Full wwPDB X-ray Structure Validation Report (i)

Mar 6, 2026 – 02:15 AM UTC

PDB ID	:	6C5L / pdb_00006c5l
Title	:	Conformation of methylated GGQ in the Peptidyl Transferase Center during translation termination (T. thermophilus)
Authors	:	Zeng, F.; Jin, H.
Deposited on	:	2018-01-16
Resolution	:	3.20 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:

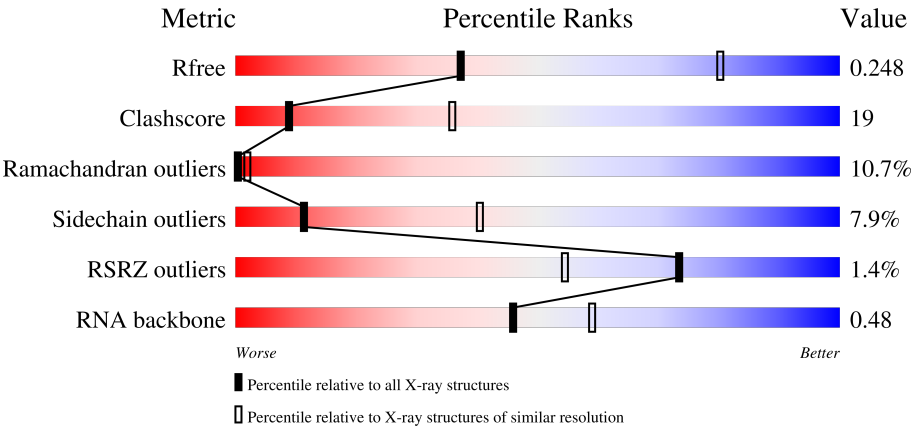
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

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 3.20 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}	180053	1466 (3.20-3.20)
Clashscore	190562	1573 (3.20-3.20)
Ramachandran outliers	187476	1548 (3.20-3.20)
Sidechain outliers	187428	1547 (3.20-3.20)
RSRZ outliers	180081	1466 (3.20-3.20)
RNA backbone	3983	1222 (3.50-2.90)

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	1522	39% 49% 11%
1	CA	1522	38% 50% 11%
2	AB	256	34% 47% 10% 8%
2	CB	256	34% 48% 9% 8%

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Mol	Chain	Length	Quality of chain
3	AC	239	38% 38% 10% 13%
3	CC	239	38% 38% 10% 13%
4	AD	209	45% 43% 10%
4	CD	209	7% 47% 40% 11%
5	AE	162	52% 36% 7%
5	CE	162	52% 38% 7%
6	AF	101	41% 54% 5%
6	CF	101	46% 49% 6%
7	AG	156	65% 31%
7	CG	156	60% 37%
8	AH	138	57% 38%
8	CH	138	49% 46% 5%
9	AI	128	8% 40% 51% 8%
9	CI	128	3% 44% 47% 9%
10	AJ	105	35% 55% 6%
10	CJ	105	31% 55% 8% 6%
11	AK	129	60% 29% 8%
11	CK	129	61% 28% 8%
12	AL	132	39% 44% 10% 5%
12	CL	132	42% 39% 12% 5%
13	AM	126	6% 28% 63% 8%
13	CM	126	5% 41% 47% 11%
14	AN	61	5% 49% 41% 8%
14	CN	61	3% 46% 39% 13%
15	AO	89	60% 35%

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Mol	Chain	Length	Quality of chain
15	CO	89	2% 57% 40%
16	AP	88	3% 38% 53% 5% 5%
16	CP	88	11% 36% 55% 5% 5%
17	AQ	105	2% 52% 39% 5%
17	CQ	105	4% 50% 41% 5% 5%
18	AR	88	42% 33% 5% 20%
18	CR	88	43% 32% 5% 20%
19	AS	93	8% 39% 33% 12% 15%
19	CS	93	33% 40% 10% 15%
20	AT	106	8% 58% 31% 7%
20	CT	106	8% 66% 23% 7%
21	AU	27	15% 44% 48% 7%
21	CU	27	7% 33% 56% 7%
22	AV	76	49% 41% 11%
22	AW	76	26% 54% 18%
22	CV	76	46% 45% 9%
22	CW	76	26% 51% 21%
23	AX	25	8% 12% 16% 68%
23	CX	25	4% 12% 12% 8% 68%
24	AY	357	3% 62% 33%
24	CY	357	3% 53% 42%
25	B0	85	6% 58% 38%
25	D0	85	6% 67% 28%
26	B1	98	40% 46% 6%
26	D1	98	49% 39% 7%

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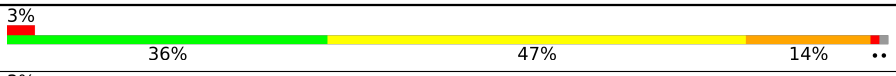
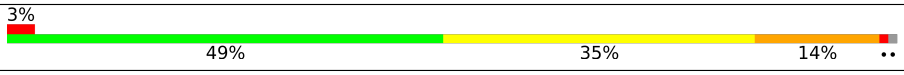
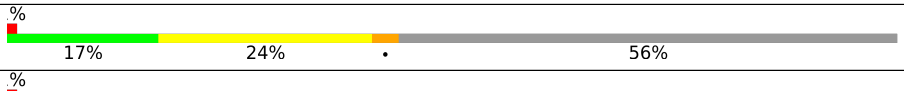
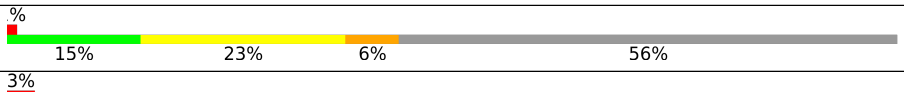
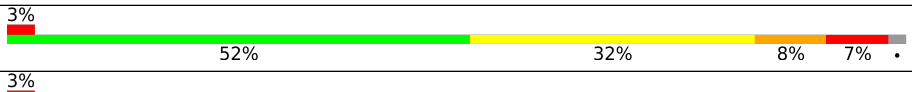
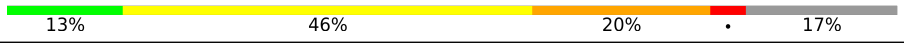
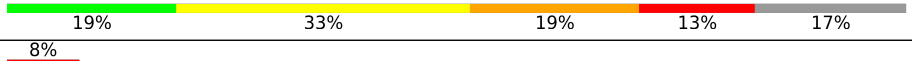
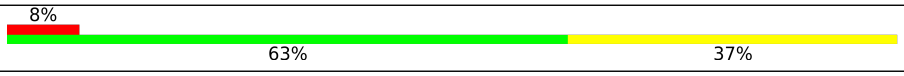
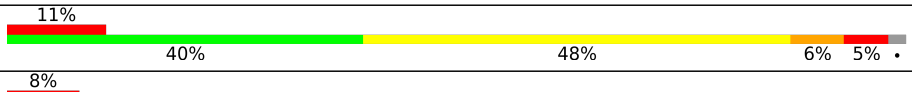
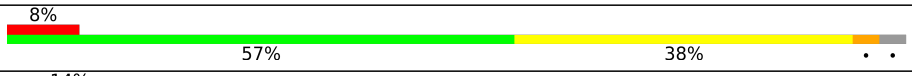
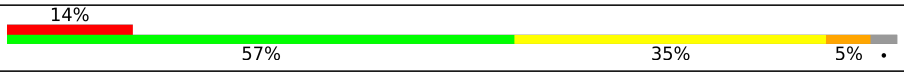
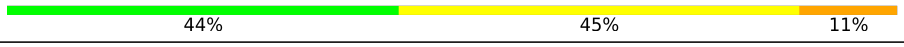
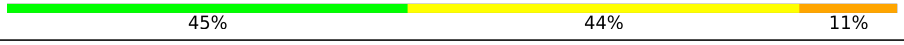
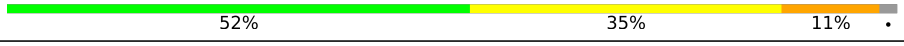
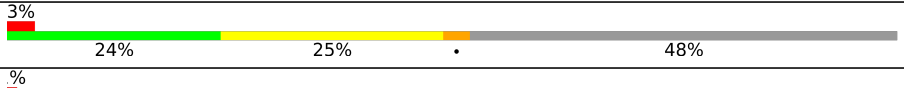
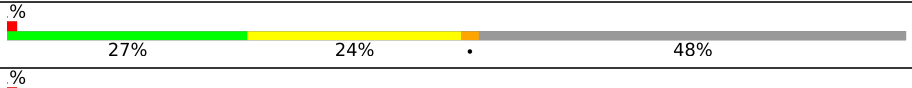
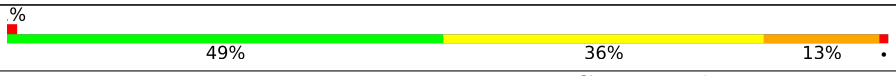
Mol	Chain	Length	Quality of chain
27	B2	72	
27	D2	72	
28	B3	60	
28	D3	60	
29	B4	71	
29	D4	71	
30	B5	60	
30	D5	60	
31	B6	54	
31	D6	54	
32	B7	49	
32	D7	49	
33	B8	65	
33	D8	65	
34	B9	37	
34	D9	37	
35	BA	2915	
35	DA	2915	
36	BB	122	
36	DB	122	
37	BC	229	
37	DC	229	
38	BD	276	
38	DD	276	
39	BE	206	

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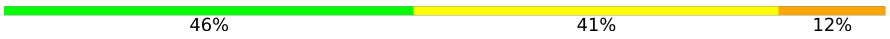
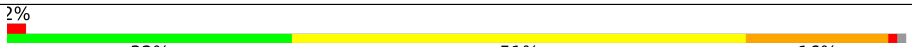
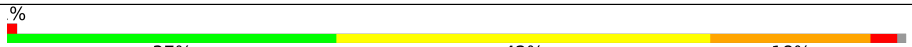
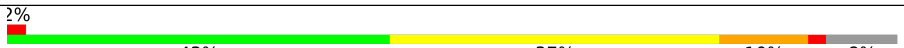
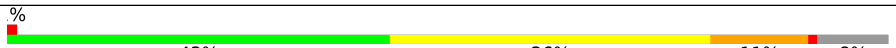
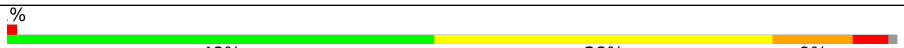
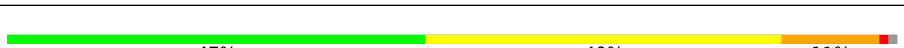
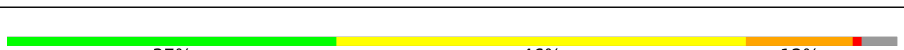
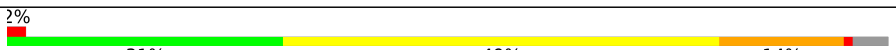
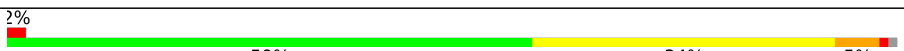
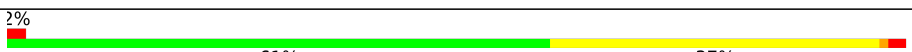
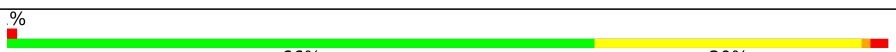
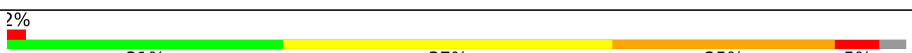
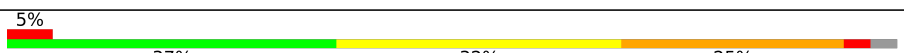
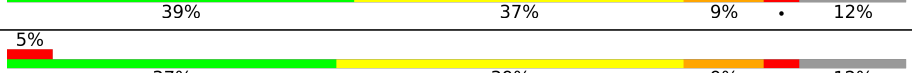
Mol	Chain	Length	Quality of chain
39	DE	206	
40	BF	210	
40	DF	210	
41	BG	182	
41	DG	182	
42	BH	180	
42	DH	180	
43	BI	148	
43	DI	148	
44	BJ	130	
44	DJ	130	
45	BK	147	
45	DK	147	
46	BN	140	
46	DN	140	
47	BO	122	
47	DO	122	
48	BP	150	
48	DP	150	
49	BQ	141	
49	DQ	141	
50	BR	118	
50	DR	118	
51	BS	112	
51	DS	112	

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Mol	Chain	Length	Quality of chain
52	BT	146	3% 36% 39% 16% 5%
52	DT	146	3% 30% 45% 16% 5%
53	BU	118	3% 60% 32% 7%
53	DU	118	65% 25% 9%
54	BV	101	2% 47% 33% 17%
54	DV	101	% 43% 39% 15%
55	BW	113	% 64% 27% 8%
55	DW	113	% 56% 36% 7%
56	BX	96	58% 32% 6%
56	DX	96	% 57% 33% 6%
57	BY	110	12% 18% 50% 16% 7% 8%
57	DY	110	5% 25% 43% 17% 7% 8%
58	BZ	206	34% 44% 11% 10%
58	DZ	206	42% 37% 9% 10%

2 Entry composition (i)

There are 61 unique types of molecules in this entry. The entry contains 304459 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 rRNA.

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	235	Total	C	N	O	S	0	0	1
			1901	1213	342	341	5			
2	CB	235	Total	C	N	O	S	0	0	1
			1901	1213	342	341	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	207	Total	C	N	O	S	0	0	1
			1613	1016	315	281	1			
3	CC	207	Total	C	N	O	S	0	0	1
			1613	1016	315	281	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	151	Total	C	N	O	S	0	0	1
			1147	724	218	201	4			
5	CE	151	Total	C	N	O	S	0	0	1
			1147	724	218	201	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			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AJ	99	Total	C	N	O	S	0	0	1
			795	499	157	138	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CJ	99	Total	C	N	O	S	0	0	1
			795	499	157	138	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	125	Total	C	N	O	S	0	0	1
			971	611	196	163	1			
12	CL	125	Total	C	N	O	S	0	0	1
			971	611	196	163	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	125	Total	C	N	O	S	0	0	1
			988	611	206	169	2			
13	CM	125	Total	C	N	O	S	0	0	1
			988	611	206	169	2			

- Molecule 14 is a protein called 30S ribosomal protein S14 type Z.

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	84	Total	C	N	O	S	0	0	1
			701	443	140	117	1			
16	CP	84	Total	C	N	O	S	0	0	1
			701	443	140	117	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	100	Total	C	N	O	S	0	0	1
			824	528	152	142	2			
17	CQ	100	Total	C	N	O	S	0	0	1
			824	528	152	142	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	79	Total	C	N	O	S	0	0	1
			630	403	115	110	2			
19	CS	79	Total	C	N	O	S	0	0	1
			630	403	115	110	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			
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	25	Total	C	N	O	0	0	1
			209	128	51	30			
21	CU	25	Total	C	N	O	0	0	1
			209	128	51	30			

- Molecule 22 is a RNA chain called E-site tRNA PHE OR P-site tRNA PHE (unmodified bases).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AV	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
22	AW	75	Total	C	N	O	P	0	0	0
			1597	713	285	525	74			
22	CV	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
22	CW	75	Total	C	N	O	P	0	0	0
			1597	713	285	525	74			

- Molecule 23 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AX	8	Total	C	N	O	P	0	0	0
			166	76	29	54	7			
23	CX	8	Total	C	N	O	P	0	0	0
			166	76	29	54	7			

- Molecule 24 is a protein called Peptide chain release factor 2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	AY	351	Total	C	N	O	S	0	0	0
			2802	1753	506	535	8			
24	CY	351	Total	C	N	O	S	0	0	0
			2802	1753	506	535	8			

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AY	0	HIS	-	expression tag	UNP F6DD48
AY	1	HIS	-	expression tag	UNP F6DD48
AY	2	HIS	-	expression tag	UNP F6DD48
AY	3	HIS	-	expression tag	UNP F6DD48
AY	4	HIS	-	expression tag	UNP F6DD48
AY	5	HIS	-	expression tag	UNP F6DD48

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Chain	Residue	Modelled	Actual	Comment	Reference
CY	0	HIS	-	expression tag	UNP F6DD48
CY	1	HIS	-	expression tag	UNP F6DD48
CY	2	HIS	-	expression tag	UNP F6DD48
CY	3	HIS	-	expression tag	UNP F6DD48
CY	4	HIS	-	expression tag	UNP F6DD48
CY	5	HIS	-	expression tag	UNP F6DD48

- Molecule 25 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	B0	83	Total	C	N	O	S	0	0	0
			657	407	139	110	1			
25	D0	83	Total	C	N	O	S	0	0	0
			657	407	139	110	1			

- Molecule 26 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	B1	94	Total	C	N	O	S	0	0	1
			732	460	146	125	1			
26	D1	94	Total	C	N	O	S	0	0	1
			732	460	146	125	1			

- Molecule 27 is a protein called 50S ribosomal protein L29.

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

- Molecule 28 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	B3	60	Total	C	N	O	S	0	0	1
			468	298	91	78	1			
28	D3	60	Total	C	N	O	S	0	0	1
			468	298	91	78	1			

- Molecule 29 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	B4	31	Total	C	N	O	S	0	0	1
			226	142	37	43	4			
29	D4	31	Total	C	N	O	S	0	0	1
			226	142	37	43	4			

- Molecule 30 is a protein called 50S ribosomal protein L32.

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

- Molecule 31 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	B6	45	Total	C	N	O	S	0	0	1
			381	235	78	64	4			
31	D6	45	Total	C	N	O	S	0	0	1
			381	235	78	64	4			

- Molecule 32 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	B7	49	Total	C	N	O	S	0	0	1
			419	257	105	55	2			
32	D7	49	Total	C	N	O	S	0	0	1
			419	257	105	55	2			

- Molecule 33 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	B8	64	Total	C	N	O	S	0	0	1
			508	326	102	78	2			
33	D8	64	Total	C	N	O	S	0	0	1
			508	326	102	78	2			

- Molecule 34 is a protein called 50S ribosomal protein L36.

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

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

- Molecule 35 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BA	2901	Total	C	N	O	P	0	0	0
			62474	27806	11681	20087	2900			
35	DA	2901	Total	C	N	O	P	0	0	0
			62474	27806	11681	20087	2900			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BA	1227	G	UNK	conflict	GB 37223181
DA	1227	G	UNK	conflict	GB 37223181

- Molecule 36 is a RNA chain called 5S rRNA.

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

- Molecule 37 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BC	120	Total	C	N	O	S	0	0	0
			937	590	174	172	1			
37	DC	120	Total	C	N	O	S	0	0	0
			937	590	174	172	1			

- Molecule 38 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BD	273	Total	C	N	O	S	0	0	0
			2120	1338	421	358	3			
38	DD	273	Total	C	N	O	S	0	0	0
			2120	1338	421	358	3			

- Molecule 39 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BE	205	Total	C	N	O	S	0	0	1
			1564	988	300	270	6			
39	DE	205	Total	C	N	O	S	0	0	1
			1564	988	300	270	6			

- Molecule 40 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BF	208	Total	C	N	O	S	0	0	1
			1624	1035	304	282	3			
40	DF	208	Total	C	N	O	S	0	0	1
			1624	1035	304	282	3			

- Molecule 41 is a protein called 50S ribosomal protein L5.

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

- Molecule 42 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BH	165	Total	C	N	O	S	0	0	1
			1248	788	234	225	1			
42	DH	165	Total	C	N	O	S	0	0	1
			1248	788	234	225	1			

- Molecule 43 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BI	146	Total	C	N	O	S	0	0	1
			1132	723	201	207	1			
43	DI	146	Total	C	N	O	S	0	0	1
			1132	723	201	207	1			

- Molecule 44 is a protein called 50S ribosomal protein L10.

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

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

- Molecule 45 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BK	141	Total 1038	C 661	N 184	O 187	S 6	0	0	1
45	DK	141	Total 1038	C 661	N 184	O 187	S 6	0	0	1

- Molecule 46 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BN	139	Total 1105	C 712	N 207	O 182	S 4	0	0	1
46	DN	139	Total 1105	C 712	N 207	O 182	S 4	0	0	1

- Molecule 47 is a protein called 50S ribosomal protein L14.

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

- Molecule 48 is a protein called 50S ribosomal protein L15.

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

- Molecule 49 is a protein called 50S ribosomal protein L16.

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

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

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

- Molecule 51 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
51	BS	99	Total	C	N	O	0	0	1
			771	486	155	130			
51	DS	99	Total	C	N	O	0	0	1
			771	486	155	130			

- Molecule 52 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	BT	138	Total	C	N	O	S	0	0	1
			1142	710	235	196	1			
52	DT	138	Total	C	N	O	S	0	0	1
			1142	710	235	196	1			

- Molecule 53 is a protein called 50S ribosomal protein L20.

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

- Molecule 54 is a protein called 50S ribosomal protein L21.

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

- Molecule 55 is a protein called 50S ribosomal protein L22.

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

- Molecule 56 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
56	BX	93	Total 726	C 471	N 132	O 123	0	0	1
56	DX	93	Total 726	C 471	N 132	O 123	0	0	1

- Molecule 57 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	BY	101	Total 776	C 500	N 149	O 123	S 4	0	0	1
57	DY	101	Total 776	C 500	N 149	O 123	S 4	0	0	1

- Molecule 58 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
58	BZ	185	Total 1468	C 936	N 262	O 268	S 2	0	0	1
58	DZ	185	Total 1468	C 936	N 262	O 268	S 2	0	0	1

- Molecule 59 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	AA	30	Total 30	Mg 30	0	0
59	B5	1	Total 1	Mg 1	0	0
59	BA	180	Total 180	Mg 180	0	0
59	BB	2	Total 2	Mg 2	0	0
59	BD	1	Total 1	Mg 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	BE	1	Total Mg 1 1	0	0
59	BF	1	Total Mg 1 1	0	0
59	BQ	1	Total Mg 1 1	0	0
59	BT	1	Total Mg 1 1	0	0
59	CA	26	Total Mg 26 26	0	0
59	D5	2	Total Mg 2 2	0	0
59	DA	221	Total Mg 221 221	0	0
59	DB	2	Total Mg 2 2	0	0
59	DD	2	Total Mg 2 2	0	0
59	DP	1	Total Mg 1 1	0	0
59	DU	1	Total Mg 1 1	0	0
59	DW	1	Total Mg 1 1	0	0

- Molecule 60 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	AD	1	Total Zn 1 1	0	0
60	AN	1	Total Zn 1 1	0	0
60	B9	1	Total Zn 1 1	0	0
60	CD	1	Total Zn 1 1	0	0
60	CN	1	Total Zn 1 1	0	0
60	D9	1	Total Zn 1 1	0	0

- Molecule 61 is water.

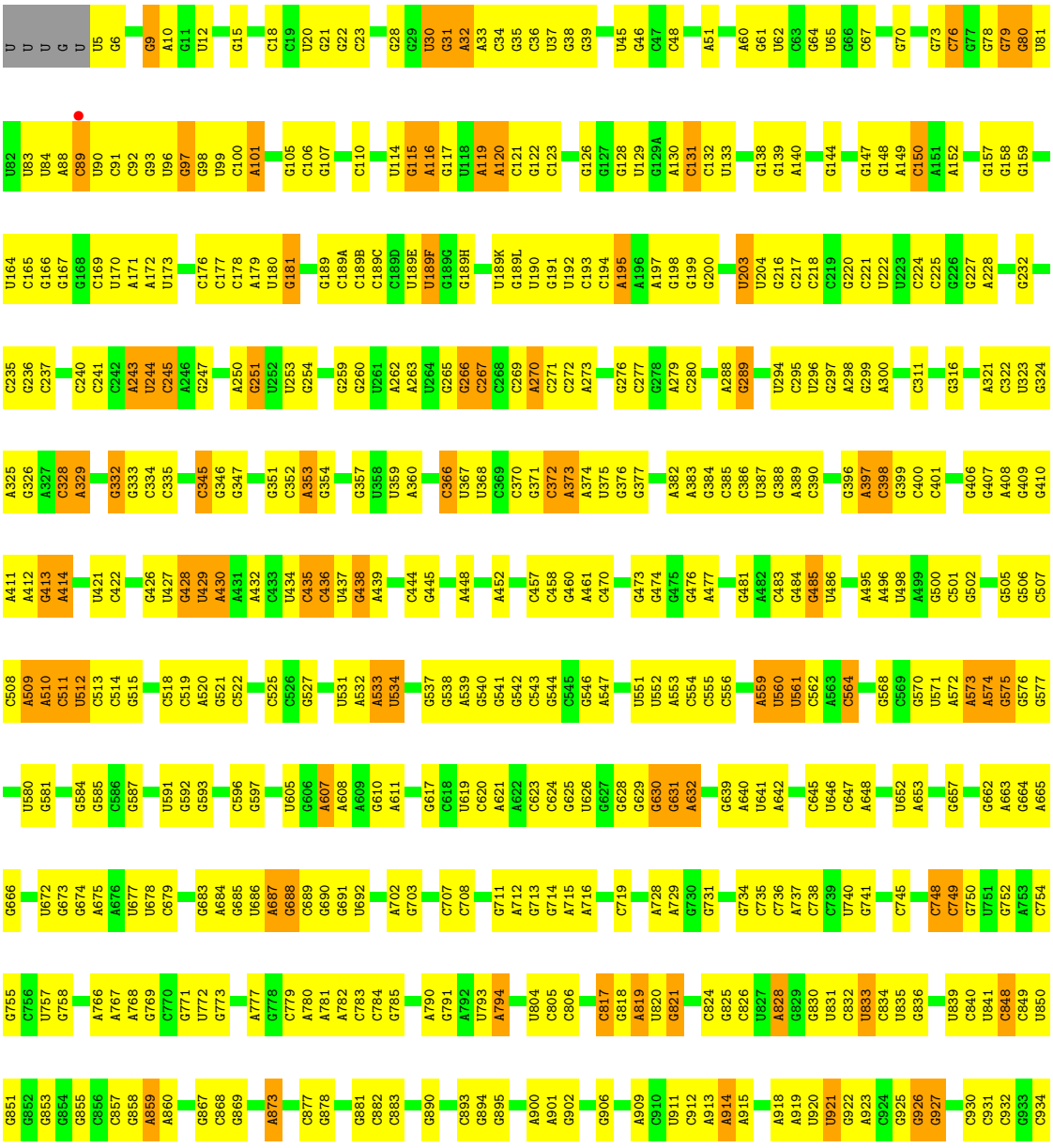
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	AA	2	Total O 2 2	0	0
61	BA	6	Total O 6 6	0	0
61	BE	1	Total O 1 1	0	0
61	DA	7	Total O 7 7	0	0
61	DE	1	Total O 1 1	0	0
61	DS	1	Total O 1 1	0	0
61	DZ	1	Total O 1 1	0	0

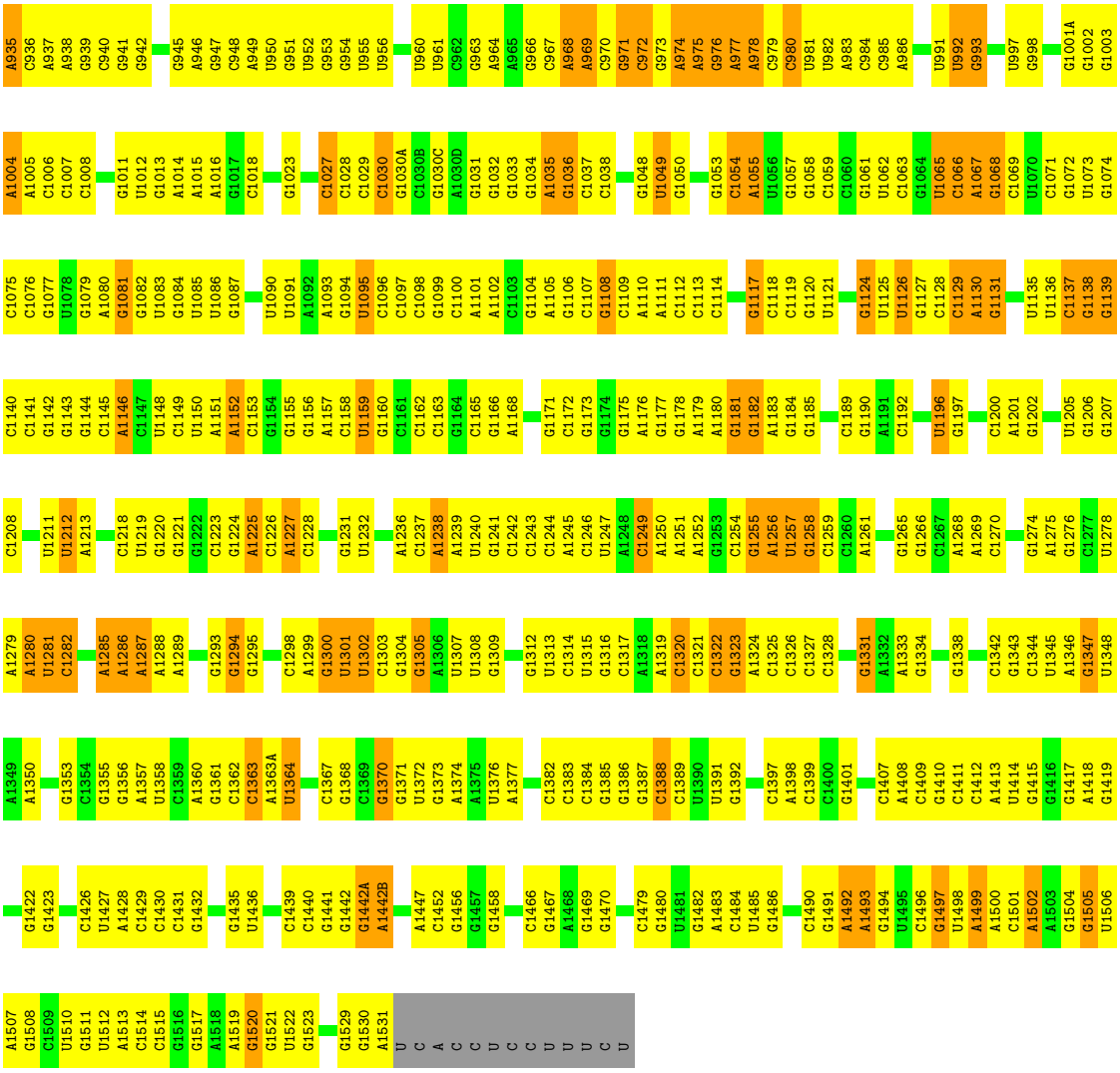
3 Residue-property plots (i)

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

- Molecule 1: 16S rRNA

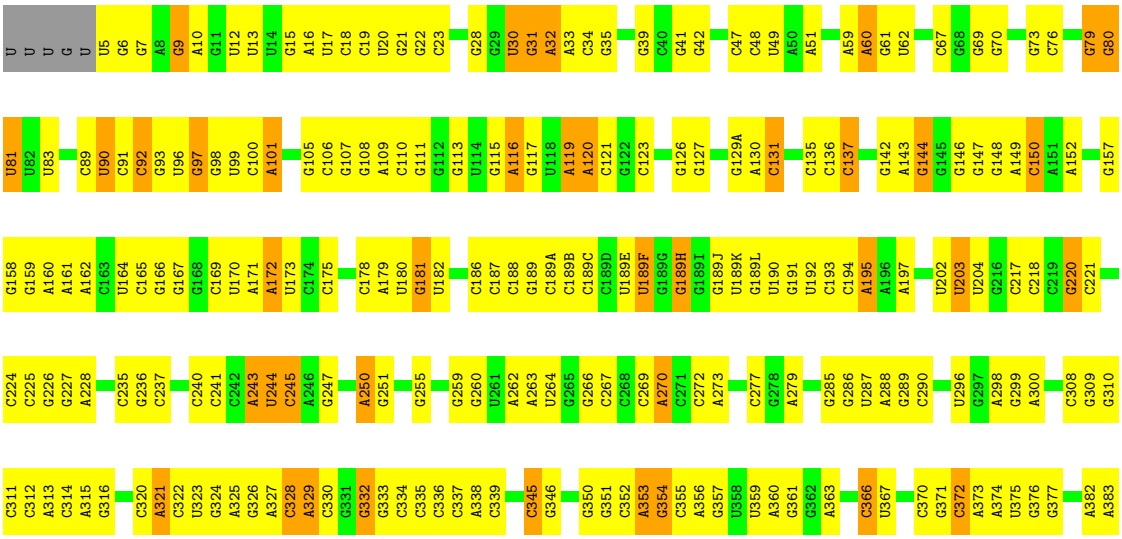
Chain AA:

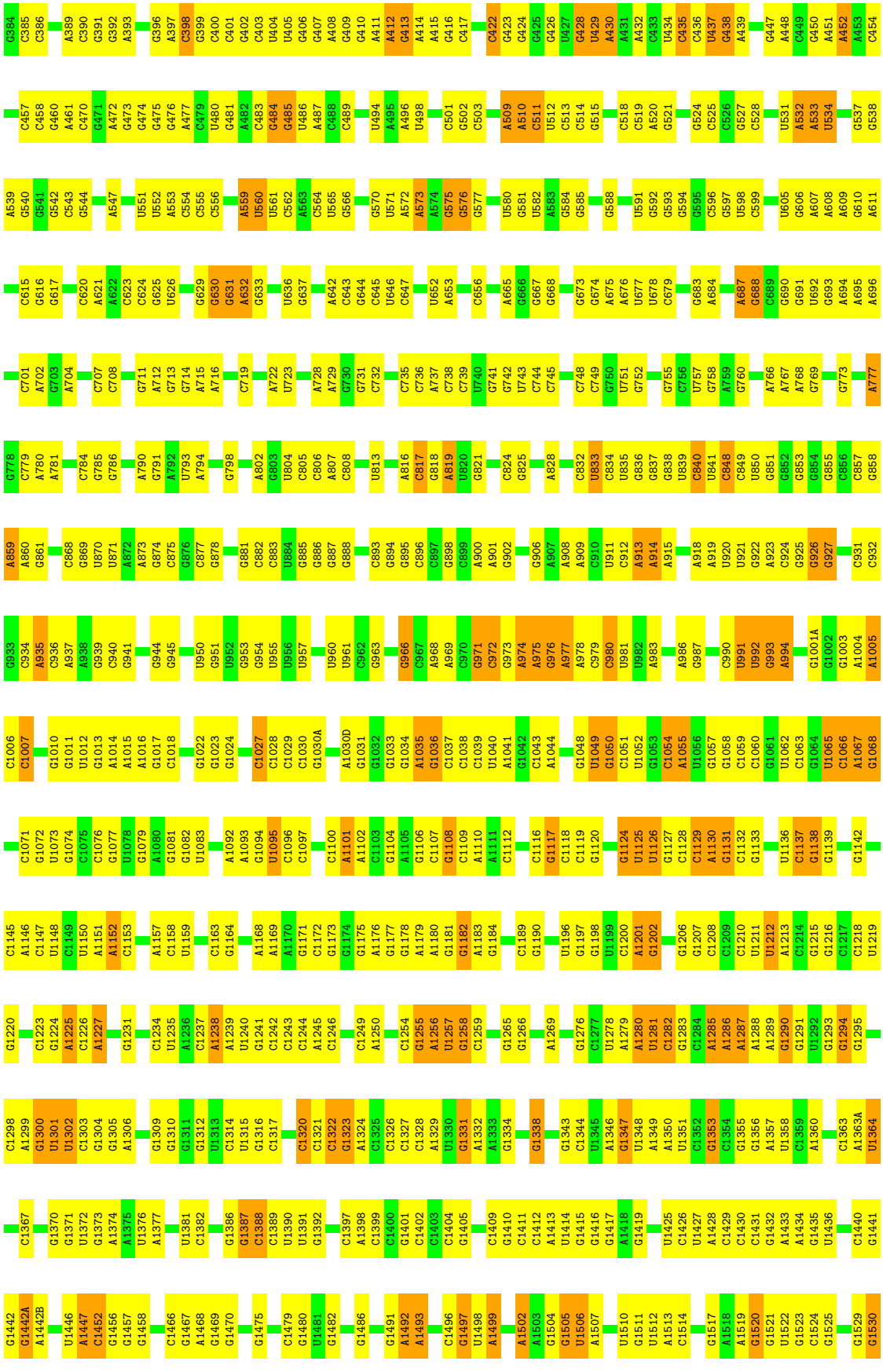




• Molecule 1: 16S rRNA

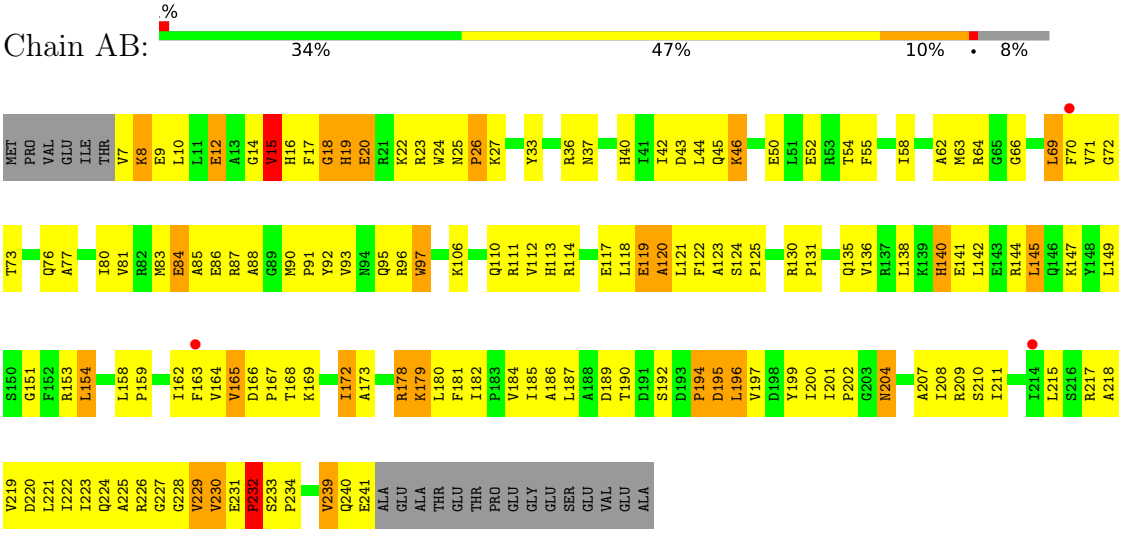
Chain CA:





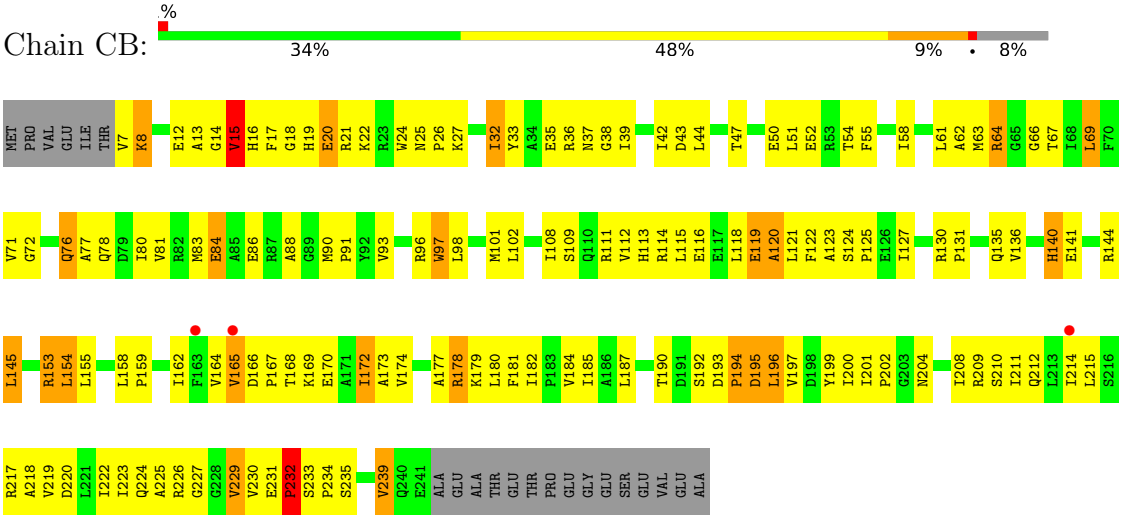
• Molecule 2: 30S ribosomal protein S2

Chain AB:



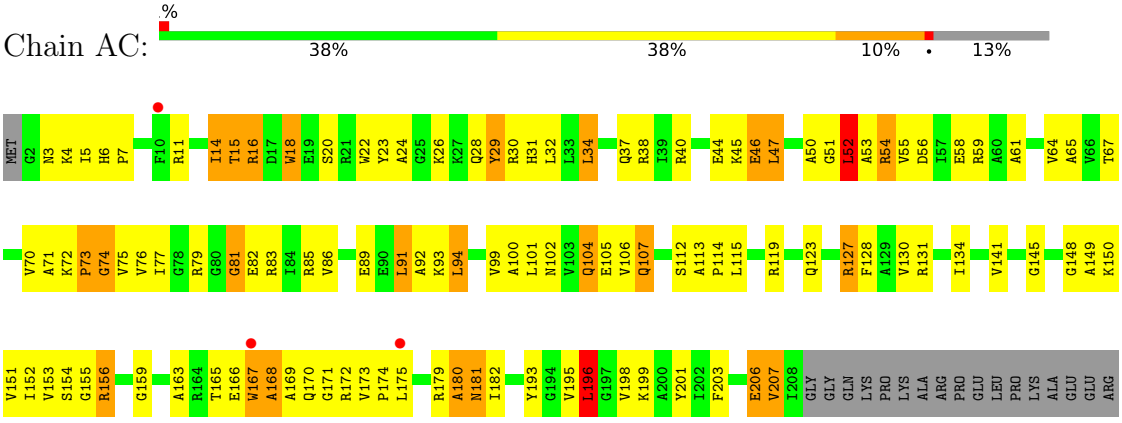
• Molecule 2: 30S ribosomal protein S2

Chain CB:

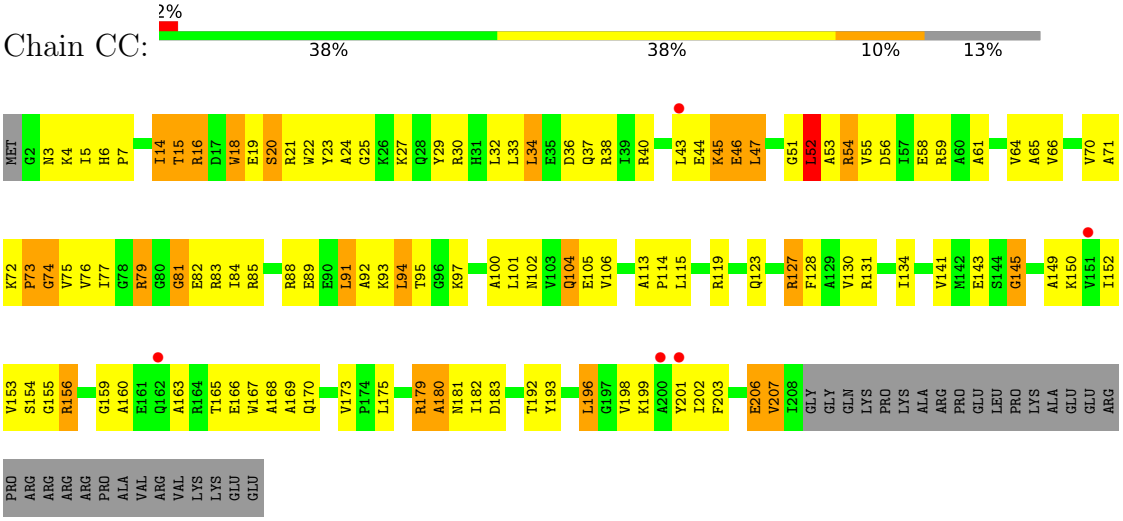


• Molecule 3: 30S ribosomal protein S3

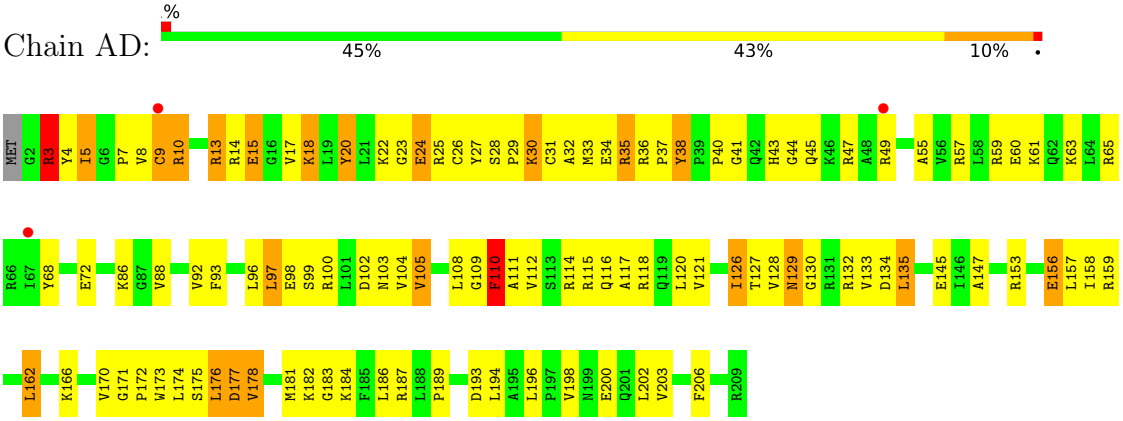
Chain AC:



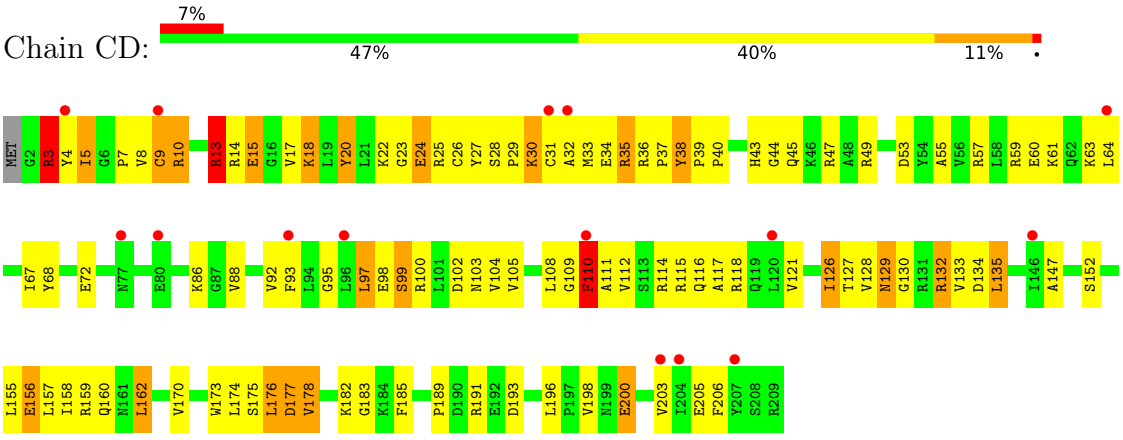
• Molecule 3: 30S ribosomal protein S3



• Molecule 4: 30S ribosomal protein S4

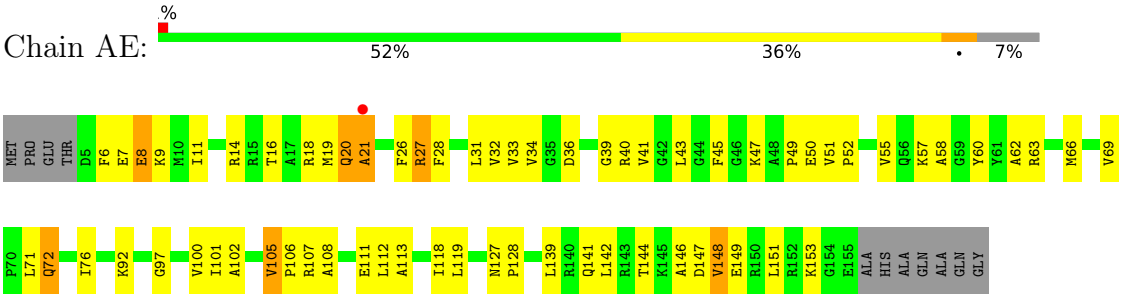


• Molecule 4: 30S ribosomal protein S4



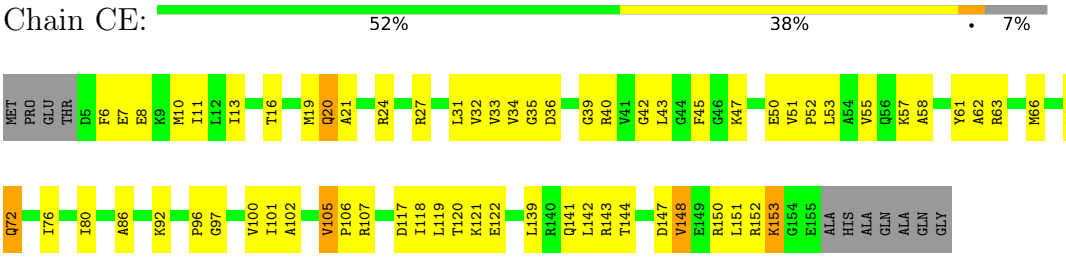
• Molecule 5: 30S ribosomal protein S5

Chain AE:



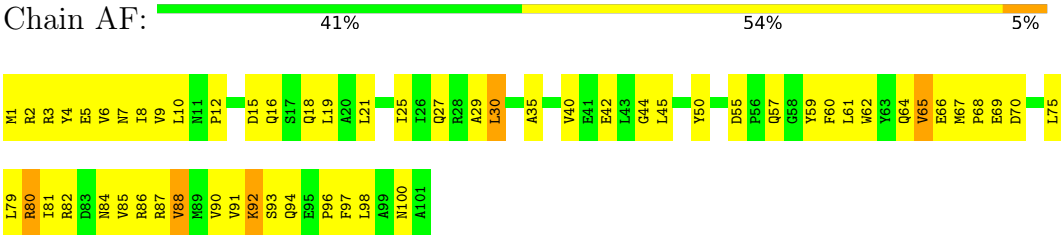
• Molecule 5: 30S ribosomal protein S5

Chain CE:



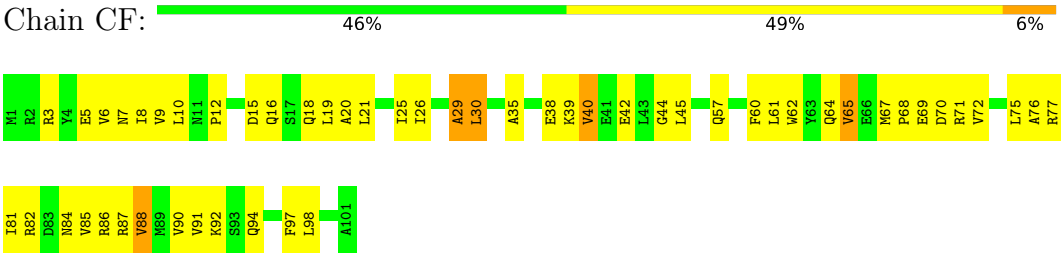
• Molecule 6: 30S ribosomal protein S6

Chain AF:



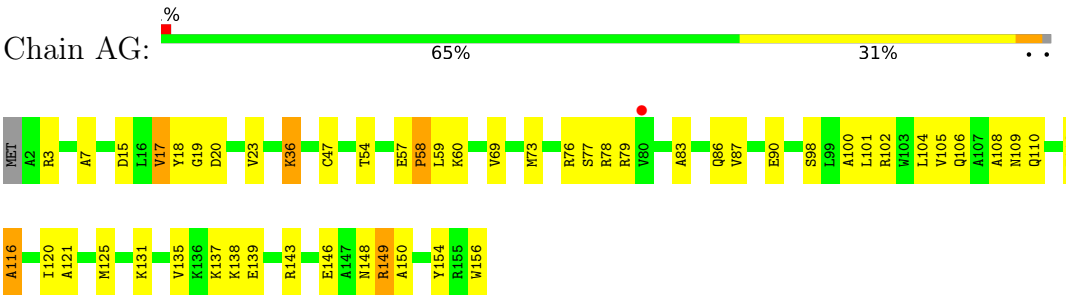
• Molecule 6: 30S ribosomal protein S6

Chain CF:



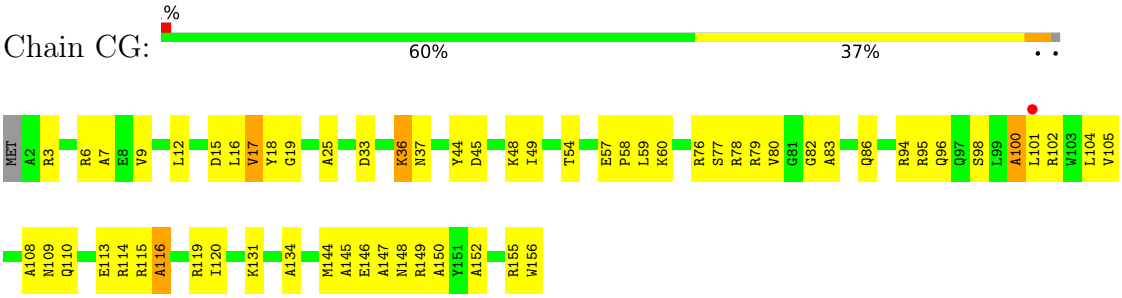
• Molecule 7: 30S ribosomal protein S7

Chain AG:



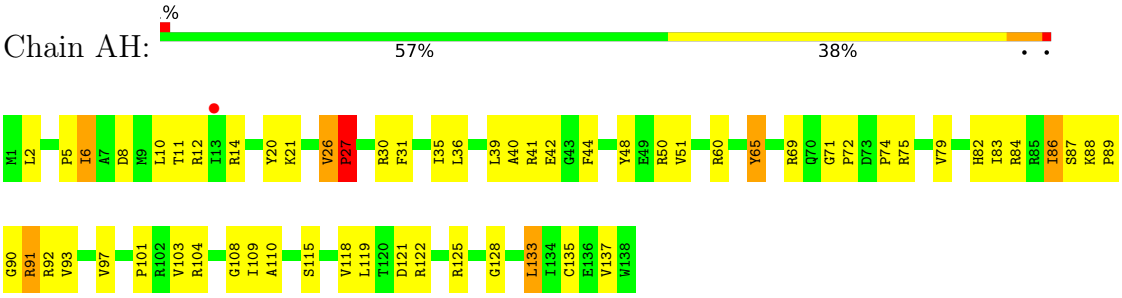
• Molecule 7: 30S ribosomal protein S7

Chain CG:



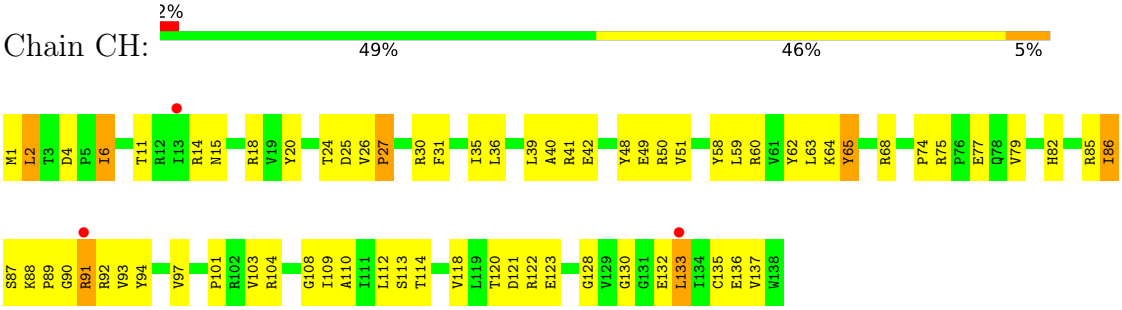
• Molecule 8: 30S ribosomal protein S8

Chain AH:



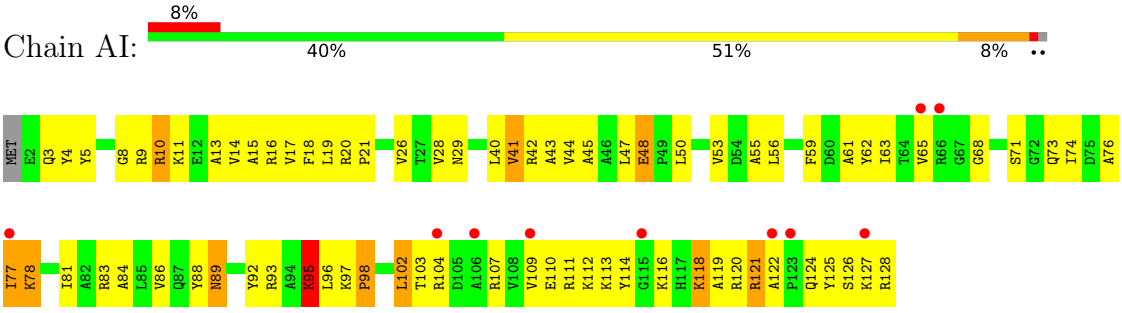
• Molecule 8: 30S ribosomal protein S8

Chain CH:



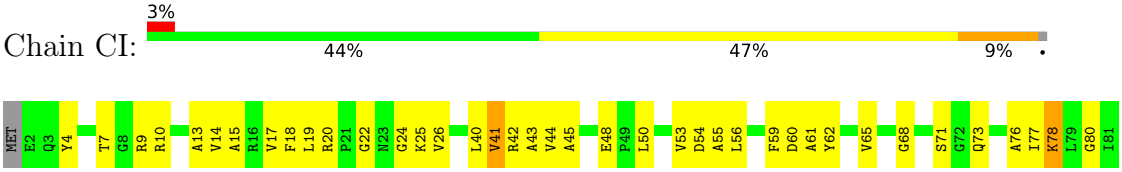
• Molecule 9: 30S ribosomal protein S9

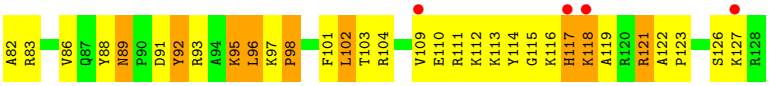
Chain AI:



• Molecule 9: 30S ribosomal protein S9

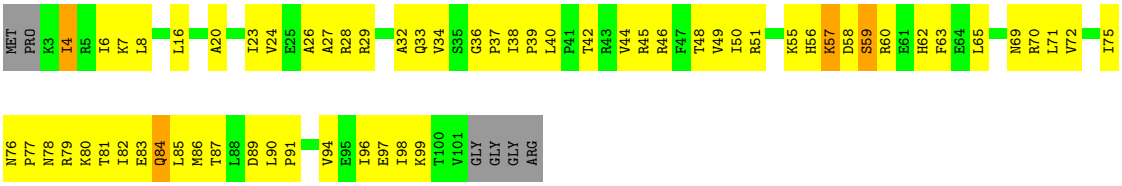
Chain CI:





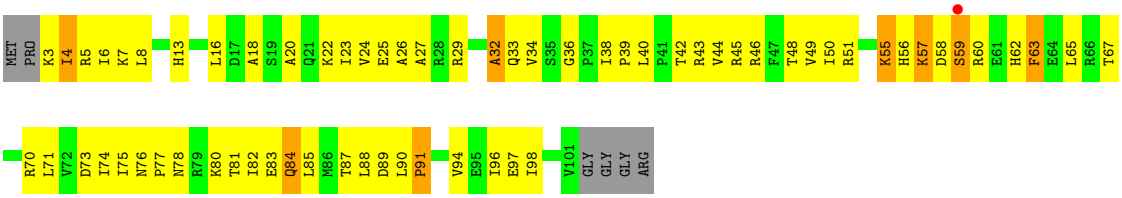
• Molecule 10: 30S ribosomal protein S10

Chain AJ:



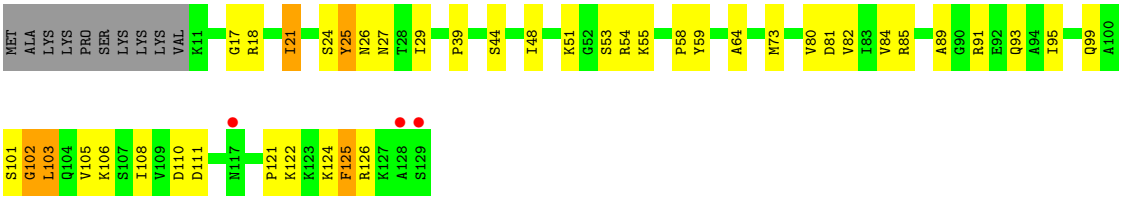
• Molecule 10: 30S ribosomal protein S10

Chain CJ:



• Molecule 11: 30S ribosomal protein S11

Chain AK:

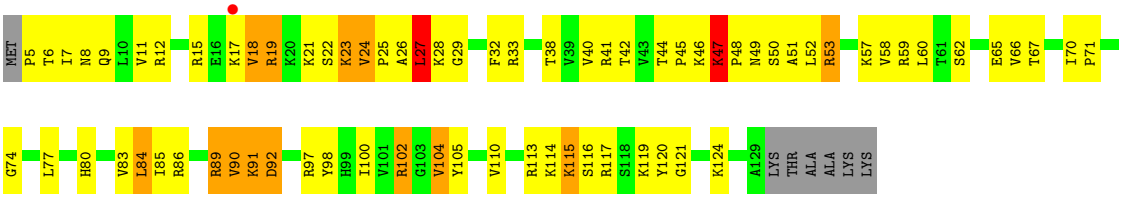


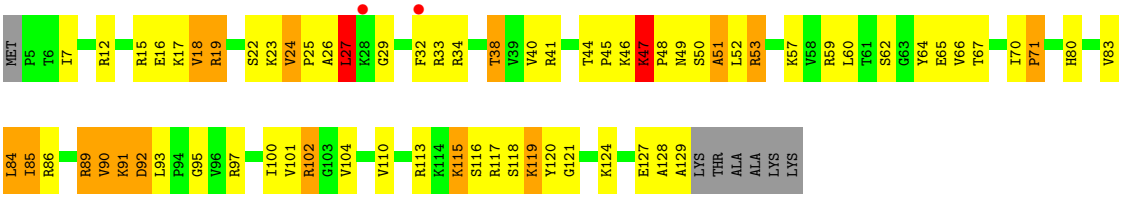
• Molecule 11: 30S ribosomal protein S11

Chain CK:

• Molecule 12: 30S ribosomal protein S12

Chain AL:



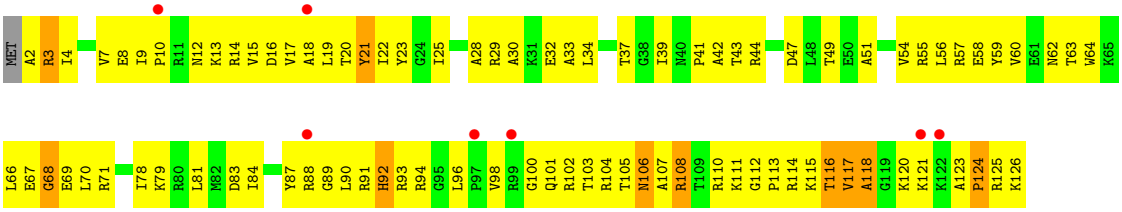


• Molecule 12: 30S ribosomal protein S12

Chain CL:

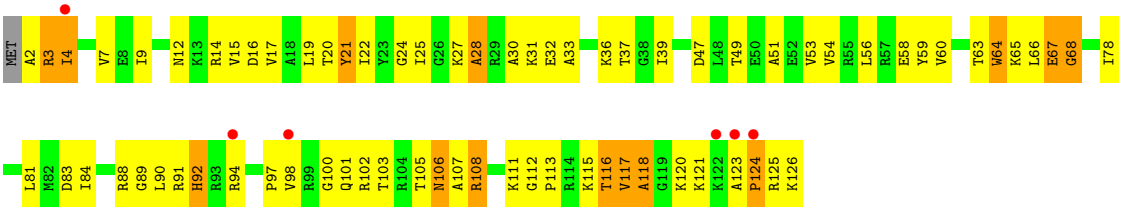
• Molecule 13: 30S ribosomal protein S13

Chain AM:



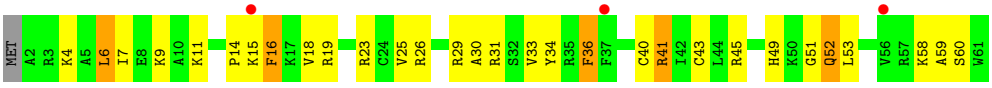
• Molecule 13: 30S ribosomal protein S13

Chain CM:



• Molecule 14: 30S ribosomal protein S14 type Z

Chain AN:



• Molecule 14: 30S ribosomal protein S14 type Z

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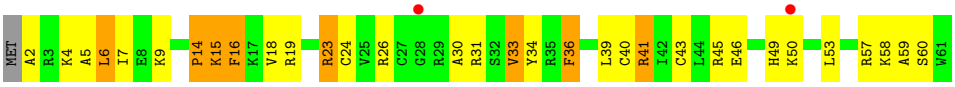
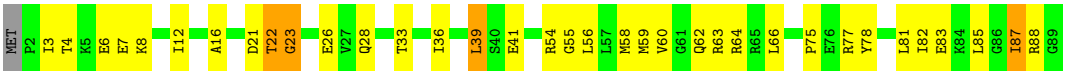


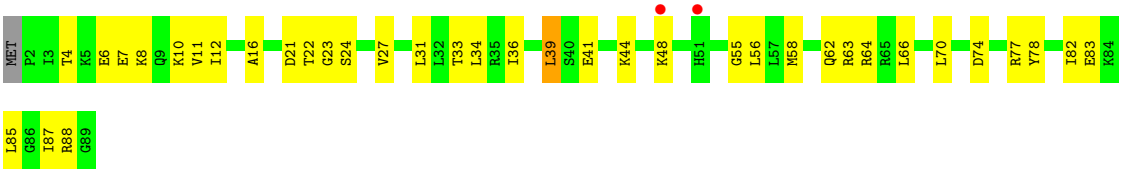
• Molecule 15: 30S ribosomal protein S15

Chain AO:



• Molecule 15: 30S ribosomal protein S15

Chain CO:

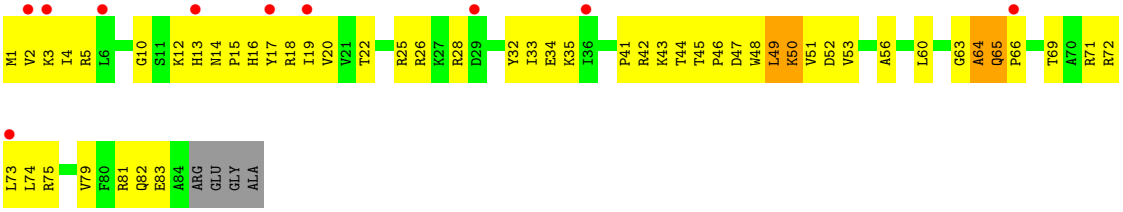


• Molecule 16: 30S ribosomal protein S16

Chain AP:

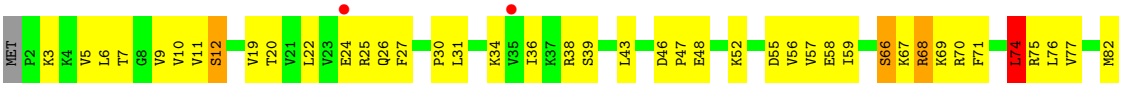
• Molecule 16: 30S ribosomal protein S16

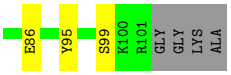
Chain CP:



• Molecule 17: 30S ribosomal protein S17

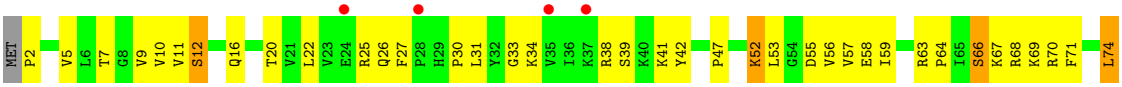
Chain AQ:





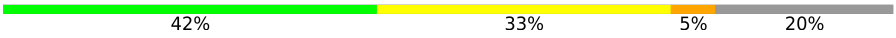
• Molecule 17: 30S ribosomal protein S17

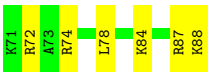
Chain CQ:



• Molecule 18: 30S ribosomal protein S18

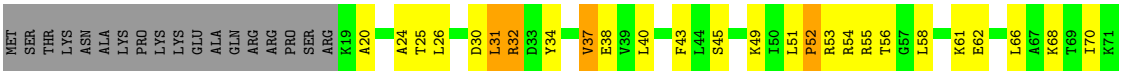
Chain AR:

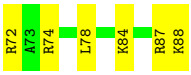




• Molecule 18: 30S ribosomal protein S18

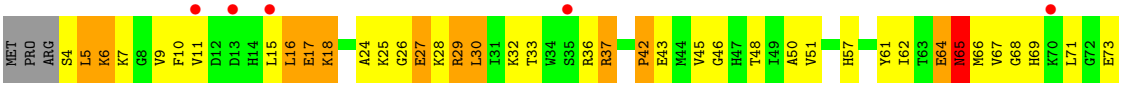
Chain CR:

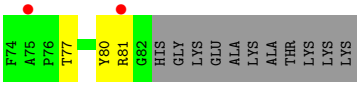




• Molecule 19: 30S ribosomal protein S19

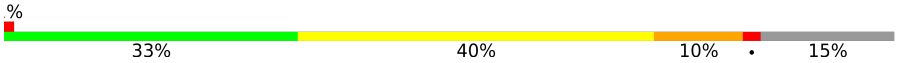
Chain AS:

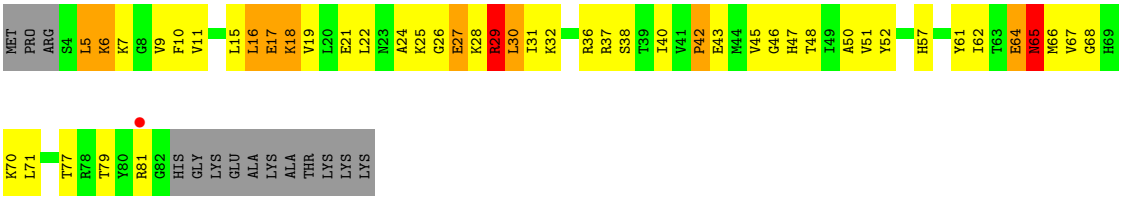




• Molecule 19: 30S ribosomal protein S19

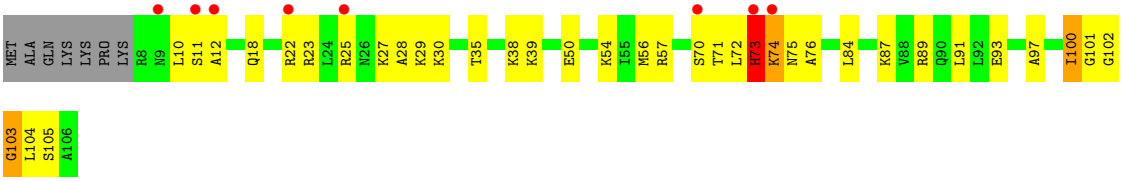
Chain CS:





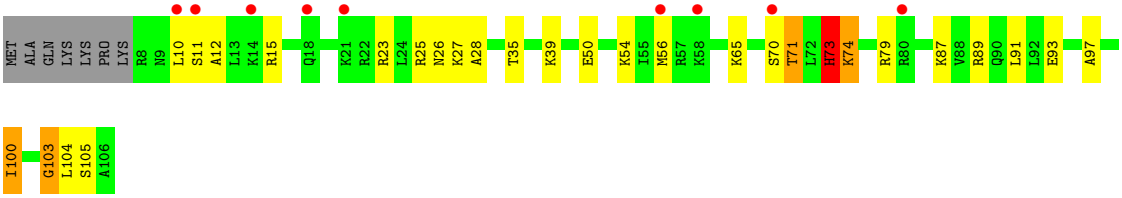
• Molecule 20: 30S ribosomal protein S20

Chain AT:



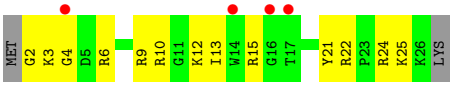
• Molecule 20: 30S ribosomal protein S20

Chain CT:



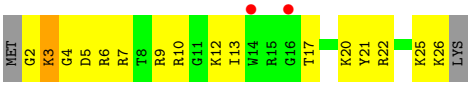
• Molecule 21: 30S ribosomal protein Thx

Chain AU:



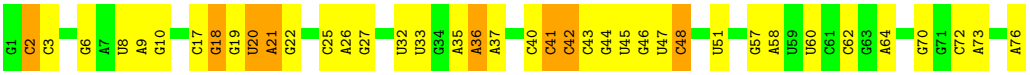
• Molecule 21: 30S ribosomal protein Thx

Chain CU:



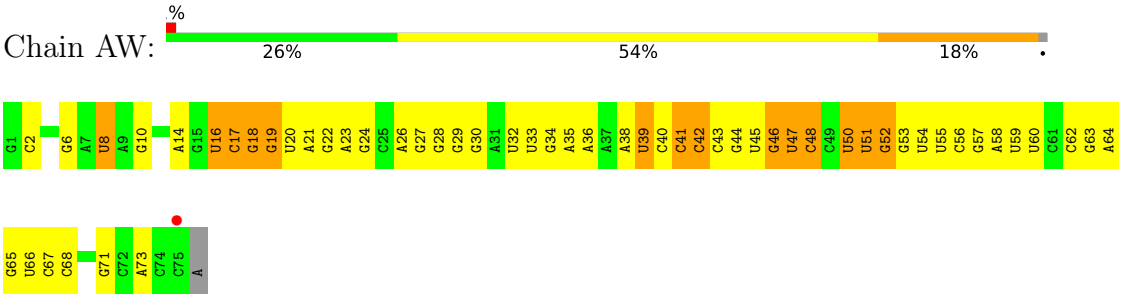
• Molecule 22: E-site tRNA PHE OR P-site tRNA PHE (unmodified bases)

Chain AV:



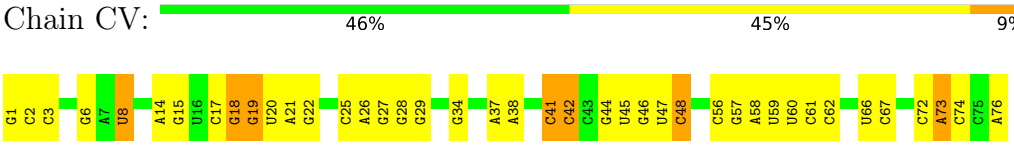
• Molecule 22: E-site tRNA PHE OR P-site tRNA PHE (unmodified bases)

Chain AW:



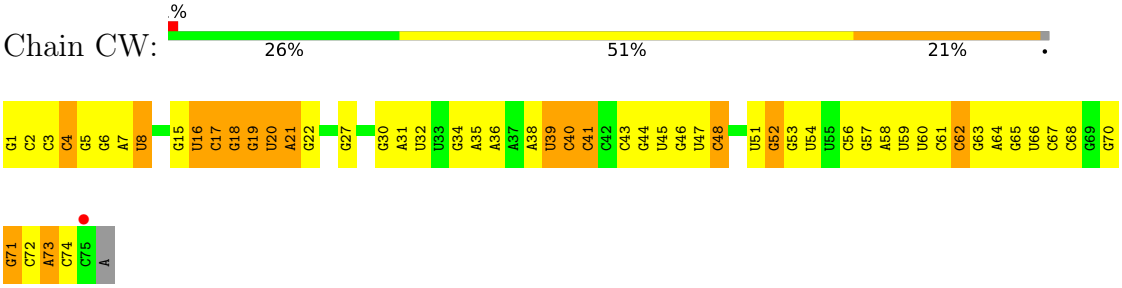
• Molecule 22: E-site tRNA PHE OR P-site tRNA PHE (unmodified bases)

Chain CV:



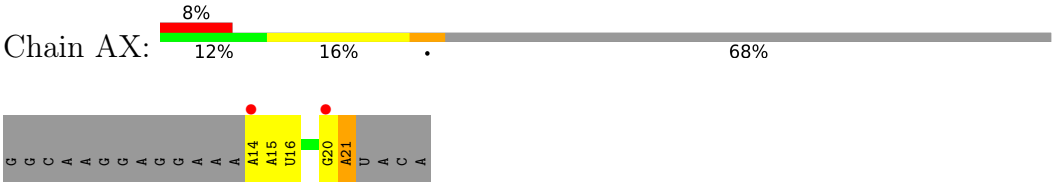
• Molecule 22: E-site tRNA PHE OR P-site tRNA PHE (unmodified bases)

Chain CW:



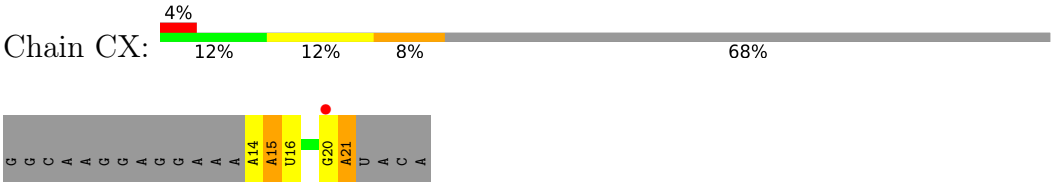
• Molecule 23: mRNA

Chain AX:



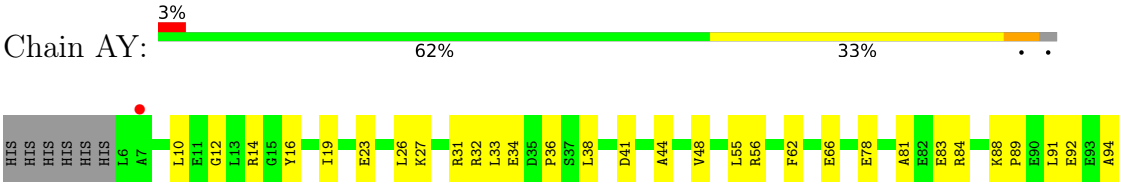
• Molecule 23: mRNA

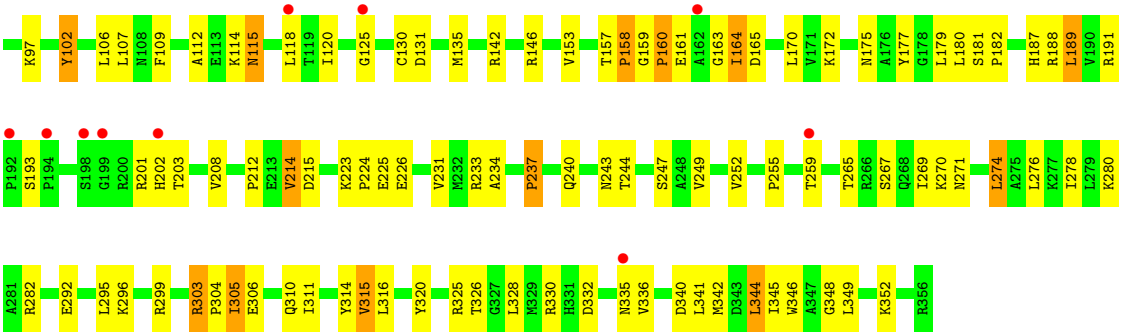
Chain CX:



• Molecule 24: Peptide chain release factor 2

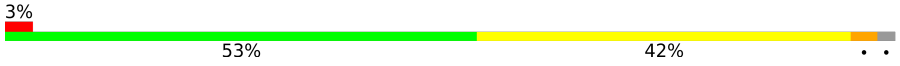
Chain AY:

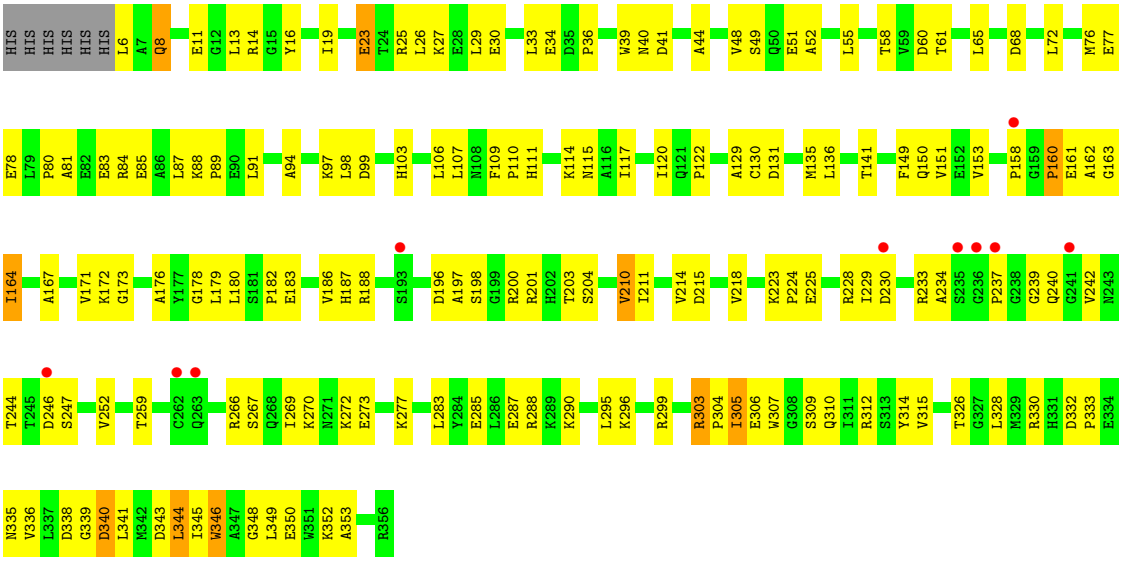




• Molecule 24: Peptide chain release factor 2

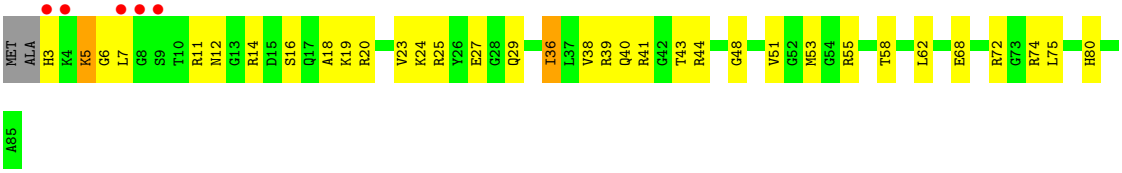
Chain CY:





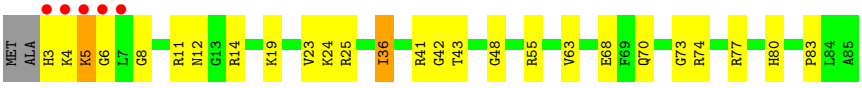
• Molecule 25: 50S ribosomal protein L27

Chain B0:



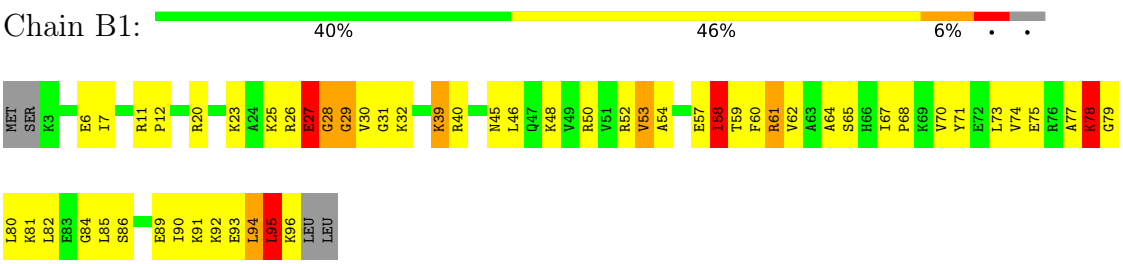
• Molecule 25: 50S ribosomal protein L27

Chain D0:



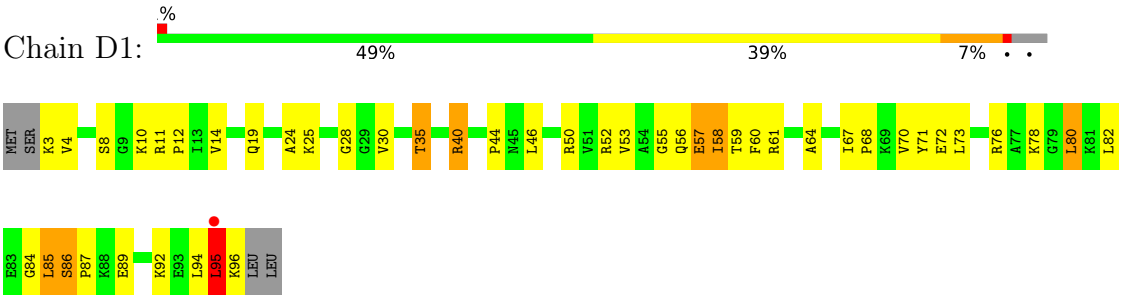
• Molecule 26: 50S ribosomal protein L28

Chain B1:



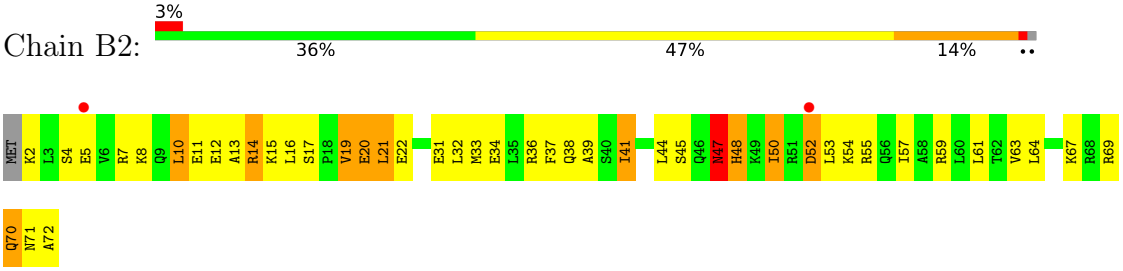
• Molecule 26: 50S ribosomal protein L28

Chain D1:



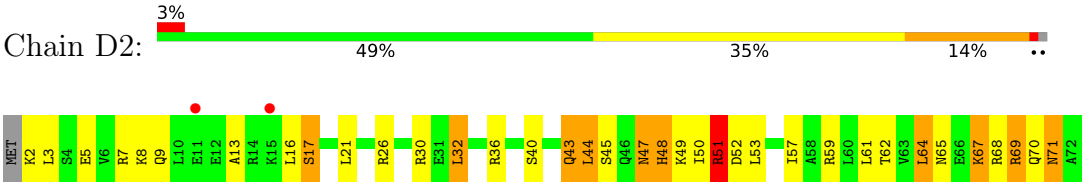
• Molecule 27: 50S ribosomal protein L29

Chain B2:



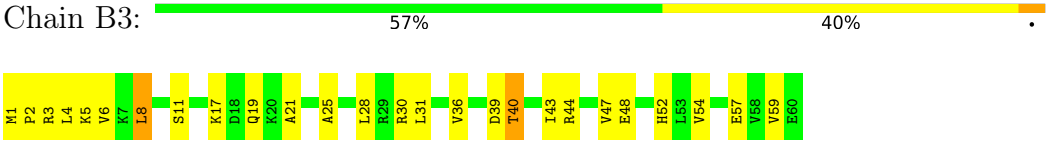
• Molecule 27: 50S ribosomal protein L29

Chain D2:



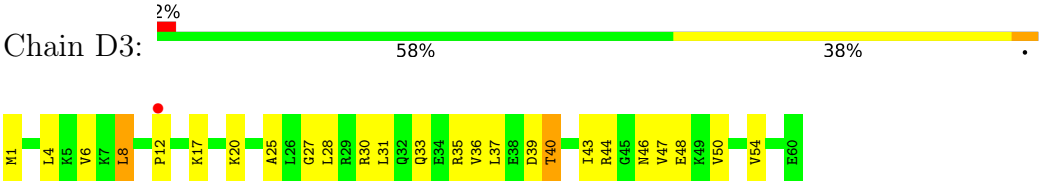
• Molecule 28: 50S ribosomal protein L30

Chain B3:



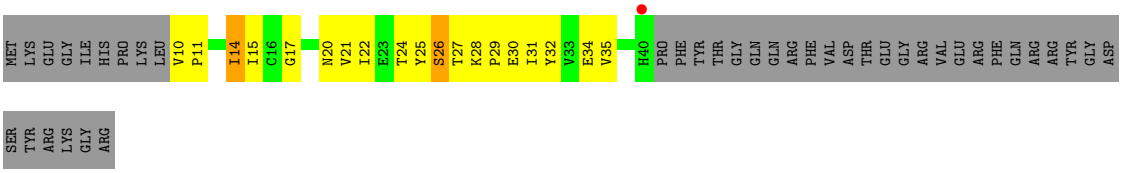
• Molecule 28: 50S ribosomal protein L30

Chain D3:



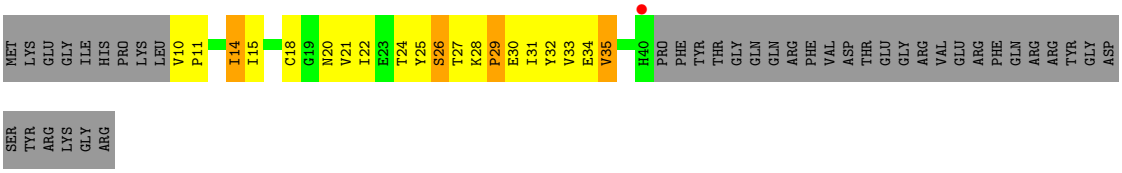
• Molecule 29: 50S ribosomal protein L31

Chain B4:



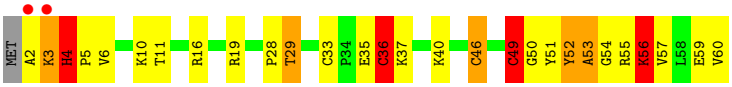
• Molecule 29: 50S ribosomal protein L31

Chain D4:



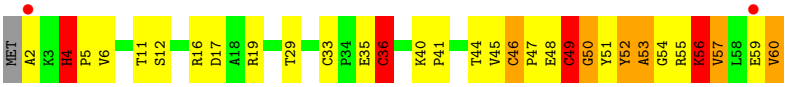
• Molecule 30: 50S ribosomal protein L32

Chain B5:



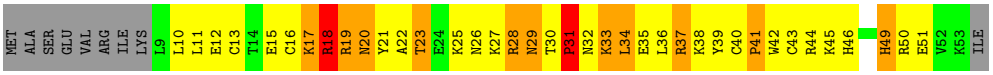
• Molecule 30: 50S ribosomal protein L32

Chain D5:



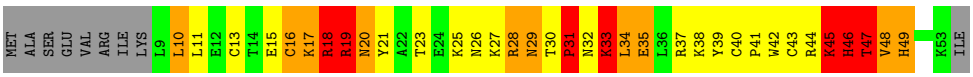
• Molecule 31: 50S ribosomal protein L33

Chain B6:



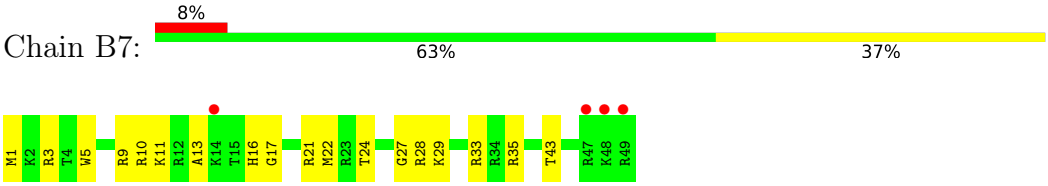
• Molecule 31: 50S ribosomal protein L33

Chain D6:



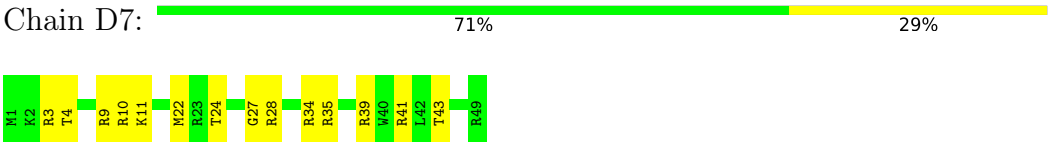
• Molecule 32: 50S ribosomal protein L34

Chain B7:



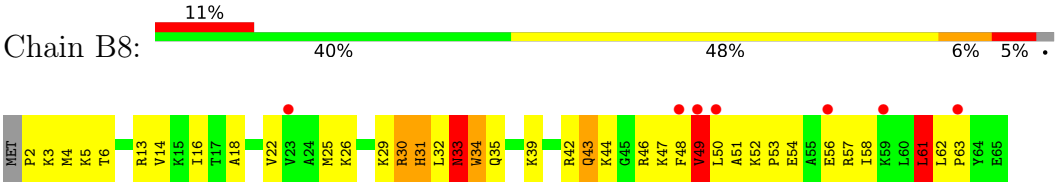
• Molecule 32: 50S ribosomal protein L34

Chain D7:



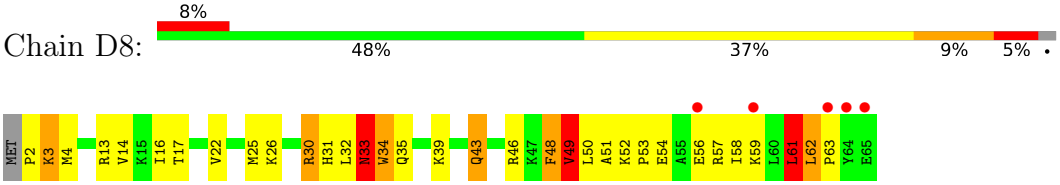
• Molecule 33: 50S ribosomal protein L35

Chain B8:



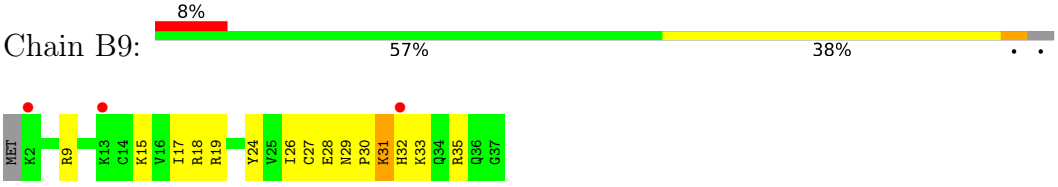
• Molecule 33: 50S ribosomal protein L35

Chain D8:



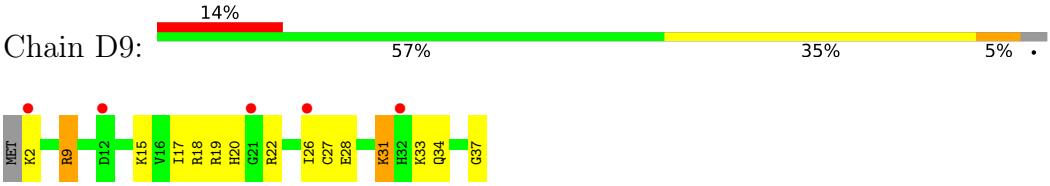
• Molecule 34: 50S ribosomal protein L36

Chain B9:



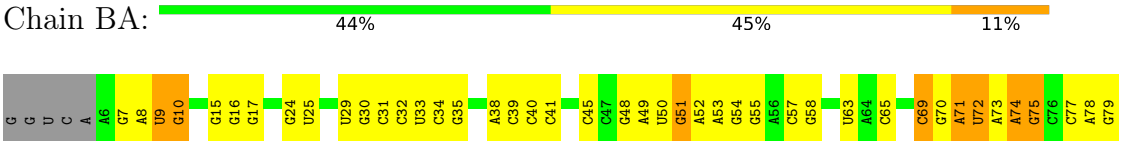
• Molecule 34: 50S ribosomal protein L36

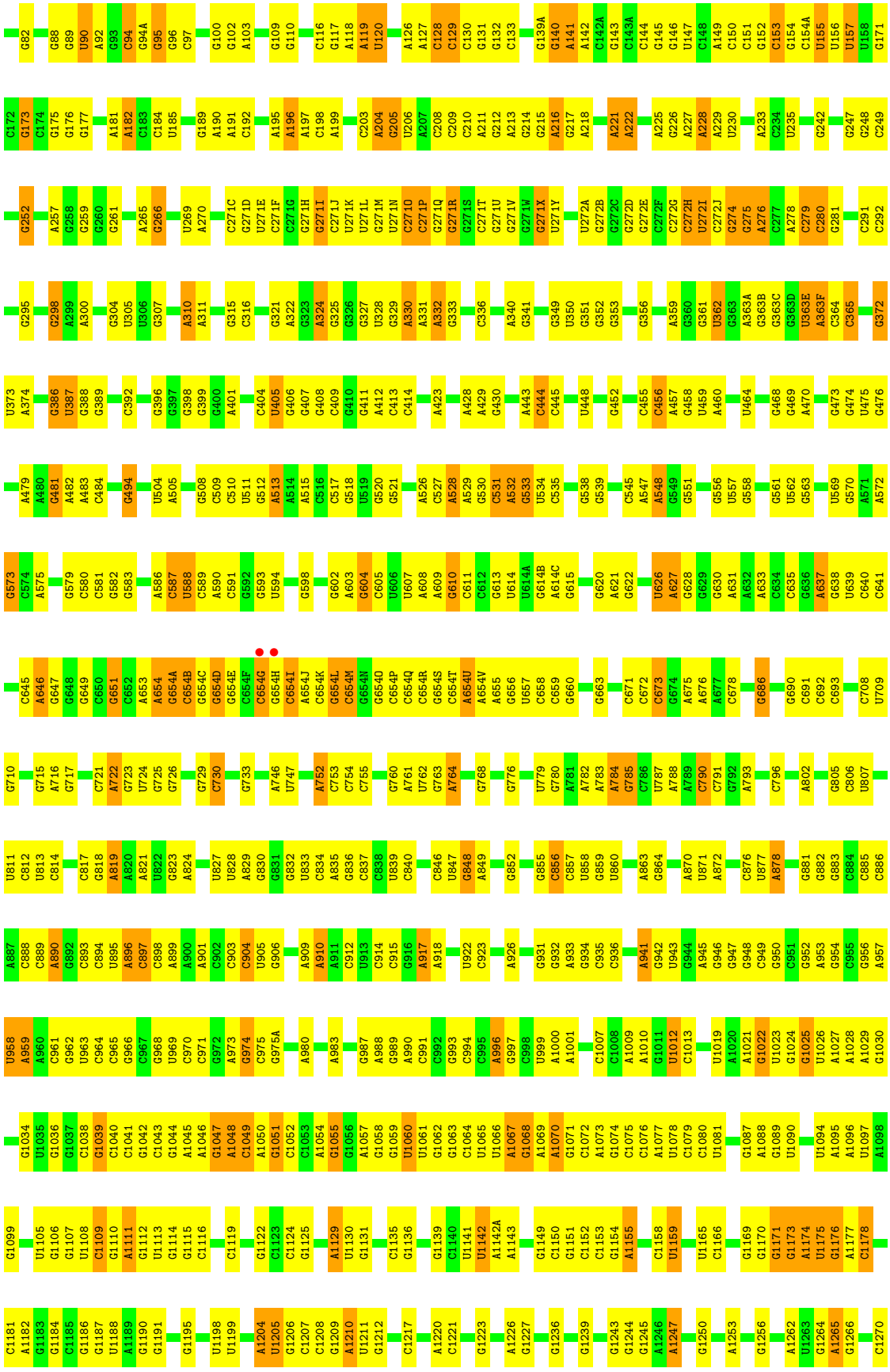
Chain D9:



• Molecule 35: 23S rRNA

Chain BA:

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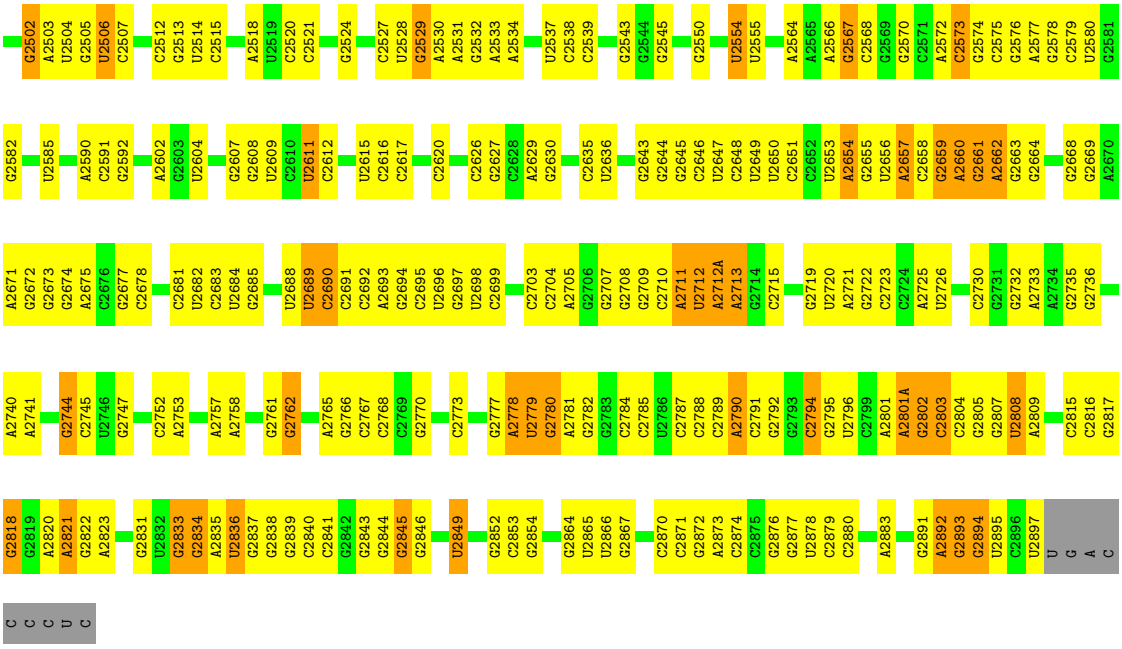
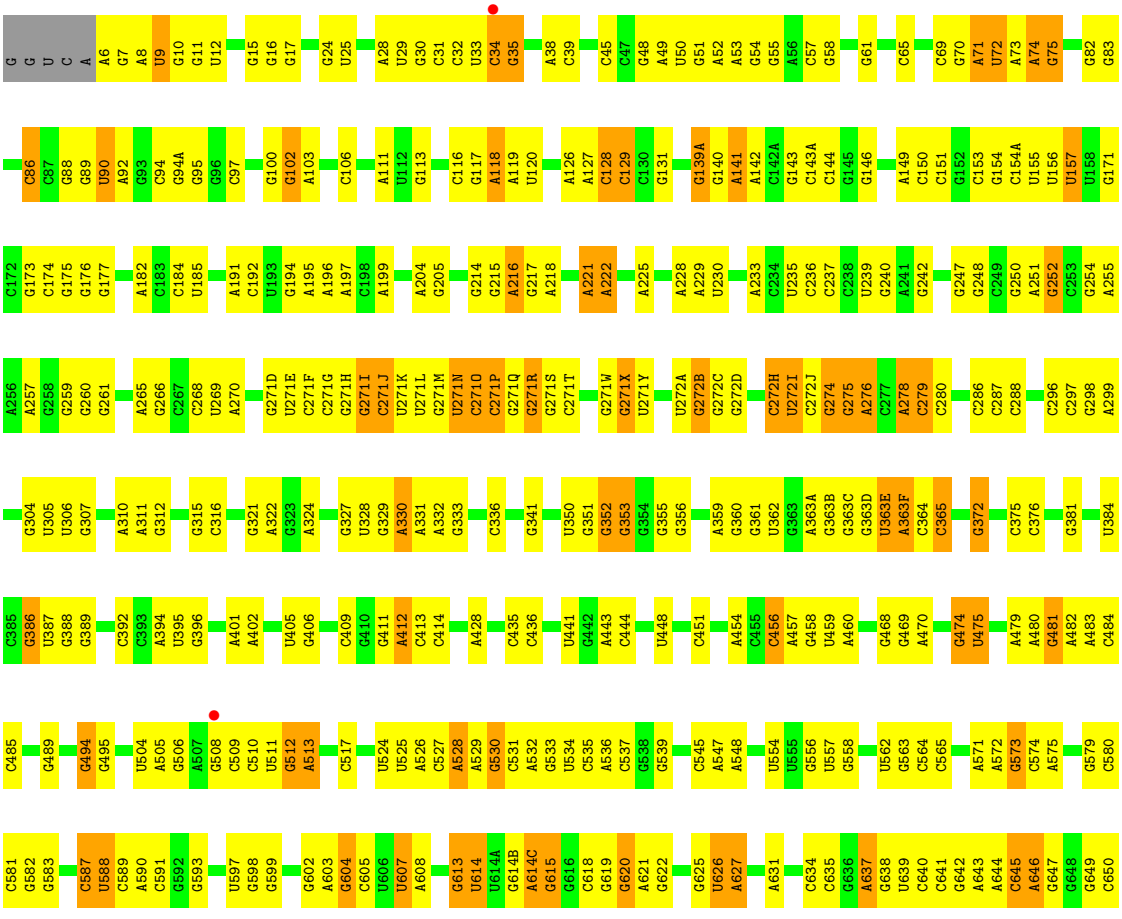
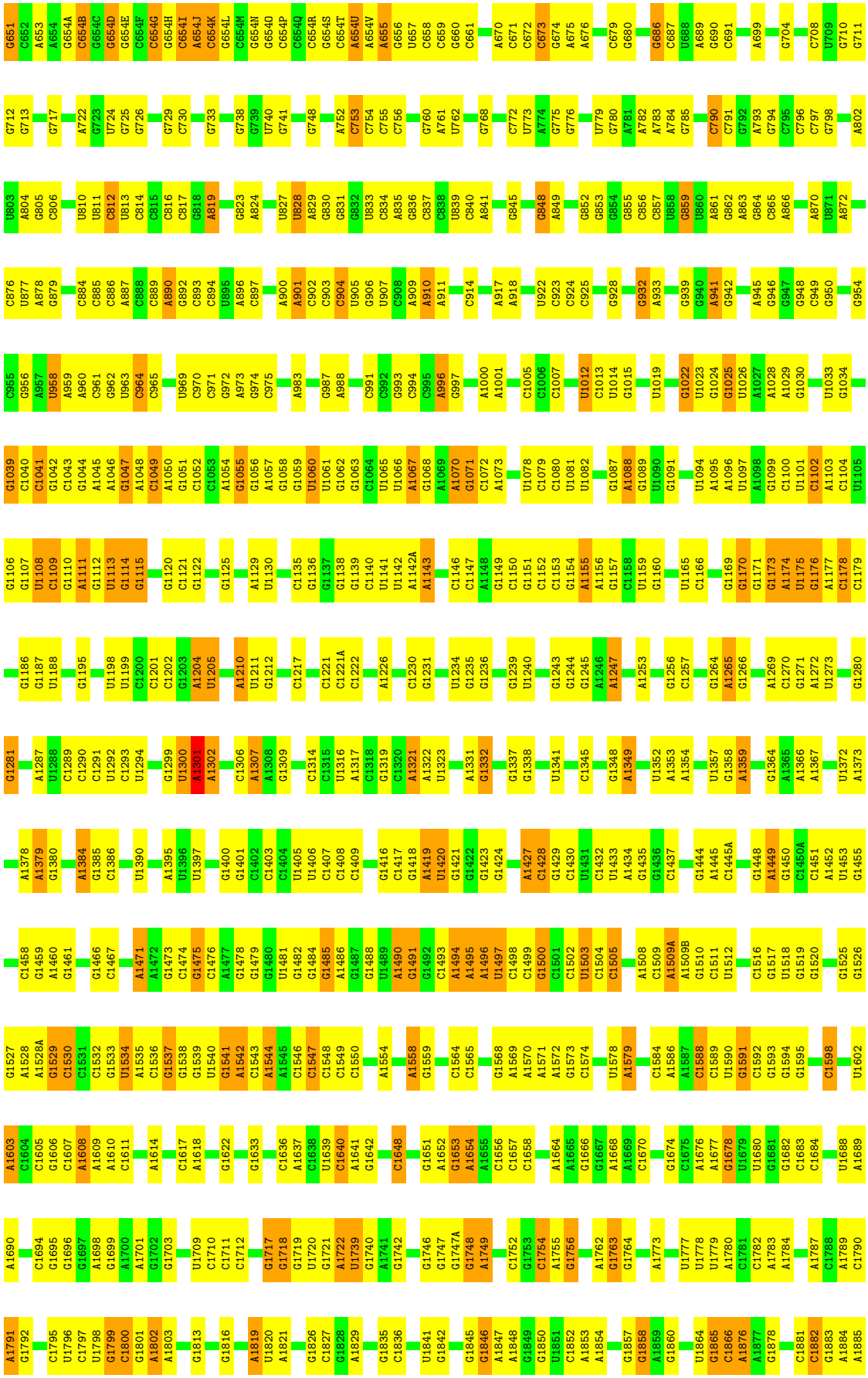


• Molecule 35: 23S rRNA

Chain DA:

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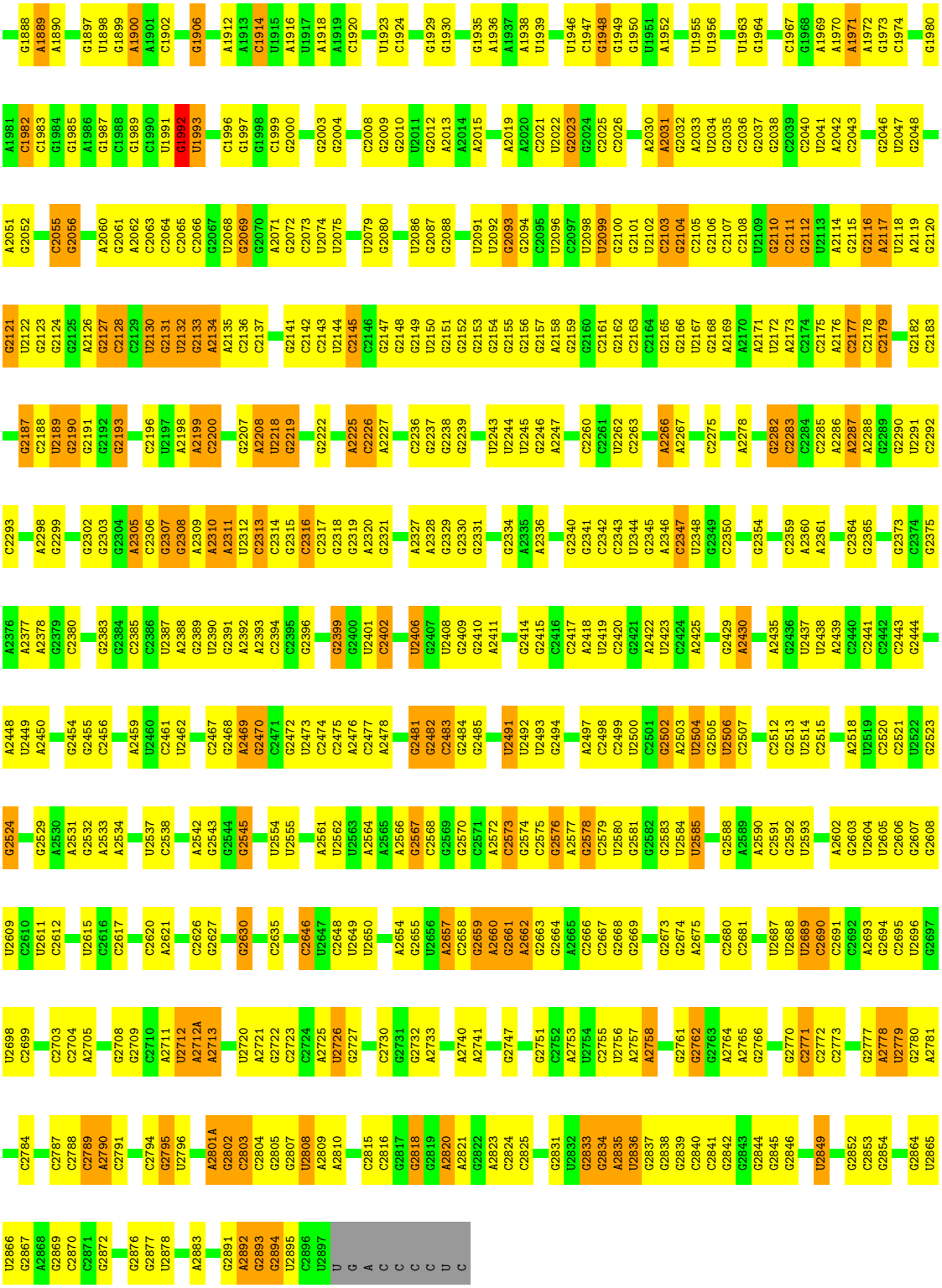
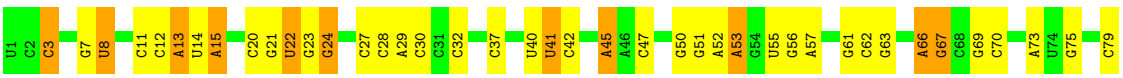


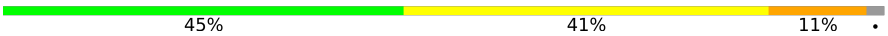
• Molecule 36: 5S rRNA

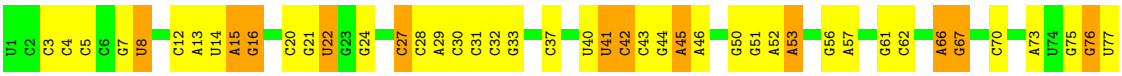
Chain BB:

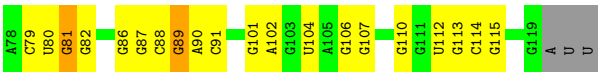


• Molecule 36: 5S rRNA

Chain DB:

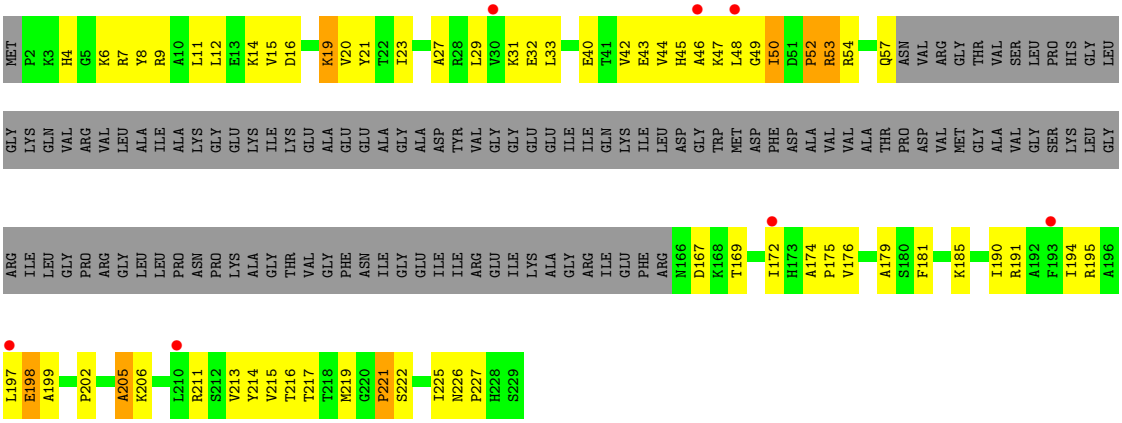






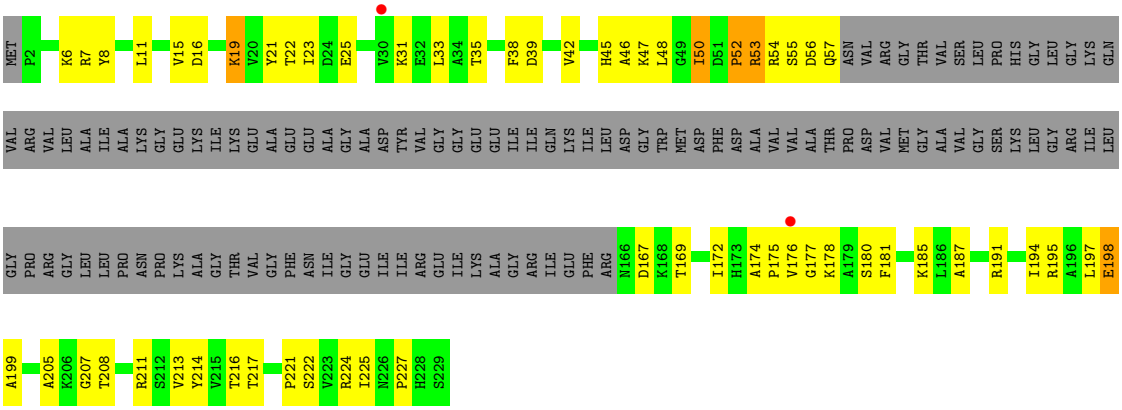
• Molecule 37: 50S ribosomal protein L1

Chain BC:



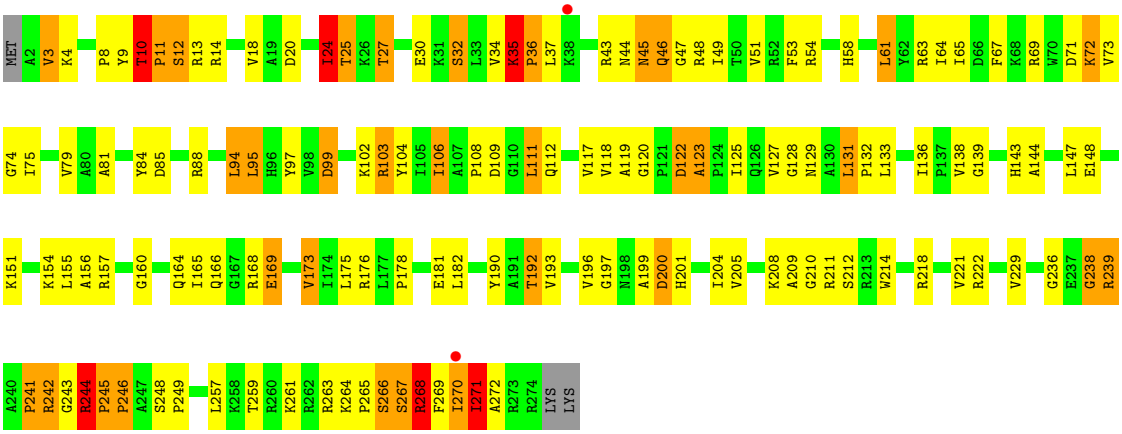
• Molecule 37: 50S ribosomal protein L1

Chain DC:

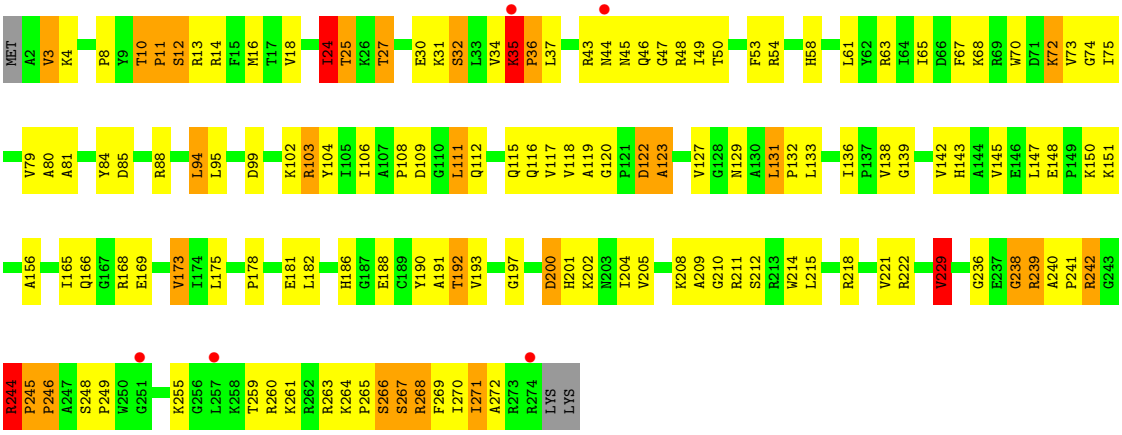


• Molecule 38: 50S ribosomal protein L2

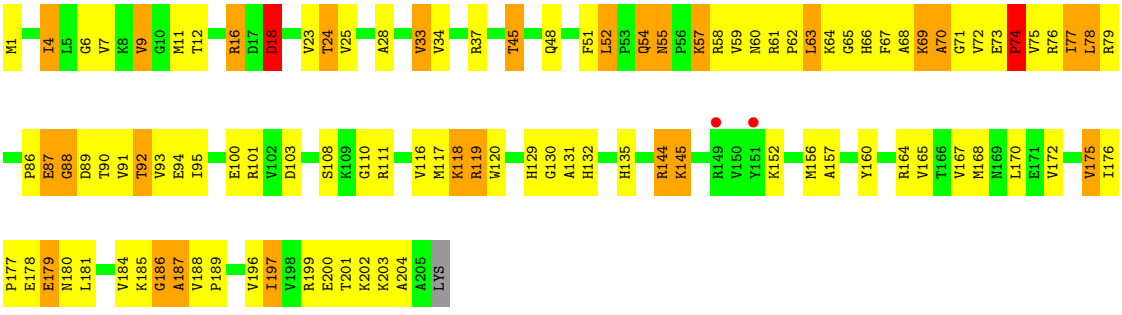
Chain BD:



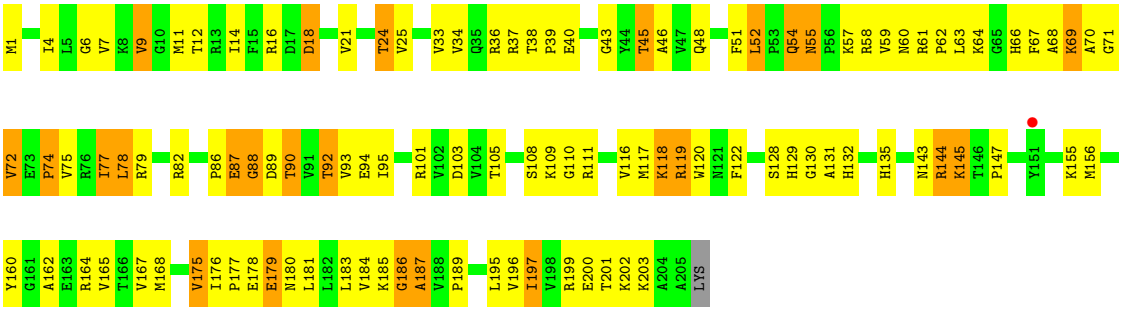
• Molecule 38: 50S ribosomal protein L2



• Molecule 39: 50S ribosomal protein L3

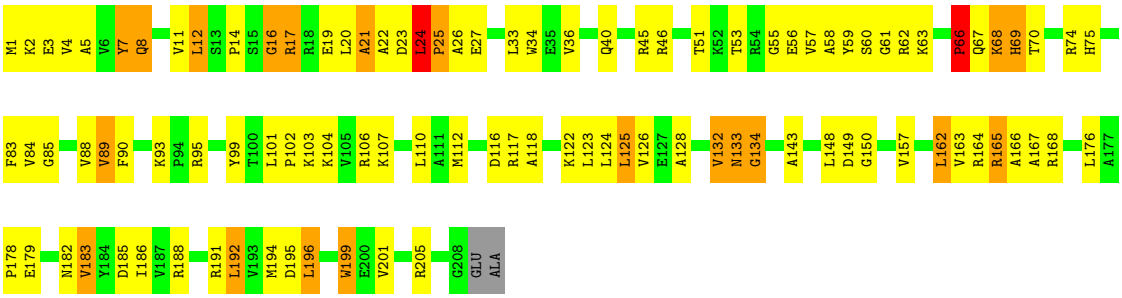


• Molecule 39: 50S ribosomal protein L3



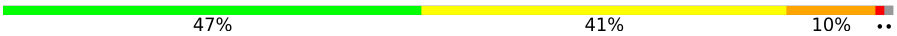
• Molecule 40: 50S ribosomal protein L4

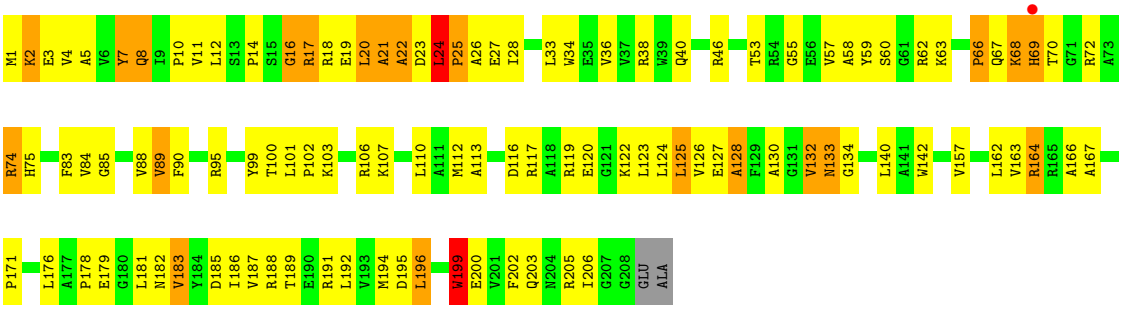
Chain BF:



• Molecule 40: 50S ribosomal protein L4

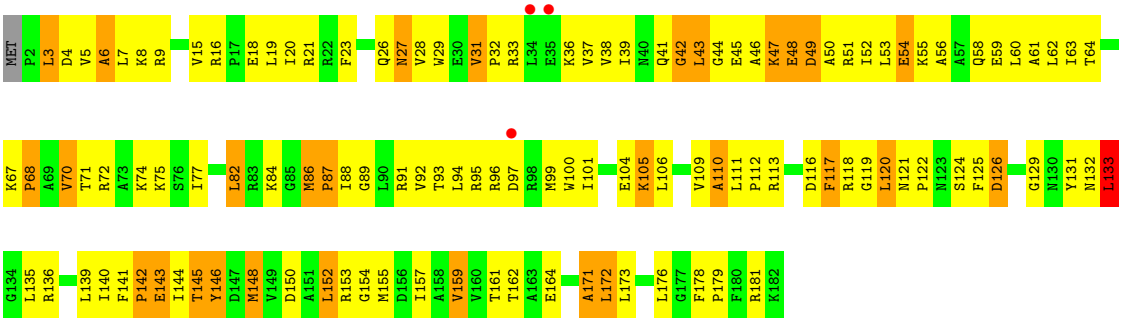
Chain DF:





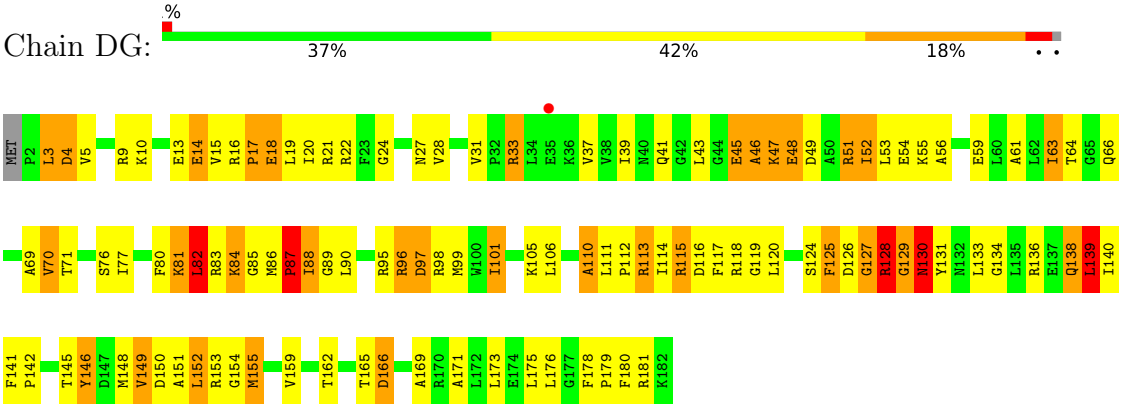
• Molecule 41: 50S ribosomal protein L5

Chain BG:



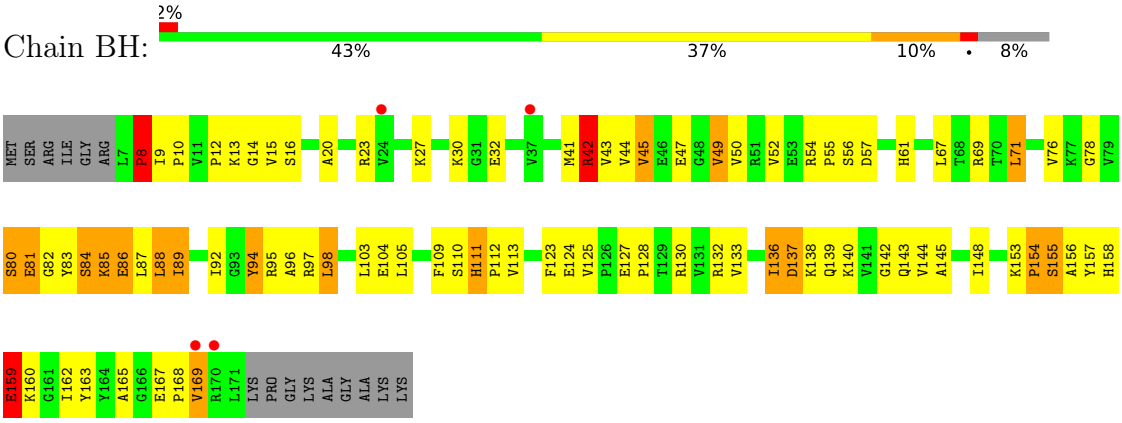
• Molecule 41: 50S ribosomal protein L5

Chain DG:



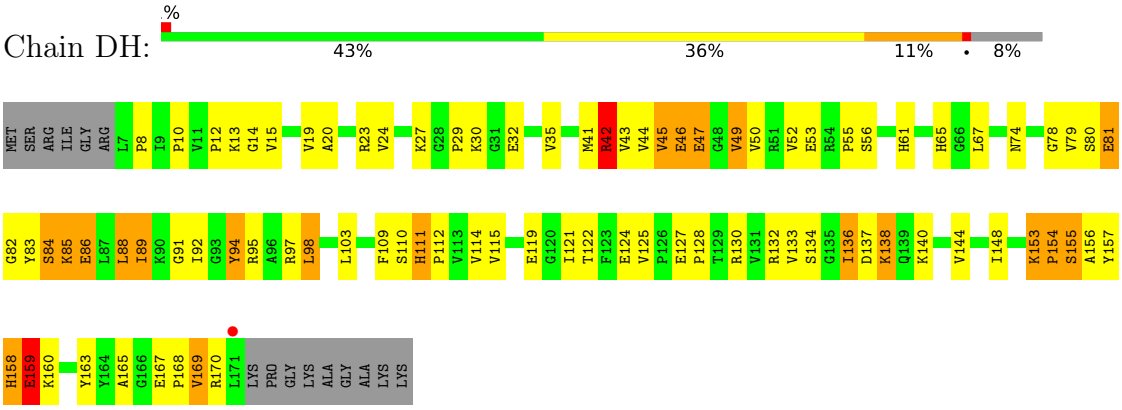
• Molecule 42: 50S ribosomal protein L6

Chain BH:



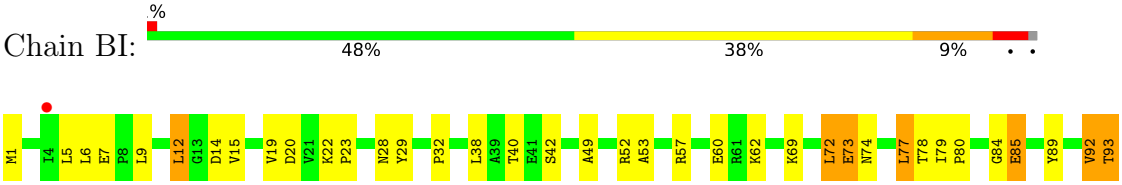
• Molecule 42: 50S ribosomal protein L6

Chain DH:



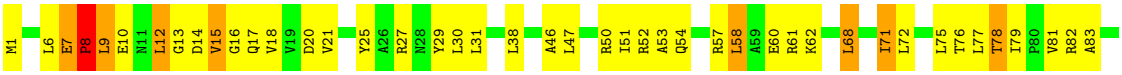
• Molecule 43: 50S ribosomal protein L9

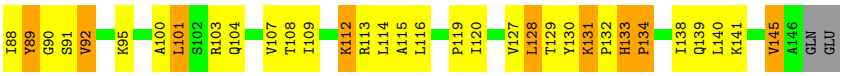
Chain BI:



• Molecule 43: 50S ribosomal protein L9

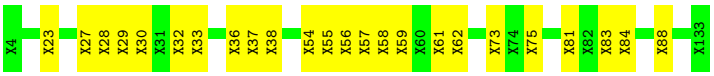
Chain DI:





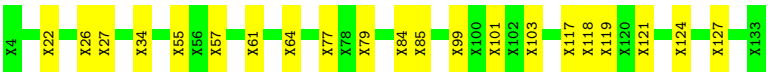
• Molecule 44: 50S ribosomal protein L10

Chain BJ:



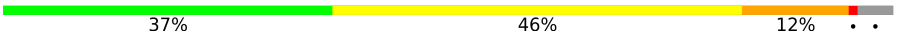
• Molecule 44: 50S ribosomal protein L10

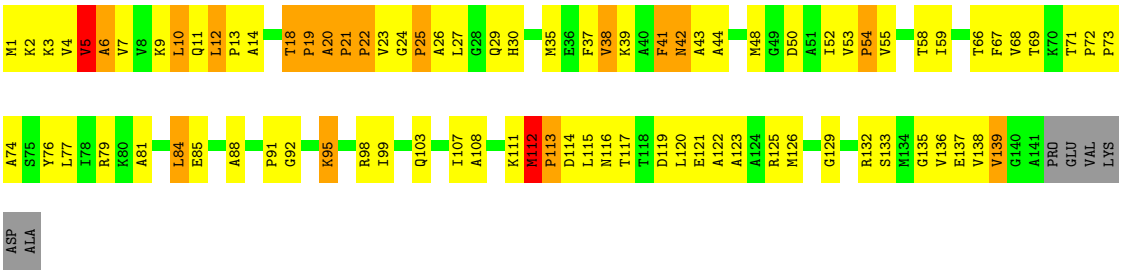
Chain DJ:



• Molecule 45: 50S ribosomal protein L11

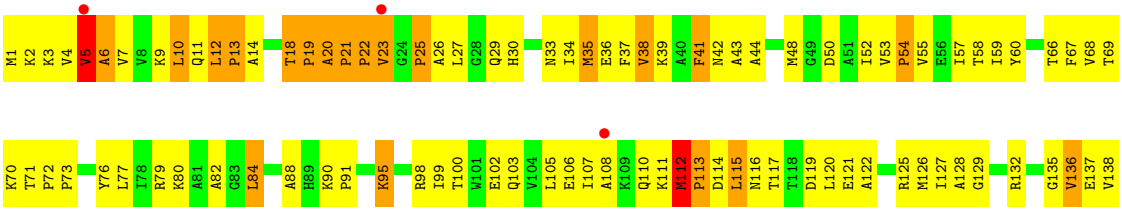
Chain BK:

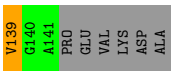




• Molecule 45: 50S ribosomal protein L11

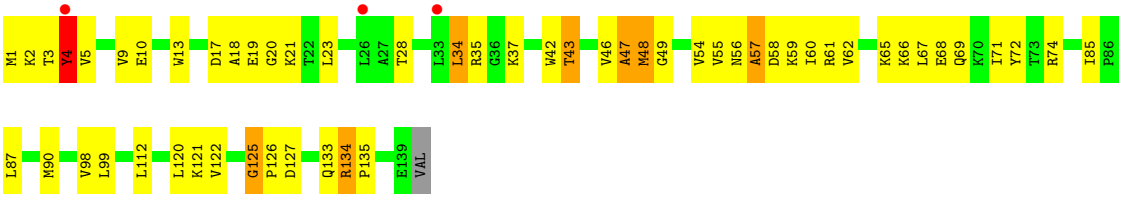
Chain DK:





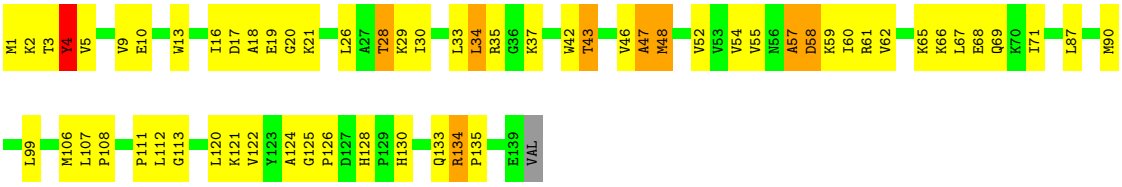
• Molecule 46: 50S ribosomal protein L13

Chain BN:



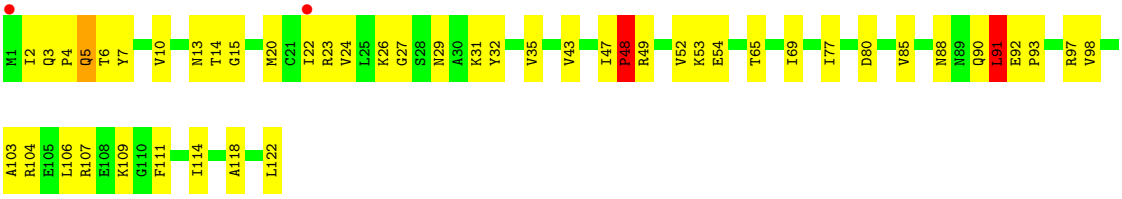
• Molecule 46: 50S ribosomal protein L13

Chain DN:



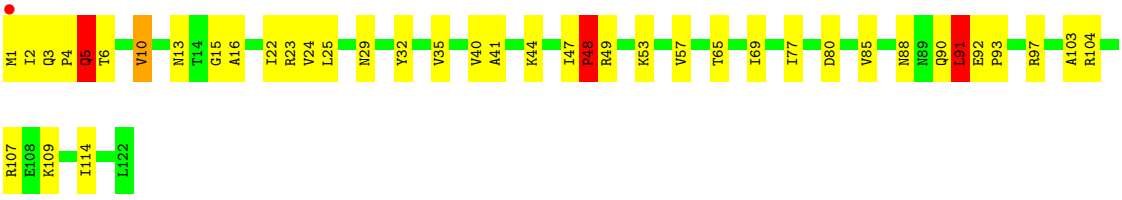
• Molecule 47: 50S ribosomal protein L14

Chain BO:



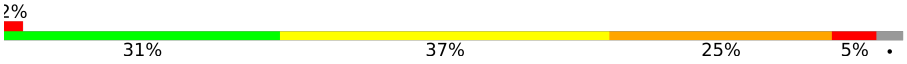
• Molecule 47: 50S ribosomal protein L14

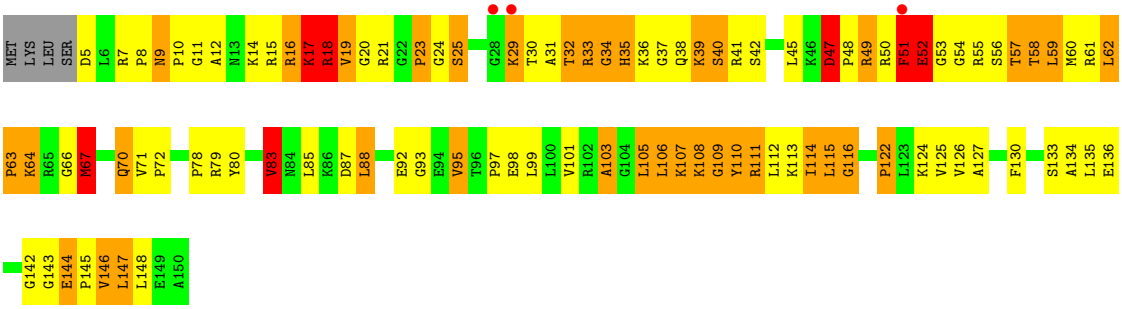
Chain DO:



• Molecule 48: 50S ribosomal protein L15

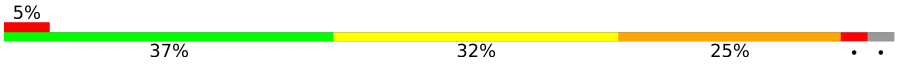
Chain BP:

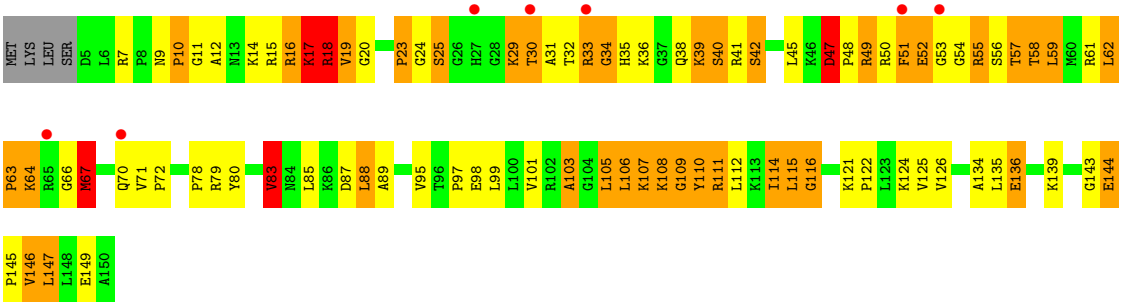




• Molecule 48: 50S ribosomal protein L15

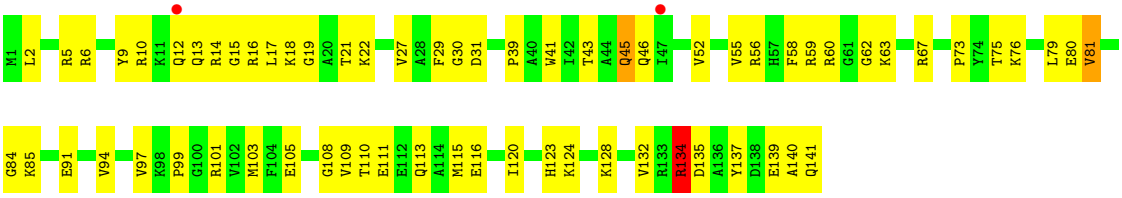
Chain DP:





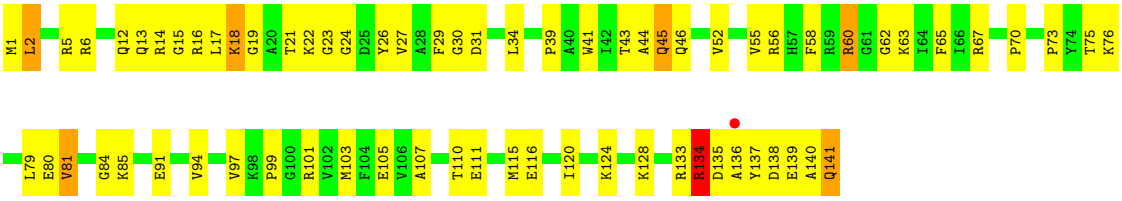
• Molecule 49: 50S ribosomal protein L16

Chain BQ:



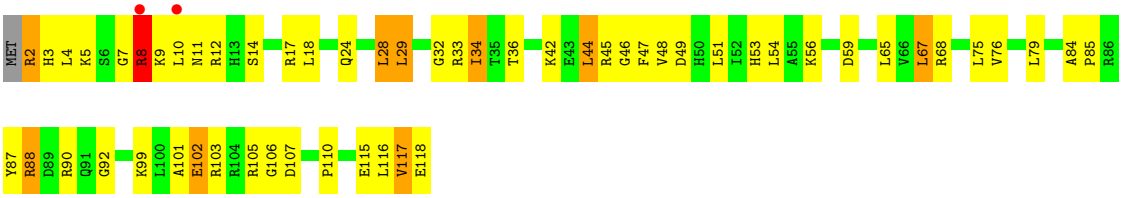
• Molecule 49: 50S ribosomal protein L16

Chain DQ:



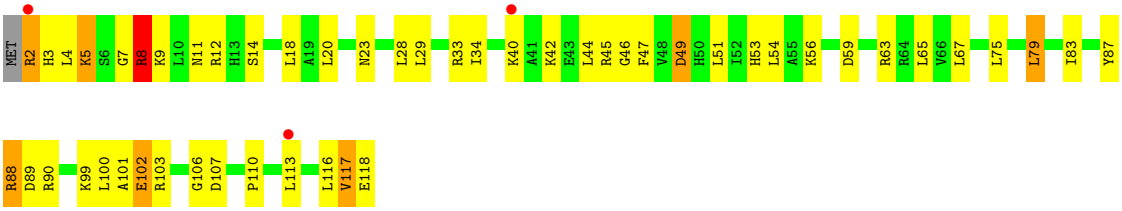
• Molecule 50: 50S ribosomal protein L17

Chain BR:



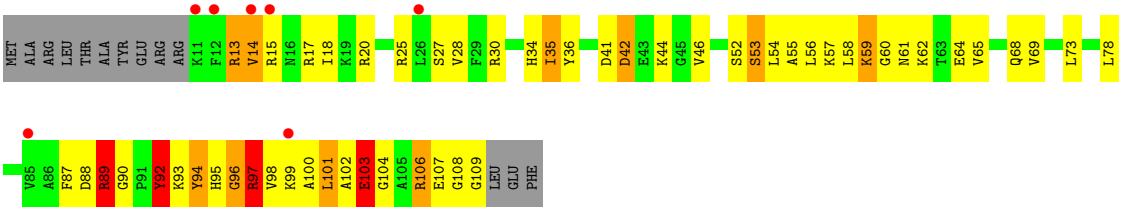
• Molecule 50: 50S ribosomal protein L17

Chain DR:



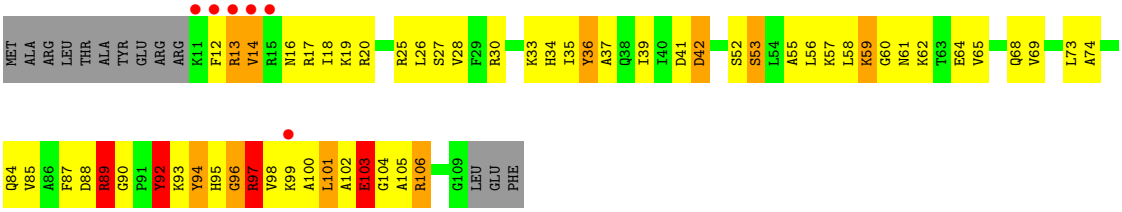
• Molecule 51: 50S ribosomal protein L18

Chain BS:



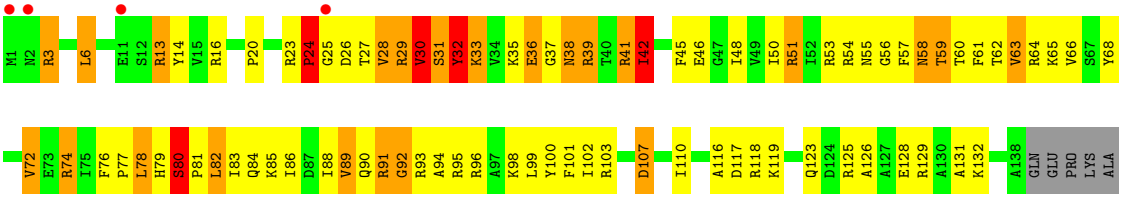
• Molecule 51: 50S ribosomal protein L18

Chain DS:

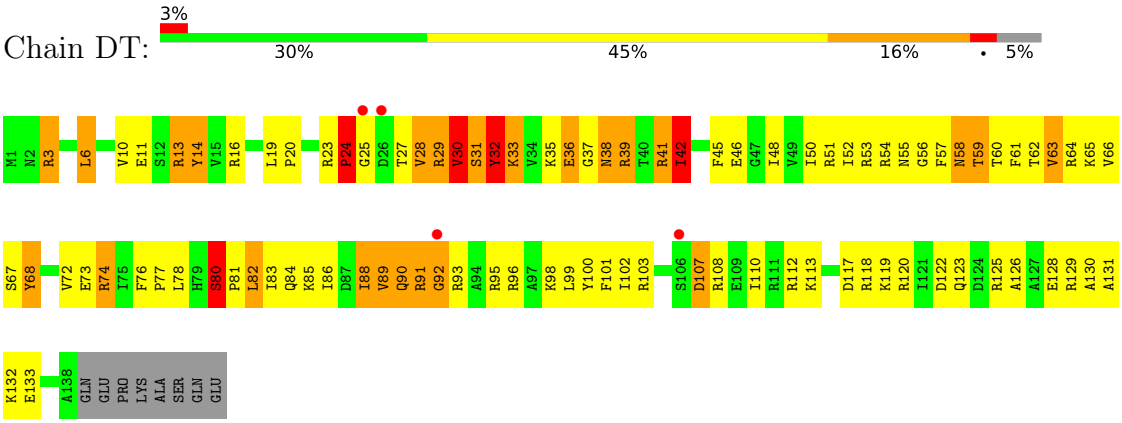


• Molecule 52: 50S ribosomal protein L19

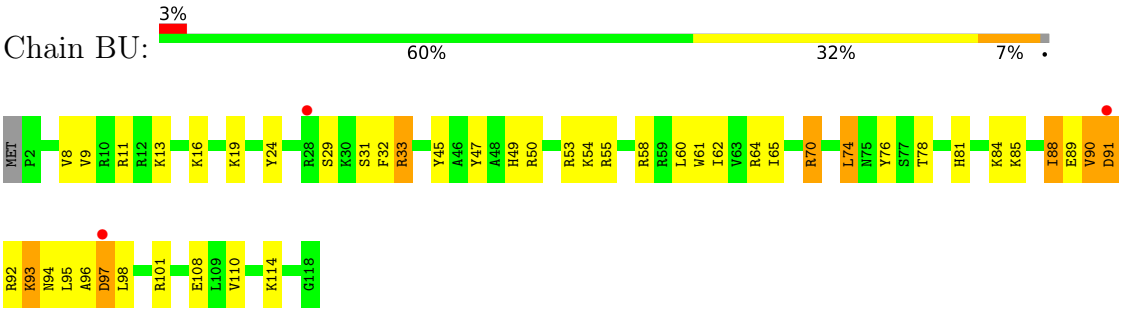
Chain BT:



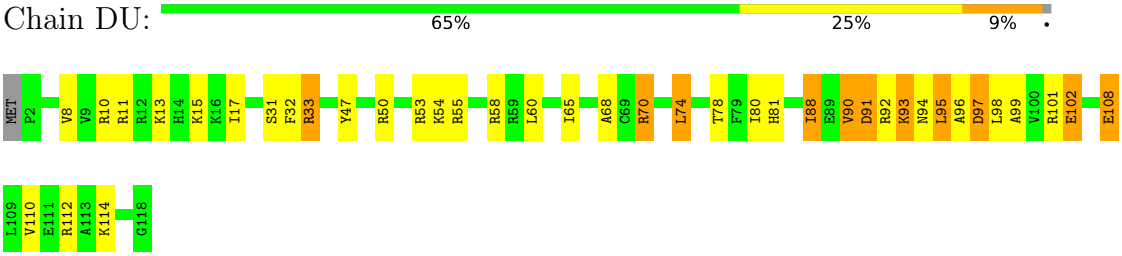
• Molecule 52: 50S ribosomal protein L19



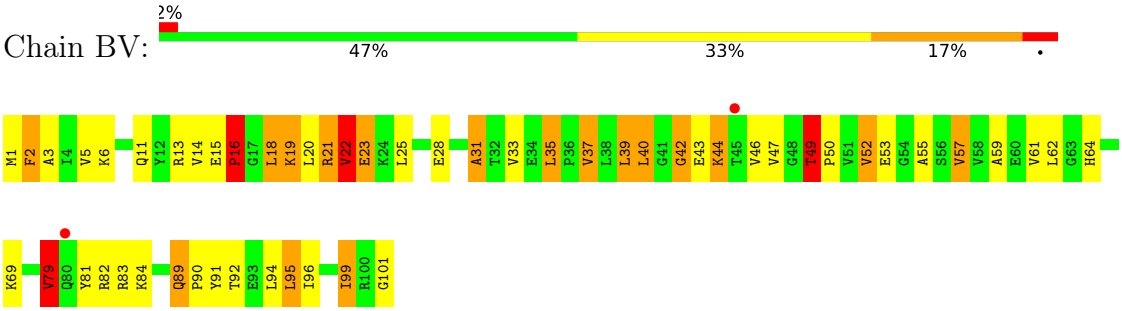
• Molecule 53: 50S ribosomal protein L20



• Molecule 53: 50S ribosomal protein L20

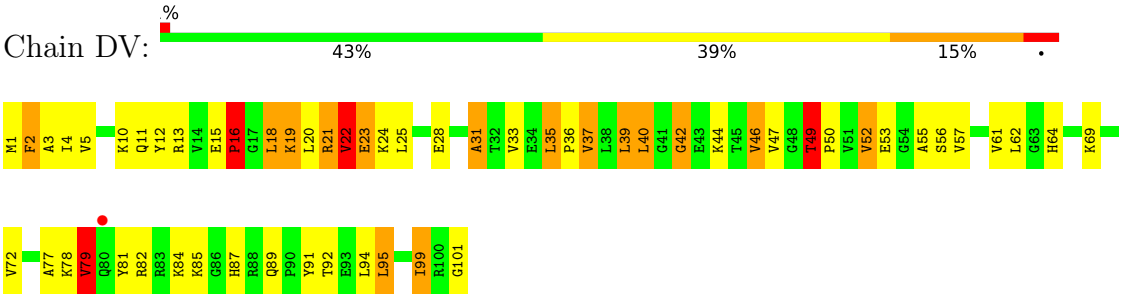


• Molecule 54: 50S ribosomal protein L21



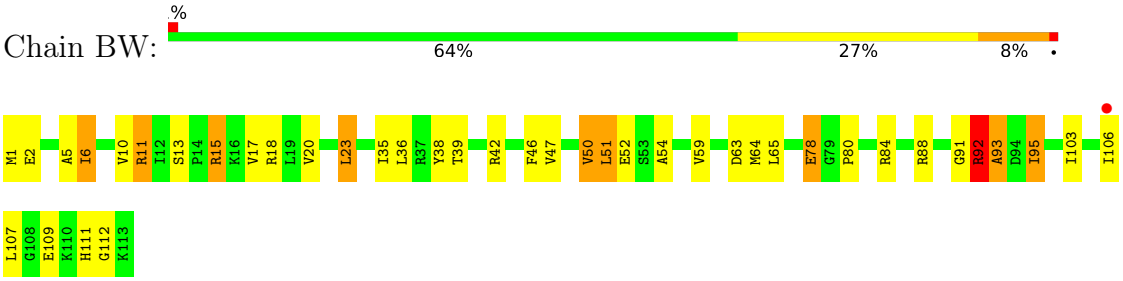
• Molecule 54: 50S ribosomal protein L21

Chain DV:



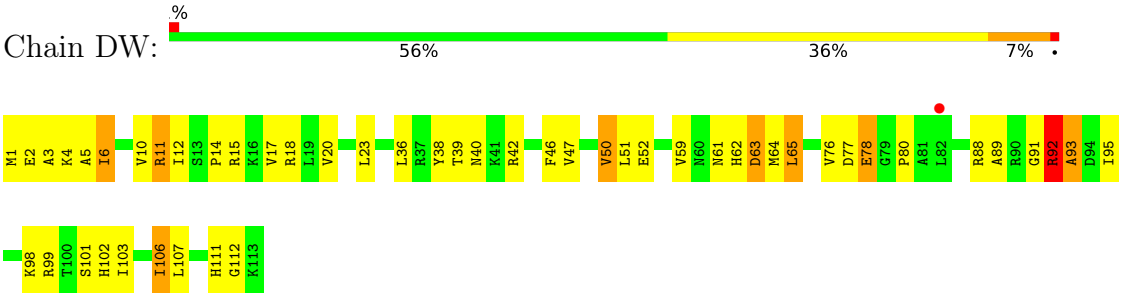
• Molecule 55: 50S ribosomal protein L22

Chain BW:



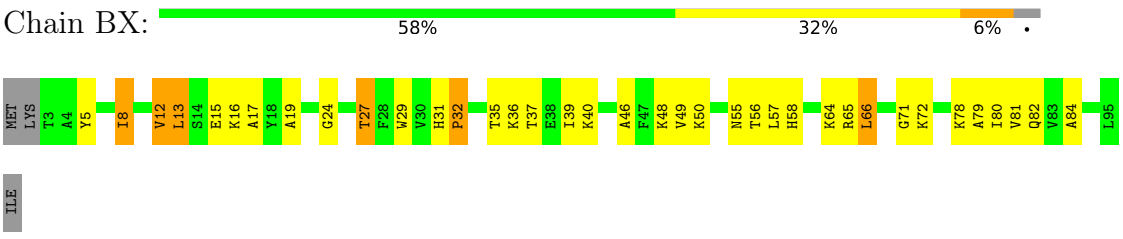
• Molecule 55: 50S ribosomal protein L22

Chain DW:



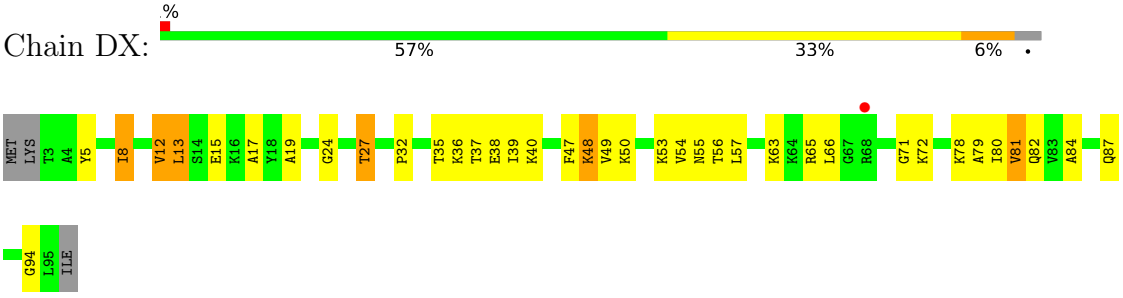
• Molecule 56: 50S ribosomal protein L23

Chain BX:



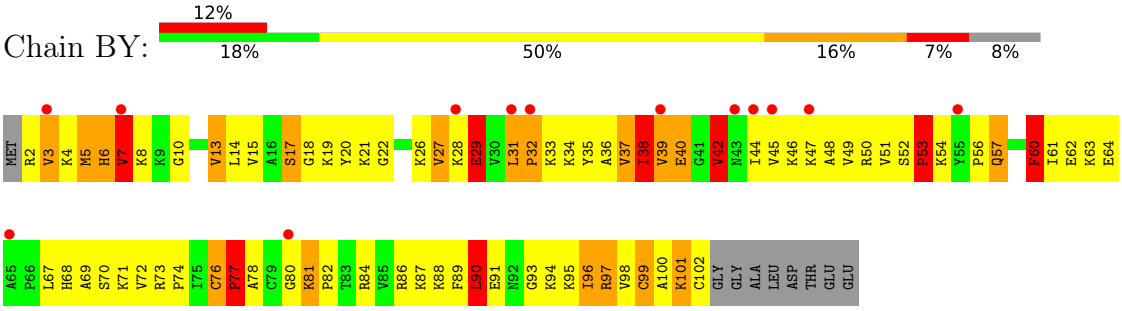
• Molecule 56: 50S ribosomal protein L23

Chain DX:



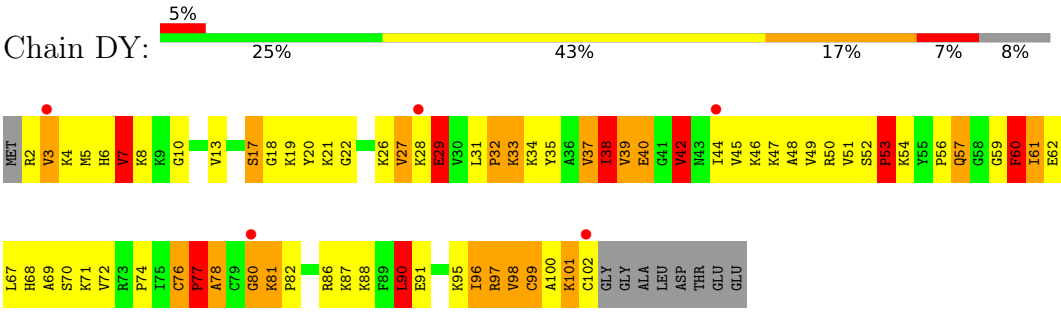
• Molecule 57: 50S ribosomal protein L24

Chain BY:



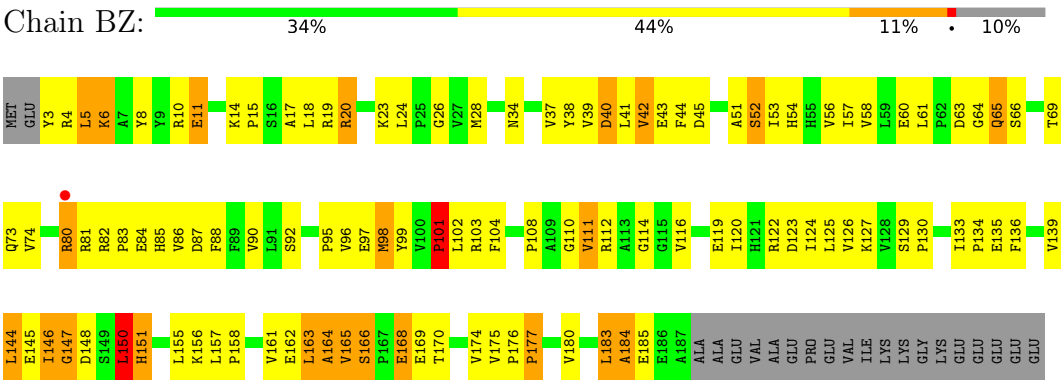
• Molecule 57: 50S ribosomal protein L24

Chain DY:



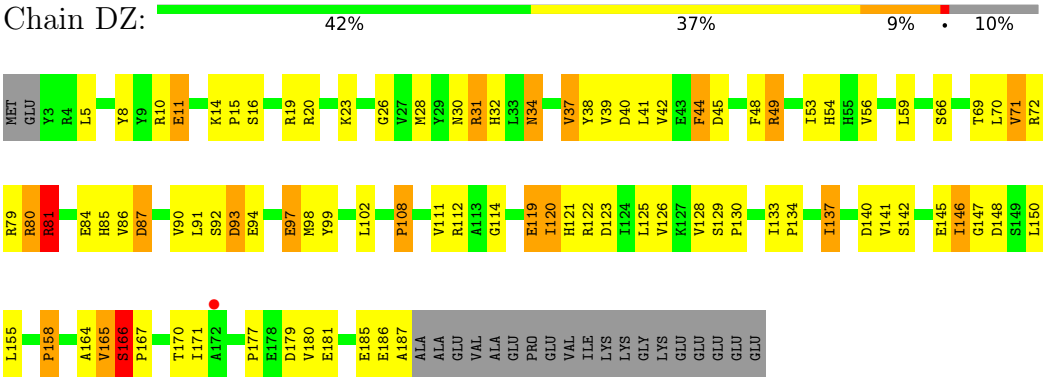
• Molecule 58: 50S ribosomal protein L25

Chain BZ:



• Molecule 58: 50S ribosomal protein L25

Chain DZ:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	211.02Å 452.53Å 623.44Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	48.98 – 3.20 48.98 – 3.20	Depositor EDS
% Data completeness (in resolution range)	100.0 (48.98-3.20) 100.0 (48.98-3.20)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	5.16 (at 3.19Å)	Xtriage
Refinement program	PHENIX 1.12_2829	Depositor
R, R_{free}	0.223 , 0.247 0.224 , 0.248	Depositor DCC
R_{free} test set	48519 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å^2)	128.7	Xtriage
Anisotropy	0.019	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.27 , 106.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.25$, $< L^2 > = 0.12$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.96	EDS
Total number of atoms	304459	wwPDB-VP
Average B, all atoms (Å^2)	160.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.55% 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: ZN, MG, MEQ

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	0.19	0/36190	0.42	0/56486
1	CA	0.19	0/36190	0.42	0/56486
2	AB	0.28	0/1936	0.86	1/2611 (0.0%)
2	CB	0.27	0/1936	0.83	0/2611
3	AC	0.26	0/1637	0.80	0/2207
3	CC	0.26	0/1637	0.79	0/2207
4	AD	0.25	0/1733	0.83	0/2318
4	CD	0.28	0/1733	0.83	1/2318 (0.0%)
5	AE	0.25	0/1163	0.76	0/1566
5	CE	0.24	0/1163	0.75	0/1566
6	AF	0.28	0/856	0.83	0/1154
6	CF	0.29	0/856	0.86	0/1154
7	AG	0.23	0/1276	0.79	0/1709
7	CG	0.25	0/1276	0.83	0/1709
8	AH	0.25	0/1136	0.78	0/1527
8	CH	0.23	0/1136	0.77	0/1527
9	AI	0.25	0/1028	0.87	0/1375
9	CI	0.26	0/1028	0.88	0/1375
10	AJ	0.25	0/808	0.80	0/1087
10	CJ	0.29	0/808	0.81	0/1087
11	AK	0.22	0/900	0.72	0/1213
11	CK	0.22	0/900	0.75	0/1213
12	AL	0.27	0/987	0.83	1/1322 (0.1%)
12	CL	0.29	0/987	0.84	1/1322 (0.1%)
13	AM	0.28	0/996	0.87	0/1328
13	CM	0.28	0/996	0.86	0/1328
14	AN	0.24	0/501	0.72	0/664
14	CN	0.25	0/501	0.73	0/664
15	AO	0.27	0/745	0.70	0/992
15	CO	0.23	0/745	0.70	0/992
16	AP	0.23	0/717	0.73	0/965
16	CP	0.24	0/717	0.74	0/965

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AQ	0.22	0/837	0.78	0/1119
17	CQ	0.22	0/837	0.75	0/1119
18	AR	0.25	0/579	0.81	0/768
18	CR	0.25	0/579	0.83	0/768
19	AS	0.28	0/643	0.87	0/867
19	CS	0.26	0/643	0.84	1/867 (0.1%)
20	AT	0.24	0/765	0.74	0/1007
20	CT	0.23	0/765	0.70	0/1007
21	AU	0.21	0/213	0.87	0/279
21	CU	0.23	0/213	0.68	0/279
22	AV	0.22	0/1809	0.43	0/2819
22	AW	0.25	0/1784	0.47	0/2780
22	CV	0.22	0/1809	0.42	0/2819
22	CW	0.22	0/1784	0.47	0/2780
23	AX	0.27	0/185	0.64	0/286
23	CX	0.28	0/185	0.67	0/286
24	AY	0.25	0/2839	0.62	0/3833
24	CY	0.26	0/2839	0.66	0/3833
25	B0	0.25	0/666	0.74	0/885
25	D0	0.23	0/666	0.70	0/885
26	B1	0.28	0/739	0.90	2/983 (0.2%)
26	D1	0.33	0/739	0.80	0/983
27	B2	0.26	0/600	0.85	1/793 (0.1%)
27	D2	0.29	0/600	0.92	0/793
28	B3	0.32	0/473	0.79	0/636
28	D3	0.23	0/473	0.70	0/636
29	B4	0.29	0/229	0.89	0/311
29	D4	0.29	0/229	0.83	0/311
30	B5	0.38	0/473	1.15	3/639 (0.5%)
30	D5	0.35	0/473	1.06	1/639 (0.2%)
31	B6	0.49	0/387	1.13	0/517
31	D6	0.53	0/388	1.32	5/520 (1.0%)
32	B7	0.20	0/427	0.74	0/563
32	D7	0.20	0/427	0.74	0/563
33	B8	0.30	0/516	0.95	0/681
33	D8	0.29	0/516	0.94	0/681
34	B9	0.27	0/302	0.70	0/397
34	D9	0.28	0/302	0.73	0/397
35	BA	0.21	3/69972 (0.0%)	0.45	1/109237 (0.0%)
35	DA	0.22	1/69972 (0.0%)	0.46	3/109237 (0.0%)
36	BB	0.20	0/2853	0.42	0/4451
36	DB	0.20	0/2853	0.41	0/4451
37	BC	0.23	0/956	0.80	0/1288

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
37	DC	0.23	0/956	0.78	0/1288
38	BD	0.27	0/2170	0.88	1/2926 (0.0%)
38	DD	0.28	0/2170	0.89	2/2926 (0.1%)
39	BE	0.34	0/1597	0.92	1/2155 (0.0%)
39	DE	0.30	0/1597	0.94	1/2155 (0.0%)
40	BF	0.30	0/1659	0.87	0/2246
40	DF	0.31	0/1659	0.90	3/2246 (0.1%)
41	BG	0.27	0/1498	0.91	2/2013 (0.1%)
41	DG	0.32	0/1499	0.97	4/2016 (0.2%)
42	BH	0.28	0/1271	0.96	2/1720 (0.1%)
42	DH	0.30	0/1271	1.01	3/1720 (0.2%)
43	BI	0.31	0/1147	0.93	0/1553
43	DI	0.30	0/1147	0.94	0/1553
45	BK	0.28	0/1057	0.94	0/1432
45	DK	0.31	0/1057	0.98	2/1432 (0.1%)
46	BN	0.26	0/1132	0.85	0/1527
46	DN	0.26	0/1132	0.81	0/1527
47	BO	0.24	0/943	0.75	0/1269
47	DO	0.25	0/943	0.72	0/1269
48	BP	0.35	0/1131	1.25	9/1504 (0.6%)
48	DP	0.36	0/1131	1.29	13/1504 (0.9%)
49	BQ	0.26	0/1143	0.81	0/1527
49	DQ	0.26	0/1143	0.82	0/1527
50	BR	0.27	0/974	0.77	0/1302
50	DR	0.29	0/974	0.84	1/1302 (0.1%)
51	BS	0.31	0/779	0.93	0/1038
51	DS	0.33	0/779	0.93	0/1038
52	BT	0.31	0/1156	1.00	5/1544 (0.3%)
52	DT	0.33	0/1156	1.03	5/1544 (0.3%)
53	BU	0.27	0/975	0.80	1/1297 (0.1%)
53	DU	0.30	0/975	0.85	2/1297 (0.2%)
54	BV	0.29	0/790	0.84	0/1057
54	DV	0.31	0/790	0.87	0/1057
55	BW	0.37	1/907 (0.1%)	0.80	0/1216
55	DW	0.28	0/907	0.74	0/1216
56	BX	0.27	0/740	0.84	0/995
56	DX	0.26	0/740	0.85	0/995
57	BY	0.48	1/789 (0.1%)	1.08	4/1053 (0.4%)
57	DY	0.36	0/789	1.07	1/1053 (0.1%)
58	BZ	0.28	0/1500	0.88	0/2037
58	DZ	0.29	0/1500	0.86	0/2037
All	All	0.23	6/328430 (0.0%)	0.59	83/490154 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
13	AM	0	1
13	CM	0	1
35	BA	0	1
All	All	0	3

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BY	7	VAL	CB-CG2	6.68	1.74	1.52
35	BA	764	A	O4'-C1'	-6.49	1.32	1.42
35	DA	859	G	C5'-C4'	6.47	1.61	1.51
35	BA	1131	G	C3'-C2'	5.55	1.61	1.52
35	BA	1131	G	C1'-N9	5.49	1.55	1.47
55	BW	51	LEU	CG-CD2	5.34	1.70	1.52

All (83) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
42	DH	10	PRO	N-CA-CB	8.74	111.49	103.19
38	DD	244	ARG	C-N-CD	-7.86	103.32	120.60
38	BD	244	ARG	C-N-CD	-7.70	103.65	120.60
42	BH	8	PRO	N-CA-CB	7.45	111.08	103.25
52	DT	29	ARG	CA-C-N	7.34	135.18	121.97
52	DT	29	ARG	C-N-CA	7.34	135.18	121.97
42	BH	10	PRO	N-CA-CB	7.30	110.13	103.19
52	BT	29	ARG	CA-C-N	7.28	135.08	121.97
52	BT	29	ARG	C-N-CA	7.28	135.08	121.97
41	DG	87	PRO	N-CA-C	7.11	127.12	112.47
19	CS	29	ARG	CA-CB-CG	7.08	128.26	114.10
42	DH	8	PRO	N-CA-CB	7.04	110.78	103.38
48	BP	16	ARG	CA-C-N	6.45	133.85	121.54
48	BP	16	ARG	C-N-CA	6.45	133.85	121.54
30	B5	3	LYS	CA-C-N	6.36	137.31	121.80
30	B5	3	LYS	C-N-CA	6.36	137.31	121.80
30	B5	36	CYS	CA-CB-SG	6.34	128.98	114.40
53	BU	97	ASP	N-CA-C	-6.26	105.68	113.38
48	DP	53	GLY	N-CA-C	-6.14	98.63	113.18
48	DP	52	GLU	CA-C-N	6.12	133.40	121.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	DP	52	GLU	C-N-CA	6.12	133.40	121.41
30	D5	36	CYS	CA-CB-SG	6.07	128.35	114.40
48	BP	52	GLU	N-CA-C	6.07	123.72	110.80
48	DP	52	GLU	N-CA-C	6.05	123.69	110.80
39	BE	74	PRO	N-CA-C	6.04	124.92	112.47
41	DG	81	LYS	CA-C-N	6.04	133.08	121.54
41	DG	81	LYS	C-N-CA	6.04	133.08	121.54
53	DU	97	ASP	N-CA-C	-6.03	105.96	113.38
31	D6	35	GLU	CA-CB-CG	6.01	126.12	114.10
48	DP	54	GLY	N-CA-C	-5.99	99.00	113.18
48	DP	16	ARG	CA-C-N	5.93	132.87	121.54
48	DP	16	ARG	C-N-CA	5.93	132.87	121.54
31	D6	46	HIS	CA-C-N	5.92	132.37	121.70
31	D6	46	HIS	C-N-CA	5.92	132.37	121.70
2	AB	23	ARG	N-CA-C	-5.84	105.04	113.21
48	DP	17	LYS	N-CA-C	5.84	123.23	110.80
41	BG	125	PHE	CA-C-N	5.81	132.63	121.54
41	BG	125	PHE	C-N-CA	5.81	132.63	121.54
57	DY	7	VAL	N-CA-C	5.80	121.42	109.34
12	CL	119	LYS	N-CA-C	-5.75	102.78	110.55
52	BT	29	ARG	N-CA-C	5.74	117.82	108.76
53	DU	95	LEU	CA-CB-CG	-5.72	96.29	116.30
52	BT	30	VAL	N-CA-C	5.71	121.22	109.34
52	DT	29	ARG	N-CA-C	5.68	117.91	108.99
48	BP	53	GLY	N-CA-C	-5.68	99.72	113.18
39	DE	74	PRO	N-CA-C	5.57	123.95	112.47
4	CD	13	ARG	NE-CZ-NH2	5.57	124.21	119.20
40	DF	20	LEU	CA-C-N	5.53	132.10	121.54
40	DF	20	LEU	C-N-CA	5.53	132.10	121.54
35	DA	859	G	C4'-C3'-O3'	-5.52	101.12	109.40
41	DG	129	GLY	N-CA-C	-5.50	100.28	112.17
52	DT	30	VAL	N-CA-C	5.47	120.73	109.34
27	B2	47	ASN	N-CA-C	5.46	122.44	110.80
12	AL	119	LYS	N-CA-C	-5.46	103.18	110.55
40	DF	199	TRP	CB-CG-CD2	-5.46	119.16	126.80
52	DT	80	SER	N-CA-C	5.43	121.82	109.81
38	DD	229	VAL	CG1-CB-CG2	5.41	122.70	110.80
31	D6	19	ARG	CA-C-N	5.39	131.83	121.54
31	D6	19	ARG	C-N-CA	5.39	131.83	121.54
48	BP	17	LYS	N-CA-C	5.35	122.20	110.80
57	BY	6	HIS	CA-C-N	5.35	131.59	121.97
57	BY	6	HIS	C-N-CA	5.35	131.59	121.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	DP	10	PRO	CA-C-N	5.34	131.87	121.41
48	DP	10	PRO	C-N-CA	5.34	131.87	121.41
48	BP	51	PHE	CA-C-N	5.32	131.70	121.54
48	BP	51	PHE	C-N-CA	5.32	131.70	121.54
48	DP	47	ASP	CA-C-N	5.21	139.51	127.00
48	DP	47	ASP	C-N-CA	5.21	139.51	127.00
48	BP	51	PHE	N-CA-C	5.21	121.89	110.80
48	BP	54	GLY	N-CA-C	-5.14	101.00	113.18
42	DH	46	GLU	N-CA-C	5.13	117.07	107.99
45	DK	115	LEU	CA-C-N	5.11	131.29	121.54
45	DK	115	LEU	C-N-CA	5.11	131.29	121.54
35	BA	1301	A	C4'-C3'-O3'	5.07	117.00	109.40
57	BY	5	MET	CA-C-N	-5.06	113.70	122.10
57	BY	5	MET	C-N-CA	-5.06	113.70	122.10
52	BT	80	SER	N-CA-C	5.06	120.99	109.81
50	DR	5	LYS	N-CA-C	-5.04	100.08	110.80
26	B1	29	GLY	CA-C-N	5.03	131.02	121.97
26	B1	29	GLY	C-N-CA	5.03	131.02	121.97
35	DA	1992	G	C2'-C3'-O3'	5.02	117.03	109.50
48	DP	10	PRO	N-CA-C	-5.02	107.50	114.27
35	DA	1301	A	P-O3'-C3'	5.01	127.72	120.20

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
13	AM	118	ALA	Peptide
35	BA	2379	G	Sidechain
13	CM	118	ALA	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	850	0
1	CA	32329	0	16318	863	0
2	AB	1901	0	1951	126	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	CB	1901	0	1951	116	0
3	AC	1613	0	1677	89	0
3	CC	1613	0	1677	91	0
4	AD	1703	0	1763	113	0
4	CD	1703	0	1763	105	0
5	AE	1147	0	1207	53	0
5	CE	1147	0	1207	52	0
6	AF	843	0	857	52	0
6	CF	843	0	857	57	0
7	AG	1257	0	1296	45	0
7	CG	1257	0	1296	54	0
8	AH	1116	0	1177	52	0
8	CH	1116	0	1177	56	0
9	AI	1011	0	1042	80	0
9	CI	1011	0	1042	63	0
10	AJ	795	0	840	63	0
10	CJ	795	0	840	67	0
11	AK	885	0	904	39	0
11	CK	885	0	904	35	0
12	AL	971	0	1057	56	0
12	CL	971	0	1057	59	0
13	AM	988	0	1057	93	0
13	CM	988	0	1057	73	0
14	AN	492	0	530	24	0
14	CN	492	0	529	27	0
15	AO	734	0	771	28	0
15	CO	734	0	771	25	0
16	AP	701	0	720	42	0
16	CP	701	0	720	45	0
17	AQ	824	0	891	35	0
17	CQ	824	0	891	33	0
18	AR	574	0	644	33	0
18	CR	574	0	644	29	0
19	AS	630	0	652	33	0
19	CS	630	0	652	35	0
20	AT	763	0	861	27	0
20	CT	763	0	861	24	0
21	AU	209	0	221	15	0
21	CU	209	0	221	15	0
22	AV	1619	0	822	19	0
22	AW	1597	0	811	63	0
22	CV	1619	0	822	30	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	CW	1597	0	811	60	0
23	AX	166	0	87	3	0
23	CX	166	0	87	9	0
24	AY	2802	0	2818	113	0
24	CY	2802	0	2818	144	0
25	B0	657	0	683	36	0
25	D0	657	0	683	34	0
26	B1	732	0	808	38	0
26	D1	732	0	808	37	0
27	B2	598	0	653	46	0
27	D2	598	0	653	27	0
28	B3	468	0	523	20	0
28	D3	468	0	523	19	0
29	B4	226	0	229	18	0
29	D4	226	0	229	19	0
30	B5	459	0	477	26	0
30	D5	459	0	477	29	0
31	B6	381	0	390	46	0
31	D6	381	0	391	52	0
32	B7	419	0	467	13	0
32	D7	419	0	467	10	0
33	B8	508	0	576	43	0
33	D8	508	0	576	44	0
34	B9	299	0	323	15	0
34	D9	299	0	324	14	0
35	BA	62474	0	31495	1340	0
35	DA	62474	0	31497	1267	0
36	BB	2551	0	1295	55	0
36	DB	2551	0	1295	56	0
37	BC	937	0	957	65	0
37	DC	937	0	957	62	0
38	BD	2120	0	2197	121	0
38	DD	2120	0	2197	115	0
39	BE	1564	0	1629	81	0
39	DE	1564	0	1629	90	0
40	BF	1624	0	1677	86	0
40	DF	1624	0	1677	89	0
41	BG	1474	0	1534	123	0
41	DG	1474	0	1535	116	0
42	BH	1248	0	1289	60	0
42	DH	1248	0	1289	65	0
43	BI	1132	0	1218	47	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
43	DI	1132	0	1218	62	0
44	BJ	651	0	155	14	0
44	DJ	651	0	157	12	0
45	BK	1038	0	1089	77	0
45	DK	1038	0	1089	99	0
46	BN	1105	0	1180	49	0
46	DN	1105	0	1180	65	0
47	BO	933	0	996	42	0
47	DO	933	0	996	37	0
48	BP	1114	0	1187	135	0
48	DP	1114	0	1187	123	0
49	BQ	1122	0	1179	66	0
49	DQ	1122	0	1179	68	0
50	BR	960	0	1021	51	0
50	DR	960	0	1021	44	0
51	BS	771	0	832	55	0
51	DS	771	0	832	63	0
52	BT	1142	0	1202	88	0
52	DT	1142	0	1202	104	0
53	BU	958	0	1015	54	0
53	DU	958	0	1015	52	0
54	BV	779	0	852	49	0
54	DV	779	0	852	61	0
55	BW	896	0	953	29	0
55	DW	896	0	953	30	0
56	BX	726	0	778	31	0
56	DX	726	0	778	29	0
57	BY	776	0	870	90	0
57	DY	776	0	870	79	0
58	BZ	1468	0	1492	110	0
58	DZ	1468	0	1492	76	0
59	AA	30	0	0	0	0
59	B5	1	0	0	0	0
59	BA	180	0	0	0	0
59	BB	2	0	0	0	0
59	BD	1	0	0	0	0
59	BE	1	0	0	0	0
59	BF	1	0	0	0	0
59	BQ	1	0	0	0	0
59	BT	1	0	0	0	0
59	CA	26	0	0	0	0
59	D5	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
59	DA	221	0	0	0	0
59	DB	2	0	0	0	0
59	DD	2	0	0	0	0
59	DP	1	0	0	0	0
59	DU	1	0	0	0	0
59	DW	1	0	0	0	0
60	AD	1	0	0	0	0
60	AN	1	0	0	0	0
60	B9	1	0	0	0	0
60	CD	1	0	0	0	0
60	CN	1	0	0	0	0
60	D9	1	0	0	0	0
61	AA	2	0	0	1	0
61	BA	6	0	0	2	0
61	BE	1	0	0	0	0
61	DA	7	0	0	3	0
61	DE	1	0	0	1	0
61	DS	1	0	0	0	0
61	DZ	1	0	0	0	0
All	All	304459	0	208396	9411	0

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 19.

