.51	0.45
30:DE:24:THR:HG21	30:DE:188:VAL:HG12	1.98	0.45
30:DE:50:GLY:HA3	30:DE:74:PRO:HG2	1.98	0.45
30:DE:65:GLY:HA2	30:DE:70:ALA:CB	2.46	0.45
31:DF:25:PRO:HB3	31:DF:119:ARG:HD3	1.98	0.45
31:DF:177:ALA:HB1	31:DF:178:PRO:HD2	1.96	0.45
34:DI:65:ALA:O	34:DI:69:LYS:CB	2.64	0.45
38:DP:144:GLU:N	38:DP:145:PRO:HD3	2.31	0.45
44:DV:11:GLN:O	44:DV:12:TYR:CG	2.69	0.45
44:DV:25:LEU:H	44:DV:92:THR:HG21	1.81	0.45
47:DY:26:LYS:O	47:DY:27:VAL:C	2.54	0.45
48:DZ:38:TYR:O	48:DZ:38:TYR:CD1	2.69	0.45
48:DZ:97:GLU:HG2	48:DZ:125:LEU:HD11	1.98	0.45
53:D4:61:VAL:HG13	53:D4:65:CYS:SG	2.57	0.45
1:AA:1179:A:H5"	9:AI:102:LEU:CD2	2.47	0.45
1:AA:1481:U:H2'	1:AA:1482:G:C8	2.52	0.45
7:AG:111:ARG:HB2	7:AG:119:ARG:HD2	1.99	0.45
8:AH:89:PRO:HA	8:AH:92:ARG:HH11	1.81	0.45
24:AY:13:G:N1	24:AY:22:A:N6	2.37	0.45
26:BA:629:U:C5	26:BA:644:G:C5	3.04	0.45
26:BA:1209:G:N2	26:BA:1229:C:O2	2.47	0.45
26:BA:1635:U:H2'	26:BA:1636:G:H5"	1.97	0.45
26:BA:2040:A:N7	54:B5:9:LYS:HE3	2.31	0.45
26:BA:2437:A:H3'	26:BA:2438:C:H5'	1.97	0.45
26:BA:2819:A:H2'	30:BE:61:ARG:NH2	2.32	0.45
31:BF:3:GLU:OE1	31:BF:21:ALA:N	2.50	0.45
33:BH:158:HIS:CD2	33:BH:170:ARG:O	2.69	0.45
38:BP:115:LEU:HA	38:BP:134:ALA:HB2	1.96	0.45
41:BS:97:ARG:NH2	41:BS:98:VAL:HA	2.30	0.45
1:CA:1104:U:O5'	1:CA:1104:U:H6	1.99	0.45
1:CA:1109:U:H2'	1:CA:1110:G:O5'	2.16	0.45
5:CE:112:LEU:N	5:CE:112:LEU:HD23	2.31	0.45
13:CM:3:ARG:HG2	13:CM:9:ILE:HG12	1.97	0.45
24:CY:53:A:H61	24:CY:61:C:N4	2.10	0.45
26:DA:176:G:H1'	26:DA:1410:A:N1	2.31	0.45
26:DA:779:G:O6	26:DA:807:A:C8	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DA:992:G:OP1	26:DA:1006:G:OP1	2.33	0.45
26:DA:1048:G:N2	26:DA:1198:C:C2	2.84	0.45
26:DA:1260:G:OP1	43:DU:8:VAL:CG2	2.65	0.45
26:DA:1652:C:N4	26:DA:1667:G:OP2	2.43	0.45
26:DA:1755:U:H2'	26:DA:1756:C:C6	2.52	0.45
26:DA:2094:C:H5'	29:DD:229:VAL:HG13	1.99	0.45
26:DA:2388:A:H2'	26:DA:2389:A:C8	2.50	0.45
27:DB:88:C:N4	27:DB:89:G:C6	2.85	0.45
37:DO:76:ALA:HB3	42:DT:75:ILE:HD12	1.97	0.45
38:DP:47:ASP:HB3	38:DP:48:PRO:CA	2.46	0.45
1:AA:262:A:C6	1:AA:263:A:C6	3.04	0.45
1:AA:436:C:O2'	1:AA:437:U:P	2.74	0.45
1:AA:1350:A:H2'	1:AA:1351:U:C6	2.51	0.45
2:AB:75:LYS:HA	2:AB:78:GLN:HE21	1.80	0.45
5:AE:51:VAL:O	5:AE:55:VAL:HG23	2.16	0.45
13:AM:20:THR:C	13:AM:22:ILE:H	2.20	0.45
18:AR:71:LYS:O	18:AR:74:ARG:HB2	2.16	0.45
26:BA:330:G:N2	26:BA:333:A:C8	2.84	0.45
26:BA:468:A:C5	31:BF:45:ARG:HD2	2.52	0.45
26:BA:609:C:C4	38:BP:33:ARG:HG2	2.52	0.45
26:BA:871:C:H2'	26:BA:872:U:O4'	2.16	0.45
26:BA:1286:A:C2'	26:BA:1287:A:O5'	2.65	0.45
26:BA:1354:G:H4'	56:B7:7:PRO:HG2	1.97	0.45
26:BA:2517:U:H4'	26:BA:2518:C:OP1	2.15	0.45
26:BA:2855:G:H2'	26:BA:2856:U:O4'	2.17	0.45
31:BF:64:ILE:O	31:BF:65:TRP:CD1	2.69	0.45
33:BH:41:MET:HE2	33:BH:43:VAL:N	2.31	0.45
39:BQ:110:THR:HG23	39:BQ:113:GLN:HB2	1.99	0.45
42:BT:3:ARG:O	42:BT:4:GLY:C	2.55	0.45
50:B1:12:PRO:HB3	50:B1:43:TYR:CD2	2.52	0.45
2:CB:70:PHE:HA	2:CB:163:PHE:O	2.17	0.45
3:CC:122:GLU:HA	3:CC:125:GLU:OE1	2.17	0.45
22:CV:77:A:N7	49:D0:2:ALA:CB	2.79	0.45
26:DA:247:G:H21	26:DA:645:A:H8	1.64	0.45
26:DA:1325:G:H3'	26:DA:1326:G:H5"	1.98	0.45
26:DA:1328:G:N2	26:DA:1330:G:H3'	2.32	0.45
26:DA:1403:G:O2'	26:DA:1404:A:C5'	2.65	0.45
26:DA:1615:A:O2'	29:DD:38:LYS:HG3	2.16	0.45
26:DA:1621:C:O2	26:DA:1621:C:H2'	2.16	0.45
26:DA:2567:C:H2'	26:DA:2568:G:O4'	2.16	0.45
30:DE:6:GLY:HA2	30:DE:51:PHE:CZ	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DX:3:THR:O	46:DX:4:ALA:HB3	2.16	0.45
47:DY:38:ILE:HD12	47:DY:66:PRO:HA	1.97	0.45
55:D6:24:GLU:OE1	55:D6:24:GLU:HA	2.16	0.45
1:AA:521:G:OP1	12:AL:73:GLU:HA	2.16	0.45
1:AA:1023:G:H2'	1:AA:1023:G:N3	2.32	0.45
1:AA:1245:A:N1	1:AA:1293:G:C6	2.84	0.45
1:AA:1327:C:OP1	21:AU:20:LYS:HB3	2.16	0.45
26:BA:1090:A:H3'	26:BA:1090:A:N3	2.31	0.45
26:BA:1152:G:H2'	26:BA:1153:U:O5'	2.16	0.45
26:BA:1538:C:C5	26:BA:2226:G:O2'	2.67	0.45
26:BA:1777:G:C2'	26:BA:1778:G:H5'	2.41	0.45
26:BA:1789:A:H4'	26:BA:2727:C:O4'	2.17	0.45
26:BA:2288:G:P	49:B0:10:THR:HG21	2.57	0.45
26:BA:2403:A:OP1	57:B8:32:LEU:HD13	2.17	0.45
27:BB:29:A:H2'	27:BB:30:C:C6	2.52	0.45
31:BF:3:GLU:HA	31:BF:24:LEU:HB3	1.97	0.45
31:BF:178:PRO:HB2	31:BF:201:VAL:HG11	1.99	0.45
35:BJ:42:ALA:O	35:BJ:43:ALA:CB	2.65	0.45
38:BP:53:GLY:HA3	38:BP:55:ARG:HB2	1.98	0.45
40:BR:24:GLN:HE22	40:BR:36:THR:HG21	1.81	0.45
40:BR:45:ARG:HG3	40:BR:95:THR:CG2	2.46	0.45
43:BU:91:ASP:O	43:BU:92:ARG:HB3	2.15	0.45
48:BZ:91:LEU:H	48:BZ:91:LEU:HD12	1.81	0.45
1:CA:831:G:C2	1:CA:832:G:C8	3.04	0.45
1:CA:954:G:N2	1:CA:1345:C:OP2	2.41	0.45
2:CB:80:ILE:HG21	2:CB:211:ILE:HG22	1.97	0.45
2:CB:115:LEU:HB2	2:CB:145:LEU:HD12	1.99	0.45
5:CE:101:ILE:O	5:CE:120:THR:OG1	2.35	0.45
6:CF:86:ARG:O	6:CF:87:ARG:HG2	2.17	0.45
7:CG:116:ALA:O	7:CG:118:VAL:N	2.49	0.45
15:CO:24:SER:O	15:CO:25:THR:C	2.55	0.45
18:CR:43:PHE:C	18:CR:44:LEU:HD12	2.37	0.45
24:CY:75:C:O2	26:DA:2518:C:H1'	2.17	0.45
26:DA:1066:A:C8	26:DA:1066:A:H3'	2.52	0.45
26:DA:1066:A:H3'	26:DA:1066:A:H8	1.80	0.45
26:DA:1311:G:O2'	26:DA:2033:G:O6	2.28	0.45
26:DA:1694:C:H2'	26:DA:1695:G:O5'	2.16	0.45
26:DA:1855:A:OP1	29:DD:249:PRO:HD3	2.16	0.45
26:DA:1976:U:H5'	26:DA:2562:C:O2'	2.16	0.45
26:DA:2043:U:O2'	26:DA:2628:C:H5'	2.17	0.45
26:DA:2500:G:C6	26:DA:2501:G:N1	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DA:2587:G:OP1	26:DA:2588:A:OP1	2.34	0.45
26:DA:2810:A:H2'	26:DA:2810:A:N3	2.31	0.45
29:DD:144:ALA:HB3	29:DD:192:THR:HG23	1.98	0.45
30:DE:137:HIS:HB3	30:DE:138:PRO:CD	2.47	0.45
55:D6:13:CYS:HB2	55:D6:22:ALA:HB3	1.99	0.45
55:D6:19:ARG:HG3	55:D6:20:ASN:N	2.32	0.45
1:AA:521:G:C2	1:AA:522:C:C6	3.05	0.45
1:AA:1303:C:OP1	1:AA:1304:G:OP2	2.35	0.45
2:AB:181:PHE:O	2:AB:183:PRO:HD3	2.17	0.45
3:AC:52:LEU:HG	3:AC:52:LEU:O	2.16	0.45
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.16	0.45
23:AW:58:A:O3'	23:AW:59:U:C5	2.69	0.45
26:BA:611:C:H2'	26:BA:612:A:C8	2.51	0.45
26:BA:2413:C:C2'	26:BA:2414:C:H5'	2.47	0.45
26:BA:2541:A:O2'	26:BA:2543:G:OP2	2.25	0.45
27:BB:20:C:H2'	27:BB:21:G:H5'	1.97	0.45
28:BC:169:ALA:O	28:BC:171:ALA:N	2.49	0.45
31:BF:132:VAL:O	31:BF:134:GLY:N	2.49	0.45
31:BF:168:ARG:HG3	31:BF:175:THR:HG21	1.98	0.45
39:BQ:12:GLN:HG2	39:BQ:73:PRO:HD2	1.98	0.45
39:BQ:141:GLN:HB3	48:BZ:72:ARG:CZ	2.47	0.45
47:BY:28:LYS:HB3	47:BY:37:VAL:HB	1.99	0.45
1:CA:652:G:O2'	15:CO:46:HIS:HB3	2.17	0.45
1:CA:924:A:O2'	1:CA:1315:A:N3	2.41	0.45
1:CA:1189:G:H2'	1:CA:1190:C:C6	2.52	0.45
2:CB:162:ILE:HD11	2:CB:184:VAL:HG22	1.97	0.45
3:CC:15:THR:HG22	3:CC:16:ARG:N	2.32	0.45
4:CD:31:CYS:C	4:CD:33:MET:N	2.70	0.45
6:CF:21:LEU:O	6:CF:25:ILE:HG12	2.16	0.45
26:DA:29:G:H2'	26:DA:30:C:O4'	2.17	0.45
26:DA:1740:C:O2	26:DA:1740:C:H2'	2.17	0.45
26:DA:1916:C:C2	26:DA:1917:G:C8	3.05	0.45
26:DA:2229:U:O2'	50:D1:52:ARG:NH1	2.50	0.45
29:DD:35:LYS:HB3	29:DD:36:PRO:HD3	1.98	0.45
29:DD:181:GLU:HA	29:DD:272:ALA:HB3	1.99	0.45
35:DJ:40:ALA:HA	35:DJ:43:ALA:HB3	1.99	0.45
36:DN:3:THR:HG22	36:DN:5:VAL:HB	1.99	0.45
55:D6:15:GLU:OE2	55:D6:43:CYS:SG	2.72	0.45
1:AA:32:A:H2'	1:AA:33:A:C8	2.51	0.45
1:AA:109:A:C6	1:AA:326:G:C6	3.04	0.45
1:AA:360:A:H2'	1:AA:361:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1026:G:N3	1:AA:1026:G:H2'	2.31	0.45
1:AA:1290:G:H2'	1:AA:1290:G:N3	2.32	0.45
1:AA:1303:C:H2'	1:AA:1304:G:H5'	1.99	0.45
2:AB:42:ILE:CD1	2:AB:202:PRO:HB2	2.47	0.45
8:AH:29:SER:O	8:AH:32:LYS:N	2.50	0.45
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.52	0.45
13:AM:82:MET:CG	13:AM:82:MET:O	2.64	0.45
24:AY:27:C:O5'	24:AY:27:C:H6	2.00	0.45
26:BA:162:C:O2	26:BA:162:C:H2'	2.17	0.45
26:BA:928:G:H2'	26:BA:929:G:H8	1.81	0.45
26:BA:1050:C:O2'	36:BN:28:THR:OG1	2.31	0.45
26:BA:2073:G:H4'	30:BE:143:ASN:O	2.16	0.45
26:BA:2522:U:O3'	30:BE:123:ALA:HB3	2.16	0.45
26:BA:2595:U:O2	26:BA:2595:U:O4'	2.32	0.45
26:BA:2671:A:H4'	26:BA:2672:G:H21	1.82	0.45
30:BE:16:ARG:HG3	30:BE:21:VAL:HG21	1.98	0.45
31:BF:9:ILE:HG12	31:BF:14:PRO:HA	1.98	0.45
33:BH:143:GLN:O	33:BH:146:ALA:HB3	2.17	0.45
36:BN:14:VAL:HG11	36:BN:137:LYS:HD2	1.99	0.45
42:BT:27:THR:O	42:BT:47:GLY:O	2.34	0.45
56:B7:8:ASN:HD22	56:B7:9:ARG:N	2.15	0.45
1:CA:969:U:O2	1:CA:971:G:H8	1.98	0.45
1:CA:973:C:N3	1:CA:1029:A:O2'	2.43	0.45
1:CA:1189:G:H2'	1:CA:1190:C:H6	1.82	0.45
10:CJ:58:ASP:O	10:CJ:59:SER:C	2.55	0.45
13:CM:49:THR:HG22	13:CM:51:ALA:H	1.82	0.45
26:DA:200:G:O2'	26:DA:201:A:H5'	2.17	0.45
26:DA:420:A:C6	26:DA:421:U:C4	3.05	0.45
26:DA:552:A:N1	26:DA:2063:A:H2'	2.32	0.45
26:DA:746:G:H2'	26:DA:747:G:O4'	2.17	0.45
26:DA:1286:A:O2'	26:DA:1287:A:O5'	2.34	0.45
26:DA:2388:A:H4'	41:DS:107:GLU:HG3	1.98	0.45
26:DA:2479:G:H2'	26:DA:2487:A:C8	2.51	0.45
43:DU:14:HIS:CD2	43:DU:32:ALA:HB1	2.52	0.45
47:DY:52:SER:O	47:DY:54:LYS:N	2.49	0.45
47:DY:75:ILE:HD12	47:DY:79:CYS:SG	2.57	0.45
47:DY:77:PRO:O	47:DY:99:CYS:SG	2.75	0.45
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.99	0.45
1:AA:894:G:C6	1:AA:895:G:C5	3.05	0.45
1:AA:1371:G:O3'	9:AI:69:GLY:HA3	2.16	0.45
4:AD:25:ARG:C	4:AD:27:TYR:N	2.71	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:97:PHE:O	18:AR:31:LEU:HD23	2.15	0.45
9:AI:79:LEU:HD11	9:AI:83:ARG:NH2	2.32	0.45
22:AV:75:C:H2'	22:AV:76:C:C5'	2.46	0.45
23:AW:21:A:N6	23:AW:46:G:N3	2.65	0.45
23:AW:23:A:H3'	23:AW:24:G:H8	1.82	0.45
26:BA:555:C:C5	26:BA:2056:G:C2	3.05	0.45
26:BA:852:C:OP2	38:BP:39:LYS:HD3	2.16	0.45
26:BA:1175:U:C2	26:BA:2046:C:H5"	2.52	0.45
26:BA:1564:G:O2'	26:BA:1565:U:H5'	2.17	0.45
26:BA:1854:G:N3	29:BD:254:THR:OG1	2.50	0.45
26:BA:2885:G:O2'	42:BT:3:ARG:NE	2.50	0.45
29:BD:211:ARG:HA	29:BD:214:TRP:CD2	2.52	0.45
31:BF:157:VAL:HA	31:BF:176:LEU:O	2.17	0.45
31:BF:157:VAL:HG11	31:BF:181:LEU:HD13	1.98	0.45
32:BG:97:ASP:O	32:BG:101:ILE:HG23	2.17	0.45
33:BH:38:SER:OG	33:BH:40:GLU:HG2	2.17	0.45
33:BH:149:ARG:HA	33:BH:162:ILE:HG13	1.99	0.45
40:BR:117:VAL:O	40:BR:118:GLU:CB	2.64	0.45
57:B8:6:THR:HG22	57:B8:63:PRO:HD3	1.99	0.45
1:CA:802:G:O2'	1:CA:803:A:C5'	2.62	0.45
2:CB:29:ALA:O	2:CB:32:ILE:HG22	2.17	0.45
2:CB:47:THR:O	2:CB:51:LEU:HD12	2.16	0.45
26:DA:1337:U:H2'	26:DA:1338:C:C6	2.51	0.45
29:DD:210:GLY:O	29:DD:211:ARG:CB	2.64	0.45
30:DE:128:SER:OG	30:DE:129:HIS:N	2.45	0.45
35:DJ:51:ALA:O	35:DJ:52:ALA:HB2	2.17	0.45
36:DN:55:VAL:O	36:DN:56:ASN:C	2.54	0.45
39:DQ:42:ILE:HD12	39:DQ:42:ILE:N	2.31	0.45
41:DS:26:LEU:O	41:DS:88:ASP:HB3	2.17	0.45
41:DS:78:LEU:HD11	41:DS:103:GLU:HB3	1.99	0.45
44:DV:13:ARG:HH11	44:DV:13:ARG:CG	2.29	0.45
45:DW:10:VAL:O	45:DW:11:ARG:CB	2.64	0.45
51:D2:64:LEU:HD23	51:D2:64:LEU:O	2.17	0.45
54:D5:4:HIS:HB3	54:D5:5:PRO:HD3	1.99	0.45
1:AA:1427:U:H2'	1:AA:1428:A:C8	2.51	0.45
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.17	0.45
3:AC:44:GLU:HA	3:AC:52:LEU:HD11	1.98	0.45
5:AE:20:GLN:O	5:AE:22:GLY:N	2.49	0.45
11:AK:111:ASP:HA	18:AR:84:LYS:HE2	1.99	0.45
23:AW:76:A:O2'	26:BA:2405:C:N3	2.50	0.45
26:BA:159:G:O2'	26:BA:160:C:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:340:G:C2	26:BA:341:C:C2	3.05	0.45
26:BA:548:U:H2'	26:BA:549:U:C6	2.51	0.45
26:BA:552:A:C2	26:BA:2063:A:H2'	2.52	0.45
26:BA:566:C:H2'	26:BA:567:C:OP1	2.16	0.45
26:BA:646:G:OP2	38:BP:108:LYS:NZ	2.35	0.45
26:BA:1358:U:H3'	26:BA:1359:C:H5'	1.98	0.45
26:BA:1766:A:N6	26:BA:1769:A:N1	2.65	0.45
26:BA:1888:G:O2'	26:BA:1905:A:N6	2.50	0.45
26:BA:1923:C:H4'	29:BD:244:ARG:HA	1.99	0.45
26:BA:2064:C:H1'	26:BA:2791:U:O4	2.17	0.45
26:BA:2086:C:H2'	26:BA:2087:C:H6	1.82	0.45
26:BA:2653:G:N2	26:BA:2785:C:C2	2.85	0.45
32:BG:2:PRO:HD2	53:B4:51:TYR:CE2	2.52	0.45
32:BG:96:ARG:O	32:BG:97:ASP:C	2.55	0.45
33:BH:158:HIS:NE2	33:BH:170:ARG:C	2.70	0.45
34:BI:127:VAL:HG13	34:BI:138:ILE:O	2.17	0.45
42:BT:14:TYR:N	42:BT:14:TYR:CD1	2.85	0.45
44:BV:34:GLU:CG	44:BV:56:SER:HB2	2.47	0.45
44:BV:76:LYS:HB2	44:BV:81:TYR:HB3	1.99	0.45
50:B1:77:ALA:HA	50:B1:80:LEU:HD12	1.98	0.45
1:CA:378:A:C2	1:CA:379:A:C4	3.05	0.45
1:CA:641:G:H4'	15:CO:28:GLN:HG2	1.99	0.45
1:CA:647:A:H5'	1:CA:820:G:OP1	2.17	0.45
1:CA:1087:G:H4'	2:CB:111:ARG:NH1	2.31	0.45
1:CA:1141:C:O2	1:CA:1141:C:C2'	2.64	0.45
2:CB:91:PRO:CG	2:CB:155:LEU:HD23	2.47	0.45
26:DA:791:G:O6	26:DA:792:A:C6	2.70	0.45
26:DA:1463:G:N1	26:DA:1625:A:OP2	2.43	0.45
26:DA:1694:C:C2'	26:DA:1695:G:O5'	2.65	0.45
26:DA:2342:G:H4'	49:D0:43:THR:H	1.82	0.45
30:DE:196:VAL:O	30:DE:196:VAL:CG2	2.65	0.45
36:DN:15:LEU:HD13	36:DN:16:ILE:N	2.32	0.45
40:DR:48:VAL:O	40:DR:49:ASP:C	2.53	0.45
49:D0:50:ASN:HB3	49:D0:63:VAL:HG22	1.99	0.45
51:D2:16:LEU:O	51:D2:17:SER:HB3	2.16	0.45
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.52	0.45
1:AA:376:G:C2	1:AA:389:A:N1	2.85	0.45
1:AA:923:A:H2'	1:AA:924:C:H6	1.77	0.45
1:AA:1158:C:O2'	1:AA:1160:G:OP1	2.35	0.45
1:AA:1245:A:C6	1:AA:1293:G:C6	3.04	0.45
1:AA:1300:G:HO2'	1:AA:1301:U:P	2.28	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:56:LEU:O	15:AO:60:VAL:HG23	2.15	0.45
20:AT:16:HIS:O	20:AT:19:SER:HB3	2.17	0.45
20:AT:63:ILE:HG22	20:AT:77:ALA:HB1	1.99	0.45
23:AW:11:C:O5'	23:AW:11:C:H6	2.00	0.45
26:BA:518:G:N2	45:BW:57:ASN:HD21	2.15	0.45
26:BA:655:A:O2'	38:BP:67:MET:HB3	2.17	0.45
26:BA:771:G:C6	26:BA:772:G:N1	2.85	0.45
26:BA:1364:G:H8	26:BA:1364:G:C5'	2.29	0.45
26:BA:1690:C:H2'	26:BA:1691:G:H5'	1.99	0.45
26:BA:1818:C:O2'	26:BA:1819:A:H5'	2.17	0.45
26:BA:1897:A:H2'	26:BA:1898:A:C8	2.52	0.45
26:BA:2858:U:O4	42:BT:23:ARG:NH2	2.42	0.45
29:BD:33:LEU:HD22	29:BD:34:VAL:HG13	1.99	0.45
37:BO:61:VAL:O	37:BO:63:VAL:HG13	2.17	0.45
44:BV:49:THR:CB	44:BV:50:PRO:CD	2.94	0.45
47:BY:25:GLY:HA3	47:BY:39:VAL:HG12	1.99	0.45
47:BY:66:PRO:O	47:BY:67:LEU:CB	2.62	0.45
1:CA:47:G:O2'	1:CA:361:U:H1'	2.17	0.45
1:CA:369:A:C2	1:CA:370:A:C8	3.05	0.45
6:CF:78:GLU:O	6:CF:81:ILE:HG13	2.17	0.45
26:DA:29:G:O2'	26:DA:1258:A:N3	2.49	0.45
26:DA:108:A:H4'	51:D2:69:ARG:NH2	2.32	0.45
26:DA:319:C:H2'	26:DA:320:C:O5'	2.17	0.45
26:DA:469:C:H4'	31:DF:49:ALA:HB2	1.99	0.45
26:DA:1424:A:HO2'	26:DA:1425:G:P	2.34	0.45
26:DA:2037:U:H1'	54:D5:6:VAL:HG13	1.98	0.45
26:DA:2139:U:H5	26:DA:2169:G:HO2'	1.64	0.45
26:DA:2242:C:H2'	26:DA:2243:U:O4'	2.17	0.45
26:DA:2672:G:H2'	26:DA:2673:A:C2	2.52	0.45
29:DD:62:TYR:HA	29:DD:87:ASN:HD21	1.82	0.45
29:DD:77:ALA:HA	29:DD:97:TYR:HA	1.99	0.45
33:DH:136:ILE:HD12	33:DH:136:ILE:N	2.32	0.45
34:DI:31:LEU:N	34:DI:32:PRO:CD	2.80	0.45
51:D2:47:ASN:O	51:D2:48:HIS:C	2.55	0.45
1:AA:1321:C:H5"	1:AA:1322:C:C5'	2.47	0.44
1:AA:1349:A:H2'	1:AA:1350:A:C8	2.50	0.44
1:AA:1403:C:H6	1:AA:1403:C:O5'	2.00	0.44
4:AD:168:ARG:N	4:AD:168:ARG:HD2	2.32	0.44
7:AG:50:ILE:O	7:AG:54:THR:N	2.50	0.44
9:AI:16:ARG:O	9:AI:63:ILE:HG23	2.17	0.44
26:BA:16:G:H4'	43:BU:25:TRP:CH2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:154:C:H3'	26:BA:157:U:P	2.58	0.44
26:BA:623:C:O2'	26:BA:627:C:OP1	2.31	0.44
26:BA:843:C:OP2	31:BF:62:ARG:HG3	2.16	0.44
26:BA:863:C:H4'	26:BA:976:G:C5	2.53	0.44
26:BA:1059:U:H2'	26:BA:1060:G:H5'	1.98	0.44
26:BA:1540:A:O4'	26:BA:1540:A:P	2.75	0.44
26:BA:1646:G:N7	26:BA:1647:U:C4	2.85	0.44
26:BA:1701:A:H3'	26:BA:1702:C:H6	1.82	0.44
26:BA:2516:G:O2'	26:BA:2517:U:C6	2.69	0.44
26:BA:2521:C:C4	26:BA:2522:U:C4	3.05	0.44
30:BE:5:LEU:N	30:BE:5:LEU:HD23	2.32	0.44
34:BI:123:LEU:HD11	34:BI:144:VAL:HG22	1.99	0.44
40:BR:70:LEU:HD13	40:BR:75:LEU:CD1	2.46	0.44
48:BZ:5:LEU:HD23	48:BZ:6:LYS:N	2.33	0.44
1:CA:850:A:C4	1:CA:852:G:N7	2.85	0.44
1:CA:1134:A:O4'	10:CJ:39:PRO:HB2	2.16	0.44
1:CA:1437:C:OP1	20:CT:27:LYS:HD2	2.17	0.44
3:CC:148:GLY:HA3	3:CC:172:ARG:O	2.16	0.44
3:CC:206:GLU:O	3:CC:207:VAL:C	2.55	0.44
4:CD:8:VAL:C	4:CD:10:ARG:N	2.68	0.44
12:CL:25:PRO:C	12:CL:27:LEU:H	2.20	0.44
24:CY:3:A:C8	24:CY:3:A:OP2	2.70	0.44
26:DA:351:U:H4'	47:DY:68:HIS:CD2	2.52	0.44
26:DA:628:U:H4'	26:DA:704:C:C4'	2.46	0.44
26:DA:1090:A:H4'	26:DA:1092:G:C1'	2.47	0.44
26:DA:1767:U:H5"	26:DA:1767:U:O2	2.17	0.44
26:DA:2247:C:H2'	26:DA:2248:G:O4'	2.17	0.44
26:DA:2416:G:O2'	26:DA:2417:U:OP2	2.32	0.44
27:DB:63:G:H2'	27:DB:63:G:N3	2.32	0.44
32:DG:125:PHE:CB	32:DG:166:ASP:HB2	2.47	0.44
32:DG:133:LEU:HD12	32:DG:133:LEU:C	2.38	0.44
36:DN:82:LEU:HD21	36:DN:84:LYS:HE3	1.98	0.44
39:DQ:1:MET:O	39:DQ:2:LEU:HB2	2.16	0.44
39:DQ:137:TYR:CE2	48:DZ:81:ARG:NH1	2.86	0.44
48:DZ:137:ILE:HG21	48:DZ:155:LEU:HD12	1.98	0.44
49:D0:24:LYS:N	49:D0:37:LEU:O	2.27	0.44
1:AA:328:C:H4'	1:AA:329:A:C5'	2.46	0.44
1:AA:537:G:H2'	1:AA:538:G:C8	2.52	0.44
1:AA:586:C:C2'	1:AA:587:G:H5'	2.48	0.44
1:AA:667:G:OP1	1:AA:732:C:O2'	2.21	0.44
1:AA:1160:G:N3	1:AA:1160:G:H2'	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:106:LYS:O	2:AB:110:GLN:NE2	2.49	0.44
26:BA:820:A:C2	26:BA:833:U:O2'	2.71	0.44
26:BA:1475:C:H2'	26:BA:1476:U:C6	2.52	0.44
26:BA:1909:G:C5'	26:BA:1909:G:N3	2.80	0.44
26:BA:2259:C:H3'	26:BA:2260:U:H6	1.82	0.44
26:BA:2553:A:N3	26:BA:2553:A:O4'	2.51	0.44
26:BA:2823:C:C5	26:BA:2824:C:C5	3.05	0.44
29:BD:26:LYS:O	29:BD:27:THR:HB	2.17	0.44
29:BD:153:ALA:O	29:BD:157:ARG:NH1	2.42	0.44
31:BF:167:ALA:O	31:BF:169:ASN:N	2.51	0.44
36:BN:5:VAL:O	36:BN:5:VAL:CG1	2.65	0.44
36:BN:30:ILE:CD1	36:BN:99:LEU:HD11	2.48	0.44
38:BP:65:ARG:NH2	57:B8:11:LYS:O	2.50	0.44
38:BP:65:ARG:HD3	57:B8:46:ARG:HH22	1.81	0.44
39:BQ:120:ILE:O	39:BQ:123:HIS:HB2	2.17	0.44
40:BR:18:LEU:HD22	40:BR:22:ARG:HD2	1.99	0.44
42:BT:50:ILE:HA	42:BT:99:LEU:CD1	2.46	0.44
45:BW:82:LEU:HB2	45:BW:98:LYS:HB2	1.99	0.44
51:B2:35:LEU:HD23	51:B2:35:LEU:HA	1.80	0.44
54:B5:36:CYS:SG	54:B5:48:GLU:HB2	2.56	0.44
1:CA:606:A:C8	1:CA:607:C:C5	3.04	0.44
1:CA:691:C:H2'	1:CA:692:C:C6	2.52	0.44
1:CA:768:C:H4'	26:DA:1867:C:OP1	2.17	0.44
1:CA:898:U:O2	1:CA:898:U:H2'	2.16	0.44
1:CA:1059:C:C2	1:CA:1065:G:N2	2.85	0.44
24:CY:27:C:O5'	24:CY:27:C:H6	2.00	0.44
26:DA:620:G:H5'	38:DP:15:ARG:HB2	1.98	0.44
26:DA:1916:C:H2'	26:DA:1917:G:O4'	2.17	0.44
26:DA:2266:G:N2	49:D0:9:SER:HB3	2.32	0.44
60:DC:74:VAL:HB	60:DC:91:ALA:CB	2.48	0.44
31:DF:116:ASP:O	31:DF:120:GLU:HG2	2.18	0.44
39:DQ:43:THR:HA	39:DQ:94:VAL:HG12	1.99	0.44
48:DZ:28:MET:SD	48:DZ:28:MET:C	2.96	0.44
1:AA:257:G:C2	1:AA:270:A:C2	3.05	0.44
1:AA:974:A:OP1	1:AA:974:A:C8	2.68	0.44
1:AA:1074:G:C6	1:AA:1075:C:C4	3.05	0.44
5:AE:7:GLU:HG2	5:AE:112:LEU:HD22	1.98	0.44
9:AI:114:TYR:O	9:AI:114:TYR:CD2	2.70	0.44
16:AP:21:VAL:HG11	16:AP:59:TRP:NE1	2.32	0.44
24:AY:53:A:H61	24:AY:61:C:N4	2.10	0.44
24:AY:54:A:C2	24:AY:55:C:C5	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:92:G:H2'	26:BA:93:G:O4'	2.18	0.44
26:BA:235:G:H4'	26:BA:412:G:C5	2.52	0.44
26:BA:1084:G:O6	26:BA:1085:C:N4	2.50	0.44
26:BA:1098:C:O2	26:BA:1098:C:C2'	2.66	0.44
26:BA:1170:G:H4'	58:B9:37:GLY:OXT	2.17	0.44
26:BA:1313:A:H2'	26:BA:1314:A:O5'	2.18	0.44
26:BA:1643:C:O3'	46:BX:35:THR:HG22	2.17	0.44
26:BA:1859:A:H2'	26:BA:1860:C:H5'	1.98	0.44
26:BA:2301:G:C2	26:BA:2354:C:O2	2.69	0.44
26:BA:2695:U:OP2	42:BT:53:ARG:CZ	2.65	0.44
30:BE:117:MET:HG3	30:BE:117:MET:O	2.17	0.44
34:BI:81:VAL:HG21	34:BI:88:ILE:HD13	1.99	0.44
36:BN:15:LEU:HD13	36:BN:16:ILE:N	2.32	0.44
38:BP:139:LYS:O	38:BP:141:ALA:N	2.49	0.44
39:BQ:17:LEU:HD13	39:BQ:39:PRO:HB2	2.00	0.44
39:BQ:138:ASP:OD1	48:BZ:122:ARG:NH2	2.51	0.44
40:BR:4:LEU:O	40:BR:5:LYS:HD3	2.17	0.44
46:BX:18:TYR:C	46:BX:20:GLY:N	2.69	0.44
51:B2:16:LEU:O	51:B2:17:SER:CB	2.65	0.44
55:B6:16:CYS:O	55:B6:17:LYS:HB2	2.17	0.44
1:CA:39:G:C2	1:CA:393:A:C2	3.05	0.44
1:CA:106:G:OP2	16:CP:27:LYS:NZ	2.47	0.44
1:CA:748:C:C2	1:CA:749:G:C8	3.06	0.44
1:CA:800:A:OP2	1:CA:1505:C:H5'	2.17	0.44
1:CA:805:G:H2'	1:CA:806:C:C6	2.52	0.44
1:CA:1297:U:O2'	1:CA:1342:A:N3	2.48	0.44
1:CA:1387:C:O5'	1:CA:1387:C:H6	2.00	0.44
4:CD:102:ASP:OD1	4:CD:103:ASN:N	2.51	0.44
12:CL:38:THR:HG23	12:CL:39:VAL:HG23	1.99	0.44
23:CW:16:U:H3'	23:CW:17:C:H5'	1.99	0.44
26:DA:178:A:C4	26:DA:195:A:C2	3.05	0.44
26:DA:602:C:H2'	26:DA:603:C:H6	1.82	0.44
26:DA:2785:C:OP1	30:DE:164:ARG:NE	2.48	0.44
26:DA:2875:U:C6	26:DA:2877:A:H1'	2.52	0.44
27:DB:114:C:H4'	41:DS:46:VAL:HG22	1.99	0.44
38:DP:96:THR:O	38:DP:100:LEU:HD23	2.17	0.44
38:DP:125:VAL:CG1	38:DP:138:LEU:HD21	2.48	0.44
1:AA:124:G:C6	1:AA:125:U:C4	3.06	0.44
1:AA:222:U:H2'	1:AA:223:U:C6	2.53	0.44
1:AA:600:C:H2'	1:AA:601:C:C6	2.53	0.44
1:AA:923:A:H5'	5:AE:21:ALA:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.33	0.44
4:AD:129:ASN:HD21	4:AD:144:ASP:HA	1.82	0.44
13:AM:90:LEU:O	13:AM:92:HIS:N	2.49	0.44
26:BA:50:A:N7	26:BA:116:A:N6	2.64	0.44
26:BA:730:G:OP1	56:B7:16:HIS:CE1	2.71	0.44
26:BA:1494:G:O2'	26:BA:1574:A:N1	2.39	0.44
26:BA:2122:G:H2'	26:BA:2123:U:O4'	2.17	0.44
26:BA:2819:A:C2'	30:BE:61:ARG:CZ	2.95	0.44
27:BB:81:G:C6	27:BB:82:G:C5	3.06	0.44
30:BE:61:ARG:HB3	30:BE:62:PRO:HD3	2.00	0.44
30:BE:119:ARG:HG2	30:BE:160:TYR:HB2	1.99	0.44
38:BP:49:ARG:HD3	57:B8:58:ILE:HG22	1.99	0.44
41:BS:77:ALA:O	41:BS:80:LEU:N	2.50	0.44
51:B2:2:LYS:HE3	51:B2:52:ASP:OD2	2.17	0.44
1:CA:142:G:N2	1:CA:171:C:C2	2.85	0.44
1:CA:469:G:C4'	1:CA:470:G:O5'	2.60	0.44
1:CA:564:U:H2'	1:CA:565:G:O4'	2.17	0.44
1:CA:1014:G:H2'	1:CA:1015:G:O4'	2.16	0.44
1:CA:1053:U:P	5:CE:25:ARG:HH11	2.40	0.44
8:CH:86:ILE:HD11	8:CH:136:GLU:HG2	2.00	0.44
15:CO:36:ILE:O	15:CO:39:LEU:N	2.50	0.44
16:CP:70:ALA:O	16:CP:74:LEU:HD12	2.17	0.44
19:CS:42:PRO:O	19:CS:43:GLU:CB	2.65	0.44
22:CV:48:U:H3'	22:CV:49:C:C5'	2.48	0.44
26:DA:115:A:N3	26:DA:166:G:H1'	2.32	0.44
26:DA:276:G:O2'	26:DA:277:G:C8	2.54	0.44
26:DA:752:A:C2	26:DA:753:G:H1'	2.52	0.44
26:DA:1057:U:O4	36:DN:28:THR:HG21	2.17	0.44
26:DA:1085:C:O2'	26:DA:1086:C:P	2.75	0.44
26:DA:1887:G:O2'	26:DA:1906:A:N6	2.45	0.44
26:DA:2119:U:H2'	26:DA:2120:U:O4'	2.18	0.44
26:DA:2554:G:H2'	26:DA:2555:G:C8	2.52	0.44
26:DA:2769:A:N1	33:DH:67:LEU:HD22	2.33	0.44
34:DI:53:ALA:O	34:DI:57:ARG:CB	2.66	0.44
36:DN:3:THR:C	36:DN:5:VAL:N	2.70	0.44
37:DO:61:VAL:O	37:DO:84:ALA:HB1	2.17	0.44
41:DS:95:HIS:CG	41:DS:96:GLY:N	2.85	0.44
42:DT:70:VAL:HG12	42:DT:71:GLY:O	2.17	0.44
42:DT:106:SER:HA	42:DT:110:ILE:HG12	1.99	0.44
43:DU:92:ARG:O	43:DU:93:LYS:C	2.55	0.44
54:D5:4:HIS:CB	54:D5:5:PRO:HD3	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:D8:14:VAL:HG21	57:D8:22:VAL:CG1	2.47	0.44
1:AA:406:G:H21	4:AD:119:GLN:HE22	1.65	0.44
1:AA:1353:G:H2'	1:AA:1354:C:C6	2.53	0.44
1:AA:1374:A:C4	1:AA:1375:A:C8	3.06	0.44
1:AA:1415:G:C6	1:AA:1486:G:C6	3.05	0.44
5:AE:76:ILE:HD11	5:AE:142:LEU:CD2	2.44	0.44
23:AW:30:G:C2	23:AW:41:C:N3	2.86	0.44
24:AY:20:U:H5	24:AY:59:A:N6	2.07	0.44
26:BA:1728:G:H2'	26:BA:1729:C:C6	2.52	0.44
26:BA:1842:A:C2	26:BA:1843:G:C4	3.06	0.44
32:BG:15:VAL:O	32:BG:16:ARG:C	2.56	0.44
35:BJ:86:ALA:O	35:BJ:87:ALA:CB	2.65	0.44
36:BN:35:ARG:O	36:BN:37:LYS:N	2.50	0.44
38:BP:36:LYS:HA	38:BP:41:ARG:HG3	1.99	0.44
1:CA:175:U:H2'	1:CA:176:G:C5'	2.47	0.44
1:CA:370:A:C6	1:CA:371:U:C4	3.04	0.44
1:CA:762:G:H2'	1:CA:763:C:O4'	2.18	0.44
1:CA:816:C:O2'	1:CA:817:U:P	2.76	0.44
1:CA:925:G:H2'	1:CA:926:C:O4'	2.18	0.44
1:CA:1261:A:O2'	1:CA:1263:U:OP2	2.26	0.44
1:CA:1268:A:C5'	21:CU:25:LYS:HD2	2.47	0.44
3:CC:47:LEU:CD1	3:CC:76:VAL:HG12	2.47	0.44
8:CH:99:GLU:O	8:CH:100:ILE:C	2.56	0.44
14:CN:24:CYS:HB3	14:CN:29:ARG:HB3	1.99	0.44
16:CP:63:GLY:O	16:CP:64:ALA:HB2	2.18	0.44
22:CV:5:G:N2	22:CV:70:C:C2	2.86	0.44
26:DA:25:G:N1	26:DA:26:G:N2	2.66	0.44
26:DA:431:U:H3'	26:DA:432:G:C5'	2.48	0.44
26:DA:763:G:H2'	26:DA:764:A:O4'	2.17	0.44
26:DA:1421:C:H2'	26:DA:1422:G:O5'	2.17	0.44
26:DA:1946:C:O2'	26:DA:1947:U:H5'	2.17	0.44
26:DA:2183:G:H2'	26:DA:2184:C:O4'	2.18	0.44
26:DA:2221:C:H5'	26:DA:2222:C:P	2.57	0.44
26:DA:2407:G:O2'	26:DA:2408:G:H5'	2.18	0.44
26:DA:2517:U:H4'	26:DA:2518:C:OP1	2.16	0.44
27:DB:111:G:C6	27:DB:112:U:C4	3.05	0.44
31:DF:165:ARG:HA	31:DF:168:ARG:CD	2.44	0.44
32:DG:15:VAL:HG21	32:DG:176:LEU:HD23	1.99	0.44
33:DH:154:PRO:O	33:DH:156:ALA:N	2.38	0.44
38:DP:146:VAL:HG13	38:DP:147:LEU:N	2.32	0.44
43:DU:44:ASN:ND2	44:DV:75:PHE:HB3	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DW:22:ASP:HA	45:DW:25:ARG:NH1	2.33	0.44
46:DX:24:GLY:O	46:DX:82:GLN:HA	2.17	0.44
49:D0:40:GLN:HG3	49:D0:42:GLY:O	2.18	0.44
50:D1:45:ASN:HD21	50:D1:47:GLN:HE21	1.65	0.44
55:D6:27:LYS:HB2	55:D6:30:THR:HB	2.00	0.44
1:AA:243:A:C2	1:AA:246:A:C8	3.06	0.44
1:AA:833:U:H2'	1:AA:834:C:H6	1.82	0.44
1:AA:939:G:C5'	7:AG:102:ARG:NH2	2.81	0.44
3:AC:46:GLU:O	3:AC:47:LEU:HB2	2.16	0.44
9:AI:112:LYS:HD3	9:AI:112:LYS:C	2.38	0.44
14:AN:47:LEU:O	14:AN:48:ALA:C	2.56	0.44
26:BA:230:G:H5"	57:B8:62:LEU:CD1	2.38	0.44
26:BA:551:C:H4'	26:BA:552:A:O5'	2.18	0.44
26:BA:1032:G:OP1	52:B3:10:LYS:NZ	2.46	0.44
26:BA:1538:C:N4	26:BA:2226:G:O2'	2.51	0.44
26:BA:2096:U:N3	26:BA:2098:A:N7	2.62	0.44
26:BA:2139:U:OP1	26:BA:2168:G:O2'	2.30	0.44
26:BA:2799:C:O2	26:BA:2799:C:C2'	2.66	0.44
30:BE:120:TRP:CD2	30:BE:155:LYS:HD3	2.52	0.44
31:BF:103:LYS:HA	31:BF:106:ARG:HG3	2.00	0.44
32:BG:85:GLY:N	32:BG:87:PRO:HG2	2.32	0.44
41:BS:101:LEU:HD12	41:BS:101:LEU:C	2.38	0.44
43:BU:40:PHE:CD1	44:BV:75:PHE:CE2	3.06	0.44
1:CA:324:C:O2	1:CA:324:C:H2'	2.17	0.44
13:CM:65:LYS:HA	13:CM:66:LEU:HG	1.98	0.44
17:CQ:7:THR:HA	17:CQ:57:VAL:O	2.16	0.44
17:CQ:48:GLU:O	17:CQ:49:GLU:C	2.56	0.44
22:CV:12:G:H4'	26:DA:1929:C:O2	2.17	0.44
24:CY:18:G:N1	24:CY:57:C:N4	2.66	0.44
26:DA:1046:A:H2'	26:DA:1047:G:O4'	2.18	0.44
26:DA:1326:G:C8	26:DA:1326:G:H5'	2.53	0.44
26:DA:1457:A:C6	26:DA:1458:G:C5	3.06	0.44
26:DA:2072:A:H8	26:DA:2072:A:OP2	2.00	0.44
26:DA:2342:G:H4'	49:D0:43:THR:N	2.33	0.44
26:DA:2837:C:O2'	26:DA:2838:C:H5'	2.18	0.44
34:DI:29:TYR:CE1	34:DI:33:ARG:NE	2.86	0.44
38:DP:13:ASN:C	38:DP:13:ASN:ND2	2.71	0.44
42:DT:31:SER:OG	42:DT:32:TYR:N	2.46	0.44
50:D1:52:ARG:HD3	50:D1:52:ARG:HA	1.90	0.44
1:AA:149:A:O2'	1:AA:150:C:P	2.75	0.44
1:AA:353:A:C2'	1:AA:354:G:OP2	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:521:G:H4'	12:AL:73:GLU:HG2	1.99	0.44
8:AH:82:HIS:HB3	8:AH:138:TRP:CE2	2.53	0.44
18:AR:30:ASP:C	18:AR:32:ARG:H	2.21	0.44
24:AY:3:A:C8	24:AY:3:A:OP2	2.70	0.44
26:BA:58:G:C8	26:BA:61:U:C5	3.06	0.44
26:BA:557:G:H5'	43:BU:24:TYR:CE2	2.53	0.44
26:BA:599:G:C6	26:BA:600:A:C6	3.06	0.44
26:BA:898:G:H5'	52:B3:45:GLY:HA3	1.99	0.44
26:BA:2121:G:C6	26:BA:2211:G:C5	3.06	0.44
26:BA:2447:G:C6	26:BA:2448:U:C4	3.05	0.44
26:BA:2845:U:C4	26:BA:2892:A:N6	2.86	0.44
26:BA:2868:G:C6	26:BA:2869:A:N6	2.86	0.44
26:BA:2885:G:H4'	42:BT:3:ARG:CD	2.47	0.44
29:BD:238:GLY:O	29:BD:239:ARG:O	2.35	0.44
31:BF:80:ALA:O	31:BF:83:PHE:HB2	2.17	0.44
31:BF:107:LYS:HD2	31:BF:205:ARG:O	2.17	0.44
34:BI:75:LEU:HD21	34:BI:105:HIS:CD2	2.52	0.44
43:BU:90:VAL:HG13	44:BV:39:LEU:HG	2.00	0.44
47:BY:11:ASP:H	47:BY:27:VAL:HA	1.82	0.44
55:B6:33:LYS:HE2	55:B6:33:LYS:HA	2.00	0.44
1:CA:60:A:N3	1:CA:60:A:H2'	2.32	0.44
1:CA:68:C:H2'	1:CA:69:G:C8	2.53	0.44
1:CA:362:C:HO2'	1:CA:363:U:P	2.41	0.44
3:CC:173:VAL:O	3:CC:175:LEU:HD12	2.16	0.44
8:CH:103:VAL:CG2	8:CH:110:ALA:HB2	2.48	0.44
26:DA:732:G:N2	26:DA:834:A:H61	2.16	0.44
26:DA:1325:G:N2	26:DA:1336:C:C2	2.85	0.44
26:DA:2547:G:C6	26:DA:2548:U:C4	3.05	0.44
27:DB:47:C:O2'	41:DS:93:LYS:HG2	2.18	0.44
60:DC:18:LYS:CG	60:DC:22:ILE:HD11	2.47	0.44
32:DG:27:ASN:HB2	32:DG:30:GLU:HB2	2.00	0.44
42:DT:64:ARG:HA	42:DT:72:VAL:O	2.18	0.44
52:D3:12:PRO:O	52:D3:13:ILE:C	2.55	0.44
1:AA:603:U:H2'	1:AA:604:G:H8	1.83	0.44
1:AA:945:G:C2	1:AA:1337:G:C2	3.06	0.44
1:AA:1379:G:O2'	1:AA:1380:U:H5'	2.17	0.44
2:AB:42:ILE:HD11	2:AB:202:PRO:HB2	2.00	0.44
3:AC:55:VAL:O	3:AC:55:VAL:HG12	2.17	0.44
12:AL:47:LYS:HB3	12:AL:48:PRO:HD3	2.00	0.44
22:AV:14:A:C6	22:AV:23:G:C5	3.05	0.44
26:BA:506:G:C4	26:BA:531:A:C2	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:559:C:H2'	26:BA:560:A:H5'	2.00	0.44
26:BA:793:U:C5	26:BA:2624:U:C5	3.06	0.44
26:BA:985:A:H4'	38:BP:35:HIS:NE2	2.33	0.44
26:BA:1391:G:N2	26:BA:1645:C:O2	2.35	0.44
26:BA:1396:C:O2'	26:BA:1617:A:N3	2.45	0.44
26:BA:1716:C:O2	30:BE:129:HIS:HE1	2.00	0.44
26:BA:2819:A:H2'	30:BE:61:ARG:CZ	2.47	0.44
26:BA:2896:U:H2'	26:BA:2897:C:C6	2.53	0.44
27:BB:42:C:O2	32:BG:93:THR:N	2.41	0.44
29:BD:168:ARG:O	29:BD:169:GLU:HB2	2.18	0.44
32:BG:96:ARG:O	32:BG:98:ARG:N	2.51	0.44
36:BN:54:VAL:HB	36:BN:122:VAL:HG22	1.98	0.44
48:BZ:153:SER:OG	48:BZ:163:LEU:HD23	2.17	0.44
50:B1:73:LEU:O	50:B1:77:ALA:N	2.51	0.44
57:B8:21:LYS:HD3	57:B8:48:PHE:CZ	2.52	0.44
1:CA:995:A:H8	1:CA:995:A:O5'	2.00	0.44
1:CA:1039:U:OP1	3:CC:163:ALA:HB3	2.18	0.44
9:CI:11:LYS:HA	9:CI:108:VAL:HG12	2.00	0.44
24:CY:33:U:C2'	24:CY:35:G:N7	2.81	0.44
26:DA:418:C:H5"	26:DA:435:C:H5"	2.00	0.44
26:DA:727:G:H2'	26:DA:728:G:O4'	2.17	0.44
26:DA:916:A:C2	26:DA:953:C:C2	3.05	0.44
26:DA:1311:G:O4'	45:DW:15:ARG:NH2	2.42	0.44
26:DA:1763:G:O2'	26:DA:1764:U:H5'	2.17	0.44
26:DA:1789:A:C8	26:DA:2707:U:H1'	2.53	0.44
26:DA:2431:C:OP1	57:D8:33:ASN:O	2.35	0.44
26:DA:2664:U:O2'	33:DH:110:SER:HB2	2.18	0.44
26:DA:2789:G:H5"	26:DA:2790:A:H5'	1.99	0.44
32:DG:53:LEU:HD22	32:DG:53:LEU:N	2.32	0.44
37:DO:98:VAL:CG1	37:DO:117:LEU:HB3	2.48	0.44
37:DO:115:VAL:HG13	37:DO:121:VAL:HG21	1.99	0.44
56:D7:12:ARG:HD3	56:D7:46:VAL:CG2	2.48	0.44
1:AA:216:G:O2'	1:AA:217:C:O4'	2.34	0.44
1:AA:1466:C:O2'	1:AA:1467:G:H5'	2.18	0.44
22:AV:48:U:O4'	22:AV:48:U:OP1	2.36	0.44
24:AY:18:G:N1	24:AY:57:C:N4	2.66	0.44
26:BA:309:C:O2'	26:BA:310:C:H5'	2.18	0.44
26:BA:655:A:OP1	38:BP:64:LYS:CE	2.66	0.44
26:BA:745:A:H2'	26:BA:746:G:O4'	2.18	0.44
26:BA:775:G:O5'	29:BD:208:LYS:NZ	2.51	0.44
26:BA:852:C:O2	26:BA:2455:G:O2'	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:874:U:O2	26:BA:874:U:H3'	2.17	0.44
26:BA:906:U:C5	26:BA:962:A:N7	2.86	0.44
26:BA:985:A:HO2'	38:BP:35:HIS:CE1	2.36	0.44
26:BA:1183:G:H5'	36:BN:102:ALA:CB	2.48	0.44
26:BA:1450:U:H2'	26:BA:1451:U:H6	1.83	0.44
26:BA:1856:G:H4'	29:BD:242:ARG:HH21	1.83	0.44
26:BA:2666:G:N3	26:BA:2666:G:H2'	2.32	0.44
26:BA:2753:A:OP1	58:B9:22:ARG:NH1	2.51	0.44
29:BD:53:PHE:HA	29:BD:218:ARG:HB2	2.00	0.44
31:BF:188:ARG:HA	38:BP:7:ARG:CD	2.47	0.44
36:BN:55:VAL:HG22	36:BN:126:PRO:HA	2.00	0.44
41:BS:20:ARG:HA	41:BS:20:ARG:HE	1.82	0.44
56:B7:8:ASN:C	56:B7:8:ASN:ND2	2.70	0.44
57:B8:10:ALA:O	57:B8:11:LYS:C	2.53	0.44
1:CA:1135:A:H2'	1:CA:1136:C:C6	2.52	0.44
1:CA:1161:A:H5"	9:CI:102:LEU:CD2	2.48	0.44
1:CA:1234:A:H2'	1:CA:1235:G:O4'	2.18	0.44
4:CD:192:GLU:OE2	4:CD:192:GLU:N	2.50	0.44
10:CJ:48:THR:CA	10:CJ:62:HIS:HB3	2.43	0.44
19:CS:15:LEU:O	19:CS:19:VAL:HG23	2.18	0.44
26:DA:55:C:H2'	26:DA:56:G:O4'	2.17	0.44
26:DA:267:G:O2'	26:DA:268:G:P	2.76	0.44
26:DA:535:U:C5	26:DA:536:G:C5	3.06	0.44
26:DA:1765:G:N3	26:DA:1765:G:H5"	2.33	0.44
26:DA:1889:A:N6	26:DA:1904:G:O2'	2.51	0.44
26:DA:2568:G:H2'	26:DA:2569:C:C6	2.53	0.44
26:DA:2799:C:H1'	30:DE:61:ARG:CD	2.48	0.44
44:DV:45:THR:O	44:DV:46:VAL:HG12	2.18	0.44
1:AA:9:G:C2	1:AA:26:A:C2	3.06	0.43
1:AA:1208:C:H2'	1:AA:1209:C:H6	1.79	0.43
5:AE:20:GLN:O	5:AE:21:ALA:C	2.56	0.43
22:AV:76:C:OP1	26:BA:2613:A:P	2.76	0.43
24:AY:49:G:N2	24:AY:66:G:H1'	2.33	0.43
26:BA:1472:A:N6	26:BA:1617:A:N7	2.64	0.43
26:BA:2103:A:H2'	26:BA:2104:G:O4'	2.18	0.43
26:BA:2596:U:O2	26:BA:2596:U:O4'	2.36	0.43
26:BA:2757:C:C4	26:BA:2758:U:C4	3.06	0.43
28:BC:96:GLY:O	28:BC:100:ILE:HG12	2.18	0.43
29:BD:35:LYS:HD2	29:BD:36:PRO:N	2.33	0.43
29:BD:124:PRO:HB2	29:BD:126:GLN:HG2	2.00	0.43
31:BF:28:ILE:O	31:BF:30:PRO:HD3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BF:199:TRP:O	31:BF:203:GLN:HG2	2.17	0.43
42:BT:40:THR:O	42:BT:41:ARG:CB	2.66	0.43
43:BU:50:ARG:HH12	44:BV:72:VAL:HG13	1.82	0.43
46:BX:59:VAL:O	46:BX:60:ARG:C	2.56	0.43
52:B3:1:MET:HB3	52:B3:39:ASP:HB3	2.00	0.43
54:B5:51:TYR:CD2	54:B5:52:TYR:CZ	3.06	0.43
55:B6:10:LEU:HD22	55:B6:10:LEU:H	1.83	0.43
3:CC:44:GLU:HA	3:CC:52:LEU:HD11	1.99	0.43
9:CI:5:TYR:HA	9:CI:17:VAL:O	2.18	0.43
24:CY:51:G:N3	24:CY:64:G:C2	2.86	0.43
26:DA:735:A:O2'	26:DA:826:G:H5'	2.18	0.43
26:DA:1288:G:H2'	26:DA:1289:G:O4'	2.17	0.43
26:DA:1461:G:C4	26:DA:1462:C:C5	3.05	0.43
26:DA:1783:G:N1	26:DA:1786:G:C2	2.86	0.43
26:DA:2492:G:C2'	26:DA:2493:G:OP2	2.64	0.43
26:DA:2752:A:C6	26:DA:2753:A:C6	3.06	0.43
35:DJ:22:ALA:O	35:DJ:23:ALA:HB2	2.18	0.43
38:DP:32:THR:HG21	38:DP:37:GLY:CA	2.47	0.43
1:AA:542:G:H5'	4:AD:41:GLY:HA3	2.01	0.43
1:AA:1226:C:H2'	13:AM:103:THR:HB	2.00	0.43
7:AG:140:ASP:HA	7:AG:143:ARG:NH1	2.33	0.43
7:AG:146:GLU:O	7:AG:149:ARG:HB2	2.18	0.43
10:AJ:35:SER:OG	10:AJ:73:ASP:HB2	2.18	0.43
23:AW:39:U:O2	23:AW:39:U:H5'	2.19	0.43
24:AY:36:A:N1	25:AX:19:PSU:C2	2.85	0.43
26:BA:507:A:H4'	47:BY:47:LYS:HD2	2.01	0.43
26:BA:558:U:O2'	43:BU:49:HIS:HD2	2.00	0.43
26:BA:712:G:H4'	38:BP:49:ARG:NH2	2.34	0.43
26:BA:879:U:H5"	38:BP:48:PRO:HB3	1.99	0.43
26:BA:1088:C:C6	26:BA:1088:C:OP2	2.71	0.43
26:BA:1363:C:C3'	26:BA:1364:G:H5"	2.48	0.43
26:BA:1766:A:C6	26:BA:1769:A:C6	3.06	0.43
26:BA:1803:A:H2'	26:BA:1804:C:H5'	2.00	0.43
26:BA:1824:U:O4'	26:BA:1921:A:C2	2.71	0.43
26:BA:2850:C:N4	26:BA:2885:G:O6	2.34	0.43
32:BG:124:SER:O	32:BG:131:TYR:HA	2.18	0.43
42:BT:55:ASN:O	42:BT:57:PHE:O	2.35	0.43
43:BU:75:ASN:OD1	43:BU:75:ASN:C	2.56	0.43
44:BV:46:VAL:HG22	44:BV:47:VAL:H	1.82	0.43
50:B1:50:ARG:HG2	50:B1:59:THR:HG22	2.00	0.43
55:B6:10:LEU:H	55:B6:10:LEU:CD2	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:B6:46:HIS:CD2	55:B6:46:HIS:O	2.70	0.43
1:CA:33:A:C2	1:CA:34:A:C4	3.06	0.43
1:CA:304:C:H2'	1:CA:305:G:C8	2.54	0.43
4:CD:22:LYS:HG3	4:CD:26:CYS:SG	2.58	0.43
5:CE:108:ALA:O	5:CE:112:LEU:HG	2.18	0.43
10:CJ:38:ILE:HG13	10:CJ:71:LEU:HB3	1.98	0.43
15:CO:78:TYR:O	15:CO:82:ILE:HG22	2.18	0.43
26:DA:89:A:H2'	26:DA:90:G:O4'	2.18	0.43
26:DA:353:A:HO2'	26:DA:354:A:H8	1.59	0.43
26:DA:934:C:H2'	26:DA:935:C:H5'	1.98	0.43
26:DA:942:C:H2'	26:DA:943:C:C6	2.53	0.43
26:DA:1216:G:H2'	26:DA:1216:G:N3	2.33	0.43
26:DA:1220:G:O2'	26:DA:1221:A:H5'	2.19	0.43
26:DA:1470:G:H2'	26:DA:1471:G:C8	2.53	0.43
26:DA:1973:A:C6	26:DA:1974:A:C6	3.07	0.43
26:DA:2666:G:H2'	26:DA:2666:G:N3	2.33	0.43
27:DB:43:C:H5"	27:DB:44:G:OP2	2.17	0.43
30:DE:49:LEU:O	30:DE:78:LEU:CB	2.66	0.43
39:DQ:27:VAL:O	39:DQ:28:ALA:HB3	2.18	0.43
39:DQ:42:ILE:HD13	39:DQ:97:VAL:CG2	2.47	0.43
42:DT:112:ARG:HA	42:DT:115:ARG:HE	1.83	0.43
43:DU:33:ARG:O	43:DU:37:GLU:HG3	2.18	0.43
43:DU:83:LEU:CG	43:DU:88:ILE:HD11	2.48	0.43
1:AA:404:U:H2'	1:AA:405:U:C6	2.54	0.43
1:AA:437:U:O2'	4:AD:123:HIS:CD2	2.71	0.43
1:AA:664:G:H22	1:AA:741:G:H1	1.66	0.43
1:AA:865:A:C2	1:AA:918:A:H4'	2.53	0.43
1:AA:1130:A:C2	1:AA:1146:A:C4	3.07	0.43
2:AB:40:HIS:HB2	2:AB:190:THR:HG21	2.00	0.43
4:AD:9:CYS:SG	4:AD:22:LYS:HG3	2.59	0.43
5:AE:50:GLU:HG3	5:AE:52:PRO:HD2	2.01	0.43
8:AH:81:HIS:HB2	8:AH:138:TRP:CE3	2.53	0.43
26:BA:509:C:H2'	26:BA:510:C:H6	1.83	0.43
26:BA:732:G:N2	26:BA:834:A:H61	2.16	0.43
26:BA:833:U:H5"	26:BA:834:A:H5'	2.00	0.43
26:BA:838:G:N3	26:BA:2093:G:O2'	2.49	0.43
26:BA:1734:U:O2	26:BA:1746:A:H5"	2.18	0.43
26:BA:1874:C:OP1	29:BD:257:LEU:HD23	2.17	0.43
26:BA:2107:U:OP2	29:BD:263:ARG:NE	2.51	0.43
26:BA:2475:C:O2'	26:BA:2476:C:C5'	2.66	0.43
26:BA:2548:U:H2'	26:BA:2549:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:2550:C:H4'	58:B9:3:VAL:HG21	2.01	0.43
26:BA:2673:A:O2'	26:BA:2674:G:P	2.76	0.43
26:BA:2725:A:H3'	26:BA:2726:G:C5'	2.48	0.43
26:BA:2781:C:H2'	26:BA:2782:G:O5'	2.19	0.43
30:BE:87:GLU:O	30:BE:87:GLU:CG	2.65	0.43
32:BG:38:VAL:HG22	32:BG:93:THR:HG23	1.99	0.43
32:BG:46:ALA:O	32:BG:51:ARG:O	2.35	0.43
45:BW:3:ALA:O	45:BW:106:ILE:HA	2.17	0.43
50:B1:67:ILE:N	50:B1:68:PRO:HD2	2.32	0.43
57:B8:51:ALA:C	57:B8:53:PRO:HD2	2.38	0.43
1:CA:560:G:N1	1:CA:743:A:OP1	2.50	0.43
1:CA:1210:C:H2'	1:CA:1211:A:H8	1.83	0.43
13:CM:3:ARG:HG2	13:CM:9:ILE:CG1	2.49	0.43
18:CR:50:ILE:HD13	18:CR:70:ILE:HG21	1.99	0.43
24:CY:54:A:C2	24:CY:55:C:C5	3.05	0.43
24:CY:59:A:O5'	24:CY:59:A:H8	2.01	0.43
26:DA:25:G:C2	26:DA:26:G:N2	2.87	0.43
26:DA:505:A:O3'	47:DY:46:LYS:HA	2.18	0.43
26:DA:1908:C:H2'	26:DA:1909:G:H5"	1.99	0.43
26:DA:1910:A:N3	26:DA:2107:U:O2'	2.51	0.43
26:DA:2693:U:O4	26:DA:2740:U:H1'	2.19	0.43
29:DD:244:ARG:HA	29:DD:245:PRO:HA	1.85	0.43
31:DF:167:ALA:HA	31:DF:170:LEU:CD2	2.48	0.43
34:DI:65:ALA:O	34:DI:69:LYS:HB3	2.18	0.43
43:DU:66:ASN:ND2	43:DU:70:ARG:HE	2.16	0.43
55:D6:11:LEU:HD22	55:D6:12:GLU:H	1.84	0.43
1:AA:67:C:H2'	1:AA:68:G:C8	2.53	0.43
1:AA:290:C:O5'	1:AA:290:C:H6	2.01	0.43
3:AC:47:LEU:HD23	3:AC:52:LEU:HD13	1.99	0.43
10:AJ:4:ILE:HD12	10:AJ:4:ILE:N	2.34	0.43
26:BA:945:A:N3	26:BA:945:A:H2'	2.32	0.43
26:BA:1044:U:C2'	26:BA:1045:A:H5'	2.48	0.43
34:BI:92:VAL:CG1	34:BI:120:ILE:HB	2.49	0.43
38:BP:51:PHE:O	38:BP:52:GLU:HB2	2.19	0.43
40:BR:21:TYR:CZ	40:BR:43:GLU:HG2	2.54	0.43
41:BS:24:LEU:HB3	41:BS:85:VAL:HG12	2.00	0.43
41:BS:74:ALA:HB1	41:BS:103:GLU:CB	2.48	0.43
42:BT:28:VAL:O	42:BT:29:ARG:HB2	2.18	0.43
42:BT:38:ASN:HD22	42:BT:40:THR:H	1.66	0.43
43:BU:87:GLY:HA3	44:BV:49:THR:HG22	1.99	0.43
43:BU:92:ARG:HD2	44:BV:11:GLN:CD	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BY:23:ARG:HA	47:BY:23:ARG:HD2	1.83	0.43
47:BY:87:LYS:O	47:BY:88:LYS:HB2	2.18	0.43
1:CA:243:G:C5	1:CA:244:C:C5	3.06	0.43
1:CA:950:C:H4'	10:CJ:57:LYS:HG2	1.99	0.43
1:CA:1143:G:H2'	1:CA:1143:G:N3	2.33	0.43
4:CD:126:ILE:CG2	4:CD:127:THR:N	2.81	0.43
6:CF:3:ARG:NH1	6:CF:38:GLU:OE1	2.51	0.43
26:DA:72:A:H5'	26:DA:73:G:O4'	2.19	0.43
26:DA:212:G:N7	26:DA:446:C:H4'	2.34	0.43
26:DA:516:A:H2'	26:DA:517:G:O4'	2.19	0.43
26:DA:1088:C:HO2'	26:DA:1089:G:H8	1.62	0.43
26:DA:2209:C:H2'	26:DA:2210:U:O4'	2.17	0.43
34:DI:119:PRO:O	34:DI:121:LYS:N	2.52	0.43
36:DN:128:HIS:HD2	36:DN:130:HIS:O	2.01	0.43
37:DO:113:LYS:HG3	37:DO:117:LEU:HD12	2.01	0.43
38:DP:23:PRO:HB2	38:DP:33:ARG:NE	2.33	0.43
38:DP:112:LEU:H	38:DP:128:HIS:CD2	2.36	0.43
47:DY:8:LYS:HB2	47:DY:28:LYS:NZ	2.33	0.43
47:DY:37:VAL:HG22	47:DY:67:LEU:O	2.19	0.43
47:DY:44:ILE:HG22	47:DY:45:VAL:N	2.33	0.43
52:D3:26:LEU:HD21	52:D3:46:ASN:HB2	2.00	0.43
56:D7:12:ARG:CG	56:D7:46:VAL:HG21	2.48	0.43
1:AA:775:G:O2'	1:AA:776:G:H5'	2.19	0.43
1:AA:934:C:C6	1:AA:1344:C:C5	3.07	0.43
2:AB:213:LEU:HD23	2:AB:213:LEU:O	2.18	0.43
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.33	0.43
19:AS:9:VAL:O	19:AS:9:VAL:HG12	2.18	0.43
26:BA:25:G:P	45:BW:80:PRO:HB3	2.58	0.43
26:BA:781:A:H3'	26:BA:782:C:C6	2.53	0.43
26:BA:1526:G:C6	26:BA:1527:U:N3	2.87	0.43
26:BA:1648:A:H5'	26:BA:1648:A:C8	2.53	0.43
26:BA:1783:G:H5'	42:BT:95:ARG:HG3	2.00	0.43
26:BA:1895:G:H5'	26:BA:1896:C:P	2.58	0.43
26:BA:2367:C:O3'	49:B0:20:ARG:HD3	2.18	0.43
26:BA:2411:G:C6	26:BA:2412:U:C4	3.07	0.43
26:BA:2885:G:H4'	42:BT:3:ARG:NE	2.34	0.43
29:BD:211:ARG:O	29:BD:215:LEU:HG	2.18	0.43
30:BE:120:TRP:O	30:BE:121:ASN:HB2	2.19	0.43
36:BN:15:LEU:HD12	36:BN:136:GLU:HG3	1.99	0.43
42:BT:106:SER:O	42:BT:107:ASP:CB	2.66	0.43
1:CA:342:G:H2'	1:CA:342:G:N3	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:795:C:O2'	1:CA:879:A:N1	2.45	0.43
1:CA:920:G:C2	1:CA:1324:C:C2	3.06	0.43
1:CA:976:G:H2'	1:CA:977:C:C6	2.53	0.43
1:CA:1109:U:C2'	1:CA:1110:G:O5'	2.67	0.43
1:CA:1188:G:C6	1:CA:1189:G:C5	3.07	0.43
4:CD:150:GLU:CD	4:CD:151:LYS:H	2.22	0.43
16:CP:67:THR:HG22	16:CP:68:ASP:N	2.33	0.43
18:CR:53:ARG:C	18:CR:55:ARG:H	2.22	0.43
19:CS:42:PRO:O	19:CS:43:GLU:HB3	2.19	0.43
26:DA:69:A:O2'	26:DA:70:U:OP2	2.30	0.43
26:DA:567:C:C5	26:DA:570:A:N7	2.87	0.43
26:DA:865:A:N3	26:DA:1233:A:C2	2.86	0.43
26:DA:1054:A:H5"	43:DU:63:VAL:CG2	2.45	0.43
26:DA:1254:A:H5'	26:DA:1254:A:C8	2.53	0.43
26:DA:1721:C:H2'	26:DA:1722:A:H5'	2.00	0.43
38:DP:30:THR:HG22	38:DP:31:ALA:N	2.34	0.43
42:DT:54:ARG:HA	42:DT:59:THR:HB	2.00	0.43
43:DU:31:SER:HB3	43:DU:34:LYS:HB2	2.01	0.43
48:DZ:51:ALA:O	48:DZ:52:SER:HB3	2.18	0.43
50:D1:53:VAL:HG22	50:D1:74:VAL:HG13	2.01	0.43
51:D2:53:LEU:O	51:D2:56:GLN:HB2	2.18	0.43
55:D6:15:GLU:O	55:D6:18:ARG:HG2	2.18	0.43
1:AA:199:G:N2	1:AA:219:C:C2	2.87	0.43
1:AA:384:G:H2'	1:AA:385:C:C6	2.53	0.43
1:AA:777:A:C2	1:AA:778:G:H1'	2.54	0.43
1:AA:976:G:C8	1:AA:1362:C:N4	2.86	0.43
3:AC:77:ILE:HA	3:AC:84:ILE:HB	2.00	0.43
3:AC:155:GLY:HA2	3:AC:164:ARG:O	2.18	0.43
10:AJ:8:LEU:HD23	10:AJ:96:ILE:CG2	2.47	0.43
20:AT:75:ASN:O	20:AT:79:ARG:N	2.49	0.43
24:AY:49:G:C2	24:AY:66:G:C2	2.99	0.43
24:AY:59:A:H8	24:AY:59:A:O5'	2.01	0.43
26:BA:145:G:H2'	26:BA:146:U:O4'	2.18	0.43
26:BA:715:G:C8	26:BA:715:G:O2'	2.69	0.43
26:BA:852:C:P	38:BP:39:LYS:HB3	2.59	0.43
26:BA:1267:C:H2'	26:BA:1268:G:O5'	2.19	0.43
26:BA:2210:U:H2'	26:BA:2211:G:C5'	2.48	0.43
26:BA:2542:A:N3	26:BA:2542:A:H2'	2.32	0.43
26:BA:2761:A:N6	26:BA:2765:A:N1	2.61	0.43
26:BA:2890:C:C2	26:BA:2891:A:C8	3.07	0.43
30:BE:121:ASN:O	30:BE:122:PHE:C	2.56	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BQ:21:THR:HG21	39:BQ:101:ARG:HD2	1.99	0.43
39:BQ:133:ARG:O	39:BQ:134:ARG:CG	2.66	0.43
42:BT:31:SER:HB2	42:BT:32:TYR:CE2	2.53	0.43
42:BT:102:ILE:O	42:BT:106:SER:HB3	2.18	0.43
44:BV:35:LEU:HB2	44:BV:57:VAL:HG13	2.00	0.43
47:BY:28:LYS:O	47:BY:29:GLU:C	2.57	0.43
51:B2:25:VAL:HG21	51:B2:61:LEU:HD11	2.01	0.43
57:B8:26:LYS:CB	57:B8:44:LYS:HG3	2.49	0.43
1:CA:442:G:H2'	1:CA:470:G:N2	2.33	0.43
1:CA:1494:G:H2'	1:CA:1496:A:OP2	2.18	0.43
9:CI:28:VAL:HG22	9:CI:63:ILE:HB	2.01	0.43
15:CO:29:VAL:O	15:CO:32:LEU:N	2.51	0.43
26:DA:506:G:O2'	26:DA:507:A:OP2	2.36	0.43
26:DA:735:A:HO2'	26:DA:826:G:H5'	1.83	0.43
26:DA:822:G:C8	26:DA:839:A:C2	3.07	0.43
26:DA:1526:G:C2	26:DA:1559:U:O2	2.72	0.43
26:DA:1538:C:H4'	26:DA:1539:A:OP1	2.18	0.43
26:DA:1575:G:N3	26:DA:1575:G:H2'	2.34	0.43
26:DA:2031:G:H5"	45:DW:42:ARG:HB2	2.01	0.43
26:DA:2217:C:O2'	26:DA:2218:U:H5'	2.18	0.43
26:DA:2431:C:O5'	26:DA:2431:C:H6	2.02	0.43
26:DA:2442:U:O2'	26:DA:2444:A:N7	2.45	0.43
26:DA:2785:C:P	30:DE:164:ARG:HE	2.41	0.43
37:DO:23:ARG:HG3	37:DO:24:VAL:N	2.33	0.43
42:DT:11:GLU:N	42:DT:11:GLU:OE2	2.51	0.43
46:DX:12:VAL:CB	46:DX:17:ALA:HB1	2.48	0.43
48:DZ:57:ILE:HG22	48:DZ:58:VAL:N	2.34	0.43
54:D5:50:GLY:HA3	54:D5:56:LYS:HB3	2.00	0.43
58:D9:17:ILE:HG13	58:D9:26:ILE:HD11	1.99	0.43
1:AA:539:A:H2'	1:AA:540:G:H8	1.81	0.43
1:AA:582:U:C2	1:AA:760:G:C6	3.07	0.43
1:AA:689:C:H2'	1:AA:690:G:O4'	2.18	0.43
1:AA:836:G:C6	1:AA:851:G:C6	3.07	0.43
1:AA:908:A:H2'	1:AA:909:A:C8	2.54	0.43
1:AA:1260:C:H4'	1:AA:1284:C:H5'	2.01	0.43
1:AA:1355:G:H2'	1:AA:1356:G:C8	2.53	0.43
3:AC:110:ASN:O	3:AC:141:VAL:HG22	2.19	0.43
4:AD:61:LYS:HD3	4:AD:206:PHE:CE2	2.54	0.43
19:AS:40:ILE:HG21	19:AS:62:ILE:HD11	1.99	0.43
24:AY:33:U:C2'	24:AY:35:G:N7	2.81	0.43
26:BA:459:C:C4	26:BA:460:U:O4	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:643:G:H3'	26:BA:644:G:H21	1.84	0.43
26:BA:721:A:C8	26:BA:850:A:C6	3.07	0.43
26:BA:948:C:O2'	26:BA:949:C:H5'	2.19	0.43
26:BA:975:G:O2'	52:B3:24:LYS:HD3	2.19	0.43
26:BA:1087:G:N3	26:BA:1087:G:H2'	2.34	0.43
26:BA:1311:G:OP2	54:B5:19:ARG:NH1	2.51	0.43
26:BA:1357:U:OP2	46:BX:63:LYS:NZ	2.49	0.43
26:BA:1384:G:H21	26:BA:1648:A:H1'	1.81	0.43
26:BA:2096:U:C4	26:BA:2249:G:C6	3.07	0.43
26:BA:2118:C:H2'	26:BA:2119:U:O4'	2.17	0.43
26:BA:2323:U:C2'	26:BA:2324:C:H5'	2.48	0.43
26:BA:2343:U:H5'	26:BA:2347:A:N6	2.33	0.43
29:BD:69:ARG:HD2	29:BD:119:ALA:HB2	2.00	0.43
31:BF:61:GLY:O	31:BF:62:ARG:C	2.57	0.43
32:BG:96:ARG:O	32:BG:99:MET:N	2.51	0.43
33:BH:156:ALA:O	33:BH:158:HIS:N	2.51	0.43
44:BV:19:LYS:CG	44:BV:20:LEU:O	2.67	0.43
45:BW:17:VAL:O	45:BW:18:ARG:C	2.52	0.43
45:BW:57:ASN:O	45:BW:58:ALA:C	2.57	0.43
45:BW:92:ARG:O	45:BW:93:ALA:HB3	2.18	0.43
50:B1:83:GLU:O	50:B1:86:SER:OG	2.37	0.43
1:CA:548:C:O2'	8:CH:91:ARG:NH2	2.51	0.43
1:CA:917:G:H2'	1:CA:918:C:C6	2.53	0.43
1:CA:1146:C:H2'	1:CA:1147:G:C8	2.54	0.43
1:CA:1204:G:H2'	1:CA:1205:C:O4'	2.19	0.43
1:CA:1340:U:OP1	14:CN:35:ARG:HG2	2.19	0.43
1:CA:1425:G:O6	1:CA:1427:A:H2	2.01	0.43
7:CG:113:GLU:HB2	7:CG:119:ARG:HG2	1.99	0.43
8:CH:5:PRO:O	8:CH:8:ASP:HB3	2.18	0.43
18:CR:56:THR:HB	18:CR:58:LEU:HD13	2.00	0.43
26:DA:11:U:O2	26:DA:11:U:H2'	2.18	0.43
26:DA:594:A:H2'	26:DA:595:G:O4'	2.18	0.43
26:DA:1467:G:H4'	26:DA:1538:C:OP1	2.19	0.43
26:DA:1766:A:H2	26:DA:1768:G:H2'	1.84	0.43
26:DA:1967:U:C2	26:DA:1968:C:C5	3.06	0.43
26:DA:2367:C:O3'	49:D0:20:ARG:HD3	2.19	0.43
26:DA:2406:C:C2	26:DA:2407:G:C8	3.07	0.43
27:DB:83:G:H5"	52:D3:52:HIS:CE1	2.54	0.43
31:DF:41:LEU:O	31:DF:44:ARG:HG2	2.19	0.43
31:DF:66:PRO:O	31:DF:68:LYS:N	2.51	0.43
40:DR:101:ALA:O	40:DR:102:GLU:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DV:20:LEU:N	44:DV:20:LEU:HD12	2.34	0.43
1:AA:59:A:H2'	1:AA:59:A:N3	2.33	0.43
1:AA:923:A:H5"	5:AE:21:ALA:HB2	2.00	0.43
1:AA:1277:C:H3'	1:AA:1277:C:C6	2.52	0.43
13:AM:70:LEU:HD23	13:AM:70:LEU:C	2.39	0.43
22:AV:57:C:N4	32:BG:83:ARG:NH2	2.67	0.43
26:BA:35:G:O2'	26:BA:475:G:H2'	2.19	0.43
26:BA:123:A:C5	56:B7:18:PHE:CD1	3.06	0.43
26:BA:2727:C:H2'	26:BA:2728:U:H6	1.83	0.43
26:BA:2778:G:N3	26:BA:2778:G:H2'	2.34	0.43
26:BA:2896:U:O2'	26:BA:2897:C:H5'	2.19	0.43
27:BB:105:A:OP1	48:BZ:72:ARG:NH2	2.51	0.43
29:BD:35:LYS:CG	29:BD:63:ARG:HG3	2.48	0.43
31:BF:65:TRP:CZ3	31:BF:72:ARG:HB2	2.54	0.43
33:BH:28:GLY:HA3	33:BH:79:VAL:HB	2.01	0.43
34:BI:77:LEU:O	34:BI:78:THR:HB	2.19	0.43
38:BP:46:LYS:O	38:BP:47:ASP:HB2	2.19	0.43
42:BT:83:ILE:HD11	42:BT:84:GLN:NE2	2.32	0.43
45:BW:6:ILE:HA	45:BW:104:THR:HA	2.00	0.43
46:BX:11:PRO:HD3	51:B2:37:PHE:CD1	2.53	0.43
50:B1:45:ASN:C	50:B1:45:ASN:HD22	2.21	0.43
55:B6:51:GLU:O	55:B6:52:VAL:CB	2.67	0.43
1:CA:1291:G:C6	1:CA:1311:A:C2	3.07	0.43
3:CC:103:VAL:HG12	3:CC:104:GLN:N	2.34	0.43
3:CC:157:ILE:HD13	3:CC:166:GLU:HB2	2.01	0.43
15:CO:7:GLU:O	15:CO:11:VAL:HG23	2.19	0.43
22:CV:74:A:H5'	22:CV:75:C:O5'	2.18	0.43
26:DA:555:C:OP1	26:DA:583:G:N1	2.51	0.43
26:DA:722:A:H2	26:DA:848:A:H61	1.65	0.43
26:DA:1383:G:N7	46:DX:62:LYS:NZ	2.52	0.43
26:DA:1562:G:C2	26:DA:1563:C:C2	3.06	0.43
26:DA:1574:A:N7	26:DA:1575:G:H8	2.16	0.43
26:DA:1984:U:H4'	26:DA:1985:G:OP1	2.18	0.43
26:DA:2313:G:C6	26:DA:2314:G:C5	3.07	0.43
29:DD:46:GLN:N	29:DD:46:GLN:OE1	2.52	0.43
30:DE:110:GLY:O	40:DR:2:ARG:HD3	2.17	0.43
34:DI:61:ARG:HA	34:DI:64:GLU:HB2	2.01	0.43
37:DO:77:ILE:HD13	42:DT:74:ARG:HD3	2.01	0.43
39:DQ:132:VAL:HG11	48:DZ:81:ARG:HE	1.82	0.43
41:DS:35:ILE:H	41:DS:53:SER:HB2	1.83	0.43
41:DS:101:LEU:HD12	41:DS:102:ALA:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:175:C:H2'	1:AA:176:C:H6	1.84	0.43
1:AA:798:G:OP2	11:AK:122:LYS:NZ	2.51	0.43
1:AA:832:C:N4	1:AA:855:G:C6	2.86	0.43
1:AA:1162:C:H2'	1:AA:1163:C:C6	2.54	0.43
7:AG:40:ALA:O	7:AG:44:TYR:CD1	2.72	0.43
8:AH:20:TYR:CE1	8:AH:76:PRO:HG2	2.54	0.43
9:AI:4:TYR:N	9:AI:4:TYR:CD1	2.87	0.43
15:AO:39:LEU:HD12	15:AO:56:LEU:HD13	2.00	0.43
22:AV:48:U:H3'	22:AV:49:C:C5'	2.49	0.43
26:BA:73:G:H4'	51:B2:55:ARG:NH1	2.34	0.43
26:BA:1270:G:H4'	44:BV:84:LYS:HB3	2.01	0.43
26:BA:2459:A:OP1	26:BA:2510:C:OP1	2.37	0.43
26:BA:2482:C:H3'	26:BA:2483:G:H8	1.83	0.43
34:BI:14:ASP:N	34:BI:17:GLN:OE1	2.52	0.43
34:BI:118:LYS:HG2	34:BI:119:PRO:HD2	2.01	0.43
37:BO:80:ASP:OD2	42:BT:64:ARG:NH2	2.50	0.43
37:BO:87:ILE:CG2	37:BO:91:LEU:HA	2.49	0.43
38:BP:57:THR:OG1	38:BP:59:LEU:HB2	2.19	0.43
39:BQ:55:VAL:CG2	39:BQ:56:ARG:N	2.81	0.43
1:CA:67:G:O4'	1:CA:168:U:C4	2.72	0.43
1:CA:433:U:OP1	4:CD:155:LEU:HD22	2.19	0.43
1:CA:814:G:N2	1:CA:835:C:C2	2.87	0.43
1:CA:908:C:C4	1:CA:909:C:C5	3.07	0.43
1:CA:937:A:O2'	1:CA:939:U:H5'	2.19	0.43
1:CA:1140:A:H4'	1:CA:1141:C:O5'	2.19	0.43
24:CY:49:G:N2	24:CY:66:G:H1'	2.33	0.43
26:DA:271:U:H4'	26:DA:272:G:C6	2.54	0.43
26:DA:717:C:H41	38:DP:42:SER:HA	1.84	0.43
26:DA:801:C:H2'	26:DA:802:C:C6	2.54	0.43
26:DA:1213:G:C2	26:DA:1226:A:C2	3.07	0.43
26:DA:1311:G:OP2	54:D5:19:ARG:NH1	2.52	0.43
26:DA:1540:A:N3	26:DA:1541:A:C2	2.87	0.43
26:DA:2360:G:OP2	57:D8:42:ARG:NE	2.45	0.43
27:DB:80:U:H2'	27:DB:81:G:H21	1.84	0.43
32:DG:9:ARG:C	32:DG:11:TYR:H	2.22	0.43
40:DR:2:ARG:HD3	40:DR:5:LYS:CE	2.49	0.43
44:DV:18:LEU:N	44:DV:18:LEU:CD1	2.82	0.43
48:DZ:15:PRO:O	48:DZ:19:ARG:HG2	2.19	0.43
1:AA:250:A:O2'	1:AA:251:G:OP2	2.33	0.43
1:AA:437:U:C5	1:AA:438:G:C5	3.07	0.43
1:AA:450:G:N7	1:AA:481:G:C6	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:500:G:C6	1:AA:501:C:C4	3.06	0.43
1:AA:540:G:C6	1:AA:541:G:C5	3.06	0.43
1:AA:818:G:C6	1:AA:820:U:O2'	2.71	0.43
10:AJ:4:ILE:HD11	10:AJ:77:PRO:HB3	2.01	0.43
23:AW:58:A:O3'	23:AW:59:U:H5	2.02	0.43
26:BA:415:G:H1	38:BP:71:VAL:HG12	1.84	0.43
26:BA:431:U:O2	26:BA:431:U:O4'	2.36	0.43
26:BA:1530:G:O6	26:BA:1549:C:N4	2.52	0.43
26:BA:1670:C:H2'	26:BA:1671:G:O4'	2.19	0.43
26:BA:2858:U:H1'	26:BA:2875:U:H6	1.84	0.43
31:BF:64:ILE:O	31:BF:65:TRP:HD1	2.02	0.43
32:BG:83:ARG:O	32:BG:84:LYS:C	2.56	0.43
37:BO:7:TYR:CZ	37:BO:44:LYS:HG3	2.53	0.43
38:BP:17:LYS:C	38:BP:19:VAL:N	2.71	0.43
42:BT:28:VAL:HG22	42:BT:46:GLU:CA	2.49	0.43
46:BX:37:THR:O	46:BX:38:GLU:C	2.56	0.43
49:B0:43:THR:OG1	49:B0:46:LYS:HG2	2.19	0.43
51:B2:3:LEU:O	51:B2:7:ARG:HG3	2.19	0.43
1:CA:1101:C:H5"	9:CI:104:ARG:CD	2.49	0.43
1:CA:1208:C:OP1	13:CM:91:ARG:NH1	2.52	0.43
1:CA:1282:G:O2'	1:CA:1283:U:OP2	2.36	0.43
1:CA:1391:A:HO2'	26:DA:1937:A:H61	1.67	0.43
3:CC:46:GLU:O	3:CC:47:LEU:CB	2.67	0.43
3:CC:94:LEU:HD12	3:CC:95:THR:N	2.33	0.43
4:CD:187:ARG:NH2	4:CD:193:ASP:OD2	2.51	0.43
20:CT:26:ASN:CB	20:CT:71:THR:HG23	2.47	0.43
22:CV:55:U:H2'	22:CV:56:U:O4'	2.18	0.43
24:CY:7:A:C2	24:CY:66:G:C2	2.71	0.43
24:CY:49:G:C2	24:CY:66:G:C2	2.99	0.43
26:DA:435:C:O2'	26:DA:436:G:H5'	2.17	0.43
26:DA:546:G:H2'	26:DA:547:C:C6	2.54	0.43
26:DA:706:G:C6	26:DA:707:C:C4	3.07	0.43
26:DA:1346:A:C2'	26:DA:1347:A:H3'	2.49	0.43
26:DA:1423:A:O2'	26:DA:1424:A:H5"	2.19	0.43
26:DA:1530:G:H2'	26:DA:1531:A:C8	2.54	0.43
30:DE:108:SER:O	30:DE:162:ALA:HA	2.19	0.43
47:DY:29:GLU:OE1	47:DY:29:GLU:N	2.51	0.43
56:D7:27:GLY:O	56:D7:30:VAL:HB	2.19	0.43
1:AA:652:U:C4	1:AA:752:G:N3	2.87	0.42
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	2.00	0.42
2:AB:102:LEU:N	2:AB:102:LEU:HD12	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:134:ASP:OD2	4:AD:134:ASP:N	2.51	0.42
10:AJ:4:ILE:HB	10:AJ:74:ILE:HD11	2.01	0.42
13:AM:65:LYS:CA	13:AM:66:LEU:CB	2.95	0.42
23:AW:34:G:C2	23:AW:35:A:N3	2.87	0.42
26:BA:857:U:C2	26:BA:1296:C:C5	3.07	0.42
26:BA:906:U:O2'	26:BA:907:A:H5'	2.19	0.42
26:BA:1187:A:H5'	26:BA:1187:A:H8	1.84	0.42
26:BA:1387:A:C2	26:BA:1390:C:C5	3.07	0.42
26:BA:1387:A:C2	26:BA:1390:C:C6	3.07	0.42
26:BA:2602:C:OP1	29:BD:239:ARG:HG2	2.19	0.42
26:BA:2752:A:C6	26:BA:2753:A:C6	3.07	0.42
27:BB:73:A:C4	27:BB:105:A:C2	3.07	0.42
33:BH:158:HIS:HE2	33:BH:170:ARG:C	2.22	0.42
38:BP:146:VAL:HG13	38:BP:147:LEU:N	2.34	0.42
39:BQ:118:LEU:O	39:BQ:119:ARG:C	2.58	0.42
41:BS:95:HIS:O	41:BS:97:ARG:HD3	2.19	0.42
53:B4:36:VAL:HB	53:B4:37:PRO:HD2	2.01	0.42
55:B6:26:ASN:C	55:B6:27:LYS:HD3	2.40	0.42
1:CA:1427:A:N7	42:DT:118:ARG:HD3	2.34	0.42
5:CE:92:LYS:HB3	5:CE:119:LEU:HB2	2.00	0.42
26:DA:110:G:H5"	26:DA:111:U:OP1	2.19	0.42
26:DA:773:A:H2	29:DD:9:TYR:CD2	2.36	0.42
26:DA:1173:A:N3	26:DA:2527:G:O2'	2.42	0.42
26:DA:1439:U:H2'	26:DA:1440:A:O4'	2.19	0.42
26:DA:2692:C:H5	26:DA:2737:A:H62	1.66	0.42
26:DA:2759:G:O2'	33:DH:67:LEU:HD13	2.19	0.42
32:DG:56:ALA:O	32:DG:59:GLU:OE1	2.37	0.42
36:DN:55:VAL:HG13	36:DN:56:ASN:N	2.34	0.42
38:DP:64:LYS:C	38:DP:66:GLY:N	2.72	0.42
39:DQ:19:GLY:O	39:DQ:20:ALA:HB3	2.18	0.42
42:DT:50:ILE:HA	42:DT:99:LEU:CD1	2.49	0.42
43:DU:34:LYS:HA	43:DU:34:LYS:CE	2.49	0.42
43:DU:83:LEU:HG	43:DU:88:ILE:HD11	2.01	0.42
46:DX:35:THR:O	46:DX:36:LYS:C	2.57	0.42
1:AA:377:G:OP1	16:AP:3:LYS:CD	2.67	0.42
1:AA:910:C:O5'	1:AA:910:C:H6	2.02	0.42
1:AA:1065:U:O2'	1:AA:1066:C:OP2	2.34	0.42
1:AA:1401:G:C2	1:AA:1402:C:H1'	2.53	0.42
2:AB:60:ASP:HB3	2:AB:64:ARG:NH2	2.34	0.42
20:AT:89:ARG:CZ	20:AT:104:LEU:HD21	2.49	0.42
23:AW:47:U:O2	23:AW:47:U:O4'	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:20:U:H2'	24:AY:21:G:H4'	2.01	0.42
26:BA:126:C:H6	26:BA:126:C:H5"	1.85	0.42
26:BA:939:C:O2'	26:BA:940:U:H5'	2.19	0.42
26:BA:970:C:C2'	26:BA:971:A:O5'	2.67	0.42
26:BA:1098:C:O2'	35:BJ:31:ALA:HA	2.20	0.42
26:BA:1857:C:C5'	26:BA:1992:A:H4'	2.49	0.42
26:BA:2302:U:H5"	26:BA:2391:C:O2'	2.19	0.42
26:BA:2487:A:N1	26:BA:2488:C:C6	2.86	0.42
26:BA:2583:A:C5	30:BE:144:ARG:NH1	2.87	0.42
26:BA:2647:U:H4'	30:BE:80:GLU:CD	2.40	0.42
26:BA:2701:C:OP2	40:BR:14:SER:HB3	2.19	0.42
29:BD:28:GLU:O	29:BD:29:PRO:C	2.56	0.42
33:BH:13:LYS:HA	33:BH:13:LYS:HE2	2.00	0.42
33:BH:149:ARG:O	33:BH:153:LYS:N	2.51	0.42
38:BP:23:PRO:HB2	38:BP:33:ARG:CG	2.49	0.42
38:BP:57:THR:OG1	38:BP:59:LEU:N	2.52	0.42
38:BP:144:GLU:N	38:BP:145:PRO:CD	2.82	0.42
39:BQ:37:LEU:HD11	39:BQ:130:LYS:HB2	2.00	0.42
42:BT:96:ARG:CZ	42:BT:96:ARG:HB3	2.48	0.42
42:BT:107:ASP:OD1	42:BT:107:ASP:N	2.51	0.42
1:CA:143:G:O2'	1:CA:144:A:H5'	2.19	0.42
1:CA:566:U:OP1	15:CO:68:ARG:NH2	2.52	0.42
4:CD:159:ARG:O	4:CD:160:GLN:C	2.57	0.42
26:DA:143:C:C2	26:DA:144:G:C8	3.08	0.42
26:DA:414:G:C6	26:DA:416:A:C2	3.08	0.42
26:DA:524:G:N2	26:DA:526:A:H3'	2.33	0.42
26:DA:903:C:C4	26:DA:904:U:O4	2.71	0.42
26:DA:1022:G:C6	26:DA:1032:G:C6	3.07	0.42
26:DA:1050:C:C2	26:DA:1188:A:C5	3.08	0.42
26:DA:1628:C:O2'	26:DA:1631:A:H8	2.00	0.42
26:DA:2799:C:O2'	30:DE:61:ARG:HD3	2.19	0.42
27:DB:78:A:H2'	27:DB:79:C:O4'	2.19	0.42
34:DI:6:LEU:HD12	34:DI:34:GLY:O	2.18	0.42
37:DO:3:GLN:HB2	37:DO:4:PRO:HD2	2.01	0.42
39:DQ:2:LEU:HD22	39:DQ:47:ILE:HG21	2.01	0.42
41:DS:20:ARG:NE	41:DS:20:ARG:CA	2.80	0.42
45:DW:64:MET:O	45:DW:65:LEU:CB	2.67	0.42
46:DX:21:PHE:CE2	46:DX:26:TYR:CD2	3.06	0.42
46:DX:83:VAL:HG12	46:DX:87:GLN:HB2	2.01	0.42
48:DZ:65:GLN:HB3	48:DZ:67:LEU:HD11	2.00	0.42
57:D8:33:ASN:ND2	57:D8:33:ASN:H	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:319:G:C2	1:AA:320:C:C2	3.07	0.42
1:AA:890:G:O2'	1:AA:906:G:O6	2.29	0.42
2:AB:182:ILE:O	2:AB:183:PRO:C	2.58	0.42
15:AO:66:LEU:O	15:AO:69:TYR:N	2.52	0.42
22:AV:4:G:O2'	22:AV:5:G:OP2	2.37	0.42
23:AW:28:G:H2'	23:AW:29:G:H8	1.85	0.42
24:AY:51:G:N3	24:AY:64:G:C2	2.86	0.42
26:BA:138:A:C8	26:BA:1453:C:O2'	2.63	0.42
26:BA:651:A:C5	26:BA:661:A:N7	2.87	0.42
26:BA:1314:A:O2'	26:BA:1370:G:O6	2.33	0.42
26:BA:2518:C:H2'	26:BA:2519:G:O4'	2.19	0.42
27:BB:32:C:C2	27:BB:51:G:N2	2.87	0.42
30:BE:101:ARG:NH1	30:BE:169:ASN:O	2.51	0.42
43:BU:66:ASN:HD21	43:BU:70:ARG:HE	1.65	0.42
45:BW:27:LYS:O	45:BW:28:SER:C	2.55	0.42
57:B8:21:LYS:HD3	57:B8:48:PHE:CE2	2.53	0.42
1:CA:61:A:P	1:CA:61:A:H8	2.43	0.42
1:CA:931:G:C6	1:CA:932:G:C5	3.07	0.42
1:CA:978:U:H2'	1:CA:979:A:C8	2.55	0.42
1:CA:1258:G:N1	1:CA:1259:C:O2	2.52	0.42
2:CB:77:ALA:HA	2:CB:80:ILE:HD13	2.01	0.42
5:CE:6:PHE:HB2	5:CE:34:VAL:HG22	2.01	0.42
26:DA:174:G:O2'	26:DA:175:G:H5'	2.19	0.42
26:DA:504:A:HO2'	26:DA:506:G:H8	1.66	0.42
26:DA:667:A:O2'	26:DA:668:A:H5'	2.19	0.42