All (9411) 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)
57:BY:7:VAL:CB	57:BY:7:VAL:CG2	1.74	1.61
23:AX:20:G:N2	24:AY:203:THR:O	1.69	1.24
35:BA:1048:A:H62	35:BA:1052:C:N4	1.39	1.19
31:D6:35:GLU:HG3	31:D6:37:ARG:HH22	1.10	1.16
35:BA:1048:A:N6	35:BA:1052:C:H42	1.54	1.06
1:AA:78:G:N2	1:AA:91:C:O2	1.90	1.04
35:DA:1529:G:N7	35:DA:1541:G:N2	2.05	1.04
9:CI:4:TYR:HB2	9:CI:19:LEU:HB2	1.36	1.02
39:DE:111:ARG:HA	50:DR:2:ARG:HG2	1.41	1.01
35:DA:1048:A:H62	35:DA:1052:C:H42	1.09	1.00
35:BA:2098:U:H3	35:BA:2191:G:H1	1.04	1.00
22:CV:19:G:N2	22:CV:56:C:O2	1.95	0.99
35:DA:1899:G:N2	35:DA:1902:C:H41	1.60	0.98
36:DB:22:U:H3	36:DB:61:G:H1	1.00	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2867:G:OP2	52:BT:119:LYS:NZ	1.97	0.97
57:BY:95:LYS:HG3	57:BY:100:ALA:HA	1.46	0.97
31:D6:35:GLU:OE1	31:D6:37:ARG:NH1	1.96	0.97
35:BA:1422:G:H1	35:BA:1576:U:H3	1.03	0.97
35:BA:279:C:H42	35:BA:361:G:H1	1.12	0.96
36:BB:80:U:H2'	36:BB:81:G:H21	1.31	0.96
52:BT:25:GLY:HA2	52:BT:92:GLY:HA3	1.46	0.96
30:B5:55:ARG:HD3	30:B5:56:LYS:H	1.32	0.95
31:D6:35:GLU:HG3	31:D6:37:ARG:NH2	1.81	0.95
1:CA:410:G:H21	1:CA:432:A:H62	1.10	0.94
35:BA:1165:U:H3	35:BA:1184:G:H1	1.02	0.94
35:BA:2747:G:H21	35:BA:2757:A:H62	1.08	0.94
35:DA:2098:U:H3	35:DA:2191:G:H1	1.05	0.94
42:DH:41:MET:HG3	42:DH:42:ARG:H	1.31	0.94
57:DY:95:LYS:HG3	57:DY:100:ALA:HA	1.49	0.94
35:DA:1899:G:H22	35:DA:1902:C:H41	0.97	0.93
35:BA:676:A:H8	35:BA:2069:G:H21	1.01	0.93
46:DN:47:ALA:HB2	46:DN:112:LEU:HD11	1.51	0.93
57:DY:7:VAL:HB	57:DY:8:LYS:HD2	1.50	0.93
24:AY:115:ASN:HD22	24:AY:170:LEU:HD11	1.30	0.93
1:AA:1029:C:HO2'	1:AA:1033:G:H1	1.16	0.92
43:BI:131:LYS:HA	43:BI:135:GLU:HG2	1.50	0.92
22:CW:30:G:N2	22:CW:40:C:O2	2.02	0.92
35:DA:1042:G:H1	35:DA:1113:U:H3	0.96	0.92
35:BA:259:G:H21	35:BA:621:A:H8	1.16	0.92
35:DA:2100:G:H1	35:DA:2189:U:H3	0.96	0.92
5:AE:102:ALA:HB1	5:AE:106:PRO:HG2	1.52	0.92
1:AA:932:C:H5"	7:AG:3:ARG:HD2	1.50	0.92
22:CW:6:G:H21	22:CW:7:A:H62	1.17	0.91
40:DF:53:THR:HG23	40:DF:55:GLY:H	1.34	0.91
30:D5:55:ARG:HD3	30:D5:56:LYS:H	1.34	0.91
3:AC:150:LYS:HB3	3:AC:201:TYR:HB2	1.52	0.91
24:AY:182:PRO:O	24:AY:325:ARG:NH2	2.04	0.90
35:BA:272(G):C:H42	35:BA:363(C):G:H1	1.17	0.90
35:BA:336:C:HO2'	57:BY:35:TYR:HH	1.18	0.90
48:DP:16:ARG:HH22	48:DP:18:ARG:HG2	1.34	0.90
33:D8:62:LEU:HD13	35:DA:242:G:H5"	1.52	0.90
35:BA:132:G:H1	35:BA:147:U:H3	1.10	0.90
1:AA:376:G:H1	1:AA:387:U:H3	1.20	0.90
35:DA:529:A:H62	35:DA:2041:U:H3	1.18	0.90
35:BA:2784:C:H1'	39:BE:37:ARG:HH12	1.34	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:79:VAL:HG21	38:BD:111:LEU:HD11	1.52	0.90
10:AJ:63:PHE:HD1	14:AN:58:LYS:HA	1.37	0.90
35:BA:2852:G:H1	35:BA:2865:U:H3	1.16	0.90
1:CA:137:C:H42	1:CA:226:G:H1	1.17	0.89
23:CX:20:G:N2	24:CY:203:THR:O	2.05	0.89
35:BA:1068:G:HO2'	35:BA:1096:A:HO2'	1.17	0.89
35:DA:2305:A:H5"	41:DG:134:GLY:HA3	1.53	0.88
42:BH:41:MET:HG3	42:BH:42:ARG:H	1.38	0.88
35:BA:2681:C:H5	35:BA:2725:A:H62	1.21	0.88
35:DA:2867:G:OP2	52:DT:119:LYS:NZ	2.06	0.88
35:DA:1171:G:H3'	35:DA:1173:G:H4'	1.55	0.88
35:DA:2099:U:H3	35:DA:2190:G:H1	0.88	0.88
41:DG:47:LYS:HB3	41:DG:88:ILE:HD11	1.56	0.88
1:CA:1006:C:H42	1:CA:1024:G:H21	1.22	0.87
22:CV:74:C:OP2	24:CY:266:ARG:NH1	2.07	0.87
1:AA:1401:G:H1	1:AA:1501:C:H42	1.20	0.87
1:CA:927:G:H1	1:CA:1390:U:H3	1.18	0.87
35:BA:2245:U:H5'	35:BA:2246:G:H5'	1.55	0.87
40:BF:53:THR:HG23	40:BF:55:GLY:H	1.39	0.87
37:BC:54:ARG:HB3	37:BC:57:GLN:HB3	1.57	0.87
54:BV:1:MET:HE1	54:BV:43:GLU:HG2	1.56	0.87
35:DA:271(D):G:H1	35:DA:271(T):C:H42	1.20	0.87
35:DA:2178:C:H4'	37:DC:47:LYS:HD3	1.55	0.87
40:DF:24:LEU:HB3	40:DF:25:PRO:HD2	1.57	0.87
38:DD:79:VAL:HG21	38:DD:111:LEU:HD11	1.55	0.87
2:CB:172:ILE:H	2:CB:172:ILE:HD12	1.40	0.86
35:DA:2788:C:O2'	35:DA:2809:A:N3	2.08	0.86
35:BA:1852:C:O2	35:BA:1890:A:N6	2.08	0.86
54:BV:62:LEU:HD21	54:BV:95:LEU:HB2	1.55	0.86
22:CV:19:G:N1	22:CV:56:C:N3	2.23	0.86
35:DA:2245:U:H5'	35:DA:2246:G:H5'	1.55	0.86
33:B8:13:ARG:HB3	48:BP:63:PRO:HB3	1.58	0.86
1:CA:501:C:OP1	12:CL:117:ARG:NH2	2.09	0.86
9:CI:26:VAL:HG22	9:CI:61:ALA:HB3	1.58	0.86
40:DF:3:GLU:HA	40:DF:24:LEU:HG	1.57	0.86
1:AA:925:G:H1	1:AA:1391:U:H3	1.18	0.86
22:CW:19:G:H22	22:CW:56:C:H42	1.23	0.86
54:DV:19:LYS:HZ2	54:DV:20:LEU:H	1.23	0.86
35:BA:1036:G:N2	35:BA:1119:C:O2	2.07	0.86
4:AD:128:VAL:HG12	4:AD:129:ASN:H	1.40	0.86
1:AA:1342:C:H4'	9:AI:125:TYR:HB3	1.57	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:172:ILE:HD12	2:AB:172:ILE:H	1.39	0.85
33:D8:13:ARG:HB3	48:DP:63:PRO:HB3	1.57	0.85
58:DZ:81:ARG:HB3	58:DZ:81:ARG:HH11	1.41	0.85
30:B5:16:ARG:NH2	35:BA:517:C:OP1	2.08	0.85
35:BA:654(E):G:N1	35:BA:654(P):C:O2	2.09	0.85
35:DA:1451:C:N4	35:DA:1459:G:O6	2.09	0.85
48:DP:144:GLU:H	48:DP:145:PRO:HD3	1.41	0.85
54:DV:62:LEU:HD21	54:DV:95:LEU:HB2	1.58	0.85
35:BA:1607:C:N4	35:BA:1622:G:OP2	2.10	0.85
1:CA:410:G:N2	1:CA:432:A:H62	1.75	0.85
1:AA:346:G:OP1	52:BT:41:ARG:NH1	2.09	0.85
35:BA:631:A:OP1	48:BP:64:LYS:NZ	2.08	0.85
51:BS:58:LEU:HD23	51:BS:65:VAL:HG13	1.57	0.84
9:AI:42:ARG:NH1	9:AI:71:SER:OG	2.09	0.84
51:BS:17:ARG:HH21	51:BS:90:GLY:H	1.25	0.84
57:DY:46:LYS:H	57:DY:62:GLU:HB2	1.42	0.84
22:CW:7:A:N6	22:CW:67:C:O2	2.09	0.84
1:CA:107:G:N7	20:CT:15:ARG:NH2	2.25	0.84
51:DS:13:ARG:HG3	51:DS:14:VAL:H	1.42	0.84
3:AC:153:VAL:HG22	3:AC:198:VAL:HG12	1.60	0.84
4:CD:128:VAL:HG12	4:CD:129:ASN:H	1.41	0.84
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	1.59	0.84
42:DH:12:PRO:HD2	42:DH:49:VAL:HA	1.58	0.84
46:BN:47:ALA:HB2	46:BN:112:LEU:HD11	1.58	0.84
35:DA:2068:U:H3	35:DA:2430:A:H2	1.23	0.84
37:DC:8:TYR:HE1	37:DC:221:PRO:HB3	1.43	0.83
4:CD:59:ARG:HA	4:CD:59:ARG:HE	1.43	0.83
35:DA:676:A:H8	35:DA:2069:G:H21	1.25	0.83
3:AC:14:ILE:HG12	3:AC:15:THR:H	1.43	0.83
35:BA:1485:G:N2	35:BA:1504:C:O2	2.12	0.83
35:BA:2100:G:H1	35:BA:2189:U:H3	1.23	0.83
40:BF:24:LEU:HB3	40:BF:25:PRO:HD2	1.58	0.83
1:CA:617:G:H1	1:CA:623:C:H42	1.25	0.83
35:BA:65:C:O2	35:BA:456:C:N4	2.10	0.83
37:BC:57:GLN:HE21	37:BC:205:ALA:HA	1.42	0.83
35:BA:1686:C:H42	35:BA:1702:G:H1	1.26	0.83
48:BP:144:GLU:H	48:BP:145:PRO:HD3	1.42	0.83
37:DC:42:VAL:HG22	37:DC:217:THR:HG22	1.59	0.83
43:BI:49:ALA:HA	43:BI:52:ARG:HG2	1.61	0.83
1:CA:452:A:H62	1:CA:480:U:H3	1.26	0.83
35:DA:848:G:H2'	35:DA:849:A:H8	1.43	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:97:GLU:HG2	58:DZ:125:LEU:HD21	1.61	0.83
55:DW:92:ARG:HB3	55:DW:92:ARG:HH11	1.42	0.83
51:BS:13:ARG:HG3	51:BS:14:VAL:H	1.41	0.83
38:DD:44:ASN:HB3	38:DD:49:ILE:HA	1.61	0.83
35:BA:2285:C:O2	35:BA:2383:G:N2	2.12	0.82
37:BC:8:TYR:HE1	37:BC:221:PRO:HB3	1.43	0.82
1:CA:110:C:O2'	16:CP:25:ARG:O	1.97	0.82
3:CC:32:LEU:HB3	3:CC:59:ARG:HH22	1.45	0.82
56:DX:12:VAL:HB	56:DX:17:ALA:HB1	1.61	0.82
35:DA:2101:G:N2	35:DA:2188:C:O2	2.11	0.82
35:BA:1485:G:N1	35:BA:1504:C:N3	2.27	0.82
3:CC:59:ARG:HG2	3:CC:64:VAL:HA	1.59	0.82
48:BP:16:ARG:HH12	48:BP:18:ARG:HB2	1.44	0.82
12:AL:89:ARG:HA	12:AL:97:ARG:HA	1.60	0.82
35:BA:848:G:H2'	35:BA:849:A:H8	1.45	0.82
2:CB:33:TYR:HB2	2:CB:43:ASP:HB2	1.61	0.82
12:CL:89:ARG:HA	12:CL:97:ARG:HA	1.60	0.82
27:D2:2:LYS:HB3	35:DA:97:C:H5"	1.60	0.82
35:DA:1056:G:N2	35:DA:1102:C:OP1	2.12	0.82
45:BK:91:PRO:O	58:BZ:112:ARG:NH1	2.12	0.82
5:CE:50:GLU:HG3	5:CE:52:PRO:HD2	1.61	0.82
35:BA:1899:G:H22	35:BA:1902:C:H41	1.28	0.82
36:BB:21:G:O2'	36:BB:22:U:O4'	1.97	0.82
2:CB:69:LEU:HD23	2:CB:159:PRO:HG2	1.62	0.82
35:DA:1747(A):G:H2'	35:DA:1748:G:H5"	1.60	0.82
35:BA:1095:A:N6	45:BK:29:GLN:OE1	2.13	0.82
56:BX:12:VAL:HB	56:BX:17:ALA:HB1	1.61	0.82
1:CA:189:G:H1	1:CA:189(K):U:H3	1.28	0.82
1:CA:191:G:C4	20:CT:105:SER:HB3	2.13	0.82
1:CA:1128:C:O2'	1:CA:1130:A:N7	2.12	0.81
35:BA:1747(A):G:H2'	35:BA:1748:G:H5"	1.62	0.81
3:CC:150:LYS:HB3	3:CC:201:TYR:HB2	1.60	0.81
35:BA:885:C:O2	35:BA:890:A:N6	2.14	0.81
41:BG:46:ALA:HB2	41:BG:88:ILE:HD11	1.59	0.81
45:BK:21:PRO:HB2	45:BK:22:PRO:HD3	1.63	0.81
58:BZ:151:HIS:HB2	58:BZ:170:THR:HA	1.62	0.81
45:DK:1:MET:HG2	45:DK:70:LYS:HZ3	1.44	0.81
57:DY:10:GLY:HA2	57:DY:27:VAL:HG13	1.59	0.81
35:DA:1217:C:OP2	53:DU:15:LYS:NZ	2.12	0.81
1:CA:833:U:H3	1:CA:853:G:H1	1.27	0.81
38:DD:165:ILE:HD13	38:DD:175:LEU:HD21	1.62	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BW:92:ARG:HB3	55:BW:92:ARG:HH11	1.44	0.81
35:BA:847:U:O4	35:BA:933:A:N6	2.14	0.81
35:BA:881:G:H1	35:BA:895:U:H3	1.26	0.81
48:BP:7:ARG:NH1	48:BP:7:ARG:HA	1.96	0.81
2:CB:185:ILE:HG22	2:CB:199:TYR:HB2	1.63	0.81
1:AA:617:G:H1	1:AA:623:C:H42	1.26	0.81
35:BA:2787:C:O2	39:BE:61:ARG:NH1	2.14	0.81
37:DC:191:ARG:HB3	37:DC:195:ARG:HH12	1.45	0.81
2:AB:224:GLN:HA	2:AB:229:VAL:HG22	1.62	0.81
48:BP:38:GLN:HG3	48:BP:39:LYS:H	1.44	0.81
26:D1:50:ARG:HG2	26:D1:59:THR:HG22	1.63	0.81
35:DA:1332:G:N2	35:DA:1609:A:O2'	2.14	0.81
26:B1:50:ARG:HG2	26:B1:59:THR:HG22	1.62	0.80
57:BY:7:VAL:HB	57:BY:8:LYS:HD2	1.63	0.80
36:BB:20:C:H2'	36:BB:21:G:H5"	1.62	0.80
4:AD:59:ARG:HA	4:AD:59:ARG:HE	1.46	0.80
35:DA:1106:G:O6	35:DA:1107:G:N2	2.13	0.80
13:CM:39:ILE:HD12	13:CM:56:LEU:HD23	1.63	0.80
35:DA:1980:G:O2'	35:DA:1982:C:OP2	1.99	0.80
57:DY:76:CYS:SG	57:DY:77:PRO:HD2	2.22	0.80
1:AA:833:U:H3	1:AA:853:G:H1	1.27	0.80
3:AC:156:ARG:NH2	3:AC:159:GLY:O	2.15	0.80
52:BT:3:ARG:HB2	52:BT:6:LEU:HB3	1.63	0.80
35:BA:2101:G:N2	35:BA:2188:C:O2	2.14	0.80
7:CG:77:SER:HA	7:CG:86:GLN:HA	1.63	0.80
35:DA:819:A:OP2	35:DA:1187:G:N2	2.13	0.80
35:DA:2134:A:N6	35:DA:2157:G:O2'	2.15	0.80
52:DT:25:GLY:HA2	52:DT:92:GLY:HA3	1.62	0.80
1:AA:666:G:H1	1:AA:740:U:H3	1.27	0.80
3:CC:58:GLU:HB2	3:CC:65:ALA:HB3	1.63	0.80
58:DZ:28:MET:HE3	58:DZ:37:VAL:HG11	1.63	0.80
1:AA:1226:C:OP2	13:AM:103:THR:OG1	2.00	0.80
35:BA:996:A:OP2	53:BU:92:ARG:NH2	2.13	0.80
19:CS:32:LYS:HA	19:CS:50:ALA:HB3	1.64	0.80
41:DG:115:ARG:HH22	41:DG:136:ARG:HD2	1.45	0.80
6:AF:1:MET:HB3	6:AF:66:GLU:HG2	1.63	0.80
47:BO:80:ASP:OD2	52:BT:64:ARG:NH2	2.14	0.80
3:CC:6:HIS:HD2	3:CC:7:PRO:HD2	1.46	0.80
1:AA:1129:C:N4	1:AA:1135:U:O4	2.16	0.79
8:AH:97:VAL:HG21	8:AH:128:GLY:HA2	1.64	0.79
31:B6:28:ARG:HA	31:B6:32:ASN:HD22	1.45	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DK:21:PRO:HB2	45:DK:22:PRO:HD3	1.63	0.79
46:DN:58:ASP:O	46:DN:60:ILE:N	2.15	0.79
35:DA:1689:A:H62	35:DA:1698:A:H2	1.26	0.79
9:AI:10:ARG:NH2	9:AI:107:ARG:O	2.14	0.79
35:BA:1411:C:N3	35:BA:1591:G:N1	2.29	0.79
4:CD:13:ARG:NH1	4:CD:38:TYR:O	2.15	0.79
53:DU:88:ILE:HG22	54:DV:47:VAL:HG23	1.63	0.79
35:DA:631:A:OP1	48:DP:64:LYS:NZ	2.15	0.79
35:DA:271(E):U:H3	35:DA:271(S):G:H1	1.29	0.79
13:AM:93:ARG:HD3	35:BA:888:C:H5'	1.65	0.79
35:BA:1568:G:H5"	38:BD:61:LEU:HD23	1.64	0.79
58:DZ:69:THR:HG22	58:DZ:90:VAL:HA	1.65	0.79
40:BF:40:GLN:HE22	40:BF:182:ASN:HB2	1.48	0.79
39:DE:119:ARG:NH1	39:DE:156:MET:O	2.16	0.79
1:CA:189(C):C:O2	1:CA:189(H):G:N2	2.16	0.79
3:CC:14:ILE:HG12	3:CC:15:THR:H	1.47	0.79
13:CM:3:ARG:HH21	13:CM:7:VAL:HG22	1.48	0.79
57:DY:28:LYS:HZ2	57:DY:37:VAL:HG11	1.48	0.79
1:CA:1189:C:OP1	10:CJ:51:ARG:NH2	2.16	0.79
1:CA:1363(A):A:H4'	1:CA:1364:U:H5"	1.63	0.79
1:CA:1392:G:H21	1:CA:1502:A:H8	1.31	0.79
1:AA:945:G:N2	1:AA:1334:G:O2'	2.16	0.78
35:BA:2747:G:N2	35:BA:2757:A:H62	1.80	0.78
38:BD:44:ASN:HB3	38:BD:49:ILE:HA	1.65	0.78
42:BH:12:PRO:HD2	42:BH:49:VAL:HA	1.65	0.78
33:D8:30:ARG:HA	33:D8:30:ARG:HE	1.47	0.78
1:AA:1165:C:O2	1:AA:1171:G:N2	2.13	0.78
35:BA:1529:G:O6	35:BA:1541:G:N1	2.16	0.78
35:BA:1538:G:H2'	35:BA:1539:G:C8	2.18	0.78
1:AA:976:G:N2	1:AA:1363:C:OP2	2.15	0.78
35:BA:1678:G:H22	35:BA:1989:G:H22	1.31	0.78
36:BB:21:G:O6	36:BB:62:C:N4	2.16	0.78
52:BT:35:LYS:O	52:BT:38:ASN:ND2	2.16	0.78
40:DF:25:PRO:HB3	40:DF:119:ARG:HD3	1.65	0.78
40:BF:103:LYS:HA	40:BF:106:ARG:HG3	1.63	0.78
41:BG:44:GLY:HA2	41:BG:88:ILE:HB	1.64	0.78
57:BY:46:LYS:H	57:BY:62:GLU:HB2	1.48	0.78
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.65	0.78
9:AI:4:TYR:HB2	9:AI:19:LEU:HB2	1.66	0.78
2:AB:91:PRO:HG3	2:AB:154:LEU:HB2	1.64	0.78
35:BA:2327:A:H2'	35:BA:2328:A:C8	2.19	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:152:A:H62	1:CA:169:C:H42	1.31	0.78
35:DA:848:G:H2'	35:DA:849:A:C8	2.19	0.78
35:BA:2115:G:N3	35:BA:2117:A:N6	2.32	0.78
2:AB:18:GLY:O	2:AB:204:ASN:ND2	2.17	0.78
1:CA:673:G:H2'	1:CA:674:G:C8	2.19	0.78
48:DP:38:GLN:HG3	48:DP:39:LYS:H	1.49	0.78
47:BO:49:ARG:H	47:BO:49:ARG:HD3	1.47	0.78
9:CI:13:ALA:HB2	9:CI:68:GLY:HA3	1.66	0.78
24:CY:23:GLU:HA	24:CY:26:LEU:HG	1.66	0.78
35:BA:2843:G:H1	35:BA:2874:C:H42	1.32	0.77
1:CA:668:G:H4'	15:CO:48:LYS:HB2	1.67	0.77
1:AA:1363(A):A:H4'	1:AA:1364:U:H5"	1.66	0.77
41:BG:72:ARG:HD3	41:BG:86:MET:HA	1.65	0.77
49:BQ:14:ARG:HG2	49:BQ:41:TRP:HH2	1.48	0.77
1:CA:932:C:H5"	7:CG:3:ARG:HD2	1.64	0.77
35:DA:907:U:O2'	49:DQ:101:ARG:NH2	2.17	0.77
22:AW:62:C:H4'	37:BC:53:ARG:HG3	1.65	0.77
35:DA:1852:C:O2	35:DA:1890:A:N6	2.16	0.77
35:DA:2681:C:H5	35:DA:2725:A:H62	1.28	0.77
4:AD:3:ARG:NH2	4:AD:118:ARG:HD3	1.98	0.77
35:DA:1568:G:H5"	38:DD:61:LEU:HD23	1.66	0.77
35:DA:2121:G:N1	35:DA:2178:C:O2	2.17	0.77
54:DV:19:LYS:HG2	54:DV:94:LEU:HB2	1.67	0.77
58:DZ:53:ILE:HG22	58:DZ:71:VAL:HG12	1.64	0.77
35:BA:281:G:H21	35:BA:359:A:H62	1.33	0.77
1:CA:990:C:O2	1:CA:1215:G:N2	2.14	0.77
1:CA:1004:A:O2'	1:CA:1038:C:N3	2.17	0.77
22:CW:15:G:N2	22:CW:59:U:O2	2.18	0.77
43:DI:88:ILE:HG22	43:DI:90:GLY:H	1.50	0.77
1:CA:714:G:H2'	1:CA:715:A:C8	2.19	0.77
45:DK:27:LEU:HD13	45:DK:57:ILE:HD13	1.66	0.77
1:AA:939:G:H5"	7:AG:102:ARG:HH22	1.50	0.77
1:AA:1376:U:OP1	7:AG:98:SER:OG	2.02	0.77
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.49	0.77
37:BC:7:ARG:NH2	37:BC:219:MET:O	2.15	0.77
38:BD:24:ILE:HG23	38:BD:25:THR:H	1.50	0.77
45:BK:4:VAL:HG22	45:BK:5:VAL:H	1.50	0.77
1:CA:408:A:OP2	4:CD:115:ARG:NH2	2.18	0.77
33:D8:25:MET:HG3	48:DP:64:LYS:HB3	1.67	0.77
35:DA:1040:C:N4	35:DA:1115:G:O6	2.17	0.77
40:DF:63:LYS:NZ	40:DF:75:HIS:O	2.18	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:101:VAL:HB	48:DP:107:LYS:HA	1.65	0.77
10:AJ:26:ALA:HA	10:AJ:29:ARG:HH12	1.49	0.77
35:BA:654(S):G:H2'	35:BA:654(T):C:C6	2.20	0.77
10:AJ:27:ALA:HB2	10:AJ:85:LEU:HD11	1.67	0.77
26:B1:73:LEU:HD11	26:B1:95:LEU:HD23	1.66	0.77
35:BA:2876:G:H4'	52:BT:3:ARG:HE	1.48	0.77
2:CB:80:ILE:H	2:CB:80:ILE:HD12	1.49	0.77
30:D5:4:HIS:HB3	30:D5:5:PRO:CD	2.15	0.77
32:D7:22:MET:O	32:D7:28:ARG:NH1	2.18	0.77
24:AY:188:ARG:HD3	24:AY:310:GLN:HE21	1.50	0.77
41:BG:72:ARG:HB3	41:BG:87:PRO:HD2	1.68	0.77
41:DG:51:ARG:HA	41:DG:51:ARG:HE	1.49	0.77
35:BA:1451:C:N4	35:BA:1459:G:O6	2.16	0.76
37:DC:42:VAL:HA	37:DC:217:THR:HA	1.67	0.76
45:DK:4:VAL:HG22	45:DK:5:VAL:H	1.50	0.76
1:AA:1126:U:OP2	1:AA:1281:U:N3	2.17	0.76
5:AE:92:LYS:HB3	5:AE:119:LEU:HB2	1.65	0.76
35:DA:1798:U:H5'	38:DD:259:THR:HG22	1.65	0.76
41:DG:115:ARG:HG3	41:DG:116:ASP:H	1.49	0.76
30:D5:46:CYS:SG	55:DW:38:TYR:OH	2.41	0.76
16:CP:18:ARG:HD3	16:CP:35:LYS:HE3	1.67	0.76
2:AB:166:ASP:HB3	2:AB:169:LYS:HB2	1.66	0.76
35:BA:1411:C:O2	35:BA:1591:G:N2	2.19	0.76
57:BY:8:LYS:HE3	57:BY:74:PRO:HD3	1.67	0.76
35:DA:1044:G:O2'	35:DA:1111:A:N6	2.18	0.76
35:DA:1858:G:O2'	35:DA:1884:A:N6	2.18	0.76
35:DA:2093:G:H1	35:DA:2196:C:H42	1.33	0.76
36:DB:37:C:O2	51:DS:95:HIS:NE2	2.18	0.76
52:DT:20:PRO:HD2	52:DT:85:LYS:HB2	1.66	0.76
51:DS:30:ARG:HH22	51:DS:62:LYS:HD2	1.48	0.76
1:AA:1189:C:OP1	10:AJ:51:ARG:NH2	2.17	0.76
1:AA:922:G:H4'	5:AE:20:GLN:HA	1.67	0.76
12:AL:18:VAL:HG23	12:AL:19:ARG:H	1.50	0.76
35:BA:2314:C:H2'	35:BA:2315:G:H8	1.50	0.76
52:BT:28:VAL:HG22	52:BT:46:GLU:HA	1.68	0.76
1:AA:673:G:H2'	1:AA:674:G:C8	2.21	0.76
35:BA:1332:G:N2	35:BA:1609:A:O2'	2.18	0.76
35:BA:1636:C:H2'	35:BA:1637:A:C8	2.20	0.76
43:BI:113:ARG:O	43:BI:131:LYS:HB2	1.86	0.76
35:DA:1094:U:H1'	35:DA:1097:U:H5	1.51	0.76
43:DI:112:LYS:H	43:DI:112:LYS:HD2	1.50	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:80:SER:HB3	52:DT:81:PRO:HD3	1.66	0.76
6:AF:30:LEU:HB2	6:AF:35:ALA:HB3	1.68	0.75
15:CO:16:ALA:HB1	15:CO:21:ASP:HB3	1.67	0.75
1:AA:6:G:H4'	1:AA:298:A:H4'	1.68	0.75
1:AA:1386:G:H2'	1:AA:1387:G:H8	1.52	0.75
35:DA:996:A:OP2	53:DU:92:ARG:NH2	2.19	0.75
52:DT:65:LYS:NZ	52:DT:66:VAL:O	2.20	0.75
35:BA:1359:A:H62	35:BA:1372:U:H3	1.31	0.75
35:BA:1798:U:H5'	38:BD:259:THR:HG22	1.65	0.75
1:AA:1005:A:O4'	1:AA:1036:G:N2	2.19	0.75
1:AA:1055:A:N7	1:AA:1200:C:N4	2.34	0.75
43:BI:1:MET:N	43:BI:20:ASP:OD1	2.18	0.75
28:B3:6:VAL:HB	28:B3:54:VAL:HG11	1.67	0.75
35:BA:413:C:H42	35:BA:2410:G:H1	1.33	0.75
35:BA:1245:G:OP1	48:BP:16:ARG:NE	2.19	0.75
41:BG:96:ARG:HG2	41:BG:97:ASP:H	1.49	0.75
22:CW:27:G:H1	22:CW:43:C:H42	1.31	0.75
35:DA:252:G:OP2	48:DP:50:ARG:NH1	2.20	0.75
1:AA:1178:G:OP2	9:AI:97:LYS:NZ	2.19	0.75
30:B5:2:ALA:HA	35:BA:2015:A:H1'	1.66	0.75
2:CB:112:VAL:C	2:CB:114:ARG:H	1.95	0.75
35:DA:654(E):G:N1	35:DA:654(P):C:O2	2.20	0.75
35:DA:2660:A:H5'	35:DA:2661:G:N2	2.02	0.75
38:DD:24:ILE:HG23	38:DD:25:THR:H	1.52	0.75
46:BN:67:LEU:HD23	46:BN:87:LEU:HD13	1.67	0.75
35:BA:2150:U:H2'	35:BA:2151:G:H8	1.51	0.75
13:AM:90:LEU:C	13:AM:92:HIS:H	1.94	0.75
35:BA:1899:G:H22	35:BA:1902:C:N4	1.84	0.75
35:BA:1980:G:O2'	35:BA:1982:C:OP2	2.05	0.75
35:BA:2075:U:OP2	35:BA:2238:G:O2'	2.04	0.75
3:CC:16:ARG:HB2	3:CC:16:ARG:NH1	2.02	0.75
3:CC:156:ARG:NH2	3:CC:159:GLY:O	2.20	0.75
35:BA:2683:C:OP1	52:BT:53:ARG:NH2	2.20	0.74
47:BO:35:VAL:HG11	47:BO:103:ALA:HB3	1.69	0.74
18:CR:56:THR:HB	18:CR:58:LEU:HD13	1.70	0.74
35:DA:1598:C:H5'	56:DX:36:LYS:HB2	1.68	0.74
57:DY:42:VAL:HG21	57:DY:67:LEU:HD13	1.69	0.74
58:DZ:49:ARG:HG2	58:DZ:49:ARG:HH11	1.50	0.74
7:AG:73:MET:HG2	7:AG:90:GLU:HA	1.67	0.74
30:B5:33:CYS:HB2	30:B5:40:LYS:HE3	1.69	0.74
34:D9:22:ARG:NH2	35:DA:2741:A:OP1	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:768:G:O2'	35:DA:1379:A:N6	2.20	0.74
35:DA:1540:U:H3'	35:DA:1541:G:H3'	1.69	0.74
22:AW:52:G:H2'	22:AW:53:G:C8	2.22	0.74
24:AY:130:CYS:HB3	24:AY:164:ILE:H	1.51	0.74
35:BA:271(D):G:H1	35:BA:271(T):C:H42	1.35	0.74
35:DA:1065:U:O2	35:DA:1073:A:N6	2.19	0.74
35:BA:819:A:OP2	35:BA:1187:G:N2	2.20	0.74
52:BT:80:SER:HB3	52:BT:81:PRO:HD3	1.69	0.74
35:DA:587:C:OP2	48:DP:33:ARG:NH2	2.20	0.74
3:AC:6:HIS:HD2	3:AC:7:PRO:HD2	1.53	0.74
3:AC:16:ARG:NH1	3:AC:16:ARG:HB2	2.03	0.74
10:AJ:16:LEU:HD23	10:AJ:94:VAL:HG13	1.69	0.74
39:BE:111:ARG:HB2	39:BE:160:TYR:O	1.88	0.74
45:BK:76:TYR:O	45:BK:79:ARG:HG3	1.88	0.74
4:CD:3:ARG:NH2	4:CD:118:ARG:HD3	2.02	0.74
35:DA:1048:A:N6	35:DA:1108:U:O4	2.16	0.74
37:DC:54:ARG:HB3	37:DC:57:GLN:HB3	1.69	0.74
39:BE:64:LYS:C	39:BE:66:HIS:H	1.95	0.74
1:CA:80:G:H22	1:CA:90:U:H5"	1.52	0.74
48:DP:16:ARG:HH12	48:DP:18:ARG:HB2	1.52	0.74
40:BF:125:LEU:HD23	40:BF:125:LEU:H	1.53	0.74
2:CB:233:SER:HB2	2:CB:234:PRO:HD2	1.68	0.74
41:DG:64:THR:HG23	41:DG:66:GLN:H	1.53	0.74
52:DT:23:ARG:O	52:DT:25:GLY:N	2.21	0.74
54:DV:15:GLU:HB3	54:DV:16:PRO:HD2	1.70	0.74
35:BA:494:G:O2'	55:BW:5:ALA:O	2.05	0.74
1:CA:737:A:H2'	1:CA:738:C:C6	2.23	0.74
36:DB:80:U:H2'	36:DB:81:G:H21	1.53	0.74
46:DN:99:LEU:HD12	46:DN:122:VAL:HG21	1.70	0.74
1:AA:15:G:H1	1:AA:920:U:H3	1.35	0.74
38:BD:10:THR:HG23	38:BD:13:ARG:HB3	1.70	0.74
45:BK:77:LEU:HD12	45:BK:111:LYS:HE2	1.68	0.74
1:CA:1003:G:O2'	1:CA:1039:C:N3	2.20	0.74
2:AB:136:VAL:O	2:AB:140:HIS:HB2	1.88	0.74
7:AG:77:SER:HA	7:AG:86:GLN:HA	1.69	0.74
35:BA:2470:G:OP1	49:BQ:56:ARG:NH2	2.21	0.74
35:DA:2101:G:N1	35:DA:2188:C:N3	2.35	0.74
1:AA:1305:G:O2'	1:AA:1331:G:N2	2.21	0.73
38:BD:71:ASP:HB2	38:BD:103:ARG:HH22	1.53	0.73
24:CY:72:LEU:HD13	24:CY:91:LEU:HG	1.69	0.73
35:DA:65:C:O2	35:DA:456:C:N4	2.18	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:106:ARG:NH1	51:DS:106:ARG:HB3	2.02	0.73
52:DT:29:ARG:HG3	52:DT:30:VAL:HG13	1.70	0.73
6:AF:10:LEU:HD13	6:AF:61:LEU:HD13	1.69	0.73
24:AY:265:THR:OG1	24:AY:271:ASN:OD1	2.05	0.73
52:DT:35:LYS:O	52:DT:38:ASN:ND2	2.21	0.73
1:AA:413:G:N2	1:AA:429:U:OP2	2.20	0.73
2:AB:178:ARG:HB2	2:AB:178:ARG:HH11	1.54	0.73
16:AP:45:THR:HG22	16:AP:47:ASP:H	1.54	0.73
1:CA:410:G:H21	1:CA:432:A:N6	1.83	0.73
1:CA:790:A:OP1	22:CV:38:A:O2'	2.05	0.73
34:D9:15:LYS:HE2	34:D9:17:ILE:HD11	1.69	0.73
35:DA:810:U:O2'	48:DP:33:ARG:NH1	2.21	0.73
55:DW:1:MET:HE3	55:DW:2:GLU:H	1.52	0.73
35:BA:140:G:H1'	35:BA:141:A:H2	1.52	0.73
35:BA:823:G:H2'	35:BA:824:A:H8	1.53	0.73
35:BA:1048:A:H62	35:BA:1052:C:H42	0.75	0.73
35:BA:1403:C:H5"	35:BA:1471:A:H1'	1.70	0.73
4:CD:13:ARG:O	4:CD:15:GLU:N	2.21	0.73
35:DA:1071:G:N1	35:DA:1091:G:O6	2.16	0.73
32:B7:22:MET:O	32:B7:28:ARG:NH1	2.21	0.73
51:BS:28:VAL:HB	51:BS:89:ARG:HB2	1.67	0.73
35:DA:2132:U:H3	37:DC:6:LYS:NZ	1.85	0.73
2:AB:194:PRO:O	2:AB:196:LEU:N	2.22	0.73
9:AI:53:VAL:HG23	9:AI:55:ALA:H	1.54	0.73
1:CA:1219:U:OP1	14:CN:19:ARG:NH2	2.20	0.73
35:DA:1473:G:O6	35:DA:1519:G:N2	2.22	0.73
35:BA:1658:C:OP1	39:BE:132:HIS:ND1	2.22	0.73
43:BI:127:VAL:HG22	43:BI:139:GLN:HA	1.69	0.73
57:BY:50:ARG:HB2	57:BY:57:GLN:HA	1.71	0.73
35:DA:654(J):A:N7	35:DA:654(N):G:N2	2.37	0.73
35:DA:2150:U:H2'	35:DA:2151:G:H8	1.52	0.73
47:DO:49:ARG:HD3	47:DO:49:ARG:H	1.53	0.73
35:BA:994:C:OP1	53:BU:53:ARG:NH2	2.21	0.73
38:DD:182:LEU:H	38:DD:272:ALA:HB3	1.53	0.73
1:AA:921:U:O2'	5:AE:19:MET:O	2.07	0.73
1:AA:1384:C:H2'	1:AA:1385:G:H8	1.54	0.73
30:D5:33:CYS:HB2	30:D5:40:LYS:HE3	1.70	0.73
13:AM:124:PRO:HB3	24:AY:158:PRO:HA	1.69	0.73
16:AP:18:ARG:HD3	16:AP:35:LYS:HE3	1.70	0.73
16:CP:72:ARG:HH21	16:CP:73:LEU:HD21	1.54	0.73
35:DA:598:G:H5'	48:DP:15:ARG:HB2	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2030:A:H4'	35:BA:2031:A:H8	1.52	0.72
40:BF:188:ARG:HA	48:BP:7:ARG:HD3	1.71	0.72
32:D7:11:LYS:HE2	35:DA:686:G:H5"	1.69	0.72
35:DA:1614:A:H62	55:DW:93:ALA:HB2	1.54	0.72
35:DA:2329:G:H2'	35:DA:2330:G:C8	2.24	0.72
1:AA:1384:C:H2'	1:AA:1385:G:C8	2.23	0.72
52:BT:23:ARG:O	52:BT:25:GLY:N	2.22	0.72
35:DA:7:G:H2'	35:DA:8:A:C8	2.24	0.72
37:DC:214:TYR:HB3	37:DC:222:SER:HB2	1.71	0.72
40:DF:128:ALA:O	40:DF:142:TRP:NE1	2.19	0.72
1:AA:272:C:H2'	1:AA:273:A:H8	1.55	0.72
1:AA:912:C:OP1	12:AL:91:LYS:NZ	2.21	0.72
2:AB:233:SER:HB2	2:AB:234:PRO:HD2	1.71	0.72
57:BY:7:VAL:CG2	57:BY:7:VAL:CA	2.65	0.72
57:BY:44:ILE:HG22	57:BY:45:VAL:H	1.54	0.72
11:CK:99:GLN:HG2	11:CK:105:VAL:HG11	1.70	0.72
27:D2:47:ASN:O	27:D2:49:LYS:N	2.21	0.72
13:AM:83:ASP:OD2	19:AS:65:ASN:ND2	2.23	0.72
35:BA:156:U:H4'	35:BA:157:U:H5"	1.72	0.72
22:CW:19:G:N2	22:CW:56:C:H42	1.88	0.72
35:DA:16:G:H1	35:DA:524:U:H3	1.34	0.72
35:DA:1899:G:H22	35:DA:1902:C:N4	1.82	0.72
40:DF:103:LYS:HA	40:DF:106:ARG:HG3	1.71	0.72
1:AA:738:C:H5"	6:AF:69:GLU:HB2	1.69	0.72
35:BA:143:G:H1'	56:BX:37:THR:HG21	1.72	0.72
1:CA:152:A:H62	1:CA:169:C:N4	1.88	0.72
8:CH:87:SER:HB2	8:CH:93:VAL:HB	1.71	0.72
45:DK:77:LEU:HD12	45:DK:111:LYS:HE2	1.70	0.72
9:AI:13:ALA:HB2	9:AI:68:GLY:HA3	1.72	0.72
51:BS:27:SER:HA	51:BS:88:ASP:HB3	1.72	0.72
35:DA:956:G:OP2	49:DQ:14:ARG:NH2	2.22	0.72
35:DA:2099:U:O4	35:DA:2190:G:O6	2.06	0.72
1:AA:110:C:O2'	16:AP:25:ARG:O	2.06	0.72
36:BB:37:C:O2	51:BS:95:HIS:NE2	2.22	0.72
58:BZ:42:VAL:HG13	58:BZ:43:GLU:H	1.53	0.72
1:CA:324:G:N2	1:CA:327:A:OP2	2.22	0.72
1:CA:991:U:O4	1:CA:1212:U:O2'	2.07	0.72
12:CL:18:VAL:HG23	12:CL:19:ARG:H	1.54	0.72
53:DU:90:VAL:HG13	54:DV:39:LEU:HD12	1.70	0.72
15:AO:36:ILE:HD12	15:AO:63:ARG:HE	1.55	0.72
18:AR:68:LYS:O	18:AR:72:ARG:HG3	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:76:CYS:SG	57:BY:77:PRO:HD2	2.30	0.72
53:DU:90:VAL:HG21	54:DV:47:VAL:HG21	1.72	0.72
1:AA:70:G:H1	1:AA:99:U:H3	1.36	0.72
2:AB:112:VAL:C	2:AB:114:ARG:H	1.97	0.72
35:BA:1044:G:O2'	35:BA:1111:A:N6	2.22	0.72
35:BA:2101:G:N1	35:BA:2188:C:N3	2.38	0.72
52:BT:27:THR:O	52:BT:28:VAL:HG23	1.90	0.72
7:CG:36:LYS:HZ2	7:CG:36:LYS:HB2	1.53	0.72
9:CI:53:VAL:HG23	9:CI:55:ALA:H	1.55	0.72
24:CY:36:PRO:HB3	45:DK:29:GLN:HA	1.71	0.72
1:AA:573:A:N3	1:AA:883:C:O2'	2.23	0.71
1:AA:1270:C:OP2	21:AU:24:ARG:NH2	2.23	0.71
2:AB:80:ILE:H	2:AB:80:ILE:HD12	1.55	0.71
5:CE:33:VAL:HG22	5:CE:43:LEU:HD13	1.71	0.71
25:D0:41:ARG:NH2	35:DA:2387:U:O2'	2.23	0.71
35:DA:642:G:N2	35:DA:645:C:OP2	2.23	0.71
1:AA:985:C:H42	1:AA:1220:G:H1	1.36	0.71
3:AC:180:ALA:HB1	3:AC:203:PHE:HE1	1.55	0.71
11:AK:80:VAL:HG13	11:AK:103:LEU:HD11	1.71	0.71
35:BA:1048:A:N6	35:BA:1052:C:N4	2.25	0.71
48:BP:124:LYS:HA	48:BP:143:GLY:HA3	1.72	0.71
28:D3:8:LEU:HD13	28:D3:31:LEU:HD23	1.71	0.71
35:BA:2285:C:N3	35:BA:2383:G:N1	2.38	0.71
1:CA:235:C:H5'	17:CQ:70:ARG:HG2	1.72	0.71
1:CA:575:G:N2	1:CA:576:G:N7	2.32	0.71
35:DA:1538:G:H2'	35:DA:1539:G:C8	2.26	0.71
48:DP:7:ARG:NH1	48:DP:7:ARG:HA	2.05	0.71
1:AA:673:G:H2'	1:AA:674:G:H8	1.55	0.71
25:B0:11:ARG:O	25:B0:14:ARG:NH2	2.22	0.71
35:BA:848:G:H2'	35:BA:849:A:C8	2.24	0.71
35:BA:1529:G:N7	35:BA:1541:G:N2	2.38	0.71
41:BG:63:ILE:HG22	41:BG:143:GLU:HG2	1.73	0.71
43:BI:144:VAL:HG12	43:BI:145:VAL:H	1.55	0.71
58:BZ:14:LYS:HB3	58:BZ:17:ALA:HB3	1.71	0.71
3:CC:33:LEU:O	3:CC:37:GLN:NE2	2.22	0.71
9:CI:22:GLY:H	9:CI:59:PHE:HA	1.55	0.71
13:CM:125:ARG:HG3	24:CY:160:PRO:HD2	1.71	0.71
1:CA:1012:U:H2'	1:CA:1013:G:C8	2.25	0.71
10:CJ:4:ILE:HD11	10:CJ:77:PRO:HB3	1.71	0.71
42:DH:153:LYS:H	42:DH:153:LYS:HD3	1.55	0.71
35:BA:654(B):C:N4	35:BA:654(R):C:N3	2.38	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1137:C:O2'	1:CA:1138:G:N2	2.23	0.71
5:CE:92:LYS:HB3	5:CE:119:LEU:HB2	1.70	0.71
45:DK:122:ALA:HA	45:DK:125:ARG:HE	1.54	0.71
52:DT:16:ARG:NH2	52:DT:82:LEU:O	2.24	0.71
1:AA:328:C:H4'	1:AA:329:A:H5'	1.72	0.71
1:AA:711:G:H2'	1:AA:712:A:C8	2.26	0.71
54:BV:55:ALA:HA	54:BV:101:GLY:HA2	1.70	0.71
58:BZ:44:PHE:CZ	58:BZ:86:VAL:HG11	2.25	0.71
35:DA:1266:G:O2'	35:DA:2012:G:O6	2.07	0.71
1:AA:269:C:H2'	1:AA:270:A:H8	1.56	0.71
13:AM:9:ILE:HD13	41:BG:146:TYR:CE2	2.26	0.71
1:CA:376:G:H5"	16:CP:5:ARG:HD2	1.71	0.71
52:DT:32:TYR:CD2	52:DT:81:PRO:HB2	2.26	0.71
1:AA:157:G:H1	1:AA:164:U:H3	1.38	0.71
4:AD:128:VAL:O	4:AD:130:GLY:N	2.22	0.71
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.72	0.71
43:BI:132:PRO:HG2	43:BI:133:HIS:CE1	2.26	0.71
20:CT:10:LEU:O	20:CT:12:ALA:N	2.21	0.71
35:DA:1658:C:OP1	39:DE:132:HIS:ND1	2.24	0.71
39:DE:175:VAL:HG22	39:DE:177:PRO:HD3	1.71	0.71
4:AD:13:ARG:HG3	4:AD:40:PRO:HD3	1.72	0.71
10:AJ:24:VAL:HG21	10:AJ:37:PRO:HG3	1.73	0.71
24:AY:303:ARG:H	24:AY:304:PRO:HD3	1.54	0.71
35:BA:910:A:N7	49:BQ:13:GLN:HG3	2.06	0.71
30:D5:2:ALA:N	35:DA:2015:A:N3	2.38	0.71
35:DA:494:G:O2'	55:DW:5:ALA:O	2.09	0.71
34:B9:18:ARG:HE	35:BA:1034:G:H5'	1.55	0.70
1:CA:713:G:H2'	1:CA:714:G:C8	2.26	0.70
7:CG:146:GLU:HG2	7:CG:149:ARG:HH12	1.55	0.70
24:CY:267:SER:HB3	25:D0:3:HIS:CE1	2.26	0.70
1:AA:938:A:O2'	1:AA:1376:U:O2'	2.06	0.70
5:AE:9:LYS:NZ	5:AE:111:GLU:OE1	2.23	0.70
9:AI:40:LEU:C	9:AI:42:ARG:H	2.00	0.70
35:BA:2485:G:H5"	49:BQ:46:GLN:HE21	1.56	0.70
38:BD:201:HIS:O	38:BD:204:ILE:HG12	1.91	0.70
1:CA:1013:G:N2	1:CA:1016:A:OP2	2.24	0.70
2:AB:111:ARG:HH21	2:AB:114:ARG:HG2	1.56	0.70
2:AB:168:THR:HG23	2:AB:192:SER:OG	1.92	0.70
26:B1:86:SER:HB2	26:B1:89:GLU:HB2	1.74	0.70
35:BA:2747:G:H21	35:BA:2757:A:N6	1.86	0.70
37:BC:8:TYR:CE1	37:BC:221:PRO:HB3	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:89:ILE:HD11	42:BH:95:ARG:HA	1.72	0.70
1:CA:936:C:O2	1:CA:1382:C:N4	2.23	0.70
1:CA:1029:C:H1'	1:CA:1033:G:H1	1.57	0.70
22:CW:27:G:H1	22:CW:43:C:N4	1.88	0.70
35:BA:517:C:O2'	55:BW:18:ARG:NH2	2.25	0.70
35:BA:1021:A:H62	35:BA:1141:U:H3	1.38	0.70
35:BA:1496:A:O2'	35:BA:1497:U:O2	2.08	0.70
52:BT:29:ARG:HG3	52:BT:30:VAL:HG13	1.73	0.70
1:CA:413:G:N2	1:CA:429:U:OP2	2.24	0.70
4:CD:22:LYS:HG3	4:CD:26:CYS:SG	2.32	0.70
45:DK:66:THR:HG22	45:DK:68:VAL:HG23	1.71	0.70
1:AA:728:A:H2'	1:AA:729:A:H8	1.57	0.70
18:AR:70:ILE:O	18:AR:74:ARG:HG3	1.91	0.70
35:BA:823:G:H2'	35:BA:824:A:C8	2.26	0.70
35:BA:2576:G:O2'	35:BA:2579:C:OP2	2.10	0.70
1:CA:142:G:H1	1:CA:221:C:H42	1.40	0.70
1:CA:269:C:H2'	1:CA:270:A:H8	1.55	0.70
2:CB:165:VAL:HG23	2:CB:166:ASP:H	1.56	0.70
2:CB:166:ASP:HB3	2:CB:169:LYS:HB2	1.73	0.70
29:D4:28:LYS:O	29:D4:30:GLU:N	2.22	0.70
12:AL:90:VAL:O	12:AL:92:ASP:N	2.25	0.70
35:BA:1000:A:H2'	35:BA:1001:A:C8	2.27	0.70
35:BA:1296:G:OP1	35:BA:2709:G:O2'	2.08	0.70
35:BA:1540:U:H3'	35:BA:1541:G:H3'	1.73	0.70
1:CA:272:C:H2'	1:CA:273:A:H8	1.54	0.70
3:CC:180:ALA:HB1	3:CC:203:PHE:HE1	1.57	0.70
57:DY:39:VAL:HG12	57:DY:40:GLU:H	1.56	0.70
1:AA:345:C:H5'	52:BT:41:ARG:HD3	1.74	0.70
38:BD:4:LYS:HE3	38:BD:20:ASP:HA	1.74	0.70
48:BP:144:GLU:H	48:BP:145:PRO:CD	2.04	0.70
29:D4:31:ILE:HD12	41:DG:142:PRO:HB2	1.73	0.70
35:DA:156:U:H4'	35:DA:157:U:H5"	1.74	0.70
35:DA:2166:G:H2'	35:DA:2167:U:C6	2.27	0.70
48:DP:144:GLU:H	48:DP:145:PRO:CD	2.04	0.70
2:AB:165:VAL:HG23	2:AB:166:ASP:H	1.57	0.70
35:BA:2790:A:O2'	35:BA:2893:G:N2	2.21	0.70
36:BB:3:C:H42	36:BB:118:G:H1	1.39	0.70
38:BD:12:SER:HB2	38:BD:208:LYS:HB3	1.73	0.70
46:BN:62:VAL:HG22	46:BN:66:LYS:HD2	1.73	0.70
48:BP:47:ASP:HB3	48:BP:48:PRO:C	2.17	0.70
39:DE:11:MET:HE1	39:DE:187:ALA:H	1.57	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1261:A:H62	1:AA:1274:G:N2	1.89	0.70
27:B2:13:ALA:HA	27:B2:16:LEU:HG	1.73	0.70
36:BB:14:U:OP2	36:BB:70:C:O2'	2.09	0.70
45:BK:54:PRO:HD3	45:BK:73:PRO:HD3	1.73	0.70
1:CA:837:G:H2'	1:CA:838:G:C8	2.27	0.70
1:CA:1452:C:O2	1:CA:1456:G:N2	2.24	0.70
24:CY:130:CYS:HB3	24:CY:164:ILE:H	1.57	0.70
46:BN:99:LEU:HD12	46:BN:122:VAL:HG21	1.73	0.69
58:BZ:69:THR:HG22	58:BZ:90:VAL:HA	1.74	0.69
1:CA:674:G:H2'	1:CA:675:A:H8	1.56	0.69
24:CY:115:ASN:HA	24:CY:176:ALA:HB3	1.74	0.69
35:DA:1348:G:H2'	35:DA:1349:A:H5"	1.74	0.69
10:AJ:28:ARG:NH2	10:AJ:34:VAL:O	2.25	0.69
1:CA:573:A:N3	1:CA:883:C:O2'	2.24	0.69
12:CL:25:PRO:C	12:CL:27:LEU:H	2.00	0.69
16:CP:45:THR:HG22	16:CP:47:ASP:H	1.57	0.69
35:DA:116:C:O2'	35:DA:126:A:N3	2.25	0.69
35:DA:1226:A:OP1	54:DV:84:LYS:NZ	2.23	0.69
48:DP:85:LEU:HD23	48:DP:114:ILE:HD11	1.72	0.69
29:B4:11:PRO:HA	29:B4:25:TYR:HA	1.72	0.69
35:BA:279:C:N4	35:BA:361:G:H1	1.86	0.69
35:BA:2246:G:H2'	35:BA:2247:A:H8	1.57	0.69
55:BW:1:MET:HE3	55:BW:2:GLU:H	1.56	0.69
1:CA:438:G:O2'	1:CA:494:U:O4	2.10	0.69
5:CE:39:GLY:HA2	5:CE:69:VAL:HB	1.74	0.69
24:AY:214:VAL:HG13	24:AY:215:ASP:H	1.56	0.69
35:BA:1614:A:H62	55:BW:93:ALA:HB2	1.56	0.69
48:BP:114:ILE:HD12	48:BP:115:LEU:H	1.57	0.69
35:DA:969:U:H2'	35:DA:970:C:C6	2.26	0.69
35:DA:2801(A):A:H4'	35:DA:2802:G:H5'	1.75	0.69
42:DH:155:SER:O	42:DH:157:TYR:N	2.26	0.69
53:DU:92:ARG:O	53:DU:94:ASN:N	2.26	0.69
1:AA:714:G:H2'	1:AA:715:A:C8	2.27	0.69
35:BA:272(J):C:H5'	35:BA:274:G:OP2	1.92	0.69
58:BZ:20:ARG:HH11	58:BZ:20:ARG:HB2	1.55	0.69
1:CA:1065:U:O2'	1:CA:1066:C:OP2	2.10	0.69
31:D6:46:HIS:HA	31:D6:47:THR:HG23	1.73	0.69
42:DH:89:ILE:HD11	42:DH:95:ARG:HA	1.72	0.69
15:AO:39:LEU:HD12	15:AO:56:LEU:HB2	1.73	0.69
9:CI:42:ARG:NH1	9:CI:71:SER:OG	2.26	0.69
35:BA:676:A:H8	35:BA:2069:G:N2	1.83	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1024:G:H3'	35:BA:1025:G:H5"	1.75	0.69
35:BA:1614:A:N6	55:BW:91:GLY:O	2.26	0.69
35:BA:1899:G:N2	35:BA:1902:C:H41	1.90	0.69
35:BA:2161:C:H2'	35:BA:2162:G:H8	1.55	0.69
53:BU:90:VAL:HG13	54:BV:39:LEU:HD12	1.74	0.69
57:BY:39:VAL:HG12	57:BY:40:GLU:H	1.57	0.69
1:AA:1004:A:N7	1:AA:1035:A:N6	2.41	0.69
1:AA:1176:A:H2'	1:AA:1177:G:C8	2.28	0.69
24:AY:115:ASN:HB3	24:AY:172:LYS:HA	1.75	0.69
35:BA:529:A:H62	35:BA:2041:U:H3	1.40	0.69
36:BB:24:G:H21	36:BB:27:C:H42	1.39	0.69
53:BU:92:ARG:O	53:BU:94:ASN:N	2.26	0.69
58:BZ:97:GLU:HG3	58:BZ:127:LYS:HG2	1.73	0.69
7:CG:78:ARG:HG2	7:CG:79:ARG:H	1.58	0.69
24:CY:332:ASP:HB2	24:CY:335:ASN:HB3	1.73	0.69
35:DA:336:C:O2'	57:DY:35:TYR:OH	2.08	0.69
35:DA:2849:U:OP2	52:DT:95:ARG:NH1	2.26	0.69
44:DJ:124:UNK:O	44:DJ:127:UNK:N	2.26	0.69
3:AC:37:GLN:NE2	14:AN:52:GLN:OE1	2.26	0.69
6:AF:91:VAL:HG11	18:AR:72:ARG:NH1	2.08	0.69
35:BA:2068:U:H3	35:BA:2430:A:H2	1.38	0.69
4:CD:110:PHE:H	4:CD:110:PHE:HD1	1.41	0.69
35:DA:1359:A:H62	35:DA:1372:U:H3	1.40	0.69
24:AY:188:ARG:HB2	24:AY:310:GLN:HG2	1.75	0.69
35:BA:2305:A:O2'	41:BG:136:ARG:NH1	2.26	0.69
58:BZ:19:ARG:HA	58:BZ:23:LYS:O	1.93	0.69
12:CL:24:VAL:HG22	12:CL:97:ARG:HB3	1.75	0.69
12:CL:57:LYS:HG2	12:CL:67:THR:HG22	1.74	0.69
35:DA:761:A:N7	61:DA:3301:HOH:O	2.25	0.69
1:AA:657:G:N2	15:AO:22:THR:OG1	2.25	0.68
35:BA:1348:G:H2'	35:BA:1349:A:H5"	1.73	0.68
1:CA:953:G:O2'	13:CM:120:LYS:NZ	2.25	0.68
35:DA:602:G:HO2'	35:DA:604:G:HO2'	1.39	0.68
35:DA:2523:G:H2'	35:DA:2524:G:H5"	1.75	0.68
1:AA:316:G:OP2	1:AA:351:G:O2'	2.12	0.68
1:AA:1274:G:H2'	1:AA:1275:A:C8	2.27	0.68
6:AF:77:ARG:NH1	6:AF:77:ARG:HB3	2.08	0.68
9:AI:9:ARG:O	9:AI:104:ARG:NH1	2.25	0.68
3:CC:183:ASP:HB3	3:CC:202:ILE:HB	1.75	0.68
14:CN:23:ARG:NH1	14:CN:30:ALA:HB2	2.09	0.68
20:CT:50:GLU:HA	20:CT:100:ILE:HG22	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1353:A:H2'	35:DA:1354:A:C8	2.27	0.68
35:DA:1607:C:N4	35:DA:1622:G:OP2	2.26	0.68
1:AA:448:A:H62	1:AA:486:U:H3	1.41	0.68
35:BA:1106:G:O6	35:BA:1107:G:N2	2.26	0.68
4:CD:128:VAL:O	4:CD:130:GLY:N	2.27	0.68
22:CV:6:G:N2	22:CV:67:C:O2	2.19	0.68
35:DA:823:G:H2'	35:DA:824:A:H8	1.58	0.68
35:DA:1068:G:H21	35:DA:1096:A:H5'	1.58	0.68
46:DN:2:LYS:NZ	53:DU:95:LEU:HD21	2.08	0.68
1:AA:372:C:H42	1:AA:389:A:H62	1.39	0.68
4:AD:22:LYS:HG3	4:AD:26:CYS:SG	2.34	0.68
17:AQ:7:THR:HG22	17:AQ:58:GLU:HG2	1.76	0.68
38:BD:109:ASP:HB2	38:BD:197:GLY:HA2	1.74	0.68
52:BT:29:ARG:HD3	52:BT:86:ILE:HG22	1.74	0.68
51:DS:27:SER:HA	51:DS:88:ASP:HB3	1.74	0.68
51:DS:87:PHE:HB2	51:DS:106:ARG:HD3	1.76	0.68
6:AF:91:VAL:HG11	18:AR:72:ARG:HH12	1.58	0.68
9:AI:3:GLN:OE1	9:AI:20:ARG:NH2	2.26	0.68
25:B0:11:ARG:HH11	25:B0:11:ARG:HB2	1.59	0.68
35:BA:1754:C:OP1	52:BT:96:ARG:NH1	2.26	0.68
35:BA:2394:C:OP1	48:BP:63:PRO:HD2	1.93	0.68
1:CA:1255:G:OP1	10:CJ:45:ARG:NH2	2.26	0.68
4:CD:13:ARG:HH11	4:CD:13:ARG:HB3	1.56	0.68
4:CD:14:ARG:HB2	4:CD:40:PRO:HD2	1.75	0.68
29:D4:14:ILE:HA	29:D4:31:ILE:HB	1.75	0.68
31:D6:19:ARG:HD2	31:D6:43:CYS:HB2	1.75	0.68
31:D6:26:ASN:HD22	31:D6:32:ASN:HD21	1.40	0.68
35:DA:1508:A:H4'	35:DA:1509(A):A:C4	2.28	0.68
46:DN:58:ASP:C	46:DN:60:ILE:H	2.01	0.68
52:DT:27:THR:O	52:DT:28:VAL:HG23	1.93	0.68
1:AA:1316:G:N2	1:AA:1319:A:OP2	2.26	0.68
19:AS:48:THR:HG22	19:AS:61:TYR:HA	1.75	0.68
35:BA:300:A:OP1	57:BY:84:ARG:NH2	2.26	0.68
35:BA:2730:C:O2'	39:BE:168:MET:O	2.11	0.68
52:BT:32:TYR:CD2	52:BT:81:PRO:HB2	2.29	0.68
1:CA:316:G:OP2	1:CA:351:G:O2'	2.12	0.68
31:D6:15:GLU:HA	31:D6:49:HIS:CE1	2.28	0.68
35:DA:2414:G:H21	48:DP:67:MET:HE1	1.59	0.68
35:DA:2494:G:O2'	49:DQ:80:GLU:HA	1.94	0.68
38:DD:43:ARG:HB3	38:DD:54:ARG:HB2	1.76	0.68
46:DN:19:GLU:O	46:DN:60:ILE:HA	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1304:G:H21	1:AA:1333:A:H62	1.40	0.68
2:AB:223:ILE:HA	2:AB:226:ARG:HB3	1.74	0.68
22:AW:48:C:C5	22:AW:59:U:H1'	2.28	0.68
2:CB:168:THR:HG23	2:CB:192:SER:OG	1.94	0.68
35:DA:2876:G:H4'	52:DT:3:ARG:HE	1.59	0.68
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.75	0.68
10:AJ:56:HIS:O	10:AJ:58:ASP:N	2.27	0.68
29:B4:14:ILE:HA	29:B4:31:ILE:HB	1.75	0.68
35:DA:2156:G:H2'	35:DA:2157:G:C4	2.29	0.68
40:DF:101:LEU:HD12	40:DF:102:PRO:HD2	1.75	0.68
42:DH:41:MET:CG	42:DH:42:ARG:H	2.07	0.68
1:AA:562:C:H1'	12:AL:15:ARG:HD2	1.76	0.68
2:AB:187:LEU:HD23	2:AB:201:ILE:HG22	1.76	0.68
26:B1:53:VAL:HG22	26:B1:74:VAL:HG13	1.75	0.68
35:BA:1788:C:OP1	38:BD:222:ARG:NH2	2.26	0.68
35:BA:2246:G:H2'	35:BA:2247:A:C8	2.29	0.68
39:BE:119:ARG:NH1	39:BE:156:MET:O	2.27	0.68
46:BN:3:THR:O	46:BN:5:VAL:N	2.26	0.68
48:BP:7:ARG:HA	48:BP:7:ARG:HH11	1.59	0.68
1:CA:346:G:OP1	52:DT:41:ARG:NH1	2.27	0.68
4:CD:88:VAL:HG13	5:CE:97:GLY:HA2	1.76	0.68
35:DA:654(O):G:H2'	35:DA:654(P):C:C6	2.29	0.68
35:DA:2572:A:N7	39:DE:145:LYS:HB2	2.09	0.68
41:DG:52:ILE:HG13	41:DG:53:LEU:H	1.59	0.68
48:DP:36:LYS:HD3	48:DP:41:ARG:HB3	1.76	0.68
31:B6:25:LYS:HB2	33:B8:34:TRP:HE1	1.59	0.67
46:BN:23:LEU:HB2	46:BN:60:ILE:HD12	1.76	0.67
1:CA:1381:U:O2	7:CG:78:ARG:NH1	2.27	0.67
24:CY:77:GLU:HB2	24:CY:84:ARG:HG2	1.76	0.67
25:D0:74:ARG:HH12	36:DB:13:A:H8	1.42	0.67
35:DA:654(G):C:H2'	35:DA:654(H):G:C8	2.29	0.67
35:DA:910:A:C5	49:DQ:13:GLN:HG3	2.29	0.67
41:DG:3:LEU:HA	41:DG:97:ASP:OD2	1.93	0.67
45:DK:108:ALA:HB1	45:DK:120:LEU:HG	1.74	0.67
48:DP:114:ILE:HD12	48:DP:115:LEU:H	1.59	0.67
49:DQ:43:THR:HG22	49:DQ:94:VAL:HG12	1.76	0.67
1:AA:131:C:O2'	1:AA:262:A:N3	2.25	0.67
1:AA:191:G:C4	20:AT:105:SER:HB3	2.29	0.67
35:BA:587:C:OP2	48:BP:33:ARG:NH2	2.27	0.67
35:BA:1068:G:H21	35:BA:1096:A:H5'	1.59	0.67
35:BA:1353:A:H2'	35:BA:1354:A:C8	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:26:LYS:HG3	57:BY:27:VAL:H	1.60	0.67
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.30	0.67
35:DA:2096:U:H3	35:DA:2193:G:H1	1.40	0.67
35:DA:2122:U:H2'	35:DA:2123:G:H8	1.59	0.67
24:AY:182:PRO:HD3	24:AY:349:LEU:HD21	1.76	0.67
30:B5:4:HIS:HB3	30:B5:5:PRO:CD	2.23	0.67
43:BI:72:LEU:O	43:BI:74:ASN:N	2.27	0.67
1:CA:1315:U:HO2'	1:CA:1360:A:HO2'	1.40	0.67
2:CB:194:PRO:O	2:CB:196:LEU:N	2.27	0.67
35:DA:1041:C:H42	35:DA:1114:G:H1	1.40	0.67
36:DB:5:C:O2'	36:DB:27:C:O2	2.13	0.67
58:DZ:153:SER:H	58:DZ:167:PRO:HB2	1.58	0.67
1:AA:975:A:H4'	1:AA:976:G:H5"	1.76	0.67
3:CC:47:LEU:HD23	3:CC:52:LEU:HD13	1.75	0.67
21:CU:6:ARG:O	21:CU:12:LYS:HE3	1.95	0.67
29:D4:18:CYS:HB3	29:D4:35:VAL:HG13	1.76	0.67
31:D6:40:CYS:SG	31:D6:45:LYS:NZ	2.67	0.67
35:DA:2787:C:O2	39:DE:61:ARG:NH1	2.27	0.67
33:B8:53:PRO:HA	33:B8:56:GLU:HB3	1.77	0.67
1:CA:975:A:H4'	1:CA:976:G:H5"	1.76	0.67
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.30	0.67
25:D0:11:ARG:HB2	25:D0:11:ARG:HH11	1.58	0.67
35:DA:2564:A:OP1	35:DA:2648:C:H4'	1.95	0.67
45:DK:76:TYR:O	45:DK:79:ARG:HG3	1.93	0.67
48:DP:111:ARG:NH1	48:DP:149:GLU:OE2	2.27	0.67
26:B1:39:LYS:NZ	35:BA:190:A:OP2	2.27	0.67
55:BW:88:ARG:HB2	55:BW:92:ARG:HB2	1.77	0.67
3:AC:59:ARG:HG2	3:AC:64:VAL:HA	1.76	0.67
4:AD:110:PHE:HD1	4:AD:110:PHE:H	1.41	0.67
11:AK:85:ARG:HG2	11:AK:111:ASP:O	1.94	0.67
24:AY:106:LEU:HD23	24:AY:349:LEU:HD13	1.76	0.67
35:BA:252:G:OP2	48:BP:50:ARG:NH1	2.25	0.67
39:BE:11:MET:HE1	39:BE:187:ALA:H	1.58	0.67
52:BT:65:LYS:NZ	52:BT:66:VAL:O	2.21	0.67
52:BT:100:TYR:HD2	52:BT:103:ARG:HH21	1.43	0.67
54:BV:2:PHE:HB3	54:BV:42:GLY:HA2	1.76	0.67
1:CA:939:G:H5"	7:CG:102:ARG:HH12	1.60	0.67
2:CB:93:VAL:HG11	2:CB:97:TRP:HD1	1.59	0.67
19:CS:42:PRO:O	19:CS:43:GLU:HB3	1.95	0.67
35:DA:259:G:H21	35:DA:621:A:H8	1.40	0.67
57:DY:44:ILE:HG22	57:DY:45:VAL:H	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:18:ARG:HG2	11:AK:81:ASP:HB2	1.77	0.67
24:AY:244:THR:HG21	35:BA:2452:C:H5”	1.75	0.67
35:BA:142:A:H8	35:BA:1408:C:H1’	1.60	0.67
35:BA:278:A:N1	35:BA:362:U:N3	2.42	0.67
35:BA:969:U:H2’	35:BA:970:C:C6	2.28	0.67
40:BF:63:LYS:NZ	40:BF:75:HIS:O	2.28	0.67
41:BG:152:LEU:HD23	41:BG:152:LEU:H	1.60	0.67
42:BH:16:SER:HB2	42:BH:27:LYS:HB2	1.75	0.67
1:CA:269:C:H2’	1:CA:270:A:C8	2.29	0.67
1:CA:345:C:H5’	52:DT:41:ARG:HD3	1.76	0.67
1:CA:1224:G:O2’	1:CA:1322:C:OP2	2.12	0.67
35:DA:2777:G:H5”	35:DA:2778:A:H5’	1.77	0.67
45:DK:100:THR:HA	45:DK:139:VAL:HB	1.75	0.67
4:AD:13:ARG:HH12	4:AD:36:ARG:HB3	1.59	0.67
20:AT:10:LEU:O	20:AT:12:ALA:N	2.25	0.67
35:BA:1598:C:H5’	56:BX:36:LYS:HB2	1.76	0.67
40:BF:132:VAL:HG22	40:BF:133:ASN:H	1.58	0.67
10:CJ:25:GLU:O	10:CJ:29:ARG:NH1	2.28	0.67
35:DA:2483:C:N3	49:DQ:124:LYS:NZ	2.42	0.67
40:DF:1:MET:O	40:DF:3:GLU:HG2	1.95	0.67
41:DG:128:ARG:HB3	41:DG:128:ARG:NH1	2.09	0.67
47:DO:77:ILE:HD13	52:DT:74:ARG:HD3	1.76	0.67
48:DP:47:ASP:HB3	48:DP:48:PRO:C	2.19	0.67
53:DU:31:SER:O	53:DU:33:ARG:N	2.25	0.67
1:AA:62:U:H3	1:AA:105:G:H1	1.43	0.67
2:AB:185:ILE:HG22	2:AB:199:TYR:HB2	1.76	0.67
35:BA:626:U:H5”	35:BA:627:A:H5’	1.77	0.67
35:BA:1210:A:H5’	35:BA:1210:A:H8	1.59	0.67
1:CA:15:G:H1	1:CA:920:U:H3	1.43	0.67
33:D8:62:LEU:HD13	35:DA:242:G:C5’	2.25	0.67
41:DG:85:GLY:C	41:DG:87:PRO:HD2	2.19	0.67
40:BF:40:GLN:NE2	40:BF:182:ASN:HB2	2.10	0.66
48:BP:16:ARG:HH12	48:BP:18:ARG:CB	2.08	0.66
1:CA:767:A:O2’	1:CA:1524:C:O2	2.13	0.66
1:CA:1259:C:H42	1:CA:1276:G:H1	1.43	0.66
35:DA:274:G:O2’	35:DA:276:A:OP2	2.08	0.66
35:DA:484:C:OP1	57:DY:50:ARG:NE	2.26	0.66
35:DA:2660:A:H5’	35:DA:2661:G:H21	1.60	0.66
46:DN:3:THR:O	46:DN:5:VAL:N	2.27	0.66
1:AA:1011:G:H1	1:AA:1018:C:H42	1.43	0.66
1:AA:1119:C:OP2	9:AI:9:ARG:NH2	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:56:ALA:HB1	41:BG:153:ARG:HH12	1.61	0.66
1:CA:1057:G:H5"	3:CC:154:SER:HB2	1.75	0.66
3:CC:32:LEU:HB3	3:CC:59:ARG:NH2	2.10	0.66
45:DK:102:GLU:HA	45:DK:105:LEU:HD13	1.77	0.66
1:AA:322:C:O2'	20:AT:23:ARG:HB2	1.95	0.66
1:AA:713:G:H2'	1:AA:714:G:C8	2.31	0.66
22:AW:8:U:H3	22:AW:14:A:H62	1.44	0.66
35:BA:2502:G:H5"	35:BA:2503:A:H5"	1.78	0.66
25:D0:55:ARG:NH2	35:DA:2364:C:OP1	2.28	0.66
46:DN:13:TRP:O	46:DN:135:PRO:HD2	1.95	0.66
35:BA:948:G:H1	35:BA:969:U:H3	1.43	0.66
35:BA:2291:U:OP1	35:BA:2380:C:O2'	2.13	0.66
52:BT:28:VAL:CG2	52:BT:46:GLU:HG3	2.24	0.66
2:CB:136:VAL:O	2:CB:140:HIS:HB2	1.95	0.66
3:CC:6:HIS:ND1	14:CN:49:HIS:HB3	2.11	0.66
4:CD:121:VAL:O	4:CD:134:ASP:HA	1.95	0.66
45:DK:77:LEU:HD13	45:DK:107:ILE:HD11	1.75	0.66
52:DT:85:LYS:HZ2	52:DT:85:LYS:HB3	1.61	0.66
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.77	0.66
21:AU:6:ARG:O	21:AU:12:LYS:HE3	1.94	0.66
35:BA:140:G:N2	35:BA:142:A:N1	2.41	0.66
37:BC:43:GLU:HA	37:BC:175:PRO:HA	1.77	0.66
1:CA:592:G:H2'	1:CA:593:G:H8	1.60	0.66
30:D5:47:PRO:HB3	30:D5:57:VAL:HG11	1.77	0.66
35:DA:1826:G:H4'	38:DD:242:ARG:HH21	1.61	0.66
44:DJ:101:UNK:O	44:DJ:103:UNK:N	2.29	0.66
45:DK:11:GLN:HB2	45:DK:52:ILE:HD11	1.77	0.66
1:AA:107:G:OP1	1:AA:325:A:N6	2.27	0.66
44:BJ:55:UNK:O	44:BJ:57:UNK:N	2.29	0.66
1:CA:144:G:N2	1:CA:178:C:O2	2.18	0.66
9:CI:24:GLY:N	9:CI:60:ASP:OD1	2.28	0.66
13:CM:90:LEU:C	13:CM:92:HIS:H	2.03	0.66
1:AA:537:G:H5"	12:AL:113:ARG:HH12	1.61	0.66
35:BA:654(O):G:H2'	35:BA:654(P):C:C6	2.30	0.66
45:BK:19:PRO:HB2	45:BK:21:PRO:HD2	1.78	0.66
51:BS:106:ARG:NH1	51:BS:106:ARG:HB3	2.11	0.66
57:BY:13:VAL:HB	57:BY:28:LYS:HD3	1.76	0.66
4:CD:33:MET:C	4:CD:35:ARG:H	2.04	0.66
11:CK:85:ARG:HG2	11:CK:111:ASP:O	1.96	0.66
17:CQ:52:LYS:H	17:CQ:52:LYS:HD2	1.61	0.66
19:CS:11:VAL:HG13	19:CS:16:LEU:HD11	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CW:39:U:H2'	22:CW:40:C:H5"	1.76	0.66
30:D5:2:ALA:HA	35:DA:2015:A:H1'	1.76	0.66
35:DA:2877:G:H5'	52:DT:3:ARG:NH2	2.10	0.66
53:DU:8:VAL:HG23	53:DU:11:ARG:HH21	1.61	0.66
1:AA:539:A:H2'	1:AA:540:G:C8	2.30	0.66
1:AA:1035:A:H2'	1:AA:1036:G:C8	2.31	0.66
29:B4:28:LYS:O	29:B4:30:GLU:N	2.28	0.66
35:BA:69:C:O2	35:BA:73:A:O2'	2.12	0.66
35:BA:2107:C:H41	35:BA:2179:C:H42	1.43	0.66
46:BN:58:ASP:O	46:BN:60:ILE:N	2.28	0.66
50:BR:87:TYR:OH	50:BR:116:LEU:O	2.10	0.66
1:CA:1244:C:H2'	1:CA:1245:A:H8	1.61	0.66
35:DA:2032:G:N7	61:DA:3302:HOH:O	2.29	0.66
39:DE:64:LYS:C	39:DE:66:HIS:H	2.02	0.66
39:DE:119:ARG:HG2	39:DE:160:TYR:HB2	1.78	0.66
1:AA:1014:A:H2'	1:AA:1015:A:C8	2.31	0.66
1:AA:1432:G:OP1	52:BT:107:ASP:HB2	1.95	0.66
5:AE:100:VAL:HG12	5:AE:118:ILE:HG22	1.78	0.66
12:AL:25:PRO:C	12:AL:27:LEU:H	2.04	0.66
22:AW:27:G:H1	22:AW:43:C:N4	1.93	0.66
35:BA:947:G:H1	35:BA:970:C:H42	1.44	0.66
35:BA:2096:U:H3	35:BA:2193:G:H1	1.44	0.66
1:CA:131:C:O2'	1:CA:262:A:N3	2.27	0.66
1:CA:1328:C:OP1	21:CU:21:TYR:OH	2.13	0.66
6:CF:16:GLN:H	6:CF:16:GLN:CD	2.04	0.66
34:D9:19:ARG:HA	35:DA:2757:A:OP1	1.94	0.66
35:DA:806:C:OP2	48:DP:39:LYS:HG3	1.96	0.66
41:DG:114:ILE:HG22	41:DG:115:ARG:HG2	1.76	0.66
51:DS:25:ARG:NH1	51:DS:42:ASP:OD1	2.28	0.66
1:AA:1344:C:H4'	9:AI:120:ARG:HB3	1.78	0.66
4:AD:93:PHE:O	4:AD:97:LEU:HB2	1.95	0.66
22:AW:34:G:O6	22:AW:35:A:N6	2.29	0.66
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.29	0.66
1:CA:426:G:OP1	4:CD:36:ARG:NH1	2.29	0.66
22:CW:30:G:N1	22:CW:40:C:N3	2.32	0.66
35:DA:1712:C:H42	35:DA:1747:G:H1	1.41	0.66
1:AA:430:A:OP1	4:AD:9:CYS:N	2.29	0.65
13:AM:125:ARG:HD2	24:AY:165:ASP:HA	1.79	0.65
16:AP:53:VAL:HG12	16:AP:79:VAL:HG22	1.78	0.65
35:BA:1485:G:O6	35:BA:1504:C:N4	2.29	0.65
35:BA:1843:C:H5"	38:BD:257:LEU:HD23	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2120:G:H2'	35:BA:2121:G:H8	1.61	0.65
57:BY:7:VAL:CG2	57:BY:7:VAL:N	2.59	0.65
1:CA:1172:C:H2'	1:CA:1173:G:H8	1.60	0.65
1:CA:1220:G:O3'	19:CS:36:ARG:HD3	1.96	0.65
7:CG:45:ASP:O	7:CG:49:ILE:HG12	1.97	0.65
35:DA:793:A:OP2	35:DA:2071:A:O2'	2.15	0.65
35:DA:2150:U:H2'	35:DA:2151:G:C8	2.31	0.65
37:DC:191:ARG:HB3	37:DC:195:ARG:NH1	2.11	0.65
5:AE:50:GLU:HG3	5:AE:52:PRO:HD2	1.78	0.65
22:AW:27:G:H1	22:AW:43:C:H42	1.44	0.65
33:B8:33:ASN:ND2	35:BA:2419:U:OP2	2.25	0.65
35:BA:2314:C:H2'	35:BA:2315:G:C8	2.31	0.65
40:BF:134:GLY:H	40:BF:162:LEU:HG	1.61	0.65
57:BY:96:ILE:HB	57:BY:99:CYS:HB2	1.77	0.65
1:CA:926:G:H22	23:CX:15:A:H3'	1.60	0.65
1:CA:966:G:O2'	9:CI:127:LYS:O	2.14	0.65
4:CD:25:ARG:NH1	4:CD:30:LYS:O	2.29	0.65
35:DA:1024:G:H3'	35:DA:1025:G:H5"	1.78	0.65
1:AA:401:C:O2'	1:AA:621:A:N3	2.26	0.65
31:B6:36:LEU:H	31:B6:37:ARG:HH21	1.45	0.65
35:DA:2291:U:H3	35:DA:2341:G:H1	1.43	0.65
10:AJ:44:VAL:HG12	10:AJ:46:ARG:HD2	1.78	0.65
13:AM:78:ILE:HA	13:AM:81:LEU:HD12	1.79	0.65
35:BA:321:G:O2'	35:BA:340:A:N3	2.27	0.65
35:BA:1171:G:H3'	35:BA:1173:G:H4'	1.79	0.65
46:BN:55:VAL:HG22	46:BN:126:PRO:HA	1.79	0.65
1:CA:1499:A:H1'	1:CA:1520:G:H5'	1.78	0.65
2:CB:231:GLU:HB2	2:CB:232:PRO:HD2	1.78	0.65
5:CE:31:LEU:HD23	5:CE:45:PHE:HB2	1.78	0.65
18:CR:70:ILE:O	18:CR:74:ARG:HG3	1.96	0.65
20:CT:23:ARG:O	20:CT:27:LYS:HB2	1.96	0.65
35:DA:363(E):U:H3'	35:DA:363(F):A:O4'	1.96	0.65
48:DP:124:LYS:HA	48:DP:143:GLY:HA3	1.78	0.65
54:DV:19:LYS:NZ	54:DV:20:LEU:H	1.93	0.65
58:DZ:70:LEU:HG	58:DZ:91:LEU:HD11	1.78	0.65
1:AA:537:G:H5"	12:AL:113:ARG:NH1	2.12	0.65
15:AO:36:ILE:HG23	15:AO:56:LEU:HD11	1.78	0.65
1:CA:559:A:H4'	1:CA:560:U:H3'	1.79	0.65
2:CB:119:GLU:C	2:CB:121:LEU:H	2.03	0.65
4:CD:95:GLY:O	4:CD:99:SER:OG	2.11	0.65
30:D5:52:TYR:O	30:D5:54:GLY:N	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2137:C:H42	35:DA:2154:G:H22	1.43	0.65
1:AA:539:A:H2'	1:AA:540:G:H8	1.61	0.65
1:AA:782:A:OP1	1:AA:1521:G:N2	2.26	0.65
35:BA:2790:A:HO2'	35:BA:2893:G:N2	1.94	0.65
57:BY:7:VAL:CG2	57:BY:7:VAL:H	2.09	0.65
1:CA:954:G:H5'	13:CM:120:LYS:NZ	2.11	0.65
7:CG:78:ARG:HG2	7:CG:79:ARG:N	2.11	0.65
10:CJ:56:HIS:O	10:CJ:58:ASP:N	2.29	0.65
22:CV:2:C:H4'	25:D0:8:GLY:HA2	1.77	0.65
24:CY:214:VAL:HG13	24:CY:215:ASP:H	1.61	0.65
31:D6:25:LYS:HD3	33:D8:34:TRP:HZ2	1.62	0.65
35:DA:2591:C:H2'	35:DA:2592:G:C8	2.32	0.65
1:AA:114:U:H2'	1:AA:115:G:C8	2.32	0.65
5:AE:6:PHE:HB2	5:AE:34:VAL:HG22	1.79	0.65
12:AL:57:LYS:HG2	12:AL:67:THR:HG22	1.78	0.65
24:AY:189:LEU:HD21	24:AY:191:ARG:HG3	1.79	0.65
35:BA:274:G:O2'	35:BA:275:G:H3'	1.95	0.65
35:BA:2142:C:H2'	35:BA:2143:C:C6	2.32	0.65
38:BD:268:ARG:HB3	38:BD:268:ARG:HH11	1.61	0.65
1:CA:1327:C:H5"	21:CU:20:LYS:HB3	1.79	0.65
16:CP:1:MET:HE2	16:CP:65:GLN:HG3	1.79	0.65
22:CV:58:A:O2'	22:CV:60:U:OP2	2.15	0.65
24:CY:269:ILE:HD13	49:DQ:79:LEU:HD13	1.79	0.65
35:DA:2310:A:O2'	35:DA:2311:A:H5'	1.96	0.65
36:DB:21:G:O6	36:DB:62:C:N4	2.20	0.65
37:DC:23:ILE:HD11	37:DC:227:PRO:HA	1.79	0.65
1:AA:519:C:OP1	24:AY:310:GLN:NE2	2.28	0.65
10:AJ:4:ILE:HD11	10:AJ:77:PRO:HB3	1.78	0.65
35:BA:1043:C:H2'	35:BA:1044:G:H8	1.62	0.65
35:BA:1678:G:H22	35:BA:1989:G:N2	1.94	0.65
45:BK:66:THR:HG22	45:BK:68:VAL:HG23	1.78	0.65
48:BP:29:LYS:HB3	48:BP:34:GLY:H	1.62	0.65
50:BR:7:GLY:O	50:BR:8:ARG:HB2	1.97	0.65
57:BY:42:VAL:HG21	57:BY:67:LEU:HD13	1.79	0.65
1:CA:359:U:H2'	1:CA:360:A:C8	2.32	0.65
2:CB:22:LYS:HA	2:CB:22:LYS:HE2	1.78	0.65
35:DA:626:U:H5"	35:DA:627:A:H5'	1.79	0.65
35:DA:2790:A:O2'	35:DA:2893:G:N3	2.29	0.65
43:DI:83:ALA:HB2	43:DI:88:ILE:HG23	1.79	0.65
4:AD:13:ARG:O	4:AD:15:GLU:N	2.30	0.65
5:AE:31:LEU:HD21	5:AE:43:LEU:HD11	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:8:LEU:HD23	10:AJ:96:ILE:HG22	1.78	0.65
25:B0:43:THR:H	35:BA:2331:G:H4'	1.61	0.65
35:BA:2167:U:H2'	35:BA:2168:G:C8	2.32	0.65
35:BA:2178:C:H4'	37:BC:47:LYS:HD3	1.78	0.65
41:BG:124:SER:HB2	41:BG:131:TYR:CE1	2.32	0.65
56:BX:35:THR:O	56:BX:39:ILE:HG12	1.97	0.65
4:CD:14:ARG:HD2	4:CD:59:ARG:NH1	2.11	0.65
5:CE:147:ASP:O	5:CE:151:LEU:HG	1.97	0.65
12:CL:84:LEU:HD12	12:CL:104:VAL:HG11	1.79	0.65
16:CP:22:THR:HA	16:CP:33:ILE:HG12	1.79	0.65
35:DA:274:G:O2'	35:DA:275:G:H3'	1.97	0.65
35:DA:994:C:O2'	35:DA:996:A:OP1	2.14	0.65
35:DA:2591:C:H2'	35:DA:2592:G:H8	1.61	0.65
43:DI:57:ARG:HG2	43:DI:61:ARG:HH12	1.62	0.65
46:DN:62:VAL:HG22	46:DN:66:LYS:HD2	1.79	0.65
1:AA:426:G:OP1	4:AD:36:ARG:NH1	2.29	0.65
4:AD:187:ARG:NH2	4:AD:193:ASP:OD2	2.30	0.65
22:AW:19:G:H4'	22:AW:57:G:H22	1.61	0.65
35:BA:482:A:H4'	57:BY:47:LYS:HG2	1.78	0.65
35:BA:527:C:N4	35:BA:2779:U:OP2	2.29	0.65
35:BA:956:G:OP2	49:BQ:14:ARG:NH2	2.29	0.65
40:BF:101:LEU:HD12	40:BF:102:PRO:HD2	1.78	0.65
41:BG:52:ILE:HG13	41:BG:53:LEU:H	1.60	0.65
52:BT:51:ARG:HG3	52:BT:98:LYS:HE3	1.77	0.65
35:DA:1156:A:OP1	53:DU:55:ARG:NH1	2.29	0.65
35:DA:1540:U:H2'	35:DA:1541:G:C2	2.32	0.65
38:DD:8:PRO:HB3	38:DD:14:ARG:HB2	1.77	0.65
1:AA:736:C:H2'	1:AA:737:A:C8	2.32	0.64
24:AY:269:ILE:HD13	49:BQ:79:LEU:HD13	1.79	0.64
35:BA:779:U:OP1	38:BD:49:ILE:HG23	1.97	0.64
4:CD:13:ARG:HH11	4:CD:13:ARG:CB	2.10	0.64
8:CH:40:ALA:C	8:CH:42:GLU:H	2.04	0.64
17:CQ:67:LYS:HA	17:CQ:70:ARG:HH12	1.61	0.64
33:D8:4:MET:HB2	33:D8:61:LEU:HD13	1.76	0.64
57:DY:26:LYS:HG3	57:DY:27:VAL:H	1.62	0.64
57:DY:96:ILE:HG22	57:DY:97:ARG:H	1.61	0.64
58:DZ:16:SER:O	58:DZ:20:ARG:HG2	1.97	0.64
2:AB:84:GLU:HG3	2:AB:215:LEU:HB3	1.79	0.64
16:AP:28:ARG:HG2	16:AP:28:ARG:HH11	1.62	0.64
35:BA:2591:C:H2'	35:BA:2592:G:H8	1.61	0.64
57:BY:28:LYS:HA	57:BY:38:ILE:HG22	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1119:C:OP2	9:CI:9:ARG:NH2	2.30	0.64
35:DA:2394:C:OP1	48:DP:63:PRO:HD2	1.98	0.64
45:DK:11:GLN:HA	45:DK:54:PRO:HA	1.79	0.64
1:AA:677:U:H3	1:AA:713:G:H22	1.46	0.64
1:AA:1232:U:H5'	9:AI:126:SER:OG	1.97	0.64
15:AO:16:ALA:HB1	15:AO:21:ASP:HB3	1.78	0.64
24:AY:326:THR:HG23	24:AY:328:LEU:H	1.62	0.64
54:BV:15:GLU:HB3	54:BV:16:PRO:HD2	1.78	0.64
1:CA:624:C:H2'	1:CA:625:G:H8	1.60	0.64
3:CC:153:VAL:HG22	3:CC:198:VAL:HG12	1.79	0.64
35:DA:1666:G:HO2'	47:DO:6:THR:HG1	1.41	0.64
36:DB:89:G:H2'	36:DB:90:A:C8	2.33	0.64
49:DQ:14:ARG:HG2	49:DQ:41:TRP:HH2	1.62	0.64
1:AA:297:G:N2	1:AA:300:A:OP2	2.27	0.64
2:AB:37:ASN:O	2:AB:37:ASN:ND2	2.30	0.64
18:AR:37:VAL:HG23	18:AR:38:GLU:H	1.62	0.64
33:B8:13:ARG:NH1	48:BP:61:ARG:O	2.29	0.64
1:CA:564:C:C4	17:CQ:31:LEU:HD11	2.33	0.64
9:CI:40:LEU:C	9:CI:42:ARG:H	2.05	0.64
12:CL:47:LYS:HB3	12:CL:48:PRO:CD	2.28	0.64
22:CW:35:A:H61	23:CX:14:A:N6	1.95	0.64
37:DC:54:ARG:NH2	37:DC:56:ASP:OD1	2.30	0.64
38:DD:201:HIS:O	38:DD:204:ILE:HG12	1.97	0.64
39:DE:59:VAL:HG13	39:DE:60:ASN:H	1.62	0.64
42:DH:97:ARG:HG3	42:DH:98:LEU:H	1.60	0.64
54:DV:72:VAL:HB	54:DV:85:LYS:HB3	1.78	0.64
35:BA:310:A:OP1	57:BY:18:GLY:HA2	1.98	0.64
35:BA:761:A:N7	61:BA:3201:HOH:O	2.29	0.64
35:BA:941:A:H4'	48:BP:35:HIS:CE1	2.33	0.64
35:BA:997:G:OP1	53:BU:93:LYS:HD3	1.96	0.64
35:BA:2788:C:O2'	35:BA:2809:A:N3	2.27	0.64
56:BX:36:LYS:HD3	56:BX:56:THR:HG23	1.78	0.64
57:BY:17:SER:OG	57:BY:18:GLY:N	2.29	0.64
1:CA:97:G:HO2'	1:CA:98:G:H8	1.44	0.64
1:CA:413:G:O2'	1:CA:428:G:N2	2.30	0.64
13:CM:83:ASP:CG	13:CM:84:ILE:H	2.06	0.64
25:D0:23:VAL:HG21	35:DA:857:C:H4'	1.79	0.64
35:DA:1530:C:N4	35:DA:1541:G:OP1	2.25	0.64
35:DA:2022:U:O2'	35:DA:2617:C:H5'	1.98	0.64
1:AA:152:A:H62	1:AA:169:C:H42	1.46	0.64
4:AD:57:ARG:NH2	5:AE:107:ARG:HD3	2.13	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2132:U:H3	37:BC:6:LYS:HG3	1.62	0.64
38:BD:182:LEU:H	38:BD:272:ALA:HB3	1.63	0.64
40:BF:101:LEU:O	40:BF:106:ARG:NH1	2.30	0.64
1:CA:62:U:H3	1:CA:105:G:H1	1.43	0.64
1:CA:1298:C:H4'	1:CA:1299:A:C4	2.33	0.64
2:CB:97:TRP:HZ2	2:CB:102:LEU:HD13	1.63	0.64
35:DA:2659:G:N2	35:DA:2661:G:O2'	2.31	0.64
35:DA:2807:G:H1	35:DA:2892:A:H62	1.46	0.64
52:DT:28:VAL:HG22	52:DT:46:GLU:HA	1.80	0.64
52:DT:28:VAL:HG21	52:DT:46:GLU:HG3	1.80	0.64
58:DZ:5:LEU:HD21	58:DZ:39:VAL:HG21	1.78	0.64
13:AM:115:LYS:C	13:AM:117:VAL:H	2.06	0.64
27:B2:13:ALA:C	27:B2:15:LYS:H	2.05	0.64
38:BD:148:GLU:HB2	38:BD:151:LYS:HD2	1.78	0.64
51:DS:84:GLN:HB3	51:DS:105:ALA:HB3	1.80	0.64
53:DU:90:VAL:O	53:DU:92:ARG:N	2.31	0.64
1:AA:1347:G:HO2'	1:AA:1373:G:H1	1.43	0.64
35:BA:484:C:OP1	57:BY:50:ARG:NE	2.29	0.64
35:BA:2119:A:N6	35:BA:2170:A:N7	2.45	0.64
1:CA:798:G:OP2	11:CK:122:LYS:NZ	2.31	0.64
25:D0:11:ARG:HB2	25:D0:11:ARG:NH1	2.13	0.64
35:DA:1000:A:H2'	35:DA:1001:A:C8	2.33	0.64
37:DC:7:ARG:NH1	37:DC:11:LEU:HD11	2.13	0.64
3:AC:206:GLU:HG2	3:AC:207:VAL:H	1.63	0.64
22:AW:50:U:H2'	22:AW:51:U:C5	2.33	0.64
58:BZ:82:ARG:NH1	58:BZ:83:PRO:O	2.31	0.64
35:DA:276:A:O2'	35:DA:278:A:N7	2.29	0.64
35:DA:2698:U:H2'	35:DA:2699:C:C6	2.33	0.64
37:DC:8:TYR:CE1	37:DC:221:PRO:HB3	2.31	0.64
47:DO:23:ARG:HG3	47:DO:24:VAL:N	2.13	0.64
48:DP:146:VAL:HG22	48:DP:147:LEU:H	1.63	0.64
1:AA:78:G:N1	1:AA:91:C:N3	2.42	0.64
1:AA:148:G:H2'	1:AA:149:A:C8	2.33	0.64
8:AH:87:SER:HB2	8:AH:93:VAL:HB	1.80	0.64
24:AY:332:ASP:HB2	24:AY:335:ASN:HB3	1.79	0.64
35:BA:2030:A:H4'	35:BA:2031:A:C8	2.32	0.64
40:BF:123:LEU:HD12	40:BF:124:LEU:H	1.62	0.64
1:CA:224:C:H2'	1:CA:225:C:C6	2.33	0.64
1:CA:973:G:OP1	10:CJ:57:LYS:NZ	2.26	0.64
1:CA:1326:C:H2'	1:CA:1327:C:C6	2.33	0.64
1:CA:1456:G:O3'	20:CT:39:LYS:NZ	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:76:VAL:HG23	3:CC:77:ILE:HG13	1.80	0.64
33:D8:53:PRO:HA	33:D8:56:GLU:HB3	1.78	0.64
35:DA:997:G:OP1	53:DU:93:LYS:HD3	1.98	0.64
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.34	0.63
3:AC:70:VAL:HG12	3:AC:72:LYS:H	1.62	0.63
11:AK:29:ILE:HG13	11:AK:44:SER:HB3	1.78	0.63
39:BE:175:VAL:HG22	39:BE:177:PRO:HD3	1.80	0.63
1:CA:611:A:N1	1:CA:629:G:N2	2.46	0.63
35:DA:2291:U:OP1	35:DA:2380:C:O2'	2.16	0.63
40:DF:8:GLN:HB3	40:DF:126:VAL:HA	1.80	0.63
49:DQ:21:THR:HG21	49:DQ:101:ARG:HB2	1.80	0.63
2:AB:208:ILE:HA	2:AB:211:ILE:HD12	1.80	0.63
35:BA:2328:A:H2'	35:BA:2329:G:C8	2.33	0.63
54:BV:19:LYS:HG2	54:BV:94:LEU:HB2	1.80	0.63
1:CA:192:U:H2'	1:CA:193:C:H6	1.64	0.63
1:CA:642:A:N3	8:CH:113:SER:OG	2.30	0.63
1:CA:1525:G:OP1	11:CK:120:ARG:NH2	2.31	0.63
2:CB:37:ASN:ND2	2:CB:37:ASN:O	2.31	0.63
13:CM:88:ARG:HA	13:CM:98:VAL:HG11	1.79	0.63
24:CY:188:ARG:HB2	24:CY:310:GLN:HG2	1.79	0.63
31:D6:13:CYS:O	31:D6:21:TYR:HA	1.98	0.63
45:DK:27:LEU:HD23	45:DK:27:LEU:H	1.64	0.63
53:DU:47:TYR:HA	53:DU:50:ARG:NH2	2.14	0.63
57:DY:32:PRO:C	57:DY:34:LYS:H	2.06	0.63
1:AA:750:G:N3	15:AO:23:GLY:HA3	2.13	0.63
1:AA:976:G:H5'	1:AA:1358:U:O2'	1.98	0.63
6:AF:77:ARG:HB3	6:AF:77:ARG:HH11	1.63	0.63
8:AH:40:ALA:C	8:AH:42:GLU:H	2.06	0.63
10:AJ:39:PRO:HB3	10:AJ:70:ARG:HH12	1.63	0.63
22:AW:63:G:H2'	22:AW:64:A:O4'	1.99	0.63
30:B5:4:HIS:O	35:BA:2056:G:N2	2.30	0.63
35:BA:1592:C:H2'	35:BA:1593:G:H8	1.63	0.63
35:BA:1779:U:H5	35:BA:1784:A:N7	1.96	0.63
35:BA:2123:G:H2'	35:BA:2124:G:H8	1.64	0.63
35:BA:2698:U:H2'	35:BA:2699:C:C6	2.33	0.63
52:BT:28:VAL:HG21	52:BT:46:GLU:HG3	1.79	0.63
57:BY:96:ILE:HG22	57:BY:97:ARG:H	1.62	0.63
1:CA:328:C:H4'	1:CA:329:A:H5'	1.78	0.63
1:CA:987:G:H1	1:CA:1218:C:H42	1.45	0.63
21:CU:9:ARG:HA	21:CU:9:ARG:HH11	1.62	0.63
35:DA:1096:A:H61	45:DK:30:HIS:CE1	2.16	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1678:G:H22	35:DA:1989:G:H22	1.44	0.63
41:DG:61:ALA:HA	41:DG:64:THR:HG22	1.79	0.63
5:AE:9:LYS:HB2	5:AE:112:LEU:HD11	1.80	0.63
9:AI:17:VAL:HG13	9:AI:81:ILE:HD13	1.80	0.63
35:BA:993:G:OP1	53:BU:50:ARG:NH2	2.32	0.63
35:BA:1666:G:HO2'	47:BO:6:THR:HG1	1.45	0.63
35:BA:2025:C:H2'	35:BA:2026:C:C6	2.34	0.63
57:BY:44:ILE:H	57:BY:62:GLU:CD	2.07	0.63
1:CA:188:C:H42	1:CA:189(L):G:H1	1.47	0.63
1:CA:1055:A:N7	1:CA:1200:C:N4	2.46	0.63
16:CP:13:HIS:O	16:CP:15:PRO:HD3	1.97	0.63
35:DA:910:A:N7	49:DQ:13:GLN:HG3	2.14	0.63
43:DI:8:PRO:HG3	43:DI:14:ASP:HA	1.80	0.63
45:DK:54:PRO:HD3	45:DK:73:PRO:HD3	1.81	0.63
53:DU:110:VAL:O	53:DU:114:LYS:HG2	1.98	0.63
57:DY:44:ILE:H	57:DY:62:GLU:CD	2.07	0.63
58:DZ:10:ARG:HH21	58:DZ:26:GLY:H	1.47	0.63
6:AF:100:ASN:ND2	18:AR:23:LYS:O	2.32	0.63
10:AJ:77:PRO:O	10:AJ:79:ARG:NH1	2.31	0.63
35:BA:140:G:H1'	35:BA:141:A:C2	2.33	0.63
35:BA:676:A:H2	35:BA:802:A:H61	1.44	0.63
42:BH:97:ARG:HG3	42:BH:98:LEU:H	1.64	0.63
51:BS:20:ARG:NE	51:BS:20:ARG:HA	2.12	0.63
53:BU:101:ARG:HB2	53:BU:101:ARG:HH11	1.61	0.63
1:CA:608:A:O2'	16:CP:32:TYR:OH	2.17	0.63
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.34	0.63
6:CF:39:LYS:H	6:CF:64:GLN:HB3	1.63	0.63
12:CL:90:VAL:O	12:CL:92:ASP:N	2.32	0.63
34:D9:15:LYS:NZ	35:DA:2753:A:N3	2.46	0.63
35:DA:2491:U:H5'	35:DA:2570:G:H5"	1.81	0.63
40:DF:125:LEU:HD23	40:DF:125:LEU:H	1.61	0.63
20:AT:72:LEU:HD22	20:AT:76:ALA:HB1	1.80	0.63
35:BA:2147:G:H2'	35:BA:2148:G:O4'	1.98	0.63
40:BF:67:GLN:HG3	40:BF:67:GLN:O	1.99	0.63
52:BT:65:LYS:HZ3	52:BT:66:VAL:H	1.47	0.63
1:CA:224:C:H2'	1:CA:225:C:H6	1.63	0.63
1:CA:737:A:H2'	1:CA:738:C:H6	1.63	0.63
1:CA:1027:C:H2'	1:CA:1028:C:C5	2.33	0.63
1:CA:1469:G:H2'	1:CA:1470:G:H8	1.63	0.63
3:CC:113:ALA:HB3	3:CC:114:PRO:HD3	1.81	0.63
35:DA:658:C:H2'	35:DA:659:C:C6	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:885:C:H2'	35:DA:886:C:O4'	1.99	0.63
35:DA:2019:A:H61	35:DA:2035:G:H1	1.47	0.63
1:AA:559:A:H4'	1:AA:560:U:H3'	1.79	0.63
1:AA:982:U:O4	1:AA:1223:C:N3	2.31	0.63
4:AD:25:ARG:NH1	4:AD:30:LYS:O	2.32	0.63
13:AM:8:GLU:OE1	13:AM:22:ILE:HG13	1.98	0.63
35:BA:730:C:OP1	35:BA:1775:U:O2'	2.16	0.63
35:BA:2591:C:H2'	35:BA:2592:G:C8	2.33	0.63
43:BI:53:ALA:O	43:BI:57:ARG:HB3	1.97	0.63
49:BQ:132:VAL:HG11	58:BZ:81:ARG:HH21	1.63	0.63
1:CA:728:A:H2'	1:CA:729:A:C8	2.33	0.63
1:CA:1432:G:OP1	52:DT:107:ASP:HB2	1.99	0.63
2:CB:47:THR:HG23	2:CB:202:PRO:HG2	1.81	0.63
9:CI:15:ALA:HB2	9:CI:65:VAL:HG23	1.80	0.63
10:CJ:3:LYS:N	10:CJ:74:ILE:O	2.31	0.63
12:CL:117:ARG:NH2	12:CL:124:LYS:HB2	2.13	0.63
42:DH:19:VAL:HG22	42:DH:24:VAL:HG23	1.79	0.63
1:AA:1435:G:H2'	1:AA:1436:U:H6	1.63	0.63
6:AF:16:GLN:CD	6:AF:16:GLN:H	2.07	0.63
24:AY:142:ARG:O	24:AY:146:ARG:HG3	1.99	0.63
31:B6:35:GLU:OE1	31:B6:37:ARG:NH2	2.32	0.63
40:BF:3:GLU:HA	40:BF:24:LEU:HG	1.81	0.63
49:BQ:141:GLN:HB3	58:BZ:99:TYR:CE1	2.33	0.63
58:BZ:10:ARG:NH2	58:BZ:26:GLY:O	2.31	0.63
1:CA:728:A:H2'	1:CA:729:A:H8	1.63	0.63
31:D6:30:THR:HB	31:D6:31:PRO:HD2	1.81	0.63
35:DA:143:G:H1'	56:DX:37:THR:HG21	1.81	0.63
35:DA:1918:A:O2'	35:DA:1920:C:N4	2.32	0.63
45:DK:112:MET:H	45:DK:113:PRO:CD	2.12	0.63
48:DP:29:LYS:HB3	48:DP:34:GLY:H	1.63	0.63
1:AA:269:C:H2'	1:AA:270:A:C8	2.33	0.63
1:AA:1238:A:H62	1:AA:1301:U:H3	1.46	0.63
2:AB:71:VAL:HB	2:AB:164:VAL:HG13	1.80	0.63
8:AH:90:GLY:O	12:AL:7:ILE:HG21	1.98	0.63
12:AL:32:PHE:HE1	12:AL:86:ARG:HG3	1.64	0.63
13:AM:23:TYR:HB3	13:AM:67:GLU:HB2	1.79	0.63
35:BA:912:C:OP1	49:BQ:9:TYR:OH	2.17	0.63
42:BH:56:SER:HB2	42:BH:61:HIS:ND1	2.14	0.63
1:CA:1304:G:H1	1:CA:1331:G:HO2'	1.45	0.63
35:DA:2660:A:H5'	35:DA:2661:G:C2	2.33	0.63
43:DI:78:THR:HA	43:DI:141:LYS:O	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DQ:140:ALA:O	49:DQ:141:GLN:HB2	1.97	0.63
56:DX:63:LYS:HE3	56:DX:72:LYS:HE3	1.79	0.63
1:AA:1003:G:N2	1:AA:1004:A:N3	2.47	0.62
1:AA:1456:G:O3'	20:AT:39:LYS:NZ	2.31	0.62
10:AJ:45:ARG:HB3	10:AJ:65:LEU:HB3	1.80	0.62
15:AO:8:LYS:O	15:AO:12:ILE:HG13	1.99	0.62
35:BA:1007:C:H5"	46:BN:35:ARG:NH1	2.14	0.62
35:BA:2816:C:O2	35:BA:2883:A:O2'	2.17	0.62
46:BN:13:TRP:O	46:BN:135:PRO:HD2	1.99	0.62
52:BT:29:ARG:CB	52:BT:85:LYS:HA	2.29	0.62
53:BU:8:VAL:HG23	53:BU:11:ARG:HH21	1.62	0.62
1:CA:143:A:H2	1:CA:220:G:H1	1.46	0.62
1:CA:722:A:O2'	1:CA:723:U:O2	2.12	0.62
1:CA:832:C:N4	1:CA:855:G:O6	2.31	0.62
1:CA:1238:A:N7	1:CA:1303:C:H1'	2.13	0.62
2:CB:71:VAL:HB	2:CB:164:VAL:HG13	1.81	0.62
35:DA:2147:G:H2'	35:DA:2148:G:O4'	1.98	0.62
1:AA:481:G:O2'	1:AA:483:C:N4	2.32	0.62
1:AA:737:A:H2'	1:AA:738:C:C6	2.35	0.62
2:AB:219:VAL:O	2:AB:223:ILE:HG13	1.99	0.62
22:AW:33:U:H3	22:AW:35:A:H3'	1.64	0.62
25:B0:24:LYS:O	25:B0:25:ARG:HD3	1.99	0.62
35:BA:1948:G:H5'	35:BA:1948:G:H8	1.63	0.62
35:BA:2808:U:H5'	35:BA:2891:G:O6	1.98	0.62
42:BH:27:LYS:HG2	42:BH:32:GLU:HG3	1.81	0.62
51:BS:106:ARG:O	51:BS:106:ARG:HD2	1.98	0.62
1:CA:377:G:OP1	16:CP:5:ARG:NH1	2.33	0.62
7:CG:15:ASP:HB3	7:CG:19:GLY:H	1.63	0.62
15:CO:8:LYS:O	15:CO:12:ILE:HG13	1.99	0.62
35:DA:24:G:O2'	55:DW:78:GLU:O	2.16	0.62
35:DA:1174:A:H5"	35:DA:1175:U:H5'	1.80	0.62
35:DA:2469:A:O2'	49:DQ:56:ARG:NE	2.31	0.62
35:DA:2470:G:OP1	49:DQ:56:ARG:NH2	2.29	0.62
40:DF:132:VAL:HG22	40:DF:133:ASN:H	1.64	0.62
1:AA:1158:C:O2'	1:AA:1160:G:OP1	2.15	0.62
1:AA:1226:C:O2'	13:AM:111:LYS:NZ	2.25	0.62
4:AD:43:HIS:O	4:AD:45:GLN:N	2.32	0.62
24:AY:234:ALA:HB2	24:AY:247:SER:HB2	1.81	0.62
35:BA:364:C:H2'	35:BA:365:C:H5'	1.81	0.62
35:BA:1339:G:H5"	56:BX:16:LYS:HD3	1.81	0.62
43:BI:133:HIS:O	43:BI:135:GLU:HG3	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:123:C:O2'	1:CA:290:C:O2	2.16	0.62
1:CA:152:A:N6	1:CA:169:C:H42	1.95	0.62
30:D5:4:HIS:O	35:DA:2056:G:N2	2.31	0.62
35:DA:1614:A:N6	55:DW:91:GLY:O	2.32	0.62
35:DA:2100:G:O6	35:DA:2189:U:O4	2.16	0.62
35:DA:2132:U:H3	37:DC:6:LYS:HZ3	1.45	0.62
38:DD:108:PRO:HB3	38:DD:143:HIS:CE1	2.34	0.62
40:DF:36:VAL:HG11	40:DF:183:VAL:HG11	1.81	0.62
40:DF:164:ARG:HG2	40:DF:164:ARG:HH11	1.63	0.62
41:DG:10:LYS:O	41:DG:14:GLU:HB3	1.98	0.62
52:DT:28:VAL:CG2	52:DT:46:GLU:HG3	2.30	0.62
3:AC:16:ARG:NH2	3:AC:182:ILE:O	2.32	0.62
35:BA:458:G:O2'	35:BA:469:G:O6	2.12	0.62
35:BA:2037:G:H2'	35:BA:2038:G:C8	2.34	0.62
35:BA:2787:C:H1'	39:BE:61:ARG:HD3	1.81	0.62
41:BG:16:ARG:HH21	41:BG:33:ARG:HG3	1.63	0.62