26:DA:781:A:C8	26:DA:782:C:C5	3.07	0.42
26:DA:866:A:H2'	26:DA:867:A:O4'	2.20	0.42
26:DA:931:C:C2	26:DA:932:C:N4	2.87	0.42
26:DA:1309:G:H2'	26:DA:2035:A:N6	2.34	0.42
26:DA:1829:G:N7	29:DD:179:SER:OG	2.43	0.42
26:DA:1873:C:H5'	29:DD:253:GLN:OE1	2.19	0.42
26:DA:2476:C:O2	26:DA:2497:G:C2	2.72	0.42
48:DZ:77:ASP:O	48:DZ:78:LYS:HB2	2.19	0.42
50:D1:5:CYS:SG	50:D1:62:VAL:CG2	3.04	0.42
1:AA:721:G:C6	1:AA:733:A:C2	3.07	0.42
1:AA:958:A:N6	19:AS:77:THR:O	2.49	0.42
1:AA:1319:A:OP1	19:AS:10:PHE:CE1	2.73	0.42
8:AH:6:ILE:HD12	8:AH:6:ILE:H	1.85	0.42
11:AK:73:MET:CE	11:AK:103:LEU:HD22	2.48	0.42
23:AW:16:U:H3'	23:AW:17:C:C5'	2.48	0.42
24:AY:3:A:C2	24:AY:71:A:C2	3.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:67:C:O2'	26:BA:68:G:H5'	2.20	0.42
26:BA:258:A:O2'	26:BA:259:A:H5'	2.18	0.42
26:BA:484:U:OP2	56:B7:39:ARG:NH1	2.52	0.42
26:BA:565:C:H2'	26:BA:566:C:C6	2.55	0.42
26:BA:634:C:C2'	26:BA:635:G:H5'	2.49	0.42
26:BA:1376:A:HO2'	26:BA:1377:G:H8	1.66	0.42
26:BA:1614:G:H21	29:BD:58:HIS:CE1	2.37	0.42
26:BA:1918:G:H2'	26:BA:1919:U:O4'	2.20	0.42
26:BA:2213:G:H2'	26:BA:2214:G:H5'	2.02	0.42
26:BA:2352:G:H2'	26:BA:2353:C:H6	1.82	0.42
26:BA:2500:G:C6	26:BA:2501:G:C6	3.07	0.42
26:BA:2504:U:H2'	26:BA:2505:G:O4'	2.20	0.42
26:BA:2820:G:OP1	30:BE:60:ASN:CB	2.68	0.42
28:BC:47:LEU:N	28:BC:47:LEU:HD23	2.34	0.42
30:BE:65:GLY:O	30:BE:67:PHE:N	2.52	0.42
31:BF:65:TRP:HZ3	31:BF:73:ALA:O	2.03	0.42
32:BG:64:THR:OG1	32:BG:94:LEU:HD11	2.19	0.42
34:BI:94:ALA:CB	34:BI:114:LEU:HD11	2.49	0.42
37:BO:22:ILE:O	37:BO:22:ILE:HG22	2.18	0.42
38:BP:85:LEU:HB3	38:BP:114:ILE:CD1	2.50	0.42
42:BT:110:ILE:HG23	42:BT:114:LEU:HD12	2.01	0.42
44:BV:14:VAL:O	44:BV:15:GLU:HG3	2.19	0.42
57:B8:26:LYS:HB3	57:B8:44:LYS:HG3	2.01	0.42
1:CA:1036:G:N7	1:CA:1181:U:H3'	2.34	0.42
1:CA:1457:C:H2'	1:CA:1458:G:H8	1.84	0.42
2:CB:11:LEU:HD11	2:CB:217:ARG:NH2	2.34	0.42
2:CB:11:LEU:O	2:CB:16:HIS:CE1	2.72	0.42
2:CB:84:GLU:HB3	2:CB:219:VAL:CG2	2.49	0.42
5:CE:51:VAL:HB	5:CE:52:PRO:HD3	2.01	0.42
9:CI:71:SER:HA	9:CI:74:ILE:HD12	2.00	0.42
13:CM:10:PRO:CG	13:CM:18:ALA:HB1	2.50	0.42
13:CM:97:PRO:HA	13:CM:110:ARG:HD3	2.02	0.42
13:CM:116:THR:O	13:CM:117:VAL:C	2.58	0.42
24:CY:61:C:OP2	24:CY:62:G:OP2	2.37	0.42
26:DA:646:G:O2'	26:DA:647:G:H5'	2.19	0.42
26:DA:800:C:O4'	26:DA:1663:A:H2	2.02	0.42
26:DA:1209:G:C5	26:DA:1210:U:C4	3.08	0.42
26:DA:1517:A:OP2	26:DA:1566:G:N1	2.42	0.42
26:DA:1723:A:H2'	26:DA:1724:G:C8	2.55	0.42
26:DA:1902:C:H2'	26:DA:1902:C:O2	2.20	0.42
26:DA:2079:A:H5"	26:DA:2080:A:OP2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DA:2798:U:C4	26:DA:2799:C:C5	3.08	0.42
29:DD:95:LEU:HD12	29:DD:95:LEU:O	2.20	0.42
32:DG:129:GLY:O	32:DG:130:ASN:CB	2.67	0.42
39:DQ:26:TYR:HA	48:DZ:81:ARG:HH22	1.84	0.42
48:DZ:29:TYR:HA	48:DZ:33:LEU:O	2.20	0.42
1:AA:302:G:O2'	1:AA:556:C:H5"	2.20	0.42
1:AA:509:A:H2'	1:AA:510:A:C8	2.54	0.42
1:AA:737:A:H2'	1:AA:738:C:H6	1.83	0.42
1:AA:1224:G:O2'	1:AA:1322:C:OP2	2.37	0.42
1:AA:1229:A:H2'	1:AA:1230:C:H6	1.84	0.42
3:AC:11:ARG:O	3:AC:13:GLY:N	2.52	0.42
4:AD:25:ARG:O	4:AD:27:TYR:N	2.52	0.42
26:BA:490:G:H2'	26:BA:491:A:C8	2.55	0.42
26:BA:928:G:H2'	26:BA:929:G:C8	2.54	0.42
26:BA:1013:U:H2'	26:BA:1014:C:C6	2.54	0.42
26:BA:1044:U:H2'	26:BA:1045:A:H5'	2.02	0.42
26:BA:1272:G:OP1	43:BU:13:LYS:NZ	2.48	0.42
26:BA:1449:C:O2'	26:BA:1450:U:H5'	2.20	0.42
26:BA:1815:A:O2'	26:BA:1816:A:H2'	2.19	0.42
26:BA:1818:C:C2	26:BA:1819:A:C8	3.07	0.42
26:BA:2735:C:C2'	26:BA:2736:C:O5'	2.67	0.42
27:BB:17:C:H2'	27:BB:18:G:O4'	2.19	0.42
29:BD:22:SER:OG	29:BD:23:GLU:N	2.51	0.42
33:BH:103:LEU:O	33:BH:115:VAL:N	2.50	0.42
37:BO:89:ASN:C	37:BO:91:LEU:H	2.23	0.42
37:BO:114:ILE:H	37:BO:114:ILE:CD1	2.30	0.42
38:BP:62:LEU:N	38:BP:62:LEU:CD2	2.83	0.42
40:BR:21:TYR:OH	40:BR:43:GLU:HG2	2.19	0.42
40:BR:67:LEU:O	40:BR:70:LEU:O	2.38	0.42
44:BV:79:VAL:O	44:BV:79:VAL:HG13	2.19	0.42
49:B0:68:GLU:CG	49:B0:80:HIS:HB2	2.49	0.42
55:B6:17:LYS:O	55:B6:18:ARG:CB	2.66	0.42
57:B8:61:LEU:H	57:B8:61:LEU:HG	1.47	0.42
1:CA:26:C:C5	1:CA:542:G:N2	2.88	0.42
1:CA:522:G:OP2	12:CL:115:LYS:HG3	2.20	0.42
2:CB:112:VAL:HG13	2:CB:153:ARG:HG3	2.00	0.42
24:CY:20:U:H2'	24:CY:21:G:H4'	2.01	0.42
24:CY:50:G:N2	24:CY:51:G:C4	2.88	0.42
26:DA:24:U:H2'	26:DA:25:G:C8	2.55	0.42
26:DA:193:G:O2'	26:DA:194:U:OP2	2.37	0.42
26:DA:752:A:C2'	26:DA:753:G:O5'	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DA:882:G:C5	26:DA:883:C:C4	3.07	0.42
26:DA:1358:U:H3'	26:DA:1359:C:H5'	2.01	0.42
26:DA:1454:C:H2'	26:DA:1455:G:O4'	2.19	0.42
26:DA:1698:A:O3'	26:DA:1699:G:C8	2.72	0.42
26:DA:1956:G:H1'	26:DA:1985:G:N2	2.34	0.42
26:DA:2314:G:O2'	32:DG:132:ASN:HB2	2.19	0.42
26:DA:2696:G:O2'	26:DA:2738:U:H5	2.03	0.42
26:DA:2810:A:O2'	26:DA:2903:U:H5'	2.19	0.42
27:DB:33:G:C6	27:DB:34:U:N3	2.87	0.42
35:DJ:118:ALA:HB3	35:DJ:121:ALA:HB3	2.01	0.42
44:DV:22:VAL:O	44:DV:23:GLU:CG	2.67	0.42
45:DW:62:HIS:O	45:DW:63:ASP:C	2.57	0.42
45:DW:68:ARG:O	45:DW:109:GLU:HA	2.20	0.42
52:D3:12:PRO:O	52:D3:14:GLY:N	2.52	0.42
1:AA:11:G:C5	1:AA:12:U:C4	3.08	0.42
1:AA:632:A:C8	1:AA:633:G:C8	3.07	0.42
1:AA:859:A:H2'	1:AA:860:A:O4'	2.18	0.42
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.19	0.42
1:AA:1126:U:C2'	1:AA:1127:G:O5'	2.68	0.42
2:AB:187:LEU:HD13	2:AB:187:LEU:O	2.19	0.42
7:AG:26:PHE:O	7:AG:30:ILE:HG12	2.19	0.42
7:AG:75:VAL:HB	7:AG:86:GLN:HB2	2.02	0.42
8:AH:20:TYR:HA	8:AH:65:TYR:CE2	2.54	0.42
19:AS:65:ASN:OD1	19:AS:65:ASN:N	2.52	0.42
24:AY:3:A:C6	24:AY:71:A:N1	2.76	0.42
26:BA:296:C:H2'	26:BA:297:G:OP1	2.19	0.42
26:BA:459:C:H2'	26:BA:460:U:C6	2.54	0.42
27:BB:11:C:OP2	27:BB:12:C:H5	2.03	0.42
30:BE:56:PRO:O	30:BE:57:LYS:C	2.58	0.42
30:BE:111:ARG:HG3	40:BR:2:ARG:HG2	2.00	0.42
31:BF:64:ILE:HD12	31:BF:64:ILE:HA	1.87	0.42
38:BP:23:PRO:C	38:BP:33:ARG:NH1	2.73	0.42
47:BY:30:VAL:CG1	47:BY:31:LEU:N	2.83	0.42
47:BY:33:LYS:HD3	47:BY:34:LYS:HE3	2.02	0.42
48:BZ:175:VAL:HB	48:BZ:176:PRO:HD2	2.00	0.42
1:CA:400:U:O2'	1:CA:401:U:H5'	2.19	0.42
1:CA:489:G:C6	1:CA:519:A:C2	3.08	0.42
1:CA:667:G:C6	1:CA:668:A:C6	3.08	0.42
1:CA:674:G:C6	1:CA:675:G:C6	3.07	0.42
1:CA:730:A:H2'	1:CA:731:C:C6	2.55	0.42
1:CA:993:A:H2'	1:CA:994:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:48:ALA:HB2	14:CN:53:LEU:HD12	2.01	0.42
19:CS:6:LYS:C	19:CS:7:LYS:HE3	2.39	0.42
26:DA:351:U:H4'	47:DY:68:HIS:CG	2.54	0.42
26:DA:393:C:C2'	26:DA:394:C:H5'	2.50	0.42
26:DA:472:A:H4'	26:DA:474:A:N7	2.33	0.42
26:DA:1702:C:C2	26:DA:1703:C:C5	3.08	0.42
26:DA:2111:G:H21	50:D1:45:ASN:ND2	2.17	0.42
26:DA:2213:G:C2'	26:DA:2214:G:H5'	2.48	0.42
26:DA:2595:U:O2	26:DA:2595:U:O4'	2.38	0.42
29:DD:270:ILE:HD12	29:DD:270:ILE:O	2.18	0.42
31:DF:181:LEU:O	31:DF:205:ARG:NH2	2.51	0.42
36:DN:39:ARG:C	43:DU:67:ALA:HB1	2.40	0.42
37:DO:98:VAL:HG12	37:DO:117:LEU:HB3	2.02	0.42
41:DS:16:ASN:O	41:DS:19:LYS:N	2.40	0.42
42:DT:57:PHE:O	42:DT:58:ASN:C	2.58	0.42
43:DU:88:ILE:HG22	44:DV:47:VAL:HG23	2.01	0.42
1:AA:244:U:C6	1:AA:894:G:N2	2.87	0.42
1:AA:472:A:C5	1:AA:473:G:C8	3.08	0.42
1:AA:901:A:N7	1:AA:902:G:H1'	2.34	0.42
7:AG:47:CYS:O	7:AG:50:ILE:HB	2.20	0.42
12:AL:85:ILE:HD12	12:AL:100:ILE:HA	2.02	0.42
17:AQ:33:GLY:O	17:AQ:34:LYS:O	2.38	0.42
23:AW:35:A:C2	23:AW:36:A:N1	2.87	0.42
26:BA:2164:C:O2	26:BA:2170:G:C2	2.73	0.42
26:BA:2193:U:H1'	26:BA:2194:A:OP1	2.19	0.42
26:BA:2293:G:H5'	26:BA:2400:G:H1'	2.00	0.42
26:BA:2473:U:C2	26:BA:2500:G:N2	2.88	0.42
30:BE:116:VAL:HG22	30:BE:117:MET:N	2.35	0.42
39:BQ:26:TYR:HB2	39:BQ:137:TYR:HB3	2.01	0.42
40:BR:77:ARG:O	40:BR:78:LYS:C	2.58	0.42
41:BS:12:PHE:H	41:BS:12:PHE:HD2	1.68	0.42
44:BV:18:LEU:HD13	44:BV:19:LYS:H	1.85	0.42
48:BZ:104:PHE:HZ	48:BZ:172:ALA:HB2	1.85	0.42
53:B4:46:ASN:HD22	53:B4:47:VAL:N	2.16	0.42
58:B9:14:CYS:SG	58:B9:32:HIS:CG	3.08	0.42
1:CA:451:C:C2	1:CA:462:G:N2	2.88	0.42
1:CA:643:U:C2	1:CA:644:G:C8	3.08	0.42
1:CA:741:U:H2'	1:CA:742:G:O4'	2.20	0.42
1:CA:934:U:H2'	1:CA:935:U:O4'	2.19	0.42
1:CA:1028:C:C2'	1:CA:1029:A:O5'	2.67	0.42
2:CB:92:TYR:CG	2:CB:151:GLY:HA3	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:121:LEU:HA	2:CB:124:SER:CB	2.49	0.42
3:CC:46:GLU:O	3:CC:47:LEU:HB2	2.20	0.42
3:CC:124:ILE:O	3:CC:127:ARG:N	2.51	0.42
14:CN:4:LYS:O	14:CN:8:GLU:HG2	2.20	0.42
18:CR:67:ALA:HA	18:CR:70:ILE:HD12	2.02	0.42
26:DA:158:U:H4'	26:DA:159:G:N9	2.34	0.42
26:DA:365:G:H2'	26:DA:366:C:O5'	2.19	0.42
26:DA:716:A:H5'	38:DP:43:GLY:O	2.19	0.42
26:DA:840:G:H2'	26:DA:841:C:C6	2.55	0.42
26:DA:1041:A:N3	26:DA:1042:G:C8	2.87	0.42
26:DA:1209:G:C6	26:DA:1210:U:C4	3.08	0.42
60:DC:74:VAL:HA	60:DC:119:ALA:HB3	2.01	0.42
32:DG:20:ILE:O	32:DG:24:GLY:N	2.52	0.42
39:DQ:42:ILE:HD13	39:DQ:97:VAL:HB	2.00	0.42
39:DQ:54:MET:SD	39:DQ:118:LEU:HD23	2.59	0.42
39:DQ:83:MET:N	39:DQ:83:MET:SD	2.92	0.42
44:DV:21:ARG:HG2	44:DV:91:TYR:CG	2.55	0.42
47:DY:88:LYS:HB3	47:DY:90:LEU:HD23	2.02	0.42
55:D6:9:LEU:HD22	55:D6:10:LEU:N	2.34	0.42
1:AA:56:U:H2'	1:AA:57:G:C8	2.54	0.42
1:AA:59:A:H5'	1:AA:60:A:H5"	2.02	0.42
1:AA:293:G:C5	1:AA:294:U:C5	3.07	0.42
1:AA:858:G:H8	1:AA:858:G:OP2	2.03	0.42
2:AB:15:VAL:HG23	2:AB:209:ARG:HE	1.84	0.42
2:AB:105:PHE:O	2:AB:106:LYS:C	2.57	0.42
4:AD:88:VAL:HG13	5:AE:97:GLY:HA2	1.99	0.42
5:AE:11:ILE:HD12	5:AE:31:LEU:HD13	2.01	0.42
5:AE:12:LEU:CD1	5:AE:31:LEU:HB3	2.50	0.42
16:AP:39:TYR:CE1	16:AP:41:PRO:HA	2.54	0.42
19:AS:11:VAL:HG23	19:AS:38:SER:HB2	2.02	0.42
22:AV:26:C:H2'	22:AV:27:G:O4'	2.20	0.42
26:BA:826:G:N3	26:BA:829:A:N6	2.67	0.42
26:BA:874:U:O2	26:BA:874:U:C3'	2.67	0.42
26:BA:1305:G:H2'	26:BA:1306:C:C6	2.55	0.42
26:BA:2215:G:C5	26:BA:2216:C:C5	3.08	0.42
26:BA:2584:C:OP1	26:BA:2585:G:OP1	2.37	0.42
26:BA:2799:C:O2	30:BE:61:ARG:HD2	2.20	0.42
26:BA:2807:G:H2'	26:BA:2807:G:N3	2.35	0.42
29:BD:166:GLN:HB3	29:BD:174:ILE:HG22	2.01	0.42
29:BD:176:ARG:HB3	29:BD:176:ARG:CZ	2.49	0.42
32:BG:53:LEU:C	32:BG:55:LYS:N	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BH:19:VAL:HG11	33:BH:43:VAL:O	2.19	0.42
33:BH:55:PRO:O	33:BH:56:SER:C	2.57	0.42
38:BP:10:PRO:O	38:BP:11:GLY:C	2.58	0.42
40:BR:23:ASN:N	40:BR:23:ASN:HD22	2.18	0.42
41:BS:88:ASP:O	41:BS:89:ARG:O	2.37	0.42
47:BY:31:LEU:N	47:BY:31:LEU:CD2	2.82	0.42
55:B6:40:CYS:SG	55:B6:45:LYS:HD3	2.60	0.42
1:CA:251:G:H5'	17:CQ:16:GLN:O	2.20	0.42
1:CA:433:U:OP1	4:CD:155:LEU:CD2	2.67	0.42
1:CA:528:G:C6	1:CA:529:C:C4	3.08	0.42
1:CA:765:A:C3'	1:CA:766:A:H5'	2.49	0.42
1:CA:799:A:N7	1:CA:1487:C:O2'	2.42	0.42
1:CA:899:U:H2'	1:CA:900:G:O4'	2.19	0.42
1:CA:953:A:N1	10:CJ:48:THR:O	2.52	0.42
2:CB:212:GLN:HG3	2:CB:235:SER:HA	2.01	0.42
5:CE:42:GLY:HA3	5:CE:66:MET:HG2	2.02	0.42
13:CM:96:LEU:O	13:CM:110:ARG:NE	2.52	0.42
24:CY:6:G:C2	24:CY:68:U:O2	2.73	0.42
24:CY:35:G:H2'	24:CY:36:A:O4'	2.20	0.42
26:DA:386:G:N7	26:DA:387:A:N7	2.68	0.42
26:DA:732:G:N7	56:D7:5:TRP:CH2	2.88	0.42
26:DA:1176:G:O6	26:DA:2061:C:H1'	2.20	0.42
26:DA:1293:G:C5	43:DU:3:ARG:HB2	2.54	0.42
26:DA:1597:C:C5	26:DA:1598:G:N7	2.88	0.42
26:DA:1608:A:H2'	26:DA:1609:G:O4'	2.19	0.42
26:DA:1613:A:O2'	29:DD:63:ARG:NH2	2.53	0.42
26:DA:1670:C:H2'	26:DA:1671:G:O4'	2.20	0.42
26:DA:1829:G:H5'	26:DA:1849:A:N6	2.35	0.42
26:DA:2879:C:H2'	26:DA:2880:C:O4'	2.20	0.42
30:DE:9:VAL:HG22	30:DE:25:VAL:HB	2.01	0.42
43:DU:79:PHE:CE2	43:DU:83:LEU:HD11	2.55	0.42
44:DV:21:ARG:HG3	44:DV:93:GLU:CG	2.49	0.42
47:DY:31:LEU:HB2	47:DY:32:PRO:HA	2.01	0.42
1:AA:1153:C:C2'	1:AA:1154:G:O5'	2.68	0.42
1:AA:1225:A:N3	1:AA:1225:A:C2'	2.83	0.42
1:AA:1288:A:O2'	1:AA:1289:A:H5'	2.20	0.42
2:AB:219:VAL:O	2:AB:222:ILE:HB	2.20	0.42
8:AH:97:VAL:HG13	8:AH:98:LYS:N	2.35	0.42
9:AI:28:VAL:HG22	9:AI:63:ILE:HB	2.02	0.42
10:AJ:32:ALA:HB3	10:AJ:76:ASN:HB3	2.02	0.42
20:AT:53:LEU:HB2	20:AT:100:ILE:CG2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:12:G:H4'	26:BA:1929:C:O2	2.20	0.42
26:BA:186:C:O5'	26:BA:186:C:H6	2.03	0.42
26:BA:516:A:C2	26:BA:517:G:H1'	2.55	0.42
26:BA:590:U:H5'	26:BA:989:A:C2	2.55	0.42
26:BA:674:C:OP1	57:B8:48:PHE:CZ	2.73	0.42
26:BA:1870:G:H2'	26:BA:1870:G:N3	2.34	0.42
26:BA:2725:A:H3'	26:BA:2726:G:H5'	2.02	0.42
29:BD:121:PRO:HB3	29:BD:135:PHE:CE1	2.54	0.42
34:BI:110:ASP:C	34:BI:112:LYS:H	2.23	0.42
38:BP:6:LEU:HD23	38:BP:10:PRO:HD3	2.00	0.42
52:B3:59:VAL:OXT	52:B3:59:VAL:HG12	2.20	0.42
1:CA:353:G:C2	1:CA:354:U:C5	3.07	0.42
1:CA:542:G:H2'	1:CA:543:A:H2	1.85	0.42
2:CB:35:GLU:HA	2:CB:39:ILE:O	2.20	0.42
9:CI:53:VAL:O	9:CI:54:ASP:HB2	2.19	0.42
10:CJ:4:ILE:HD11	10:CJ:77:PRO:HB3	2.02	0.42
11:CK:44:SER:OG	11:CK:47:VAL:HG23	2.19	0.42
14:CN:24:CYS:CB	14:CN:27:CYS:O	2.68	0.42
15:CO:83:GLU:C	15:CO:85:LEU:N	2.74	0.42
16:CP:28:ARG:HG2	16:CP:29:ASP:OD2	2.20	0.42
26:DA:18:C:H2'	26:DA:19:C:H6	1.84	0.42
26:DA:488:G:N1	26:DA:492:G:C6	2.88	0.42
26:DA:554:G:C5	26:DA:2043:U:H5"	2.55	0.42
26:DA:924:A:N6	26:DA:944:A:O2'	2.53	0.42
26:DA:1207:G:N3	44:DV:89:GLN:NE2	2.68	0.42
26:DA:1332:A:OP1	40:DR:105:ARG:O	2.37	0.42
26:DA:2194:A:H2'	26:DA:2194:A:N3	2.35	0.42
26:DA:2518:C:H2'	26:DA:2519:G:O4'	2.18	0.42
26:DA:2566:U:C4	26:DA:2567:C:C2	3.08	0.42
27:DB:29:A:H2'	27:DB:30:C:O4'	2.20	0.42
29:DD:101:GLU:OE1	29:DD:103:ARG:NH1	2.47	0.42
30:DE:65:GLY:HA2	30:DE:70:ALA:HB3	2.00	0.42
31:DF:2:LYS:O	31:DF:3:GLU:HB3	2.19	0.42
32:DG:113:ARG:HA	32:DG:113:ARG:HE	1.85	0.42
40:DR:56:LYS:HE3	40:DR:88:ARG:HA	2.02	0.42
47:DY:20:TYR:O	47:DY:23:ARG:HG2	2.20	0.42
1:AA:32:A:C2	1:AA:33:A:C4	3.08	0.42
1:AA:256:U:C2	1:AA:257:G:C8	3.07	0.42
1:AA:1079:G:H2'	1:AA:1080:A:C8	2.54	0.42
10:AJ:50:ILE:HG12	14:AN:41:ARG:HD3	2.01	0.42
16:AP:43:LYS:HG3	16:AP:48:TRP:CE3	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:52:ASP:OD1	16:AP:55:ARG:HG3	2.20	0.42
24:AY:9:G:O2'	24:AY:10:C:C6	2.73	0.42
26:BA:457:U:H6	26:BA:457:U:O5'	2.02	0.42
26:BA:609:C:C5	38:BP:33:ARG:CD	3.02	0.42
26:BA:1020:G:C6	26:BA:1021:C:C5	3.07	0.42
26:BA:1187:A:O2'	26:BA:1188:A:H3'	2.20	0.42
26:BA:1701:A:H3'	26:BA:1702:C:C6	2.55	0.42
26:BA:2200:C:H4'	26:BA:2200:C:OP1	2.20	0.42
26:BA:2504:U:O2'	39:BQ:80:GLU:OE2	2.38	0.42
29:BD:65:ILE:HD11	29:BD:67:PHE:CG	2.54	0.42
29:BD:149:PRO:O	29:BD:150:LYS:HB2	2.20	0.42
30:BE:186:GLY:O	30:BE:187:ALA:HB3	2.20	0.42
31:BF:155:LEU:HD12	31:BF:174:VAL:O	2.20	0.42
34:BI:78:THR:HA	34:BI:141:LYS:O	2.20	0.42
36:BN:67:LEU:CB	36:BN:88:GLU:HG3	2.49	0.42
37:BO:36:GLY:HA2	37:BO:106:LEU:HD23	2.02	0.42
41:BS:13:ARG:O	41:BS:15:ARG:N	2.53	0.42
42:BT:34:VAL:HG22	42:BT:39:ARG:HG2	2.01	0.42
50:B1:44:PRO:HB2	50:B1:46:LEU:HD13	2.02	0.42
52:B3:21:ALA:O	52:B3:24:LYS:N	2.49	0.42
54:B5:41:PRO:O	54:B5:44:THR:OG1	2.38	0.42
1:CA:251:G:H2'	1:CA:252:U:H6	1.84	0.42
1:CA:954:G:H5'	1:CA:1340:U:O2'	2.20	0.42
1:CA:1198:G:C2	1:CA:1199:C:C4	3.08	0.42
1:CA:1237:G:OP1	10:CJ:45:ARG:NH2	2.52	0.42
1:CA:1507:G:H4'	1:CA:1508:G:OP2	2.20	0.42
20:CT:55:ILE:O	20:CT:56:MET:C	2.57	0.42
24:CY:4:G:O6	24:CY:5:A:C6	2.73	0.42
26:DA:68:G:H2'	26:DA:110:G:O2'	2.20	0.42
26:DA:644:G:C4'	26:DA:645:A:OP1	2.68	0.42
26:DA:731:A:OP1	56:D7:11:LYS:NZ	2.39	0.42
26:DA:1475:C:H2'	26:DA:1476:U:H6	1.80	0.42
26:DA:1538:C:C4	26:DA:2226:G:O2'	2.71	0.42
26:DA:1854:G:OP1	29:DD:52:ARG:NH1	2.53	0.42
26:DA:1973:A:C4	37:DO:22:ILE:HD12	2.55	0.42
26:DA:2100:U:H2'	26:DA:2101:G:O4'	2.20	0.42
26:DA:2253:G:H2'	26:DA:2254:U:O4'	2.20	0.42
60:DC:189:ALA:O	60:DC:193:ALA:HB3	2.19	0.42
36:DN:111:PRO:HA	36:DN:114:ARG:CZ	2.50	0.42
54:D5:33:CYS:CB	54:D5:40:LYS:HE3	2.46	0.42
57:D8:6:THR:CG2	57:D8:63:PRO:HD3	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:192:U:H2'	1:AA:193:C:C6	2.55	0.41
1:AA:276:G:C6	1:AA:277:C:C4	3.08	0.41
1:AA:1268:A:O2'	21:AU:19:GLY:HA2	2.20	0.41
1:AA:1394:A:H4'	1:AA:1395:C:OP2	2.20	0.41
1:AA:1416:G:O2'	1:AA:1417:G:H5'	2.19	0.41
1:AA:1458:G:H5'	20:AT:32:ALA:HB2	2.02	0.41
2:AB:183:PRO:HA	2:AB:198:ASP:OD1	2.19	0.41
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.82	0.41
13:AM:123:ALA:CA	24:AY:39:A:H4'	2.42	0.41
22:AV:3:C:O2	22:AV:3:C:C2'	2.67	0.41
22:AV:50:G:H1	22:AV:66:C:H42	1.68	0.41
23:AW:38:A:N6	23:AW:39:U:C5	2.88	0.41
24:AY:61:C:OP2	24:AY:62:G:OP2	2.37	0.41
26:BA:400:A:C2	26:BA:427:A:C4	3.08	0.41
26:BA:955:A:C5	39:BQ:13:GLN:HG3	2.55	0.41
26:BA:1646:G:C5	26:BA:1647:U:C4	3.07	0.41
26:BA:1698:A:O3'	26:BA:1699:G:C8	2.73	0.41
26:BA:2430:U:O4	57:B8:30:ARG:NH1	2.53	0.41
26:BA:2723:U:O2'	26:BA:2724:A:P	2.77	0.41
27:BB:66:A:HO2'	27:BB:67:G:P	2.38	0.41
29:BD:77:ALA:CB	29:BD:97:TYR:HA	2.50	0.41
44:BV:13:ARG:HH11	44:BV:13:ARG:CG	2.33	0.41
46:BX:29:TRP:CZ3	46:BX:78:LYS:HB3	2.56	0.41
50:B1:20:ARG:HG2	50:B1:20:ARG:NH1	2.34	0.41
53:B4:40:ILE:HA	53:B4:57:ILE:HB	2.02	0.41
1:CA:546:C:H2'	1:CA:546:C:OP2	2.20	0.41
1:CA:1189:G:C6	1:CA:1190:C:C4	3.08	0.41
3:CC:39:ILE:HG22	3:CC:43:LEU:HD12	2.02	0.41
9:CI:82:ALA:HB1	9:CI:96:LEU:HD13	2.00	0.41
17:CQ:33:GLY:O	17:CQ:34:LYS:C	2.58	0.41
21:CU:10:ARG:HA	21:CU:13:ILE:HB	2.02	0.41
24:CY:4:G:C5	24:CY:5:A:C5	3.08	0.41
26:DA:1026:A:N1	26:DA:2048:G:O2'	2.42	0.41
26:DA:1175:U:O2	30:DE:149:ARG:NH2	2.40	0.41
26:DA:1381:A:H2'	26:DA:1382:G:C8	2.55	0.41
26:DA:1494:G:O2'	26:DA:1574:A:N1	2.31	0.41
26:DA:1563:C:O2'	26:DA:1564:G:H5'	2.20	0.41
26:DA:1763:G:C6	26:DA:1764:U:C4	3.08	0.41
26:DA:1994:G:H2'	26:DA:1995:C:C6	2.55	0.41
26:DA:2719:G:OP1	40:DR:68:ARG:HD3	2.20	0.41
29:DD:136:ILE:HA	29:DD:137:PRO:HD3	1.92	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DN:15:LEU:HB2	36:DN:134:ARG:HB2	2.01	0.41
38:DP:47:ASP:HB3	38:DP:48:PRO:HA	2.01	0.41
56:D7:31:LEU:HD22	56:D7:42:LEU:HD13	2.02	0.41
1:AA:614:A:C2	1:AA:627:G:C2	3.08	0.41
1:AA:663:A:H2'	1:AA:664:G:O4'	2.21	0.41
1:AA:985:C:H2'	1:AA:986:A:C8	2.55	0.41
1:AA:1097:C:O2'	1:AA:1098:C:H5'	2.20	0.41
1:AA:1172:C:H2'	1:AA:1173:G:H8	1.85	0.41
3:AC:6:HIS:CD2	3:AC:8:ILE:H	2.38	0.41
3:AC:32:LEU:HD22	3:AC:59:ARG:CZ	2.50	0.41
9:AI:96:LEU:HG	9:AI:102:LEU:HB2	2.02	0.41
14:AN:41:ARG:HE	14:AN:42:ILE:CD1	2.33	0.41
23:AW:1:G:C2	23:AW:73:A:C2	3.08	0.41
26:BA:149:C:H2'	26:BA:150:C:C6	2.56	0.41
26:BA:1270:G:N1	26:BA:1271:A:N1	2.68	0.41
26:BA:1461:G:C4	26:BA:1462:C:C5	3.08	0.41
26:BA:1740:C:O2'	26:BA:1741:G:C5	2.73	0.41
26:BA:2183:G:H2'	26:BA:2184:C:O4'	2.20	0.41
26:BA:2186:G:H2'	26:BA:2187:G:O4'	2.20	0.41
26:BA:2254:U:O2	26:BA:2445:A:H2	2.02	0.41
26:BA:2302:U:H3	26:BA:2352:G:H1	1.69	0.41
26:BA:2346:A:C8	26:BA:2348:G:C5	3.08	0.41
26:BA:2403:A:OP1	57:B8:32:LEU:HD22	2.20	0.41
29:BD:101:GLU:OE1	29:BD:103:ARG:NH1	2.44	0.41
36:BN:120:LEU:HD11	36:BN:122:VAL:CG2	2.50	0.41
48:BZ:54:HIS:HB3	48:BZ:101:PRO:HD3	2.02	0.41
54:B5:49:CYS:HB2	54:B5:50:GLY:H	1.72	0.41
54:B5:55:ARG:C	54:B5:56:LYS:HD3	2.40	0.41
1:CA:201:C:H6	1:CA:201:C:O5'	2.03	0.41
1:CA:1324:C:O2'	9:CI:124:GLN:HA	2.20	0.41
3:CC:53:ALA:HB2	3:CC:115:LEU:CG	2.49	0.41
4:CD:92:VAL:O	4:CD:96:LEU:HD13	2.20	0.41
5:CE:147:ASP:O	5:CE:151:LEU:HG	2.20	0.41
10:CJ:6:ILE:O	10:CJ:71:LEU:HD12	2.19	0.41
16:CP:22:THR:HA	16:CP:33:ILE:HG12	2.01	0.41
16:CP:25:ARG:C	16:CP:26:ARG:O	2.59	0.41
22:CV:74:A:H5"	22:CV:74:A:H8	1.84	0.41
26:DA:8:U:O2'	26:DA:9:G:P	2.78	0.41
26:DA:391:U:H3'	26:DA:392:A:O4'	2.19	0.41
26:DA:422:G:O3'	50:D1:44:PRO:HA	2.20	0.41
26:DA:810:A:N1	26:DA:1819:A:O2'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DA:1045:A:C6	26:DA:1200:A:C8	3.08	0.41
26:DA:1381:A:H2'	26:DA:1382:G:H8	1.84	0.41
26:DA:1578:C:O2'	26:DA:1579:G:C2	2.74	0.41
26:DA:2020:C:OP1	26:DA:2735:C:O2'	2.37	0.41
26:DA:2332:G:H2'	26:DA:2332:G:N3	2.35	0.41
26:DA:2353:C:O2'	26:DA:2385:C:H5"	2.20	0.41
36:DN:125:GLY:CA	36:DN:126:PRO:O	2.69	0.41
36:DN:128:HIS:CD2	36:DN:130:HIS:O	2.73	0.41
38:DP:107:LYS:C	38:DP:109:GLY:N	2.71	0.41
57:D8:4:MET:HB3	57:D8:61:LEU:HD13	2.02	0.41
1:AA:293:G:C6	1:AA:294:U:C4	3.09	0.41
1:AA:300:A:H1'	1:AA:565:U:O2	2.20	0.41
1:AA:491:G:H2'	1:AA:492:G:O4'	2.21	0.41
1:AA:1238:A:N7	1:AA:1303:C:H1'	2.35	0.41
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.55	0.41
13:AM:89:GLY:O	13:AM:92:HIS:HB2	2.20	0.41
16:AP:28:ARG:NH1	16:AP:29:ASP:OD2	2.53	0.41
22:AV:59:A:H1'	22:AV:61:U:OP2	2.20	0.41
24:AY:4:G:O6	24:AY:5:A:C6	2.73	0.41
26:BA:643:G:H3'	26:BA:644:G:N2	2.34	0.41
26:BA:1017:A:O4'	26:BA:1232:U:C6	2.74	0.41
26:BA:2124:C:O2	26:BA:2208:G:C2	2.73	0.41
26:BA:2298:A:H2	26:BA:2357:A:C2	2.38	0.41
26:BA:2313:G:C6	26:BA:2326:G:C6	3.08	0.41
26:BA:2575:A:OP1	26:BA:2659:C:H4'	2.21	0.41
26:BA:2642:G:N2	30:BE:61:ARG:NH1	2.68	0.41
26:BA:2768:U:OP2	58:B9:19:ARG:NH2	2.53	0.41
26:BA:2878:G:C6	26:BA:2879:C:C4	3.08	0.41
29:BD:72:LYS:NZ	29:BD:99:ASP:OD1	2.31	0.41
32:BG:45:GLU:O	32:BG:46:ALA:HB3	2.20	0.41
32:BG:45:GLU:OE1	32:BG:45:GLU:N	2.42	0.41
37:BO:26:LYS:HB2	37:BO:30:ALA:CB	2.50	0.41
40:BR:59:ASP:OD1	40:BR:61:HIS:HB3	2.21	0.41
41:BS:44:LYS:O	41:BS:46:VAL:HG23	2.20	0.41
43:BU:79:PHE:CZ	43:BU:83:LEU:HD21	2.55	0.41
52:B3:7:LYS:O	52:B3:54:VAL:HG13	2.21	0.41
1:CA:110:A:O5'	1:CA:110:A:C8	2.70	0.41
1:CA:1050:A:O5'	1:CA:1050:A:C8	2.73	0.41
1:CA:1082:G:C5	1:CA:1083:C:C4	3.08	0.41
1:CA:1375:G:N2	1:CA:1480:A:C8	2.87	0.41
2:CB:233:SER:CB	2:CB:234:PRO:HD2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:24:ALA:HB2	3:CC:32:LEU:HD12	2.01	0.41
6:CF:91:VAL:HG13	18:CR:72:ARG:HH22	1.84	0.41
8:CH:34:GLU:HA	8:CH:34:GLU:OE2	2.21	0.41
11:CK:123:LYS:O	11:CK:124:LYS:C	2.59	0.41
19:CS:61:TYR:CG	19:CS:62:ILE:N	2.89	0.41
26:DA:637:U:H4'	26:DA:638:G:H5"	2.02	0.41
26:DA:996:G:P	39:DQ:16:ARG:NH2	2.80	0.41
26:DA:1167:G:C2	26:DA:1168:C:C6	3.08	0.41
26:DA:1333:U:C2	26:DA:1372:C:O2	2.73	0.41
26:DA:1647:U:H3'	26:DA:1648:A:H5'	2.03	0.41
26:DA:2433:A:O2'	26:DA:2434:U:O5'	2.34	0.41
26:DA:2603:G:C6	26:DA:2604:U:N3	2.88	0.41
26:DA:2723:U:O2	26:DA:2723:U:C5'	2.60	0.41
26:DA:2891:A:OP1	40:DR:96:ARG:NE	2.50	0.41
60:DC:56:GLN:NE2	60:DC:168:ALA:CB	2.82	0.41
60:DC:72:VAL:HG21	60:DC:161:ALA:HB1	2.02	0.41
29:DD:62:TYR:HA	29:DD:87:ASN:ND2	2.34	0.41
31:DF:161:GLU:O	31:DF:165:ARG:HG3	2.21	0.41
32:DG:64:THR:HG23	32:DG:66:GLN:H	1.85	0.41
32:DG:111:LEU:N	32:DG:112:PRO:CD	2.83	0.41
33:DH:13:LYS:HA	33:DH:13:LYS:HE2	2.02	0.41
34:DI:93:THR:HG23	34:DI:95:LYS:HB2	2.02	0.41
42:DT:92:GLY:O	42:DT:93:ARG:C	2.58	0.41
47:DY:4:LYS:HB2	47:DY:32:PRO:HG2	2.02	0.41
47:DY:17:SER:HA	47:DY:71:LYS:HB3	2.01	0.41
51:D2:61:LEU:O	51:D2:62:THR:C	2.57	0.41
1:AA:186:C:H2'	1:AA:187:C:C6	2.55	0.41
1:AA:600:C:OP1	8:AH:98:LYS:HE2	2.21	0.41
1:AA:1227:A:OP1	19:AS:81:ARG:OXT	2.37	0.41
2:AB:120:ALA:O	2:AB:121:LEU:HG	2.21	0.41
4:AD:31:CYS:C	4:AD:33:MET:N	2.73	0.41
24:AY:4:G:C6	24:AY:5:A:C4	3.09	0.41
24:AY:31:U:C5	24:AY:32:C:C5	3.08	0.41
24:AY:50:G:N2	24:AY:51:G:C4	2.88	0.41
26:BA:738:C:C2'	26:BA:739:C:H5'	2.50	0.41
26:BA:894:G:N9	26:BA:977:A:H8	2.18	0.41
26:BA:1197:C:O2'	26:BA:1198:C:H5'	2.21	0.41
26:BA:1297:G:H1'	43:BU:33:ARG:NH2	2.36	0.41
26:BA:1516:G:H8	26:BA:1516:G:O5'	2.03	0.41
26:BA:1734:U:H1'	26:BA:1747:A:C6	2.56	0.41
26:BA:2254:U:H2'	26:BA:2255:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:2326:G:N2	32:BG:128:ARG:HD3	2.32	0.41
26:BA:2376:G:OP2	49:B0:55:ARG:NH1	2.46	0.41
29:BD:45:ASN:CG	29:BD:46:GLN:H	2.24	0.41
30:BE:24:THR:HG22	30:BE:186:GLY:CA	2.49	0.41
30:BE:81:ILE:O	30:BE:82:ARG:C	2.58	0.41
31:BF:192:LEU:HD23	31:BF:193:VAL:N	2.35	0.41
32:BG:137:GLU:HG2	32:BG:152:LEU:HD23	2.02	0.41
33:BH:54:ARG:NH2	33:BH:57:ASP:OD1	2.52	0.41
37:BO:1:MET:HE2	37:BO:32:TYR:CG	2.56	0.41
37:BO:8:LEU:HD22	37:BO:8:LEU:N	2.35	0.41
42:BT:19:LEU:HD22	42:BT:85:LYS:HB2	2.03	0.41
42:BT:83:ILE:CD1	42:BT:84:GLN:HE21	2.31	0.41
48:BZ:30:ASN:C	48:BZ:32:HIS:N	2.73	0.41
50:B1:5:CYS:CB	50:B1:8:SER:HG	2.34	0.41
1:CA:399:C:O2'	1:CA:400:U:H5'	2.21	0.41
1:CA:433:U:C5	1:CA:434:G:C5	3.09	0.41
1:CA:1242:C:H4'	1:CA:1266:C:C5'	2.50	0.41
4:CD:111:ALA:HA	4:CD:116:GLN:OE1	2.20	0.41
14:CN:44:LEU:HD12	14:CN:44:LEU:C	2.41	0.41
24:CY:44:A:C8	24:CY:44:A:O5'	2.70	0.41
26:DA:257:U:O2	26:DA:257:U:C2'	2.66	0.41
26:DA:819:U:C4'	29:DD:47:GLY:HA2	2.48	0.41
26:DA:895:A:N6	26:DA:973:G:O2'	2.49	0.41
26:DA:1309:G:O5'	26:DA:1309:G:H8	2.03	0.41
26:DA:1564:G:C6	26:DA:1565:U:C4	3.07	0.41
26:DA:1883:A:N1	26:DA:2108:G:H1'	2.35	0.41
26:DA:2199:C:H4'	60:DC:172:ALA:HB2	2.03	0.41
26:DA:2728:U:HO2'	26:DA:2729:G:H5'	1.84	0.41
29:DD:73:VAL:C	29:DD:75:ILE:H	2.24	0.41
30:DE:53:PRO:O	30:DE:54:GLN:C	2.58	0.41
31:DF:65:TRP:CZ3	31:DF:72:ARG:CB	3.03	0.41
31:DF:116:ASP:OD2	38:DP:5:ASP:N	2.53	0.41
31:DF:127:GLU:OE1	31:DF:127:GLU:HA	2.21	0.41
40:DR:2:ARG:CD	40:DR:5:LYS:CE	2.98	0.41
40:DR:18:LEU:HD11	40:DR:22:ARG:CZ	2.50	0.41
44:DV:21:ARG:HG3	44:DV:93:GLU:HG2	2.02	0.41
1:AA:273:A:N6	1:AA:274:A:N6	2.68	0.41
1:AA:979:C:OP1	1:AA:1223:C:N4	2.54	0.41
6:AF:97:PHE:HD2	18:AR:31:LEU:HD21	1.85	0.41
9:AI:47:LEU:C	9:AI:49:PRO:HD2	2.40	0.41
9:AI:58:ARG:HB2	9:AI:59:PHE:CD1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:4:G:C5	24:AY:5:A:C5	3.08	0.41
24:AY:16:C:N4	26:BA:927:G:O2'	2.53	0.41
26:BA:1405:A:C8	26:BA:1406:G:C8	3.08	0.41
26:BA:1530:G:H1'	26:BA:1550:C:N4	2.36	0.41
26:BA:1650:C:H2'	26:BA:1651:G:O4'	2.21	0.41
26:BA:1824:U:C1'	26:BA:1921:A:C2	3.04	0.41
26:BA:2204:C:C2'	26:BA:2205:G:O5'	2.69	0.41
26:BA:2572:A:H2'	26:BA:2573:U:O4'	2.20	0.41
26:BA:2817:U:O2	26:BA:2900:A:N6	2.52	0.41
27:BB:65:C:N4	27:BB:109:C:O2'	2.50	0.41
40:BR:65:LEU:HD12	40:BR:65:LEU:HA	1.96	0.41
41:BS:93:LYS:O	41:BS:94:TYR:C	2.58	0.41
42:BT:12:SER:O	42:BT:13:ARG:NE	2.54	0.41
45:BW:19:LEU:HG	54:B5:25:LEU:HD21	2.03	0.41
55:B6:14:THR:O	55:B6:16:CYS:N	2.54	0.41
1:CA:918:C:C2	1:CA:919:G:C8	3.09	0.41
1:CA:1282:G:HO2'	1:CA:1283:U:P	2.41	0.41
3:CC:15:THR:HG21	3:CC:181:ASN:HA	2.01	0.41
4:CD:25:ARG:HA	4:CD:28:SER:OG	2.20	0.41
16:CP:3:LYS:O	16:CP:21:VAL:HA	2.21	0.41
17:CQ:22:LEU:HD11	17:CQ:39:SER:HB2	2.02	0.41
26:DA:145:G:H2'	26:DA:146:U:O4'	2.20	0.41
26:DA:264:U:H2'	26:DA:265:C:C6	2.55	0.41
26:DA:455:A:H2'	26:DA:456:G:C8	2.55	0.41
26:DA:494:G:C6	56:D7:39:ARG:NH1	2.88	0.41
26:DA:662:G:C6	26:DA:663:U:C4	3.09	0.41
26:DA:1244:C:C2	26:DA:1291:A:C2	3.08	0.41
26:DA:1816:A:N9	26:DA:1959:A:N6	2.69	0.41
26:DA:2641:G:C6	26:DA:2642:G:C6	3.09	0.41
26:DA:2843:G:N2	26:DA:2891:A:N6	2.68	0.41
29:DD:142:VAL:HG23	29:DD:192:THR:C	2.41	0.41
30:DE:51:PHE:O	30:DE:52:LEU:C	2.58	0.41
34:DI:57:ARG:O	34:DI:61:ARG:NH1	2.54	0.41
40:DR:38:VAL:HB	40:DR:39:PRO:CD	2.47	0.41
50:D1:86:SER:O	50:D1:90:ILE:HG12	2.21	0.41
1:AA:146:G:N2	1:AA:177:C:O2	2.53	0.41
1:AA:376:G:H5"	16:AP:5:ARG:HB2	2.03	0.41
1:AA:807:A:C5	1:AA:808:C:C4	3.09	0.41
1:AA:954:G:H2'	1:AA:955:U:C6	2.55	0.41
1:AA:975:A:H5'	1:AA:975:A:H8	1.85	0.41
1:AA:1152:A:H2'	1:AA:1153:C:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:15:VAL:H	2:AB:16:HIS:CE1	2.39	0.41
2:AB:71:VAL:HB	2:AB:164:VAL:HG13	2.03	0.41
5:AE:80:ILE:HG22	8:AH:104:ARG:NH2	2.36	0.41
8:AH:111:ILE:C	8:AH:112:LEU:HD23	2.41	0.41
11:AK:88:GLY:O	11:AK:89:ALA:C	2.58	0.41
11:AK:126:ARG:HH11	11:AK:126:ARG:HB3	1.86	0.41
13:AM:4:ILE:HG23	13:AM:57:ARG:HG3	2.02	0.41
23:AW:34:G:N2	23:AW:35:A:N3	2.68	0.41
24:AY:35:G:H2'	24:AY:36:A:O4'	2.20	0.41
26:BA:122:G:H4'	26:BA:123:A:OP2	2.21	0.41
26:BA:222:C:H2'	26:BA:223:U:O4'	2.21	0.41
26:BA:995:C:C2'	26:BA:996:G:H5'	2.50	0.41
26:BA:1184:C:OP1	36:BN:23:LEU:O	2.38	0.41
26:BA:2613:A:H2'	26:BA:2613:A:N3	2.35	0.41
26:BA:2684:G:H8	26:BA:2684:G:H5"	1.85	0.41
32:BG:37:VAL:HG22	32:BG:159:VAL:HB	2.03	0.41
34:BI:121:LYS:O	34:BI:121:LYS:HG3	2.21	0.41
36:BN:7:LYS:O	36:BN:8:GLN:C	2.59	0.41
41:BS:33:LYS:HE3	41:BS:34:HIS:NE2	2.36	0.41
42:BT:30:VAL:HA	42:BT:44:ASP:HA	2.03	0.41
48:BZ:19:ARG:NH1	48:BZ:84:GLU:O	2.51	0.41
51:B2:53:LEU:HA	51:B2:56:GLN:HB2	2.03	0.41
1:CA:1151:A:C6	1:CA:1152:A:C6	3.09	0.41
1:CA:1385:C:C4	1:CA:1386:C:C5	3.08	0.41
1:CA:1405:G:H4'	37:DO:49:ARG:CZ	2.50	0.41
3:CC:150:LYS:HA	3:CC:169:ALA:CB	2.51	0.41
4:CD:109:GLY:C	4:CD:111:ALA:N	2.71	0.41
4:CD:155:LEU:O	4:CD:156:GLU:C	2.58	0.41
9:CI:104:ARG:O	9:CI:105:ASP:HB2	2.21	0.41
12:CL:84:LEU:HD13	12:CL:104:VAL:HG11	2.01	0.41
22:CV:73:A:H2'	22:CV:73:A:N3	2.34	0.41
24:CY:10:C:C2	24:CY:11:C:C5	3.09	0.41
26:DA:99:G:OP1	26:DA:99:G:H4'	2.19	0.41
26:DA:819:U:C5'	29:DD:47:GLY:HA2	2.49	0.41
26:DA:920:G:O2'	48:DZ:170:THR:HG21	2.21	0.41
26:DA:1806:G:N3	26:DA:1806:G:H2'	2.36	0.41
26:DA:2052:A:O2'	26:DA:2466:G:O2'	2.34	0.41
26:DA:2220:A:C5'	26:DA:2221:C:OP2	2.68	0.41
26:DA:2603:G:C6	26:DA:2604:U:C4	3.09	0.41
26:DA:2902:G:N3	26:DA:2902:G:H2'	2.34	0.41
27:DB:51:G:N7	41:DS:62:LYS:NZ	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DF:134:GLY:HA2	31:DF:162:LEU:O	2.21	0.41
31:DF:195:ASP:OD1	31:DF:196:LEU:N	2.54	0.41
37:DO:13:ASN:ND2	37:DO:97:ARG:HB2	2.36	0.41
39:DQ:85:LYS:CG	49:D0:8:GLY:O	2.69	0.41
40:DR:84:ALA:N	40:DR:85:PRO:CD	2.82	0.41
43:DU:66:ASN:HD21	43:DU:70:ARG:NE	2.18	0.41
46:DX:47:PHE:O	46:DX:48:LYS:C	2.59	0.41
47:DY:46:LYS:N	47:DY:62:GLU:HG2	2.34	0.41
49:D0:34:GLY:O	49:D0:35:ASN:C	2.57	0.41
52:D3:22:ALA:O	52:D3:25:ALA:HB3	2.21	0.41
54:D5:46:CYS:SG	54:D5:47:PRO:N	2.93	0.41
1:AA:59:A:C5'	1:AA:60:A:H5"	2.50	0.41
1:AA:853:G:O2'	1:AA:854:G:H5'	2.21	0.41
1:AA:1033:G:H2'	1:AA:1034:G:O4'	2.21	0.41
1:AA:1353:G:H2'	1:AA:1354:C:H6	1.85	0.41
1:AA:1429:C:H2'	1:AA:1430:C:C6	2.55	0.41
4:AD:62:GLN:NE2	4:AD:65:ARG:HE	2.18	0.41
24:AY:10:C:C2	24:AY:11:C:C5	3.09	0.41
26:BA:230:G:C8	57:B8:5:LYS:HG2	2.56	0.41
26:BA:669:C:O2	26:BA:669:C:O4'	2.35	0.41
26:BA:706:G:C6	26:BA:707:C:C4	3.09	0.41
26:BA:784:G:N2	26:BA:2002:A:N1	2.68	0.41
26:BA:1184:C:C2'	26:BA:1188:A:HO2'	2.33	0.41
26:BA:1254:A:H5"	26:BA:1256:G:O4'	2.21	0.41
26:BA:1698:A:H3'	26:BA:1699:G:C8	2.56	0.41
26:BA:1801:C:HO2'	26:BA:1816:A:H8	1.64	0.41
26:BA:1820:C:H5"	26:BA:1821:A:OP1	2.20	0.41
26:BA:2424:G:O2'	38:BP:70:GLN:NE2	2.54	0.41
29:BD:24:ILE:O	29:BD:82:ILE:O	2.39	0.41
29:BD:31:LYS:O	29:BD:33:LEU:N	2.53	0.41
37:BO:104:ARG:NH2	42:BT:33:LYS:HE2	2.35	0.41
38:BP:144:GLU:N	38:BP:145:PRO:HD3	2.36	0.41
41:BS:17:ARG:HA	41:BS:20:ARG:CZ	2.51	0.41
42:BT:45:PHE:HE2	42:BT:63:VAL:CG1	2.33	0.41
45:BW:54:ALA:CB	45:BW:107:LEU:HD22	2.50	0.41
1:CA:46:U:H2'	1:CA:47:G:C8	2.55	0.41
1:CA:168:U:O4'	1:CA:204:A:C4	2.74	0.41
1:CA:669:G:N2	1:CA:670:U:C4	2.88	0.41
1:CA:859:G:OP2	12:CL:12:ARG:NH2	2.54	0.41
1:CA:1217:U:O2'	1:CA:1287:G:O5'	2.38	0.41
1:CA:1425:G:O6	1:CA:1427:A:C2	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1425:G:C2'	1:CA:1426:G:O5'	2.69	0.41
2:CB:121:LEU:HA	2:CB:124:SER:HB2	2.02	0.41
2:CB:187:LEU:O	2:CB:187:LEU:HD13	2.20	0.41
12:CL:91:LYS:O	12:CL:91:LYS:CG	2.69	0.41
14:CN:29:ARG:HG2	14:CN:40:CYS:HB2	2.03	0.41
17:CQ:59:ILE:CG2	17:CQ:71:PHE:HB3	2.51	0.41
24:CY:9:G:O2'	24:CY:10:C:C6	2.73	0.41
24:CY:31:U:C5	24:CY:32:C:C5	3.08	0.41
26:DA:165:G:H3'	26:DA:166:G:H8	1.86	0.41
26:DA:448:A:C2	26:DA:449:A:C4	3.08	0.41
26:DA:470:C:H2'	26:DA:471:G:O4'	2.21	0.41
26:DA:599:G:C6	26:DA:600:A:C6	3.09	0.41
26:DA:629:U:OP1	31:DF:102:PRO:HA	2.20	0.41
26:DA:1059:U:C2'	26:DA:1060:G:H5'	2.51	0.41
26:DA:1704:C:H2'	26:DA:1705:U:C6	2.55	0.41
26:DA:1865:G:N3	26:DA:1865:G:H2'	2.36	0.41
26:DA:2466:G:C2	26:DA:2509:C:N4	2.89	0.41
26:DA:2473:U:H2'	26:DA:2474:C:O4'	2.21	0.41
27:DB:48:A:H2'	27:DB:49:C:C6	2.55	0.41
32:DG:68:PRO:HB2	32:DG:90:LEU:HD11	2.02	0.41
32:DG:125:PHE:HB2	32:DG:166:ASP:HB2	2.03	0.41
42:DT:12:SER:O	42:DT:13:ARG:NE	2.53	0.41
42:DT:33:LYS:O	42:DT:40:THR:O	2.39	0.41
42:DT:34:VAL:O	42:DT:35:LYS:HB3	2.21	0.41
43:DU:47:TYR:HA	43:DU:50:ARG:NH2	2.36	0.41
53:D4:57:ILE:HG22	53:D4:59:VAL:HG23	2.02	0.41
1:AA:96:U:O2'	1:AA:97:G:O5'	2.38	0.41
1:AA:250:A:HO2'	1:AA:251:G:P	2.44	0.41
1:AA:771:G:C6	1:AA:772:U:C4	3.09	0.41
1:AA:818:G:C2'	1:AA:819:A:H5'	2.51	0.41
1:AA:1350:A:C2	1:AA:1351:U:C2	3.08	0.41
1:AA:1489:G:C6	1:AA:1490:C:C4	3.08	0.41
3:AC:83:ARG:O	3:AC:86:VAL:HG22	2.21	0.41
9:AI:4:TYR:HA	9:AI:88:TYR:CE1	2.55	0.41
12:AL:24:VAL:O	12:AL:24:VAL:HG12	2.19	0.41
22:AV:34:U:O2'	22:AV:36:A:N7	2.40	0.41
23:AW:12:U:C2	23:AW:24:G:N2	2.88	0.41
24:AY:44:A:C8	24:AY:44:A:O5'	2.70	0.41
26:BA:1906:A:H3'	26:BA:1907:C:H6	1.86	0.41
26:BA:2239:G:H2'	26:BA:2240:C:C6	2.56	0.41
26:BA:2371:A:H2'	26:BA:2372:A:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BD:73:VAL:HG13	29:BD:120:GLY:CA	2.51	0.41
30:BE:47:VAL:HG13	30:BE:47:VAL:O	2.20	0.41
31:BF:100:THR:O	31:BF:100:THR:HG22	2.20	0.41
39:BQ:62:GLY:HA2	48:BZ:116:VAL:HG11	2.01	0.41
43:BU:112:ARG:NE	44:BV:46:VAL:HG11	2.36	0.41
51:B2:35:LEU:O	51:B2:39:ALA:N	2.48	0.41
54:B5:33:CYS:O	54:B5:36:CYS:O	2.38	0.41
57:B8:33:ASN:N	57:B8:33:ASN:HD22	2.18	0.41
1:CA:296:A:H1'	1:CA:549:U:O2	2.21	0.41
1:CA:350:G:C2	1:CA:351:C:C6	3.09	0.41
1:CA:460:G:H2'	1:CA:461:G:H8	1.86	0.41
1:CA:722:C:H6	1:CA:722:C:O5'	2.04	0.41
1:CA:1329:G:OP2	9:CI:107:ARG:HG2	2.21	0.41
1:CA:1432:A:H2'	1:CA:1432:A:N3	2.36	0.41
1:CA:1458:G:C5	1:CA:1459:U:C5	3.08	0.41
1:CA:1465:G:H8	1:CA:1465:G:O5'	2.03	0.41
1:CA:1478:A:OP2	1:CA:1483:G:OP2	2.39	0.41
2:CB:162:ILE:O	2:CB:162:ILE:HG13	2.20	0.41
5:CE:71:LEU:HD13	5:CE:114:GLY:O	2.21	0.41
11:CK:50:TYR:HD1	11:CK:60:ALA:HB2	1.85	0.41
22:CV:53:G:C4	22:CV:54:G:C8	3.09	0.41
26:DA:327:G:C2	26:DA:337:A:C2	3.09	0.41
26:DA:963:A:C5	26:DA:964:G:H1'	2.56	0.41
26:DA:1092:G:C8	26:DA:1155:G:C6	3.09	0.41
26:DA:1377:G:N2	26:DA:1654:A:HO2'	2.12	0.41
26:DA:1974:A:HO2'	26:DA:2570:C:HO2'	1.60	0.41
26:DA:2319:G:N7	26:DA:2321:A:O5'	2.54	0.41
26:DA:2522:U:O4	26:DA:2586:C:N3	2.54	0.41
27:DB:6:C:C2	27:DB:116:G:N2	2.89	0.41
33:DH:158:HIS:NE2	33:DH:170:ARG:O	2.54	0.41
38:DP:7:ARG:O	38:DP:10:PRO:HG2	2.21	0.41
40:DR:34:ILE:HG22	40:DR:36:THR:HG23	2.03	0.41
47:DY:31:LEU:CB	47:DY:32:PRO:HA	2.51	0.41
57:D8:30:ARG:O	57:D8:31:HIS:HB3	2.21	0.41
1:AA:373:A:C2	1:AA:482:A:N6	2.89	0.41
1:AA:408:A:OP1	4:AD:113:SER:OG	2.36	0.41
1:AA:590:C:OP1	8:AH:29:SER:HA	2.21	0.41
1:AA:782:A:H2'	1:AA:783:C:O4'	2.21	0.41
1:AA:872:A:C4	1:AA:874:G:N7	2.89	0.41
1:AA:977:A:O2'	1:AA:979:C:OP2	2.35	0.41
1:AA:1054:C:N4	24:AY:34:C:H1'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1192:C:C5	1:AA:1193:G:C8	3.09	0.41
1:AA:1207:G:H2'	1:AA:1208:C:H6	1.85	0.41
1:AA:1277:C:C6	1:AA:1277:C:C3'	3.04	0.41
1:AA:1314:C:OP2	19:AS:6:LYS:HD3	2.21	0.41
3:AC:77:ILE:C	3:AC:83:ARG:HB3	2.42	0.41
5:AE:34:VAL:HG12	5:AE:62:ALA:HB1	2.02	0.41
5:AE:76:ILE:HG13	5:AE:77:PRO:HD2	2.02	0.41
9:AI:46:ALA:HA	9:AI:78:LYS:HB2	2.03	0.41
11:AK:91:ARG:O	11:AK:94:ALA:HB3	2.21	0.41
17:AQ:9:VAL:O	17:AQ:21:VAL:HA	2.21	0.41
17:AQ:48:GLU:O	17:AQ:50:LYS:N	2.54	0.41
18:AR:44:LEU:HD11	18:AR:70:ILE:HG21	2.02	0.41
18:AR:66:LEU:CG	18:AR:70:ILE:HD11	2.51	0.41
23:AW:39:U:OP1	23:AW:39:U:H4'	2.21	0.41
23:AW:75:C:HO2'	23:AW:76:A:H8	1.69	0.41
24:AY:6:G:C2	24:AY:68:U:O2	2.73	0.41
24:AY:36:A:C2	25:AX:20:A:C6	3.09	0.41
24:AY:59:A:O5'	24:AY:59:A:C8	2.74	0.41
26:BA:303:C:C2	26:BA:384:G:N2	2.89	0.41
26:BA:507:A:H4'	47:BY:47:LYS:CD	2.51	0.41
26:BA:552:A:N1	26:BA:2063:A:H2'	2.36	0.41
26:BA:557:G:C6	26:BA:558:U:N3	2.89	0.41
26:BA:1092:G:OP1	26:BA:1092:G:H4'	2.19	0.41
26:BA:1311:G:O6	45:BW:13:SER:CB	2.69	0.41
26:BA:1557:G:O2'	26:BA:1558:C:H5'	2.20	0.41
26:BA:1636:G:H8	26:BA:1636:G:C5'	2.33	0.41
26:BA:1873:C:C2'	26:BA:1874:C:H5'	2.51	0.41
26:BA:1876:G:N2	26:BA:1916:C:C2	2.88	0.41
26:BA:2326:G:H21	32:BG:128:ARG:CD	2.33	0.41
26:BA:2769:A:H2'	26:BA:2770:A:H5'	2.02	0.41
27:BB:20:C:C2'	27:BB:21:G:H5"	2.51	0.41
28:BC:63:SER:O	28:BC:64:LEU:O	2.39	0.41
28:BC:215:ALA:O	28:BC:216:ALA:HB2	2.21	0.41
29:BD:35:LYS:HB3	29:BD:36:PRO:HD3	2.03	0.41
29:BD:52:ARG:O	29:BD:53:PHE:HB2	2.21	0.41
30:BE:51:PHE:C	30:BE:74:PRO:HB3	2.41	0.41
30:BE:177:PRO:O	30:BE:178:GLU:C	2.58	0.41
31:BF:22:ALA:HB1	31:BF:26:ALA:HB2	2.02	0.41
31:BF:140:LEU:HD12	31:BF:140:LEU:HA	1.85	0.41
32:BG:109:VAL:O	32:BG:112:PRO:HB2	2.20	0.41
32:BG:127:GLY:O	32:BG:128:ARG:C	2.58	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BH:30:LYS:CD	33:BH:81:GLU:HG2	2.51	0.41
33:BH:32:GLU:HG2	33:BH:33:LEU:N	2.35	0.41
36:BN:67:LEU:CB	36:BN:88:GLU:CG	2.97	0.41
38:BP:95:VAL:CG2	38:BP:125:VAL:HG23	2.50	0.41
39:BQ:50:ALA:HB1	39:BQ:121:ALA:HB1	2.03	0.41
42:BT:46:GLU:O	42:BT:65:LYS:HD2	2.20	0.41
42:BT:134:GLU:O	42:BT:135:ALA:HB3	2.21	0.41
43:BU:6:THR:O	43:BU:9:VAL:HG23	2.19	0.41
45:BW:62:HIS:O	45:BW:63:ASP:C	2.58	0.41
47:BY:13:VAL:HG23	47:BY:74:PRO:HA	2.02	0.41
47:BY:81:LYS:NZ	47:BY:98:VAL:O	2.53	0.41
54:B5:46:CYS:SG	54:B5:47:PRO:N	2.94	0.41
55:B6:20:ASN:O	55:B6:21:TYR:CD1	2.74	0.41
56:B7:12:ARG:NH2	56:B7:44:PRO:HB3	2.35	0.41
57:B8:4:MET:SD	57:B8:61:LEU:HD22	2.61	0.41
1:CA:228:G:H2'	1:CA:229:C:O4'	2.20	0.41
1:CA:355:U:H2'	1:CA:356:A:C8	2.55	0.41
1:CA:559:G:C6	1:CA:805:G:N7	2.88	0.41
1:CA:693:G:H2'	1:CA:694:G:H8	1.86	0.41
1:CA:758:G:C6	1:CA:759:G:C5	3.09	0.41
1:CA:993:A:N3	1:CA:1201:U:O2'	2.48	0.41
1:CA:996:G:H2'	1:CA:997:C:C6	2.56	0.41
1:CA:1036:G:N7	1:CA:1182:C:C5'	2.83	0.41
1:CA:1146:C:N3	1:CA:1156:G:N2	2.69	0.41
1:CA:1351:G:OP2	9:CI:112:LYS:CD	2.67	0.41
1:CA:1360:A:H2'	7:CG:7:ALA:CB	2.51	0.41
1:CA:1364:U:C5	1:CA:1365:C:C5	3.09	0.41
1:CA:1388:G:O4'	1:CA:1497:A:H4'	2.21	0.41
3:CC:36:ASP:HA	3:CC:39:ILE:HD12	2.03	0.41
3:CC:189:ALA:HB3	3:CC:196:LEU:HB2	2.02	0.41
5:CE:31:LEU:HD23	5:CE:45:PHE:HB2	2.02	0.41
8:CH:51:VAL:HG11	8:CH:60:ARG:HD2	2.03	0.41
9:CI:24:GLY:O	9:CI:26:VAL:HG23	2.20	0.41
10:CJ:90:LEU:N	10:CJ:91:PRO:HD3	2.34	0.41
22:CV:2:G:C6	22:CV:73:A:C6	3.09	0.41
26:DA:81:G:N2	26:DA:100:A:OP2	2.43	0.41
26:DA:153:G:C6	26:DA:154:C:C4	3.08	0.41
26:DA:209:A:C4'	26:DA:210:A:O5'	2.65	0.41
26:DA:655:A:O2'	38:DP:67:MET:HB3	2.21	0.41
26:DA:972:G:H3'	26:DA:973:G:H8	1.86	0.41
26:DA:1423:A:C8	26:DA:1425:G:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DA:1530:G:H1'	26:DA:1550:C:N4	2.36	0.41
26:DA:1593:C:O2'	26:DA:1594:C:H5'	2.21	0.41
26:DA:1727:G:O2'	26:DA:1792:A:C2'	2.69	0.41
26:DA:1728:G:H2'	26:DA:1729:C:C6	2.55	0.41
26:DA:2054:A:H4'	26:DA:2055:U:OP1	2.21	0.41
26:DA:2163:C:H6	26:DA:2163:C:O5'	2.03	0.41
26:DA:2427:C:OP1	38:DP:64:LYS:O	2.39	0.41
26:DA:2757:C:H2'	26:DA:2758:U:O4'	2.21	0.41
26:DA:2876:G:O2'	26:DA:2877:A:P	2.77	0.41
29:DD:203:ASN:O	29:DD:204:ILE:C	2.58	0.41
30:DE:69:LYS:O	30:DE:71:GLY:N	2.54	0.41
30:DE:108:SER:O	30:DE:162:ALA:N	2.54	0.41
30:DE:116:VAL:HG22	30:DE:122:PHE:CG	2.56	0.41
31:DF:66:PRO:C	31:DF:68:LYS:H	2.24	0.41
32:DG:94:LEU:HD22	32:DG:98:ARG:CB	2.51	0.41
33:DH:89:ILE:HD13	33:DH:94:TYR:HB3	2.03	0.41
43:DU:101:ARG:HD3	44:DV:13:ARG:HH21	1.85	0.41
46:DX:55:ASN:O	46:DX:79:ALA:HA	2.20	0.41
47:DY:38:ILE:CG2	47:DY:39:VAL:N	2.83	0.41
48:DZ:17:ALA:HA	48:DZ:20:ARG:CD	2.51	0.41
1:AA:149:A:O2'	1:AA:150:C:OP2	2.39	0.41
1:AA:299:G:C6	1:AA:300:A:C6	3.09	0.41
1:AA:376:G:N3	1:AA:389:A:C2	2.88	0.41
1:AA:455:C:O5'	1:AA:455:C:H6	2.04	0.41
1:AA:651:C:O2'	1:AA:652:U:H5'	2.21	0.41
1:AA:1197:G:OP1	1:AA:1198:G:OP2	2.39	0.41
14:AN:37:PHE:CE1	14:AN:53:LEU:HD13	2.56	0.41
23:AW:28:G:H2'	23:AW:29:G:C8	2.56	0.41
26:BA:100:A:H8	26:BA:100:A:O5'	2.04	0.41
26:BA:195:A:H2'	26:BA:196:C:O4'	2.20	0.41
26:BA:272:G:H2'	26:BA:273:U:H5"	2.01	0.41
26:BA:615:G:C6	26:BA:616:U:C4	3.08	0.41
26:BA:1394:A:C2'	26:BA:1395:C:OP1	2.69	0.41
26:BA:2121:G:C6	26:BA:2122:G:C6	3.09	0.41
26:BA:2196:C:O2'	28:BC:215:ALA:N	2.52	0.41
26:BA:2329:G:C2'	26:BA:2330:G:OP1	2.69	0.41
26:BA:2381:G:C6	26:BA:2382:G:C6	3.09	0.41
26:BA:2579:C:H2'	26:BA:2580:G:O5'	2.21	0.41
26:BA:2632:A:C6	26:BA:2633:C:C4	3.08	0.41
28:BC:40:THR:HG23	28:BC:215:ALA:HB3	2.03	0.41
29:BD:8:PRO:HB3	29:BD:14:ARG:HB2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BD:209:ALA:C	29:BD:210:GLY:O	2.59	0.41
34:BI:130:TYR:HB3	34:BI:136:VAL:HG13	2.02	0.41
47:BY:15:VAL:HB	47:BY:23:ARG:HB2	2.03	0.41
51:B2:22:GLU:OE2	51:B2:68:ARG:NH2	2.54	0.41
57:B8:33:ASN:HA	57:B8:36:LYS:CD	2.51	0.41
1:CA:722:C:H5"	6:CF:69:GLU:HB2	2.02	0.41
1:CA:770:G:C2	1:CA:781:C:C2	3.09	0.41
1:CA:900:G:C6	1:CA:901:A:C6	3.09	0.41
1:CA:1141:C:O2	1:CA:1141:C:H2'	2.21	0.41
4:CD:59:ARG:O	4:CD:63:LYS:HB2	2.21	0.41
23:CW:11:C:H6	23:CW:11:C:O5'	2.04	0.41
24:CY:4:G:C6	24:CY:5:A:C4	3.09	0.41
24:CY:44:A:N1	24:CY:45:G:N2	2.69	0.41
24:CY:59:A:O5'	24:CY:59:A:C8	2.74	0.41
26:DA:706:G:H5'	31:DF:99:TYR:CD2	2.56	0.41
26:DA:1721:C:C2'	26:DA:1722:A:H5'	2.50	0.41
26:DA:1827:C:H5"	29:DD:258:LYS:HA	2.03	0.41
26:DA:2121:G:C6	26:DA:2122:G:C5	3.09	0.41
26:DA:2200:C:C2	26:DA:2202:G:O6	2.74	0.41
26:DA:2214:G:C5	26:DA:2215:G:C8	3.08	0.41
26:DA:2468:U:C4	26:DA:2469:G:C6	3.09	0.41
29:DD:210:GLY:O	29:DD:212:SER:N	2.53	0.41
31:DF:170:LEU:HB2	31:DF:173:VAL:HB	2.03	0.41
32:DG:111:LEU:HB2	32:DG:112:PRO:HD3	2.02	0.41
32:DG:138:GLN:OE1	32:DG:153:ARG:HG2	2.20	0.41
40:DR:73:VAL:O	40:DR:76:VAL:HG12	2.21	0.41
45:DW:12:ILE:O	45:DW:101:SER:OG	2.32	0.41
47:DY:77:PRO:O	47:DY:78:ALA:HB2	2.20	0.41
1:AA:373:A:O2'	1:AA:374:A:H5'	2.22	0.40
1:AA:555:C:H2'	1:AA:556:C:C6	2.56	0.40
1:AA:724:G:C2	1:AA:725:G:C8	3.10	0.40
1:AA:981:U:H5'	14:AN:21:TYR:CE1	2.55	0.40
1:AA:1160:G:C2	1:AA:1161:C:C6	3.09	0.40
1:AA:1442:G:N7	1:AA:1442(B):A:C2	2.89	0.40
2:AB:137:ARG:NH1	2:AB:141:GLU:HB2	2.37	0.40
3:AC:20:SER:HB2	3:AC:40:ARG:HH22	1.87	0.40
3:AC:70:VAL:HG12	3:AC:72:LYS:H	1.86	0.40
6:AF:7:ASN:HB2	6:AF:89:MET:HB3	2.03	0.40
9:AI:114:TYR:O	9:AI:114:TYR:HD2	2.03	0.40
15:AO:18:PHE:O	15:AO:19:PRO:C	2.60	0.40
26:BA:23:G:O2'	45:BW:77:ASP:HB3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:178:A:C4	26:BA:195:A:C2	3.10	0.40
26:BA:286:G:HO3'	26:BA:286:G:HO2'	1.68	0.40
26:BA:795:C:C5	26:BA:1663:A:C6	3.09	0.40
26:BA:1090:A:H4'	26:BA:1092:G:C1'	2.51	0.40
26:BA:1093:A:N7	26:BA:1096:G:O6	2.54	0.40
26:BA:1152:G:C2'	26:BA:1153:U:O5'	2.69	0.40
26:BA:1287:A:N1	38:BP:8:PRO:HG3	2.35	0.40
26:BA:1484:A:H2'	26:BA:1485:G:O4'	2.22	0.40
26:BA:1521:G:C6	26:BA:1522:C:C4	3.09	0.40
26:BA:1734:U:H5'	26:BA:1735:A:OP1	2.21	0.40
26:BA:2117:U:H2'	26:BA:2118:C:C6	2.56	0.40
26:BA:2242:C:H2'	26:BA:2243:U:O4'	2.21	0.40
26:BA:2339:A:H2'	26:BA:2340:G:C8	2.56	0.40
26:BA:2345:G:N3	41:BS:18:ILE:HD11	2.36	0.40
26:BA:2357:A:C2	26:BA:2394:G:C2	3.08	0.40
26:BA:2470:A:C2	26:BA:2471:U:H1'	2.56	0.40
26:BA:2529:A:H5'	26:BA:2529:A:C8	2.57	0.40
41:BS:97:ARG:C	41:BS:97:ARG:NE	2.75	0.40
42:BT:31:SER:CA	42:BT:32:TYR:CD2	3.04	0.40
43:BU:115:ALA:C	43:BU:117:GLN:H	2.25	0.40
46:BX:8:ILE:HD11	46:BX:42:ALA:CB	2.50	0.40
1:CA:517:A:O2'	1:CA:518:U:H5"	2.21	0.40
1:CA:667:G:C2	1:CA:692:C:N3	2.89	0.40
1:CA:1049:C:O2'	1:CA:1050:A:H5'	2.21	0.40
1:CA:1067:G:OP1	1:CA:1069:U:C4	2.75	0.40
1:CA:1113:A:C2	1:CA:1129:A:C4	3.09	0.40
1:CA:1289:U:H2'	1:CA:1290:U:C6	2.56	0.40
3:CC:7:PRO:O	3:CC:11:ARG:HG2	2.20	0.40
3:CC:44:GLU:O	3:CC:48:TYR:HB2	2.21	0.40
4:CD:9:CYS:HB2	4:CD:22:LYS:HD2	2.04	0.40
8:CH:51:VAL:HG11	8:CH:60:ARG:HB2	2.03	0.40
9:CI:95:LYS:HD3	9:CI:96:LEU:N	2.35	0.40
11:CK:59:TYR:CZ	11:CK:63:LEU:HD21	2.56	0.40
16:CP:45:THR:HG22	16:CP:47:ASP:H	1.86	0.40
24:CY:3:A:H2	24:CY:70:A:N6	2.05	0.40
26:DA:322:A:O2'	26:DA:342:C:H4'	2.21	0.40
26:DA:535:U:O4	26:DA:536:G:C2	2.74	0.40
26:DA:816:G:O2'	26:DA:1399:A:N1	2.49	0.40
26:DA:817:G:OP1	56:D7:10:ARG:NH1	2.52	0.40
26:DA:1410:A:O3'	50:D1:11:ARG:NH2	2.54	0.40
26:DA:1693:G:H5'	26:DA:1693:G:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DA:1734:U:O2	26:DA:1746:A:H8	2.04	0.40
26:DA:1816:A:N3	26:DA:1816:A:C2'	2.84	0.40
26:DA:1824:U:H2'	26:DA:1825:C:C6	2.56	0.40
26:DA:2053:G:N1	26:DA:2583:A:C8	2.89	0.40
26:DA:2413:C:C3'	26:DA:2414:C:H5'	2.51	0.40
26:DA:2726:G:C6	26:DA:2727:C:C4	3.09	0.40
26:DA:2876:G:HO2'	26:DA:2877:A:P	2.44	0.40
29:DD:131:LEU:N	29:DD:131:LEU:HD12	2.36	0.40
36:DN:3:THR:C	36:DN:5:VAL:H	2.24	0.40
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	2.02	0.40
1:AA:338:A:C6	1:AA:339:C:C4	3.10	0.40
1:AA:599:C:H6	1:AA:599:C:O5'	2.04	0.40
1:AA:707:C:O2'	1:AA:708:C:H5'	2.20	0.40
1:AA:817:C:C2	1:AA:819:A:O4'	2.74	0.40
1:AA:1349:A:OP1	9:AI:121:ARG:N	2.45	0.40
1:AA:1442:G:C6	1:AA:1442(B):A:N1	2.89	0.40
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.21	0.40
5:AE:96:PRO:HA	5:AE:117:ASP:OD2	2.21	0.40
7:AG:50:ILE:HG23	7:AG:54:THR:HG23	2.04	0.40
8:AH:109:ILE:HD11	8:AH:120:THR:CB	2.51	0.40
10:AJ:82:ILE:HG22	10:AJ:86:MET:HG2	2.04	0.40
11:AK:33:THR:HA	11:AK:39:PRO:HA	2.03	0.40
11:AK:91:ARG:HD2	11:AK:92:GLU:OE1	2.21	0.40
23:AW:16:U:C2	23:AW:19:G:H5"	2.55	0.40
24:AY:44:A:N1	24:AY:45:G:N2	2.69	0.40
26:BA:440:C:HO2'	26:BA:1894:U:C2'	2.32	0.40
26:BA:624:G:N2	26:BA:702:G:C5	2.89	0.40
26:BA:645:A:H2'	26:BA:646:G:C5'	2.51	0.40
26:BA:1311:G:C8	45:BW:15:ARG:NH1	2.89	0.40
26:BA:2266:G:C6	26:BA:2267:G:C5	3.09	0.40
26:BA:2411:G:C5	26:BA:2412:U:C5	3.09	0.40
26:BA:2524:G:H2'	26:BA:2525:U:C6	2.56	0.40
26:BA:2672:G:OP2	26:BA:2672:G:O4'	2.39	0.40
26:BA:2895:G:N2	26:BA:2896:U:C2	2.88	0.40
28:BC:41:VAL:HG23	28:BC:178:ALA:HB3	2.04	0.40
29:BD:249:PRO:HG2	29:BD:250:TRP:CE3	2.56	0.40
29:BD:270:ILE:HD12	29:BD:270:ILE:O	2.21	0.40
33:BH:158:HIS:CE1	33:BH:169:VAL:C	2.94	0.40
36:BN:65:LYS:HD3	36:BN:69:GLN:HE21	1.86	0.40
38:BP:24:GLY:O	38:BP:25:SER:HB3	2.20	0.40
43:BU:66:ASN:C	43:BU:66:ASN:HD22	2.25	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BW:4:LYS:HA	45:BW:106:ILE:HG22	2.03	0.40
47:BY:74:PRO:O	47:BY:80:GLY:O	2.39	0.40
51:B2:16:LEU:HD13	51:B2:20:GLU:CG	2.51	0.40
1:CA:460:G:H2'	1:CA:461:G:C8	2.57	0.40
1:CA:671:A:H4'	1:CA:672:G:O5'	2.21	0.40
1:CA:990:G:C2	1:CA:998:C:C2	3.09	0.40
1:CA:1038:A:C4	1:CA:1188:G:C2	3.09	0.40
1:CA:1482:G:O2'	1:CA:1483:G:P	2.80	0.40
7:CG:18:TYR:OH	7:CG:58:PRO:HG2	2.21	0.40
12:CL:86:ARG:N	12:CL:99:HIS:O	2.52	0.40
13:CM:6:GLY:O	32:DG:113:ARG:NH2	2.53	0.40
19:CS:24:ALA:O	19:CS:25:LYS:HB2	2.21	0.40
24:CY:3:A:H2'	24:CY:4:G:C8	2.56	0.40
26:DA:182:G:H2'	26:DA:183:A:O4'	2.21	0.40
26:DA:199:A:H2'	26:DA:200:G:O4'	2.20	0.40
26:DA:295:U:OP2	26:DA:295:U:C5	2.74	0.40
26:DA:360:C:H2'	26:DA:361:G:O4'	2.22	0.40
26:DA:731:A:C2	26:DA:735:A:C6	3.09	0.40
26:DA:1006:G:H2'	26:DA:1007:U:O4'	2.20	0.40
26:DA:1373:G:H2'	26:DA:1375:C:C5	2.56	0.40
26:DA:1687:A:H2'	26:DA:1688:G:O4'	2.22	0.40
26:DA:1908:C:C3'	26:DA:1909:G:H5'	2.51	0.40
26:DA:2082:G:N7	26:DA:2512:C:H4'	2.36	0.40
26:DA:2241:G:H1'	50:D1:45:ASN:CB	2.52	0.40
26:DA:2328:C:H2'	26:DA:2329:G:H5'	2.03	0.40
26:DA:2722:A:OP1	26:DA:2724:A:OP1	2.38	0.40
26:DA:2897:C:H2'	26:DA:2898:C:H6	1.85	0.40
29:DD:224:ALA:O	29:DD:225:ALA:CB	2.69	0.40
33:DH:121:ILE:HD11	33:DH:140:LYS:HB3	2.04	0.40
40:DR:20:LEU:HD21	40:DR:40:LYS:HD3	2.01	0.40
40:DR:48:VAL:O	40:DR:51:LEU:N	2.54	0.40
40:DR:63:ARG:HA	40:DR:80:PHE:CZ	2.57	0.40
41:DS:106:ARG:HD2	41:DS:107:GLU:O	2.21	0.40
42:DT:26:ASP:HB3	42:DT:89:VAL:O	2.21	0.40
42:DT:48:ILE:O	42:DT:63:VAL:HA	2.21	0.40
43:DU:66:ASN:HD21	43:DU:70:ARG:HE	1.68	0.40
43:DU:79:PHE:CE2	43:DU:83:LEU:HD21	2.56	0.40
1:AA:298:A:H2'	1:AA:299:G:O4'	2.21	0.40
1:AA:472:A:O2'	16:AP:81:ARG:HA	2.21	0.40
1:AA:1012:U:H2'	1:AA:1013:G:O4'	2.21	0.40
1:AA:1351:U:H2'	1:AA:1352:C:C6	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:76:ILE:CG1	5:AE:77:PRO:HD2	2.52	0.40
10:AJ:7:LYS:HG3	10:AJ:97:GLU:HB2	2.04	0.40
19:AS:23:ASN:O	19:AS:25:LYS:N	2.55	0.40
19:AS:58:VAL:O	19:AS:58:VAL:HG23	2.20	0.40
22:AV:2:G:H2'	22:AV:3:C:C6	2.57	0.40
22:AV:65:G:C2'	22:AV:66:C:O5'	2.70	0.40
23:AW:21:A:C6	23:AW:46:G:N3	2.90	0.40
26:BA:188:U:C5	26:BA:189:C:C6	3.09	0.40
26:BA:505:A:H1'	47:BY:44:ILE:HG21	2.03	0.40
26:BA:585:G:C6	26:BA:2039:G:C5	3.10	0.40
26:BA:632:G:H2'	26:BA:633:C:C6	2.57	0.40
26:BA:873:U:H2'	26:BA:2441:A:C2	2.56	0.40
26:BA:1052:C:H3'	26:BA:1053:C:H2'	2.03	0.40
26:BA:1459:G:C6	26:BA:1460:U:C4	3.09	0.40
26:BA:1625:A:H2'	26:BA:1626:A:C8	2.56	0.40
26:BA:2035:A:H2'	26:BA:2036:A:C8	2.56	0.40
26:BA:2084:C:C4	26:BA:2085:C:C4	3.09	0.40
26:BA:2303:C:O2'	26:BA:2304:C:H5'	2.22	0.40
26:BA:2545:A:H2'	26:BA:2546:G:O5'	2.21	0.40
26:BA:2753:A:H2'	26:BA:2754:C:O4'	2.22	0.40
27:BB:4:C:H2'	27:BB:5:C:C6	2.57	0.40
29:BD:9:TYR:C	29:BD:10:THR:HG22	2.41	0.40
33:BH:40:GLU:O	33:BH:41:MET:HB2	2.21	0.40
33:BH:85:LYS:NZ	33:BH:87:LEU:HG	2.36	0.40
38:BP:10:PRO:O	38:BP:11:GLY:O	2.38	0.40
38:BP:39:LYS:NZ	38:BP:42:SER:OG	2.55	0.40
38:BP:49:ARG:HD2	57:B8:58:ILE:HG22	2.02	0.40
38:BP:119:GLU:OE1	38:BP:119:GLU:HA	2.20	0.40
41:BS:81:GLY:O	41:BS:82:ILE:C	2.60	0.40
42:BT:68:TYR:CD2	42:BT:68:TYR:N	2.89	0.40
44:BV:35:LEU:HB3	44:BV:37:VAL:HG23	2.03	0.40
52:B3:17:LYS:HA	52:B3:17:LYS:HD3	1.84	0.40
54:B5:33:CYS:N	54:B5:38:ALA:O	2.44	0.40
1:CA:933:U:H2'	1:CA:934:U:O4'	2.20	0.40
1:CA:1130:C:O2	9:CI:16:ARG:NH1	2.55	0.40
22:CV:53:G:C6	22:CV:64:G:C6	3.09	0.40
23:CW:11:C:H2'	23:CW:12:U:O4'	2.22	0.40
24:CY:11:C:H42	24:CY:25:G:H1	1.70	0.40
26:DA:92:G:H21	51:D2:47:ASN:HD22	1.68	0.40
26:DA:638:G:N2	31:DF:44:ARG:O	2.53	0.40
26:DA:906:U:C5	26:DA:962:A:N7	2.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DA:1348:G:H1'	26:DA:1687:A:N1	2.36	0.40
26:DA:1789:A:C8	26:DA:2707:U:O2	2.74	0.40
26:DA:2091:G:C2	26:DA:2453:C:C2	3.09	0.40
26:DA:2513:G:H5"	26:DA:2514:A:H5"	2.02	0.40
26:DA:2763:G:N3	26:DA:2763:G:H2'	2.36	0.40
26:DA:2801:C:N3	26:DA:2902:G:O6	2.54	0.40
26:DA:2849:C:C5'	40:DR:53:HIS:CD2	3.04	0.40
29:DD:28:GLU:H	29:DD:29:PRO:CD	2.34	0.40
29:DD:28:GLU:H	29:DD:29:PRO:HD2	1.87	0.40
30:DE:33:VAL:HG11	30:DE:88:GLY:HA2	2.03	0.40
32:DG:111:LEU:HD13	32:DG:120:LEU:HD21	2.03	0.40
34:DI:82:ARG:O	34:DI:89:TYR:HD1	2.04	0.40
36:DN:41:ASP:OD1	36:DN:41:ASP:N	2.54	0.40
41:DS:54:LEU:HD23	41:DS:58:LEU:O	2.21	0.40
1:AA:42:G:HO2'	1:AA:622:A:H2	1.64	0.40
1:AA:57:G:C5	1:AA:58:C:C4	3.10	0.40
1:AA:106:C:O2'	1:AA:107:G:H5'	2.22	0.40
1:AA:672:U:HO2'	1:AA:673:G:C5'	2.35	0.40
1:AA:691:G:H2'	1:AA:692:U:C6	2.57	0.40
1:AA:781:A:H5'	1:AA:782:A:OP2	2.21	0.40
1:AA:797:C:O2'	1:AA:798:G:H5'	2.21	0.40
1:AA:890:G:N2	1:AA:906:G:H2'	2.36	0.40
2:AB:125:PRO:O	2:AB:128:GLU:HB3	2.22	0.40
2:AB:212:GLN:HE22	2:AB:216:SER:HB2	1.87	0.40
3:AC:103:VAL:HG12	3:AC:104:GLN:N	2.37	0.40
3:AC:141:VAL:O	3:AC:144:SER:N	2.55	0.40
7:AG:95:ARG:O	7:AG:99:LEU:HG	2.21	0.40
17:AQ:12:SER:HB3	17:AQ:20:THR:OG1	2.21	0.40
18:AR:79:LEU:HD23	18:AR:79:LEU:HA	1.85	0.40
19:AS:43:GLU:O	19:AS:45:VAL:N	2.54	0.40
23:AW:8:U:O5'	23:AW:8:U:H6	2.05	0.40
23:AW:25:C:H2'	23:AW:26:A:C8	2.56	0.40
26:BA:819:U:H4'	29:BD:47:GLY:CA	2.51	0.40
26:BA:1526:G:C6	26:BA:1527:U:C4	3.09	0.40
26:BA:1604:A:N3	26:BA:1604:A:O4'	2.54	0.40
26:BA:1729:C:H2'	26:BA:1730:C:C6	2.57	0.40
26:BA:1931:G:O2'	26:BA:1932:U:H5'	2.21	0.40
26:BA:1938:U:H2'	26:BA:1939:A:O4'	2.22	0.40
26:BA:2107:U:H2'	26:BA:2108:G:C8	2.57	0.40
26:BA:2199:C:H2'	26:BA:2200:C:OP1	2.22	0.40
26:BA:2269:C:O2'	26:BA:2437:A:H4'	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:2640:A:O2'	26:BA:2641:G:OP2	2.38	0.40
26:BA:2723:U:O2	26:BA:2723:U:C2'	2.61	0.40
29:BD:34:VAL:O	29:BD:35:LYS:C	2.59	0.40
31:BF:132:VAL:O	31:BF:133:ASN:C	2.59	0.40
32:BG:86:MET:O	32:BG:87:PRO:O	2.39	0.40
34:BI:13:GLY:O	34:BI:14:ASP:C	2.59	0.40
38:BP:59:LEU:HG	38:BP:61:ARG:HH12	1.86	0.40
41:BS:85:VAL:HG23	41:BS:106:ARG:HG3	2.04	0.40
44:BV:2:PHE:HB2	44:BV:42:GLY:CA	2.52	0.40
45:BW:47:VAL:O	45:BW:50:VAL:HG12	2.22	0.40
47:BY:52:SER:C	47:BY:54:LYS:N	2.75	0.40
52:B3:6:VAL:HG12	52:B3:56:VAL:HG22	2.03	0.40
1:CA:1050:A:N3	1:CA:1051:G:H1'	2.37	0.40
1:CA:1447:G:H2'	1:CA:1448:G:H8	1.84	0.40
4:CD:78:LEU:O	4:CD:81:GLU:HB3	2.21	0.40
23:CW:37:A:H2'	23:CW:38:A:C8	2.56	0.40
24:CY:54:A:C2	24:CY:55:C:C6	3.09	0.40
26:DA:386:G:C8	26:DA:387:A:C8	3.10	0.40
26:DA:1272:G:OP1	43:DU:13:LYS:HD3	2.22	0.40
26:DA:1323:A:OP1	40:DR:36:THR:HG22	2.22	0.40
26:DA:1538:C:C5	26:DA:2226:G:O2'	2.70	0.40
26:DA:1808:U:H2'	26:DA:1814:A:N6	2.37	0.40
26:DA:2071:C:H2'	26:DA:2072:A:O4'	2.21	0.40
26:DA:2345:G:H4'	26:DA:2346:A:OP2	2.22	0.40
27:DB:100:A:C6	27:DB:101:G:C5	3.09	0.40
29:DD:65:ILE:HG13	29:DD:67:PHE:CE2	2.56	0.40
29:DD:77:ALA:HB2	29:DD:97:TYR:CG	2.56	0.40
30:DE:77:ILE:HG22	30:DE:78:LEU:H	1.86	0.40
37:DO:43:VAL:HG23	37:DO:56:ASP:O	2.22	0.40
38:DP:92:GLU:HG3	38:DP:123:LEU:HD23	2.02	0.40
45:DW:37:ARG:NH2	54:D5:48:GLU:OE2	2.53	0.40
58:D9:10:ILE:O	58:D9:10:ILE:HG22	2.22	0.40
1:AA:148:G:O2'	1:AA:149:A:H5'	2.21	0.40
1:AA:349:A:O2'	1:AA:350:G:H5'	2.22	0.40
2:AB:9:GLU:HA	2:AB:12:GLU:OE1	2.22	0.40
4:AD:60:GLU:HG2	4:AD:202:LEU:HB2	2.03	0.40
5:AE:33:VAL:HG11	5:AE:109:ILE:HA	2.02	0.40
10:AJ:49:VAL:CG2	14:AN:41:ARG:HB2	2.52	0.40
11:AK:84:VAL:HG23	11:AK:110:ASP:HA	2.03	0.40
15:AO:74:ASP:OD2	15:AO:77:ARG:HG2	2.22	0.40
26:BA:8:U:O2'	26:BA:9:G:P	2.79	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:310:C:H2'	26:BA:311:C:C6	2.56	0.40
26:BA:340:G:N2	26:BA:341:C:H1'	2.36	0.40
26:BA:539:A:N1	26:BA:1305:G:O2'	2.49	0.40
26:BA:629:U:C5'	31:BF:103:LYS:HD2	2.51	0.40
26:BA:1010:G:C6	26:BA:1011:C:N4	2.89	0.40
26:BA:1198:C:N4	26:BA:1199:G:C6	2.89	0.40
26:BA:1956:G:C6	26:BA:1983:C:C6	3.09	0.40
26:BA:2500:G:C6	26:BA:2501:G:N1	2.90	0.40
26:BA:2509:C:O2'	26:BA:2510:C:H5'	2.22	0.40
28:BC:54:SER:OG	28:BC:55:ASP:N	2.52	0.40
29:BD:246:PRO:HG2	29:BD:255:LYS:HG3	2.03	0.40
32:BG:130:ASN:HB3	32:BG:160:VAL:HA	2.03	0.40
33:BH:68:THR:O	33:BH:72:ILE:HG12	2.21	0.40
36:BN:58:ASP:OD1	36:BN:124:ALA:HB1	2.21	0.40
38:BP:37:GLY:H	38:BP:38:GLN:HG2	1.87	0.40
38:BP:64:LYS:CB	57:B8:25:MET:HG3	2.48	0.40
42:BT:128:GLU:O	42:BT:129:ARG:C	2.59	0.40
43:BU:60:LEU:O	43:BU:61:TRP:C	2.60	0.40
44:BV:40:LEU:N	44:BV:40:LEU:CD2	2.84	0.40
47:BY:14:LEU:HD12	47:BY:23:ARG:H	1.86	0.40
57:B8:17:THR:HG23	57:B8:23:VAL:CG2	2.51	0.40
1:CA:144:A:O2'	1:CA:145:C:OP2	2.37	0.40
1:CA:597:C:C6	1:CA:597:C:H3'	2.57	0.40
1:CA:1172:G:H3'	3:CC:3:ASN:ND2	2.37	0.40
4:CD:65:ARG:HD2	4:CD:72:GLU:HA	2.02	0.40
6:CF:42:GLU:OE1	6:CF:59:TYR:HE2	2.04	0.40
10:CJ:44:VAL:HG12	10:CJ:45:ARG:N	2.37	0.40
13:CM:86:CYS:HA	19:CS:73:GLU:O	2.21	0.40
26:DA:29:G:C5	26:DA:30:C:C4	3.09	0.40
26:DA:875:A:H5'	26:DA:877:G:N7	2.36	0.40
26:DA:1420:C:H2'	26:DA:1421:C:H6	1.86	0.40
26:DA:1488:G:H5"	26:DA:1488:G:C8	2.56	0.40
26:DA:2329:G:C2'	26:DA:2330:G:OP1	2.70	0.40
34:DI:20:ASP:OD1	34:DI:20:ASP:N	2.53	0.40
35:DJ:103:ALA:HA	35:DJ:107:ALA:HB3	2.04	0.40
36:DN:46:VAL:HG13	36:DN:48:MET:HG3	2.04	0.40
36:DN:126:PRO:HB2	36:DN:127:ASP:H	1.75	0.40
38:DP:8:PRO:O	38:DP:9:ASN:HB3	2.21	0.40
38:DP:114:ILE:HG23	38:DP:130:PHE:CD1	2.57	0.40
44:DV:22:VAL:O	44:DV:23:GLU:HB2	2.22	0.40
45:DW:50:VAL:HG13	45:DW:105:VAL:HG21	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DY:14:LEU:HD11	47:DY:22:GLY:HA2	2.02	0.40
47:DY:44:ILE:O	47:DY:62:GLU:HB3	2.21	0.40
48:DZ:127:LYS:HB2	48:DZ:162:GLU:HG3	2.04	0.40
57:D8:37:SER:OG	57:D8:39:LYS:HB3	2.22	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:358:U:OP1	34:DI:87:LYS:NZ[4_455]	2.03	0.17

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
2	AB	232/234 (99%)	170 (73%)	51 (22%)	11 (5%)	2 14
2	CB	232/234 (99%)	181 (78%)	41 (18%)	10 (4%)	2 16
3	AC	204/206 (99%)	150 (74%)	40 (20%)	14 (7%)	1 8
3	CC	204/206 (99%)	159 (78%)	32 (16%)	13 (6%)	1 9
4	AD	206/208 (99%)	155 (75%)	37 (18%)	14 (7%)	1 8
4	CD	206/208 (99%)	160 (78%)	36 (18%)	10 (5%)	2 14
5	AE	148/150 (99%)	129 (87%)	15 (10%)	4 (3%)	5 26
5	CE	148/150 (99%)	130 (88%)	16 (11%)	2 (1%)	11 38
6	AF	99/101 (98%)	89 (90%)	7 (7%)	3 (3%)	4 24
6	CF	99/101 (98%)	88 (89%)	9 (9%)	2 (2%)	7 32
7	AG	153/155 (99%)	133 (87%)	18 (12%)	2 (1%)	12 40
7	CG	153/155 (99%)	130 (85%)	18 (12%)	5 (3%)	4 22
8	AH	136/138 (99%)	119 (88%)	14 (10%)	3 (2%)	6 30

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
8	CH	136/138 (99%)	115 (85%)	18 (13%)	3 (2%)	6 30
9	AI	125/127 (98%)	96 (77%)	25 (20%)	4 (3%)	4 22
9	CI	125/127 (98%)	101 (81%)	21 (17%)	3 (2%)	6 28
10	AJ	96/98 (98%)	76 (79%)	17 (18%)	3 (3%)	4 23
10	CJ	96/98 (98%)	73 (76%)	18 (19%)	5 (5%)	2 13
11	AK	117/119 (98%)	96 (82%)	19 (16%)	2 (2%)	9 35
11	CK	117/119 (98%)	102 (87%)	12 (10%)	3 (3%)	5 27
12	AL	122/124 (98%)	95 (78%)	18 (15%)	9 (7%)	1 7
12	CL	122/124 (98%)	95 (78%)	20 (16%)	7 (6%)	1 11
13	AM	122/124 (98%)	87 (71%)	23 (19%)	12 (10%)	0 3
13	CM	122/124 (98%)	90 (74%)	23 (19%)	9 (7%)	1 7
14	AN	58/60 (97%)	43 (74%)	11 (19%)	4 (7%)	1 8
14	CN	58/60 (97%)	46 (79%)	8 (14%)	4 (7%)	1 8
15	AO	86/88 (98%)	62 (72%)	19 (22%)	5 (6%)	1 11
15	CO	86/88 (98%)	71 (83%)	10 (12%)	5 (6%)	1 11
16	AP	81/83 (98%)	68 (84%)	13 (16%)	0	100 100
16	CP	81/83 (98%)	64 (79%)	12 (15%)	5 (6%)	1 10
17	AQ	97/99 (98%)	85 (88%)	8 (8%)	4 (4%)	3 17
17	CQ	97/99 (98%)	89 (92%)	5 (5%)	3 (3%)	4 23
18	AR	68/70 (97%)	55 (81%)	8 (12%)	5 (7%)	1 7
18	CR	68/70 (97%)	58 (85%)	6 (9%)	4 (6%)	1 10
19	AS	76/78 (97%)	57 (75%)	11 (14%)	8 (10%)	0 3
19	CS	76/78 (97%)	64 (84%)	8 (10%)	4 (5%)	2 12
20	AT	97/99 (98%)	71 (73%)	22 (23%)	4 (4%)	3 17
20	CT	97/99 (98%)	72 (74%)	21 (22%)	4 (4%)	3 17
21	AU	22/24 (92%)	13 (59%)	7 (32%)	2 (9%)	1 4
21	CU	22/24 (92%)	17 (77%)	4 (18%)	1 (4%)	2 15
28	BC	182/206 (88%)	111 (61%)	50 (28%)	21 (12%)	0 2
29	BD	269/271 (99%)	214 (80%)	34 (13%)	21 (8%)	1 6
29	DD	269/271 (99%)	217 (81%)	31 (12%)	21 (8%)	1 6
30	BE	202/204 (99%)	138 (68%)	47 (23%)	17 (8%)	1 5