42:BH:104:GLU:HA	42:BH:113:VAL:O	1.99	0.62
51:DS:13:ARG:CG	51:DS:14:VAL:H	2.12	0.62
1:AA:542:G:P	4:AD:10:ARG:HH22	2.22	0.62
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.34	0.62
10:AJ:63:PHE:HA	14:AN:59:ALA:H	1.64	0.62
35:BA:672:C:H2'	35:BA:673:C:H5'	1.81	0.62
47:BO:77:ILE:HD11	52:BT:72:VAL:HG12	1.80	0.62
58:BZ:28:MET:HE3	58:BZ:37:VAL:HG11	1.79	0.62
4:CD:57:ARG:NH2	5:CE:107:ARG:HD3	2.15	0.62
8:CH:97:VAL:HG21	8:CH:128:GLY:HA2	1.82	0.62
35:DA:2577:A:H5"	35:DA:2578:G:H5'	1.82	0.62
35:DA:2853:C:H2'	35:DA:2854:G:H8	1.64	0.62
40:DF:67:GLN:HG3	40:DF:67:GLN:O	2.00	0.62
1:AA:407:G:OP1	4:AD:115:ARG:NH1	2.32	0.62
1:AA:1014:A:C2	1:AA:1219:U:H1'	2.35	0.62
12:AL:117:ARG:NH2	12:AL:124:LYS:HB2	2.15	0.62
25:B0:55:ARG:NH2	35:BA:2364:C:OP1	2.31	0.62
35:BA:639:U:H3	35:BA:649:G:H1	1.47	0.62
38:BD:94:LEU:HB2	38:BD:104:TYR:HE1	1.64	0.62
42:BH:54:ARG:NH2	42:BH:57:ASP:OD1	2.33	0.62
45:BK:38:VAL:HG23	45:BK:39:LYS:H	1.61	0.62
22:CW:66:U:H2'	22:CW:67:C:C6	2.35	0.62
48:DP:16:ARG:HH22	48:DP:18:ARG:CG	2.08	0.62
1:AA:148:G:H2'	1:AA:149:A:H8	1.63	0.62
1:AA:192:U:H1'	20:AT:103:GLY:HA2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:506:G:H1	1:AA:525:C:H42	1.47	0.62
1:AA:596:C:H2'	1:AA:597:G:H8	1.64	0.62
1:AA:1224:G:O2'	1:AA:1322:C:OP2	2.17	0.62
30:B5:52:TYR:O	30:B5:54:GLY:N	2.32	0.62
42:BH:155:SER:O	42:BH:157:TYR:N	2.31	0.62
48:BP:59:LEU:HA	48:BP:61:ARG:NH1	2.15	0.62
49:BQ:12:GLN:HG2	49:BQ:73:PRO:HD2	1.81	0.62
1:CA:323:U:H2'	1:CA:324:G:O4'	1.99	0.62
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.63	0.62
6:CF:35:ALA:HB1	6:CF:65:VAL:HG21	1.82	0.62
16:CP:28:ARG:HH11	16:CP:28:ARG:HG2	1.64	0.62
19:CS:9:VAL:O	19:CS:11:VAL:N	2.32	0.62
25:D0:68:GLU:HG3	25:D0:80:HIS:HB2	1.81	0.62
28:D3:6:VAL:HB	28:D3:54:VAL:HG11	1.82	0.62
35:DA:639:U:H2'	35:DA:640:C:C6	2.35	0.62
35:DA:1902:C:O2'	38:DD:244:ARG:HB2	1.99	0.62
38:DD:268:ARG:HB3	38:DD:268:ARG:HH11	1.64	0.62
41:DG:41:GLN:HG2	41:DG:155:MET:HB3	1.81	0.62
54:DV:5:VAL:HG21	54:DV:35:LEU:HD23	1.80	0.62
1:AA:1249:C:H42	1:AA:1288:A:H62	1.47	0.62
1:AA:1274:G:H2'	1:AA:1275:A:H8	1.62	0.62
2:AB:162:ILE:HD11	2:AB:184:VAL:HG22	1.81	0.62
35:BA:872:A:OP1	49:BQ:5:ARG:NH2	2.33	0.62
35:BA:1860:G:O3'	37:BC:206:LYS:HB2	1.99	0.62
41:BG:142:PRO:HG2	41:BG:143:GLU:OE2	1.99	0.62
54:BV:47:VAL:HG12	54:BV:52:VAL:HG13	1.82	0.62
15:CO:74:ASP:HB3	15:CO:77:ARG:HG2	1.81	0.62
22:CV:15:G:N2	22:CV:59:U:O2	2.32	0.62
35:DA:1169:G:H2'	35:DA:1170:G:O4'	2.00	0.62
35:DA:1677:A:H2'	35:DA:1678:G:H8	1.64	0.62
35:DA:2030:A:H4'	35:DA:2031:A:H8	1.65	0.62
42:DH:88:LEU:HD22	42:DH:130:ARG:HG2	1.82	0.62
52:DT:83:ILE:HG13	52:DT:84:GLN:N	2.14	0.62
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.63	0.62
1:AA:1240:U:OP2	7:AG:116:ALA:HB2	1.99	0.62
1:AA:1321:C:H5"	1:AA:1322:C:H2'	1.81	0.62
1:AA:1392:G:H21	1:AA:1502:A:H8	1.47	0.62
13:AM:115:LYS:O	13:AM:117:VAL:N	2.32	0.62
16:AP:13:HIS:O	16:AP:15:PRO:HD3	2.00	0.62
35:BA:2696:U:H2'	35:BA:2697:G:C8	2.34	0.62
1:CA:766:A:H62	1:CA:813:U:H3	1.45	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:33:ALA:O	13:CM:37:THR:OG1	2.17	0.62
22:CW:52:G:H2'	22:CW:53:G:C8	2.34	0.62
30:D5:4:HIS:HB3	30:D5:5:PRO:HD3	1.81	0.62
46:DN:2:LYS:HZ2	53:DU:95:LEU:HD21	1.64	0.62
48:DP:89:ALA:HA	48:DP:121:LYS:HD3	1.81	0.62
52:DT:85:LYS:HB3	52:DT:85:LYS:NZ	2.14	0.62
53:DU:101:ARG:HB2	53:DU:101:ARG:HH11	1.63	0.62
1:AA:592:G:H2'	1:AA:593:G:H8	1.63	0.62
1:AA:1124:G:O6	1:AA:1145:C:O2'	2.17	0.62
2:AB:141:GLU:O	2:AB:145:LEU:HB2	2.00	0.62
24:AY:102:TYR:HE2	24:AY:346:TRP:CE2	2.16	0.62
33:B8:50:LEU:HD12	33:B8:51:ALA:H	1.64	0.62
35:BA:2271:G:H2'	35:BA:2272:U:C6	2.34	0.62
1:CA:372:C:H42	1:CA:389:A:H62	1.48	0.62
22:CW:52:G:H2'	22:CW:53:G:H8	1.63	0.62
35:DA:2808:U:H5'	35:DA:2891:G:O6	2.00	0.62
38:DD:10:THR:HG23	38:DD:13:ARG:HB3	1.81	0.62
40:DF:123:LEU:HD12	40:DF:124:LEU:H	1.65	0.62
1:AA:1036:G:H3'	1:AA:1037:C:C6	2.35	0.61
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.00	0.61
1:AA:1409:C:H42	1:AA:1491:G:H1	1.47	0.61
2:AB:25:ASN:O	2:AB:27:LYS:N	2.33	0.61
35:BA:2876:G:H4'	52:BT:3:ARG:NE	2.15	0.61
42:BH:167:GLU:O	42:BH:169:VAL:N	2.32	0.61
58:BZ:146:ILE:HG13	58:BZ:147:GLY:H	1.65	0.61
1:CA:674:G:H2'	1:CA:675:A:C8	2.34	0.61
24:CY:348:GLY:O	24:CY:352:LYS:HB2	2.00	0.61
43:DI:92:VAL:HG13	43:DI:120:ILE:HB	1.82	0.61
46:DN:133:GLN:HG2	46:DN:134:ARG:H	1.64	0.61
26:B1:27:GLU:OE2	26:B1:28:GLY:N	2.32	0.61
35:BA:2282:G:N2	35:BA:2390:U:O2	2.32	0.61
57:BY:46:LYS:N	57:BY:62:GLU:HB2	2.15	0.61
4:CD:49:ARG:HE	4:CD:49:ARG:HA	1.65	0.61
4:CD:176:LEU:HG	4:CD:177:ASP:H	1.65	0.61
4:CD:191:ARG:NE	4:CD:200:GLU:OE1	2.33	0.61
22:CW:34:G:N1	23:CX:15:A:N7	2.48	0.61
53:DU:95:LEU:HD12	54:DV:11:GLN:HE21	1.62	0.61
58:DZ:93:ASP:OD1	58:DZ:94:GLU:N	2.33	0.61
1:AA:951:G:O2'	1:AA:970:C:O2'	2.12	0.61
5:AE:101:ILE:HD11	5:AE:119:LEU:HD23	1.80	0.61
25:B0:74:ARG:HH12	36:BB:13:A:H8	1.46	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2151:G:H2'	35:BA:2152:G:H8	1.65	0.61
40:BF:20:LEU:HD12	40:BF:199:TRP:CH2	2.36	0.61
43:BI:125:GLU:HA	43:BI:125:GLU:OE1	2.01	0.61
51:BS:13:ARG:CG	51:BS:14:VAL:H	2.13	0.61
53:BU:110:VAL:O	53:BU:114:LYS:HG2	2.01	0.61
58:BZ:20:ARG:HB2	58:BZ:20:ARG:NH1	2.14	0.61
7:CG:16:LEU:HD13	9:CI:45:ALA:HB2	1.82	0.61
12:CL:70:ILE:HG12	12:CL:100:ILE:HD12	1.82	0.61
33:D8:2:PRO:HA	35:DA:591:C:O2	2.00	0.61
35:DA:271(H):G:H1	35:DA:271(P):C:H42	1.49	0.61
35:DA:272(C):G:H1	35:DA:365:C:H42	1.48	0.61
35:DA:2135:A:N6	35:DA:2156:G:O2'	2.32	0.61
37:DC:16:ASP:HB3	37:DC:19:LYS:HB2	1.82	0.61
46:DN:133:GLN:HG2	46:DN:135:PRO:HD3	1.82	0.61
1:AA:652:U:O4	1:AA:752:G:O2'	2.14	0.61
2:AB:33:TYR:HB2	2:AB:43:ASP:HB2	1.83	0.61
10:AJ:7:LYS:HB2	10:AJ:97:GLU:HB2	1.80	0.61
13:AM:108:ARG:CZ	13:AM:114:ARG:HG2	2.29	0.61
13:AM:123:ALA:HB1	24:AY:161:GLU:O	2.00	0.61
19:AS:29:ARG:HD3	19:AS:30:LEU:H	1.64	0.61
25:B0:11:ARG:HB2	25:B0:11:ARG:NH1	2.15	0.61
35:BA:2305:A:H1'	41:BG:135:LEU:O	1.99	0.61
42:BH:41:MET:CG	42:BH:42:ARG:H	2.11	0.61
1:CA:611:A:H61	1:CA:629:G:H1	1.45	0.61
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.63	0.61
1:CA:1458:G:OP1	20:CT:35:THR:OG1	2.13	0.61
35:DA:1664:A:H61	35:DA:1996:C:H42	1.47	0.61
35:DA:2176:A:H2'	35:DA:2177:C:C6	2.36	0.61
39:DE:77:ILE:HG22	39:DE:78:LEU:H	1.65	0.61
41:DG:16:ARG:O	41:DG:20:ILE:HG13	1.99	0.61
51:DS:30:ARG:NH2	51:DS:62:LYS:HD2	2.15	0.61
54:DV:36:PRO:HA	54:DV:56:SER:HB2	1.81	0.61
1:AA:630:G:H2'	1:AA:631:G:H5'	1.82	0.61
13:AM:34:LEU:HD13	13:AM:41:PRO:HG3	1.82	0.61
16:AP:22:THR:HA	16:AP:33:ILE:HG12	1.83	0.61
27:B2:33:MET:HE1	56:BX:46:ALA:HB1	1.81	0.61
31:B6:31:PRO:HB3	35:BA:2286:A:H3'	1.81	0.61
35:BA:2590:A:OP2	38:BD:238:GLY:HA2	2.00	0.61
39:BE:54:GLN:O	39:BE:75:VAL:HG23	1.99	0.61
46:BN:133:GLN:HG2	46:BN:134:ARG:H	1.65	0.61
1:CA:1244:C:H2'	1:CA:1245:A:C8	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:224:GLN:HA	2:CB:229:VAL:HG22	1.81	0.61
6:CF:6:VAL:HG13	6:CF:90:VAL:HG22	1.83	0.61
22:CW:5:G:H1	22:CW:68:C:H42	1.49	0.61
35:DA:218:A:H2	35:DA:235:U:H4'	1.66	0.61
35:DA:1403:C:H5"	35:DA:1471:A:H1'	1.82	0.61
35:DA:2177:C:O2	37:DC:45:HIS:HB3	2.00	0.61
38:DD:133:LEU:HB3	38:DD:173:VAL:HG11	1.81	0.61
1:AA:189(L):G:H2'	1:AA:190:U:C6	2.35	0.61
1:AA:666:G:N2	1:AA:740:U:O2	2.29	0.61
35:BA:1174:A:H5"	35:BA:1175:U:H5'	1.82	0.61
35:BA:2661:G:H5"	35:BA:2662:A:C2	2.35	0.61
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.36	0.61
24:CY:26:LEU:HB2	24:CY:55:LEU:HD21	1.83	0.61
29:D4:26:SER:OG	29:D4:27:THR:N	2.33	0.61
35:DA:1048:A:H2	35:DA:1109:C:H41	1.48	0.61
36:DB:45:A:C1'	41:DG:95:ARG:HH12	2.12	0.61
39:DE:24:THR:HG22	39:DE:186:GLY:HA2	1.81	0.61
1:AA:1261:A:H62	1:AA:1274:G:H21	1.49	0.61
13:AM:7:VAL:HG11	41:BG:139:LEU:HD21	1.81	0.61
13:AM:83:ASP:CG	13:AM:84:ILE:H	2.09	0.61
35:BA:71:A:H8	35:BA:71:A:H5'	1.66	0.61
35:BA:513:A:O2'	35:BA:1217:C:OP1	2.18	0.61
35:BA:996:A:H4'	53:BU:92:ARG:HE	1.64	0.61
35:BA:2150:U:H2'	35:BA:2151:G:C8	2.35	0.61
35:BA:2681:C:H5	35:BA:2725:A:N6	1.95	0.61
35:BA:2801(A):A:H4'	35:BA:2802:G:H5'	1.83	0.61
39:BE:116:VAL:O	39:BE:117:MET:HB3	2.01	0.61
48:BP:16:ARG:HH22	48:BP:18:ARG:HG2	1.65	0.61
58:BZ:141:VAL:HA	58:BZ:144:LEU:HD23	1.83	0.61
35:DA:1845:G:H2'	35:DA:1846:G:H5"	1.81	0.61
41:DG:77:ILE:HG22	41:DG:80:PHE:H	1.65	0.61
46:DN:43:THR:HB	46:DN:46:VAL:HG12	1.82	0.61
50:DR:7:GLY:O	50:DR:8:ARG:HB2	1.99	0.61
35:BA:1149:G:H2'	35:BA:1150:C:C6	2.36	0.61
35:BA:1173:G:H3'	35:BA:1174:A:C5'	2.29	0.61
53:BU:88:ILE:HG22	54:BV:47:VAL:HG23	1.83	0.61
58:BZ:28:MET:HE1	58:BZ:61:LEU:HD21	1.83	0.61
1:CA:137:C:N4	1:CA:226:G:H1	1.95	0.61
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.36	0.61
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.36	0.61
3:CC:20:SER:HB2	3:CC:40:ARG:HH22	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:59:ILE:CG2	17:CQ:71:PHE:HB3	2.31	0.61
35:DA:823:G:H2'	35:DA:824:A:C8	2.35	0.61
52:DT:50:ILE:HD11	52:DT:102:ILE:HD11	1.83	0.61
57:DY:46:LYS:N	57:DY:62:GLU:HB2	2.14	0.61
1:AA:1307:U:OP1	13:AM:101:GLN:NE2	2.33	0.61
4:AD:35:ARG:O	4:AD:37:PRO:HD3	2.01	0.61
4:AD:196:LEU:H	4:AD:196:LEU:HD12	1.66	0.61
9:AI:40:LEU:O	9:AI:42:ARG:N	2.31	0.61
11:AK:58:PRO:HB2	11:AK:93:GLN:HG3	1.81	0.61
19:AS:6:LYS:HG3	19:AS:7:LYS:HE2	1.83	0.61
31:B6:38:LYS:HD3	35:BA:2344:U:OP1	2.00	0.61
35:BA:654(H):G:H3'	35:BA:654(I):C:H4'	1.82	0.61
39:BE:77:ILE:HG22	39:BE:78:LEU:H	1.66	0.61
45:BK:122:ALA:HA	45:BK:125:ARG:HE	1.64	0.61
48:BP:126:VAL:HA	48:BP:145:PRO:HB2	1.82	0.61
52:BT:50:ILE:HD11	52:BT:102:ILE:HD11	1.82	0.61
58:BZ:95:PRO:HA	58:BZ:129:SER:HA	1.83	0.61
1:CA:1095:U:OP1	1:CA:1108:G:N2	2.34	0.61
1:CA:1100:C:O2'	1:CA:1102:A:OP1	2.19	0.61
35:DA:527:C:N4	35:DA:2779:U:OP2	2.34	0.61
41:DG:106:LEU:HA	41:DG:110:ALA:HB3	1.83	0.61
49:DQ:111:GLU:OE2	49:DQ:133:ARG:NH1	2.32	0.61
4:AD:33:MET:C	4:AD:35:ARG:H	2.09	0.61
6:AF:6:VAL:HG13	6:AF:90:VAL:HG22	1.81	0.61
10:AJ:87:THR:C	10:AJ:89:ASP:H	2.09	0.61
35:BA:74:A:H4'	35:BA:75:G:O5'	1.99	0.61
35:BA:1007:C:H5"	46:BN:35:ARG:HH11	1.63	0.61
35:BA:1151:G:H5"	53:BU:81:HIS:CE1	2.36	0.61
35:BA:1187:G:H5"	54:BV:81:TYR:CE2	2.36	0.61
35:BA:2607:G:H2'	35:BA:2608:G:O4'	1.99	0.61
39:BE:59:VAL:HG13	39:BE:60:ASN:H	1.66	0.61
54:BV:64:HIS:ND1	54:BV:92:THR:HG22	2.16	0.61
1:CA:127:G:HO2'	17:CQ:2:PRO:N	1.98	0.61
1:CA:1006:C:H42	1:CA:1024:G:N2	1.96	0.61
15:CO:6:GLU:N	15:CO:6:GLU:OE1	2.34	0.61
35:DA:910:A:H62	49:DQ:12:GLN:HA	1.66	0.61
35:DA:2329:G:H2'	35:DA:2330:G:H8	1.65	0.61
41:DG:55:LYS:NZ	41:DG:148:MET:O	2.32	0.61
1:AA:542:G:OP1	4:AD:10:ARG:NH2	2.34	0.60
4:AD:176:LEU:HG	4:AD:177:ASP:H	1.64	0.60
12:AL:53:ARG:HG2	12:AL:53:ARG:HH11	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AW:64:A:H2'	22:AW:65:G:C8	2.36	0.60
35:BA:941:A:H2'	35:BA:942:G:C8	2.36	0.60
1:CA:531:U:OP2	24:CY:201:ARG:NH1	2.32	0.60
7:CG:15:ASP:HB3	7:CG:19:GLY:N	2.16	0.60
24:CY:303:ARG:H	24:CY:304:PRO:HD3	1.65	0.60
36:DB:21:G:O2'	36:DB:22:U:H6	1.84	0.60
41:DG:101:ILE:O	41:DG:105:LYS:NZ	2.34	0.60
43:DI:31:LEU:HD21	43:DI:38:LEU:HG	1.83	0.60
1:AA:276:G:O3'	17:AQ:68:ARG:NH1	2.32	0.60
1:AA:1079:G:H2'	1:AA:1080:A:C8	2.35	0.60
1:AA:1255:G:O2'	1:AA:1258:G:O2'	2.18	0.60
12:AL:47:LYS:HB3	12:AL:48:PRO:CD	2.30	0.60
22:AW:16:U:C4	22:AW:18:G:H2'	2.36	0.60
33:B8:39:LYS:O	33:B8:43:GLN:HG3	2.01	0.60
35:BA:7:G:N2	35:BA:2897:U:O2	2.33	0.60
35:BA:372:G:N2	35:BA:401:A:OP2	2.29	0.60
39:BE:59:VAL:O	39:BE:62:PRO:HD2	2.01	0.60
1:CA:1226:C:O2'	13:CM:111:LYS:NZ	2.31	0.60
6:CF:67:MET:HE1	6:CF:75:LEU:HD22	1.83	0.60
25:D0:24:LYS:O	25:D0:25:ARG:HD3	2.02	0.60
31:D6:39:TYR:HB3	31:D6:49:HIS:CD2	2.35	0.60
33:D8:25:MET:SD	48:DP:64:LYS:HD2	2.42	0.60
41:DG:37:VAL:HG22	41:DG:159:VAL:HG12	1.83	0.60
43:DI:13:GLY:O	43:DI:17:GLN:NE2	2.34	0.60
51:DS:28:VAL:HB	51:DS:89:ARG:HB2	1.83	0.60
56:DX:50:LYS:HB3	56:DX:84:ALA:HB2	1.81	0.60
1:AA:79:G:H1	1:AA:80:G:H21	1.47	0.60
1:AA:939:G:H5"	7:AG:102:ARG:NH2	2.15	0.60
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.36	0.60
1:AA:1258:G:H2'	1:AA:1259:C:C6	2.36	0.60
5:AE:31:LEU:HD23	5:AE:45:PHE:HB2	1.82	0.60
7:AG:148:ASN:C	7:AG:150:ALA:H	2.10	0.60
12:AL:45:PRO:HG3	12:AL:53:ARG:HD3	1.84	0.60
35:BA:806:C:OP2	48:BP:39:LYS:HG3	2.00	0.60
35:BA:2130:U:O2'	35:BA:2133:G:O2'	2.19	0.60
53:BU:31:SER:O	53:BU:33:ARG:N	2.30	0.60
1:CA:1097:C:O2'	1:CA:1169:A:N3	2.30	0.60
1:CA:1435:G:H2'	1:CA:1436:U:H6	1.66	0.60
4:CD:13:ARG:HG3	4:CD:40:PRO:HD3	1.83	0.60
8:CH:103:VAL:HG21	8:CH:110:ALA:HB2	1.83	0.60
35:DA:613:G:N2	35:DA:614(C):A:O2'	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:941:A:H2'	35:DA:942:G:C8	2.36	0.60
1:AA:191:G:O2'	20:AT:101:GLY:O	2.18	0.60
1:AA:1095:U:OP1	1:AA:1108:G:N1	2.33	0.60
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.66	0.60
24:AY:187:HIS:CE1	24:AY:311:ILE:HD11	2.37	0.60
35:BA:142:A:C8	35:BA:1408:C:H1'	2.36	0.60
35:BA:1541:G:H4'	35:BA:1542:A:O4'	2.00	0.60
35:BA:2304:G:H4'	41:BG:133:LEU:HA	1.83	0.60
39:BE:86:PRO:O	39:BE:88:GLY:N	2.34	0.60
1:CA:357:G:OP1	1:CA:366:C:O2'	2.12	0.60
1:CA:711:G:H2'	1:CA:712:A:C8	2.36	0.60
1:CA:807:A:H2'	1:CA:808:C:C6	2.36	0.60
1:CA:1355:G:H2'	1:CA:1356:G:C8	2.35	0.60
35:DA:2818:G:OP2	50:DR:42:LYS:NZ	2.35	0.60
38:DD:181:GLU:HA	38:DD:272:ALA:HB3	1.83	0.60
40:DF:24:LEU:HB3	40:DF:25:PRO:CD	2.30	0.60
51:DS:34:HIS:HB3	51:DS:53:SER:HB3	1.84	0.60
1:AA:1244:C:H2'	1:AA:1245:A:H8	1.67	0.60
1:AA:1372:U:H2'	1:AA:1373:G:O4'	2.01	0.60
28:B3:17:LYS:HG2	35:BA:969:U:OP1	2.01	0.60
35:BA:271(C):C:H2'	35:BA:271(D):G:C8	2.36	0.60
35:BA:2660:A:H5'	35:BA:2661:G:H21	1.67	0.60
35:BA:2849:U:OP2	52:BT:95:ARG:NH1	2.34	0.60
42:BH:8:PRO:HA	42:BH:69:ARG:HH21	1.66	0.60
57:BY:10:GLY:HA2	57:BY:27:VAL:HG13	1.82	0.60
4:CD:132:ARG:HG2	4:CD:132:ARG:HH11	1.67	0.60
5:CE:101:ILE:O	5:CE:120:THR:OG1	2.16	0.60
24:CY:223:LYS:C	24:CY:225:GLU:H	2.09	0.60
31:D6:26:ASN:HD22	31:D6:32:ASN:ND2	1.98	0.60
35:DA:156:U:OP1	35:DA:157:U:N3	2.34	0.60
35:DA:589:C:H2'	35:DA:590:A:H8	1.66	0.60
35:DA:1149:G:H2'	35:DA:1150:C:C6	2.37	0.60
36:DB:106:G:OP1	58:DZ:31:ARG:NH2	2.34	0.60
41:DG:115:ARG:CG	41:DG:116:ASP:H	2.13	0.60
1:AA:279:A:OP2	17:AQ:95:TYR:OH	2.18	0.60
1:AA:692:U:O4	11:AK:26:ASN:ND2	2.29	0.60
6:AF:4:TYR:HD1	6:AF:92:LYS:HA	1.67	0.60
11:AK:82:VAL:HB	11:AK:108:ILE:HG13	1.84	0.60
19:AS:9:VAL:O	19:AS:11:VAL:N	2.35	0.60
22:AW:51:U:H3	22:AW:64:A:H2	1.47	0.60
35:BA:48:G:N1	35:BA:177:G:OP2	2.30	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2723:C:H5”	50:BR:2:ARG:HH11	1.66	0.60
44:BJ:23:UNK:C	44:BJ:88:UNK:HA	2.31	0.60
47:BO:7:TYR:HE1	47:BO:20:MET:HE3	1.67	0.60
1:CA:110:C:H2’	1:CA:111:G:O4’	2.02	0.60
9:CI:9:ARG:HG2	9:CI:14:VAL:HG22	1.83	0.60
9:CI:110:GLU:OE2	9:CI:113:LYS:NZ	2.33	0.60
13:CM:49:THR:HG22	13:CM:51:ALA:H	1.66	0.60
22:CW:61:C:H2’	22:CW:62:C:C6	2.37	0.60
35:DA:1486:A:N1	35:DA:1504:C:N4	2.49	0.60
56:DX:12:VAL:HG23	56:DX:13:LEU:H	1.65	0.60
1:AA:9:G:H2’	1:AA:10:A:H8	1.67	0.60
3:AC:182:ILE:HG12	3:AC:203:PHE:HD1	1.67	0.60
35:BA:1076:C:H2’	35:BA:1077:A:C8	2.36	0.60
57:BY:28:LYS:HA	57:BY:39:VAL:H	1.67	0.60
1:CA:12:U:H3	1:CA:22:G:H1	1.49	0.60
1:CA:911:U:OP2	12:CL:97:ARG:NH2	2.34	0.60
15:CO:36:ILE:HG23	15:CO:56:LEU:HD11	1.84	0.60
18:CR:37:VAL:HG23	18:CR:38:GLU:H	1.66	0.60
30:D5:40:LYS:NZ	30:D5:49:CYS:SG	2.71	0.60
35:DA:954:G:H5”	49:DQ:13:GLN:HB3	1.83	0.60
35:DA:1678:G:N2	35:DA:1989:G:H22	1.99	0.60
35:DA:2246:G:H2’	35:DA:2247:A:C8	2.37	0.60
35:DA:2290:G:H1	35:DA:2342:C:H42	1.48	0.60
51:DS:99:LYS:O	51:DS:101:LEU:N	2.34	0.60
57:DY:90:LEU:HD12	57:DY:91:GLU:HG2	1.82	0.60
58:DZ:10:ARG:NH2	58:DZ:26:GLY:O	2.35	0.60
1:AA:1323:G:H4’	1:AA:1363:C:N3	2.17	0.60
7:AG:69:VAL:HA	7:AG:138:LYS:HD2	1.83	0.60
9:AI:28:VAL:HG22	9:AI:63:ILE:HB	1.84	0.60
25:B0:74:ARG:NH1	36:BB:13:A:H8	2.00	0.60
35:BA:910:A:H62	49:BQ:12:GLN:HA	1.67	0.60
35:BA:1991:U:H2’	35:BA:1992:G:H5”	1.82	0.60
35:BA:2401:U:H2’	35:BA:2402:C:H5”	1.83	0.60
35:BA:2831:G:OP1	39:BE:58:ARG:NH1	2.35	0.60
39:BE:119:ARG:HG2	39:BE:160:TYR:HB2	1.83	0.60
43:BI:84:GLY:HA3	43:BI:89:TYR:HE1	1.66	0.60
4:CD:173:TRP:CE2	4:CD:189:PRO:HB3	2.36	0.60
8:CH:89:PRO:HA	8:CH:92:ARG:HH11	1.66	0.60
19:CS:16:LEU:H	19:CS:16:LEU:HD12	1.66	0.60
26:D1:80:LEU:HB3	26:D1:82:LEU:HD22	1.84	0.60
35:DA:704:G:O2’	35:DA:726:G:N2	2.22	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2393:A:H5'	48:DP:62:LEU:HB3	1.84	0.60
35:DA:2472:G:H5'	35:DA:2473:U:H5"	1.84	0.60
1:AA:473:G:O3'	16:AP:81:ARG:NH2	2.35	0.60
1:AA:1054:C:O4'	1:AA:1196:U:O2'	2.18	0.60
2:AB:8:LYS:O	2:AB:12:GLU:HG3	2.01	0.60
7:AG:76:ARG:HH21	7:AG:156:TRP:HH2	1.50	0.60
29:B4:26:SER:OG	29:B4:27:THR:N	2.35	0.60
40:BF:3:GLU:O	40:BF:19:GLU:HB2	2.00	0.60
40:BF:4:VAL:HG11	40:BF:17:ARG:HD3	1.83	0.60
45:BK:112:MET:H	45:BK:113:PRO:CD	2.15	0.60
1:CA:1175:G:H2'	1:CA:1176:A:C8	2.37	0.60
1:CA:1427:U:H2'	1:CA:1428:A:H8	1.67	0.60
8:CH:91:ARG:HG2	8:CH:91:ARG:HH11	1.66	0.60
33:D8:50:LEU:HD12	33:D8:51:ALA:H	1.67	0.60
35:DA:690:G:H2'	35:DA:691:C:H6	1.67	0.60
38:DD:35:LYS:O	38:DD:37:LEU:N	2.34	0.60
43:DI:127:VAL:HG22	43:DI:139:GLN:HA	1.84	0.60
43:DI:133:HIS:HB2	43:DI:134:PRO:CD	2.32	0.60
46:DN:67:LEU:HD23	46:DN:87:LEU:HD13	1.83	0.60
24:AY:267:SER:HB3	25:B0:3:HIS:ND1	2.16	0.60
31:B6:19:ARG:HG2	31:B6:19:ARG:HH11	1.67	0.60
35:BA:1677:A:H2'	35:BA:1678:G:H8	1.66	0.60
37:BC:44:VAL:HG13	37:BC:215:VAL:HG22	1.84	0.60
38:BD:11:PRO:C	38:BD:13:ARG:H	2.10	0.60
41:BG:3:LEU:O	41:BG:8:LYS:NZ	2.35	0.60
48:BP:17:LYS:O	48:BP:19:VAL:N	2.35	0.60
3:CC:89:GLU:O	3:CC:93:LYS:HB2	2.02	0.60
7:CG:152:ALA:O	7:CG:155:ARG:NE	2.35	0.60
35:DA:1257:C:OP1	40:DF:72:ARG:NH2	2.35	0.60
35:DA:1682:G:OP2	35:DA:1699:G:N2	2.34	0.60
40:DF:24:LEU:O	40:DF:26:ALA:N	2.31	0.60
41:DG:82:LEU:HD23	41:DG:83:ARG:H	1.66	0.60
51:DS:96:GLY:O	51:DS:98:VAL:N	2.34	0.60
58:DZ:54:HIS:NE2	58:DZ:123:ASP:OD2	2.35	0.60
34:B9:18:ARG:NE	35:BA:1034:G:H5'	2.17	0.59
35:BA:1636:C:H2'	35:BA:1637:A:H8	1.62	0.59
35:BA:1889:A:H2'	35:BA:1890:A:C8	2.37	0.59
35:BA:2291:U:H2'	35:BA:2292:C:C6	2.36	0.59
35:BA:2744:G:N2	42:BH:143:GLN:OE1	2.35	0.59
39:BE:24:THR:HG22	39:BE:186:GLY:HA2	1.83	0.59
40:BF:195:ASP:OD1	40:BF:196:LEU:N	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:96:GLY:O	51:BS:98:VAL:N	2.33	0.59
1:CA:537:G:H5"	12:CL:113:ARG:HH12	1.66	0.59
5:CE:6:PHE:HB2	5:CE:34:VAL:HG22	1.83	0.59
25:D0:68:GLU:CG	25:D0:80:HIS:HB2	2.32	0.59
35:DA:143:G:H4'	56:DX:35:THR:HG21	1.84	0.59
35:DA:389:G:H1	48:DP:71:VAL:HG12	1.67	0.59
39:DE:51:PHE:HD1	39:DE:52:LEU:HD22	1.66	0.59
42:DH:20:ALA:HB3	42:DH:23:ARG:HB2	1.84	0.59
1:AA:476:G:H2'	1:AA:477:A:C8	2.37	0.59
1:AA:835:U:H3	1:AA:851:G:H1	1.49	0.59
1:AA:1030:C:H41	1:AA:1032:G:H21	1.49	0.59
15:AO:4:THR:OG1	15:AO:7:GLU:HB2	2.02	0.59
35:BA:1826:G:H4'	38:BD:242:ARG:HH21	1.67	0.59
39:BE:111:ARG:HD2	39:BE:160:TYR:CD2	2.37	0.59
41:BG:31:VAL:HG22	41:BG:32:PRO:HD2	1.83	0.59
58:BZ:96:VAL:HG22	58:BZ:97:GLU:H	1.68	0.59
1:CA:1479:C:H2'	1:CA:1480:G:H8	1.67	0.59
16:CP:53:VAL:HG12	16:CP:79:VAL:HG22	1.84	0.59
35:DA:1054:A:H2'	35:DA:1055:G:O4'	2.02	0.59
35:DA:1779:U:H5	35:DA:1784:A:N7	2.00	0.59
35:DA:1803:A:H4'	38:DD:259:THR:HG23	1.84	0.59
35:DA:2065:C:H2'	35:DA:2066:C:H6	1.67	0.59
39:DE:24:THR:HG23	39:DE:184:VAL:HG23	1.82	0.59
42:DH:78:GLY:HA2	42:DH:82:GLY:HA3	1.84	0.59
1:AA:783:C:OP1	1:AA:1515:C:O2'	2.19	0.59
13:AM:125:ARG:HG3	24:AY:160:PRO:HD2	1.85	0.59
35:BA:295:G:OP1	57:BY:2:ARG:NH2	2.35	0.59
35:BA:483:A:H4'	57:BY:49:VAL:HA	1.83	0.59
36:BB:24:G:N2	36:BB:27:C:H42	2.00	0.59
38:BD:3:VAL:HG23	38:BD:200:ASP:OD2	2.02	0.59
46:BN:4:TYR:N	46:BN:4:TYR:CD1	2.70	0.59
46:BN:120:LEU:HD11	46:BN:122:VAL:HG23	1.84	0.59
51:BS:34:HIS:HB3	51:BS:53:SER:HB3	1.83	0.59
51:BS:96:GLY:C	51:BS:98:VAL:H	2.09	0.59
58:BZ:58:VAL:HG13	58:BZ:66:SER:HB2	1.84	0.59
1:CA:1502:A:H2	1:CA:1505:G:H22	1.48	0.59
10:CJ:8:LEU:HD23	10:CJ:96:ILE:HG22	1.83	0.59
12:CL:67:THR:OG1	12:CL:95:GLY:O	2.20	0.59
19:CS:67:VAL:HG23	19:CS:68:GLY:H	1.68	0.59
27:D2:51:ARG:HB3	35:DA:61:G:OP2	2.03	0.59
35:DA:534:U:H2'	35:DA:535:C:C6	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:994:C:OP1	53:DU:53:ARG:NH2	2.34	0.59
37:DC:216:THR:HB	37:DC:222:SER:HB3	1.85	0.59
56:DX:63:LYS:HB3	56:DX:72:LYS:HG3	1.83	0.59
58:DZ:59:LEU:O	58:DZ:66:SER:HA	2.01	0.59
1:AA:963:G:H21	10:AJ:55:LYS:HZ2	1.51	0.59
1:AA:1499:A:H1'	1:AA:1520:G:H5'	1.83	0.59
19:AS:67:VAL:HG23	19:AS:68:GLY:H	1.67	0.59
27:B2:5:GLU:O	27:B2:8:LYS:HB2	2.02	0.59
35:BA:2745:C:O2	42:BH:139:GLN:NE2	2.27	0.59
37:BC:57:GLN:NE2	37:BC:205:ALA:HA	2.13	0.59
38:BD:32:SER:O	38:BD:36:PRO:HD3	2.01	0.59
38:BD:35:LYS:O	38:BD:37:LEU:N	2.36	0.59
45:BK:27:LEU:HD23	45:BK:27:LEU:H	1.67	0.59
48:BP:58:THR:O	48:BP:61:ARG:NE	2.35	0.59
49:BQ:43:THR:OG1	49:BQ:46:GLN:HG3	2.02	0.59
58:BZ:102:LEU:HD11	58:BZ:124:ILE:HG12	1.83	0.59
8:CH:86:ILE:HG21	8:CH:133:LEU:HD22	1.83	0.59
9:CI:115:GLY:O	9:CI:116:LYS:HG3	2.03	0.59
13:CM:58:GLU:C	13:CM:60:VAL:H	2.11	0.59
18:CR:53:ARG:C	18:CR:55:ARG:H	2.10	0.59
24:CY:111:HIS:NE2	24:CY:214:VAL:HB	2.17	0.59
35:DA:298:G:N7	61:DA:3303:HOH:O	2.32	0.59
35:DA:779:U:OP1	38:DD:49:ILE:HG23	2.02	0.59
43:DI:77:LEU:HB3	43:DI:140:LEU:HG	1.84	0.59
50:DR:47:PHE:O	50:DR:51:LEU:HD13	2.03	0.59
1:AA:628:G:H2'	1:AA:629:G:C8	2.37	0.59
1:AA:878:G:H5'	8:AH:89:PRO:HG2	1.84	0.59
26:B1:61:ARG:NH2	35:BA:1364:G:OP2	2.35	0.59
27:B2:19:VAL:O	27:B2:21:LEU:N	2.35	0.59
35:BA:2022:U:O2'	35:BA:2617:C:H5'	2.01	0.59
49:BQ:111:GLU:O	49:BQ:115:MET:HG2	2.01	0.59
1:CA:503:C:OP2	12:CL:116:SER:OG	2.16	0.59
1:CA:1291:G:OP1	7:CG:37:ASN:ND2	2.35	0.59
35:DA:2590:A:OP2	38:DD:238:GLY:HA2	2.03	0.59
35:DA:2646:C:OP2	35:DA:2732:G:O2'	2.11	0.59
35:DA:2865:U:OP2	35:DA:2866:U:O2'	2.14	0.59
39:DE:59:VAL:O	39:DE:62:PRO:HD2	2.02	0.59
1:AA:1328:C:OP1	21:AU:21:TYR:OH	2.17	0.59
13:AM:54:VAL:O	13:AM:58:GLU:HG2	2.02	0.59
15:AO:33:THR:HG21	15:AO:85:LEU:HD21	1.84	0.59
31:B6:19:ARG:HH21	35:BA:2401:U:H5"	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:30:THR:HB	31:B6:31:PRO:HD2	1.83	0.59
35:BA:89:G:OP2	35:BA:90:U:H2'	2.03	0.59
35:BA:2485:G:H5"	49:BQ:46:GLN:NE2	2.16	0.59
35:BA:2514:U:H2'	35:BA:2515:C:C6	2.37	0.59
38:BD:181:GLU:HA	38:BD:272:ALA:HB3	1.84	0.59
40:BF:116:ASP:OD2	48:BP:5:ASP:HA	2.01	0.59
52:BT:35:LYS:C	52:BT:37:GLY:H	2.10	0.59
1:CA:1112:C:O2	3:CC:179:ARG:HG2	2.03	0.59
12:CL:53:ARG:NH1	12:CL:92:ASP:OD2	2.35	0.59
26:D1:52:ARG:NH1	35:DA:2218:U:O2	2.35	0.59
35:DA:2010:G:H5"	55:DW:42:ARG:HB2	1.84	0.59
35:DA:2052:G:H4'	39:DE:143:ASN:O	2.02	0.59
35:DA:2086:U:H2'	35:DA:2087:G:C8	2.38	0.59
37:DC:23:ILE:HB	37:DC:191:ARG:HH12	1.67	0.59
58:DZ:40:ASP:OD1	58:DZ:42:VAL:HG12	2.01	0.59
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.38	0.59
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.02	0.59
11:AK:24:SER:O	11:AK:26:ASN:N	2.36	0.59
17:AQ:59:ILE:CG2	17:AQ:71:PHE:HB3	2.33	0.59
22:AV:27:G:H1	22:AV:43:C:H42	1.51	0.59
35:BA:90:U:O2'	35:BA:92:A:OP2	2.21	0.59
35:BA:2121:G:N1	35:BA:2178:C:O2	2.36	0.59
35:BA:2469:A:O2'	49:BQ:56:ARG:NE	2.34	0.59
41:BG:46:ALA:HB3	41:BG:82:LEU:HD21	1.84	0.59
48:BP:101:VAL:HG12	48:BP:106:LEU:HB3	1.85	0.59
1:CA:383:A:OP1	1:CA:454:C:O2'	2.15	0.59
5:CE:100:VAL:HG12	5:CE:118:ILE:HG22	1.82	0.59
15:CO:36:ILE:HD12	15:CO:63:ARG:HE	1.67	0.59
36:DB:114:C:H2'	36:DB:115:G:C8	2.36	0.59
38:DD:11:PRO:O	38:DD:13:ARG:N	2.32	0.59
39:DE:75:VAL:C	39:DE:77:ILE:H	2.10	0.59
1:AA:531:U:OP2	24:AY:201:ARG:NH2	2.30	0.59
1:AA:857:C:H2'	1:AA:858:G:O4'	2.03	0.59
1:AA:1014:A:H2	1:AA:1219:U:H1'	1.68	0.59
1:AA:1294:G:H2'	1:AA:1295:G:C8	2.37	0.59
22:AW:48:C:H3'	22:AW:50:U:C4	2.38	0.59
35:BA:1721:G:H8	35:BA:1741:A:H62	1.50	0.59
35:BA:1827:C:OP2	38:BD:222:ARG:NH1	2.34	0.59
35:BA:2514:U:H2'	35:BA:2515:C:H6	1.68	0.59
50:BR:11:ASN:OD1	50:BR:12:ARG:N	2.35	0.59
56:BX:27:THR:HB	56:BX:80:ILE:HG22	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:107:G:OP1	1:CA:325:A:N6	2.35	0.59
6:CF:86:ARG:O	6:CF:87:ARG:HG2	2.03	0.59
22:CW:65:G:H2'	22:CW:66:U:C6	2.38	0.59
30:D5:40:LYS:NZ	30:D5:45:VAL:O	2.36	0.59
35:DA:639:U:H2'	35:DA:640:C:H6	1.68	0.59
38:DD:12:SER:HB2	38:DD:208:LYS:HB3	1.85	0.59
41:DG:41:GLN:HB3	41:DG:43:LEU:HD13	1.85	0.59
50:DR:56:LYS:NZ	50:DR:90:ARG:O	2.35	0.59
51:DS:96:GLY:C	51:DS:98:VAL:H	2.10	0.59
1:AA:639:G:H2'	1:AA:640:A:C8	2.38	0.59
1:AA:1212:U:H2'	24:AY:78:GLU:OE2	2.03	0.59
1:AA:1220:G:O3'	19:AS:36:ARG:HD3	2.02	0.59
8:AH:103:VAL:HG21	8:AH:110:ALA:HB2	1.83	0.59
22:AW:33:U:N3	22:AW:36:A:OP2	2.36	0.59
24:AY:226:GLU:HB2	24:AY:255:PRO:HD3	1.83	0.59
35:BA:605:C:OP1	40:BF:104:LYS:NZ	2.36	0.59
35:BA:855:G:H1	35:BA:922:U:H3	1.51	0.59
35:BA:1210:A:H5"	35:BA:1212:G:H5'	1.83	0.59
35:BA:1341:U:OP1	35:BA:1397:U:N3	2.22	0.59
50:BR:10:LEU:HB3	50:BR:17:ARG:NE	2.18	0.59
1:CA:1409:C:H2'	1:CA:1410:G:H8	1.66	0.59
2:CB:124:SER:OG	2:CB:125:PRO:HD2	2.03	0.59
9:CI:113:LYS:N	9:CI:113:LYS:HD2	2.18	0.59
13:CM:7:VAL:HG11	41:DG:139:LEU:HD22	1.85	0.59
22:CW:6:G:H21	22:CW:7:A:N6	1.96	0.59
24:CY:27:LYS:HA	24:CY:30:GLU:HG3	1.84	0.59
24:CY:229:ILE:HG21	24:CY:272:LYS:HE2	1.85	0.59
28:D3:27:GLY:O	28:D3:33:GLN:NE2	2.36	0.59
35:DA:918:A:N3	36:DB:80:U:O2'	2.32	0.59
35:DA:2122:U:H2'	35:DA:2123:G:C8	2.37	0.59
42:DH:86:GLU:HB3	42:DH:132:ARG:HB3	1.85	0.59
52:DT:3:ARG:HB2	52:DT:6:LEU:HB3	1.85	0.59
55:DW:64:MET:O	55:DW:65:LEU:HB2	2.03	0.59
1:AA:1172:C:H2'	1:AA:1173:G:H8	1.67	0.59
8:AH:91:ARG:HG2	8:AH:91:ARG:HH11	1.68	0.59
13:AM:57:ARG:HH12	29:B4:17:GLY:HA3	1.67	0.59
24:AY:341:LEU:HD22	24:AY:344:LEU:HD11	1.85	0.59
35:BA:1066:U:N3	35:BA:1069:A:OP2	2.33	0.59
35:BA:1423:G:HO2'	35:BA:1499:C:HO2'	1.51	0.59
49:BQ:63:LYS:HD2	58:BZ:175:VAL:HG21	1.85	0.59
52:BT:91:ARG:HG2	52:BT:116:ALA:HA	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:22:G:H2'	1:CA:23:C:C6	2.38	0.59
1:CA:59:A:H2	1:CA:330:C:H42	1.50	0.59
1:CA:108:G:N2	1:CA:108:G:OP2	2.34	0.59
1:CA:950:U:H3	1:CA:1231:G:H1	1.50	0.59
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.38	0.59
4:CD:196:LEU:H	4:CD:196:LEU:HD12	1.68	0.59
6:CF:39:LYS:HG2	6:CF:40:VAL:H	1.66	0.59
11:CK:21:ILE:HD13	11:CK:82:VAL:HG13	1.84	0.59
15:CO:33:THR:HG21	15:CO:85:LEU:HD21	1.84	0.59
22:CW:8:U:H1'	22:CW:48:C:H1'	1.84	0.59
22:CW:63:G:H4'	37:DC:54:ARG:NH1	2.18	0.59
35:DA:1405:U:H2'	35:DA:1406:U:H6	1.68	0.59
35:DA:2133:G:H1'	35:DA:2158:A:N6	2.18	0.59
35:DA:2341:G:H2'	35:DA:2342:C:C6	2.38	0.59
37:DC:197:LEU:C	37:DC:199:ALA:H	2.09	0.59
48:DP:58:THR:O	48:DP:61:ARG:NE	2.36	0.59
57:DY:17:SER:OG	57:DY:18:GLY:N	2.35	0.59
1:AA:407:G:O6	1:AA:436:C:N4	2.36	0.58
1:AA:951:G:OP2	13:AM:102:ARG:NH2	2.35	0.58
1:AA:1338:G:H21	22:AV:42:C:H4'	1.68	0.58
4:AD:15:GLU:HG3	4:AD:63:LYS:HE2	1.83	0.58
18:AR:31:LEU:HD12	18:AR:66:LEU:HB2	1.85	0.58
21:AU:2:GLY:C	21:AU:4:GLY:H	2.11	0.58
35:BA:833:U:H5"	48:BP:48:PRO:HB3	1.85	0.58
35:BA:1717:G:H2'	35:BA:1718:G:H5"	1.84	0.58
35:BA:1865:G:H5'	35:BA:1866:C:OP2	2.02	0.58
35:BA:2310:A:O2'	35:BA:2311:A:H5'	2.03	0.58
47:BO:49:ARG:HD3	47:BO:49:ARG:N	2.17	0.58
57:BY:7:VAL:H	57:BY:7:VAL:HG22	1.67	0.58
1:CA:624:C:H2'	1:CA:625:G:C8	2.37	0.58
1:CA:1239:A:O2'	7:CG:114:ARG:O	2.16	0.58
4:CD:43:HIS:O	4:CD:45:GLN:N	2.34	0.58
6:CF:82:ARG:HB2	6:CF:85:VAL:HG23	1.85	0.58
13:CM:120:LYS:HD3	13:CM:121:LYS:N	2.18	0.58
24:CY:303:ARG:HH22	35:DA:1914:C:H1'	1.67	0.58
35:DA:218:A:C2	35:DA:235:U:H4'	2.38	0.58
46:DN:120:LEU:HD11	46:DN:122:VAL:HG23	1.85	0.58
54:DV:64:HIS:ND1	54:DV:92:THR:HG22	2.18	0.58
1:AA:323:U:H2'	1:AA:324:G:O4'	2.02	0.58
7:AG:57:GLU:O	7:AG:59:LEU:N	2.35	0.58
18:AR:56:THR:HB	18:AR:58:LEU:HD13	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:102:TYR:HH	24:AY:346:TRP:CD1	2.20	0.58
31:B6:31:PRO:CB	35:BA:2286:A:H3'	2.33	0.58
35:BA:910:A:C5	49:BQ:13:GLN:HG3	2.39	0.58
35:BA:2790:A:HO2'	35:BA:2893:G:H21	1.42	0.58
36:BB:20:C:C2'	36:BB:21:G:H5"	2.32	0.58
52:BT:129:ARG:CZ	52:BT:131:ALA:HB3	2.33	0.58
57:BY:81:LYS:HD3	57:BY:97:ARG:HG3	1.85	0.58
1:CA:472:A:O2'	16:CP:82:GLN:OE1	2.15	0.58
1:CA:790:A:H2'	1:CA:791:G:C8	2.39	0.58
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.38	0.58
5:CE:63:ARG:HA	5:CE:66:MET:HE2	1.85	0.58
12:CL:27:LEU:C	12:CL:29:GLY:H	2.10	0.58
22:CV:29:G:H1	22:CV:41:C:H42	1.51	0.58
41:DG:5:VAL:HG11	41:DG:101:ILE:HG22	1.84	0.58
42:DH:154:PRO:HB3	42:DH:163:TYR:CZ	2.37	0.58
48:DP:17:LYS:O	48:DP:19:VAL:N	2.36	0.58
1:AA:940:C:H2'	1:AA:941:G:C8	2.38	0.58
6:AF:98:LEU:HG	18:AR:30:ASP:HB2	1.85	0.58
35:BA:893:C:H2'	35:BA:894:C:H6	1.68	0.58
40:BF:24:LEU:HB3	40:BF:25:PRO:CD	2.32	0.58
51:BS:99:LYS:O	51:BS:101:LEU:N	2.36	0.58
1:CA:848:C:H2'	1:CA:849:C:C6	2.37	0.58
10:CJ:33:GLN:O	10:CJ:75:ILE:HG12	2.03	0.58
12:CL:53:ARG:HG2	12:CL:53:ARG:HH11	1.68	0.58
17:CQ:53:LEU:HD23	17:CQ:82:MET:HE1	1.84	0.58
35:DA:304:G:H2'	35:DA:305:U:C6	2.39	0.58
1:AA:501:C:H2'	1:AA:502:G:H8	1.69	0.58
1:AA:1005:A:OP2	1:AA:1036:G:N2	2.31	0.58
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.04	0.58
8:AH:89:PRO:HA	8:AH:92:ARG:HH11	1.69	0.58
35:BA:1557:C:OP2	35:BA:1558:A:O2'	2.16	0.58
46:BN:43:THR:H	46:BN:48:MET:HE2	1.67	0.58
57:BY:2:ARG:C	57:BY:4:LYS:H	2.11	0.58
1:CA:359:U:H2'	1:CA:360:A:H8	1.68	0.58
1:CA:836:G:H1	1:CA:850:U:H3	1.51	0.58
13:CM:78:ILE:HA	13:CM:81:LEU:HD12	1.84	0.58
27:D2:5:GLU:O	27:D2:9:GLN:HG3	2.04	0.58
35:DA:48:G:N1	35:DA:177:G:OP2	2.34	0.58
35:DA:2167:U:H2'	35:DA:2168:G:C8	2.38	0.58
38:DD:27:THR:HG21	38:DD:81:ALA:HB1	1.85	0.58
1:AA:546:G:P	4:AD:72:GLU:HB3	2.43	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1484:C:HO2'	35:BA:1960:A:HO2'	1.50	0.58
2:AB:119:GLU:C	2:AB:121:LEU:H	2.10	0.58
8:AH:21:LYS:O	8:AH:65:TYR:OH	2.20	0.58
17:AQ:67:LYS:O	17:AQ:69:LYS:N	2.34	0.58
35:BA:30:G:H2'	35:BA:31:C:H6	1.68	0.58
1:CA:9:G:H2'	1:CA:10:A:H8	1.68	0.58
1:CA:719:C:O2'	18:CR:49:LYS:HB3	2.02	0.58
18:CR:87:ARG:HB3	18:CR:87:ARG:NH1	2.19	0.58
27:D2:13:ALA:HA	27:D2:16:LEU:HD12	1.85	0.58
35:DA:1022:G:H22	35:DA:1142(A):A:H2	1.48	0.58
35:DA:1747(A):G:C2'	35:DA:1748:G:H5"	2.32	0.58
35:DA:2119:A:O2'	35:DA:2120:G:H5"	2.02	0.58
35:DA:2286:A:H4'	35:DA:2287:A:O4'	2.04	0.58
52:DT:29:ARG:CB	52:DT:85:LYS:HA	2.33	0.58
56:DX:57:LEU:HD11	56:DX:78:LYS:HE2	1.85	0.58
57:DY:86:ARG:HG2	57:DY:87:LYS:N	2.18	0.58
58:DZ:151:HIS:HA	58:DZ:171:ILE:HG12	1.86	0.58
1:AA:426:G:P	4:AD:36:ARG:HH12	2.27	0.58
6:AF:15:ASP:OD1	6:AF:18:GLN:N	2.29	0.58
35:BA:654(T):C:N4	35:BA:654(U):A:N3	2.52	0.58
35:BA:1044:G:HO2'	35:BA:1111:A:N6	2.00	0.58
35:BA:1676:A:C2	35:BA:1993:U:H5'	2.39	0.58
43:BI:12:LEU:HD12	43:BI:19:VAL:HG11	1.84	0.58
1:CA:696:A:N3	1:CA:786:G:O2'	2.31	0.58
4:CD:133:VAL:HG12	4:CD:135:LEU:H	1.67	0.58
12:CL:60:LEU:C	12:CL:62:SER:H	2.10	0.58
57:DY:8:LYS:HE3	57:DY:74:PRO:HD3	1.86	0.58