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
30	DE	202/204 (99%)	152 (75%)	35 (17%)	15 (7%)	1 7
31	BF	205/207 (99%)	163 (80%)	28 (14%)	14 (7%)	1 8
31	DF	205/207 (99%)	163 (80%)	28 (14%)	14 (7%)	1 8
32	BG	179/181 (99%)	140 (78%)	27 (15%)	12 (7%)	1 8
32	DG	179/181 (99%)	137 (76%)	31 (17%)	11 (6%)	1 10
33	BH	157/159 (99%)	113 (72%)	24 (15%)	20 (13%)	0 1
33	DH	157/159 (99%)	116 (74%)	25 (16%)	16 (10%)	0 3
34	BI	143/145 (99%)	107 (75%)	29 (20%)	7 (5%)	2 14
34	DI	143/145 (99%)	110 (77%)	25 (18%)	8 (6%)	2 11
35	BJ	128/130 (98%)	70 (55%)	42 (33%)	16 (12%)	0 1
35	DJ	128/130 (98%)	72 (56%)	42 (33%)	14 (11%)	0 2
36	BN	136/138 (99%)	100 (74%)	25 (18%)	11 (8%)	1 6
36	DN	136/138 (99%)	108 (79%)	15 (11%)	13 (10%)	0 4
37	BO	120/122 (98%)	106 (88%)	12 (10%)	2 (2%)	9 35
37	DO	120/122 (98%)	106 (88%)	13 (11%)	1 (1%)	19 51
38	BP	144/146 (99%)	82 (57%)	37 (26%)	25 (17%)	0 1
38	DP	144/146 (99%)	87 (60%)	28 (19%)	29 (20%)	0 0
39	BQ	139/141 (99%)	109 (78%)	25 (18%)	5 (4%)	3 20
39	DQ	139/141 (99%)	116 (84%)	19 (14%)	4 (3%)	4 24
40	BR	115/117 (98%)	93 (81%)	16 (14%)	6 (5%)	2 13
40	DR	115/117 (98%)	92 (80%)	17 (15%)	6 (5%)	2 13
41	BS	96/98 (98%)	58 (60%)	22 (23%)	16 (17%)	0 1
41	DS	96/98 (98%)	63 (66%)	20 (21%)	13 (14%)	0 1
42	BT	135/137 (98%)	95 (70%)	23 (17%)	17 (13%)	0 1
42	DT	135/137 (98%)	89 (66%)	30 (22%)	16 (12%)	0 2
43	BU	115/117 (98%)	90 (78%)	19 (16%)	6 (5%)	2 13
43	DU	115/117 (98%)	92 (80%)	19 (16%)	4 (4%)	3 21
44	BV	99/101 (98%)	74 (75%)	14 (14%)	11 (11%)	0 2
44	DV	99/101 (98%)	72 (73%)	17 (17%)	10 (10%)	0 3
45	BW	111/113 (98%)	92 (83%)	16 (14%)	3 (3%)	5 26
45	DW	111/113 (98%)	96 (86%)	7 (6%)	8 (7%)	1 7

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
46	BX	90/92 (98%)	80 (89%)	7 (8%)	3 (3%)	4 22
46	DX	90/92 (98%)	75 (83%)	8 (9%)	7 (8%)	1 6
47	BY	98/100 (98%)	53 (54%)	22 (22%)	23 (24%)	0 0
47	DY	98/100 (98%)	60 (61%)	19 (19%)	19 (19%)	0 1
48	BZ	174/176 (99%)	141 (81%)	26 (15%)	7 (4%)	3 18
48	DZ	174/176 (99%)	130 (75%)	33 (19%)	11 (6%)	1 9
49	B0	82/84 (98%)	75 (92%)	6 (7%)	1 (1%)	13 42
49	D0	82/84 (98%)	72 (88%)	9 (11%)	1 (1%)	13 42
50	B1	91/93 (98%)	76 (84%)	12 (13%)	3 (3%)	4 22
50	D1	91/93 (98%)	74 (81%)	10 (11%)	7 (8%)	1 6
51	B2	69/71 (97%)	53 (77%)	10 (14%)	6 (9%)	1 5
51	D2	69/71 (97%)	54 (78%)	11 (16%)	4 (6%)	1 11
52	B3	57/59 (97%)	51 (90%)	5 (9%)	1 (2%)	8 35
52	D3	57/59 (97%)	53 (93%)	3 (5%)	1 (2%)	8 35
53	B4	28/30 (93%)	21 (75%)	4 (14%)	3 (11%)	0 3
53	D4	28/30 (93%)	20 (71%)	5 (18%)	3 (11%)	0 3
54	B5	57/59 (97%)	43 (75%)	9 (16%)	5 (9%)	1 5
54	D5	57/59 (97%)	48 (84%)	4 (7%)	5 (9%)	1 5
55	B6	42/44 (96%)	21 (50%)	8 (19%)	13 (31%)	0 0
55	D6	42/44 (96%)	23 (55%)	7 (17%)	12 (29%)	0 0
56	B7	46/48 (96%)	45 (98%)	1 (2%)	0	100 100
56	D7	46/48 (96%)	45 (98%)	0	1 (2%)	6 30
57	B8	61/63 (97%)	44 (72%)	10 (16%)	7 (12%)	0 2
57	D8	61/63 (97%)	47 (77%)	8 (13%)	6 (10%)	0 3
58	B9	34/36 (94%)	32 (94%)	2 (6%)	0	100 100
58	D9	34/36 (94%)	33 (97%)	1 (3%)	0	100 100
60	DC	182/196 (93%)	115 (63%)	47 (26%)	20 (11%)	0 2
All	All	11898/12136 (98%)	9181 (77%)	1900 (16%)	817 (7%)	1 8

All (817) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	106	LYS

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Mol	Chain	Res	Type
2	AB	165	VAL
3	AC	12	LEU
3	AC	20	SER
3	AC	47	LEU
3	AC	156	ARG
4	AD	4	TYR
4	AD	5	ILE
4	AD	26	CYS
4	AD	30	LYS
4	AD	110	PHE
8	AH	2	LEU
9	AI	89	ASN
10	AJ	59	SER
12	AL	91	LYS
12	AL	92	ASP
13	AM	66	LEU
13	AM	113	PRO
13	AM	117	VAL
14	AN	15	LYS
14	AN	16	PHE
17	AQ	31	LEU
17	AQ	49	GLU
18	AR	45	SER
18	AR	87	ARG
19	AS	10	PHE
19	AS	24	ALA
19	AS	80	TYR
28	BC	198	ALA
28	BC	213	ALA
29	BD	23	GLU
29	BD	25	THR
29	BD	33	LEU
29	BD	99	ASP
29	BD	241	PRO
29	BD	242	ARG
30	BE	2	LYS
30	BE	66	HIS
30	BE	71	GLY
30	BE	72	VAL
30	BE	82	ARG
30	BE	131	ALA
31	BF	21	ALA

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Mol	Chain	Res	Type
31	BF	25	PRO
31	BF	89	VAL
32	BG	82	LEU
32	BG	87	PRO
32	BG	97	ASP
32	BG	128	ARG
33	BH	45	VAL
33	BH	83	TYR
33	BH	127	GLU
33	BH	137	ASP
33	BH	156	ALA
33	BH	157	TYR
33	BH	159	GLU
34	BI	85	GLU
34	BI	133	HIS
35	BJ	6	ALA
35	BJ	33	ALA
35	BJ	38	ALA
35	BJ	43	ALA
35	BJ	87	ALA
35	BJ	108	ALA
36	BN	4	TYR
36	BN	57	ALA
36	BN	58	ASP
38	BP	11	GLY
38	BP	14	LYS
38	BP	18	ARG
38	BP	31	ALA
38	BP	35	HIS
38	BP	40	SER
38	BP	47	ASP
38	BP	52	GLU
38	BP	65	ARG
38	BP	67	MET
38	BP	107	LYS
38	BP	111	ARG
39	BQ	134	ARG
39	BQ	135	ASP
40	BR	102	GLU
41	BS	23	ARG
41	BS	53	SER
41	BS	59	LYS

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Mol	Chain	Res	Type
41	BS	89	ARG
41	BS	92	TYR
41	BS	97	ARG
41	BS	102	ALA
41	BS	104	GLY
42	BT	24	PRO
42	BT	30	VAL
42	BT	33	LYS
42	BT	80	SER
42	BT	92	GLY
42	BT	107	ASP
42	BT	129	ARG
43	BU	32	ALA
43	BU	33	ARG
43	BU	91	ASP
44	BV	19	LYS
44	BV	22	VAL
44	BV	46	VAL
44	BV	79	VAL
46	BX	12	VAL
47	BY	3	VAL
47	BY	7	VAL
47	BY	27	VAL
47	BY	38	ILE
47	BY	56	PRO
47	BY	77	PRO
47	BY	78	ALA
47	BY	81	LYS
48	BZ	31	ARG
48	BZ	166	SER
50	B1	83	GLU
51	B2	17	SER
51	B2	47	ASN
54	B5	4	HIS
54	B5	36	CYS
54	B5	57	VAL
55	B6	18	ARG
55	B6	20	ASN
55	B6	28	ARG
55	B6	31	PRO
55	B6	34	LEU
55	B6	44	ARG

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Mol	Chain	Res	Type
57	B8	3	LYS
57	B8	43	GLN
2	CB	165	VAL
2	CB	183	PRO
3	CC	12	LEU
4	CD	3	ARG
4	CD	5	ILE
4	CD	30	LYS
8	CH	2	LEU
12	CL	18	VAL
12	CL	91	LYS
12	CL	92	ASP
12	CL	115	LYS
13	CM	66	LEU
13	CM	83	ASP
13	CM	113	PRO
13	CM	117	VAL
14	CN	16	PHE
16	CP	26	ARG
18	CR	87	ARG
19	CS	10	PHE
20	CT	103	GLY
60	DC	213	ALA
29	DD	25	THR
29	DD	33	LEU
29	DD	242	ARG
29	DD	271	ILE
30	DE	66	HIS
30	DE	72	VAL
30	DE	131	ALA
31	DF	3	GLU
31	DF	21	ALA
31	DF	89	VAL
31	DF	167	ALA
32	DG	87	PRO
32	DG	97	ASP
32	DG	115	ARG
33	DH	45	VAL
33	DH	137	ASP
33	DH	138	LYS
33	DH	154	PRO
33	DH	155	SER

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Mol	Chain	Res	Type
33	DH	156	ALA
33	DH	159	GLU
34	DI	115	ALA
35	DJ	23	ALA
35	DJ	52	ALA
36	DN	4	TYR
36	DN	57	ALA
36	DN	58	ASP
36	DN	133	GLN
38	DP	9	ASN
38	DP	11	GLY
38	DP	14	LYS
38	DP	19	VAL
38	DP	35	HIS
38	DP	39	LYS
38	DP	52	GLU
38	DP	57	THR
38	DP	58	THR
38	DP	65	ARG
38	DP	103	ALA
38	DP	107	LYS
38	DP	108	LYS
38	DP	111	ARG
39	DQ	27	VAL
39	DQ	135	ASP
41	DS	53	SER
41	DS	59	LYS
41	DS	89	ARG
41	DS	94	TYR
41	DS	97	ARG
42	DT	24	PRO
42	DT	28	VAL
42	DT	30	VAL
42	DT	33	LYS
42	DT	80	SER
42	DT	129	ARG
42	DT	131	ALA
44	DV	23	GLU
44	DV	46	VAL
44	DV	49	THR
45	DW	63	ASP
46	DX	4	ALA

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Mol	Chain	Res	Type
46	DX	12	VAL
47	DY	3	VAL
47	DY	7	VAL
47	DY	17	SER
47	DY	24	VAL
47	DY	27	VAL
47	DY	38	ILE
47	DY	56	PRO
47	DY	77	PRO
47	DY	78	ALA
49	D0	13	GLY
50	D1	52	ARG
50	D1	85	LEU
51	D2	47	ASN
53	D4	54	LYS
54	D5	4	HIS
54	D5	49	CYS
54	D5	57	VAL
55	D6	19	ARG
57	D8	61	LEU
2	AB	153	ARG
3	AC	206	GLU
4	AD	9	CYS
4	AD	18	LYS
4	AD	44	GLY
5	AE	21	ALA
6	AF	40	VAL
9	AI	12	GLU
9	AI	105	ASP
10	AJ	27	ALA
12	AL	46	LYS
12	AL	74	GLY
12	AL	115	LYS
13	AM	6	GLY
17	AQ	34	LYS
19	AS	28	LYS
28	BC	55	ASP
28	BC	150	ALA
28	BC	160	ALA
28	BC	167	ALA
28	BC	170	ALA
28	BC	204	ALA

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Mol	Chain	Res	Type
28	BC	216	ALA
29	BD	27	THR
29	BD	45	ASN
29	BD	127	VAL
29	BD	225	ALA
29	BD	238	GLY
30	BE	18	ASP
30	BE	60	ASN
30	BE	77	ILE
30	BE	86	PRO
30	BE	186	GLY
31	BF	67	GLN
31	BF	133	ASN
31	BF	134	GLY
31	BF	167	ALA
32	BG	14	GLU
32	BG	96	ARG
32	BG	126	ASP
32	BG	127	GLY
32	BG	129	GLY
33	BH	56	SER
33	BH	138	LYS
33	BH	153	LYS
33	BH	154	PRO
34	BI	12	LEU
35	BJ	19	ALA
35	BJ	79	ALA
35	BJ	109	ALA
36	BN	77	GLY
37	BO	5	GLN
38	BP	19	VAL
38	BP	48	PRO
38	BP	49	ARG
38	BP	64	LYS
38	BP	140	ALA
39	BQ	27	VAL
39	BQ	139	GLU
40	BR	8	ARG
40	BR	105	ARG
40	BR	117	VAL
41	BS	82	ILE
41	BS	90	GLY

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Mol	Chain	Res	Type
42	BT	35	LYS
42	BT	55	ASN
43	BU	90	VAL
44	BV	18	LEU
44	BV	37	VAL
45	BW	63	ASP
47	BY	22	GLY
47	BY	29	GLU
47	BY	39	VAL
47	BY	80	GLY
47	BY	99	CYS
50	B1	53	VAL
50	B1	85	LEU
51	B2	43	GLN
51	B2	71	ASN
55	B6	15	GLU
55	B6	17	LYS
55	B6	25	LYS
55	B6	33	LYS
55	B6	49	HIS
57	B8	32	LEU
57	B8	34	TRP
2	CB	83	MET
2	CB	153	ARG
3	CC	4	LYS
3	CC	47	LEU
3	CC	145	GLY
3	CC	156	ARG
4	CD	47	ARG
4	CD	156	GLU
6	CF	38	GLU
7	CG	7	ALA
7	CG	117	ALA
8	CH	22	GLU
8	CH	68	ARG
9	CI	42	ARG
10	CJ	27	ALA
10	CJ	59	SER
11	CK	101	SER
12	CL	121	GLY
13	CM	6	GLY
13	CM	100	GLY

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Mol	Chain	Res	Type
13	CM	107	ALA
14	CN	15	LYS
14	CN	28	GLY
15	CO	84	LYS
18	CR	65	ILE
60	DC	55	ASP
60	DC	170	ALA
60	DC	202	ALA
60	DC	209	ALA
60	DC	211	ALA
60	DC	216	ALA
29	DD	32	SER
29	DD	99	ASP
29	DD	115	GLN
29	DD	225	ALA
29	DD	234	GLY
29	DD	239	ARG
29	DD	244	ARG
30	DE	17	ASP
30	DE	54	GLN
30	DE	77	ILE
30	DE	83	ASP
30	DE	88	GLY
31	DF	25	PRO
31	DF	26	ALA
31	DF	66	PRO
31	DF	128	ALA
31	DF	168	ARG
32	DG	43	LEU
32	DG	52	ILE
32	DG	82	LEU
32	DG	96	ARG
32	DG	126	ASP
33	DH	158	HIS
34	DI	14	ASP
34	DI	85	GLU
34	DI	120	ILE
34	DI	133	HIS
35	DJ	49	ALA
35	DJ	58	ALA
35	DJ	88	ALA
35	DJ	120	ALA

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Mol	Chain	Res	Type
35	DJ	124	ALA
38	DP	18	ARG
38	DP	34	GLY
38	DP	42	SER
38	DP	46	LYS
38	DP	47	ASP
38	DP	49	ARG
38	DP	147	LEU
38	DP	149	GLU
39	DQ	2	LEU
40	DR	45	ARG
40	DR	117	VAL
41	DS	102	ALA
42	DT	12	SER
42	DT	85	LYS
42	DT	88	ILE
43	DU	32	ALA
43	DU	91	ASP
43	DU	93	LYS
44	DV	37	VAL
44	DV	53	GLU
45	DW	6	ILE
45	DW	112	GLY
46	DX	11	PRO
47	DY	29	GLU
48	DZ	92	SER
50	D1	28	GLY
50	D1	58	ILE
50	D1	84	GLY
51	D2	44	LEU
52	D3	13	ILE
53	D4	61	VAL
55	D6	16	CYS
55	D6	28	ARG
55	D6	31	PRO
55	D6	33	LYS
55	D6	44	ARG
57	D8	31	HIS
57	D8	34	TRP
2	AB	18	GLY
2	AB	77	ALA
2	AB	121	LEU

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Mol	Chain	Res	Type
3	AC	48	TYR
3	AC	179	ARG
4	AD	14	ARG
4	AD	47	ARG
5	AE	8	GLU
7	AG	54	THR
9	AI	42	ARG
10	AJ	23	ILE
12	AL	19	ARG
13	AM	27	LYS
13	AM	106	ASN
13	AM	107	ALA
15	AO	25	THR
15	AO	76	GLU
19	AS	29	ARG
20	AT	94	ALA
20	AT	97	ALA
20	AT	103	GLY
28	BC	52	ARG
28	BC	148	ALA
28	BC	171	ALA
28	BC	178	ALA
29	BD	28	GLU
29	BD	169	GLU
29	BD	239	ARG
30	BE	88	GLY
30	BE	122	PHE
30	BE	187	ALA
31	BF	5	ALA
31	BF	14	PRO
32	BG	84	LYS
32	BG	117	PHE
33	BH	21	PRO
33	BH	57	ASP
33	BH	128	PRO
34	BI	120	ILE
35	BJ	10	ALA
35	BJ	22	ALA
35	BJ	84	ALA
35	BJ	105	ALA
37	BO	48	PRO
38	BP	23	PRO

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Mol	Chain	Res	Type
38	BP	38	GLN
38	BP	42	SER
41	BS	94	TYR
42	BT	26	ASP
42	BT	32	TYR
42	BT	58	ASN
42	BT	90	GLN
43	BU	92	ARG
44	BV	2	PHE
45	BW	111	HIS
46	BX	19	ALA
47	BY	17	SER
47	BY	41	GLY
47	BY	50	ARG
47	BY	53	PRO
48	BZ	81	ARG
51	B2	69	ARG
53	B4	54	LYS
53	B4	61	VAL
55	B6	43	CYS
57	B8	35	GLN
57	B8	40	GLU
3	CC	15	THR
3	CC	81	GLY
4	CD	4	TYR
4	CD	14	ARG
5	CE	107	ARG
5	CE	153	LYS
10	CJ	23	ILE
10	CJ	58	ASP
12	CL	51	ALA
13	CM	63	THR
15	CO	24	SER
15	CO	85	LEU
16	CP	64	ALA
17	CQ	49	GLU
19	CS	25	LYS
19	CS	80	TYR
20	CT	99	LEU
60	DC	126	ALA
60	DC	171	ALA
60	DC	173	ALA

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Mol	Chain	Res	Type
60	DC	178	ALA
60	DC	198	ALA
60	DC	205	ALA
29	DD	23	GLU
29	DD	27	THR
29	DD	210	GLY
29	DD	241	PRO
30	DE	60	ASN
30	DE	89	ASP
30	DE	118	LYS
31	DF	11	VAL
31	DF	54	ARG
32	DG	50	ALA
33	DH	55	PRO
33	DH	56	SER
33	DH	157	TYR
35	DJ	47	ALA
35	DJ	56	ALA
35	DJ	76	ALA
35	DJ	104	ALA
36	DN	59	LYS
36	DN	127	ASP
36	DN	135	PRO
38	DP	89	ALA
38	DP	106	LEU
40	DR	8	ARG
41	DS	14	VAL
41	DS	92	TYR
42	DT	31	SER
42	DT	92	GLY
42	DT	107	ASP
44	DV	79	VAL
45	DW	11	ARG
45	DW	65	LEU
45	DW	93	ALA
46	DX	13	LEU
47	DY	62	GLU
48	DZ	42	VAL
48	DZ	52	SER
48	DZ	136	PHE
48	DZ	165	VAL
48	DZ	166	SER

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Mol	Chain	Res	Type
48	DZ	177	PRO
50	D1	45	ASN
50	D1	53	VAL
51	D2	70	GLN
55	D6	18	ARG
57	D8	40	GLU
2	AB	83	MET
2	AB	130	ARG
2	AB	191	ASP
3	AC	4	LYS
3	AC	81	GLY
3	AC	168	ALA
4	AD	32	ALA
4	AD	91	SER
5	AE	153	LYS
11	AK	101	SER
12	AL	27	LEU
18	AR	31	LEU
18	AR	34	TYR
19	AS	30	LEU
19	AS	44	MET
20	AT	71	THR
21	AU	3	LYS
28	BC	64	LEU
28	BC	126	ALA
28	BC	177	ALA
28	BC	184	ALA
28	BC	205	ALA
29	BD	211	ARG
29	BD	267	SER
31	BF	26	ALA
31	BF	53	THR
31	BF	168	ARG
33	BH	55	PRO
35	BJ	50	ALA
35	BJ	77	ALA
36	BN	8	GLN
36	BN	134	ARG
38	BP	141	ALA
39	BQ	28	ALA
40	BR	12	ARG
41	BS	19	LYS

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Mol	Chain	Res	Type
41	BS	71	ARG
42	BT	12	SER
44	BV	49	THR
44	BV	80	GLN
45	BW	6	ILE
47	BY	24	VAL
47	BY	37	VAL
48	BZ	93	ASP
48	BZ	104	PHE
51	B2	44	LEU
53	B4	46	ASN
54	B5	49	CYS
55	B6	23	THR
57	B8	31	HIS
2	CB	14	GLY
3	CC	45	LYS
3	CC	165	THR
4	CD	44	GLY
4	CD	172	PRO
11	CK	49	GLY
12	CL	19	ARG
16	CP	16	HIS
17	CQ	34	LYS
17	CQ	83	ASP
18	CR	55	ARG
19	CS	24	ALA
20	CT	97	ALA
60	DC	52	ARG
60	DC	125	ALA
60	DC	167	ALA
60	DC	177	ALA
29	DD	3	VAL
29	DD	202	LYS
30	DE	70	ALA
30	DE	90	THR
31	DF	127	GLU
33	DH	49	VAL
33	DH	83	TYR
33	DH	126	PRO
34	DI	78	THR
35	DJ	7	ALA
35	DJ	29	ALA

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Mol	Chain	Res	Type
36	DN	8	GLN
36	DN	47	ALA
36	DN	126	PRO
40	DR	102	GLU
40	DR	105	ARG
42	DT	35	LYS
42	DT	83	ILE
44	DV	18	LEU
45	DW	12	ILE
45	DW	35	ILE
46	DX	10	ALA
46	DX	36	LYS
47	DY	39	VAL
47	DY	81	LYS
54	D5	36	CYS
55	D6	17	LYS
57	D8	35	GLN
2	AB	52	GLU
3	AC	195	VAL
6	AF	96	PRO
7	AG	153	HIS
8	AH	73	ASP
13	AM	12	ASN
13	AM	67	GLU
14	AN	44	LEU
17	AQ	80	GLY
18	AR	54	ARG
28	BC	24	GLU
28	BC	108	ALA
28	BC	162	ALA
29	BD	244	ARG
30	BE	57	LYS
31	BF	66	PRO
33	BH	81	GLU
33	BH	158	HIS
34	BI	53	ALA
35	BJ	76	ALA
36	BN	110	GLY
38	BP	39	LYS
38	BP	108	LYS
41	BS	14	VAL
42	BT	31	SER

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Mol	Chain	Res	Type
47	BY	62	GLU
47	BY	67	LEU
2	CB	19	HIS
2	CB	143	GLU
3	CC	39	ILE
3	CC	179	ARG
3	CC	181	ASN
4	CD	9	CYS
7	CG	155	ARG
9	CI	43	ALA
16	CP	28	ARG
16	CP	72	ARG
18	CR	64	ARG
21	CU	9	ARG
29	DD	28	GLU
29	DD	35	LYS
29	DD	127	VAL
30	DE	45	THR
33	DH	85	LYS
35	DJ	107	ALA
36	DN	134	ARG
38	DP	30	THR
38	DP	104	GLY
41	DS	100	ALA
41	DS	107	GLU
42	DT	41	ARG
43	DU	92	ARG
44	DV	3	ALA
44	DV	16	PRO
44	DV	29	PRO
47	DY	37	VAL
47	DY	53	PRO
47	DY	67	LEU
47	DY	80	GLY
51	D2	18	PRO
53	D4	46	ASN
55	D6	15	GLU
55	D6	41	PRO
55	D6	42	TRP
55	D6	49	HIS
56	D7	2	LYS
57	D8	3	LYS

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Mol	Chain	Res	Type
3	AC	37	GLN
3	AC	145	GLY
5	AE	107	ARG
8	AH	77	GLU
11	AK	93	GLN
13	AM	21	TYR
13	AM	83	ASP
14	AN	60	SER
15	AO	24	SER
15	AO	65	ARG
15	AO	85	LEU
29	BD	3	VAL
29	BD	111	LEU
30	BE	45	THR
33	BH	85	LYS
33	BH	92	ILE
34	BI	78	THR
34	BI	144	VAL
36	BN	135	PRO
40	BR	4	LEU
42	BT	28	VAL
42	BT	88	ILE
44	BV	3	ALA
44	BV	23	GLU
48	BZ	142	SER
48	BZ	168	GLU
2	CB	233	SER
6	CF	39	LYS
10	CJ	90	LEU
11	CK	117	ASN
13	CM	5	ALA
14	CN	14	PRO
20	CT	98	PRO
60	DC	109	ALA
60	DC	162	ALA
29	DD	236	GLY
32	DG	10	LYS
32	DG	142	PRO
38	DP	56	SER
39	DQ	22	LYS
46	DX	48	LYS
47	DY	31	LEU

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Mol	Chain	Res	Type
48	DZ	41	LEU
48	DZ	168	GLU
54	D5	37	LYS
2	AB	15	VAL
19	AS	67	VAL
30	BE	75	VAL
31	BF	10	PRO
36	BN	60	ILE
38	BP	34	GLY
41	BS	85	VAL
47	BY	31	LEU
15	CO	86	GLY
34	DI	7	GLU
37	DO	48	PRO
38	DP	122	PRO
40	DR	58	GLY
48	DZ	114	GLY
48	DZ	147	GLY
3	AC	141	VAL
6	AF	81	ILE
29	BD	57	GLY
38	BP	146	VAL
52	B3	2	PRO
54	B5	50	GLY
15	CO	29	VAL
36	DN	5	VAL
41	DS	85	VAL
4	AD	56	VAL
47	BY	49	VAL
3	CC	195	VAL
7	CG	14	PRO
60	DC	64	LEU
33	DH	92	ILE
34	DI	15	VAL
36	DN	129	PRO
4	AD	28	SER
12	AL	121	GLY
13	AM	124	PRO
21	AU	13	ILE
29	BD	35	LYS
32	BG	86	MET
46	BX	11	PRO

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Mol	Chain	Res	Type
49	B0	13	GLY
2	CB	130	ARG
2	CB	228	GLY
7	CG	81	GLY
31	DF	14	PRO
31	DF	206	ILE
38	DP	48	PRO
41	DS	90	GLY
47	DY	66	PRO
12	AL	47	LYS
33	BH	49	VAL
36	BN	94	HIS
41	BS	22	GLY
43	BU	88	ILE
9	CI	41	VAL
30	DE	53	PRO
41	DS	35	ILE
36	BN	126	PRO

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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
2	AB	202/202 (100%)	185 (92%)	17 (8%)	11 35
2	CB	202/202 (100%)	181 (90%)	21 (10%)	7 25
3	AC	160/160 (100%)	142 (89%)	18 (11%)	6 22
3	CC	160/160 (100%)	145 (91%)	15 (9%)	8 30
4	AD	180/180 (100%)	160 (89%)	20 (11%)	6 23
4	CD	180/180 (100%)	160 (89%)	20 (11%)	6 23
5	AE	115/115 (100%)	104 (90%)	11 (10%)	8 29
5	CE	115/115 (100%)	101 (88%)	14 (12%)	5 20
6	AF	90/90 (100%)	82 (91%)	8 (9%)	9 32
6	CF	90/90 (100%)	85 (94%)	5 (6%)	21 52

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
7	AG	126/126 (100%)	115 (91%)	11 (9%)	10 34
7	CG	126/126 (100%)	115 (91%)	11 (9%)	10 34
8	AH	119/119 (100%)	108 (91%)	11 (9%)	9 31
8	CH	119/119 (100%)	107 (90%)	12 (10%)	7 27
9	AI	98/98 (100%)	88 (90%)	10 (10%)	7 27
9	CI	98/98 (100%)	89 (91%)	9 (9%)	9 31
10	AJ	88/88 (100%)	76 (86%)	12 (14%)	3 16
10	CJ	88/88 (100%)	79 (90%)	9 (10%)	7 27
11	AK	90/90 (100%)	82 (91%)	8 (9%)	9 32
11	CK	90/90 (100%)	84 (93%)	6 (7%)	16 45
12	AL	104/104 (100%)	88 (85%)	16 (15%)	2 12
12	CL	104/104 (100%)	90 (86%)	14 (14%)	4 16
13	AM	99/99 (100%)	88 (89%)	11 (11%)	6 23
13	CM	99/99 (100%)	88 (89%)	11 (11%)	6 23
14	AN	49/49 (100%)	43 (88%)	6 (12%)	5 20
14	CN	49/49 (100%)	44 (90%)	5 (10%)	7 27
15	AO	79/79 (100%)	73 (92%)	6 (8%)	13 39
15	CO	79/79 (100%)	76 (96%)	3 (4%)	33 62
16	AP	72/72 (100%)	65 (90%)	7 (10%)	8 29
16	CP	72/72 (100%)	62 (86%)	10 (14%)	3 16
17	AQ	94/94 (100%)	88 (94%)	6 (6%)	17 46
17	CQ	94/94 (100%)	89 (95%)	5 (5%)	22 53
18	AR	61/61 (100%)	54 (88%)	7 (12%)	5 22
18	CR	61/61 (100%)	59 (97%)	2 (3%)	38 66
19	AS	69/69 (100%)	56 (81%)	13 (19%)	1 6
19	CS	69/69 (100%)	58 (84%)	11 (16%)	2 11
20	AT	76/76 (100%)	68 (90%)	8 (10%)	7 25
20	CT	76/76 (100%)	67 (88%)	9 (12%)	5 21
21	AU	19/19 (100%)	15 (79%)	4 (21%)	1 4
21	CU	19/19 (100%)	17 (90%)	2 (10%)	7 25
28	BC	61/66 (92%)	55 (90%)	6 (10%)	8 29

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
29	BD	213/213 (100%)	180 (84%)	33 (16%)	2 12
29	DD	213/213 (100%)	176 (83%)	37 (17%)	2 8
30	BE	165/165 (100%)	134 (81%)	31 (19%)	1 6
30	DE	165/165 (100%)	139 (84%)	26 (16%)	2 11
31	BF	165/165 (100%)	138 (84%)	27 (16%)	2 10
31	DF	165/165 (100%)	149 (90%)	16 (10%)	8 29
32	BG	155/155 (100%)	128 (83%)	27 (17%)	2 8
32	DG	155/155 (100%)	137 (88%)	18 (12%)	5 22
33	BH	132/132 (100%)	106 (80%)	26 (20%)	1 5
33	DH	132/132 (100%)	120 (91%)	12 (9%)	9 31
34	BI	122/122 (100%)	110 (90%)	12 (10%)	8 29
34	DI	122/122 (100%)	111 (91%)	11 (9%)	9 32
36	BN	117/117 (100%)	90 (77%)	27 (23%)	1 3
36	DN	117/117 (100%)	94 (80%)	23 (20%)	1 5
37	BO	100/100 (100%)	92 (92%)	8 (8%)	12 37
37	DO	100/100 (100%)	93 (93%)	7 (7%)	15 43
38	BP	112/112 (100%)	83 (74%)	29 (26%)	0 2
38	DP	112/112 (100%)	86 (77%)	26 (23%)	1 3
39	BQ	111/111 (100%)	97 (87%)	14 (13%)	4 19
39	DQ	111/111 (100%)	101 (91%)	10 (9%)	9 32
40	BR	100/100 (100%)	85 (85%)	15 (15%)	3 13
40	DR	100/100 (100%)	85 (85%)	15 (15%)	3 13
41	BS	77/77 (100%)	60 (78%)	17 (22%)	1 3
41	DS	77/77 (100%)	67 (87%)	10 (13%)	4 17
42	BT	120/120 (100%)	98 (82%)	22 (18%)	1 7
42	DT	120/120 (100%)	93 (78%)	27 (22%)	1 3
43	BU	92/92 (100%)	78 (85%)	14 (15%)	3 13
43	DU	92/92 (100%)	82 (89%)	10 (11%)	6 24
44	BV	82/82 (100%)	60 (73%)	22 (27%)	0 1
44	DV	82/82 (100%)	65 (79%)	17 (21%)	1 4
45	BW	91/91 (100%)	81 (89%)	10 (11%)	6 24

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
45	DW	91/91 (100%)	80 (88%)	11 (12%)	5 20
46	BX	74/74 (100%)	67 (90%)	7 (10%)	8 29
46	DX	74/74 (100%)	65 (88%)	9 (12%)	5 20
47	BY	84/84 (100%)	65 (77%)	19 (23%)	1 3
47	DY	84/84 (100%)	67 (80%)	17 (20%)	1 5
48	BZ	155/155 (100%)	141 (91%)	14 (9%)	9 32
48	DZ	155/155 (100%)	148 (96%)	7 (4%)	27 58
49	B0	66/66 (100%)	55 (83%)	11 (17%)	2 10
49	D0	66/66 (100%)	60 (91%)	6 (9%)	9 31
50	B1	78/78 (100%)	68 (87%)	10 (13%)	4 18
50	D1	78/78 (100%)	62 (80%)	16 (20%)	1 4
51	B2	66/66 (100%)	51 (77%)	15 (23%)	1 3
51	D2	66/66 (100%)	60 (91%)	6 (9%)	9 31
52	B3	51/51 (100%)	47 (92%)	4 (8%)	12 38
52	D3	51/51 (100%)	48 (94%)	3 (6%)	19 49
53	B4	27/27 (100%)	22 (82%)	5 (18%)	1 7
53	D4	27/27 (100%)	24 (89%)	3 (11%)	6 23
54	B5	51/51 (100%)	39 (76%)	12 (24%)	1 3
54	D5	51/51 (100%)	41 (80%)	10 (20%)	1 5
55	B6	43/43 (100%)	33 (77%)	10 (23%)	1 3
55	D6	43/43 (100%)	36 (84%)	7 (16%)	2 10
56	B7	41/41 (100%)	35 (85%)	6 (15%)	3 14
56	D7	41/41 (100%)	32 (78%)	9 (22%)	1 3
57	B8	53/53 (100%)	41 (77%)	12 (23%)	1 3
57	D8	53/53 (100%)	43 (81%)	10 (19%)	1 6
58	B9	33/33 (100%)	26 (79%)	7 (21%)	1 4
58	D9	33/33 (100%)	30 (91%)	3 (9%)	9 31
60	DC	61/66 (92%)	56 (92%)	5 (8%)	11 36
All	All	9654/9664 (100%)	8391 (87%)	1263 (13%)	4 17

All (1263) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	17	PHE
2	AB	30	ARG
2	AB	33	TYR
2	AB	36	ARG
2	AB	87	ARG
2	AB	94	ASN
2	AB	128	GLU
2	AB	137	ARG
2	AB	145	LEU
2	AB	155	LEU
2	AB	172	ILE
2	AB	178	ARG
2	AB	187	LEU
2	AB	195	ASP
2	AB	196	LEU
2	AB	206	ASP
2	AB	221	LEU
3	AC	3	ASN
3	AC	5	ILE
3	AC	16	ARG
3	AC	20	SER
3	AC	21	ARG
3	AC	26	LYS
3	AC	27	LYS
3	AC	30	ARG
3	AC	34	LEU
3	AC	37	GLN
3	AC	44	GLU
3	AC	94	LEU
3	AC	98	ASN
3	AC	127	ARG
3	AC	156	ARG
3	AC	179	ARG
3	AC	184	TYR
3	AC	190	ARG
4	AD	3	ARG
4	AD	9	CYS
4	AD	10	ARG
4	AD	15	GLU
4	AD	28	SER
4	AD	38	TYR
4	AD	45	GLN
4	AD	58	LEU

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Mol	Chain	Res	Type
4	AD	73	ARG
4	AD	80	GLU
4	AD	86	LYS
4	AD	96	LEU
4	AD	131	ARG
4	AD	132	ARG
4	AD	135	LEU
4	AD	141	ARG
4	AD	145	GLU
4	AD	168	ARG
4	AD	196	LEU
4	AD	200	GLU
5	AE	10	MET
5	AE	12	LEU
5	AE	20	GLN
5	AE	24	ARG
5	AE	25	ARG
5	AE	47	LYS
5	AE	53	LEU
5	AE	68	GLU
5	AE	73	ASN
5	AE	79	GLU
5	AE	101	ILE
6	AF	17	SER
6	AF	21	LEU
6	AF	24	GLU
6	AF	32	ASN
6	AF	55	ASP
6	AF	57	GLN
6	AF	70	ASP
6	AF	94	GLN
7	AG	5	ARG
7	AG	60	LYS
7	AG	86	GLN
7	AG	97	GLN
7	AG	104	LEU
7	AG	113	GLU
7	AG	137	LYS
7	AG	140	ASP
7	AG	146	GLU
7	AG	148	ASN
7	AG	156	TRP

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Mol	Chain	Res	Type
8	AH	1	MET
8	AH	3	THR
8	AH	26	VAL
8	AH	30	ARG
8	AH	41	ARG
8	AH	52	ASP
8	AH	60	ARG
8	AH	95	VAL
8	AH	98	LYS
8	AH	102	ARG
8	AH	112	LEU
9	AI	4	TYR
9	AI	42	ARG
9	AI	66	ARG
9	AI	78	LYS
9	AI	91	ASP
9	AI	95	LYS
9	AI	110	GLU
9	AI	114	TYR
9	AI	121	ARG
9	AI	128	ARG
10	AJ	16	LEU
10	AJ	22	LYS
10	AJ	46	ARG
10	AJ	50	ILE
10	AJ	55	LYS
10	AJ	59	SER
10	AJ	62	HIS
10	AJ	68	HIS
10	AJ	81	THR
10	AJ	86	MET
10	AJ	95	GLU
10	AJ	96	ILE
11	AK	25	TYR
11	AK	29	ILE
11	AK	36	ASP
11	AK	70	LYS
11	AK	81	ASP
11	AK	92	GLU
11	AK	119	CYS
11	AK	124	LYS
12	AL	13	LYS

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Mol	Chain	Res	Type
12	AL	16	GLU
12	AL	20	LYS
12	AL	21	LYS
12	AL	41	ARG
12	AL	42	THR
12	AL	44	THR
12	AL	47	LYS
12	AL	49	ASN
12	AL	53	ARG
12	AL	62	SER
12	AL	66	VAL
12	AL	85	ILE
12	AL	89	ARG
12	AL	92	ASP
12	AL	117	ARG
13	AM	32	GLU
13	AM	47	ASP
13	AM	48	LEU
13	AM	49	THR
13	AM	56	LEU
13	AM	64	TRP
13	AM	82	MET
13	AM	93	ARG
13	AM	108	ARG
13	AM	115	LYS
13	AM	122	LYS
14	AN	18	VAL
14	AN	27	CYS
14	AN	29	ARG
14	AN	33	VAL
14	AN	41	ARG
14	AN	42	ILE
15	AO	10	LYS
15	AO	39	LEU
15	AO	44	LYS
15	AO	65	ARG
15	AO	82	ILE
15	AO	88	ARG
16	AP	2	VAL
16	AP	12	LYS
16	AP	27	LYS
16	AP	43	LYS

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Mol	Chain	Res	Type
16	AP	54	GLU
16	AP	55	ARG
16	AP	67	THR
17	AQ	4	LYS
17	AQ	9	VAL
17	AQ	25	ARG
17	AQ	49	GLU
17	AQ	52	LYS
17	AQ	63	ARG
18	AR	31	LEU
18	AR	47	THR
18	AR	68	LYS
18	AR	82	THR
18	AR	84	LYS
18	AR	87	ARG
18	AR	88	LYS
19	AS	5	LEU
19	AS	6	LYS
19	AS	7	LYS
19	AS	15	LEU
19	AS	27	GLU
19	AS	29	ARG
19	AS	37	ARG
19	AS	43	GLU
19	AS	44	MET
19	AS	65	ASN
19	AS	67	VAL
19	AS	70	LYS
19	AS	79	THR
20	AT	10	LEU
20	AT	26	ASN
20	AT	36	LEU
20	AT	38	LYS
20	AT	42	GLN
20	AT	75	ASN
20	AT	84	LEU
20	AT	93	GLU
21	AU	12	LYS
21	AU	15	ARG
21	AU	24	ARG
21	AU	25	LYS
28	BC	23	ASP

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Mol	Chain	Res	Type
28	BC	36	LYS
28	BC	50	ASP
28	BC	56	GLN
28	BC	64	LEU
28	BC	79	LYS
29	BD	10	THR
29	BD	13	ARG
29	BD	18	VAL
29	BD	24	ILE
29	BD	25	THR
29	BD	26	LYS
29	BD	28	GLU
29	BD	35	LYS
29	BD	43	ARG
29	BD	49	ILE
29	BD	61	LEU
29	BD	65	ILE
29	BD	91	ARG
29	BD	92	ILE
29	BD	94	LEU
29	BD	103	ARG
29	BD	111	LEU
29	BD	113	VAL
29	BD	126	GLN
29	BD	155	LEU
29	BD	157	ARG
29	BD	166	GLN
29	BD	173	VAL
29	BD	175	LEU
29	BD	192	THR
29	BD	221	VAL
29	BD	227	ASN
29	BD	229	VAL
29	BD	237	GLU
29	BD	242	ARG
29	BD	257	LEU
29	BD	260	ARG
29	BD	271	ILE
30	BE	9	VAL
30	BE	18	ASP
30	BE	24	THR
30	BE	33	VAL

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Mol	Chain	Res	Type
30	BE	34	VAL
30	BE	40	GLU
30	BE	52	LEU
30	BE	54	GLN
30	BE	55	ASN
30	BE	59	VAL
30	BE	60	ASN
30	BE	63	LEU
30	BE	67	PHE
30	BE	76	ARG
30	BE	78	LEU
30	BE	79	ARG
30	BE	82	ARG
30	BE	92	THR
30	BE	94	GLU
30	BE	111	ARG
30	BE	113	PHE
30	BE	119	ARG
30	BE	144	ARG
30	BE	145	LYS
30	BE	152	LYS
30	BE	169	ASN
30	BE	175	VAL
30	BE	181	LEU
30	BE	183	LEU
30	BE	202	LYS
30	BE	203	LYS
31	BF	20	LEU
31	BF	23	ASP
31	BF	24	LEU
31	BF	27	GLU
31	BF	28	ILE
31	BF	33	LEU
31	BF	38	ARG
31	BF	46	ARG
31	BF	65	TRP
31	BF	66	PRO
31	BF	68	LYS
31	BF	74	ARG
31	BF	83	PHE
31	BF	110	LEU
31	BF	125	LEU

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Mol	Chain	Res	Type
31	BF	127	GLU
31	BF	140	LEU
31	BF	149	ASP
31	BF	164	ARG
31	BF	165	ARG
31	BF	170	LEU
31	BF	175	THR
31	BF	188	ARG
31	BF	192	LEU
31	BF	196	LEU
31	BF	199	TRP
31	BF	200	GLU
32	BG	5	VAL
32	BG	16	ARG
32	BG	22	ARG
32	BG	26	GLN
32	BG	28	VAL
32	BG	35	GLU
32	BG	39	ILE
32	BG	40	ASN
32	BG	43	LEU
32	BG	45	GLU
32	BG	53	LEU
32	BG	63	ILE
32	BG	67	LYS
32	BG	71	THR
32	BG	79	ASN
32	BG	84	LYS
32	BG	88	ILE
32	BG	97	ASP
32	BG	108	ASN
32	BG	125	PHE
32	BG	128	ARG
32	BG	130	ASN
32	BG	136	ARG
32	BG	139	LEU
32	BG	147	ASP
32	BG	153	ARG
32	BG	159	VAL
33	BH	18	GLU
33	BH	23	ARG
33	BH	24	VAL

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Mol	Chain	Res	Type
33	BH	34	GLU
33	BH	40	GLU
33	BH	42	ARG
33	BH	46	GLU
33	BH	53	GLU
33	BH	54	ARG
33	BH	56	SER
33	BH	60	ARG
33	BH	77	LYS
33	BH	84	SER
33	BH	85	LYS
33	BH	86	GLU
33	BH	89	ILE
33	BH	94	TYR
33	BH	101	ARG
33	BH	116	GLU
33	BH	122	THR
33	BH	134	SER
33	BH	138	LYS
33	BH	143	GLN
33	BH	153	LYS
33	BH	157	TYR
33	BH	170	ARG
34	BI	1	MET
34	BI	7	GLU
34	BI	9	LEU
34	BI	12	LEU
34	BI	20	ASP
34	BI	52	ARG
34	BI	56	LYS
34	BI	61	ARG
34	BI	77	LEU
34	BI	81	VAL
34	BI	99	GLU
34	BI	110	ASP
36	BN	3	THR
36	BN	4	TYR
36	BN	5	VAL
36	BN	26	LEU
36	BN	33	LEU
36	BN	34	LEU
36	BN	39	ARG

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Mol	Chain	Res	Type
36	BN	41	ASP
36	BN	43	THR
36	BN	45	ASN
36	BN	46	VAL
36	BN	48	MET
36	BN	55	VAL
36	BN	56	ASN
36	BN	60	ILE
36	BN	63	THR
36	BN	65	LYS
36	BN	71	ILE
36	BN	87	LEU
36	BN	93	THR
36	BN	106	MET
36	BN	109	LYS
36	BN	112	LEU
36	BN	119	ARG
36	BN	121	LYS
36	BN	130	HIS
36	BN	131	GLN
37	BO	20	MET
37	BO	23	ARG
37	BO	24	VAL
37	BO	47	ILE
37	BO	49	ARG
37	BO	98	VAL
37	BO	108	GLU
37	BO	113	LYS
38	BP	13	ASN
38	BP	16	ARG
38	BP	29	LYS
38	BP	36	LYS
38	BP	39	LYS
38	BP	41	ARG
38	BP	45	LEU
38	BP	52	GLU
38	BP	55	ARG
38	BP	58	THR
38	BP	59	LEU
38	BP	61	ARG
38	BP	62	LEU
38	BP	64	LYS

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Mol	Chain	Res	Type
38	BP	65	ARG
38	BP	67	MET
38	BP	79	ARG
38	BP	81	GLN
38	BP	84	ASN
38	BP	85	LEU
38	BP	95	VAL
38	BP	98	GLU
38	BP	105	LEU
38	BP	108	LYS
38	BP	114	ILE
38	BP	123	LEU
38	BP	125	VAL
38	BP	132	LYS
38	BP	139	LYS
39	BQ	5	ARG
39	BQ	16	ARG
39	BQ	18	LYS
39	BQ	45	GLN
39	BQ	58	PHE
39	BQ	66	ILE
39	BQ	67	ARG
39	BQ	75	THR
39	BQ	79	LEU
39	BQ	89	ASN
39	BQ	110	THR
39	BQ	115	MET
39	BQ	133	ARG
39	BQ	139	GLU
40	BR	14	SER
40	BR	15	SER
40	BR	18	LEU
40	BR	28	LEU
40	BR	29	LEU
40	BR	57	ARG
40	BR	65	LEU
40	BR	67	LEU
40	BR	74	LYS
40	BR	76	VAL
40	BR	79	LEU
40	BR	99	LYS
40	BR	103	ARG

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Mol	Chain	Res	Type
40	BR	105	ARG
40	BR	113	LEU
41	BS	11	LYS
41	BS	12	PHE
41	BS	13	ARG
41	BS	18	ILE
41	BS	20	ARG
41	BS	25	ARG
41	BS	26	LEU
41	BS	36	TYR
41	BS	44	LYS
41	BS	50	SER
41	BS	56	LEU
41	BS	73	LEU
41	BS	89	ARG
41	BS	92	TYR
41	BS	93	LYS
41	BS	97	ARG
41	BS	103	GLU
42	BT	6	LEU
42	BT	11	GLU
42	BT	14	TYR
42	BT	29	ARG
42	BT	38	ASN
42	BT	41	ARG
42	BT	42	ILE
42	BT	44	ASP
42	BT	51	ARG
42	BT	58	ASN
42	BT	59	THR
42	BT	65	LYS
42	BT	77	PRO
42	BT	78	LEU
42	BT	83	ILE
42	BT	85	LYS
42	BT	93	ARG
42	BT	96	ARG
42	BT	98	LYS
42	BT	108	ARG
42	BT	123	GLN
42	BT	128	GLU
43	BU	8	VAL

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Mol	Chain	Res	Type
43	BU	27	LEU
43	BU	49	HIS
43	BU	60	LEU
43	BU	64	ARG
43	BU	66	ASN
43	BU	71	GLN
43	BU	74	LEU
43	BU	83	LEU
43	BU	95	LEU
43	BU	100	VAL
43	BU	102	GLU
43	BU	112	ARG
43	BU	114	LYS
44	BV	13	ARG
44	BV	18	LEU
44	BV	19	LYS
44	BV	26	ASP
44	BV	35	LEU
44	BV	37	VAL
44	BV	39	LEU
44	BV	40	LEU
44	BV	45	THR
44	BV	49	THR
44	BV	52	VAL
44	BV	69	LYS
44	BV	71	LEU
44	BV	72	VAL
44	BV	73	SER
44	BV	79	VAL
44	BV	82	ARG
44	BV	84	LYS
44	BV	85	LYS
44	BV	89	GLN
44	BV	95	LEU
44	BV	99	ILE
45	BW	4	LYS
45	BW	11	ARG
45	BW	37	ARG
45	BW	61	ASN
45	BW	63	ASP
45	BW	67	ASP
45	BW	92	ARG

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Mol	Chain	Res	Type
45	BW	96	ILE
45	BW	97	LYS
45	BW	107	LEU
46	BX	27	THR
46	BX	35	THR
46	BX	57	LEU
46	BX	70	LEU
46	BX	80	ILE
46	BX	90	GLU
46	BX	92	LEU
47	BY	2	ARG
47	BY	6	HIS
47	BY	7	VAL
47	BY	8	LYS
47	BY	14	LEU
47	BY	19	LYS
47	BY	44	ILE
47	BY	49	VAL
47	BY	50	ARG
47	BY	55	TYR
47	BY	56	PRO
47	BY	62	GLU
47	BY	66	PRO
47	BY	76	CYS
47	BY	79	CYS
47	BY	87	LYS
47	BY	89	PHE
47	BY	96	ILE
47	BY	97	ARG
48	BZ	14	LYS
48	BZ	20	ARG
48	BZ	34	ASN
48	BZ	37	VAL
48	BZ	50	GLN
48	BZ	76	LEU
48	BZ	80	ARG
48	BZ	86	VAL
48	BZ	91	LEU
48	BZ	93	ASP
48	BZ	122	ARG
48	BZ	123	ASP
48	BZ	125	LEU

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Mol	Chain	Res	Type
48	BZ	163	LEU
49	B0	9	SER
49	B0	10	THR
49	B0	19	LYS
49	B0	20	ARG
49	B0	29	GLN
49	B0	30	VAL
49	B0	41	ARG
49	B0	55	ARG
49	B0	64	ASP
49	B0	74	ARG
49	B0	84	LEU
50	B1	4	VAL
50	B1	25	LYS
50	B1	39	LYS
50	B1	45	ASN
50	B1	46	LEU
50	B1	48	LYS
50	B1	56	GLN
50	B1	58	ILE
50	B1	82	LEU
50	B1	92	LYS
51	B2	2	LYS
51	B2	3	LEU
51	B2	8	LYS
51	B2	15	LYS
51	B2	16	LEU
51	B2	28	LYS
51	B2	45	SER
51	B2	47	ASN
51	B2	51	ARG
51	B2	53	LEU
51	B2	56	GLN
51	B2	61	LEU
51	B2	62	THR
51	B2	69	ARG
51	B2	70	GLN
52	B3	8	LEU
52	B3	30	ARG
52	B3	40	THR
52	B3	48	GLU
53	B4	46	ASN

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Mol	Chain	Res	Type
53	B4	49	GLU
53	B4	58	TYR
53	B4	60	GLU
53	B4	63	SER
54	B5	3	LYS
54	B5	11	THR
54	B5	13	LYS
54	B5	23	HIS
54	B5	25	LEU
54	B5	29	THR
54	B5	35	GLU
54	B5	36	CYS
54	B5	44	THR
54	B5	49	CYS
54	B5	56	LYS
54	B5	57	VAL
55	B6	9	LEU
55	B6	10	LEU
55	B6	14	THR
55	B6	18	ARG
55	B6	26	ASN
55	B6	30	THR
55	B6	33	LYS
55	B6	43	CYS
55	B6	44	ARG
55	B6	46	HIS
56	B7	1	MET
56	B7	8	ASN
56	B7	24	THR
56	B7	36	GLN
56	B7	43	THR
56	B7	48	LYS
57	B8	8	LYS
57	B8	14	VAL
57	B8	30	ARG
57	B8	32	LEU
57	B8	33	ASN
57	B8	34	TRP
57	B8	44	LYS
57	B8	49	VAL
57	B8	52	LYS
57	B8	56	GLU