58:DZ:146:ILE:HG13	58:DZ:147:GLY:H	1.68	0.58
1:AA:372:C:N4	1:AA:389:A:H62	2.00	0.58
2:AB:231:GLU:HB2	2:AB:232:PRO:HD2	1.84	0.58
3:AC:54:ARG:NH1	3:AC:56:ASP:HB2	2.18	0.58
4:AD:28:SER:O	4:AD:30:LYS:N	2.37	0.58
18:AR:88:LYS:C	18:AR:88:LYS:HD3	2.29	0.58
24:AY:231:VAL:HG12	24:AY:249:VAL:HG12	1.86	0.58
35:BA:156:U:OP1	35:BA:157:U:N3	2.37	0.58
35:BA:1845:G:H2'	35:BA:1846:G:H5"	1.86	0.58
35:BA:2127:G:N2	35:BA:2173:A:N3	2.51	0.58
36:BB:61:G:H2'	36:BB:62:C:C6	2.39	0.58
38:BD:133:LEU:HB3	38:BD:173:VAL:HG11	1.86	0.58
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.85	0.58
1:CA:939:G:H5"	7:CG:102:ARG:HH22	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:178:ARG:HH22	2:CB:196:LEU:C	2.12	0.58
5:CE:152:ARG:NH1	8:CH:42:GLU:O	2.36	0.58
9:CI:40:LEU:O	9:CI:42:ARG:N	2.32	0.58
40:DF:116:ASP:OD1	40:DF:119:ARG:NH2	2.37	0.58
51:DS:106:ARG:HB3	51:DS:106:ARG:HH11	1.66	0.58
1:AA:1130:A:O2'	9:AI:3:GLN:NE2	2.34	0.58
8:AH:101:PRO:HG2	8:AH:133:LEU:HD11	1.86	0.58
11:AK:54:ARG:NH1	22:AW:39:U:O3'	2.37	0.58
33:B8:14:VAL:HG21	33:B8:22:VAL:HG13	1.86	0.58
37:BC:16:ASP:N	37:BC:21:TYR:OH	2.36	0.58
40:BF:24:LEU:O	40:BF:26:ALA:N	2.35	0.58
1:CA:22:G:H2'	1:CA:23:C:H6	1.67	0.58
1:CA:510:A:N3	1:CA:543:C:H1'	2.19	0.58
1:CA:673:G:H2'	1:CA:674:G:H8	1.67	0.58
28:D3:12:PRO:O	28:D3:20:LYS:NZ	2.37	0.58
39:DE:69:LYS:C	39:DE:71:GLY:H	2.11	0.58
39:DE:120:TRP:CE3	39:DE:155:LYS:HD3	2.39	0.58
1:AA:591:U:H2'	1:AA:592:G:C8	2.39	0.58
1:AA:1418:A:H2	35:BA:1948:G:N3	2.02	0.58
8:AH:35:ILE:HD13	8:AH:118:VAL:HG11	1.84	0.58
16:AP:51:VAL:O	16:AP:53:VAL:N	2.36	0.58
35:BA:1019:U:H3	35:BA:1142(A):A:N6	2.01	0.58
35:BA:1899:G:O2'	35:BA:1900:A:H5"	2.02	0.58
50:BR:56:LYS:NZ	50:BR:90:ARG:O	2.36	0.58
51:BS:97:ARG:C	51:BS:97:ARG:HH11	2.12	0.58
1:CA:181:G:N2	1:CA:182:U:O4	2.37	0.58
1:CA:434:U:H2'	1:CA:435:C:C6	2.39	0.58
5:CE:105:VAL:H	5:CE:106:PRO:HD2	1.69	0.58
13:CM:30:ALA:C	13:CM:32:GLU:H	2.12	0.58
15:CO:55:GLY:HA2	15:CO:58:MET:HE3	1.86	0.58
33:D8:32:LEU:HD11	35:DA:2391:G:H3'	1.86	0.58
35:DA:352:G:N2	35:DA:355:G:OP2	2.37	0.58
35:DA:1496:A:O2'	35:DA:1497:U:O2	2.18	0.58
39:DE:86:PRO:O	39:DE:88:GLY:N	2.37	0.58
1:AA:977:A:HO2'	1:AA:981:U:H3	1.52	0.58
3:AC:180:ALA:HB1	3:AC:203:PHE:CE1	2.39	0.58
35:BA:132:G:H2'	35:BA:133:C:C6	2.39	0.58
35:BA:893:C:H2'	35:BA:894:C:C6	2.39	0.58
35:BA:1062:G:H2'	35:BA:1063:G:H8	1.69	0.58
35:BA:2065:C:H2'	35:BA:2066:C:H6	1.68	0.58
36:BB:55:U:H2'	36:BB:56:G:C8	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:6:ALA:HB3	41:BG:104:GLU:OE2	2.03	0.58
42:BH:111:HIS:CG	42:BH:112:PRO:HD2	2.39	0.58
43:BI:129:THR:HA	43:BI:137:PRO:HA	1.85	0.58
45:BK:81:ALA:O	45:BK:103:GLN:NE2	2.37	0.58
6:CF:68:PRO:HG2	6:CF:71:ARG:HG3	1.86	0.58
26:D1:56:GLN:HG3	26:D1:87:PRO:HD3	1.86	0.58
38:DD:120:GLY:O	38:DD:131:LEU:HB3	2.03	0.58
41:DG:146:TYR:O	41:DG:149:VAL:HG22	2.03	0.58
49:DQ:31:ASP:HA	49:DQ:134:ARG:NH1	2.19	0.58
51:DS:95:HIS:CG	51:DS:96:GLY:H	2.22	0.58
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.37	0.57
1:AA:977:A:O2'	1:AA:981:U:N3	2.37	0.57
1:AA:1250:A:H4'	9:AI:68:GLY:H	1.69	0.57
4:AD:100:ARG:HH21	4:AD:118:ARG:HH22	1.51	0.57
10:AJ:16:LEU:HD13	10:AJ:70:ARG:HD2	1.86	0.57
13:AM:30:ALA:C	13:AM:32:GLU:H	2.12	0.57
35:BA:570:G:H2'	35:BA:2030:A:C6	2.39	0.57
35:BA:1048:A:OP2	35:BA:1110:G:N2	2.36	0.57
35:BA:2262:U:H2'	35:BA:2263:C:H6	1.69	0.57
38:BD:210:GLY:O	38:BD:212:SER:N	2.34	0.57
1:CA:1126:U:OP2	1:CA:1281:U:N3	2.28	0.57
1:CA:1349:A:OP2	9:CI:118:LYS:NZ	2.36	0.57
31:D6:48:VAL:HG23	31:D6:49:HIS:H	1.68	0.57
35:DA:1657:C:H2'	35:DA:1658:C:H6	1.69	0.57
37:DC:31:LYS:O	37:DC:31:LYS:HD3	2.04	0.57
1:AA:266:G:H5"	1:AA:267:C:C5	2.39	0.57
1:AA:1250:A:N3	1:AA:1370:G:O2'	2.36	0.57
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.39	0.57
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.39	0.57
14:AN:29:ARG:HH12	14:AN:31:ARG:HB2	1.69	0.57
35:BA:724:U:H2'	35:BA:725:G:O4'	2.04	0.57
38:BD:11:PRO:O	38:BD:13:ARG:N	2.33	0.57
38:BD:129:ASN:O	38:BD:193:VAL:HG12	2.03	0.57
41:BG:15:VAL:HA	41:BG:18:GLU:HB3	1.87	0.57
41:BG:39:ILE:HG22	41:BG:157:ILE:HG12	1.86	0.57
44:BJ:33:UNK:O	44:BJ:37:UNK:N	2.36	0.57
51:BS:95:HIS:CG	51:BS:96:GLY:H	2.22	0.57
52:BT:83:ILE:HG13	52:BT:84:GLN:N	2.19	0.57
58:BZ:81:ARG:HG2	58:BZ:81:ARG:HH11	1.68	0.57
1:CA:142:G:H2'	1:CA:143:A:C8	2.40	0.57
13:CM:124:PRO:HD2	24:CY:163:GLY:H	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:57:VAL:HG12	17:CQ:76:LEU:HA	1.85	0.57
28:D3:44:ARG:O	28:D3:48:GLU:HG2	2.04	0.57
35:DA:2784:C:H1'	39:DE:37:ARG:HH12	1.68	0.57
52:DT:13:ARG:CZ	52:DT:13:ARG:HA	2.34	0.57
1:AA:328:C:H4'	1:AA:329:A:C5'	2.34	0.57
1:AA:674:G:H2'	1:AA:675:A:H8	1.69	0.57
9:AI:43:ALA:C	9:AI:45:ALA:H	2.12	0.57
31:B6:36:LEU:HB3	31:B6:50:ARG:HD3	1.87	0.57
35:BA:1022:G:H22	35:BA:1142(A):A:H2	1.50	0.57
38:BD:8:PRO:HB3	38:BD:14:ARG:HB2	1.87	0.57
50:BR:33:ARG:HE	50:BR:115:GLU:HG3	1.68	0.57
1:CA:189(L):G:H2'	1:CA:190:U:C6	2.39	0.57
1:CA:972:C:O2'	10:CJ:55:LYS:HG2	2.03	0.57
3:CC:16:ARG:HB2	3:CC:16:ARG:HH11	1.68	0.57
3:CC:150:LYS:HG3	3:CC:169:ALA:HB2	1.86	0.57
5:CE:51:VAL:HB	5:CE:52:PRO:HD3	1.86	0.57
13:CM:91:ARG:CB	13:CM:98:VAL:HG22	2.33	0.57
16:CP:15:PRO:HB2	16:CP:41:PRO:HG3	1.84	0.57
30:D5:19:ARG:NH1	35:DA:1264:G:OP1	2.26	0.57
35:DA:2681:C:H5	35:DA:2725:A:N6	2.01	0.57
43:DI:1:MET:N	43:DI:21:VAL:O	2.26	0.57
43:DI:132:PRO:HG2	43:DI:133:HIS:CE1	2.39	0.57
48:DP:16:ARG:HH12	48:DP:18:ARG:N	2.03	0.57
58:DZ:151:HIS:HB2	58:DZ:170:THR:HA	1.85	0.57
1:AA:674:G:H2'	1:AA:675:A:C8	2.39	0.57
8:AH:12:ARG:HH12	8:AH:27:PRO:HD2	1.69	0.57
12:AL:27:LEU:C	12:AL:29:GLY:H	2.13	0.57
35:BA:321:G:C2	35:BA:341:G:H4'	2.39	0.57
35:BA:1918:A:O2'	35:BA:1920:C:N4	2.37	0.57
1:CA:401:C:O2'	1:CA:621:A:N3	2.32	0.57
12:CL:71:PRO:C	12:CL:102:ARG:HH12	2.13	0.57
35:DA:655:A:H4'	35:DA:656:G:H5'	1.86	0.57
45:DK:12:LEU:HB2	45:DK:53:VAL:HG23	1.86	0.57
47:DO:47:ILE:HG23	47:DO:48:PRO:HD2	1.86	0.57
52:DT:24:PRO:HD3	52:DT:52:ILE:HD12	1.85	0.57
55:DW:46:PHE:O	55:DW:50:VAL:HG12	2.04	0.57
56:DX:36:LYS:HD3	56:DX:56:THR:HG23	1.86	0.57
19:AS:62:ILE:HD12	19:AS:66:MET:HE2	1.86	0.57
37:BC:195:ARG:HH11	37:BC:195:ARG:HG3	1.69	0.57
38:BD:120:GLY:O	38:BD:131:LEU:HB3	2.05	0.57
1:CA:178:C:C2	1:CA:179:A:C8	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:162:ILE:HD11	2:CB:184:VAL:HG22	1.85	0.57
4:CD:35:ARG:O	4:CD:37:PRO:HD3	2.04	0.57
4:CD:93:PHE:O	4:CD:97:LEU:HB2	2.05	0.57
4:CD:109:GLY:O	4:CD:111:ALA:N	2.37	0.57
12:CL:45:PRO:HG3	12:CL:53:ARG:HD3	1.87	0.57
22:CV:27:G:H2'	22:CV:28:G:H8	1.69	0.57
22:CW:4:C:H2'	22:CW:5:G:O4'	2.05	0.57
24:CY:244:THR:HA	35:DA:2573:C:N4	2.20	0.57
31:D6:25:LYS:HB2	33:D8:34:TRP:HE1	1.68	0.57
35:DA:71:A:H4'	35:DA:72:U:O5'	2.05	0.57
35:DA:2347:C:H2'	35:DA:2348:U:C6	2.39	0.57
35:DA:2655:G:O2'	35:DA:2664:G:O6	2.22	0.57
36:DB:75:G:H21	58:DZ:85:HIS:CE1	2.22	0.57
36:DB:112:U:H2'	36:DB:113:G:H8	1.68	0.57
41:DG:178:PHE:HB3	41:DG:180:PHE:CE1	2.39	0.57
48:DP:101:VAL:HG12	48:DP:106:LEU:HB3	1.86	0.57
51:DS:20:ARG:NE	51:DS:20:ARG:HA	2.20	0.57
1:AA:1137:C:O2'	1:AA:1138:G:N2	2.34	0.57
1:AA:1439:C:OP1	20:AT:38:LYS:HD2	2.05	0.57
21:AU:2:GLY:O	21:AU:4:GLY:N	2.38	0.57
22:AV:35:A:H2'	22:AV:36:A:H5"	1.86	0.57
31:B6:12:GLU:HG3	31:B6:23:THR:HG22	1.87	0.57
36:BB:104:U:H5"	49:BQ:141:GLN:NE2	2.18	0.57
43:BI:144:VAL:O	43:BI:146:ALA:N	2.36	0.57
48:BP:97:PRO:C	48:BP:99:LEU:H	2.13	0.57
54:BV:52:VAL:HG23	54:BV:55:ALA:HB3	1.87	0.57
1:CA:1304:G:N1	1:CA:1331:G:O2'	2.37	0.57
8:CH:86:ILE:HG12	8:CH:135:CYS:HA	1.85	0.57
9:CI:65:VAL:HG21	9:CI:73:GLN:HB3	1.87	0.57
35:DA:1639:U:H2'	35:DA:1640:C:H5"	1.86	0.57
35:DA:2047:U:H2'	35:DA:2048:G:H8	1.69	0.57
37:DC:31:LYS:NZ	37:DC:180:SER:O	2.32	0.57
58:DZ:164:ALA:O	58:DZ:165:VAL:HG23	2.05	0.57
1:AA:781:A:O2'	1:AA:1522:U:O2	2.23	0.57
1:AA:973:G:OP1	10:AJ:57:LYS:NZ	2.38	0.57
1:AA:1245:A:N6	1:AA:1293:G:O6	2.38	0.57
2:AB:69:LEU:HD11	2:AB:93:VAL:HG23	1.86	0.57
8:AH:82:HIS:CE1	8:AH:84:ARG:HB2	2.40	0.57
12:AL:47:LYS:HB3	12:AL:48:PRO:HD3	1.85	0.57
24:AY:34:GLU:HG3	45:BK:25:PRO:HA	1.87	0.57
30:B5:19:ARG:NH1	35:BA:1264:G:OP1	2.32	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1139:G:O2'	35:BA:1143:A:N1	2.32	0.57
35:BA:1747(A):G:C2'	35:BA:1748:G:H5"	2.33	0.57
35:BA:2328:A:H2'	35:BA:2329:G:H8	1.67	0.57
55:BW:10:VAL:O	55:BW:11:ARG:HB3	2.03	0.57
1:CA:192:U:H2'	1:CA:193:C:C6	2.39	0.57
1:CA:936:C:H1'	1:CA:1382:C:N4	2.19	0.57
1:CA:1432:G:O2'	1:CA:1468:A:N6	2.37	0.57
13:CM:108:ARG:N	13:CM:108:ARG:HD2	2.20	0.57
35:DA:1865:G:H5'	35:DA:1866:C:OP2	2.05	0.57
35:DA:2000:G:OP2	50:DR:3:HIS:NE2	2.34	0.57
35:DA:2328:A:H2'	35:DA:2329:G:C8	2.40	0.57
48:DP:56:SER:C	48:DP:57:THR:HG1	2.12	0.57
1:AA:728:A:H2'	1:AA:729:A:C8	2.39	0.57
1:AA:736:C:H2'	1:AA:737:A:H8	1.69	0.57
1:AA:1071:C:H5"	5:AE:49:PRO:HG2	1.87	0.57
22:AV:44:G:H2'	22:AV:45:U:O4'	2.04	0.57
24:AY:157:THR:HG23	24:AY:165:ASP:HB3	1.87	0.57
33:B8:4:MET:HB2	33:B8:61:LEU:HD13	1.86	0.57
52:BT:85:LYS:NZ	52:BT:85:LYS:HB3	2.20	0.57
56:BX:12:VAL:HG23	56:BX:13:LEU:H	1.70	0.57
1:CA:41:G:H2'	1:CA:42:G:H8	1.69	0.57
1:CA:337:C:H2'	1:CA:338:A:H8	1.69	0.57
1:CA:751:U:H4'	15:CO:24:SER:HA	1.87	0.57
1:CA:1469:G:H2'	1:CA:1470:G:C8	2.40	0.57
4:CD:173:TRP:CD2	4:CD:189:PRO:HB3	2.39	0.57
9:CI:43:ALA:C	9:CI:45:ALA:H	2.13	0.57
13:CM:65:LYS:O	13:CM:66:LEU:N	2.37	0.57
26:D1:71:TYR:CE1	43:DI:27:ARG:HD2	2.39	0.57
35:DA:271(L):U:H4'	35:DA:271(M):G:C4	2.40	0.57
35:DA:658:C:H2'	35:DA:659:C:H6	1.67	0.57
36:DB:21:G:HO2'	36:DB:22:U:H6	1.53	0.57
38:DD:11:PRO:C	38:DD:13:ARG:H	2.12	0.57
45:DK:20:ALA:HA	45:DK:25:PRO:HD3	1.87	0.57
47:DO:35:VAL:HG11	47:DO:103:ALA:HB3	1.87	0.57
56:DX:12:VAL:HB	56:DX:17:ALA:CB	2.32	0.57
1:AA:817:C:H1'	1:AA:819:A:H5'	1.87	0.57
1:AA:921:U:O2	5:AE:19:MET:HB2	2.04	0.57
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.86	0.57
10:AJ:48:THR:HA	10:AJ:62:HIS:HB3	1.87	0.57
35:BA:281:G:N2	35:BA:359:A:H62	2.00	0.57
35:BA:483:A:C5	57:BY:60:PHE:HE1	2.22	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1165:U:O2	35:BA:1184:G:N2	2.27	0.57
35:BA:2154:G:H2'	35:BA:2155:G:H8	1.69	0.57
35:BA:2166:G:H2'	35:BA:2167:U:C6	2.40	0.57
35:BA:2572:A:N7	39:BE:145:LYS:HB2	2.20	0.57
35:BA:2660:A:H5'	35:BA:2661:G:N2	2.19	0.57
38:BD:65:ILE:HD11	38:BD:67:PHE:CZ	2.40	0.57
39:BE:75:VAL:C	39:BE:77:ILE:H	2.13	0.57
39:BE:132:HIS:O	39:BE:135:HIS:NE2	2.38	0.57
42:BH:144:VAL:O	42:BH:148:ILE:HG12	2.05	0.57
49:BQ:43:THR:HG22	49:BQ:94:VAL:HG12	1.86	0.57
50:BR:117:VAL:O	50:BR:118:GLU:HB2	2.02	0.57
52:BT:91:ARG:HA	52:BT:117:ASP:H	1.70	0.57
1:CA:5:U:O2'	1:CA:6:G:OP2	2.22	0.57
1:CA:976:G:H5'	1:CA:1358:U:O2'	2.05	0.57
2:CB:71:VAL:HG13	2:CB:93:VAL:HB	1.86	0.57
3:CC:53:ALA:HB2	3:CC:115:LEU:HD21	1.87	0.57
10:CJ:87:THR:C	10:CJ:89:ASP:H	2.12	0.57
24:CY:13:LEU:HA	24:CY:16:TYR:HB2	1.87	0.57
35:DA:904:C:H2'	35:DA:905:U:H6	1.69	0.57
35:DA:1565:C:OP1	38:DD:4:LYS:NZ	2.30	0.57
35:DA:2246:G:H2'	35:DA:2247:A:H8	1.70	0.57
38:DD:94:LEU:HB2	38:DD:104:TYR:HE1	1.69	0.57
38:DD:148:GLU:HB2	38:DD:151:LYS:HD2	1.86	0.57
43:DI:9:LEU:HB2	43:DI:12:LEU:O	2.05	0.57
51:DS:59:LYS:HG2	51:DS:60:GLY:H	1.69	0.57
1:AA:918:A:H2'	1:AA:919:A:C8	2.40	0.57
13:AM:88:ARG:HA	13:AM:98:VAL:HG11	1.86	0.57
22:AW:38:A:H3'	22:AW:39:U:H5"	1.87	0.57
28:B3:6:VAL:HG23	28:B3:28:LEU:HD11	1.87	0.57
35:BA:659:C:H2'	35:BA:660:G:H8	1.69	0.57
35:BA:1042:G:H3'	35:BA:1043:C:C6	2.40	0.57
35:BA:2804:C:H2'	35:BA:2805:G:C8	2.40	0.57
37:BC:20:VAL:HG11	37:BC:226:ASN:HB2	1.85	0.57
49:BQ:141:GLN:HB3	58:BZ:99:TYR:HE1	1.68	0.57
6:CF:91:VAL:HG11	18:CR:72:ARG:NH1	2.20	0.57
8:CH:35:ILE:HD13	8:CH:118:VAL:HG11	1.86	0.57
25:D0:12:ASN:ND2	35:DA:2278:A:OP2	2.37	0.57
35:DA:1754:C:OP1	52:DT:96:ARG:NH1	2.38	0.57
35:DA:2137:C:H42	35:DA:2154:G:N2	2.02	0.57
1:AA:217:C:O2'	1:AA:470:C:N4	2.32	0.56
1:AA:591:U:H2'	1:AA:592:G:H8	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:36:LEU:HA	8:AH:39:LEU:HD23	1.87	0.56
19:AS:16:LEU:H	19:AS:16:LEU:HD12	1.69	0.56
35:BA:639:U:H2'	35:BA:640:C:C6	2.39	0.56
35:BA:690:G:H2'	35:BA:691:C:C6	2.40	0.56
35:BA:2537:U:H2'	35:BA:2538:C:C6	2.40	0.56
40:BF:21:ALA:C	40:BF:23:ASP:H	2.12	0.56
48:BP:101:VAL:HB	48:BP:107:LYS:HA	1.86	0.56
1:CA:279:A:OP2	17:CQ:95:TYR:OH	2.23	0.56
1:CA:309:G:H2'	1:CA:310:G:H8	1.70	0.56
1:CA:707:C:OP1	11:CK:85:ARG:NH1	2.30	0.56
35:DA:458:G:O2'	35:DA:469:G:O6	2.19	0.56
35:DA:2151:G:H2'	35:DA:2152:G:H8	1.69	0.56
51:DS:97:ARG:HH11	51:DS:97:ARG:C	2.13	0.56
54:DV:28:GLU:HB2	54:DV:31:ALA:HB2	1.86	0.56
1:AA:266:G:O2'	1:AA:267:C:OP2	2.21	0.56
3:AC:16:ARG:HB2	3:AC:16:ARG:HH11	1.70	0.56
3:AC:101:LEU:HD23	3:AC:102:ASN:N	2.20	0.56
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.87	0.56
4:AD:26:CYS:O	4:AD:31:CYS:HB2	2.05	0.56
35:BA:1516:C:H2'	35:BA:1517:G:C8	2.40	0.56
35:BA:2853:C:H2'	35:BA:2854:G:H8	1.68	0.56
1:CA:599:C:H4'	8:CH:130:GLY:HA3	1.86	0.56
1:CA:922:G:H2'	1:CA:923:A:C8	2.40	0.56
2:CB:162:ILE:O	2:CB:185:ILE:HG12	2.05	0.56
5:CE:10:MET:HA	5:CE:32:VAL:HG22	1.86	0.56
10:CJ:49:VAL:HG23	14:CN:41:ARG:HB2	1.87	0.56
20:CT:26:ASN:HB2	20:CT:71:THR:HG23	1.86	0.56
35:DA:495:G:N3	55:DW:61:ASN:ND2	2.49	0.56
35:DA:1485:G:N3	35:DA:1505:C:N4	2.52	0.56
35:DA:2580:U:H5'	39:DE:131:ALA:HB2	1.86	0.56
45:DK:44:ALA:O	45:DK:48:MET:HG2	2.05	0.56
48:DP:40:SER:O	48:DP:41:ARG:NE	2.37	0.56
49:DQ:111:GLU:O	49:DQ:115:MET:HG2	2.05	0.56
58:DZ:98:MET:O	58:DZ:125:LEU:HA	2.05	0.56
1:AA:448:A:N7	1:AA:486:U:O4	2.39	0.56
4:AD:49:ARG:HA	4:AD:49:ARG:HE	1.70	0.56
6:AF:96:PRO:HB3	18:AR:30:ASP:CG	2.29	0.56
19:AS:64:GLU:HG3	19:AS:65:ASN:H	1.70	0.56
26:B1:11:ARG:HB2	26:B1:12:PRO:HD2	1.86	0.56
35:BA:1278:A:O3'	50:BR:34:ILE:HD12	2.05	0.56
35:BA:2809:A:OP2	35:BA:2891:G:N1	2.26	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:101:ILE:O	41:BG:105:LYS:HG3	2.04	0.56
43:BI:7:GLU:O	43:BI:9:LEU:HD12	2.05	0.56
45:BK:95:LYS:HD3	45:BK:135:GLY:O	2.05	0.56
1:CA:130:A:C8	17:CQ:63:ARG:HG3	2.41	0.56
1:CA:857:C:H2'	1:CA:858:G:O4'	2.05	0.56
1:CA:1036:G:H3'	1:CA:1037:C:C6	2.40	0.56
1:CA:1059:C:O3'	14:CN:45:ARG:NH2	2.35	0.56
1:CA:1179:A:H4'	9:CI:103:THR:HA	1.88	0.56
12:CL:47:LYS:HB3	12:CL:48:PRO:HD3	1.85	0.56
13:CM:115:LYS:O	13:CM:117:VAL:N	2.39	0.56
24:CY:120:ILE:HB	24:CY:167:ALA:HB3	1.86	0.56
31:D6:15:GLU:HB2	31:D6:20:ASN:HB3	1.87	0.56
31:D6:19:ARG:CG	31:D6:20:ASN:H	2.17	0.56
31:D6:38:LYS:HD3	35:DA:2344:U:OP1	2.06	0.56
35:DA:539:G:H1	35:DA:554:U:H3	1.52	0.56
35:DA:654(S):G:H2'	35:DA:654(T):C:C5	2.40	0.56
35:DA:1550:C:OP1	35:DA:1720:U:O2'	2.23	0.56
35:DA:2406:U:H5"	35:DA:2408:U:OP2	2.06	0.56
36:DB:7:G:H3'	36:DB:8:U:H5"	1.88	0.56
39:DE:34:VAL:HG11	39:DE:78:LEU:HD22	1.87	0.56
41:DG:86:MET:N	41:DG:87:PRO:HD2	2.19	0.56
42:DH:121:ILE:HG23	42:DH:133:VAL:HG13	1.85	0.56
43:DI:8:PRO:HA	43:DI:14:ASP:H	1.70	0.56
46:DN:128:HIS:HE2	46:DN:134:ARG:HD3	1.69	0.56
48:DP:106:LEU:HD22	48:DP:112:LEU:HD23	1.87	0.56
49:DQ:23:GLY:O	49:DQ:101:ARG:NH1	2.38	0.56
1:AA:1065:U:O2'	1:AA:1066:C:OP2	2.17	0.56
26:B1:25:LYS:C	26:B1:27:GLU:H	2.11	0.56
35:BA:1009:A:N3	35:BA:1153:C:O2'	2.37	0.56
35:BA:1058:G:N1	35:BA:1059:G:O6	2.39	0.56
35:BA:1592:C:H2'	35:BA:1593:G:C8	2.40	0.56
35:BA:1796:U:H2'	35:BA:1797:C:C6	2.41	0.56
52:BT:102:ILE:HB	52:BT:110:ILE:HD12	1.86	0.56
1:CA:97:G:O2'	1:CA:98:G:H8	1.89	0.56
2:CB:196:LEU:HA	8:CH:74:PRO:HG3	1.87	0.56
4:CD:49:ARG:HA	4:CD:49:ARG:NE	2.21	0.56
10:CJ:81:THR:C	10:CJ:83:GLU:H	2.13	0.56
16:CP:4:ILE:HB	16:CP:66:PRO:HB3	1.88	0.56
33:D8:14:VAL:HG21	33:D8:22:VAL:HG13	1.88	0.56
35:DA:2579:C:H2'	35:DA:2580:U:O4'	2.04	0.56
35:DA:2779:U:H1'	35:DA:2781:A:C5	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DB:40:U:N3	36:DB:44:G:OP2	2.25	0.56
45:DK:7:VAL:HG12	45:DK:58:THR:HA	1.87	0.56
45:DK:72:PRO:HB2	45:DK:77:LEU:HD11	1.87	0.56
47:DO:90:GLN:O	47:DO:91:LEU:HB2	2.06	0.56
1:AA:983:A:H1'	1:AA:1049:U:O2	2.05	0.56
1:AA:1343:G:H4'	9:AI:122:ALA:HB3	1.88	0.56
6:AF:86:ARG:O	6:AF:87:ARG:HG2	2.06	0.56
31:B6:11:LEU:HD23	31:B6:26:ASN:CG	2.30	0.56
35:BA:71:A:H2	56:BX:31:HIS:CE1	2.24	0.56
35:BA:1247:A:OP2	48:BP:18:ARG:NH2	2.37	0.56
35:BA:2203:U:H3	35:BA:2220:G:H1	1.51	0.56
37:BC:11:LEU:HD22	37:BC:33:LEU:HA	1.86	0.56
41:BG:111:LEU:HB3	41:BG:117:PHE:CE2	2.40	0.56
46:BN:133:GLN:HG2	46:BN:135:PRO:HD3	1.87	0.56
47:BO:4:PRO:O	47:BO:5:GLN:HB2	2.05	0.56
51:BS:65:VAL:O	51:BS:69:VAL:HG12	2.05	0.56
54:BV:19:LYS:NZ	54:BV:20:LEU:H	2.02	0.56
1:CA:551:U:H2'	1:CA:552:U:H6	1.70	0.56
1:CA:1530:G:H2'	1:CA:1531:A:C8	2.41	0.56
35:DA:271(Q):G:HO2'	35:DA:271(R):G:H8	1.52	0.56
35:DA:1529:G:H21	35:DA:1530:C:H5"	1.70	0.56
35:DA:2103:C:N4	35:DA:2187:G:O6	2.38	0.56
43:DI:77:LEU:O	43:DI:104:GLN:NE2	2.39	0.56
52:DT:100:TYR:HD2	52:DT:103:ARG:HH21	1.53	0.56
58:DZ:19:ARG:NH1	58:DZ:84:GLU:O	2.32	0.56
1:AA:1120:G:H2'	1:AA:1121:U:C6	2.41	0.56
4:AD:133:VAL:HG12	4:AD:135:LEU:H	1.71	0.56
24:AY:84:ARG:O	24:AY:88:LYS:HG2	2.05	0.56
28:B3:43:ILE:O	28:B3:47:VAL:HG23	2.06	0.56
35:BA:298:G:N7	61:BA:3202:HOH:O	2.33	0.56
35:BA:528:A:O2'	35:BA:529:A:H5'	2.06	0.56
35:BA:787:U:H5"	35:BA:788:A:H5'	1.88	0.56
35:BA:829:A:N7	35:BA:2247:A:O2'	2.36	0.56
35:BA:1165:U:H2'	35:BA:1166:C:C6	2.41	0.56
35:BA:2141:G:H2'	35:BA:2142:C:C6	2.39	0.56
40:BF:68:LYS:C	40:BF:70:THR:H	2.14	0.56
44:BJ:28:UNK:O	44:BJ:30:UNK:N	2.38	0.56
53:BU:92:ARG:HD2	54:BV:11:GLN:HB2	1.88	0.56
1:CA:598:U:H4'	8:CH:94:TYR:CD2	2.41	0.56
1:CA:1425:U:H3	1:CA:1475:G:H1	1.53	0.56
2:CB:162:ILE:HD13	2:CB:177:ALA:CB	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:30:LYS:C	4:CD:32:ALA:H	2.13	0.56
8:CH:88:LYS:HB3	8:CH:89:PRO:HD2	1.87	0.56
28:D3:30:ARG:NH2	35:DA:1159:U:OP1	2.38	0.56
35:DA:839:U:H3	35:DA:939:G:H1	1.52	0.56
35:DA:1390:U:H3	35:DA:1395:A:H62	1.51	0.56
41:DG:128:ARG:HB3	41:DG:128:ARG:HH11	1.69	0.56
56:DX:35:THR:O	56:DX:39:ILE:HG12	2.06	0.56
1:AA:15:G:O6	1:AA:920:U:O4	2.23	0.56
1:AA:244:U:H4'	1:AA:245:C:H5"	1.88	0.56
1:AA:936:C:O2	1:AA:1382:C:N4	2.39	0.56
9:AI:9:ARG:HG2	9:AI:14:VAL:HG22	1.88	0.56
10:AJ:33:GLN:O	10:AJ:75:ILE:HG12	2.06	0.56
22:AW:16:U:H3'	22:AW:17:C:H5'	1.86	0.56
24:AY:109:PHE:HB2	24:AY:112:ALA:HB2	1.88	0.56
35:BA:38:A:H2'	35:BA:39:C:C6	2.39	0.56
35:BA:958:U:H5"	49:BQ:14:ARG:HD2	1.88	0.56
35:BA:1796:U:H2'	35:BA:1797:C:H6	1.71	0.56
35:BA:1948:G:H5'	35:BA:1948:G:C8	2.41	0.56
35:BA:2674:G:H2'	35:BA:2675:A:C8	2.41	0.56
38:BD:44:ASN:HB2	38:BD:48:ARG:O	2.06	0.56
41:BG:37:VAL:HB	41:BG:99:MET:HG3	1.88	0.56
44:BJ:30:UNK:O	44:BJ:32:UNK:N	2.38	0.56
1:CA:322:C:O2'	20:CT:23:ARG:HB2	2.05	0.56
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.41	0.56
4:CD:15:GLU:HG3	4:CD:63:LYS:HE2	1.88	0.56
22:CW:39:U:H4'	22:CW:39:U:OP1	2.05	0.56
31:D6:11:LEU:HD21	31:D6:35:GLU:HG2	1.87	0.56
33:D8:39:LYS:O	33:D8:43:GLN:HG3	2.05	0.56
35:DA:1165:U:H2'	35:DA:1166:C:C6	2.41	0.56
35:DA:2327:A:H2'	35:DA:2328:A:C8	2.41	0.56
35:DA:2807:G:H3'	35:DA:2808:U:H5"	1.87	0.56
45:DK:2:LYS:HE3	45:DK:66:THR:HG21	1.88	0.56
46:DN:19:GLU:HG3	46:DN:20:GLY:N	2.21	0.56
47:DO:22:ILE:HG12	47:DO:41:ALA:HA	1.88	0.56
47:DO:97:ARG:HH11	47:DO:97:ARG:HG3	1.70	0.56
48:DP:23:PRO:HB2	48:DP:33:ARG:HG3	1.88	0.56
51:DS:16:ASN:ND2	51:DS:90:GLY:O	2.35	0.56
52:DT:19:LEU:HD22	52:DT:85:LYS:HG3	1.87	0.56
52:DT:125:ARG:O	52:DT:128:GLU:N	2.39	0.56
57:DY:2:ARG:C	57:DY:4:LYS:H	2.13	0.56
58:DZ:154:ASP:N	58:DZ:154:ASP:OD1	2.37	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:790:A:H2'	1:AA:791:G:C8	2.41	0.56
1:AA:1175:G:H2'	1:AA:1176:A:C8	2.41	0.56
1:AA:1261:A:N6	1:AA:1274:G:H21	2.03	0.56
3:AC:150:LYS:HG3	3:AC:169:ALA:HB2	1.87	0.56
4:AD:109:GLY:O	4:AD:111:ALA:N	2.39	0.56
5:AE:32:VAL:HG21	5:AE:55:VAL:HG13	1.88	0.56
28:B3:8:LEU:HD13	28:B3:31:LEU:HD23	1.87	0.56
53:BU:61:TRP:HB3	53:BU:93:LYS:HB3	1.87	0.56
54:BV:5:VAL:HG23	54:BV:37:VAL:O	2.05	0.56
1:CA:979:C:H3'	1:CA:980:C:H5"	1.87	0.56
1:CA:1057:G:H5"	3:CC:154:SER:CB	2.35	0.56
1:CA:1224:G:H4'	13:CM:102:ARG:HH11	1.71	0.56
26:D1:64:ALA:HA	26:D1:67:ILE:HG13	1.88	0.56
27:D2:50:ILE:C	27:D2:52:ASP:H	2.14	0.56
35:DA:615:G:O2'	40:DF:205:ARG:NH2	2.38	0.56
35:DA:1571:A:H2'	35:DA:1572:A:C8	2.40	0.56
35:DA:2401:U:H2'	35:DA:2402:C:H5"	1.88	0.56
38:DD:65:ILE:HD11	38:DD:67:PHE:CZ	2.41	0.56
40:DF:4:VAL:HA	40:DF:19:GLU:HB3	1.87	0.56
46:DN:17:ASP:HB2	46:DN:55:VAL:HG13	1.88	0.56
55:DW:88:ARG:HB2	55:DW:92:ARG:HB2	1.88	0.56
1:AA:1250:A:H2	1:AA:1370:G:H1'	1.70	0.56
3:AC:51:GLY:O	3:AC:53:ALA:N	2.39	0.56
12:AL:47:LYS:HD2	12:AL:47:LYS:C	2.31	0.56
12:AL:59:ARG:NH2	12:AL:65:GLU:OE2	2.39	0.56
19:AS:42:PRO:O	19:AS:43:GLU:HB3	2.06	0.56
22:AV:58:A:O2'	22:AV:60:U:OP2	2.24	0.56
35:BA:259:G:N2	35:BA:621:A:H8	1.96	0.56
35:BA:271(E):U:H2'	35:BA:271(F):C:C6	2.41	0.56
35:BA:272(D):G:H1	35:BA:364:C:N4	2.03	0.56
35:BA:1038:C:H2'	35:BA:1039:G:H5"	1.88	0.56
35:BA:2086:U:H2'	35:BA:2087:G:C8	2.41	0.56
35:BA:2161:C:H2'	35:BA:2162:G:C8	2.41	0.56
35:BA:2647:U:H2'	35:BA:2648:C:H6	1.70	0.56
36:BB:57:A:C4	41:BG:29:TRP:HB3	2.41	0.56
42:BH:30:LYS:HE3	42:BH:81:GLU:H	1.71	0.56
48:BP:7:ARG:O	48:BP:10:PRO:HD3	2.06	0.56
51:BS:25:ARG:NH1	51:BS:42:ASP:OD1	2.39	0.56
58:BZ:165:VAL:HG12	58:BZ:166:SER:N	2.21	0.56
1:CA:1241:G:H2'	1:CA:1242:C:C6	2.40	0.56
2:CB:101:MET:HA	2:CB:108:ILE:HG13	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:143:ARG:NH1	8:CH:77:GLU:OE1	2.38	0.56
12:CL:47:LYS:HD2	12:CL:47:LYS:C	2.31	0.56
35:DA:513:A:O2'	35:DA:1217:C:OP1	2.23	0.56
35:DA:1247:A:OP2	48:DP:18:ARG:NH2	2.38	0.56
35:DA:1709:U:H2'	35:DA:1710:C:C6	2.41	0.56
35:DA:1796:U:H2'	35:DA:1797:C:C6	2.41	0.56
46:DN:54:VAL:HB	46:DN:122:VAL:HG22	1.88	0.56
1:AA:501:C:H2'	1:AA:502:G:C8	2.41	0.56
1:AA:1028:C:N4	1:AA:1034:G:H21	2.04	0.56
1:AA:1427:U:H2'	1:AA:1428:A:H8	1.70	0.56
2:AB:20:GLU:HB2	2:AB:190:THR:OG1	2.05	0.56
2:AB:76:GLN:HB3	2:AB:208:ILE:HG12	1.86	0.56
11:AK:27:ASN:OD1	11:AK:55:LYS:HB3	2.04	0.56
12:AL:84:LEU:HG	12:AL:105:TYR:CE2	2.41	0.56
13:AM:19:LEU:HB3	13:AM:25:ILE:HG21	1.88	0.56
31:B6:37:ARG:O	31:B6:49:HIS:HB2	2.05	0.56
35:BA:658:C:H2'	35:BA:659:C:C6	2.40	0.56
35:BA:1266:G:O5'	55:BW:15:ARG:NH2	2.39	0.56
35:BA:2122:U:H2'	35:BA:2123:G:H8	1.70	0.56
36:BB:104:U:H5"	49:BQ:141:GLN:HE21	1.71	0.56
41:BG:32:PRO:HB2	41:BG:172:LEU:HD12	1.87	0.56
1:CA:636:U:H2'	1:CA:637:G:H8	1.70	0.56
1:CA:715:A:H5"	1:CA:805:C:H1'	1.88	0.56
1:CA:736:C:H2'	1:CA:737:A:C8	2.41	0.56
3:CC:175:LEU:HD21	3:CC:201:TYR:HE2	1.71	0.56
6:CF:60:PHE:CE2	18:CR:78:LEU:HD21	2.41	0.56
16:CP:2:VAL:HG13	16:CP:64:ALA:HA	1.88	0.56
16:CP:51:VAL:HG11	16:CP:74:LEU:CD2	2.36	0.56
27:D2:68:ARG:O	27:D2:69:ARG:HG3	2.06	0.56
33:D8:30:ARG:HA	33:D8:30:ARG:NE	2.20	0.56
35:DA:2816:C:O2	35:DA:2883:A:O2'	2.24	0.56
39:DE:110:GLY:O	50:DR:2:ARG:HD3	2.06	0.56
51:DS:58:LEU:HD21	51:DS:68:GLN:HB2	1.88	0.56
1:AA:750:G:H1'	15:AO:23:GLY:H	1.70	0.55
1:AA:1300:G:O2'	1:AA:1301:U:O5'	2.24	0.55
3:AC:155:GLY:HA3	3:AC:163:ALA:HB1	1.87	0.55
4:AD:14:ARG:HD2	4:AD:59:ARG:NH1	2.20	0.55
26:B1:81:LYS:HD2	35:BA:271(H):G:H4'	1.88	0.55
31:B6:36:LEU:H	31:B6:37:ARG:NH2	2.04	0.55
35:BA:1048:A:H2	35:BA:1109:C:H5	1.54	0.55
35:BA:1105:U:H2'	35:BA:1106:G:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1326:U:O2'	35:BA:2010:G:O2'	2.24	0.55
35:BA:1516:C:H2'	35:BA:1517:G:H8	1.70	0.55
35:BA:2154:G:H2'	35:BA:2155:G:C8	2.41	0.55
41:BG:122:PRO:HD3	41:BG:181:ARG:H	1.71	0.55
41:BG:173:LEU:HD22	41:BG:178:PHE:CZ	2.41	0.55
58:BZ:6:LYS:HZ3	58:BZ:6:LYS:HB2	1.71	0.55
58:BZ:130:PRO:O	58:BZ:133:ILE:HG12	2.05	0.55
1:CA:898:G:N2	1:CA:901:A:OP2	2.37	0.55
1:CA:1014:A:C2	1:CA:1219:U:H1'	2.41	0.55
21:CU:10:ARG:HA	21:CU:13:ILE:HB	1.89	0.55
25:D0:43:THR:H	35:DA:2331:G:H4'	1.71	0.55
35:DA:30:G:H2'	35:DA:31:C:H6	1.72	0.55
35:DA:279:C:H42	35:DA:361:G:H1	1.54	0.55
35:DA:556:G:H2'	35:DA:557:U:C6	2.40	0.55
49:DQ:16:ARG:HB3	49:DQ:18:LYS:HZ1	1.72	0.55
5:AE:41:VAL:HG22	5:AE:113:ALA:HA	1.88	0.55
24:AY:26:LEU:HB2	24:AY:55:LEU:HD21	1.89	0.55
35:BA:672:C:C2'	35:BA:673:C:H5'	2.36	0.55
35:BA:1639:U:H2'	35:BA:1640:C:H5"	1.88	0.55
35:BA:2074:U:H2'	35:BA:2075:U:C6	2.42	0.55
35:BA:2115:G:O2'	35:BA:2166:G:N2	2.40	0.55
43:BI:52:ARG:HG3	43:BI:53:ALA:N	2.19	0.55
49:BQ:140:ALA:O	49:BQ:141:GLN:HB2	2.05	0.55
1:CA:939:G:C5'	7:CG:102:ARG:HH12	2.18	0.55
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.41	0.55
3:CC:64:VAL:O	3:CC:100:ALA:HB3	2.06	0.55
6:CF:77:ARG:NH1	6:CF:77:ARG:HB3	2.20	0.55
8:CH:11:THR:HG22	8:CH:15:ASN:HD21	1.71	0.55
35:DA:38:A:H2'	35:DA:39:C:C6	2.40	0.55
38:DD:43:ARG:HB3	38:DD:54:ARG:CB	2.36	0.55
40:DF:195:ASP:OD1	40:DF:196:LEU:N	2.39	0.55
41:DG:46:ALA:HB3	41:DG:88:ILE:HG12	1.86	0.55
47:DO:4:PRO:O	47:DO:5:GLN:HB2	2.05	0.55
51:DS:26:LEU:HD23	51:DS:39:ILE:HG13	1.88	0.55
1:AA:832:C:N4	1:AA:855:G:O6	2.39	0.55
1:AA:1004:A:H2'	1:AA:1036:G:C6	2.41	0.55
1:AA:1211:U:H5'	1:AA:1212:U:OP1	2.06	0.55
2:AB:124:SER:OG	2:AB:125:PRO:HD2	2.06	0.55
4:AD:20:TYR:HA	4:AD:26:CYS:HB3	1.89	0.55
4:AD:31:CYS:C	4:AD:33:MET:H	2.14	0.55
7:AG:15:ASP:HB3	7:AG:19:GLY:H	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:39:PRO:HB3	10:AJ:70:ARG:NH1	2.21	0.55
13:AM:120:LYS:HD3	13:AM:121:LYS:N	2.21	0.55
35:BA:1534:U:H3'	35:BA:1535:A:C8	2.42	0.55
48:BP:16:ARG:NH1	48:BP:18:ARG:HB2	2.19	0.55
51:BS:92:TYR:CG	51:BS:93:LYS:N	2.74	0.55
1:CA:773:G:O3'	38:DD:202:LYS:NZ	2.39	0.55
1:CA:1010:G:H2'	1:CA:1011:G:H8	1.71	0.55
1:CA:1082:G:H2'	1:CA:1083:U:O4'	2.05	0.55
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.41	0.55
2:CB:178:ARG:HB2	2:CB:178:ARG:HH11	1.70	0.55
4:CD:98:GLU:OE2	4:CD:103:ASN:ND2	2.39	0.55
7:CG:148:ASN:C	7:CG:150:ALA:H	2.13	0.55
11:CK:108:ILE:HG22	18:CR:88:LYS:HB3	1.87	0.55
24:CY:182:PRO:HG3	24:CY:345:ILE:HG23	1.88	0.55
35:DA:482:A:H4'	57:DY:47:LYS:HG2	1.88	0.55
35:DA:2840:C:H2'	35:DA:2841:C:C6	2.41	0.55
45:DK:33:ASN:HD22	45:DK:36:GLU:HG3	1.71	0.55
53:DU:90:VAL:CG2	54:DV:47:VAL:HG21	2.36	0.55
54:DV:21:ARG:HB3	54:DV:91:TYR:HB2	1.89	0.55
13:AM:91:ARG:HB2	13:AM:98:VAL:HG22	1.88	0.55
24:AY:223:LYS:O	24:AY:225:GLU:N	2.38	0.55
28:B3:30:ARG:NH2	35:BA:1159:U:OP1	2.39	0.55
41:BG:48:GLU:O	41:BG:49:ASP:HB2	2.06	0.55
45:BK:137:GLU:HG3	45:BK:138:VAL:N	2.21	0.55
46:BN:43:THR:HB	46:BN:46:VAL:HG12	1.88	0.55
51:BS:106:ARG:HB3	51:BS:106:ARG:HH11	1.72	0.55
1:CA:1294:G:H2'	1:CA:1295:G:C8	2.40	0.55
2:CB:219:VAL:O	2:CB:223:ILE:HG13	2.06	0.55
24:CY:237:PRO:HG3	35:DA:2603:G:H5'	1.88	0.55
28:D3:35:ARG:HE	28:D3:37:LEU:HD21	1.72	0.55
35:DA:870:A:P	49:DQ:6:ARG:HH21	2.29	0.55
35:DA:2134:A:N6	35:DA:2157:G:HO2'	2.04	0.55
35:DA:2293:C:OP1	51:DS:92:TYR:OH	2.24	0.55
38:DD:32:SER:O	38:DD:36:PRO:HD3	2.07	0.55
39:DE:6:GLY:HA2	39:DE:51:PHE:CE2	2.41	0.55
45:DK:84:LEU:HD21	45:DK:136:VAL:HG12	1.88	0.55
53:DU:102:GLU:HG3	54:DV:2:PHE:CE1	2.42	0.55
1:AA:375:U:C2	1:AA:376:G:C8	2.95	0.55
1:AA:473:G:H5"	16:AP:81:ARG:HE	1.70	0.55
1:AA:512:U:H2'	1:AA:513:C:C6	2.42	0.55
35:BA:363(E):U:H3'	35:BA:363(F):A:O4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:839:U:O2'	35:BA:1191:G:N3	2.39	0.55
35:BA:1019:U:H3	35:BA:1142(A):A:H62	1.54	0.55
35:BA:2647:U:H2'	35:BA:2648:C:C6	2.42	0.55
38:BD:27:THR:HG21	38:BD:81:ALA:HB1	1.88	0.55
38:BD:43:ARG:HB3	38:BD:54:ARG:HB2	1.87	0.55
43:BI:133:HIS:O	43:BI:135:GLU:N	2.39	0.55
45:BK:117:THR:OG1	45:BK:123:ALA:HB2	2.07	0.55
1:CA:385:C:H2'	1:CA:386:C:C6	2.42	0.55
1:CA:922:G:H4'	5:CE:20:GLN:HA	1.88	0.55
3:CC:70:VAL:HG12	3:CC:72:LYS:H	1.72	0.55
6:CF:94:GLN:HB3	18:CR:32:ARG:HH21	1.72	0.55
25:D0:63:VAL:HG21	25:D0:83:PRO:HG3	1.88	0.55
34:D9:31:LYS:NZ	35:DA:2478:A:OP1	2.39	0.55
35:DA:271(J):C:N4	35:DA:271(L):U:O2	2.40	0.55
46:DN:4:TYR:N	46:DN:4:TYR:CD1	2.73	0.55
46:DN:120:LEU:O	46:DN:121:LYS:HD2	2.06	0.55
56:DX:27:THR:HB	56:DX:80:ILE:HG22	1.88	0.55
1:AA:985:C:H2'	1:AA:986:A:H8	1.72	0.55
1:AA:1143:G:H2'	1:AA:1144:G:H8	1.71	0.55
1:AA:1207:G:H2'	1:AA:1208:C:H6	1.72	0.55
1:AA:1347:G:H22	1:AA:1374:A:P	2.29	0.55
2:AB:178:ARG:HH22	2:AB:196:LEU:C	2.13	0.55
24:AY:19:ILE:HG12	24:AY:62:PHE:CE1	2.40	0.55
35:BA:350:U:H2'	35:BA:351:G:O4'	2.06	0.55
35:BA:538:G:H2'	35:BA:539:G:H8	1.71	0.55
35:BA:1048:A:N6	35:BA:1052:C:C4	2.69	0.55
35:BA:1057:A:N6	35:BA:1087:G:OP2	2.40	0.55
35:BA:2506:U:OP1	39:BE:144:ARG:NH2	2.39	0.55
45:BK:79:ARG:HH21	45:BK:85:GLU:HG2	1.71	0.55
1:CA:881:G:P	12:CL:12:ARG:HH22	2.29	0.55
1:CA:1350:A:O2'	7:CG:33:ASP:OD1	2.16	0.55
35:DA:1654:A:OP1	50:DR:3:HIS:HB2	2.06	0.55
35:DA:1721:G:O6	35:DA:1739:U:H5'	2.06	0.55
35:DA:2051:A:H5'	35:DA:2578:G:O4'	2.06	0.55
35:DA:2101:G:H2'	35:DA:2102:U:H6	1.71	0.55
35:DA:2314:C:H2'	35:DA:2315:G:H8	1.71	0.55
47:DO:88:ASN:OD1	47:DO:92:GLU:N	2.36	0.55
56:DX:50:LYS:N	56:DX:87:GLN:OE1	2.36	0.55
57:DY:81:LYS:HD3	57:DY:97:ARG:HG3	1.87	0.55
1:AA:1002:G:H3'	1:AA:1003:G:H8	1.71	0.55
3:AC:54:ARG:HH12	3:AC:56:ASP:HB2	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:82:MET:O	17:AQ:86:GLU:HG2	2.06	0.55
26:B1:11:ARG:NH2	35:BA:1365:A:O2'	2.40	0.55
35:BA:813:U:H2'	35:BA:814:C:H6	1.71	0.55
35:BA:2122:U:H2'	35:BA:2123:G:C8	2.42	0.55
35:BA:2377:A:H2'	35:BA:2378:A:C8	2.42	0.55
38:BD:267:SER:C	38:BD:269:PHE:H	2.15	0.55
43:BI:78:THR:HA	43:BI:141:LYS:O	2.07	0.55
54:BV:14:VAL:HB	54:BV:96:ILE:HG13	1.89	0.55
1:CA:7:G:H21	5:CE:121:LYS:HG2	1.71	0.55
1:CA:1005:A:O4'	1:CA:1036:G:N2	2.40	0.55
1:CA:1237:C:H5"	1:CA:1238:A:C8	2.40	0.55
2:CB:231:GLU:HB2	2:CB:232:PRO:CD	2.36	0.55
6:CF:30:LEU:HB2	6:CF:35:ALA:HB3	1.87	0.55
24:CY:39:TRP:C	24:CY:41:ASP:H	2.14	0.55
35:DA:654(U):A:H5"	35:DA:654(V):A:OP2	2.06	0.55
35:DA:2820:A:O4'	50:DR:5:LYS:HD2	2.06	0.55
37:DC:11:LEU:HA	37:DC:33:LEU:HD22	1.87	0.55
38:DD:13:ARG:NH1	38:DD:16:MET:SD	2.79	0.55
40:DF:3:GLU:O	40:DF:19:GLU:HB2	2.07	0.55
41:DG:115:ARG:NH2	41:DG:136:ARG:HD2	2.18	0.55
41:DG:171:ALA:O	41:DG:175:LEU:HG	2.07	0.55
1:AA:5:U:O2'	1:AA:6:G:OP2	2.24	0.55
1:AA:564:C:C4	17:AQ:31:LEU:HD11	2.42	0.55
1:AA:657:G:N2	15:AO:22:THR:HG1	2.03	0.55
4:AD:30:LYS:C	4:AD:32:ALA:H	2.13	0.55
9:AI:29:ASN:ND2	9:AI:65:VAL:O	2.39	0.55
10:AJ:56:HIS:C	10:AJ:58:ASP:H	2.14	0.55
35:BA:2475:C:H42	35:BA:2529:G:H22	1.53	0.55
45:BK:55:VAL:HG22	45:BK:69:THR:HG23	1.87	0.55
54:BV:81:TYR:C	54:BV:82:ARG:HD2	2.32	0.55
58:BZ:3:TYR:N	58:BZ:56:VAL:O	2.40	0.55
2:CB:96:ARG:N	2:CB:96:ARG:HD2	2.21	0.55
2:CB:209:ARG:NH1	2:CB:239:VAL:HG11	2.22	0.55
4:CD:176:LEU:HG	4:CD:178:VAL:H	1.72	0.55
14:CN:26:ARG:HG3	14:CN:39:LEU:HD22	1.89	0.55
35:DA:1796:U:H2'	35:DA:1797:C:H6	1.72	0.55
35:DA:2502:G:H5"	35:DA:2503:A:H5"	1.88	0.55
35:DA:2659:G:C2	35:DA:2661:G:C8	2.94	0.55
38:DD:132:PRO:HD3	38:DD:190:TYR:CZ	2.41	0.55
44:DJ:117:UNK:O	44:DJ:119:UNK:N	2.40	0.55
45:DK:111:LYS:HD2	45:DK:127:ILE:HD11	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:117:VAL:O	50:DR:118:GLU:HB2	2.07	0.55