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Mol	Chain	Res	Type
57	B8	61	LEU
57	B8	62	LEU
58	B9	2	LYS
58	B9	4	ARG
58	B9	11	CYS
58	B9	17	ILE
58	B9	26	ILE
58	B9	27	CYS
58	B9	28	GLU
2	CB	30	ARG
2	CB	36	ARG
2	CB	42	ILE
2	CB	51	LEU
2	CB	53	ARG
2	CB	63	MET
2	CB	107	THR
2	CB	137	ARG
2	CB	144	ARG
2	CB	145	LEU
2	CB	146	GLN
2	CB	169	LYS
2	CB	172	ILE
2	CB	178	ARG
2	CB	187	LEU
2	CB	195	ASP
2	CB	196	LEU
2	CB	198	ASP
2	CB	206	ASP
2	CB	220	ASP
2	CB	238	LEU
3	CC	5	ILE
3	CC	29	TYR
3	CC	30	ARG
3	CC	34	LEU
3	CC	37	GLN
3	CC	42	LEU
3	CC	46	GLU
3	CC	49	SER
3	CC	85	ARG
3	CC	89	GLU
3	CC	93	LYS
3	CC	127	ARG

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Mol	Chain	Res	Type
3	CC	156	ARG
3	CC	179	ARG
3	CC	192	THR
4	CD	3	ARG
4	CD	8	VAL
4	CD	9	CYS
4	CD	11	LEU
4	CD	36	ARG
4	CD	42	GLN
4	CD	50	ARG
4	CD	57	ARG
4	CD	58	LEU
4	CD	73	ARG
4	CD	86	LYS
4	CD	110	PHE
4	CD	132	ARG
4	CD	135	LEU
4	CD	150	GLU
4	CD	156	GLU
4	CD	168	ARG
4	CD	187	ARG
4	CD	196	LEU
4	CD	200	GLU
5	CE	12	LEU
5	CE	20	GLN
5	CE	24	ARG
5	CE	41	VAL
5	CE	47	LYS
5	CE	53	LEU
5	CE	64	ARG
5	CE	68	GLU
5	CE	72	GLN
5	CE	73	ASN
5	CE	79	GLU
5	CE	90	VAL
5	CE	101	ILE
5	CE	150	ARG
6	CF	31	GLU
6	CF	39	LYS
6	CF	70	ASP
6	CF	77	ARG
6	CF	92	LYS

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Mol	Chain	Res	Type
7	CG	4	ARG
7	CG	13	GLN
7	CG	41	ARG
7	CG	52	GLU
7	CG	86	GLN
7	CG	111	ARG
7	CG	113	GLU
7	CG	114	ARG
7	CG	136	LYS
7	CG	137	LYS
7	CG	146	GLU
8	CH	1	MET
8	CH	2	LEU
8	CH	8	ASP
8	CH	25	ASP
8	CH	30	ARG
8	CH	49	GLU
8	CH	60	ARG
8	CH	83	ILE
8	CH	91	ARG
8	CH	102	ARG
8	CH	112	LEU
8	CH	115	SER
9	CI	4	TYR
9	CI	10	ARG
9	CI	47	LEU
9	CI	95	LYS
9	CI	112	LYS
9	CI	114	TYR
9	CI	121	ARG
9	CI	125	TYR
9	CI	128	ARG
10	CJ	19	SER
10	CJ	22	LYS
10	CJ	49	VAL
10	CJ	50	ILE
10	CJ	59	SER
10	CJ	62	HIS
10	CJ	69	ASN
10	CJ	96	ILE
10	CJ	98	ILE
11	CK	24	SER

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Mol	Chain	Res	Type
11	CK	28	THR
11	CK	30	VAL
11	CK	95	ILE
11	CK	107	SER
11	CK	124	LYS
12	CL	13	LYS
12	CL	17	LYS
12	CL	20	LYS
12	CL	21	LYS
12	CL	33	ARG
12	CL	41	ARG
12	CL	42	THR
12	CL	53	ARG
12	CL	62	SER
12	CL	84	LEU
12	CL	89	ARG
12	CL	92	ASP
12	CL	102	ARG
12	CL	118	SER
13	CM	47	ASP
13	CM	48	LEU
13	CM	56	LEU
13	CM	64	TRP
13	CM	82	MET
13	CM	86	CYS
13	CM	93	ARG
13	CM	102	ARG
13	CM	108	ARG
13	CM	115	LYS
13	CM	125	ARG
14	CN	33	VAL
14	CN	35	ARG
14	CN	40	CYS
14	CN	44	LEU
14	CN	58	LYS
15	CO	41	GLU
15	CO	65	ARG
15	CO	82	ILE
16	CP	12	LYS
16	CP	16	HIS
16	CP	20	VAL
16	CP	21	VAL

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Mol	Chain	Res	Type
16	CP	27	LYS
16	CP	28	ARG
16	CP	47	ASP
16	CP	54	GLU
16	CP	55	ARG
16	CP	69	THR
17	CQ	7	THR
17	CQ	38	ARG
17	CQ	52	LYS
17	CQ	74	LEU
17	CQ	99	SER
18	CR	47	THR
18	CR	82	THR
19	CS	6	LYS
19	CS	7	LYS
19	CS	15	LEU
19	CS	27	GLU
19	CS	29	ARG
19	CS	37	ARG
19	CS	44	MET
19	CS	65	ASN
19	CS	67	VAL
19	CS	70	LYS
19	CS	79	THR
20	CT	8	ARG
20	CT	13	LEU
20	CT	19	SER
20	CT	26	ASN
20	CT	42	GLN
20	CT	45	GLN
20	CT	54	LYS
20	CT	73	HIS
20	CT	93	GLU
21	CU	15	ARG
21	CU	24	ARG
60	DC	23	ASP
60	DC	36	LYS
60	DC	56	GLN
60	DC	58	VAL
60	DC	64	LEU
29	DD	5	LYS
29	DD	10	THR

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Mol	Chain	Res	Type
29	DD	13	ARG
29	DD	20	ASP
29	DD	24	ILE
29	DD	25	THR
29	DD	26	LYS
29	DD	28	GLU
29	DD	33	LEU
29	DD	35	LYS
29	DD	38	LYS
29	DD	43	ARG
29	DD	49	ILE
29	DD	61	LEU
29	DD	64	ILE
29	DD	65	ILE
29	DD	92	ILE
29	DD	94	LEU
29	DD	98	VAL
29	DD	103	ARG
29	DD	106	ILE
29	DD	131	LEU
29	DD	155	LEU
29	DD	157	ARG
29	DD	166	GLN
29	DD	171	ASP
29	DD	173	VAL
29	DD	192	THR
29	DD	211	ARG
29	DD	212	SER
29	DD	221	VAL
29	DD	229	VAL
29	DD	242	ARG
29	DD	257	LEU
29	DD	260	ARG
29	DD	267	SER
29	DD	271	ILE
30	DE	9	VAL
30	DE	16	ARG
30	DE	18	ASP
30	DE	19	ARG
30	DE	33	VAL
30	DE	34	VAL
30	DE	41	LYS

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Mol	Chain	Res	Type
30	DE	52	LEU
30	DE	55	ASN
30	DE	63	LEU
30	DE	67	PHE
30	DE	76	ARG
30	DE	78	LEU
30	DE	79	ARG
30	DE	82	ARG
30	DE	105	THR
30	DE	113	PHE
30	DE	119	ARG
30	DE	144	ARG
30	DE	152	LYS
30	DE	163	GLU
30	DE	179	GLU
30	DE	181	LEU
30	DE	197	ILE
30	DE	202	LYS
30	DE	203	LYS
31	DF	20	LEU
31	DF	23	ASP
31	DF	24	LEU
31	DF	28	ILE
31	DF	72	ARG
31	DF	82	ILE
31	DF	83	PHE
31	DF	110	LEU
31	DF	125	LEU
31	DF	140	LEU
31	DF	160	ASN
31	DF	161	GLU
31	DF	170	LEU
31	DF	175	THR
31	DF	199	TRP
31	DF	200	GLU
32	DG	5	VAL
32	DG	22	ARG
32	DG	47	LYS
32	DG	49	ASP
32	DG	59	GLU
32	DG	67	LYS
32	DG	74	LYS

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Mol	Chain	Res	Type
32	DG	97	ASP
32	DG	113	ARG
32	DG	116	ASP
32	DG	125	PHE
32	DG	126	ASP
32	DG	130	ASN
32	DG	136	ARG
32	DG	143	GLU
32	DG	155	MET
32	DG	159	VAL
32	DG	167	GLU
33	DH	34	GLU
33	DH	53	GLU
33	DH	54	ARG
33	DH	59	ARG
33	DH	68	THR
33	DH	86	GLU
33	DH	89	ILE
33	DH	134	SER
33	DH	143	GLN
33	DH	153	LYS
33	DH	155	SER
33	DH	157	TYR
34	DI	10	GLU
34	DI	12	LEU
34	DI	20	ASP
34	DI	38	LEU
34	DI	41	GLU
34	DI	54	GLN
34	DI	61	ARG
34	DI	114	LEU
34	DI	123	LEU
34	DI	128	LEU
34	DI	144	VAL
36	DN	2	LYS
36	DN	4	TYR
36	DN	5	VAL
36	DN	19	GLU
36	DN	33	LEU
36	DN	34	LEU
36	DN	39	ARG
36	DN	41	ASP

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Mol	Chain	Res	Type
36	DN	43	THR
36	DN	45	ASN
36	DN	48	MET
36	DN	55	VAL
36	DN	56	ASN
36	DN	61	ARG
36	DN	63	THR
36	DN	87	LEU
36	DN	106	MET
36	DN	109	LYS
36	DN	115	ARG
36	DN	119	ARG
36	DN	121	LYS
36	DN	127	ASP
36	DN	131	GLN
37	DO	14	THR
37	DO	24	VAL
37	DO	47	ILE
37	DO	73	ASP
37	DO	98	VAL
37	DO	108	GLU
37	DO	117	LEU
38	DP	13	ASN
38	DP	16	ARG
38	DP	21	ARG
38	DP	32	THR
38	DP	35	HIS
38	DP	36	LYS
38	DP	39	LYS
38	DP	40	SER
38	DP	41	ARG
38	DP	45	LEU
38	DP	52	GLU
38	DP	59	LEU
38	DP	61	ARG
38	DP	62	LEU
38	DP	64	LYS
38	DP	70	GLN
38	DP	76	LYS
38	DP	81	GLN
38	DP	84	ASN
38	DP	85	LEU

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Mol	Chain	Res	Type
38	DP	98	GLU
38	DP	107	LYS
38	DP	108	LYS
38	DP	114	ILE
38	DP	131	SER
38	DP	135	LEU
39	DQ	10	ARG
39	DQ	16	ARG
39	DQ	18	LYS
39	DQ	45	GLN
39	DQ	54	MET
39	DQ	55	VAL
39	DQ	58	PHE
39	DQ	79	LEU
39	DQ	110	THR
39	DQ	135	ASP
40	DR	12	ARG
40	DR	18	LEU
40	DR	27	SER
40	DR	28	LEU
40	DR	29	LEU
40	DR	57	ARG
40	DR	67	LEU
40	DR	71	GLN
40	DR	74	LYS
40	DR	79	LEU
40	DR	95	THR
40	DR	99	LYS
40	DR	100	LEU
40	DR	104	ARG
40	DR	113	LEU
41	DS	11	LYS
41	DS	19	LYS
41	DS	20	ARG
41	DS	23	ARG
41	DS	44	LYS
41	DS	75	GLU
41	DS	89	ARG
41	DS	92	TYR
41	DS	97	ARG
41	DS	106	ARG
42	DT	6	LEU

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Mol	Chain	Res	Type
42	DT	11	GLU
42	DT	17	THR
42	DT	18	ASP
42	DT	24	PRO
42	DT	29	ARG
42	DT	32	TYR
42	DT	38	ASN
42	DT	41	ARG
42	DT	51	ARG
42	DT	54	ARG
42	DT	58	ASN
42	DT	59	THR
42	DT	67	SER
42	DT	74	ARG
42	DT	78	LEU
42	DT	82	LEU
42	DT	85	LYS
42	DT	93	ARG
42	DT	96	ARG
42	DT	99	LEU
42	DT	108	ARG
42	DT	110	ILE
42	DT	112	ARG
42	DT	113	LYS
42	DT	128	GLU
42	DT	132	LYS
43	DU	3	ARG
43	DU	8	VAL
43	DU	13	LYS
43	DU	19	LYS
43	DU	27	LEU
43	DU	60	LEU
43	DU	66	ASN
43	DU	74	LEU
43	DU	83	LEU
43	DU	108	GLU
44	DV	1	MET
44	DV	2	PHE
44	DV	13	ARG
44	DV	15	GLU
44	DV	18	LEU
44	DV	19	LYS

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Mol	Chain	Res	Type
44	DV	20	LEU
44	DV	21	ARG
44	DV	39	LEU
44	DV	40	LEU
44	DV	46	VAL
44	DV	49	THR
44	DV	66	ARG
44	DV	68	LYS
44	DV	79	VAL
44	DV	98	GLU
44	DV	99	ILE
45	DW	1	MET
45	DW	11	ARG
45	DW	15	ARG
45	DW	24	ILE
45	DW	30	GLU
45	DW	51	LEU
45	DW	52	GLU
45	DW	60	ASN
45	DW	66	GLU
45	DW	92	ARG
45	DW	96	ILE
46	DX	12	VAL
46	DX	27	THR
46	DX	41	ASN
46	DX	48	LYS
46	DX	52	VAL
46	DX	57	LEU
46	DX	63	LYS
46	DX	68	ARG
46	DX	80	ILE
47	DY	7	VAL
47	DY	8	LYS
47	DY	13	VAL
47	DY	28	LYS
47	DY	49	VAL
47	DY	50	ARG
47	DY	55	TYR
47	DY	56	PRO
47	DY	62	GLU
47	DY	63	LYS
47	DY	66	PRO

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Mol	Chain	Res	Type
47	DY	71	LYS
47	DY	76	CYS
47	DY	77	PRO
47	DY	83	THR
47	DY	89	PHE
47	DY	97	ARG
48	DZ	5	LEU
48	DZ	6	LYS
48	DZ	31	ARG
48	DZ	53	ILE
48	DZ	119	GLU
48	DZ	155	LEU
48	DZ	166	SER
49	D0	3	HIS
49	D0	19	LYS
49	D0	20	ARG
49	D0	36	ILE
49	D0	64	ASP
49	D0	84	LEU
50	D1	32	LYS
50	D1	39	LYS
50	D1	40	ARG
50	D1	41	ARG
50	D1	45	ASN
50	D1	46	LEU
50	D1	52	ARG
50	D1	59	THR
50	D1	61	ARG
50	D1	69	LYS
50	D1	72	GLU
50	D1	80	LEU
50	D1	82	LEU
50	D1	88	LYS
50	D1	92	LYS
50	D1	94	LEU
51	D2	2	LYS
51	D2	17	SER
51	D2	32	LEU
51	D2	35	LEU
51	D2	47	ASN
51	D2	53	LEU
52	D3	8	LEU

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Mol	Chain	Res	Type
52	D3	31	LEU
52	D3	57	GLU
53	D4	48	ILE
53	D4	56	GLU
53	D4	58	TYR
54	D5	6	VAL
54	D5	36	CYS
54	D5	37	LYS
54	D5	44	THR
54	D5	46	CYS
54	D5	48	GLU
54	D5	49	CYS
54	D5	51	TYR
54	D5	52	TYR
54	D5	56	LYS
55	D6	18	ARG
55	D6	29	ASN
55	D6	30	THR
55	D6	33	LYS
55	D6	42	TRP
55	D6	43	CYS
55	D6	47	THR
56	D7	1	MET
56	D7	2	LYS
56	D7	4	THR
56	D7	8	ASN
56	D7	10	ARG
56	D7	23	ARG
56	D7	24	THR
56	D7	41	ARG
56	D7	48	LYS
57	D8	8	LYS
57	D8	16	ILE
57	D8	30	ARG
57	D8	31	HIS
57	D8	32	LEU
57	D8	33	ASN
57	D8	34	TRP
57	D8	44	LYS
57	D8	49	VAL
57	D8	61	LEU
58	D9	9	ARG

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Mol	Chain	Res	Type
58	D9	26	ILE
58	D9	27	CYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (167) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	19	HIS
2	AB	37	ASN
2	AB	40	HIS
2	AB	76	GLN
2	AB	78	GLN
2	AB	95	GLN
2	AB	146	GLN
2	AB	212	GLN
3	AC	6	HIS
3	AC	69	HIS
3	AC	170	GLN
4	AD	62	GLN
4	AD	123	HIS
4	AD	125	HIS
4	AD	129	ASN
4	AD	201	GLN
5	AE	20	GLN
6	AF	18	GLN
6	AF	32	ASN
6	AF	73	ASN
6	AF	100	ASN
7	AG	97	GLN
7	AG	148	ASN
8	AH	15	ASN
10	AJ	56	HIS
10	AJ	78	ASN
11	AK	26	ASN
12	AL	8	ASN
12	AL	9	GLN
13	AM	101	GLN
15	AO	37	ASN
16	AP	76	GLN
18	AR	36	ASN
19	AS	23	ASN
20	AT	26	ASN
20	AT	42	GLN

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Mol	Chain	Res	Type
28	BC	56	GLN
29	BD	58	HIS
29	BD	126	GLN
29	BD	166	GLN
29	BD	186	HIS
29	BD	198	ASN
29	BD	227	ASN
30	BE	54	GLN
30	BE	55	ASN
30	BE	60	ASN
30	BE	129	HIS
30	BE	180	ASN
30	BE	192	ASN
31	BF	75	HIS
31	BF	133	ASN
31	BF	169	ASN
31	BF	203	GLN
32	BG	26	GLN
32	BG	121	ASN
32	BG	123	ASN
33	BH	65	HIS
33	BH	147	ASN
34	BI	43	ASN
36	BN	45	ASN
36	BN	56	ASN
36	BN	69	GLN
36	BN	128	HIS
37	BO	5	GLN
38	BP	13	ASN
38	BP	70	GLN
38	BP	128	HIS
39	BQ	12	GLN
39	BQ	45	GLN
39	BQ	123	HIS
40	BR	3	HIS
40	BR	16	HIS
40	BR	23	ASN
40	BR	24	GLN
40	BR	53	HIS
42	BT	38	ASN
42	BT	58	ASN
42	BT	84	GLN

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Mol	Chain	Res	Type
43	BU	49	HIS
43	BU	66	ASN
45	BW	57	ASN
45	BW	61	ASN
45	BW	102	HIS
46	BX	55	ASN
48	BZ	73	GLN
49	B0	12	ASN
50	B1	45	ASN
50	B1	56	GLN
52	B3	19	GLN
52	B3	46	ASN
52	B3	52	HIS
53	B4	46	ASN
54	B5	43	HIS
56	B7	8	ASN
57	B8	31	HIS
57	B8	33	ASN
58	B9	29	ASN
58	B9	34	GLN
2	CB	19	HIS
2	CB	204	ASN
3	CC	108	ASN
3	CC	170	GLN
4	CD	62	GLN
4	CD	129	ASN
5	CE	20	GLN
5	CE	141	GLN
6	CF	18	GLN
6	CF	32	ASN
6	CF	73	ASN
7	CG	148	ASN
10	CJ	56	HIS
11	CK	38	ASN
11	CK	117	ASN
13	CM	77	ASN
15	CO	37	ASN
18	CR	36	ASN
20	CT	26	ASN
20	CT	42	GLN
20	CT	45	GLN
20	CT	73	HIS

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Mol	Chain	Res	Type
20	CT	75	ASN
60	DC	56	GLN
29	DD	58	HIS
29	DD	126	GLN
29	DD	198	ASN
30	DE	192	ASN
31	DF	69	HIS
31	DF	75	HIS
31	DF	133	ASN
31	DF	160	ASN
31	DF	169	ASN
33	DH	139	GLN
33	DH	147	ASN
34	DI	43	ASN
34	DI	139	GLN
36	DN	128	HIS
37	DO	82	ASN
38	DP	13	ASN
38	DP	128	HIS
39	DQ	45	GLN
40	DR	23	ASN
40	DR	53	HIS
40	DR	71	GLN
41	DS	34	HIS
42	DT	38	ASN
42	DT	43	GLN
42	DT	58	ASN
42	DT	90	GLN
43	DU	14	HIS
43	DU	49	HIS
43	DU	66	ASN
45	DW	34	ASN
45	DW	57	ASN
45	DW	102	HIS
46	DX	41	ASN
46	DX	55	ASN
48	DZ	118	GLN
49	D0	12	ASN
50	D1	45	ASN
52	D3	19	GLN
52	D3	46	ASN
52	D3	52	HIS

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Mol	Chain	Res	Type
53	D4	46	ASN
54	D5	43	HIS
56	D7	8	ASN
57	D8	33	ASN
57	D8	35	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1503/1504 (99%)	300 (19%)	43 (2%)
1	CA	1504/1504 (100%)	296 (19%)	53 (3%)
22	AV	76/77 (98%)	18 (23%)	4 (5%)
22	CV	76/77 (98%)	22 (28%)	1 (1%)
23	AW	75/76 (98%)	22 (29%)	2 (2%)
23	CW	75/76 (98%)	19 (25%)	2 (2%)
24	AY	74/75 (98%)	38 (51%)	4 (5%)
24	CY	74/75 (98%)	38 (51%)	4 (5%)
25	AX	6/7 (85%)	3 (50%)	1 (16%)
26	BA	2800/2915 (96%)	779 (27%)	151 (5%)
26	DA	2799/2915 (96%)	754 (26%)	122 (4%)
27	BB	118/119 (99%)	36 (30%)	4 (3%)
27	DB	118/119 (99%)	27 (22%)	4 (3%)
59	CX	3/4 (75%)	2 (66%)	0
All	All	9301/9543 (97%)	2354 (25%)	395 (4%)

All (2354) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	7	G
1	AA	8	A
1	AA	9	G
1	AA	13	U
1	AA	22	G
1	AA	30	U
1	AA	31	G
1	AA	32	A
1	AA	39	G
1	AA	44	G
1	AA	47	C
1	AA	48	C
1	AA	51	A

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Mol	Chain	Res	Type
1	AA	54	C
1	AA	60	A
1	AA	61	G
1	AA	79	G
1	AA	80	G
1	AA	81	U
1	AA	84	U
1	AA	89	C
1	AA	90	U
1	AA	97	G
1	AA	101	A
1	AA	108	G
1	AA	115	G
1	AA	116	A
1	AA	120	A
1	AA	121	C
1	AA	129(A)	G
1	AA	131	C
1	AA	134	A
1	AA	144	G
1	AA	146	G
1	AA	150	C
1	AA	163	C
1	AA	170	U
1	AA	172	A
1	AA	181	G
1	AA	189(G)	G
1	AA	189(H)	G
1	AA	189(L)	G
1	AA	195	A
1	AA	197	A
1	AA	199	G
1	AA	204	U
1	AA	216	G
1	AA	220	G
1	AA	244	U
1	AA	247	G
1	AA	251	G
1	AA	253	U
1	AA	266	G
1	AA	267	C
1	AA	270	A

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Mol	Chain	Res	Type
1	AA	274	A
1	AA	289	G
1	AA	309	G
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	332	G
1	AA	345	C
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	366	C
1	AA	367	U
1	AA	372	C
1	AA	383	A
1	AA	390	C
1	AA	397	A
1	AA	398	C
1	AA	406	G
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	415	A
1	AA	421	U
1	AA	422	C
1	AA	424	G
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	435	C
1	AA	436	C
1	AA	437	U
1	AA	439	A
1	AA	452	A
1	AA	461	A
1	AA	470	C
1	AA	471	G
1	AA	482	A
1	AA	484	G
1	AA	485	G
1	AA	495	A
1	AA	496	A

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Mol	Chain	Res	Type
1	AA	498	U
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	512	U
1	AA	518	C
1	AA	527	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	536	C
1	AA	547	A
1	AA	561	U
1	AA	562	C
1	AA	572	A
1	AA	573	A
1	AA	576	G
1	AA	577	G
1	AA	581	G
1	AA	588	G
1	AA	592	G
1	AA	596	C
1	AA	616	G
1	AA	630	G
1	AA	631	G
1	AA	632	A
1	AA	642	A
1	AA	653	A
1	AA	665	A
1	AA	672	U
1	AA	687	A
1	AA	688	G
1	AA	693	G
1	AA	702	A
1	AA	724	G
1	AA	731	G
1	AA	733	A
1	AA	748	C
1	AA	749	C
1	AA	753	A
1	AA	755	G

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Mol	Chain	Res	Type
1	AA	761	G
1	AA	765	G
1	AA	773	G
1	AA	777	A
1	AA	785	G
1	AA	786	G
1	AA	792	A
1	AA	794	A
1	AA	816	A
1	AA	817	C
1	AA	818	G
1	AA	819	A
1	AA	821	G
1	AA	827	U
1	AA	828	A
1	AA	833	U
1	AA	836	G
1	AA	839	U
1	AA	840	C
1	AA	841	U
1	AA	848	C
1	AA	859	A
1	AA	864	A
1	AA	873	A
1	AA	876	G
1	AA	902	G
1	AA	914	A
1	AA	916	G
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	939	G
1	AA	945	G
1	AA	950	U
1	AA	960	U
1	AA	961	U
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	975	A

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Mol	Chain	Res	Type
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	980	C
1	AA	982	U
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	1004	A
1	AA	1005	A
1	AA	1006	C
1	AA	1026	G
1	AA	1031	G
1	AA	1041	A
1	AA	1050	G
1	AA	1053	G
1	AA	1054	C
1	AA	1055	A
1	AA	1065	U
1	AA	1066	C
1	AA	1067	A
1	AA	1068	G
1	AA	1088	G
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1108	G
1	AA	1117	G
1	AA	1124	G
1	AA	1125	U
1	AA	1126	U
1	AA	1127	G
1	AA	1129	C
1	AA	1130	A
1	AA	1131	G
1	AA	1132	C
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1142	G
1	AA	1146	A

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Mol	Chain	Res	Type
1	AA	1152	A
1	AA	1159	U
1	AA	1160	G
1	AA	1171	G
1	AA	1183	A
1	AA	1184	G
1	AA	1186	G
1	AA	1187	G
1	AA	1196	U
1	AA	1197	G
1	AA	1201	A
1	AA	1202	G
1	AA	1211	U
1	AA	1212	U
1	AA	1213	A
1	AA	1225	A
1	AA	1227	A
1	AA	1228	C
1	AA	1238	A
1	AA	1250	A
1	AA	1255	G
1	AA	1256	A
1	AA	1257	U
1	AA	1258	G
1	AA	1263	C
1	AA	1273	G
1	AA	1280	A
1	AA	1281	U
1	AA	1282	C
1	AA	1285	A
1	AA	1286	A
1	AA	1287	A
1	AA	1294	G
1	AA	1297	C
1	AA	1299	A
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1305	G
1	AA	1317	C
1	AA	1320	C
1	AA	1321	C

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Mol	Chain	Res	Type
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1338	G
1	AA	1346	A
1	AA	1347	G
1	AA	1353	G
1	AA	1363	C
1	AA	1363(A)	A
1	AA	1364	U
1	AA	1370	G
1	AA	1397	C
1	AA	1402	C
1	AA	1419	G
1	AA	1442	G
1	AA	1442(A)	G
1	AA	1442(B)	A
1	AA	1443	G
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1487	G
1	AA	1492	A
1	AA	1497	G
1	AA	1499	A
1	AA	1502	A
1	AA	1503	A
1	AA	1504	G
1	AA	1506	U
1	AA	1507	A
1	AA	1517	G
1	AA	1519	A
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
22	AV	3	C
22	AV	4	G
22	AV	5	G
22	AV	9	G
22	AV	17	C
22	AV	18	U
22	AV	19	G

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Mol	Chain	Res	Type
22	AV	20	G
22	AV	21	U
22	AV	22	A
22	AV	48	U
22	AV	49	C
22	AV	50	G
22	AV	64	G
22	AV	66	C
22	AV	74	A
22	AV	76	C
22	AV	77	A
23	AW	15	G
23	AW	16	U
23	AW	17	C
23	AW	18	G
23	AW	19	G
23	AW	20	U
23	AW	21	A
23	AW	29	G
23	AW	34	G
23	AW	35	A
23	AW	39	U
23	AW	41	C
23	AW	43	C
23	AW	47	U
23	AW	51	U
23	AW	52	G
23	AW	61	C
23	AW	64	A
23	AW	65	G
23	AW	67	C
23	AW	70	G
23	AW	76	A
24	AY	2	G
24	AY	3	A
24	AY	6	G
24	AY	7	A
24	AY	9	G
24	AY	11	C
24	AY	12	G
24	AY	13	G
24	AY	16	C

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Mol	Chain	Res	Type
24	AY	17	G
24	AY	18	G
24	AY	19	C
24	AY	21	G
24	AY	23	A
24	AY	34	C
24	AY	37	A
24	AY	41	C
24	AY	42	G
24	AY	43	G
24	AY	44	A
24	AY	45	G
24	AY	47	A
24	AY	48	G
24	AY	49	G
24	AY	50	G
24	AY	51	G
24	AY	52	C
24	AY	53	A
24	AY	54	A
24	AY	61	C
24	AY	67	U
24	AY	68	U
24	AY	70	A
24	AY	71	A
24	AY	72	A
24	AY	73	U
24	AY	74	C
24	AY	75	C
25	AX	19	PSU
25	AX	20	A
25	AX	21	G
26	BA	8	U
26	BA	9	G
26	BA	14	G
26	BA	33	C
26	BA	35	G
26	BA	40	C
26	BA	44	C
26	BA	47	A
26	BA	48	U
26	BA	53	G

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Mol	Chain	Res	Type
26	BA	56	G
26	BA	57	U
26	BA	58	G
26	BA	62	A
26	BA	67	C
26	BA	69	A
26	BA	70	U
26	BA	72	A
26	BA	73	G
26	BA	86	G
26	BA	88	U
26	BA	91	C
26	BA	98	G
26	BA	99	G
26	BA	110	G
26	BA	115	A
26	BA	116	A
26	BA	117	U
26	BA	120	G
26	BA	125	C
26	BA	126	C
26	BA	136	G
26	BA	138	A
26	BA	142	C
26	BA	147	C
26	BA	148	A
26	BA	153	G
26	BA	154	C
26	BA	158	U
26	BA	159	G
26	BA	162	C
26	BA	163	G
26	BA	184	A
26	BA	185	A
26	BA	186	C
26	BA	187	A
26	BA	188	U
26	BA	192	A
26	BA	193	G
26	BA	203	G
26	BA	204	A
26	BA	209	A

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Mol	Chain	Res	Type
26	BA	210	A
26	BA	213	A
26	BA	216	A
26	BA	217	A
26	BA	218	U
26	BA	221	A
26	BA	236	G
26	BA	237	C
26	BA	240	G
26	BA	248	G
26	BA	249	G
26	BA	255	C
26	BA	256	C
26	BA	260	A
26	BA	267	G
26	BA	269	C
26	BA	270	U
26	BA	271	U
26	BA	272	G
26	BA	274	C
26	BA	275	C
26	BA	277	G
26	BA	279	C
26	BA	282	G
26	BA	283	G
26	BA	284	U
26	BA	285	C
26	BA	294	C
26	BA	295	U
26	BA	296	C
26	BA	297	G
26	BA	298	G
26	BA	321	G
26	BA	332	G
26	BA	333	A
26	BA	334	A
26	BA	348	G
26	BA	349	G
26	BA	352	G
26	BA	353	A
26	BA	354	A
26	BA	355	A

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Mol	Chain	Res	Type
26	BA	356	G
26	BA	365	G
26	BA	367	G
26	BA	371	G
26	BA	372	G
26	BA	375	G
26	BA	376	G
26	BA	378	G
26	BA	385	U
26	BA	386	G
26	BA	388	G
26	BA	389	G
26	BA	391	U
26	BA	392	A
26	BA	393	C
26	BA	394	C
26	BA	396	G
26	BA	399	U
26	BA	412	G
26	BA	414	G
26	BA	417	G
26	BA	422	G
26	BA	431	U
26	BA	432	G
26	BA	433	G
26	BA	437	G
26	BA	440	C
26	BA	444	G
26	BA	454	A
26	BA	466	U
26	BA	469	C
26	BA	473	U
26	BA	476	C
26	BA	480	C
26	BA	481	C
26	BA	482	A
26	BA	495	A
26	BA	496	A
26	BA	497	A
26	BA	498	G
26	BA	500	U
26	BA	504	A

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Mol	Chain	Res	Type
26	BA	505	A
26	BA	506	G
26	BA	515	G
26	BA	517	G
26	BA	518	G
26	BA	529	A
26	BA	532	G
26	BA	533	C
26	BA	536	G
26	BA	537	A
26	BA	549	U
26	BA	551	C
26	BA	552	A
26	BA	553	A
26	BA	554	G
26	BA	555	C
26	BA	556	A
26	BA	557	G
26	BA	561	C
26	BA	566	C
26	BA	567	C
26	BA	571	A
26	BA	572	G
26	BA	585	G
26	BA	595	G
26	BA	597	A
26	BA	605	G
26	BA	608	A
26	BA	610	U
26	BA	614	G
26	BA	625	A
26	BA	626	G
26	BA	629	U
26	BA	632	G
26	BA	636	U
26	BA	638	G
26	BA	640	G
26	BA	644	G
26	BA	645	A
26	BA	646	G
26	BA	648	C
26	BA	651	A

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Mol	Chain	Res	Type
26	BA	653	G
26	BA	658	C
26	BA	661	A
26	BA	669	C
26	BA	670	A
26	BA	674	C
26	BA	676	C
26	BA	703	U
26	BA	714	G
26	BA	715	G
26	BA	716	A
26	BA	732	G
26	BA	733	C
26	BA	747	G
26	BA	753	G
26	BA	754	C
26	BA	755	U
26	BA	763	G
26	BA	767	C
26	BA	768	A
26	BA	776	C
26	BA	779	G
26	BA	784	G
26	BA	799	C
26	BA	808	U
26	BA	810	A
26	BA	811	G
26	BA	821	G
26	BA	822	G
26	BA	828	A
26	BA	830	A
26	BA	831	G
26	BA	835	A
26	BA	836	C
26	BA	837	C
26	BA	838	G
26	BA	840	G
26	BA	851	G
26	BA	854	G
26	BA	858	C
26	BA	865	A
26	BA	873	U

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Mol	Chain	Res	Type
26	BA	874	U
26	BA	876	G
26	BA	878	G
26	BA	891	G
26	BA	894	G
26	BA	900	G
26	BA	905	G
26	BA	917	U
26	BA	924	A
26	BA	925	G
26	BA	936	A
26	BA	941	A
26	BA	942	C
26	BA	949	C
26	BA	955	A
26	BA	961	G
26	BA	962	A
26	BA	972	G
26	BA	976	G
26	BA	978	G
26	BA	982	G
26	BA	985	A
26	BA	989	A
26	BA	990	G
26	BA	1003	A
26	BA	1005	C
26	BA	1008	C
26	BA	1009	C
26	BA	1014	C
26	BA	1018	G
26	BA	1019	C
26	BA	1028	A
26	BA	1036	C
26	BA	1041	A
26	BA	1057	U
26	BA	1058	C
26	BA	1060	G
26	BA	1067	G
26	BA	1068	U
26	BA	1070	G
26	BA	1071	U
26	BA	1072	A

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Mol	Chain	Res	Type
26	BA	1078	U
26	BA	1079	G
26	BA	1084	G
26	BA	1087	G
26	BA	1088	C
26	BA	1090	A
26	BA	1091	A
26	BA	1092	G
26	BA	1093	A
26	BA	1094	C
26	BA	1096	G
26	BA	1097	C
26	BA	1098	C
26	BA	1152	G
26	BA	1153	U
26	BA	1155	G
26	BA	1156	A
26	BA	1157	G
26	BA	1159	G
26	BA	1160	G
26	BA	1163	C
26	BA	1167	G
26	BA	1174	A
26	BA	1176	G
26	BA	1179	C
26	BA	1180	G
26	BA	1182	G
26	BA	1183	G
26	BA	1184	C
26	BA	1185	U
26	BA	1186	U
26	BA	1189	G
26	BA	1200	A
26	BA	1201	A
26	BA	1204	U
26	BA	1212	U
26	BA	1215	G
26	BA	1216	G
26	BA	1217	G
26	BA	1218	A
26	BA	1219	U
26	BA	1220	G

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Mol	Chain	Res	Type
26	BA	1221	A
26	BA	1222	C
26	BA	1223	C
26	BA	1235	G
26	BA	1238	A
26	BA	1239	G
26	BA	1248	A
26	BA	1249	U
26	BA	1252	C
26	BA	1254	A
26	BA	1255	U
26	BA	1264	A
26	BA	1265	C
26	BA	1267	C
26	BA	1268	G
26	BA	1272	G
26	BA	1287	A
26	BA	1291	A
26	BA	1292	A
26	BA	1293	G
26	BA	1295	G
26	BA	1298	A
26	BA	1299	A
26	BA	1301	G
26	BA	1310	A
26	BA	1314	A
26	BA	1316	G
26	BA	1317	A
26	BA	1318	U
26	BA	1325	G
26	BA	1326	G
26	BA	1329	A
26	BA	1332	A
26	BA	1339	U
26	BA	1345	U
26	BA	1346	A
26	BA	1347	A
26	BA	1351	C
26	BA	1352	A
26	BA	1358	U
26	BA	1359	C
26	BA	1364	G

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Mol	Chain	Res	Type
26	BA	1366	A
26	BA	1377	G
26	BA	1383	G
26	BA	1392	G
26	BA	1394	A
26	BA	1397	U
26	BA	1404	A
26	BA	1405	A
26	BA	1410	A
26	BA	1411	A
26	BA	1413	G
26	BA	1415	C
26	BA	1424	A
26	BA	1425	G
26	BA	1429	A
26	BA	1430	G
26	BA	1431	C
26	BA	1436	U
26	BA	1439	U
26	BA	1440	A
26	BA	1450	U
26	BA	1451	U
26	BA	1452	C
26	BA	1459	G
26	BA	1461	G
26	BA	1462	C
26	BA	1465	U
26	BA	1473	C
26	BA	1482	C
26	BA	1488	G
26	BA	1490	A
26	BA	1494	G
26	BA	1495	A
26	BA	1496	G
26	BA	1498	C
26	BA	1499	A
26	BA	1501	G
26	BA	1506	A
26	BA	1507	G
26	BA	1513	C
26	BA	1517	A
26	BA	1518	A

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Mol	Chain	Res	Type
26	BA	1521	G
26	BA	1522	C
26	BA	1524	G
26	BA	1527	U
26	BA	1528	G
26	BA	1529	G
26	BA	1530	G
26	BA	1535	A
26	BA	1536	G
26	BA	1538	C
26	BA	1539	A
26	BA	1540	A
26	BA	1541	A
26	BA	1542	U
26	BA	1544	C
26	BA	1546	C
26	BA	1547	C
26	BA	1550	C
26	BA	1554	C
26	BA	1555	A
26	BA	1559	U
26	BA	1570	G
26	BA	1575	G
26	BA	1576	C
26	BA	1577	C
26	BA	1578	C
26	BA	1579	G
26	BA	1590	A
26	BA	1591	A
26	BA	1595	C
26	BA	1600	A
26	BA	1604	A
26	BA	1605	G
26	BA	1612	A
26	BA	1615	A
26	BA	1621	C
26	BA	1624	U
26	BA	1625	A
26	BA	1630	C
26	BA	1631	A
26	BA	1633	C
26	BA	1636	G

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Mol	Chain	Res	Type
26	BA	1638	G
26	BA	1648	A
26	BA	1654	A
26	BA	1655	A
26	BA	1661	A
26	BA	1662	C
26	BA	1663	A
26	BA	1670	C
26	BA	1686	C
26	BA	1691	G
26	BA	1693	G
26	BA	1694	C
26	BA	1698	A
26	BA	1699	G
26	BA	1700	A
26	BA	1713	G
26	BA	1720	G
26	BA	1725	U
26	BA	1727	G
26	BA	1740	C
26	BA	1741	G
26	BA	1742	G
26	BA	1744	A
26	BA	1745	G
26	BA	1746	A
26	BA	1747	A
26	BA	1749	G
26	BA	1765	G
26	BA	1766	A
26	BA	1767	U
26	BA	1770	G
26	BA	1772	C
26	BA	1775	G
26	BA	1778	G
26	BA	1779	A
26	BA	1780	G
26	BA	1793	G
26	BA	1794	G
26	BA	1803	A
26	BA	1806	G
26	BA	1807	U
26	BA	1810	A

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Mol	Chain	Res	Type
26	BA	1816	A
26	BA	1817	A
26	BA	1821	A
26	BA	1829	G
26	BA	1830	C
26	BA	1831	G
26	BA	1832	A
26	BA	1839	A
26	BA	1846	G
26	BA	1848	U
26	BA	1849	A
26	BA	1850	U
26	BA	1851	A
26	BA	1852	G
26	BA	1865	G
26	BA	1868	C
26	BA	1869	G
26	BA	1870	G
26	BA	1872	G
26	BA	1874	C
26	BA	1876	G
26	BA	1877	A
26	BA	1879	G
26	BA	1888	G
26	BA	1894	U
26	BA	1895	G
26	BA	1896	C
26	BA	1898	A
26	BA	1899	G
26	BA	1901	C
26	BA	1902	C
26	BA	1903	C
26	BA	1906	A
26	BA	1907	C
26	BA	1909	G
26	BA	1910	A
26	BA	1917	G
26	BA	1921	A
26	BA	1923	C
26	BA	1924	G
26	BA	1927	G
26	BA	1933	A

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Mol	Chain	Res	Type
26	BA	1934	A
26	BA	1936	U
26	BA	1940	A
26	BA	1950	G
26	BA	1951	G
26	BA	1955	C
26	BA	1956	G
26	BA	1957	A
26	BA	1959	A
26	BA	1967	U
26	BA	1968	C
26	BA	1976	U
26	BA	1983	C
26	BA	1984	U
26	BA	1985	G
26	BA	1988	C
26	BA	1990	A
26	BA	1991	A
26	BA	1992	A
26	BA	1993	A
26	BA	2002	A
26	BA	2003	C
26	BA	2008	G
26	BA	2012	U
26	BA	2013	G
26	BA	2014	U
26	BA	2018	G
26	BA	2041	A
26	BA	2044	G
26	BA	2047	C
26	BA	2048	G
26	BA	2052	A
26	BA	2053	G
26	BA	2054	A
26	BA	2055	U
26	BA	2057	C
26	BA	2062	U
26	BA	2064	C
26	BA	2070	G
26	BA	2076	C
26	BA	2077	G
26	BA	2081	A

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Mol	Chain	Res	Type
26	BA	2082	G
26	BA	2083	A
26	BA	2084	C
26	BA	2090	G
26	BA	2091	G
26	BA	2113	U
26	BA	2114	G
26	BA	2116	C
26	BA	2118	C
26	BA	2120	U
26	BA	2121	G
26	BA	2123	U
26	BA	2124	C
26	BA	2125	G
26	BA	2131	G
26	BA	2137	G
26	BA	2138	A
26	BA	2139	U
26	BA	2148	G
26	BA	2152	G
26	BA	2154	G
26	BA	2155	A
26	BA	2156	A
26	BA	2157	C
26	BA	2168	G
26	BA	2180	G
26	BA	2193	U
26	BA	2194	A
26	BA	2198	C
26	BA	2200	C
26	BA	2201	U
26	BA	2202	G
26	BA	2206	C
26	BA	2208	G
26	BA	2210	U
26	BA	2211	G
26	BA	2212	G
26	BA	2213	G
26	BA	2214	G
26	BA	2219	A
26	BA	2220	A
26	BA	2221	C

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Mol	Chain	Res	Type
26	BA	2222	C
26	BA	2224	U
26	BA	2226	G
26	BA	2227	G
26	BA	2228	A
26	BA	2229	U
26	BA	2230	G
26	BA	2232	G
26	BA	2236	A
26	BA	2237	C
26	BA	2249	G
26	BA	2250	G
26	BA	2256	U
26	BA	2269	C
26	BA	2284	A
26	BA	2286	C
26	BA	2291	G
26	BA	2294	C
26	BA	2297	A
26	BA	2298	A
26	BA	2300	G
26	BA	2314	G
26	BA	2315	G
26	BA	2316	A
26	BA	2318	G
26	BA	2319	G
26	BA	2320	A
26	BA	2322	A
26	BA	2323	U
26	BA	2324	C
26	BA	2327	C
26	BA	2328	C
26	BA	2330	G
26	BA	2331	A
26	BA	2336	G
26	BA	2338	A
26	BA	2345	G
26	BA	2346	A
26	BA	2347	A
26	BA	2351	G
26	BA	2353	C
26	BA	2357	A

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Mol	Chain	Res	Type
26	BA	2358	C
26	BA	2359	U
26	BA	2371	A
26	BA	2394	G
26	BA	2396	C
26	BA	2403	A
26	BA	2413	C
26	BA	2417	U
26	BA	2421	G
26	BA	2434	U
26	BA	2436	A
26	BA	2440	G
26	BA	2441	A
26	BA	2445	A
26	BA	2446	A
26	BA	2450	A
26	BA	2451	C
26	BA	2452	C
26	BA	2453	C
26	BA	2458	G
26	BA	2459	A
26	BA	2462	A
26	BA	2463	C
26	BA	2470	A
26	BA	2475	C
26	BA	2476	C
26	BA	2480	A
26	BA	2481	G
26	BA	2483	G
26	BA	2487	A
26	BA	2488	C
26	BA	2492	G
26	BA	2493	G
26	BA	2494	C
26	BA	2495	G
26	BA	2502	U
26	BA	2513	G
26	BA	2516	G
26	BA	2517	U
26	BA	2529	A
26	BA	2531	C
26	BA	2535	G

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Mol	Chain	Res	Type
26	BA	2538	C
26	BA	2539	U
26	BA	2540	G
26	BA	2542	A
26	BA	2553	A
26	BA	2554	G
26	BA	2556	G
26	BA	2565	U
26	BA	2568	G
26	BA	2577	A
26	BA	2578	G
26	BA	2583	A
26	BA	2584	C
26	BA	2592	G
26	BA	2593	G
26	BA	2596	U
26	BA	2597	C
26	BA	2613	A
26	BA	2615	U
26	BA	2619	G
26	BA	2620	U
26	BA	2622	U
26	BA	2623	C
26	BA	2626	U
26	BA	2632	A
26	BA	2641	G
26	BA	2656	G
26	BA	2664	U
26	BA	2665	A
26	BA	2666	G
26	BA	2667	U
26	BA	2668	A
26	BA	2669	C
26	BA	2671	A
26	BA	2672	G
26	BA	2673	A
26	BA	2674	G
26	BA	2676	A
26	BA	2677	C
26	BA	2684	G
26	BA	2690	A
26	BA	2693	U

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Mol	Chain	Res	Type
26	BA	2701	C
26	BA	2702	C
26	BA	2713	U
26	BA	2714	C
26	BA	2722	A
26	BA	2723	U
26	BA	2724	A
26	BA	2725	A
26	BA	2726	G
26	BA	2732	U
26	BA	2738	U
26	BA	2745	A
26	BA	2746	A
26	BA	2764	C
26	BA	2767	C
26	BA	2769	A
26	BA	2770	A
26	BA	2772	C
26	BA	2774	G
26	BA	2776	A
26	BA	2777	A
26	BA	2778	G
26	BA	2782	G
26	BA	2783	C
26	BA	2790	A
26	BA	2791	U
26	BA	2792	G
26	BA	2801	C
26	BA	2802	A
26	BA	2803	C
26	BA	2804	G
26	BA	2805	G
26	BA	2806	C
26	BA	2812	G
26	BA	2813	C
26	BA	2814	C
26	BA	2817	U
26	BA	2827	G
26	BA	2829	A
26	BA	2830	A
26	BA	2841	U
26	BA	2842	G

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Mol	Chain	Res	Type
26	BA	2843	G
26	BA	2844	A
26	BA	2853	G
26	BA	2856	U
26	BA	2858	U
26	BA	2859	A
26	BA	2872	C
26	BA	2881	G
26	BA	2888	C
26	BA	2889	C
26	BA	2901	G
26	BA	2902	G
26	BA	2903	U
27	BB	8	U
27	BB	13	A
27	BB	15	A
27	BB	16	G
27	BB	21	G
27	BB	22	U
27	BB	24	G
27	BB	26	A
27	BB	27	C
27	BB	28	C
27	BB	31	C
27	BB	32	C
27	BB	41	U
27	BB	42	C
27	BB	43	C
27	BB	45	A
27	BB	47	C
27	BB	52	A
27	BB	53	A
27	BB	56	G
27	BB	57	A
27	BB	67	G
27	BB	73	A
27	BB	75	G
27	BB	80	U
27	BB	81	G
27	BB	82	G
27	BB	84	C
27	BB	88	C

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Mol	Chain	Res	Type
27	BB	89	G
27	BB	97	G
27	BB	102	A
27	BB	109	C
27	BB	110	G
27	BB	113	G
27	BB	118	G
1	CA	7	G
1	CA	10	G
1	CA	23	G
1	CA	32	G
1	CA	33	A
1	CA	40	G
1	CA	48	C
1	CA	49	C
1	CA	52	A
1	CA	62	G
1	CA	79	G
1	CA	80	U
1	CA	82	U
1	CA	83	U
1	CA	86	U
1	CA	87	C
1	CA	91	G
1	CA	95	A
1	CA	102	G
1	CA	109	G
1	CA	110	A
1	CA	114	A
1	CA	115	C
1	CA	124	G
1	CA	126	C
1	CA	127	C
1	CA	139	G
1	CA	141	G
1	CA	145	C
1	CA	146	A
1	CA	158	C
1	CA	176	G
1	CA	190	U
1	CA	192	G
1	CA	194	G

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Mol	Chain	Res	Type
1	CA	202	A
1	CA	204	A
1	CA	208	C
1	CA	210	U
1	CA	211	U
1	CA	212	G
1	CA	216	G
1	CA	236	C
1	CA	240	U
1	CA	241	C
1	CA	243	G
1	CA	247	G
1	CA	262	G
1	CA	263	C
1	CA	266	A
1	CA	270	A
1	CA	271	G
1	CA	285	G
1	CA	301	G
1	CA	317	A
1	CA	324	C
1	CA	325	A
1	CA	327	G
1	CA	328	G
1	CA	341	C
1	CA	348	C
1	CA	349	A
1	CA	350	G
1	CA	362	C
1	CA	363	U
1	CA	368	C
1	CA	369	A
1	CA	393	A
1	CA	394	C
1	CA	402	G
1	CA	408	A
1	CA	409	G
1	CA	410	A
1	CA	415	C
1	CA	418	C
1	CA	420	G
1	CA	424	G

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Mol	Chain	Res	Type
1	CA	425	U
1	CA	426	A
1	CA	431	C
1	CA	433	U
1	CA	435	A
1	CA	436	A
1	CA	447	A
1	CA	455	A
1	CA	467	A
1	CA	469	G
1	CA	470	G
1	CA	481	A
1	CA	482	U
1	CA	489	G
1	CA	493	A
1	CA	494	A
1	CA	495	C
1	CA	496	U
1	CA	502	C
1	CA	505	G
1	CA	511	G
1	CA	515	U
1	CA	516	A
1	CA	517	A
1	CA	518	U
1	CA	520	C
1	CA	531	A
1	CA	545	U
1	CA	546	C
1	CA	547	A
1	CA	556	A
1	CA	557	A
1	CA	560	G
1	CA	561	G
1	CA	572	G
1	CA	579	G
1	CA	580	C
1	CA	600	G
1	CA	607	C
1	CA	614	G
1	CA	615	G
1	CA	616	A

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Mol	Chain	Res	Type
1	CA	618	C
1	CA	637	A
1	CA	649	A
1	CA	671	A
1	CA	672	G
1	CA	695	G
1	CA	705	G
1	CA	708	G
1	CA	715	G
1	CA	732	C
1	CA	733	C
1	CA	739	G
1	CA	761	A
1	CA	776	A
1	CA	777	U
1	CA	778	A
1	CA	801	C
1	CA	802	G
1	CA	803	A
1	CA	804	U
1	CA	805	G
1	CA	811	U
1	CA	812	A
1	CA	817	U
1	CA	820	G
1	CA	823	U
1	CA	824	C
1	CA	825	U
1	CA	826	C
1	CA	829	G
1	CA	837	A
1	CA	880	G
1	CA	892	A
1	CA	894	G
1	CA	904	G
1	CA	905	G
1	CA	912	C
1	CA	913	A
1	CA	938	U
1	CA	939	U
1	CA	944	G
1	CA	946	A

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Mol	Chain	Res	Type
1	CA	947	A
1	CA	949	G
1	CA	950	C
1	CA	952	A
1	CA	953	A
1	CA	954	G
1	CA	955	A
1	CA	956	A
1	CA	957	C
1	CA	958	C
1	CA	960	U
1	CA	969	U
1	CA	970	U
1	CA	971	G
1	CA	980	G
1	CA	982	G
1	CA	983	A
1	CA	984	A
1	CA	985	C
1	CA	1005	G
1	CA	1006	C
1	CA	1007	C
1	CA	1019	G
1	CA	1029	A
1	CA	1032	U
1	CA	1033	G
1	CA	1034	C
1	CA	1036	G
1	CA	1037	C
1	CA	1038	A
1	CA	1044	G
1	CA	1048	U
1	CA	1049	C
1	CA	1051	G
1	CA	1055	G
1	CA	1064	G
1	CA	1071	G
1	CA	1077	G
1	CA	1078	U
1	CA	1084	A
1	CA	1087	G
1	CA	1091	G

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Mol	Chain	Res	Type
1	CA	1098	C
1	CA	1100	G
1	CA	1107	G
1	CA	1108	U
1	CA	1109	U
1	CA	1110	G
1	CA	1112	C
1	CA	1113	A
1	CA	1114	G
1	CA	1119	U
1	CA	1120	C
1	CA	1121	G
1	CA	1122	G
1	CA	1123	C
1	CA	1129	A
1	CA	1135	A
1	CA	1142	U
1	CA	1143	G
1	CA	1144	C
1	CA	1166	G
1	CA	1168	G
1	CA	1169	G
1	CA	1178	U
1	CA	1179	G
1	CA	1184	G
1	CA	1194	U
1	CA	1195	A
1	CA	1196	C
1	CA	1197	G
1	CA	1207	A
1	CA	1209	A
1	CA	1220	A
1	CA	1227	A
1	CA	1238	A
1	CA	1239	U
1	CA	1240	G
1	CA	1247	G
1	CA	1255	G
1	CA	1257	A
1	CA	1260	U
1	CA	1262	A
1	CA	1263	U

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Mol	Chain	Res	Type
1	CA	1264	C
1	CA	1268	A
1	CA	1269	A
1	CA	1272	G
1	CA	1276	G
1	CA	1278	C
1	CA	1281	A
1	CA	1282	G
1	CA	1283	U
1	CA	1284	U
1	CA	1287	G
1	CA	1299	C
1	CA	1301	A
1	CA	1302	C
1	CA	1304	C
1	CA	1305	G
1	CA	1307	C
1	CA	1313	G
1	CA	1316	G
1	CA	1317	C
1	CA	1320	G
1	CA	1329	G
1	CA	1335	G
1	CA	1346	A
1	CA	1347	U
1	CA	1353	G
1	CA	1362	G
1	CA	1370	G
1	CA	1380	C
1	CA	1383	C
1	CA	1402	G
1	CA	1405	G
1	CA	1425	G
1	CA	1426	G
1	CA	1428	G
1	CA	1432	A
1	CA	1433	C
1	CA	1465	G
1	CA	1470	A
1	CA	1476	U
1	CA	1477	A
1	CA	1480	A

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Mol	Chain	Res	Type
1	CA	1482	G
1	CA	1483	G
1	CA	1484	U
1	CA	1485	A
1	CA	1495	G
1	CA	1498	G
1	CA	1506	U
1	CA	1507	G
1	CA	1508	G
22	CV	5	G
22	CV	7	G
22	CV	8	U
22	CV	9	G
22	CV	14	A
22	CV	18	U
22	CV	19	G
22	CV	20	G
22	CV	21	U
22	CV	22	A
22	CV	38	A
22	CV	48	U
22	CV	49	C
22	CV	50	G
22	CV	53	G
22	CV	54	G
22	CV	64	G
22	CV	66	C
22	CV	68	C
22	CV	74	A
22	CV	75	C
22	CV	77	A
23	CW	2	C
23	CW	16	U
23	CW	17	C
23	CW	18	G
23	CW	19	G
23	CW	20	U
23	CW	21	A
23	CW	22	G
23	CW	23	A
23	CW	39	U
23	CW	40	C

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Mol	Chain	Res	Type
23	CW	41	C
23	CW	43	C
23	CW	47	U
23	CW	51	U
23	CW	61	C
23	CW	70	G
23	CW	73	A
23	CW	75	C
24	CY	2	G
24	CY	3	A
24	CY	6	G
24	CY	7	A
24	CY	9	G
24	CY	11	C
24	CY	12	G
24	CY	13	G
24	CY	16	C
24	CY	17	G
24	CY	18	G
24	CY	19	C
24	CY	21	G
24	CY	23	A
24	CY	34	C
24	CY	37	A
24	CY	41	C
24	CY	42	G
24	CY	43	G
24	CY	44	A
24	CY	45	G
24	CY	47	A
24	CY	48	G
24	CY	49	G
24	CY	50	G
24	CY	51	G
24	CY	52	C
24	CY	53	A
24	CY	54	A
24	CY	61	C
24	CY	67	U
24	CY	68	U
24	CY	70	A
24	CY	71	A

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Mol	Chain	Res	Type
24	CY	72	A
24	CY	73	U
24	CY	74	C
24	CY	75	C
59	CX	18	G
59	CX	19	U
26	DA	8	U
26	DA	9	G
26	DA	14	G
26	DA	33	C
26	DA	34	G
26	DA	35	G
26	DA	40	C
26	DA	44	C
26	DA	47	A
26	DA	48	U
26	DA	52	G
26	DA	53	G
26	DA	57	U
26	DA	67	C
26	DA	69	A
26	DA	70	U
26	DA	72	A
26	DA	73	G
26	DA	80	G
26	DA	81	G
26	DA	82	A
26	DA	86	G
26	DA	88	U
26	DA	89	A
26	DA	91	C
26	DA	93	G
26	DA	98	G
26	DA	99	G
26	DA	110	G
26	DA	115	A
26	DA	116	A
26	DA	117	U
26	DA	125	C
26	DA	126	C
26	DA	136	G
26	DA	138	A

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Mol	Chain	Res	Type
26	DA	142	C
26	DA	145	G
26	DA	153	G
26	DA	154	C
26	DA	158	U
26	DA	159	G
26	DA	162	C
26	DA	163	G
26	DA	169	A
26	DA	184	A
26	DA	185	A
26	DA	192	A
26	DA	193	G
26	DA	203	G
26	DA	204	A
26	DA	209	A
26	DA	210	A
26	DA	213	A
26	DA	216	A
26	DA	217	A
26	DA	218	U
26	DA	227	U
26	DA	236	G
26	DA	237	C
26	DA	240	G
26	DA	248	G
26	DA	249	G
26	DA	255	C
26	DA	256	C
26	DA	268	G
26	DA	269	C
26	DA	270	U
26	DA	271	U
26	DA	273	U
26	DA	274	C
26	DA	275	C
26	DA	277	G
26	DA	282	G
26	DA	284	U
26	DA	285	C
26	DA	286	G
26	DA	294	C

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Mol	Chain	Res	Type
26	DA	295	U
26	DA	296	C
26	DA	297	G
26	DA	298	G
26	DA	321	G
26	DA	322	A
26	DA	333	A
26	DA	334	A
26	DA	335	G
26	DA	347	A
26	DA	350	G
26	DA	352	G
26	DA	353	A
26	DA	355	A
26	DA	356	G
26	DA	375	G
26	DA	376	G
26	DA	381	U
26	DA	385	U
26	DA	386	G
26	DA	388	G
26	DA	389	G
26	DA	392	A
26	DA	393	C
26	DA	394	C
26	DA	397	A
26	DA	398	G
26	DA	412	G
26	DA	413	U
26	DA	414	G
26	DA	422	G
26	DA	431	U
26	DA	432	G
26	DA	433	G
26	DA	437	G
26	DA	440	C
26	DA	444	G
26	DA	454	A
26	DA	466	U
26	DA	469	C
26	DA	473	U
26	DA	480	C

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Mol	Chain	Res	Type
26	DA	481	C
26	DA	482	A
26	DA	495	A
26	DA	497	A
26	DA	498	G
26	DA	500	U
26	DA	504	A
26	DA	506	G
26	DA	507	A
26	DA	508	A
26	DA	515	G
26	DA	518	G
26	DA	520	G
26	DA	528	U
26	DA	529	A
26	DA	532	G
26	DA	533	C
26	DA	536	G
26	DA	537	A
26	DA	551	C
26	DA	552	A
26	DA	554	G
26	DA	555	C
26	DA	556	A
26	DA	557	G
26	DA	566	C
26	DA	567	C
26	DA	571	A
26	DA	572	G
26	DA	583	G
26	DA	584	U
26	DA	585	G
26	DA	595	G
26	DA	597	A
26	DA	608	A
26	DA	610	U
26	DA	621	G
26	DA	626	G
26	DA	629	U
26	DA	632	G
26	DA	635	G
26	DA	636	U

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Mol	Chain	Res	Type
26	DA	637	U
26	DA	638	G
26	DA	640	G
26	DA	646	G
26	DA	648	C
26	DA	650	U
26	DA	651	A
26	DA	652	G
26	DA	661	A
26	DA	669	C
26	DA	670	A
26	DA	674	C
26	DA	675	G
26	DA	676	C
26	DA	703	U
26	DA	710	C
26	DA	715	G
26	DA	716	A
26	DA	717	C
26	DA	719	C
26	DA	731	A
26	DA	732	G
26	DA	747	G
26	DA	753	G
26	DA	754	C
26	DA	755	U
26	DA	763	G
26	DA	768	A
26	DA	776	C
26	DA	784	G
26	DA	786	U
26	DA	792	A
26	DA	793	U
26	DA	799	C
26	DA	804	C
26	DA	808	U
26	DA	810	A
26	DA	811	G
26	DA	821	G
26	DA	822	G
26	DA	828	A
26	DA	830	A

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Mol	Chain	Res	Type
26	DA	831	G
26	DA	833	U
26	DA	834	A
26	DA	835	A
26	DA	836	C
26	DA	837	C
26	DA	838	G
26	DA	851	G
26	DA	853	U
26	DA	858	C
26	DA	865	A
26	DA	873	U
26	DA	874	U
26	DA	876	G
26	DA	878	G
26	DA	891	G
26	DA	892	C
26	DA	894	G
26	DA	905	G
26	DA	912	A
26	DA	924	A
26	DA	929	G
26	DA	932	C
26	DA	936	A
26	DA	941	A
26	DA	942	C
26	DA	949	C
26	DA	952	U
26	DA	955	A
26	DA	959	C
26	DA	960	C
26	DA	962	A
26	DA	976	G
26	DA	977	A
26	DA	978	G
26	DA	982	G
26	DA	985	A
26	DA	989	A
26	DA	990	G
26	DA	1002	U
26	DA	1003	A
26	DA	1005	C

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Mol	Chain	Res	Type
26	DA	1008	C
26	DA	1009	C
26	DA	1017	A
26	DA	1018	G
26	DA	1025	A
26	DA	1027	C
26	DA	1028	A
26	DA	1036	C
26	DA	1041	A
26	DA	1057	U
26	DA	1058	C
26	DA	1060	G
26	DA	1067	G
26	DA	1068	U
26	DA	1070	G
26	DA	1071	U
26	DA	1072	A
26	DA	1076	G
26	DA	1077	A
26	DA	1084	G
26	DA	1085	C
26	DA	1086	C
26	DA	1087	G
26	DA	1089	G
26	DA	1090	A
26	DA	1091	A
26	DA	1092	G
26	DA	1094	C
26	DA	1097	C
26	DA	1098	C
26	DA	1155	G
26	DA	1156	A
26	DA	1157	G
26	DA	1158	U
26	DA	1159	G
26	DA	1160	G
26	DA	1161	C
26	DA	1163	C
26	DA	1167	G
26	DA	1174	A
26	DA	1175	U
26	DA	1179	C

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Mol	Chain	Res	Type
26	DA	1180	G
26	DA	1184	C
26	DA	1185	U
26	DA	1186	U
26	DA	1187	A
26	DA	1189	G
26	DA	1200	A
26	DA	1216	G
26	DA	1217	G
26	DA	1218	A
26	DA	1219	U
26	DA	1220	G
26	DA	1222	C
26	DA	1223	C
26	DA	1239	G
26	DA	1249	U
26	DA	1252	C
26	DA	1254	A
26	DA	1255	U
26	DA	1256	G
26	DA	1257	A
26	DA	1262	C
26	DA	1263	G
26	DA	1264	A
26	DA	1265	C
26	DA	1287	A
26	DA	1289	G
26	DA	1293	G
26	DA	1294	U
26	DA	1295	G
26	DA	1298	A
26	DA	1301	G
26	DA	1310	A
26	DA	1314	A
26	DA	1316	G
26	DA	1317	A
26	DA	1318	U
26	DA	1326	G
26	DA	1327	U
26	DA	1331	A
26	DA	1332	A
26	DA	1345	U

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Mol	Chain	Res	Type
26	DA	1346	A
26	DA	1347	A
26	DA	1351	C
26	DA	1352	A
26	DA	1358	U
26	DA	1359	C
26	DA	1364	G
26	DA	1366	A
26	DA	1374	U
26	DA	1377	G
26	DA	1383	G
26	DA	1394	A
26	DA	1404	A
26	DA	1405	A
26	DA	1410	A
26	DA	1413	G
26	DA	1415	C
26	DA	1422	G
26	DA	1424	A
26	DA	1425	G
26	DA	1429	A
26	DA	1430	G
26	DA	1431	C
26	DA	1436	U
26	DA	1447	C
26	DA	1452	C
26	DA	1453	C
26	DA	1461	G
26	DA	1462	C
26	DA	1465	U
26	DA	1466	G
26	DA	1472	A
26	DA	1473	C
26	DA	1478	U
26	DA	1482	C
26	DA	1490	A
26	DA	1494	G
26	DA	1495	A
26	DA	1496	G
26	DA	1498	C
26	DA	1499	A
26	DA	1500	U

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Mol	Chain	Res	Type
26	DA	1506	A
26	DA	1507	G
26	DA	1513	C
26	DA	1517	A
26	DA	1521	G
26	DA	1522	C
26	DA	1523	A
26	DA	1524	G
26	DA	1527	U
26	DA	1528	G
26	DA	1530	G
26	DA	1535	A
26	DA	1536	G
26	DA	1538	C
26	DA	1539	A
26	DA	1540	A
26	DA	1541	A
26	DA	1542	U
26	DA	1543	C
26	DA	1546	C
26	DA	1547	C
26	DA	1550	C
26	DA	1554	C
26	DA	1555	A
26	DA	1560	C
26	DA	1567	G
26	DA	1570	G
26	DA	1575	G
26	DA	1576	C
26	DA	1577	C
26	DA	1578	C
26	DA	1579	G
26	DA	1590	A
26	DA	1591	A
26	DA	1592	C
26	DA	1595	C
26	DA	1600	A
26	DA	1601	G
26	DA	1604	A
26	DA	1605	G
26	DA	1612	A
26	DA	1615	A

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Mol	Chain	Res	Type
26	DA	1621	C
26	DA	1624	U
26	DA	1625	A
26	DA	1630	C
26	DA	1631	A
26	DA	1632	A
26	DA	1633	C
26	DA	1636	G
26	DA	1638	G
26	DA	1639	G
26	DA	1647	U
26	DA	1648	A
26	DA	1653	A
26	DA	1654	A
26	DA	1655	A
26	DA	1661	A
26	DA	1662	C
26	DA	1663	A
26	DA	1670	C
26	DA	1686	C
26	DA	1691	G
26	DA	1693	G
26	DA	1694	C
26	DA	1698	A
26	DA	1699	G
26	DA	1700	A
26	DA	1713	G
26	DA	1720	G
26	DA	1724	G
26	DA	1725	U
26	DA	1727	G
26	DA	1740	C
26	DA	1741	G
26	DA	1742	G
26	DA	1744	A
26	DA	1745	G
26	DA	1746	A
26	DA	1747	A
26	DA	1765	G
26	DA	1766	A
26	DA	1767	U
26	DA	1768	G

Continued on next page...

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Mol	Chain	Res	Type
26	DA	1770	G
26	DA	1772	C
26	DA	1773	C
26	DA	1775	G
26	DA	1778	G
26	DA	1783	G
26	DA	1788	G
26	DA	1793	G
26	DA	1794	G
26	DA	1803	A
26	DA	1806	G
26	DA	1810	A
26	DA	1812	C
26	DA	1816	A
26	DA	1817	A
26	DA	1821	A
26	DA	1829	G
26	DA	1830	C
26	DA	1831	G
26	DA	1832	A
26	DA	1846	G
26	DA	1849	A
26	DA	1850	U
26	DA	1851	A
26	DA	1859	A
26	DA	1865	G
26	DA	1868	C
26	DA	1869	G
26	DA	1876	G
26	DA	1877	A
26	DA	1879	G
26	DA	1888	G
26	DA	1894	U
26	DA	1896	C
26	DA	1897	A
26	DA	1898	A
26	DA	1899	G
26	DA	1902	C
26	DA	1903	C
26	DA	1906	A
26	DA	1909	G
26	DA	1910	A

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Mol	Chain	Res	Type
26	DA	1917	G
26	DA	1920	G
26	DA	1921	A
26	DA	1927	G
26	DA	1930	C
26	DA	1933	A
26	DA	1934	A
26	DA	1935	C
26	DA	1937	A
26	DA	1950	G
26	DA	1951	G
26	DA	1955	C
26	DA	1956	G
26	DA	1957	A
26	DA	1959	A
26	DA	1960	U
26	DA	1961	U
26	DA	1968	C
26	DA	1976	U
26	DA	1983	C
26	DA	1984	U
26	DA	1985	G
26	DA	1988	C
26	DA	1990	A
26	DA	1991	A
26	DA	1992	A
26	DA	1993	A
26	DA	2003	C
26	DA	2008	G
26	DA	2012	U
26	DA	2014	U
26	DA	2018	G
26	DA	2041	A
26	DA	2044	G
26	DA	2047	C
26	DA	2048	G
26	DA	2052	A
26	DA	2054	A
26	DA	2055	U
26	DA	2057	C
26	DA	2060	C
26	DA	2064	C

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Mol	Chain	Res	Type
26	DA	2076	C
26	DA	2077	G
26	DA	2081	A
26	DA	2082	G
26	DA	2083	A
26	DA	2084	C
26	DA	2090	G
26	DA	2091	G
26	DA	2114	G
26	DA	2115	G
26	DA	2116	C
26	DA	2117	U
26	DA	2118	C
26	DA	2120	U
26	DA	2121	G
26	DA	2124	C
26	DA	2125	G
26	DA	2129	C
26	DA	2131	G
26	DA	2137	G
26	DA	2138	A
26	DA	2140	A
26	DA	2148	G
26	DA	2149	C
26	DA	2152	G
26	DA	2154	G
26	DA	2168	G
26	DA	2170	G
26	DA	2180	G
26	DA	2193	U
26	DA	2194	A
26	DA	2198	C
26	DA	2200	C
26	DA	2201	U
26	DA	2206	C
26	DA	2208	G
26	DA	2210	U
26	DA	2212	G
26	DA	2213	G
26	DA	2214	G
26	DA	2219	A
26	DA	2220	A

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Mol	Chain	Res	Type
26	DA	2221	C
26	DA	2224	U
26	DA	2227	G
26	DA	2228	A
26	DA	2230	G
26	DA	2233	G
26	DA	2236	A
26	DA	2237	C
26	DA	2249	G
26	DA	2250	G
26	DA	2256	U
26	DA	2257	G
26	DA	2286	C
26	DA	2290	G
26	DA	2291	G
26	DA	2294	C
26	DA	2298	A
26	DA	2299	A
26	DA	2300	G
26	DA	2314	G
26	DA	2316	A
26	DA	2318	G
26	DA	2319	G
26	DA	2320	A
26	DA	2322	A
26	DA	2323	U
26	DA	2324	C
26	DA	2327	C
26	DA	2330	G
26	DA	2331	A
26	DA	2332	G
26	DA	2336	G
26	DA	2338	A
26	DA	2345	G
26	DA	2347	A
26	DA	2353	C
26	DA	2357	A
26	DA	2358	C
26	DA	2361	C
26	DA	2394	G
26	DA	2395	G
26	DA	2396	C

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Mol	Chain	Res	Type
26	DA	2403	A
26	DA	2410	G
26	DA	2413	C
26	DA	2417	U
26	DA	2421	G
26	DA	2422	A
26	DA	2434	U
26	DA	2436	A
26	DA	2440	G
26	DA	2441	A
26	DA	2446	A
26	DA	2450	A
26	DA	2451	C
26	DA	2452	C
26	DA	2459	A
26	DA	2460	U
26	DA	2463	C
26	DA	2476	C
26	DA	2479	G
26	DA	2480	A
26	DA	2481	G
26	DA	2482	C
26	DA	2485	C
26	DA	2487	A
26	DA	2488	C
26	DA	2489	A
26	DA	2490	G
26	DA	2493	G
26	DA	2494	C
26	DA	2495	G
26	DA	2502	U
26	DA	2509	C
26	DA	2513	G
26	DA	2516	G
26	DA	2529	A
26	DA	2535	G
26	DA	2540	G
26	DA	2542	A
26	DA	2553	A
26	DA	2554	G
26	DA	2556	G
26	DA	2565	U

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Mol	Chain	Res	Type
26	DA	2577	A
26	DA	2578	G
26	DA	2584	C
26	DA	2589	G
26	DA	2593	G
26	DA	2596	U
26	DA	2597	C
26	DA	2613	A
26	DA	2615	U
26	DA	2620	U
26	DA	2621	C
26	DA	2622	U
26	DA	2623	C
26	DA	2626	U
26	DA	2632	A
26	DA	2641	G
26	DA	2664	U
26	DA	2665	A
26	DA	2666	G
26	DA	2668	A
26	DA	2669	C
26	DA	2670	G
26	DA	2671	A
26	DA	2672	G
26	DA	2673	A
26	DA	2674	G
26	DA	2677	C
26	DA	2678	C
26	DA	2683	G
26	DA	2684	G
26	DA	2690	A
26	DA	2694	C
26	DA	2701	C
26	DA	2702	C
26	DA	2704	A
26	DA	2713	U
26	DA	2714	C
26	DA	2723	U
26	DA	2724	A
26	DA	2725	A
26	DA	2732	U
26	DA	2736	C

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Mol	Chain	Res	Type
26	DA	2738	U
26	DA	2742	C
26	DA	2745	A
26	DA	2746	A
26	DA	2760	A
26	DA	2763	G
26	DA	2764	C
26	DA	2770	A
26	DA	2772	C
26	DA	2774	G
26	DA	2776	A
26	DA	2777	A
26	DA	2778	G
26	DA	2782	G
26	DA	2790	A
26	DA	2791	U
26	DA	2792	G
26	DA	2799	C
26	DA	2801	C
26	DA	2802	A
26	DA	2803	C
26	DA	2804	G
26	DA	2805	G
26	DA	2806	C
26	DA	2808	U
26	DA	2809	C
26	DA	2811	A
26	DA	2812	G
26	DA	2813	C
26	DA	2814	C
26	DA	2817	U
26	DA	2827	G
26	DA	2829	A
26	DA	2830	A
26	DA	2842	G
26	DA	2843	G
26	DA	2844	A
26	DA	2853	G
26	DA	2858	U
26	DA	2859	A
26	DA	2872	C
26	DA	2881	G

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Mol	Chain	Res	Type
26	DA	2888	C
26	DA	2892	A
26	DA	2901	G
26	DA	2902	G
27	DB	12	C
27	DB	13	A
27	DB	15	A
27	DB	16	G
27	DB	21	G
27	DB	25	A
27	DB	26	A
27	DB	32	C
27	DB	40	U
27	DB	41	U
27	DB	42	C
27	DB	43	C
27	DB	45	A
27	DB	47	C
27	DB	52	A
27	DB	53	A
27	DB	67	G
27	DB	73	A
27	DB	80	U
27	DB	81	G
27	DB	86	G
27	DB	88	C
27	DB	89	G
27	DB	97	G
27	DB	109	C
27	DB	110	G
27	DB	113	G

All (395) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	7	G
1	AA	30	U
1	AA	60	A
1	AA	79	G
1	AA	115	G
1	AA	119	A
1	AA	195	A

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Mol	Chain	Res	Type
1	AA	243	A
1	AA	250	A
1	AA	266	G
1	AA	327	A
1	AA	328	C
1	AA	366	C
1	AA	428	G
1	AA	429	U
1	AA	438	G
1	AA	470	C
1	AA	484	G
1	AA	509	A
1	AA	533	A
1	AA	560	U
1	AA	575	G
1	AA	687	A
1	AA	748	C
1	AA	760	G
1	AA	793	U
1	AA	819	A
1	AA	884	U
1	AA	913	A
1	AA	992	U
1	AA	1049	U
1	AA	1065	U
1	AA	1067	A
1	AA	1139	G
1	AA	1183	A
1	AA	1201	A
1	AA	1211	U
1	AA	1281	U
1	AA	1285	A
1	AA	1300	G
1	AA	1337	G
1	AA	1498	U
1	AA	1529	G
22	AV	9	G
22	AV	16	C
22	AV	18	U
22	AV	21	U
23	AW	35	A
23	AW	47	U

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Mol	Chain	Res	Type
24	AY	6	G
24	AY	7	A
24	AY	15	G
24	AY	73	U
25	AX	15	A
26	BA	47	A
26	BA	56	G
26	BA	69	A
26	BA	72	A
26	BA	98	G
26	BA	99	G
26	BA	116	A
26	BA	117	U
26	BA	125	C
26	BA	184	A
26	BA	185	A
26	BA	187	A
26	BA	200	G
26	BA	209	A
26	BA	237	C
26	BA	284	U
26	BA	306	A
26	BA	333	A
26	BA	354	A
26	BA	355	A
26	BA	365	G
26	BA	391	U
26	BA	392	A
26	BA	413	U
26	BA	416	A
26	BA	431	U
26	BA	433	G
26	BA	480	C
26	BA	495	A
26	BA	497	A
26	BA	499	G
26	BA	527	A
26	BA	552	A
26	BA	556	A
26	BA	566	C
26	BA	571	A
26	BA	596	C

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Mol	Chain	Res	Type
26	BA	609	C
26	BA	625	A
26	BA	639	A
26	BA	715	G
26	BA	728	G
26	BA	792	A
26	BA	798	A
26	BA	810	A
26	BA	822	G
26	BA	828	A
26	BA	836	C
26	BA	839	A
26	BA	873	U
26	BA	904	U
26	BA	905	G
26	BA	1018	G
26	BA	1067	G
26	BA	1078	U
26	BA	1093	A
26	BA	1151	A
26	BA	1156	A
26	BA	1221	A
26	BA	1254	A
26	BA	1298	A
26	BA	1310	A
26	BA	1326	G
26	BA	1331	A
26	BA	1345	U
26	BA	1346	A
26	BA	1351	C
26	BA	1410	A
26	BA	1423	A
26	BA	1424	A
26	BA	1439	U
26	BA	1472	A
26	BA	1498	C
26	BA	1529	G
26	BA	1535	A
26	BA	1539	A
26	BA	1542	U
26	BA	1549	C
26	BA	1576	C

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Mol	Chain	Res	Type
26	BA	1590	A
26	BA	1604	A
26	BA	1647	U
26	BA	1653	A
26	BA	1654	A
26	BA	1698	A
26	BA	1699	G
26	BA	1727	G
26	BA	1740	C
26	BA	1745	G
26	BA	1810	A
26	BA	1816	A
26	BA	1829	G
26	BA	1830	C
26	BA	1848	U
26	BA	1849	A
26	BA	1850	U
26	BA	1853	G
26	BA	1868	C
26	BA	1877	A
26	BA	1906	A
26	BA	1933	A
26	BA	1955	C
26	BA	1959	A
26	BA	1983	C
26	BA	1991	A
26	BA	2013	G
26	BA	2054	A
26	BA	2056	G
26	BA	2057	C
26	BA	2083	A
26	BA	2147	A
26	BA	2192	A
26	BA	2193	U
26	BA	2212	G
26	BA	2236	A
26	BA	2249	G
26	BA	2289	A
26	BA	2293	G
26	BA	2318	G
26	BA	2319	G
26	BA	2329	G

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Mol	Chain	Res	Type
26	BA	2330	G
26	BA	2346	A
26	BA	2357	A
26	BA	2416	G
26	BA	2433	A
26	BA	2450	A
26	BA	2458	G
26	BA	2459	A
26	BA	2469	G
26	BA	2475	C
26	BA	2492	G
26	BA	2540	G
26	BA	2553	A
26	BA	2592	G
26	BA	2622	U
26	BA	2666	G
26	BA	2673	A
26	BA	2676	A
26	BA	2700	U
26	BA	2738	U
26	BA	2781	C
26	BA	2791	U
26	BA	2801	C
26	BA	2808	U
26	BA	2810	A
26	BA	2812	G
26	BA	2829	A
26	BA	2842	G
26	BA	2858	U
26	BA	2882	A
27	BB	21	G
27	BB	56	G
27	BB	66	A
27	BB	109	C
1	CA	6	U
1	CA	8	G
1	CA	31	U
1	CA	61	A
1	CA	62	G
1	CA	78	G
1	CA	109	G
1	CA	113	A

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Mol	Chain	Res	Type
1	CA	211	U
1	CA	239	A
1	CA	242	A
1	CA	246	A
1	CA	262	G
1	CA	323	A
1	CA	324	C
1	CA	362	C
1	CA	424	G
1	CA	425	U
1	CA	434	G
1	CA	469	G
1	CA	481	A
1	CA	493	A
1	CA	495	C
1	CA	514	G
1	CA	517	A
1	CA	544	U
1	CA	545	U
1	CA	559	G
1	CA	560	G
1	CA	671	A
1	CA	732	C
1	CA	777	U
1	CA	803	A
1	CA	823	U
1	CA	862	U
1	CA	891	A
1	CA	970	U
1	CA	1032	U
1	CA	1048	U
1	CA	1050	A
1	CA	1165	A
1	CA	1183	A
1	CA	1193	U
1	CA	1195	A
1	CA	1196	C
1	CA	1263	U
1	CA	1267	A
1	CA	1282	G
1	CA	1317	C
1	CA	1319	G

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Mol	Chain	Res	Type
1	CA	1427	A
1	CA	1476	U
1	CA	1482	G
22	CV	16	C
23	CW	18	G
23	CW	47	U
24	CY	6	G
24	CY	7	A
24	CY	15	G
24	CY	73	U
26	DA	47	A
26	DA	69	A
26	DA	72	A
26	DA	81	G
26	DA	88	U
26	DA	98	G
26	DA	99	G
26	DA	116	A
26	DA	125	C
26	DA	158	U
26	DA	165	G
26	DA	187	A
26	DA	200	G
26	DA	209	A
26	DA	284	U
26	DA	333	A
26	DA	354	A
26	DA	355	A
26	DA	379	G
26	DA	392	A
26	DA	413	U
26	DA	416	A
26	DA	473	U
26	DA	497	A
26	DA	499	G
26	DA	506	G
26	DA	527	A
26	DA	566	C
26	DA	609	C
26	DA	625	A
26	DA	639	A
26	DA	715	G

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Mol	Chain	Res	Type
26	DA	731	A
26	DA	732	G
26	DA	792	A
26	DA	798	A
26	DA	810	A
26	DA	822	G
26	DA	836	C
26	DA	904	U
26	DA	912	A
26	DA	1018	G
26	DA	1067	G
26	DA	1071	U
26	DA	1085	C
26	DA	1156	A
26	DA	1254	A
26	DA	1325	G
26	DA	1326	G
26	DA	1331	A
26	DA	1333	U
26	DA	1345	U
26	DA	1346	A
26	DA	1410	A
26	DA	1423	A
26	DA	1424	A
26	DA	1441	U
26	DA	1465	U
26	DA	1472	A
26	DA	1498	C
26	DA	1504	C
26	DA	1535	A
26	DA	1539	A
26	DA	1542	U
26	DA	1576	C
26	DA	1590	A
26	DA	1604	A
26	DA	1647	U
26	DA	1653	A
26	DA	1655	A
26	DA	1662	C
26	DA	1698	A
26	DA	1699	G
26	DA	1740	C

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Mol	Chain	Res	Type
26	DA	1810	A
26	DA	1829	G
26	DA	1849	A
26	DA	1850	U
26	DA	1868	C
26	DA	1869	G
26	DA	1920	G
26	DA	1921	A
26	DA	1955	C
26	DA	1960	U
26	DA	1983	C
26	DA	1984	U
26	DA	1991	A
26	DA	2005	G
26	DA	2013	G
26	DA	2052	A
26	DA	2054	A
26	DA	2137	G
26	DA	2147	A
26	DA	2192	A
26	DA	2193	U
26	DA	2212	G
26	DA	2236	A
26	DA	2260	U
26	DA	2293	G
26	DA	2322	A
26	DA	2329	G
26	DA	2331	A
26	DA	2346	A
26	DA	2357	A
26	DA	2416	G
26	DA	2421	G
26	DA	2433	A
26	DA	2450	A
26	DA	2459	A
26	DA	2475	C
26	DA	2492	G
26	DA	2528	C
26	DA	2673	A
26	DA	2700	U
26	DA	2792	G
26	DA	2801	C

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Mol	Chain	Res	Type
26	DA	2803	C
26	DA	2808	U
26	DA	2812	G
26	DA	2841	U
26	DA	2842	G
26	DA	2882	A
27	DB	40	U
27	DB	52	A
27	DB	66	A
27	DB	109	C

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

1 non-standard protein/DNA/RNA residue is modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
25	PSU	AX	19	25,24	18,21,22	1.48	2 (11%)	22,30,33	1.37	3 (13%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
25	PSU	AX	19	25,24	-	2/7/25/26	0/2/2/2

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	AX	19	PSU	C2-N1	4.86	1.43	1.36
25	AX	19	PSU	C6-C5	2.42	1.38	1.35

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	AX	19	PSU	C6-C5-C4	4.04	121.03	118.20
25	AX	19	PSU	C6-N1-C2	-2.89	119.73	122.68
25	AX	19	PSU	O2-C2-N1	2.79	125.87	122.79

There are no chirality outliers.

All (2) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
25	AX	19	PSU	O4'-C4'-C5'-O5'
25	AX	19	PSU	C3'-C4'-C5'-O5'

There are no ring outliers.

1 monomer is involved in 7 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
25	AX	19	PSU	7	0

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
60	DC	2

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	DC	110:ALA	C	119:ALA	N	13.98
1	DC	136:ALA	C	139:ALA	N	11.93

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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, 95^{th} 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	AA	1504/1504 (100%)	0.11	60 (3%) 38 36	23, 77, 165, 393	0
1	CA	1504/1504 (100%)	0.26	95 (6%) 20 20	38, 86, 188, 312	0
2	AB	234/234 (100%)	0.26	12 (5%) 28 26	66, 113, 158, 196	0
2	CB	234/234 (100%)	0.67	34 (14%) 2 2	85, 139, 177, 216	0
3	AC	206/206 (100%)	-0.05	5 (2%) 59 56	64, 96, 134, 183	0
3	CC	206/206 (100%)	0.87	30 (14%) 2 2	90, 130, 182, 221	0
4	AD	208/208 (100%)	0.12	7 (3%) 45 43	55, 91, 126, 174	0
4	CD	208/208 (100%)	-0.08	3 (1%) 75 75	49, 79, 108, 139	0
5	AE	150/150 (100%)	-0.02	0 100 100	47, 76, 104, 125	0
5	CE	150/150 (100%)	0.14	4 (2%) 54 52	58, 88, 126, 148	0
6	AF	101/101 (100%)	-0.21	0 100 100	52, 80, 108, 124	0
6	CF	101/101 (100%)	-0.08	2 (1%) 65 64	52, 82, 116, 139	0
7	AG	155/155 (100%)	-0.01	7 (4%) 33 32	61, 97, 137, 156	0
7	CG	155/155 (100%)	0.58	14 (9%) 9 9	82, 119, 157, 175	0
8	AH	138/138 (100%)	-0.20	0 100 100	50, 81, 105, 135	0
8	CH	138/138 (100%)	-0.02	3 (2%) 62 60	59, 95, 119, 146	0
9	AI	127/127 (100%)	0.32	8 (6%) 20 20	58, 112, 146, 230	0
9	CI	127/127 (100%)	1.17	32 (25%) 0 0	94, 136, 180, 235	0
10	AJ	98/98 (100%)	0.72	12 (12%) 4 3	67, 119, 160, 187	0
10	CJ	98/98 (100%)	1.36	26 (26%) 0 0	94, 158, 190, 226	0
11	AK	119/119 (100%)	-0.01	4 (3%) 45 43	45, 79, 108, 165	0
11	CK	119/119 (100%)	0.48	11 (9%) 9 9	55, 95, 132, 161	0
12	AL	124/124 (100%)	0.03	8 (6%) 18 18	47, 71, 105, 155	0
12	CL	124/124 (100%)	0.14	8 (6%) 18 18	50, 81, 115, 124	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AM	124/124 (100%)	0.70	13 (10%) 6 6	68, 112, 153, 231	0
13	CM	124/124 (100%)	1.50	30 (24%) 0 0	101, 153, 200, 218	0
14	AN	60/60 (100%)	0.07	0 100 100	55, 85, 135, 155	0
14	CN	60/60 (100%)	0.86	7 (11%) 4 4	104, 137, 160, 182	0
15	AO	88/88 (100%)	0.02	1 (1%) 80 81	48, 80, 111, 130	0
15	CO	88/88 (100%)	0.02	2 (2%) 60 59	55, 87, 117, 139	0
16	AP	83/83 (100%)	0.20	2 (2%) 59 56	65, 92, 125, 149	0
16	CP	83/83 (100%)	-0.11	0 100 100	51, 73, 112, 139	0
17	AQ	99/99 (100%)	0.12	0 100 100	51, 90, 112, 117	0
17	CQ	99/99 (100%)	0.02	2 (2%) 65 64	63, 87, 115, 126	0
18	AR	70/70 (100%)	-0.10	1 (1%) 75 75	48, 76, 108, 138	0
18	CR	70/70 (100%)	0.06	2 (2%) 51 50	61, 91, 126, 149	0
19	AS	78/78 (100%)	0.38	6 (7%) 13 12	72, 114, 165, 189	0
19	CS	78/78 (100%)	1.54	27 (34%) 0 0	111, 160, 208, 221	0
20	AT	99/99 (100%)	0.24	4 (4%) 38 36	67, 102, 150, 169	0
20	CT	99/99 (100%)	0.05	2 (2%) 65 64	49, 96, 135, 150	0
21	AU	24/24 (100%)	0.34	0 100 100	74, 92, 117, 119	0
21	CU	24/24 (100%)	2.84	14 (58%) 0 0	105, 141, 205, 253	0
22	AV	77/77 (100%)	-0.08	1 (1%) 77 77	34, 78, 122, 187	0
22	CV	77/77 (100%)	0.40	8 (10%) 6 6	41, 107, 162, 175	0
23	AW	76/76 (100%)	1.93	33 (43%) 0 0	37, 183, 225, 269	0
23	CW	76/76 (100%)	2.60	44 (57%) 0 0	59, 192, 268, 296	0
24	AY	75/75 (100%)	1.76	30 (40%) 0 0	37, 107, 188, 213	0
24	CY	75/75 (100%)	2.48	39 (52%) 0 0	37, 107, 188, 213	0
25	AX	6/7 (85%)	0.13	0 100 100	50, 53, 106, 116	0
26	BA	2807/2915 (96%)	-0.20	75 (2%) 54 52	9, 38, 151, 312	0
26	DA	2807/2915 (96%)	0.01	114 (4%) 37 35	24, 64, 168, 297	0
27	BB	119/119 (100%)	-0.25	0 100 100	32, 60, 91, 118	0
27	DB	119/119 (100%)	0.42	8 (6%) 17 17	71, 112, 151, 191	0
28	BC	190/206 (92%)	3.56	120 (63%) 0 0	108, 181, 242, 295	0
29	BD	271/271 (100%)	-0.45	0 100 100	18, 36, 76, 122	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
29	DD	271/271 (100%)	-0.26	1 (0%) 92 93	23, 56, 91, 127	0
30	BE	204/204 (100%)	-0.28	2 (0%) 82 82	18, 48, 92, 134	0
30	DE	204/204 (100%)	-0.13	5 (2%) 57 54	28, 65, 120, 165	0
31	BF	207/207 (100%)	-0.29	4 (1%) 66 65	17, 48, 133, 191	0
31	DF	207/207 (100%)	0.04	7 (3%) 45 43	31, 87, 149, 214	0
32	BG	181/181 (100%)	0.03	5 (2%) 53 51	56, 82, 129, 172	0
32	DG	181/181 (100%)	0.49	14 (7%) 13 12	82, 128, 167, 210	0
33	BH	159/159 (100%)	-0.10	5 (3%) 49 48	32, 68, 118, 181	0
33	DH	159/159 (100%)	0.91	35 (22%) 0 1	70, 128, 180, 235	0
34	BI	145/145 (100%)	-0.04	1 (0%) 87 88	44, 95, 123, 159	0
34	DI	145/145 (100%)	0.26	5 (3%) 45 43	48, 101, 137, 159	0
35	BJ	130/130 (100%)	2.98	64 (49%) 0 0	120, 164, 275, 373	0
35	DJ	130/130 (100%)	3.50	87 (66%) 0 0	122, 193, 233, 284	0
36	BN	138/138 (100%)	-0.32	3 (2%) 62 60	24, 46, 95, 129	0
36	DN	138/138 (100%)	-0.01	3 (2%) 62 60	54, 90, 120, 133	0
37	BO	122/122 (100%)	-0.48	0 100 100	26, 49, 75, 91	0
37	DO	122/122 (100%)	-0.35	0 100 100	39, 64, 85, 92	0
38	BP	146/146 (100%)	-0.08	3 (2%) 63 62	21, 65, 115, 159	0
38	DP	146/146 (100%)	0.29	5 (3%) 45 43	39, 92, 134, 174	0
39	BQ	141/141 (100%)	-0.34	2 (1%) 75 75	27, 51, 85, 188	0
39	DQ	141/141 (100%)	0.14	3 (2%) 63 62	58, 92, 125, 161	0
40	BR	117/117 (100%)	-0.36	0 100 100	21, 42, 78, 93	0
40	DR	117/117 (100%)	-0.14	1 (0%) 84 84	40, 65, 100, 131	0
41	BS	98/98 (100%)	-0.06	1 (1%) 82 82	35, 64, 105, 136	0
41	DS	98/98 (100%)	0.34	3 (3%) 49 48	72, 110, 151, 181	0
42	BT	137/137 (100%)	-0.13	5 (3%) 42 40	34, 64, 139, 181	0
42	DT	137/137 (100%)	0.01	6 (4%) 34 33	43, 77, 135, 170	0
43	BU	117/117 (100%)	-0.43	0 100 100	15, 37, 73, 98	0
43	DU	117/117 (100%)	0.10	5 (4%) 35 34	40, 80, 135, 155	0
44	BV	101/101 (100%)	-0.32	1 (0%) 82 82	24, 51, 85, 119	0
44	DV	101/101 (100%)	0.58	11 (10%) 5 5	60, 110, 143, 183	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
45	BW	113/113 (100%)	-0.35	1 (0%) 84 84	25, 37, 75, 137	0
45	DW	113/113 (100%)	0.01	4 (3%) 44 42	49, 66, 103, 147	0
46	BX	92/92 (100%)	-0.45	0 100 100	25, 44, 73, 82	0
46	DX	92/92 (100%)	-0.11	0 100 100	43, 77, 98, 114	0
47	BY	100/100 (100%)	0.25	10 (10%) 7 7	34, 66, 163, 201	0
47	DY	100/100 (100%)	0.66	13 (13%) 3 3	56, 100, 175, 209	0
48	BZ	176/176 (100%)	1.75	54 (30%) 0 0	43, 119, 275, 309	0
48	DZ	176/176 (100%)	2.37	66 (37%) 0 0	92, 149, 299, 353	0
49	B0	84/84 (100%)	-0.15	0 100 100	25, 43, 78, 110	0
49	D0	84/84 (100%)	0.51	7 (8%) 11 11	58, 84, 105, 128	0
50	B1	93/93 (100%)	-0.17	3 (3%) 47 46	26, 48, 94, 131	0
50	D1	93/93 (100%)	-0.04	2 (2%) 62 60	39, 62, 111, 153	0
51	B2	71/71 (100%)	-0.01	2 (2%) 53 51	34, 61, 101, 164	0
51	D2	71/71 (100%)	-0.01	1 (1%) 75 75	60, 90, 131, 150	0
52	B3	59/59 (100%)	-0.16	2 (3%) 45 43	29, 48, 92, 149	0
52	D3	59/59 (100%)	0.56	5 (8%) 10 10	65, 101, 135, 253	0
53	B4	30/30 (100%)	0.00	1 (3%) 46 44	69, 116, 141, 154	0
53	D4	30/30 (100%)	0.83	2 (6%) 17 17	121, 142, 163, 173	0
54	B5	59/59 (100%)	0.05	3 (5%) 28 26	21, 42, 139, 213	0
54	D5	59/59 (100%)	-0.06	3 (5%) 28 26	42, 67, 130, 179	0
55	B6	44/44 (100%)	0.12	2 (4%) 33 32	30, 60, 93, 118	0
55	D6	44/44 (100%)	0.54	1 (2%) 60 59	51, 90, 113, 121	0
56	B7	48/48 (100%)	-0.31	1 (2%) 63 62	20, 30, 63, 124	0
56	D7	48/48 (100%)	-0.19	1 (2%) 63 62	31, 49, 80, 98	0
57	B8	63/63 (100%)	-0.26	0 100 100	30, 44, 64, 129	0
57	D8	63/63 (100%)	-0.01	2 (3%) 47 46	50, 77, 112, 154	0
58	B9	36/36 (100%)	-0.03	0 100 100	34, 49, 63, 78	0
58	D9	36/36 (100%)	0.58	4 (11%) 5 5	63, 91, 115, 125	0
59	CX	4/4 (100%)	0.37	1 (25%) 0 0	70, 87, 90, 158	0
60	DC	190/196 (96%)	3.98	143 (75%) 0 0	109, 188, 240, 265	0
All	All	21440/21679 (98%)	0.24	1591 (7%) 14 14	9, 77, 180, 393	0

All (1591) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
35	BJ	52	ALA	25.7
48	DZ	172	ALA	20.9
35	BJ	51	ALA	20.7
26	DA	2812	G	20.5
48	DZ	151	HIS	15.8
48	BZ	149	SER	15.6
60	DC	178	ALA	15.2
1	AA	84	U	14.8
48	BZ	168	GLU	14.6
1	AA	88	A	14.4
60	DC	217	ALA	14.0
13	AM	124	PRO	13.9
48	BZ	147	GLY	13.9
28	BC	161	ALA	13.4
28	BC	153	ALA	13.3
48	DZ	149	SER	13.2
60	DC	179	ALA	13.1
48	DZ	148	ASP	13.1
60	DC	214	ALA	12.9
60	DC	90	GLY	12.6
60	DC	89	ALA	12.5
48	DZ	176	PRO	12.5
1	CA	82	U	12.4
35	BJ	50	ALA	12.3
60	DC	163	ALA	12.2
28	BC	152	ALA	12.2
48	BZ	174	VAL	12.1
60	DC	152	ALA	12.0
35	BJ	7	ALA	11.5
28	BC	160	ALA	11.5
35	DJ	59	ALA	11.5
48	DZ	173	ALA	11.4
35	BJ	49	ALA	11.0
32	DG	2	PRO	10.7
35	DJ	37	ALA	10.7
48	BZ	148	ASP	10.7
60	DC	184	ALA	10.6
1	AA	90	U	10.5
35	DJ	52	ALA	10.4
28	BC	162	ALA	10.4
48	DZ	147	GLY	10.4
26	DA	2809	C	10.3

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Mol	Chain	Res	Type	RSRZ
35	DJ	24	ALA	10.3
60	DC	153	ALA	10.3
13	CM	123	ALA	10.2
28	BC	85	GLU	10.0
48	BZ	150	LEU	10.0
35	DJ	36	ALA	10.0
48	BZ	143	GLY	9.9
13	CM	125	ARG	9.9
28	BC	163	ALA	9.9
60	DC	119	ALA	9.8
48	DZ	174	VAL	9.8
48	BZ	145	GLU	9.7
23	CW	22	G	9.6
1	CA	1022	C	9.6
48	DZ	152	ALA	9.6
48	DZ	121	HIS	9.5
1	CA	81	U	9.5
26	BA	2194	A	9.5
35	BJ	71	ALA	9.5
26	BA	2810	A	9.4
21	CU	23	PRO	9.4
28	BC	130	ALA	9.3
60	DC	185	ALA	9.3
26	DA	2902	G	9.2
7	CG	81	GLY	9.2
24	CY	16	C	9.2
1	CA	1016	G	9.2
28	BC	179	ALA	9.0
35	DJ	49	ALA	9.0
28	BC	131	ALA	9.0
48	DZ	150	LEU	9.0
48	BZ	107	THR	8.9
35	BJ	60	ALA	8.9
28	BC	38	ASP	8.8
28	BC	63	SER	8.7
47	BY	51	VAL	8.7
24	AY	17	G	8.7
60	DC	134	ALA	8.7
35	BJ	66	ALA	8.7
60	DC	35	ALA	8.7
13	AM	123	ALA	8.6
35	DJ	99	ALA	8.6

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Mol	Chain	Res	Type	RSRZ
35	BJ	8	ALA	8.5
60	DC	57	ASN	8.5
28	BC	154	ALA	8.5
28	BC	133	ALA	8.5
1	AA	89	C	8.4
28	BC	159	ALA	8.4
48	BZ	176	PRO	8.4
35	DJ	51	ALA	8.3
26	DA	2807	G	8.2
35	BJ	75	ALA	8.2
60	DC	151	ALA	8.2
48	DZ	175	VAL	8.1
28	BC	92	ASP	8.1
35	BJ	65	ALA	8.1
48	DZ	120	ILE	8.0
60	DC	122	ALA	7.9
60	DC	215	ALA	7.9
1	CA	1005	G	7.8
1	AA	80	G	7.8
28	BC	121	ALA	7.8
60	DC	216	ALA	7.8
48	BZ	108	PRO	7.8
48	BZ	144	LEU	7.7
35	DJ	86	ALA	7.7
47	DY	58	GLY	7.7
48	BZ	106	GLY	7.6
48	BZ	175	VAL	7.5
13	AM	121	LYS	7.5
48	DZ	170	THR	7.5
24	CY	17	G	7.5
47	DY	51	VAL	7.5
33	DH	44	VAL	7.5
60	DC	128	ALA	7.5
54	B5	59	GLU	7.4
31	BF	12	LEU	7.4
48	DZ	118	GLN	7.4
28	BC	140	ALA	7.4
28	BC	120	ALA	7.4
28	BC	141	ALA	7.4
1	CA	1011	C	7.4
28	BC	134	ALA	7.4
1	AA	1001(A)	G	7.3

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Mol	Chain	Res	Type	RSRZ
35	BJ	30	ALA	7.3
60	DC	142	ALA	7.3
48	DZ	111	VAL	7.3
28	BC	103	ALA	7.3
51	B2	72	ALA	7.3
35	BJ	100	ALA	7.3
60	DC	180	ALA	7.2
48	DZ	143	GLY	7.2
26	DA	2194	A	7.2
3	CC	80	GLY	7.2
1	CA	1023	U	7.1
1	AA	1026	G	7.1
60	DC	20	TYR	7.1
35	BJ	47	ALA	7.1
60	DC	131	ALA	7.1
26	BA	2812	G	7.1
60	DC	62	VAL	7.1
28	BC	107	ALA	7.1
35	DJ	41	ALA	7.0
35	BJ	63	ALA	7.0
28	BC	99	ILE	7.0
35	DJ	4	ALA	6.9
26	BA	2154	G	6.9
48	BZ	170	THR	6.9
35	BJ	61	ALA	6.9
47	DY	59	GLY	6.8
28	BC	129	ALA	6.8
35	DJ	80	ALA	6.8
1	CA	84	A	6.8
26	DA	2154	G	6.8
23	CW	16	U	6.8
3	CC	207	VAL	6.8
26	DA	2321	A	6.8
48	DZ	177	PRO	6.8
28	BC	157	ALA	6.8
7	CG	84	ASN	6.8
35	BJ	74	ALA	6.8
26	BA	2141	G	6.7
26	DA	2811	A	6.7
26	DA	941	A	6.7
60	DC	148	ALA	6.7
23	CW	6	G	6.7

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Mol	Chain	Res	Type	RSRZ
23	CW	19	G	6.7
28	BC	139	ALA	6.7
2	CB	40	HIS	6.6
48	DZ	155	LEU	6.6
23	AW	20	U	6.6
48	BZ	166	SER	6.6
35	DJ	67	ALA	6.6
11	CK	17	GLY	6.5
19	CS	35	SER	6.5
35	BJ	31	ALA	6.5
26	BA	2807	G	6.5
35	DJ	115	ALA	6.5
52	D3	1	MET	6.5
35	DJ	45	ALA	6.5
1	CA	1019	G	6.5
60	DC	19	VAL	6.4
35	DJ	60	ALA	6.4
60	DC	103	ALA	6.4
28	BC	72	VAL	6.4
1	AA	1028	C	6.4
9	CI	90	PRO	6.4
60	DC	154	ALA	6.4
19	CS	69	HIS	6.3
23	CW	18	G	6.3
28	BC	178	ALA	6.3
3	CC	63	ASN	6.3
1	AA	1033	G	6.3
35	BJ	76	ALA	6.3
35	DJ	31	ALA	6.3
9	CI	126	SER	6.3
28	BC	78	ALA	6.3
28	BC	135	ALA	6.3
13	CM	122	LYS	6.3
10	CJ	32	ALA	6.2
35	DJ	50	ALA	6.2
13	CM	124	PRO	6.2
60	DC	130	ALA	6.2
35	DJ	38	ALA	6.2
60	DC	61	THR	6.2
60	DC	133	ALA	6.2
11	AK	12	ARG	6.2
38	DP	150	ALA	6.2

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Mol	Chain	Res	Type	RSRZ
35	DJ	114	ALA	6.1
11	CK	129	SER	6.1
28	BC	79	LYS	6.1
1	CA	85	C	6.1
28	BC	166	ALA	6.1
48	BZ	115	GLY	6.1
48	BZ	116	VAL	6.0
60	DC	167	ALA	6.0
60	DC	34	THR	6.0
33	DH	170	ARG	6.0
60	DC	147	ALA	6.0
1	AA	82	U	6.0
26	DA	2813	C	6.0
21	CU	24	ARG	6.0
26	DA	2175	G	6.0
60	DC	86	ALA	6.0
48	DZ	171	ILE	6.0
23	CW	9	A	6.0
48	DZ	146	ILE	6.0
24	CY	47	A	6.0
13	AM	84	ILE	6.0
26	DA	2138	A	6.0
35	DJ	54	ALA	6.0
48	BZ	146	ILE	6.0
60	DC	149	ALA	6.0
26	BA	2142	G	6.0
28	BC	65	PRO	5.9
48	DZ	169	GLU	5.9
1	CA	984	A	5.9
28	BC	136	ALA	5.9
60	DC	190	ALA	5.9
24	AY	16	C	5.9
1	CA	1202	G	5.9
28	BC	86	ALA	5.8
28	BC	18	LYS	5.8
3	CC	206	GLU	5.8
26	DA	2195	C	5.8
48	BZ	105	VAL	5.8
35	BJ	105	ALA	5.7
23	AW	17	C	5.7
1	CA	1018	A	5.7
38	DP	149	GLU	5.7

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Mol	Chain	Res	Type	RSRZ
60	DC	143	ALA	5.7
48	DZ	115	GLY	5.6
60	DC	121	ALA	5.6
28	BC	182	ALA	5.6
26	DA	2805	G	5.6
54	B5	60	VAL	5.6
9	AI	126	SER	5.6
48	BZ	142	SER	5.6
1	CA	980	G	5.6
48	BZ	173	ALA	5.6
28	BC	148	ALA	5.5
35	DJ	14	ALA	5.5
35	DJ	96	ALA	5.5
1	AA	91	C	5.5
48	DZ	55	HIS	5.5
28	BC	108	ALA	5.5
60	DC	168	ALA	5.5
1	AA	92	C	5.5
13	CM	84	ILE	5.5
28	BC	155	ALA	5.5
1	AA	1005	A	5.4
60	DC	183	ALA	5.4
47	DY	55	TYR	5.4
23	CW	23	A	5.4
60	DC	102	ALA	5.4
48	DZ	107	THR	5.4
10	CJ	59	SER	5.4
14	CN	17	LYS	5.4
35	DJ	72	ALA	5.4
28	BC	77	ILE	5.4
26	BA	2138	A	5.3
28	BC	95	GLY	5.3
28	BC	104	ALA	5.3
1	CA	1010	G	5.3
60	DC	55	ASP	5.3
35	DJ	40	ALA	5.3
60	DC	77	ILE	5.3
35	DJ	5	ALA	5.3
60	DC	100	ILE	5.3
60	DC	58	VAL	5.3
28	BC	132	ALA	5.2
28	BC	51	PRO	5.2

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Mol	Chain	Res	Type	RSRZ
35	DJ	15	ALA	5.2
28	BC	151	ALA	5.2
5	CE	23	GLY	5.2
60	DC	135	ALA	5.2
28	BC	96	GLY	5.2
10	AJ	37	PRO	5.2
35	DJ	81	ALA	5.2
26	DA	934	C	5.2
60	DC	213	ALA	5.2
60	DC	67	GLY	5.2
28	BC	156	ALA	5.2
11	CK	31	THR	5.1
26	DA	2176	G	5.1
28	BC	102	ALA	5.1
1	CA	972	A	5.1
28	BC	93	TYR	5.1
13	CM	121	LYS	5.1
35	BJ	67	ALA	5.1
33	DH	45	VAL	5.1
3	CC	155	GLY	5.1
13	CM	119	GLY	5.1
1	CA	1007	C	5.1
33	DH	43	VAL	5.1
23	CW	7	A	5.1
43	DU	89	GLU	5.1
35	DJ	53	ALA	5.1
1	CA	1017	G	5.1
28	BC	149	ALA	5.1
35	BJ	64	ALA	5.1
21	CU	19	GLY	5.1
26	BA	2135	A	5.0
28	BC	119	ALA	5.1
24	CY	32	C	5.0
60	DC	186	ALA	5.0
1	CA	80	U	5.0
48	BZ	111	VAL	5.0
26	BA	933	A	5.0
28	BC	91	ALA	5.0
35	BJ	62	ALA	5.0
35	DJ	35	ALA	5.0
35	DJ	8	ALA	5.0
1	CA	1201	U	5.0

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Mol	Chain	Res	Type	RSRZ
48	DZ	119	GLU	5.0
13	CM	4	ILE	5.0
28	BC	20	TYR	5.0
60	DC	136	ALA	5.0
1	CA	971	G	5.0
3	CC	53	ALA	5.0
60	DC	92	ASP	5.0
35	DJ	25	ALA	4.9
13	AM	120	LYS	4.9
24	CY	45	G	4.9
28	BC	25	ALA	4.9
43	DU	90	VAL	4.9
13	AM	122	LYS	4.9
35	DJ	102	ALA	4.9
26	DA	2190	A	4.9
28	BC	165	ALA	4.9
35	DJ	79	ALA	4.9
1	AA	1131	G	4.9
1	AA	1027	C	4.9
23	CW	55	U	4.9
48	DZ	95	PRO	4.9
35	DJ	6	ALA	4.9
13	CM	56	LEU	4.9
26	DA	1093	A	4.9
28	BC	109	ALA	4.9
9	AI	4	TYR	4.8
21	CU	18	TYR	4.8
1	CA	1012	G	4.8
28	BC	158	ALA	4.8
35	BJ	114	ALA	4.8
1	CA	1470	A	4.8
19	CS	40	ILE	4.8
28	BC	84	LYS	4.8
35	BJ	48	ALA	4.8
35	DJ	19	ALA	4.8
23	AW	45	U	4.8
28	BC	40	THR	4.8
26	DA	933	A	4.8
28	BC	122	ALA	4.8
23	CW	54	U	4.8
2	AB	122	PHE	4.8
60	DC	158	ALA	4.8

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Mol	Chain	Res	Type	RSRZ
60	DC	176	ALA	4.8
47	BY	59	GLY	4.7
28	BC	150	ALA	4.7
60	DC	141	ALA	4.7
60	DC	166	ALA	4.7
48	BZ	141	VAL	4.7
13	CM	120	LYS	4.7
60	DC	71	GLN	4.7
60	DC	124	ALA	4.7
1	CA	981	G	4.7
33	DH	32	GLU	4.7
10	CJ	34	VAL	4.7
3	AC	71	ALA	4.7
24	AY	47	A	4.7
23	CW	44	G	4.7
19	AS	29	ARG	4.7
24	CY	15	G	4.6
28	BC	19	VAL	4.6
28	BC	145	ALA	4.6
60	DC	45	ALA	4.6
28	BC	27	ARG	4.6
35	DJ	68	ALA	4.6
60	DC	76	ALA	4.6
28	BC	128	ALA	4.6
50	B1	85	LEU	4.6
28	BC	106	ALA	4.6
48	BZ	155	LEU	4.6
7	CG	82	GLY	4.6
24	CY	49	G	4.6
3	CC	160	ALA	4.6
60	DC	18	LYS	4.6
35	DJ	44	ALA	4.6
23	CW	47	U	4.6
23	CW	61	C	4.6
48	BZ	97	GLU	4.6
32	DG	50	ALA	4.6
35	DJ	76	ALA	4.6
60	DC	51	PRO	4.6
1	CA	1020	C	4.5
26	BA	2157	C	4.5
32	DG	41	GLN	4.5
13	AM	119	GLY	4.5

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Mol	Chain	Res	Type	RSRZ
35	DJ	33	ALA	4.5
10	CJ	17	ASP	4.5
13	CM	16	ASP	4.5
2	CB	122	PHE	4.5
24	AY	46	U	4.5
35	DJ	39	ALA	4.5
26	BA	2177	G	4.5
52	B3	1	MET	4.5
23	AW	49	C	4.5
1	AA	1129	C	4.5
24	AY	20	U	4.4
32	BG	50	ALA	4.4
1	CA	86	U	4.4
60	DC	191	ALA	4.4
1	AA	1531	A	4.4
35	BJ	53	ALA	4.4
1	AA	1030(D)	A	4.4
28	BC	173	ALA	4.4
35	BJ	11	ALA	4.4
21	CU	25	LYS	4.4
60	DC	38	ASP	4.4
26	DA	2153	U	4.4
26	DA	2808	U	4.4
48	DZ	156	LYS	4.4
54	D5	59	GLU	4.4
26	BA	2134	U	4.4
28	BC	100	ILE	4.4
24	AY	22	A	4.4
35	DJ	58	ALA	4.4
35	DJ	75	ALA	4.4
48	DZ	164	ALA	4.4
47	DY	52	SER	4.3
60	DC	63	SER	4.3
48	BZ	133	ILE	4.3
60	DC	21	THR	4.3
23	AW	48	C	4.3
7	CG	4	ARG	4.3
48	DZ	12	GLY	4.3
48	DZ	166	SER	4.3
35	BJ	29	ALA	4.3
11	AK	11	LYS	4.3
35	BJ	72	ALA	4.3

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Mol	Chain	Res	Type	RSRZ
48	BZ	169	GLU	4.3
35	DJ	48	ALA	4.3
26	DA	2146	G	4.3
26	DA	2152	G	4.3
14	CN	2	ALA	4.3
11	CK	12	ARG	4.3
48	BZ	110	GLY	4.3
28	BC	37	PHE	4.2
33	BH	44	VAL	4.2
26	DA	2133	G	4.2
7	CG	86	GLN	4.2
28	BC	142	ALA	4.2
45	DW	113	ALA	4.2
23	CW	46	G	4.2
1	AA	1447	A	4.2
48	DZ	123	ASP	4.2
28	BC	144	ALA	4.2
48	BZ	167	PRO	4.2
35	DJ	84	ALA	4.2
35	DJ	132	ALA	4.2
34	DI	61	ARG	4.2
60	DC	80	GLY	4.2
60	DC	91	ALA	4.2
23	AW	18	G	4.2
28	BC	126	ALA	4.2
60	DC	105	ALA	4.2
60	DC	182	ALA	4.2
28	BC	80	GLY	4.2
21	CU	22	ARG	4.2
35	BJ	55	ALA	4.2
1	CA	977	C	4.1
26	DA	1094	C	4.1
24	CY	66	G	4.1
43	DU	118	GLY	4.1
24	AY	21	G	4.1
26	BA	2902	G	4.1
35	DJ	63	ALA	4.1
60	DC	123	ALA	4.1
18	AR	88	LYS	4.1
60	DC	87	GLU	4.1
35	BJ	28	ALA	4.1
1	CA	1027	A	4.1

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Mol	Chain	Res	Type	RSRZ
28	BC	88	GLU	4.1
35	DJ	85	ALA	4.1
24	CY	10	C	4.1
48	DZ	114	GLY	4.1
26	BA	2166	C	4.1
26	BA	2811	A	4.1
48	BZ	120	ILE	4.1
35	BJ	13	ALA	4.1
60	DC	127	ALA	4.1
3	CC	51	GLY	4.1
24	CY	46	U	4.1
30	DE	204	ALA	4.1
35	DJ	78	ALA	4.1
26	DA	1221	A	4.1
60	DC	192	ALA	4.0
41	BS	54	LEU	4.0
1	AA	630	G	4.0
2	CB	140	HIS	4.0
60	DC	74	VAL	4.0
28	BC	76	ALA	4.0
35	DJ	7	ALA	4.0
2	CB	15	VAL	4.0
28	BC	39	GLU	4.0
35	BJ	70	ALA	4.0
35	DJ	74	ALA	4.0
60	DC	73	ARG	4.0
1	CA	1021	C	4.0
26	DA	1158	U	4.0
7	CG	80	VAL	4.0
19	CS	47	HIS	4.0
26	DA	1554	C	4.0
26	DA	2134	U	4.0
1	CA	995	A	4.0
35	BJ	104	ALA	4.0
7	AG	84	ASN	4.0
28	BC	87	GLU	4.0
23	AW	23	A	4.0
35	BJ	12	ALA	4.0
1	CA	1004	U	4.0
24	AY	66	G	4.0
43	DU	91	ASP	4.0
60	DC	177	ALA	4.0

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Mol	Chain	Res	Type	RSRZ
2	CB	240	GLN	3.9
33	DH	40	GLU	3.9
26	BA	2133	G	3.9
19	CS	34	TRP	3.9
10	CJ	73	ASP	3.9
10	CJ	74	ILE	3.9
28	BC	214	ALA	3.9
48	BZ	140	ASP	3.9
60	DC	164	ALA	3.9
57	D8	64	TYR	3.9
3	AC	72	LYS	3.9
3	CC	154	SER	3.9
3	CC	196	LEU	3.9
42	DT	39	ARG	3.9
1	AA	81	U	3.9
60	DC	157	ALA	3.9
23	CW	49	C	3.9
1	CA	1114	G	3.9
26	BA	2901	G	3.9
26	DA	2189	G	3.9
20	CT	106	ALA	3.9
38	BP	150	ALA	3.9
48	BZ	151	HIS	3.9
53	D4	43	GLY	3.9
9	CI	87	GLN	3.9
35	BJ	110	ALA	3.9
44	DV	26	ASP	3.9
60	DC	104	ALA	3.9
32	BG	2	PRO	3.9
50	D1	85	LEU	3.9
26	BA	2809	C	3.9
24	AY	56	U	3.9
51	D2	72	ALA	3.9
10	CJ	4	ILE	3.9
48	DZ	106	GLY	3.9
35	BJ	103	ALA	3.9
1	CA	999	U	3.8
3	CC	60	ALA	3.8
23	CW	51	U	3.8
60	DC	88	GLU	3.8
23	AW	46	G	3.8
26	BA	932	C	3.8

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Mol	Chain	Res	Type	RSRZ
26	BA	937	G	3.8
7	AG	85	TYR	3.8
26	BA	941	A	3.8
21	CU	2	GLY	3.8
2	CB	24	TRP	3.8
1	AA	839	U	3.8
42	BT	135	ALA	3.8
49	D0	8	GLY	3.8
26	DA	944	A	3.8
23	CW	48	C	3.8
48	BZ	130	PRO	3.8
60	DC	46	LYS	3.8
23	CW	5	G	3.8
32	DG	28	VAL	3.8
44	DV	37	VAL	3.8
26	BA	2321	A	3.8
24	CY	60	C	3.8
1	CA	1003	G	3.8
26	BA	2136	G	3.8
28	BC	105	ALA	3.7
33	DH	58	GLU	3.7
24	CY	44	A	3.7
12	AL	127	GLU	3.7
35	DJ	32	ALA	3.7
48	DZ	140	ASP	3.7
60	DC	129	ALA	3.7
23	CW	59	U	3.7
1	CA	1471	A	3.7
3	CC	59	ARG	3.7
28	BC	180	ALA	3.7
48	BZ	113	ALA	3.7
24	CY	50	G	3.7
60	DC	209	ALA	3.7
1	AA	1024	G	3.7
35	DJ	106	ALA	3.7
48	DZ	69	THR	3.7
3	CC	205	GLY	3.7
2	CB	135	GLN	3.7
13	CM	105	THR	3.7
15	CO	89	GLY	3.7
48	DZ	168	GLU	3.7
7	CG	5	ARG	3.7

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Mol	Chain	Res	Type	RSRZ
3	CC	52	LEU	3.7
11	CK	32	ILE	3.7
10	AJ	34	VAL	3.7
23	CW	17	C	3.7
24	CY	40	C	3.7
28	BC	146	ALA	3.7
35	BJ	115	ALA	3.7
42	DT	135	ALA	3.7
60	DC	218	ALA	3.7
60	DC	56	GLN	3.7
28	BC	181	ALA	3.6
60	DC	150	ALA	3.6
35	DJ	28	ALA	3.6
1	AA	79	G	3.6
48	DZ	163	LEU	3.6
35	DJ	71	ALA	3.6
33	DH	26	VAL	3.6
9	CI	124	GLN	3.6
28	BC	101	GLN	3.6
31	BF	1	MET	3.6
6	CF	101	ALA	3.6
35	BJ	68	ALA	3.6
48	BZ	177	PRO	3.6
60	DC	37	PHE	3.6
26	BA	2137	G	3.6
9	CI	116	LYS	3.6
28	BC	89	ALA	3.6
26	DA	2135	A	3.6
35	DJ	82	ALA	3.6
10	CJ	100	THR	3.6
1	AA	1006	C	3.6
1	CA	1200	C	3.6
26	DA	2174	G	3.6
31	DF	11	VAL	3.6
60	DC	99	ILE	3.6
35	DJ	113	ALA	3.6
38	DP	82	GLY	3.6
48	DZ	110	GLY	3.6
60	DC	65	PRO	3.6
7	CG	73	MET	3.6
26	BA	2182	C	3.6
19	CS	42	PRO	3.6

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Mol	Chain	Res	Type	RSRZ
26	DA	2806	C	3.5
1	CA	1195	A	3.5
20	AT	106	ALA	3.5
28	BC	110	ALA	3.5
52	D3	3	ARG	3.5
28	BC	71	GLN	3.5
1	AA	1031	G	3.5
13	CM	60	VAL	3.5
26	BA	2176	G	3.5
9	CI	19	LEU	3.5
48	BZ	109	ALA	3.5
22	CV	1	C	3.5
26	BA	2195	C	3.5
33	DH	128	PRO	3.5
2	CB	136	VAL	3.5
48	DZ	113	ALA	3.5
1	AA	1030(A)	G	3.5
7	CG	83	ALA	3.5
26	DA	2671	A	3.5
26	DA	1211	C	3.5
23	AW	9	A	3.5
26	DA	2905	U	3.5
35	DJ	34	ALA	3.5
47	BY	89	PHE	3.5
22	CV	48	U	3.5
60	DC	106	ALA	3.5
28	BC	26	ALA	3.4
1	AA	83	U	3.4
1	AA	78	G	3.4
26	BA	929	G	3.4
32	DG	182	LYS	3.4
1	CA	1166	G	3.4
54	D5	58	LEU	3.4
32	DG	29	TRP	3.4
1	CA	1196	C	3.4
34	DI	73	GLU	3.4
35	DJ	77	ALA	3.4
19	CS	21	GLU	3.4
38	BP	149	GLU	3.4
30	BE	204	ALA	3.4
1	CA	996	G	3.4
47	BY	3	VAL	3.4

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Mol	Chain	Res	Type	RSRZ
10	CJ	83	GLU	3.4
19	CS	12	ASP	3.4
35	BJ	10	ALA	3.4
3	CC	81	GLY	3.4
8	CH	131	GLY	3.4
35	BJ	9	ALA	3.4
60	DC	60	GLY	3.4
2	CB	7	VAL	3.4
26	DA	2136	G	3.4
42	DT	136	GLN	3.4
30	DE	69	LYS	3.4
35	BJ	87	ALA	3.4
35	BJ	102	ALA	3.4
35	DJ	65	ALA	3.4
48	DZ	141	VAL	3.4
26	DA	2182	C	3.4
42	DT	40	THR	3.4
1	CA	1013	A	3.3
23	AW	64	A	3.3
48	DZ	124	ILE	3.3
13	AM	125	ARG	3.3
60	DC	85	GLU	3.3
1	CA	1000	G	3.3
23	CW	28	G	3.3
24	AY	49	G	3.3
9	CI	93	ARG	3.3
21	CU	20	LYS	3.3
23	AW	59	U	3.3
26	DA	930	C	3.3
28	BC	216	ALA	3.3
21	CU	17	THR	3.3
60	DC	187	ALA	3.3
60	DC	220	ALA	3.3
52	B3	2	PRO	3.3
1	AA	1038	C	3.3
60	DC	101	GLN	3.3
1	AA	1034	G	3.3
21	CU	9	ARG	3.3
2	CB	190	THR	3.3
19	CS	4	SER	3.3
48	DZ	129	SER	3.3
11	CK	11	LYS	3.3

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Mol	Chain	Res	Type	RSRZ
33	DH	33	LEU	3.3
55	B6	17	LYS	3.3
1	CA	83	U	3.3
1	CA	1239	U	3.3
42	BT	39	ARG	3.3
23	AW	50	U	3.3
39	BQ	141	GLN	3.3
23	AW	5	G	3.3
24	CY	48	G	3.3
47	DY	61	ILE	3.3
3	CC	58	GLU	3.3
26	DA	2140	A	3.3
19	CS	36	ARG	3.3
60	DC	75	LEU	3.3
23	CW	32	U	3.3
54	B5	53	ALA	3.3
22	CV	49	C	3.3
24	CY	74	C	3.3
26	BA	1554	C	3.3
32	BG	86	MET	3.3
42	BT	132	LYS	3.3
26	DA	1579	G	3.2
26	DA	2159	C	3.2
27	DB	119	G	3.2
3	CC	17	ASP	3.2
3	CC	79	ARG	3.2
60	DC	98	GLU	3.2
9	CI	99	LEU	3.2
60	DC	189	ALA	3.2
13	CM	55	ARG	3.2
39	DQ	60	ARG	3.2
47	DY	57	GLN	3.2
13	CM	96	LEU	3.2
60	DC	194	ALA	3.2
13	CM	117	VAL	3.2
10	CJ	3	LYS	3.2
33	BH	170	ARG	3.2
7	AG	80	VAL	3.2
23	CW	34	G	3.2
26	BA	298	G	3.2
26	BA	2808	U	3.2
11	AK	13	GLN	3.2

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Mol	Chain	Res	Type	RSRZ
2	CB	232	PRO	3.2
35	DJ	97	ALA	3.2
26	BA	2806	C	3.2
23	CW	53	G	3.2
24	CY	7	A	3.2
13	CM	14	ARG	3.2
19	AS	5	LEU	3.2
35	BJ	46	ALA	3.2
1	AA	1030(C)	G	3.2
23	AW	24	G	3.2
26	BA	375	G	3.2
28	BC	69	GLY	3.2
27	DB	65	C	3.2
35	BJ	112	ALA	3.2
2	CB	21	ARG	3.2
20	AT	9	ASN	3.2
2	AB	7	VAL	3.2
7	CG	85	TYR	3.2
35	DJ	30	ALA	3.2
24	CY	59	A	3.2
49	D0	7	LEU	3.1
47	BY	52	SER	3.1
1	AA	1030(B)	C	3.1
26	BA	2132	C	3.1
26	DA	2904	C	3.1
48	DZ	136	PHE	3.1
9	CI	95	LYS	3.1
1	CA	1006	C	3.1
27	DB	5	C	3.1
13	CM	26	GLY	3.1
23	CW	8	U	3.1
23	CW	33	U	3.1
26	DA	89	A	3.1
1	CA	1002	G	3.1
9	CI	8	GLY	3.1
48	BZ	171	ILE	3.1
48	DZ	14	LYS	3.1
12	CL	18	VAL	3.1
47	BY	91	GLU	3.1
60	DC	22	ILE	3.1
24	AY	45	G	3.1
60	DC	78	ALA	3.1

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Mol	Chain	Res	Type	RSRZ
23	CW	21	A	3.1
35	DJ	93	ALA	3.1
58	D9	5	ALA	3.1
47	BY	2	ARG	3.1
45	DW	94	ASP	3.1
32	DG	90	LEU	3.1
35	BJ	4	ALA	3.1
23	CW	56	C	3.1
28	BC	90	GLY	3.1
28	BC	185	ALA	3.1
35	DJ	64	ALA	3.1
10	CJ	46	ARG	3.1
13	AM	56	LEU	3.1
35	DJ	95	ALA	3.1
24	CY	56	U	3.1
60	DC	40	THR	3.1
33	DH	34	GLU	3.1
26	DA	939	C	3.1
26	DA	2810	A	3.1
44	DV	24	LYS	3.0
48	DZ	117	LEU	3.0
26	BA	934	C	3.0
33	DH	27	LYS	3.0
32	DG	49	ASP	3.0
11	CK	19	ALA	3.0
35	BJ	73	ALA	3.0
60	DC	132	ALA	3.0
60	DC	139	ALA	3.0
9	CI	115	GLY	3.0
26	DA	2901	G	3.0
26	BA	2802	A	3.0
26	DA	1091	A	3.0
28	BC	125	ALA	3.0
28	BC	127	ALA	3.0
31	DF	1	MET	3.0
13	CM	116	THR	3.0
33	DH	59	ARG	3.0
26	BA	2813	C	3.0
48	DZ	105	VAL	3.0
4	AD	42	GLN	3.0
32	DG	3	LEU	3.0
48	DZ	122	ARG	3.0

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Mol	Chain	Res	Type	RSRZ
2	AB	127	ILE	3.0
13	CM	5	ALA	3.0
9	AI	127	LYS	3.0
9	CI	17	VAL	3.0
23	CW	45	U	3.0
27	DB	66	A	3.0
28	BC	73	ARG	3.0
7	AG	82	GLY	3.0
19	CS	41	VAL	3.0
28	BC	62	VAL	3.0
1	AA	488	C	3.0
10	CJ	9	ARG	3.0
11	CK	18	ARG	3.0
20	AT	98	PRO	3.0
22	CV	22	A	3.0
23	AW	36	A	3.0
26	DA	2179	A	3.0
2	CB	66	GLY	3.0
5	CE	22	GLY	3.0
8	CH	54	ASP	3.0
26	BA	935	C	3.0
19	CS	37	ARG	3.0
48	BZ	139	VAL	3.0
24	AY	18	G	3.0
24	CY	18	G	3.0
10	AJ	21	GLN	3.0
36	DN	68	GLU	3.0
33	DH	111	HIS	3.0
48	DZ	145	GLU	3.0
1	CA	614	G	2.9
1	CA	1028	C	2.9
2	CB	231	GLU	2.9
10	CJ	21	GLN	2.9
10	CJ	39	PRO	2.9
28	BC	164	ALA	2.9
55	D6	42	TRP	2.9
60	DC	41	VAL	2.9
60	DC	126	ALA	2.9
26	BA	2227	G	2.9
19	CS	44	MET	2.9
44	DV	5	VAL	2.9
48	BZ	96	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
60	DC	26	ALA	2.9
18	CR	27	GLY	2.9
33	DH	17	VAL	2.9
1	CA	456	C	2.9
26	BA	2745	A	2.9
2	AB	133	LYS	2.9
32	DG	10	LYS	2.9
23	AW	16	U	2.9
23	CW	20	U	2.9
26	DA	2193	U	2.9
13	CM	97	PRO	2.9
28	BC	174	ALA	2.9
26	DA	375	G	2.9
26	DA	2137	G	2.9
47	DY	50	ARG	2.9
9	AI	110	GLU	2.9
3	AC	207	VAL	2.9
20	AT	95	ALA	2.9
23	AW	47	U	2.9
48	BZ	134	PRO	2.9
60	DC	181	ALA	2.9
24	CY	61	C	2.9
26	BA	2152	G	2.9
26	BA	2803	C	2.9
26	DA	1089	G	2.9
54	D5	60	VAL	2.9
23	CW	36	A	2.9
26	BA	2140	A	2.9
3	CC	124	ILE	2.9
9	CI	3	GLN	2.9
33	DH	169	VAL	2.9
9	CI	92	TYR	2.9
26	DA	10	G	2.9
1	AA	1025	U	2.9
24	AY	14	A	2.9
3	CC	91	LEU	2.9
60	DC	159	ALA	2.9
9	CI	117	HIS	2.9
47	DY	91	GLU	2.9
53	D4	56	GLU	2.9
19	CS	53	ASN	2.9
24	AY	48	G	2.9

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Mol	Chain	Res	Type	RSRZ
3	CC	77	ILE	2.9
44	DV	25	LEU	2.9
35	DJ	130	ALA	2.9
47	BY	90	LEU	2.9
23	AW	60	U	2.9
48	DZ	96	VAL	2.9
48	DZ	165	VAL	2.9
3	CC	61	ALA	2.9
10	AJ	25	GLU	2.9
26	DA	2191	A	2.9
34	DI	138	ILE	2.8
24	AY	61	C	2.8
26	BA	931	C	2.8
23	AW	63	G	2.8
24	CY	26	A	2.8
3	CC	64	VAL	2.8
9	CI	86	VAL	2.8
47	BY	53	PRO	2.8
48	DZ	97	GLU	2.8
24	AY	57	C	2.8
27	DB	4	C	2.8
9	CI	123	PRO	2.8
1	CA	1481	A	2.8
23	CW	24	G	2.8
35	BJ	83	ALA	2.8
11	AK	81	ASP	2.8
26	DA	2200	C	2.8
9	CI	125	TYR	2.8
10	CJ	33	GLN	2.8
11	CK	13	GLN	2.8
11	CK	128	ALA	2.8
60	DC	173	ALA	2.8
13	CM	66	LEU	2.8
36	BN	3	THR	2.8
1	CA	1008	C	2.8
1	CA	1112	C	2.8
28	BC	81	GLU	2.8
10	CJ	10	GLY	2.8
19	CS	38	SER	2.8
24	AY	59	A	2.8
24	AY	70	A	2.8
26	BA	942	C	2.8

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Mol	Chain	Res	Type	RSRZ
28	BC	147	ALA	2.8
28	BC	22	ILE	2.8
26	DA	2192	A	2.8
60	DC	156	ALA	2.8
23	AW	19	G	2.8
24	CY	65	G	2.8
26	DA	2814	C	2.8
33	BH	43	VAL	2.8
7	CG	76	ARG	2.8
1	AA	1035	A	2.8
1	CA	1142	U	2.8
60	DC	155	ALA	2.8
1	CA	976	G	2.8
24	CY	75	C	2.8
26	DA	937	G	2.8
42	DT	134	GLU	2.8
56	D7	1	MET	2.8
39	BQ	140	ALA	2.8
23	CW	14	A	2.8
33	DH	36	PRO	2.8
35	DJ	116	ALA	2.8
26	DA	1159	G	2.8
60	DC	48	GLY	2.8
60	DC	93	TYR	2.8
10	AJ	80	LYS	2.8
1	CA	1133	U	2.7
23	CW	63	G	2.7
26	BA	2165	U	2.7
1	CA	1268	A	2.7
19	CS	28	LYS	2.7
21	CU	21	TYR	2.7
31	BF	11	VAL	2.7
26	DA	2149	C	2.7
60	DC	47	LEU	2.7
26	BA	2151	U	2.7
1	AA	631	G	2.7
23	CW	15	G	2.7
26	DA	2745	A	2.7
41	DS	54	LEU	2.7
7	AG	81	GLY	2.7
26	DA	2150	C	2.7
9	CI	4	TYR	2.7

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Mol	Chain	Res	Type	RSRZ
42	BT	136	GLN	2.7
1	AA	1008	C	2.7
24	CY	27	C	2.7
22	CV	61	U	2.7
10	CJ	37	PRO	2.7
12	AL	20	LYS	2.7
43	DU	85	LYS	2.7
60	DC	66	HIS	2.7
23	AW	22	G	2.7
24	CY	12	G	2.7
26	DA	925	G	2.7
35	DJ	43	ALA	2.7
10	CJ	55	LYS	2.7
1	CA	1069	U	2.7
2	AB	14	GLY	2.7
35	BJ	77	ALA	2.7
35	BJ	113	ALA	2.7
26	DA	928	G	2.7
32	BG	80	PHE	2.7
49	D0	85	ALA	2.7
1	AA	1004	A	2.7
14	CN	15	LYS	2.7
26	DA	929	G	2.7
26	DA	1096	G	2.7
48	BZ	161	VAL	2.7
60	DC	52	ARG	2.7
3	AC	87	LEU	2.7
6	CF	3	ARG	2.7
19	CS	81	ARG	2.7
35	DJ	10	ALA	2.7
35	DJ	47	ALA	2.7
14	CN	11	LYS	2.7
24	AY	9	G	2.7
28	BC	82	LYS	2.7
2	CB	127	ILE	2.7
1	AA	841	U	2.7
1	CA	823	U	2.7
26	DA	938	C	2.7
26	DA	2158	C	2.7
34	DI	139	GLN	2.7
1	CA	1014	G	2.7
23	AW	27	G	2.7

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Mol	Chain	Res	Type	RSRZ
35	DJ	83	ALA	2.7
13	CM	62	ASN	2.6
1	CA	1242	C	2.6
38	DP	110	TYR	2.6
26	BA	2183	G	2.6
26	DA	2183	G	2.6
48	BZ	132	ASN	2.6
24	AY	44	A	2.6
26	BA	1218	A	2.6
35	BJ	101	ALA	2.6
26	DA	2168	G	2.6
45	DW	1	MET	2.6
60	DC	96	GLY	2.6
1	AA	204	U	2.6
4	AD	12	CYS	2.6
48	BZ	121	HIS	2.6
1	CA	88	C	2.6
1	CA	1115	C	2.6
10	AJ	73	ASP	2.6
60	DC	59	ARG	2.6
1	CA	1203	G	2.6
9	CI	62	TYR	2.6
26	DA	2178	G	2.6
24	AY	23	A	2.6
26	DA	945	A	2.6
1	CA	962	C	2.6
26	BA	930	C	2.6
35	DJ	56	ALA	2.6
35	DJ	100	ALA	2.6
1	CA	970	U	2.6
24	CY	33	U	2.6
26	BA	9	G	2.6
39	DQ	80	GLU	2.6
9	CI	54	ASP	2.6
48	BZ	118	GLN	2.6
60	DC	64	LEU	2.6
1	CA	1132	C	2.6
23	AW	61	C	2.6
26	BA	669	C	2.6
35	DJ	11	ALA	2.6
60	DC	109	ALA	2.6
60	DC	198	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
19	AS	43	GLU	2.6
39	DQ	79	LEU	2.6
1	CA	1143	G	2.6
12	CL	19	ARG	2.6
26	BA	2175	G	2.6
26	DA	2177	G	2.6
1	AA	1001	A	2.6
9	CI	89	ASN	2.6
1	CA	1009	C	2.6
1	AA	1000	U	2.6
2	CB	139	LYS	2.6
3	CC	190	ARG	2.6
60	DC	162	ALA	2.6
60	DC	188	ALA	2.6
2	CB	128	GLU	2.6
60	DC	39	GLU	2.6
26	BA	10	G	2.6
26	DA	2319	G	2.6
23	AW	54	U	2.6
35	BJ	21	ALA	2.6
35	BJ	39	ALA	2.6
47	DY	89	PHE	2.6
44	DV	95	LEU	2.6
26	DA	924	A	2.6
60	DC	120	ALA	2.6
33	DH	129	THR	2.6
35	BJ	6	ALA	2.5
13	AM	55	ARG	2.5
19	CS	45	VAL	2.5
24	AY	24	G	2.5
26	DA	2130	U	2.5
56	B7	47	ARG	2.5
49	D0	9	SER	2.5
2	CB	101	MET	2.5
19	AS	18	LYS	2.5
1	CA	89	G	2.5
3	CC	187	ALA	2.5
33	DH	104	GLU	2.5
35	DJ	16	ALA	2.5
33	DH	103	LEU	2.5
52	D3	4	LEU	2.5
23	AW	51	U	2.5

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Mol	Chain	Res	Type	RSRZ
26	DA	271	U	2.5
4	CD	36	ARG	2.5
26	DA	936	A	2.5
19	CS	80	TYR	2.5
2	CB	89	GLY	2.5
32	DG	139	LEU	2.5
4	AD	13	ARG	2.5
7	CG	155	ARG	2.5
49	D0	11	ARG	2.5
13	CM	8	GLU	2.5
33	DH	24	VAL	2.5
60	DC	165	ALA	2.5
1	CA	1252	C	2.5
18	CR	26	LEU	2.5
24	CY	71	A	2.5
26	DA	1088	C	2.5
1	CA	1030	G	2.5
35	DJ	103	ALA	2.5
51	B2	71	ASN	2.5
26	DA	2803	C	2.5
7	CG	113	GLU	2.5
1	AA	1137	C	2.5
12	CL	16	GLU	2.5
2	CB	30	ARG	2.5
35	BJ	69	ALA	2.5
4	CD	42	GLN	2.5
1	CA	960	U	2.5
1	AA	93	G	2.5
24	CY	9	G	2.5
33	DH	19	VAL	2.5
22	AV	1	C	2.5
60	DC	110	ALA	2.5
60	DC	210	ALA	2.5
45	DW	63	ASP	2.5
4	AD	133	VAL	2.5
28	BC	43	VAL	2.5
58	D9	37	GLY	2.5
60	DC	146	ALA	2.5
48	BZ	123	ASP	2.5
28	BC	34	THR	2.5
13	CM	27	LYS	2.5
35	DJ	27	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
60	DC	160	ALA	2.5
10	AJ	54	PHE	2.5
10	AJ	38	ILE	2.5
23	CW	27	G	2.5
26	DA	2161	C	2.4
1	CA	1432	A	2.4
23	CW	76	A	2.4
32	DG	15	VAL	2.4
1	AA	486	U	2.4
12	CL	128	ALA	2.4
23	CW	50	U	2.4
59	CX	19	U	2.4
55	B6	42	TRP	2.4
60	DC	79	LYS	2.4
1	AA	1132	C	2.4
1	CA	1320	G	2.4
24	AY	15	G	2.4
26	DA	2132	C	2.4
19	CS	39	THR	2.4
23	CW	35	A	2.4
26	DA	11	U	2.4
50	D1	81	ARG	2.4
12	CL	47	LYS	2.4
35	DJ	104	ALA	2.4
24	CY	41	C	2.4
26	DA	1154	C	2.4
26	DA	1218	A	2.4
26	DA	2900	A	2.4
2	AB	13	ALA	2.4
35	BJ	99	ALA	2.4
33	BH	85	LYS	2.4
33	DH	25	LYS	2.4
26	DA	2139	U	2.4
27	DB	68	C	2.4
33	DH	51	ARG	2.4
1	CA	554	G	2.4
60	DC	95	GLY	2.4
2	CB	97	TRP	2.4
14	CN	16	PHE	2.4
35	BJ	59	ALA	2.4
33	DH	35	VAL	2.4
32	DG	47	LYS	2.4

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Mol	Chain	Res	Type	RSRZ
33	DH	57	ASP	2.4
12	AL	128	ALA	2.4
15	CO	73	GLU	2.4
26	DA	2156	A	2.4
28	BC	183	ALA	2.4
28	BC	98	GLU	2.4
7	AG	78	ARG	2.4
13	CM	106	ASN	2.4
48	BZ	98	MET	2.4
10	CJ	54	PHE	2.4
26	DA	1189	G	2.4
9	AI	94	ALA	2.4
12	CL	127	GLU	2.4
35	DJ	9	ALA	2.4
35	DJ	70	ALA	2.4
1	CA	975	U	2.4
26	BA	2160	C	2.4
26	DA	2196	C	2.4
30	BE	88	GLY	2.4
2	AB	37	ASN	2.4
35	DJ	55	ALA	2.4
36	BN	68	GLU	2.4
22	CV	46	G	2.4
24	AY	43	G	2.4
26	DA	9	G	2.4
20	CT	104	LEU	2.4
17	CQ	12	SER	2.4
19	CS	56	GLN	2.4
9	CI	9	ARG	2.4
23	AW	56	C	2.4
60	DC	200	ALA	2.4
21	CU	5	ASP	2.4
13	CM	17	VAL	2.4
2	AB	36	ARG	2.4
23	CW	10	G	2.4
10	AJ	39	PRO	2.4
1	CA	1146	C	2.4
26	DA	935	C	2.4
28	BC	124	ALA	2.4
22	CV	60	A	2.3
26	DA	1629	A	2.3
38	DP	95	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
9	CI	63	ILE	2.3
33	DH	89	ILE	2.3
48	DZ	159	PRO	2.3
1	CA	1245	C	2.3
4	AD	132	ARG	2.3
24	AY	19	C	2.3
28	BC	23	ASP	2.3
53	B4	56	GLU	2.3
24	CY	31	U	2.3
35	BJ	17	ALA	2.3
33	DH	42	ARG	2.3
10	CJ	76	ASN	2.3
14	CN	18	VAL	2.3
44	DV	46	VAL	2.3
11	CK	119	CYS	2.3
47	DY	6	HIS	2.3
48	BZ	178	GLU	2.3
9	CI	98	PRO	2.3
23	CW	73	A	2.3
35	BJ	107	ALA	2.3
49	D0	76	GLY	2.3
1	AA	1030	C	2.3
1	CA	988	G	2.3
26	DA	2227	G	2.3
44	DV	38	LEU	2.3
49	D0	75	LEU	2.3
9	CI	21	PRO	2.3
12	AL	63	GLY	2.3
23	AW	38	A	2.3
24	CY	20	U	2.3
44	BV	101	GLY	2.3
60	DC	97	GLU	2.3
12	AL	21	LYS	2.3
35	DJ	42	ALA	2.3
1	CA	1070	G	2.3
24	CY	2	G	2.3
26	DA	304	G	2.3
9	CI	128	ARG	2.3
45	BW	66	GLU	2.3
26	DA	1095	A	2.3
44	DV	94	LEU	2.3
47	DY	28	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
3	CC	200	ALA	2.3
12	AL	19	ARG	2.3
35	BJ	124	ALA	2.3
35	DJ	23	ALA	2.3
48	DZ	137	ILE	2.3
1	CA	516	A	2.3
9	CI	91	ASP	2.3
2	CB	72	GLY	2.3
50	B1	84	GLY	2.3
1	AA	63	C	2.3
26	DA	2151	U	2.3
24	CY	72	A	2.3
26	BA	936	A	2.3
5	CE	19	MET	2.3
19	CS	52	TYR	2.3
31	DF	172	TRP	2.3
60	DC	222	ALA	2.3
30	DE	73	GLU	2.3
48	BZ	154	ASP	2.3
42	BT	1	MET	2.3
1	AA	1032	G	2.3
1	CA	993	A	2.3
26	BA	2155	A	2.3
26	DA	2147	A	2.3
26	DA	2186	G	2.3
26	DA	2815	G	2.3
48	DZ	112	ARG	2.3
17	CQ	45	HIS	2.3
41	DS	93	LYS	2.3
48	DZ	109	ALA	2.3
1	AA	219	C	2.3
48	BZ	104	PHE	2.3
1	CA	979	A	2.3
35	DJ	125	ALA	2.3
1	CA	1184	G	2.2
23	AW	13	C	2.2
23	CW	62	C	2.2
33	DH	159	GLU	2.2
23	AW	21	A	2.2
26	DA	2640	A	2.2
31	DF	18	ARG	2.2
40	DR	2	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
2	CB	79	ASP	2.2
24	AY	13	G	2.2
26	BA	2186	G	2.2
26	DA	1157	G	2.2
32	BG	88	ILE	2.2
35	DJ	66	ALA	2.2
48	DZ	8	TYR	2.2
1	AA	611	A	2.2
24	AY	7	A	2.2
60	DC	72	VAL	2.2
4	CD	2	GLY	2.2
8	CH	130	GLY	2.2
9	CI	106	ALA	2.2
21	CU	11	GLY	2.2
26	BA	2146	G	2.2
26	BA	2187	G	2.2
48	BZ	172	ALA	2.2
7	AG	156	TRP	2.2
1	AA	1041	A	2.2
44	DV	66	ARG	2.2
1	CA	978	U	2.2
1	CA	922	G	2.2
23	AW	65	G	2.2
26	BA	1217	G	2.2
26	BA	2805	G	2.2
1	AA	76	C	2.2
26	BA	2150	C	2.2
2	CB	31	TYR	2.2
28	BC	123	ALA	2.2
1	AA	1040	U	2.2
4	AD	26	CYS	2.2
26	BA	2156	A	2.2
28	BC	64	LEU	2.2
10	CJ	5	ARG	2.2
1	AA	1002	G	2.2
9	CI	114	TYR	2.2
26	BA	1152	G	2.2
31	DF	12	LEU	2.2
36	BN	8	GLN	2.2
1	AA	202	U	2.2
13	CM	7	VAL	2.2
1	AA	1039	C	2.2

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Mol	Chain	Res	Type	RSRZ
26	DA	302	C	2.2
41	DS	32	LEU	2.2
10	CJ	92	THR	2.2
12	AL	28	LYS	2.2
27	DB	67	G	2.2
30	DE	76	ARG	2.2
47	DY	2	ARG	2.2
2	AB	101	MET	2.2
2	CB	229	VAL	2.2
2	CB	38	GLY	2.2
31	BF	21	ALA	2.2
48	BZ	62	PRO	2.2
58	D9	15	LYS	2.2
2	CB	37	ASN	2.2
2	CB	67	THR	2.2
57	D8	48	PHE	2.2
2	CB	35	GLU	2.2
3	CC	86	VAL	2.2
33	DH	15	VAL	2.2
33	DH	158	HIS	2.2
26	DA	2804	G	2.2
26	BA	2139	U	2.2
28	BC	52	ARG	2.2
28	BC	193	ALA	2.2
31	DF	24	LEU	2.2
48	DZ	153	SER	2.2
10	AJ	83	GLU	2.2
1	CA	1124	C	2.2
2	AB	130	ARG	2.2
3	AC	126	ARG	2.2
19	CS	25	LYS	2.2
28	BC	195	ALA	2.2
1	CA	1015	G	2.2
2	CB	152	PHE	2.2
16	AP	80	PHE	2.2
26	DA	217	A	2.2
33	DH	95	ARG	2.2
2	AB	123	ALA	2.1
28	BC	143	ALA	2.1
35	BJ	27	ALA	2.1
35	DJ	131	ALA	2.1
12	CL	73	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
24	CY	6	G	2.1
24	CY	43	G	2.1
26	DA	2777	A	2.1
28	BC	202	ALA	2.1
1	CA	958	C	2.1
24	CY	28	C	2.1
27	DB	3	C	2.1
10	CJ	12	ASP	2.1
16	AP	68	ASP	2.1
48	DZ	157	LEU	2.1
3	CC	95	THR	2.1
9	CI	82	ALA	2.1
28	BC	167	ALA	2.1
29	DD	2	ALA	2.1
35	BJ	82	ALA	2.1
60	DC	202	ALA	2.1
22	CV	47	G	2.1
26	BA	944	A	2.1
31	DF	128	ALA	2.1
33	DH	96	ALA	2.1
47	BY	88	LYS	2.1
48	DZ	127	LYS	2.1
2	AB	99	GLY	2.1
26	BA	2174	G	2.1
30	DE	1	MET	2.1
10	CJ	80	LYS	2.1
35	DJ	94	ALA	2.1
19	CS	30	LEU	2.1
48	DZ	167	PRO	2.1
4	AD	134	ASP	2.1
12	CL	51	ALA	2.1
26	BA	2178	G	2.1
26	BA	943	C	2.1
33	BH	45	VAL	2.1
7	CG	130	GLY	2.1
9	CI	127	LYS	2.1
48	DZ	125	LEU	2.1
12	AL	116	SER	2.1
28	BC	24	GLU	2.1
2	CB	227	GLY	2.1
24	AY	4	G	2.1
48	BZ	165	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
52	D3	58	VAL	2.1
33	DH	66	GLY	2.1
1	CA	1267	A	2.1
24	CY	37	A	2.1
36	DN	45	ASN	2.1
1	CA	1107	G	2.1
1	CA	1204	G	2.1
9	AI	21	PRO	2.1
32	DG	32	PRO	2.1
9	AI	128	ARG	2.1
52	D3	56	VAL	2.1
19	CS	13	ASP	2.1
42	DT	1	MET	2.1
48	DZ	98	MET	2.1
26	DA	2143	U	2.1
24	AY	71	A	2.1
38	BP	110	TYR	2.1
48	DZ	31	ARG	2.1
48	DZ	162	GLU	2.1
2	CB	192	SER	2.1
26	DA	2413	C	2.1
1	CA	1265	G	2.1
34	BI	121	LYS	2.1
23	AW	66	U	2.1
60	DC	140	ALA	2.1
1	CA	983	A	2.1
13	AM	96	LEU	2.1
34	DI	72	LEU	2.1
26	BA	2167	C	2.1
10	AJ	22	LYS	2.0
13	CM	94	ARG	2.0
23	AW	6	G	2.0
24	AY	50	G	2.0
26	DA	2141	G	2.0
2	CB	239	VAL	2.0
35	BJ	91	ALA	2.0
36	DN	46	VAL	2.0
48	BZ	128	VAL	2.0
60	DC	108	ALA	2.0
50	B1	82	LEU	2.0
3	CC	62	ASP	2.0
21	CU	14	TRP	2.0

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Mol	Chain	Res	Type	RSRZ
48	DZ	4	ARG	2.0
13	AM	32	GLU	2.0
19	CS	27	GLU	2.0
23	AW	44	G	2.0
2	CB	36	ARG	2.0
15	AO	88	ARG	2.0
3	CC	105	GLU	2.0
19	AS	12	ASP	2.0
28	BC	192	ALA	2.0
28	BC	196	ALA	2.0
33	DH	83	TYR	2.0
44	DV	96	ILE	2.0
5	CE	6	PHE	2.0
10	CJ	43	ARG	2.0
14	CN	12	ARG	2.0
26	BA	2210	U	2.0
1	CA	1253	G	2.0
13	AM	16	ASP	2.0
10	AJ	71	LEU	2.0
35	BJ	92	ALA	2.0
1	AA	487	A	2.0
24	CY	5	A	2.0
1	AA	848	C	2.0
26	BA	938	C	2.0
19	CS	64	GLU	2.0
26	BA	2143	U	2.0
9	AI	120	ARG	2.0
60	DC	144	ALA	2.0
23	CW	57	G	2.0
26	DA	976	G	2.0
26	DA	2125	G	2.0
10	CJ	87	THR	2.0
23	CW	58	A	2.0
19	AS	28	LYS	2.0
26	DA	2160	C	2.0
13	CM	98	VAL	2.0
58	D9	9	ARG	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum,

median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
25	PSU	AX	19	20/21	0.93	0.15	83,95,104,110	0

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.