52:DT:35:LYS:C	52:DT:37:GLY:H	2.14	0.55
53:DU:98:LEU:HA	53:DU:101:ARG:O	2.07	0.55
54:DV:19:LYS:HE3	54:DV:22:VAL:HG13	1.88	0.55
1:AA:359:U:H2'	1:AA:360:A:C8	2.42	0.55
1:AA:368:U:C6	43:DI:90:GLY:HA2	2.42	0.55
1:AA:376:G:H2'	1:AA:377:G:H8	1.72	0.55
1:AA:434:U:H2'	1:AA:435:C:C6	2.42	0.55
12:AL:70:ILE:HG12	12:AL:100:ILE:HD12	1.89	0.55
15:AO:78:TYR:O	15:AO:82:ILE:HG22	2.06	0.55
25:B0:36:ILE:HG23	35:BA:2354:G:O2'	2.07	0.55
27:B2:2:LYS:HB3	35:BA:97:C:O3'	2.07	0.55
32:B7:11:LYS:HE2	35:BA:686:G:H5"	1.88	0.55
35:BA:392:C:H5"	35:BA:409:C:H5"	1.89	0.55
35:BA:1697:G:OP2	35:BA:1698:A:O2'	2.17	0.55
35:BA:2065:C:H2'	35:BA:2066:C:C6	2.42	0.55
54:BV:1:MET:HB3	54:BV:99:ILE:HD11	1.87	0.55
55:BW:64:MET:O	55:BW:65:LEU:HB2	2.05	0.55
1:CA:313:A:H2'	1:CA:314:C:C6	2.42	0.55
1:CA:350:G:O2'	1:CA:351:G:H5'	2.05	0.55
1:CA:474:G:H2'	1:CA:475:G:H8	1.72	0.55
5:CE:13:ILE:HD13	5:CE:51:VAL:HG13	1.89	0.55
12:CL:33:ARG:HA	12:CL:33:ARG:HE	1.72	0.55
30:D5:19:ARG:HA	35:DA:2046:G:O5'	2.07	0.55
31:D6:48:VAL:HG23	31:D6:49:HIS:N	2.22	0.55
35:DA:689:A:H2'	35:DA:690:G:C8	2.42	0.55
35:DA:1548:C:H2'	35:DA:1549:C:H6	1.72	0.55
35:DA:1795:C:O2	38:DD:255:LYS:NZ	2.36	0.55
35:DA:2635:C:H4'	39:DE:78:LEU:HD12	1.89	0.55
48:DP:29:LYS:HB3	48:DP:34:GLY:N	2.22	0.55
52:DT:57:PHE:CG	52:DT:58:ASN:N	2.75	0.55
1:AA:12:U:H3	1:AA:22:G:H1	1.55	0.55
1:AA:624:C:H2'	1:AA:625:G:C8	2.42	0.55
1:AA:1029:C:H2'	1:AA:1030(A):G:C6	2.42	0.55
2:AB:167:PRO:HG2	2:AB:192:SER:OG	2.07	0.55
9:AI:65:VAL:HG21	9:AI:73:GLN:HB3	1.89	0.55
10:AJ:23:ILE:HG23	10:AJ:85:LEU:HD22	1.88	0.55
31:B6:26:ASN:HD22	31:B6:32:ASN:ND2	2.05	0.55
35:BA:904:C:H2'	35:BA:905:U:H6	1.72	0.55
35:BA:1348:G:C2'	35:BA:1349:A:H5"	2.36	0.55
35:BA:2415:G:H4'	48:BP:67:MET:N	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:22:U:H2'	36:BB:23:G:C8	2.42	0.55
55:BW:46:PHE:O	55:BW:50:VAL:HG12	2.07	0.55
55:BW:64:MET:HE3	55:BW:109:GLU:HG3	1.87	0.55
57:BY:28:LYS:HG2	57:BY:39:VAL:HG22	1.89	0.55
58:BZ:99:TYR:HD2	58:BZ:123:ASP:O	1.90	0.55
1:CA:552:U:H2'	1:CA:553:A:H8	1.71	0.55
19:CS:62:ILE:HD12	19:CS:66:MET:HE2	1.88	0.55
35:DA:571:A:O2'	54:DV:78:LYS:HE3	2.07	0.55
35:DA:1827:C:OP2	38:DD:222:ARG:NH1	2.40	0.55
43:DI:10:GLU:C	43:DI:12:LEU:H	2.15	0.55
57:DY:96:ILE:HB	57:DY:99:CYS:HB2	1.87	0.55
58:DZ:79:ARG:O	58:DZ:80:ARG:HB2	2.07	0.55
1:AA:22:G:H2'	1:AA:23:C:C6	2.41	0.54
1:AA:1162:C:H2'	1:AA:1163:C:C6	2.41	0.54
2:AB:55:PHE:HA	2:AB:58:ILE:HD12	1.89	0.54
4:AD:57:ARG:HH22	5:AE:107:ARG:HD3	1.71	0.54
13:AM:81:LEU:HB3	13:AM:89:GLY:HA2	1.89	0.54
26:B1:71:TYR:C	26:B1:73:LEU:H	2.14	0.54
26:B1:94:LEU:O	26:B1:96:LYS:N	2.39	0.54
35:BA:654(R):C:H2'	35:BA:654(S):G:C5	2.43	0.54
35:BA:1480:G:H1	35:BA:1511:C:H42	1.54	0.54
35:BA:1718:G:H5'	35:BA:1718:G:H8	1.70	0.54
35:BA:1939:U:OP1	35:BA:2604:U:O2'	2.24	0.54
39:BE:6:GLY:HA2	39:BE:51:PHE:CE2	2.42	0.54
57:BY:32:PRO:C	57:BY:34:LYS:H	2.14	0.54
1:CA:683:G:H2'	1:CA:684:A:C8	2.41	0.54
13:CM:123:ALA:C	24:CY:162:ALA:HA	2.31	0.54
22:CW:16:U:H3'	22:CW:17:C:H5'	1.89	0.54
35:DA:760:G:H2'	35:DA:761:A:O4'	2.07	0.54
35:DA:2302:G:H21	41:DG:128:ARG:HD3	1.72	0.54
35:DA:2378:A:H2	51:DS:20:ARG:NH2	2.05	0.54
43:DI:46:ALA:O	43:DI:50:ARG:HG3	2.05	0.54
49:DQ:43:THR:OG1	49:DQ:46:GLN:HG3	2.06	0.54
1:AA:272:C:H2'	1:AA:273:A:C8	2.39	0.54
1:AA:973:G:H3'	1:AA:974:A:H5"	1.88	0.54
13:AM:16:ASP:OD1	13:AM:17:VAL:HG23	2.06	0.54
15:AO:6:GLU:OE1	15:AO:6:GLU:N	2.40	0.54
27:B2:32:LEU:HD22	27:B2:36:ARG:NH1	2.22	0.54
35:BA:1181:C:H2'	35:BA:1182:A:C8	2.42	0.54
35:BA:1297:C:OP1	35:BA:2710:C:H4'	2.08	0.54
35:BA:1485:G:N2	35:BA:1504:C:C2	2.74	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2329:G:H2'	35:BA:2330:G:C8	2.42	0.54
35:BA:2712:U:H1'	35:BA:2712(A):A:C8	2.42	0.54
40:BF:7:TYR:HD2	40:BF:16:GLY:H	1.54	0.54
46:BN:58:ASP:C	46:BN:60:ILE:H	2.14	0.54
1:CA:598:U:H4'	8:CH:94:TYR:CG	2.41	0.54
1:CA:977:A:O2'	1:CA:981:U:N3	2.34	0.54
3:CC:206:GLU:HG2	3:CC:207:VAL:H	1.71	0.54
35:DA:654(B):C:N4	35:DA:654(R):C:N3	2.55	0.54
35:DA:872:A:OP1	49:DQ:5:ARG:NH2	2.40	0.54
35:DA:889:C:O2'	35:DA:890:A:O5'	2.17	0.54
35:DA:996:A:H4'	53:DU:92:ARG:HE	1.71	0.54
37:DC:48:LEU:HB3	37:DC:50:ILE:HG13	1.89	0.54
39:DE:116:VAL:O	39:DE:117:MET:HB3	2.06	0.54
42:DH:41:MET:SD	42:DH:43:VAL:HG13	2.46	0.54
1:AA:119:A:H4'	1:AA:120:A:O5'	2.07	0.54
1:AA:624:C:H2'	1:AA:625:G:H8	1.71	0.54
2:AB:196:LEU:HA	8:AH:74:PRO:HG3	1.89	0.54
3:AC:76:VAL:HG23	3:AC:77:ILE:HG13	1.89	0.54
4:AD:65:ARG:HD2	4:AD:72:GLU:HA	1.88	0.54
5:AE:39:GLY:HA2	5:AE:69:VAL:HB	1.89	0.54
8:AH:31:PHE:O	8:AH:35:ILE:HG12	2.08	0.54
35:BA:24:G:O2'	55:BW:78:GLU:O	2.24	0.54
35:BA:1718:G:H5'	35:BA:1718:G:C8	2.43	0.54
37:BC:31:LYS:O	37:BC:31:LYS:HD3	2.07	0.54
40:BF:164:ARG:HG2	40:BF:164:ARG:HH11	1.72	0.54
49:BQ:132:VAL:HG11	58:BZ:81:ARG:HE	1.72	0.54
1:CA:299:G:H2'	1:CA:300:A:C8	2.43	0.54
1:CA:1338:G:O2'	22:CV:41:C:O2'	2.25	0.54
22:CW:40:C:H2'	22:CW:41:C:C6	2.43	0.54
24:CY:88:LYS:HB2	24:CY:89:PRO:HD3	1.89	0.54
30:D5:16:ARG:NH2	35:DA:517:C:OP1	2.40	0.54
35:DA:2584:U:H2'	35:DA:2585:U:H2'	1.88	0.54
41:DG:51:ARG:HE	41:DG:51:ARG:CA	2.20	0.54
42:DH:124:GLU:HB2	42:DH:132:ARG:HG2	1.90	0.54
52:DT:32:TYR:HD1	52:DT:33:LYS:H	1.52	0.54
54:DV:49:THR:HG22	54:DV:50:PRO:HD3	1.89	0.54
58:DZ:45:ASP:CG	58:DZ:49:ARG:HH12	2.16	0.54
1:AA:73:G:C6	1:AA:97:G:C6	2.95	0.54
8:AH:6:ILE:HD12	8:AH:6:ILE:H	1.72	0.54
35:BA:528:A:C2	35:BA:2042:A:H2'	2.43	0.54
35:BA:1405:U:H2'	35:BA:1406:U:H6	1.70	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2443:C:H2'	35:BA:2444:G:H8	1.72	0.54
35:BA:2846:G:P	52:BT:54:ARG:HB2	2.48	0.54
39:BE:52:LEU:HD23	39:BE:76:ARG:HB2	1.87	0.54
1:CA:410:G:OP1	4:CD:30:LYS:NZ	2.33	0.54
2:CB:63:MET:HB3	2:CB:225:ALA:O	2.07	0.54
2:CB:141:GLU:O	2:CB:145:LEU:HB2	2.06	0.54
2:CB:172:ILE:H	2:CB:172:ILE:CD1	2.13	0.54
6:CF:42:GLU:C	6:CF:44:GLY:H	2.15	0.54
7:CG:57:GLU:O	7:CG:59:LEU:N	2.41	0.54
24:CY:270:LYS:HD3	25:D0:5:LYS:HD3	1.89	0.54
35:DA:1529:G:N7	35:DA:1541:G:C2	2.75	0.54
35:DA:1952:A:C6	47:DO:22:ILE:HD12	2.42	0.54
35:DA:2124:G:H4'	37:DC:175:PRO:HG3	1.90	0.54
35:DA:2199:A:H5"	35:DA:2200:C:H5	1.73	0.54
51:DS:58:LEU:HD23	51:DS:65:VAL:HG13	1.89	0.54
1:AA:96:U:O2'	1:AA:97:G:O5'	2.22	0.54
1:AA:1141:C:H2'	1:AA:1142:G:C8	2.42	0.54
2:AB:22:LYS:HE2	2:AB:22:LYS:HA	1.90	0.54
2:AB:63:MET:HB3	2:AB:225:ALA:O	2.07	0.54
16:AP:9:PHE:HB2	16:AP:16:HIS:O	2.06	0.54
26:B1:20:ARG:HG2	26:B1:20:ARG:HH11	1.71	0.54
35:BA:654(B):C:H2'	35:BA:654(C):G:C8	2.42	0.54
35:BA:2162:G:H2'	35:BA:2163:C:H6	1.73	0.54
36:BB:8:U:O4	36:BB:113:G:O6	2.24	0.54
48:BP:50:ARG:HG3	48:BP:51:PHE:N	2.23	0.54
50:BR:7:GLY:HA3	50:BR:8:ARG:HH21	1.72	0.54
1:CA:190:U:H2'	1:CA:191:G:H8	1.71	0.54
1:CA:1206:G:H4'	3:CC:192:THR:O	2.08	0.54
1:CA:1302:U:OP2	13:CM:21:TYR:OH	2.22	0.54
3:CC:155:GLY:HA3	3:CC:163:ALA:HB1	1.89	0.54
4:CD:60:GLU:OE2	4:CD:198:VAL:HA	2.08	0.54
5:CE:6:PHE:HD1	5:CE:63:ARG:HH12	1.56	0.54
13:CM:124:PRO:CD	24:CY:163:GLY:H	2.21	0.54
33:D8:30:ARG:NH2	35:DA:2419:U:O4	2.40	0.54
35:DA:83:G:N2	35:DA:103:A:OP2	2.39	0.54
35:DA:336:C:HO2'	57:DY:35:TYR:HH	1.49	0.54
35:DA:1058:G:H2'	35:DA:1059:G:C8	2.43	0.54
35:DA:2291:U:H2'	35:DA:2292:C:C6	2.42	0.54
40:DF:21:ALA:C	40:DF:23:ASP:H	2.15	0.54
41:DG:178:PHE:HB3	41:DG:180:PHE:HE1	1.72	0.54
50:DR:20:LEU:HD21	50:DR:40:LYS:HD3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DV:19:LYS:HG3	54:DV:20:LEU:N	2.21	0.54
57:DY:7:VAL:HB	57:DY:8:LYS:CD	2.30	0.54
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.43	0.54
6:AF:60:PHE:CE2	18:AR:78:LEU:HD21	2.42	0.54
13:AM:13:LYS:HA	13:AM:44:ARG:HH11	1.72	0.54
27:B2:50:ILE:C	27:B2:52:ASP:H	2.15	0.54
34:B9:19:ARG:HA	35:BA:2757:A:OP1	2.08	0.54
35:BA:2580:U:H5'	39:BE:131:ALA:HB2	1.90	0.54
39:BE:51:PHE:HD1	39:BE:52:LEU:HD22	1.72	0.54
41:BG:4:ASP:HB2	41:BG:9:ARG:HH12	1.72	0.54
51:BS:56:LEU:HD23	51:BS:56:LEU:O	2.08	0.54
58:BZ:157:LEU:HB3	58:BZ:161:VAL:HB	1.88	0.54
1:CA:90:U:OP2	1:CA:91:C:H5'	2.07	0.54
1:CA:217:C:H2'	1:CA:218:C:H6	1.72	0.54
1:CA:312:C:H2'	1:CA:313:A:C8	2.43	0.54
6:CF:30:LEU:HD23	6:CF:30:LEU:H	1.73	0.54
22:CV:44:G:H2'	22:CV:45:U:O4'	2.07	0.54
24:CY:80:PRO:HB3	24:CY:85:GLU:OE1	2.08	0.54
33:D8:13:ARG:NH2	35:DA:250:G:OP2	2.41	0.54
35:DA:1306:C:H2'	35:DA:1307:A:H8	1.73	0.54
35:DA:2025:C:H2'	35:DA:2026:C:C6	2.43	0.54
35:DA:2091:U:OP2	35:DA:2092:U:O2'	2.14	0.54
35:DA:2137:C:N4	35:DA:2154:G:H22	2.04	0.54
37:DC:16:ASP:HB3	37:DC:19:LYS:CB	2.38	0.54
38:DD:210:GLY:O	38:DD:211:ARG:HB3	2.07	0.54
49:DQ:12:GLN:HG2	49:DQ:73:PRO:HD2	1.90	0.54
50:DR:11:ASN:OD1	50:DR:12:ARG:N	2.40	0.54
52:DT:36:GLU:OE1	52:DT:38:ASN:ND2	2.41	0.54
1:AA:376:G:H2'	1:AA:377:G:C8	2.42	0.54
1:AA:448:A:OP2	1:AA:485:G:N2	2.40	0.54
1:AA:773:G:H1	1:AA:806:C:H42	1.56	0.54
1:AA:922:G:H2'	1:AA:923:A:C8	2.43	0.54
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.07	0.54
3:AC:81:GLY:O	3:AC:85:ARG:HB2	2.06	0.54
15:AO:55:GLY:HA2	15:AO:58:MET:HE3	1.90	0.54
35:BA:1173:G:H3'	35:BA:1174:A:H5'	1.90	0.54
35:BA:1792:G:H5'	38:BD:205:VAL:HG13	1.90	0.54
35:BA:2102:U:H2'	35:BA:2103:C:C6	2.43	0.54
35:BA:2123:G:H2'	35:BA:2124:G:C8	2.43	0.54
35:BA:2178:C:O2'	37:BC:47:LYS:NZ	2.41	0.54
41:BG:52:ILE:HD12	41:BG:54:GLU:OE2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:124:GLU:HB2	42:BH:132:ARG:CG	2.38	0.54
53:BU:47:TYR:HA	53:BU:50:ARG:NH2	2.21	0.54
56:BX:55:ASN:HB2	56:BX:80:ILE:HG13	1.89	0.54
58:BZ:156:LYS:O	58:BZ:158:PRO:HD3	2.07	0.54
1:CA:1116:C:H2'	1:CA:1117:G:O4'	2.08	0.54
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.43	0.54
3:CC:79:ARG:NH1	3:CC:82:GLU:OE1	2.40	0.54
10:CJ:78:ASN:O	10:CJ:82:ILE:HG12	2.08	0.54
24:CY:111:HIS:NE2	24:CY:114:LYS:HG3	2.22	0.54
29:D4:34:GLU:O	41:DG:113:ARG:NH1	2.40	0.54
32:D7:9:ARG:HG3	35:DA:1309:G:OP1	2.08	0.54
35:DA:876:C:H2'	35:DA:877:U:O4'	2.08	0.54
35:DA:1048:A:OP2	35:DA:1109:C:N4	2.40	0.54
35:DA:2712:U:H1'	35:DA:2712(A):A:C8	2.41	0.54
39:DE:111:ARG:HD2	39:DE:160:TYR:CD2	2.43	0.54
46:DN:30:ILE:HG23	46:DN:52:VAL:HG11	1.89	0.54
54:DV:18:LEU:HD12	54:DV:19:LYS:N	2.23	0.54
1:AA:30:U:H4'	1:AA:31:G:OP2	2.07	0.54
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.89	0.54
6:AF:82:ARG:HB2	6:AF:85:VAL:HG23	1.88	0.54
9:AI:18:PHE:HB2	9:AI:62:TYR:O	2.08	0.54
9:AI:43:ALA:HA	9:AI:74:ILE:HG21	1.89	0.54
11:AK:24:SER:O	11:AK:27:ASN:N	2.37	0.54
13:AM:14:ARG:HD2	13:AM:42:ALA:HA	1.90	0.54
35:BA:658:C:H2'	35:BA:659:C:H6	1.72	0.54
35:BA:1359:A:N7	35:BA:1372:U:O4	2.40	0.54
35:BA:2341:G:H2'	35:BA:2342:C:C6	2.42	0.54
38:BD:210:GLY:O	38:BD:211:ARG:HB3	2.06	0.54
48:BP:48:PRO:O	48:BP:50:ARG:N	2.40	0.54
48:BP:115:LEU:HA	48:BP:134:ALA:HB2	1.89	0.54
58:BZ:119:GLU:HG3	58:BZ:122:ARG:HD3	1.90	0.54
1:CA:1281:U:H5'	1:CA:1282:C:H5	1.73	0.54
2:CB:194:PRO:HG2	2:CB:195:ASP:OD1	2.08	0.54
22:CW:1:G:C5	22:CW:73:A:N6	2.76	0.54
26:D1:50:ARG:NH2	35:DA:2199:A:H5'	2.23	0.54
31:D6:18:ARG:HD2	31:D6:43:CYS:SG	2.47	0.54
35:DA:272(J):C:N3	35:DA:274:G:H8	2.05	0.54
35:DA:364:C:H2'	35:DA:365:C:H5'	1.90	0.54
35:DA:2567:G:H2'	35:DA:2568:C:C6	2.42	0.54
36:DB:20:C:H2'	36:DB:21:G:H5"	1.90	0.54
42:DH:97:ARG:O	42:DH:98:LEU:HB2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:87:TYR:O	50:DR:90:ARG:N	2.41	0.54
1:AA:900:A:H2'	1:AA:901:A:C8	2.43	0.54
1:AA:940:C:H2'	1:AA:941:G:H8	1.71	0.54
1:AA:1032:G:N2	1:AA:1033:G:O6	2.41	0.54
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.72	0.54
16:AP:72:ARG:HH21	16:AP:73:LEU:HD21	1.72	0.54
24:AY:36:PRO:HD3	45:BK:29:GLN:HA	1.89	0.54
35:BA:813:U:H2'	35:BA:814:C:C6	2.43	0.54
35:BA:918:A:C2	36:BB:80:U:H4'	2.43	0.54
35:BA:1562:A:H2'	35:BA:1563:G:C8	2.43	0.54
37:BC:29:LEU:HA	37:BC:32:GLU:HG2	1.89	0.54
42:BH:13:LYS:O	42:BH:15:VAL:HG13	2.08	0.54
42:BH:41:MET:HE2	42:BH:43:VAL:HG13	1.88	0.54
47:BO:107:ARG:C	47:BO:109:LYS:H	2.16	0.54
48:BP:79:ARG:NE	48:BP:109:GLY:O	2.41	0.54
58:BZ:183:LEU:HD13	58:BZ:184:ALA:N	2.22	0.54
1:CA:100:C:H2'	1:CA:101:A:C8	2.43	0.54
1:CA:263:A:OP1	20:CT:79:ARG:NH1	2.40	0.54
1:CA:272:C:H2'	1:CA:273:A:C8	2.40	0.54
1:CA:382:A:H2'	1:CA:383:A:C8	2.43	0.54
1:CA:1125:U:OP2	1:CA:1145:C:N4	2.40	0.54
3:CC:43:LEU:O	3:CC:47:LEU:HB3	2.08	0.54
17:CQ:9:VAL:HG11	17:CQ:84:LEU:HD12	1.90	0.54
24:CY:283:LEU:O	24:CY:287:GLU:N	2.40	0.54
35:DA:654(H):G:H21	35:DA:654(N):G:N2	2.06	0.54
35:DA:1087:G:H22	35:DA:1102:C:H42	1.56	0.54
35:DA:1449:A:O2'	35:DA:1530:C:N4	2.40	0.54
41:DG:119:GLY:N	41:DG:181:ARG:HE	2.05	0.54
41:DG:162:THR:HG22	41:DG:162:THR:O	2.07	0.54
49:DQ:21:THR:CG2	49:DQ:101:ARG:HB2	2.38	0.54
56:DX:12:VAL:HG13	56:DX:27:THR:O	2.08	0.54
57:DY:8:LYS:HD2	57:DY:8:LYS:N	2.23	0.54
1:AA:460:G:O6	1:AA:470:C:H5"	2.07	0.54
1:AA:538:G:O3'	12:AL:114:LYS:HD2	2.08	0.54
1:AA:707:C:H2'	1:AA:708:C:C6	2.43	0.54
4:AD:60:GLU:OE2	4:AD:198:VAL:HA	2.08	0.54
6:AF:84:ASN:O	6:AF:86:ARG:HG3	2.08	0.54
26:B1:25:LYS:NZ	35:BA:2396:G:OP1	2.41	0.54
29:B4:15:ILE:HA	29:B4:21:VAL:HG22	1.89	0.54
35:BA:1417:C:H2'	35:BA:1418:G:O4'	2.07	0.54
35:BA:2577:A:H5"	35:BA:2578:G:H5'	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2778:A:O2'	35:BA:2780:G:O2'	2.21	0.54
38:BD:65:ILE:HD11	38:BD:67:PHE:CE1	2.43	0.54
45:BK:38:VAL:HG23	45:BK:39:LYS:N	2.23	0.54
46:BN:19:GLU:O	46:BN:60:ILE:HA	2.08	0.54
58:BZ:104:PHE:HB3	58:BZ:141:VAL:HG21	1.90	0.54
1:CA:21:G:H2'	1:CA:22:G:C8	2.43	0.54
1:CA:119:A:H4'	1:CA:120:A:O5'	2.08	0.54
1:CA:944:G:N2	1:CA:1338:G:N7	2.56	0.54
6:CF:91:VAL:HG11	18:CR:72:ARG:HH12	1.72	0.54
13:CM:115:LYS:C	13:CM:117:VAL:H	2.16	0.54
19:CS:40:ILE:HD11	19:CS:71:LEU:HD23	1.90	0.54
20:CT:87:LYS:HE3	20:CT:91:LEU:HD21	1.89	0.54
35:DA:11:G:H2'	35:DA:12:U:H6	1.73	0.54
35:DA:1689:A:H2'	35:DA:1690:A:H8	1.72	0.54
35:DA:2730:C:O2'	39:DE:168:MET:O	2.24	0.54
36:DB:24:G:H21	36:DB:27:C:H42	1.56	0.54
40:DF:157:VAL:HA	40:DF:176:LEU:O	2.07	0.54
42:DH:19:VAL:HG11	42:DH:43:VAL:O	2.07	0.54
42:DH:41:MET:SD	42:DH:52:VAL:HG13	2.48	0.54
1:AA:1388:C:H2'	1:AA:1389:C:C6	2.44	0.53
3:AC:32:LEU:HB3	3:AC:59:ARG:NH2	2.22	0.53
8:AH:30:ARG:NH1	8:AH:30:ARG:HB3	2.23	0.53
24:AY:102:TYR:C	24:AY:102:TYR:CD1	2.86	0.53
30:B5:46:CYS:SG	55:BW:38:TYR:OH	2.65	0.53
32:B7:9:ARG:HG3	35:BA:1309:G:OP1	2.08	0.53
35:BA:307:G:N1	35:BA:310:A:OP2	2.41	0.53
35:BA:1059:G:H3'	35:BA:1060:U:H2'	1.90	0.53
35:BA:2347:C:H2'	35:BA:2348:U:C6	2.43	0.53
35:BA:2720:U:C2	35:BA:2721:A:C8	2.96	0.53
50:BR:7:GLY:HA3	50:BR:8:ARG:NH2	2.23	0.53
58:BZ:99:TYR:HA	58:BZ:125:LEU:HA	1.91	0.53
1:CA:70:G:H1	1:CA:99:U:H3	1.56	0.53
1:CA:584:G:H2'	1:CA:585:G:C8	2.43	0.53
1:CA:592:G:H2'	1:CA:593:G:C8	2.41	0.53
1:CA:983:A:H1'	1:CA:1049:U:O2	2.08	0.53
3:CC:183:ASP:N	3:CC:202:ILE:O	2.40	0.53
6:CF:3:ARG:HH11	6:CF:3:ARG:HG3	1.73	0.53
18:CR:40:LEU:HA	18:CR:43:PHE:HD2	1.73	0.53
24:CY:109:PHE:CE1	24:CY:353:ALA:HB2	2.43	0.53
33:D8:46:ARG:HH21	35:DA:631:A:P	2.31	0.53
35:DA:128:C:H2'	35:DA:129:C:H6	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:484:C:H2'	35:DA:485:C:H6	1.73	0.53
35:DA:1301:A:H4'	35:DA:1302:A:OP1	2.08	0.53
36:DB:14:U:OP2	36:DB:70:C:O2'	2.25	0.53
41:DG:63:ILE:HD12	41:DG:141:PHE:CG	2.43	0.53
51:DS:65:VAL:O	51:DS:69:VAL:HG12	2.08	0.53
1:AA:357:G:OP1	1:AA:366:C:O2'	2.23	0.53
16:AP:48:TRP:O	16:AP:49:LEU:HB2	2.07	0.53
24:AY:311:ILE:HD12	24:AY:325:ARG:HH21	1.72	0.53
31:B6:11:LEU:HD23	31:B6:26:ASN:OD1	2.08	0.53
35:BA:608:A:H2'	35:BA:609:A:C8	2.43	0.53
35:BA:1050:A:H2'	35:BA:1051:G:C8	2.43	0.53
35:BA:1817:G:H3'	38:BD:157:ARG:HH21	1.73	0.53
35:BA:2787:C:H1'	39:BE:61:ARG:CD	2.38	0.53
49:BQ:43:THR:OG1	49:BQ:45:GLN:HG2	2.08	0.53
51:BS:78:LEU:HD11	51:BS:103:GLU:HB3	1.88	0.53
58:BZ:19:ARG:HH12	58:BZ:84:GLU:HA	1.72	0.53
1:CA:191:G:N9	20:CT:105:SER:HB3	2.24	0.53
1:CA:1035:A:H2'	1:CA:1036:G:C8	2.44	0.53
7:CG:9:VAL:HG22	7:CG:94:ARG:NH1	2.23	0.53
11:CK:18:ARG:HH21	11:CK:37:GLY:N	2.06	0.53
17:CQ:7:THR:HG22	17:CQ:58:GLU:HG2	1.91	0.53
20:CT:10:LEU:C	20:CT:12:ALA:H	2.13	0.53
33:D8:62:LEU:N	33:D8:63:PRO:HD2	2.23	0.53
35:DA:2127:G:H2'	35:DA:2128:C:C6	2.43	0.53
41:DG:4:ASP:OD2	41:DG:9:ARG:NH1	2.41	0.53
48:DP:64:LYS:O	48:DP:66:GLY:N	2.38	0.53
52:DT:83:ILE:HG13	52:DT:84:GLN:H	1.73	0.53
57:DY:8:LYS:HB2	57:DY:28:LYS:NZ	2.22	0.53
3:AC:149:ALA:N	3:AC:170:GLN:O	2.39	0.53
33:B8:30:ARG:O	33:B8:30:ARG:HD3	2.09	0.53
35:BA:307:G:N2	35:BA:310:A:OP2	2.40	0.53
35:BA:639:U:H2'	35:BA:640:C:H6	1.73	0.53
35:BA:1226:A:OP1	54:BV:84:LYS:NZ	2.40	0.53
39:BE:117:MET:O	39:BE:118:LYS:HB2	2.09	0.53
43:BI:131:LYS:HA	43:BI:135:GLU:CG	2.32	0.53
43:BI:133:HIS:HB2	43:BI:134:PRO:CD	2.38	0.53
46:BN:35:ARG:O	46:BN:37:LYS:N	2.40	0.53
1:CA:372:C:N4	1:CA:389:A:H62	2.07	0.53
1:CA:757:U:H2'	1:CA:758:G:O4'	2.08	0.53
9:CI:50:LEU:O	9:CI:53:VAL:HG22	2.09	0.53
35:DA:2315:G:H2'	35:DA:2316:C:C6	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2831:G:OP1	39:DE:58:ARG:NH1	2.40	0.53
40:DF:33:LEU:HD11	40:DF:112:MET:HB2	1.89	0.53
43:DI:133:HIS:HB2	43:DI:134:PRO:HD3	1.91	0.53
48:DP:50:ARG:HG3	48:DP:51:PHE:N	2.23	0.53
51:DS:74:ALA:HB1	51:DS:103:GLU:HG3	1.90	0.53
1:AA:22:G:H2'	1:AA:23:C:H6	1.72	0.53
1:AA:1004:A:O2'	1:AA:1038:C:N3	2.33	0.53
1:AA:1423:G:P	47:BO:49:ARG:HH12	2.31	0.53
3:AC:83:ARG:HA	3:AC:86:VAL:HG22	1.90	0.53
4:AD:153:ARG:HG2	4:AD:181:MET:SD	2.49	0.53
25:B0:74:ARG:HH11	25:B0:74:ARG:HG3	1.73	0.53
35:BA:589:C:H2'	35:BA:590:A:H8	1.73	0.53
42:BH:97:ARG:O	42:BH:98:LEU:HB2	2.08	0.53
45:BK:99:ILE:O	45:BK:138:VAL:HA	2.09	0.53
56:BX:24:GLY:O	56:BX:82:GLN:HA	2.09	0.53
57:BY:94:LYS:O	57:BY:101:LYS:HA	2.09	0.53
1:CA:96:U:O2'	1:CA:97:G:H8	1.92	0.53
1:CA:584:G:H2'	1:CA:585:G:H8	1.73	0.53
1:CA:1250:A:N3	1:CA:1370:G:O2'	2.41	0.53
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.08	0.53
9:CI:114:TYR:CE1	10:CJ:59:SER:HA	2.44	0.53
24:CY:33:LEU:HD12	45:DK:20:ALA:HB1	1.90	0.53
28:D3:43:ILE:O	28:D3:47:VAL:HG23	2.09	0.53
35:DA:863:A:H2'	35:DA:864:G:H8	1.74	0.53
35:DA:1689:A:H2'	35:DA:1690:A:C8	2.44	0.53
40:DF:66:PRO:O	40:DF:67:GLN:HB3	2.09	0.53
41:DG:96:ARG:O	41:DG:99:MET:N	2.41	0.53
44:DJ:27:UNK:H	44:DJ:84:UNK:C	2.21	0.53
46:DN:67:LEU:O	46:DN:68:GLU:HB2	2.08	0.53
57:DY:8:LYS:NZ	57:DY:72:VAL:O	2.41	0.53
1:AA:190:U:H2'	1:AA:191:G:H8	1.71	0.53
1:AA:376:G:H5"	16:AP:5:ARG:HB2	1.91	0.53
1:AA:514:C:H2'	1:AA:515:G:H8	1.73	0.53
1:AA:707:C:H2'	1:AA:708:C:H6	1.74	0.53
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.44	0.53
1:AA:1422:G:O3'	47:BO:49:ARG:NH1	2.42	0.53
2:AB:239:VAL:O	2:AB:241:GLU:N	2.42	0.53
5:AE:76:ILE:HD11	5:AE:142:LEU:HD21	1.89	0.53
12:AL:74:GLY:O	12:AL:102:ARG:NH2	2.41	0.53
35:BA:654(S):G:H2'	35:BA:654(T):C:C5	2.44	0.53
35:BA:1039:G:H2'	35:BA:1040:C:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1401:G:H2'	35:BA:1402:C:C6	2.44	0.53
35:BA:2564:A:OP1	35:BA:2648:C:H4'	2.08	0.53
35:BA:2643:G:H2'	35:BA:2644:G:O4'	2.09	0.53
41:BG:67:LYS:H	41:BG:67:LYS:HD2	1.73	0.53
42:BH:123:PHE:CE1	42:BH:133:VAL:HG22	2.44	0.53
43:BI:77:LEU:HD21	43:BI:101:LEU:HD13	1.89	0.53
45:BK:12:LEU:HB2	45:BK:53:VAL:HG23	1.91	0.53
45:BK:137:GLU:HG3	45:BK:138:VAL:H	1.73	0.53
52:BT:36:GLU:OE1	52:BT:38:ASN:ND2	2.41	0.53
58:BZ:166:SER:HB2	58:BZ:168:GLU:N	2.24	0.53
1:CA:15:G:H4'	5:CE:24:ARG:NH1	2.24	0.53
1:CA:735:C:H2'	1:CA:736:C:C6	2.42	0.53
1:CA:736:C:H2'	1:CA:737:A:H8	1.72	0.53
2:CB:180:LEU:C	2:CB:182:ILE:H	2.17	0.53
3:CC:95:THR:HG22	3:CC:97:LYS:H	1.74	0.53
8:CH:90:GLY:O	12:CL:7:ILE:HG21	2.08	0.53
13:CM:91:ARG:HB3	13:CM:98:VAL:HG22	1.91	0.53
22:CV:41:C:H2'	22:CV:42:C:H5"	1.91	0.53
24:CY:115:ASN:HB3	24:CY:172:LYS:HA	1.90	0.53
24:CY:198:SER:HB2	24:CY:200:ARG:HG3	1.89	0.53
35:DA:1070:A:H5'	35:DA:1072:C:OP2	2.09	0.53
35:DA:1210:A:H5'	35:DA:1210:A:H8	1.72	0.53
35:DA:2298:A:H2'	35:DA:2299:G:O4'	2.09	0.53
35:DA:2795:G:H22	35:DA:2802:G:N2	2.07	0.53
37:DC:22:THR:H	37:DC:25:GLU:HB3	1.74	0.53
47:DO:10:VAL:HG21	47:DO:16:ALA:O	2.09	0.53
48:DP:80:TYR:CZ	48:DP:111:ARG:HD3	2.44	0.53
51:DS:18:ILE:C	51:DS:20:ARG:H	2.17	0.53
51:DS:92:TYR:CG	51:DS:93:LYS:N	2.77	0.53
53:DU:92:ARG:NH1	54:DV:11:GLN:O	2.42	0.53
58:DZ:48:PHE:HE2	58:DZ:71:VAL:HG11	1.73	0.53
58:DZ:165:VAL:HG12	58:DZ:167:PRO:HA	1.91	0.53
1:AA:189:G:H2'	1:AA:189(A):C:C6	2.44	0.53
1:AA:824:C:H2'	1:AA:825:G:H8	1.73	0.53
1:AA:935:A:N1	7:AG:3:ARG:NH2	2.56	0.53
1:AA:945:G:N2	1:AA:1334:G:HO2'	2.06	0.53
1:AA:1287:A:H2	1:AA:1353:G:N3	2.06	0.53
17:AQ:5:VAL:HA	17:AQ:59:ILE:O	2.07	0.53
33:B8:62:LEU:N	33:B8:63:PRO:HD2	2.24	0.53
35:BA:52:A:H2'	35:BA:53:A:H8	1.74	0.53
35:BA:336:C:O2'	57:BY:35:TYR:OH	2.02	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:690:G:H2'	35:BA:691:C:H6	1.74	0.53
35:BA:1099:G:H5"	45:BK:4:VAL:HG21	1.90	0.53
36:BB:24:G:H21	36:BB:27:C:N4	2.06	0.53
41:BG:97:ASP:C	41:BG:99:MET:H	2.17	0.53
48:BP:85:LEU:HD23	48:BP:114:ILE:HD11	1.89	0.53
1:CA:6:G:H4'	1:CA:298:A:H4'	1.91	0.53
1:CA:552:U:C2	1:CA:553:A:C8	2.96	0.53
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.44	0.53
9:CI:83:ARG:HA	9:CI:86:VAL:HG12	1.90	0.53
11:CK:91:ARG:O	11:CK:95:ILE:HG13	2.09	0.53
27:D2:64:LEU:HD23	27:D2:68:ARG:HD2	1.90	0.53
31:D6:48:VAL:O	31:D6:49:HIS:CG	2.62	0.53
33:D8:59:LYS:HZ2	48:DP:50:ARG:HB3	1.74	0.53
35:DA:74:A:H4'	35:DA:75:G:O5'	2.08	0.53
35:DA:904:C:H2'	35:DA:905:U:C6	2.42	0.53
35:DA:1543:C:H3'	35:DA:1544:A:H5"	1.89	0.53
35:DA:1651:G:H2'	35:DA:1652:A:O4'	2.09	0.53
35:DA:2114:A:N6	35:DA:2115:G:H21	2.06	0.53
35:DA:2153:G:H2'	35:DA:2154:G:C8	2.43	0.53
35:DA:2784:C:H1'	39:DE:37:ARG:NH1	2.23	0.53
38:DD:210:GLY:O	38:DD:212:SER:N	2.38	0.53
40:DF:188:ARG:HA	48:DP:7:ARG:HD3	1.89	0.53
43:DI:57:ARG:O	43:DI:60:GLU:HB3	2.09	0.53
45:DK:55:VAL:HG22	45:DK:69:THR:HG23	1.91	0.53
58:DZ:114:GLY:O	58:DZ:177:PRO:HD3	2.09	0.53
1:AA:9:G:H2'	1:AA:10:A:C8	2.43	0.53
1:AA:580:U:H2'	1:AA:581:G:O4'	2.08	0.53
1:AA:1002:G:H3'	1:AA:1003:G:C8	2.44	0.53
8:AH:20:TYR:HA	8:AH:65:TYR:CE2	2.44	0.53
26:B1:79:GLY:HA2	35:BA:271(H):G:N2	2.23	0.53
35:BA:373:U:H2'	35:BA:374:A:H8	1.74	0.53
35:BA:1528(A):A:H3'	35:BA:1529:G:H5"	1.91	0.53
35:BA:1831:G:H2'	35:BA:1832:C:C6	2.42	0.53
35:BA:2293:C:OP1	51:BS:92:TYR:OH	2.27	0.53
41:BG:61:ALA:HB2	41:BG:68:PRO:HD3	1.91	0.53
44:BJ:27:UNK:O	44:BJ:29:UNK:N	2.42	0.53
46:BN:9:VAL:HG12	46:BN:10:GLU:H	1.74	0.53
48:BP:101:VAL:C	48:BP:103:ALA:H	2.17	0.53
51:BS:58:LEU:HD21	51:BS:68:GLN:HB2	1.91	0.53
57:BY:63:LYS:HG2	57:BY:64:GLU:H	1.74	0.53
1:CA:73:G:C6	1:CA:97:G:C6	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1030(A):G:O2'	1:CA:1031:G:N2	2.42	0.53
3:CC:51:GLY:O	3:CC:53:ALA:N	2.41	0.53
5:CE:101:ILE:HD11	5:CE:119:LEU:HD23	1.90	0.53
24:CY:44:ALA:O	24:CY:48:VAL:HG23	2.07	0.53
35:DA:529:A:N6	35:DA:2041:U:H3	1.97	0.53
35:DA:602:G:O2'	35:DA:604:G:O2'	2.13	0.53
35:DA:654(S):G:H2'	35:DA:654(T):C:C4	2.44	0.53
35:DA:754:C:H2'	35:DA:755:C:H6	1.73	0.53
35:DA:2178:C:H3'	35:DA:2179:C:H5"	1.91	0.53
35:DA:2291:U:H2'	35:DA:2292:C:H6	1.74	0.53
48:DP:124:LYS:HD3	48:DP:143:GLY:HA3	1.90	0.53
52:DT:28:VAL:HB	52:DT:88:ILE:HG12	1.91	0.53
57:DY:63:LYS:HG2	57:DY:64:GLU:H	1.74	0.53
1:AA:574:A:HO2'	1:AA:882:C:HO2'	1.48	0.53
2:AB:218:ALA:O	2:AB:222:ILE:HG12	2.09	0.53
16:AP:15:PRO:HB2	16:AP:41:PRO:HG3	1.89	0.53
24:AY:41:ASP:HB3	24:AY:44:ALA:HB3	1.89	0.53
24:AY:102:TYR:C	24:AY:102:TYR:HD1	2.17	0.53
27:B2:14:ARG:NH2	35:BA:77:C:O3'	2.41	0.53
35:BA:1062:G:H2'	35:BA:1063:G:C8	2.43	0.53
35:BA:1952:A:C6	47:BO:22:ILE:HD12	2.44	0.53
39:BE:111:ARG:HA	50:BR:2:ARG:HG2	1.89	0.53
41:BG:139:LEU:HA	41:BG:144:ILE:HG21	1.91	0.53
45:BK:4:VAL:O	45:BK:5:VAL:HG12	2.07	0.53
54:BV:21:ARG:HA	54:BV:92:THR:O	2.08	0.53
1:CA:244:U:H4'	1:CA:245:C:H5"	1.91	0.53
1:CA:1048:G:O3'	1:CA:1049:U:H3'	2.08	0.53
1:CA:1055:A:H62	1:CA:1200:C:H42	1.56	0.53
2:CB:162:ILE:O	2:CB:162:ILE:HG13	2.09	0.53
26:D1:44:PRO:HB2	26:D1:46:LEU:CD1	2.39	0.53
27:D2:2:LYS:NZ	27:D2:5:GLU:OE2	2.41	0.53
27:D2:43:GLN:O	27:D2:45:SER:N	2.42	0.53
31:D6:19:ARG:HG3	31:D6:20:ASN:H	1.74	0.53
35:DA:1204:A:O2'	35:DA:1205:U:OP2	2.26	0.53
35:DA:1495:A:H2'	35:DA:1496:A:H2	1.74	0.53
35:DA:1721:G:H5'	35:DA:1722:A:OP2	2.09	0.53
35:DA:1935:G:N2	35:DA:1964:G:OP2	2.42	0.53
35:DA:2674:G:H2'	35:DA:2675:A:C8	2.44	0.53
38:DD:65:ILE:HD11	38:DD:67:PHE:CE1	2.43	0.53
38:DD:129:ASN:O	38:DD:193:VAL:HG12	2.09	0.53
52:DT:112:ARG:HH21	52:DT:113:LYS:HE2	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DU:90:VAL:HG21	54:DV:47:VAL:CG2	2.37	0.53
55:DW:10:VAL:O	55:DW:11:ARG:HB3	2.08	0.53
58:DZ:81:ARG:HH11	58:DZ:81:ARG:CB	2.19	0.53
1:AA:512:U:H2'	1:AA:513:C:H6	1.73	0.53
1:AA:1205:U:H1'	3:AC:195:VAL:HG21	1.91	0.53
2:AB:178:ARG:HG3	8:AH:72:PRO:HA	1.91	0.53
10:AJ:38:ILE:HD11	10:AJ:71:LEU:HD23	1.90	0.53
18:AR:53:ARG:C	18:AR:55:ARG:H	2.15	0.53
22:AW:44:G:H2'	22:AW:45:U:O4'	2.09	0.53
35:BA:1357:U:H2'	35:BA:1358:G:O4'	2.09	0.53
35:BA:2567:G:H2'	35:BA:2568:C:C6	2.44	0.53
36:BB:8:U:H3	36:BB:113:G:H1	1.57	0.53
38:BD:261:LYS:HB3	38:BD:264:LYS:HB2	1.91	0.53
43:BI:116:LEU:HD12	43:BI:117:GLU:H	1.74	0.53
45:BK:6:ALA:O	45:BK:59:ILE:HB	2.09	0.53
45:BK:79:ARG:HB2	45:BK:84:LEU:O	2.09	0.53
1:CA:926:G:N2	23:CX:15:A:H3'	2.24	0.53
1:CA:931:C:N4	1:CA:1387:G:O6	2.41	0.53
2:CB:36:ARG:N	2:CB:36:ARG:HD2	2.24	0.53
4:CD:61:LYS:HG3	4:CD:203:VAL:HG13	1.91	0.53
7:CG:12:LEU:HD13	7:CG:25:ALA:HB2	1.90	0.53
24:CY:52:ALA:HA	24:CY:55:LEU:HD13	1.90	0.53
27:D2:30:ARG:HB2	56:DX:5:TYR:CE1	2.43	0.53
35:DA:654(D):G:H22	35:DA:654(P):C:H42	1.55	0.53
35:DA:1094:U:N3	35:DA:1097:U:OP2	2.42	0.53
35:DA:1186:G:O5'	35:DA:1186:G:H8	1.92	0.53
37:DC:42:VAL:N	37:DC:177:GLY:O	2.41	0.53
37:DC:214:TYR:HE1	37:DC:224:ARG:HH11	1.56	0.53
38:DD:122:ASP:CG	38:DD:123:ALA:H	2.17	0.53
39:DE:93:VAL:HG21	39:DE:180:ASN:HA	1.89	0.53
1:AA:64:G:H4'	1:AA:65:U:H5"	1.91	0.53
1:AA:80:G:O6	1:AA:89:C:N4	2.42	0.53
1:AA:1084:G:H5'	1:AA:1102:A:OP2	2.09	0.53
22:AW:40:C:H2'	22:AW:41:C:C6	2.44	0.53
35:BA:78:A:H2'	35:BA:79:G:H8	1.74	0.53
35:BA:389:G:H1	48:BP:71:VAL:HG12	1.74	0.53
35:BA:2101:G:H2'	35:BA:2102:U:H6	1.73	0.53
35:BA:2579:C:H2'	35:BA:2580:U:O4'	2.09	0.53
36:BB:61:G:H2'	36:BB:62:C:H6	1.73	0.53
39:BE:77:ILE:HG22	39:BE:78:LEU:HG	1.91	0.53
39:BE:101:ARG:HB2	39:BE:201:THR:HG21	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BJ:81:UNK:O	44:BJ:83:UNK:N	2.42	0.53
49:BQ:116:GLU:O	49:BQ:120:ILE:HG12	2.09	0.53
57:BY:35:TYR:CD2	57:BY:69:ALA:HB3	2.44	0.53
1:CA:781:A:O2'	1:CA:1522:U:O2	2.25	0.53
7:CG:148:ASN:C	7:CG:150:ALA:N	2.67	0.53
11:CK:111:ASP:OD1	18:CR:84:LYS:HE2	2.09	0.53
19:CS:6:LYS:HG3	19:CS:7:LYS:HE2	1.91	0.53
35:DA:8:A:H2'	35:DA:9:U:C5	2.44	0.53
35:DA:813:U:H2'	35:DA:814:C:H6	1.74	0.53
35:DA:1094:U:H1'	35:DA:1097:U:C5	2.39	0.53
36:DB:40:U:H3'	36:DB:41:U:H5"	1.90	0.53
48:DP:114:ILE:HD12	48:DP:115:LEU:N	2.21	0.53
48:DP:124:LYS:HD3	48:DP:143:GLY:CA	2.39	0.53
50:DR:4:LEU:O	50:DR:5:LYS:HD3	2.09	0.53
52:DT:35:LYS:HZ1	52:DT:41:ARG:HE	1.57	0.53
1:AA:410:G:H21	1:AA:432:A:H62	1.56	0.52
1:AA:1244:C:H2'	1:AA:1245:A:C8	2.44	0.52
3:AC:127:ARG:N	3:AC:127:ARG:HD2	2.24	0.52
7:AG:15:ASP:HB3	7:AG:19:GLY:N	2.23	0.52
13:AM:124:PRO:HD2	24:AY:163:GLY:H	1.73	0.52
35:BA:271(Q):G:HO2'	35:BA:271(R):G:H8	1.56	0.52
35:BA:630:G:N2	35:BA:633:A:OP2	2.29	0.52
35:BA:1425:G:H2'	35:BA:1426:G:C8	2.44	0.52
35:BA:1902:C:H4'	38:BD:244:ARG:HA	1.90	0.52
35:BA:2494:G:O2'	49:BQ:80:GLU:HA	2.09	0.52
37:BC:42:VAL:HG13	37:BC:217:THR:HG22	1.91	0.52
45:BK:44:ALA:O	45:BK:48:MET:HG2	2.09	0.52
48:BP:114:ILE:HD12	48:BP:115:LEU:N	2.22	0.52
53:BU:91:ASP:OD1	53:BU:96:ALA:HB2	2.09	0.52
1:CA:409:G:H5'	4:CD:25:ARG:HB2	1.92	0.52
1:CA:512:U:H2'	1:CA:513:C:C6	2.44	0.52
1:CA:690:G:H2'	1:CA:691:G:C8	2.44	0.52
1:CA:1178:G:P	9:CI:93:ARG:HH21	2.33	0.52
1:CA:1278:U:H5"	1:CA:1279:A:O4'	2.09	0.52
1:CA:1457:G:H2'	1:CA:1458:G:H8	1.74	0.52
3:CC:77:ILE:O	3:CC:83:ARG:HB3	2.09	0.52
5:CE:6:PHE:HB3	5:CE:35:GLY:O	2.08	0.52
10:CJ:6:ILE:HG22	10:CJ:98:ILE:HG23	1.89	0.52
24:CY:19:ILE:O	24:CY:23:GLU:HB2	2.09	0.52
24:CY:303:ARG:N	24:CY:304:PRO:HD3	2.24	0.52
30:D5:35:GLU:O	30:D5:36:CYS:CB	2.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1721:G:N1	35:DA:1739:U:OP2	2.42	0.52
35:DA:2176:A:H2'	35:DA:2177:C:C5	2.44	0.52
35:DA:2747:G:O6	35:DA:2755:C:H5"	2.08	0.52
36:DB:56:G:H5'	41:DG:27:ASN:ND2	2.24	0.52
39:DE:51:PHE:CD1	39:DE:52:LEU:HD22	2.43	0.52
52:DT:38:ASN:CG	52:DT:39:ARG:H	2.16	0.52
1:AA:1165:C:N3	1:AA:1171:G:N1	2.36	0.52
2:AB:96:ARG:N	2:AB:96:ARG:HD2	2.24	0.52
35:BA:150:C:H2'	35:BA:151:C:H6	1.75	0.52
35:BA:225:A:O2'	35:BA:257:A:H4'	2.09	0.52
35:BA:1292:U:H2'	35:BA:1293:C:C6	2.44	0.52
35:BA:1316:U:H2'	35:BA:1317:A:H8	1.75	0.52
35:BA:2467:C:H4'	49:BQ:123:HIS:CD2	2.44	0.52
37:BC:52:PRO:HG2	37:BC:53:ARG:HD3	1.91	0.52
38:BD:132:PRO:HD3	38:BD:190:TYR:CZ	2.44	0.52
41:BG:38:VAL:HG22	41:BG:93:THR:HG23	1.91	0.52
46:BN:120:LEU:O	46:BN:121:LYS:HD2	2.09	0.52
52:BT:35:LYS:HZ3	52:BT:41:ARG:HH21	1.57	0.52
58:BZ:10:ARG:HH21	58:BZ:26:GLY:H	1.57	0.52
1:CA:1030(D):A:H62	1:CA:1031:G:H21	1.57	0.52
2:CB:84:GLU:HG3	2:CB:215:LEU:HB3	1.90	0.52
3:CC:36:ASP:HB3	3:CC:40:ARG:HH12	1.74	0.52
6:CF:76:ALA:HB1	6:CF:80:ARG:NH2	2.23	0.52
26:D1:52:ARG:NH1	35:DA:2218:U:H1'	2.25	0.52
31:D6:46:HIS:HB2	31:D6:47:THR:O	2.08	0.52
35:DA:271(H):G:HO2'	35:DA:271(I):G:H8	1.54	0.52
35:DA:483:A:C4	57:DY:60:PHE:HE1	2.27	0.52
35:DA:893:C:H2'	35:DA:894:C:C6	2.44	0.52
35:DA:2030:A:H4'	35:DA:2031:A:C8	2.44	0.52
39:DE:103:ASP:CG	39:DE:201:THR:HA	2.33	0.52
43:DI:128:LEU:H	43:DI:128:LEU:HD22	1.73	0.52
52:DT:29:ARG:HD3	52:DT:86:ILE:HG22	1.90	0.52
57:DY:21:LYS:HG2	57:DY:22:GLY:N	2.22	0.52
1:AA:1079:G:O3'	5:AE:14:ARG:NH2	2.41	0.52
3:AC:16:ARG:NH1	3:AC:181:ASN:OD1	2.42	0.52
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.10	0.52
7:AG:146:GLU:HG2	7:AG:149:ARG:HH12	1.73	0.52
13:AM:14:ARG:HA	13:AM:43:THR:O	2.09	0.52
35:BA:1281:G:H8	35:BA:1281:G:H5'	1.74	0.52
47:BO:90:GLN:O	47:BO:91:LEU:HB2	2.08	0.52
58:BZ:44:PHE:HZ	58:BZ:86:VAL:HG11	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:553:A:H2'	1:CA:554:C:H6	1.73	0.52
1:CA:738:C:H2'	1:CA:739:C:C6	2.44	0.52
1:CA:1446:U:H4'	1:CA:1447:A:N7	2.24	0.52
2:CB:21:ARG:NH2	2:CB:38:GLY:O	2.42	0.52
2:CB:91:PRO:HG3	2:CB:154:LEU:HB2	1.91	0.52
35:DA:272(D):G:H1	35:DA:364:C:N4	2.06	0.52
35:DA:296:C:O2'	35:DA:297:C:H5'	2.09	0.52
35:DA:1186:G:H2'	35:DA:1187:G:O4'	2.10	0.52
35:DA:1853:A:H2'	35:DA:1854:A:C8	2.44	0.52
35:DA:2561:A:H4'	47:DO:40:VAL:HG11	1.92	0.52
40:DF:185:ASP:HA	40:DF:188:ARG:HG2	1.91	0.52
48:DP:48:PRO:O	48:DP:50:ARG:N	2.43	0.52
56:DX:54:VAL:HG22	56:DX:81:VAL:HG12	1.91	0.52
57:DY:28:LYS:HG2	57:DY:39:VAL:HG22	1.91	0.52
1:AA:189:G:H2'	1:AA:189(A):C:H6	1.74	0.52
1:AA:522:C:H5"	12:AL:120:TYR:OH	2.09	0.52
1:AA:779:C:H5"	11:AK:122:LYS:HG2	1.90	0.52
1:AA:1152:A:H2'	1:AA:1153:C:C6	2.45	0.52
1:AA:1278:U:H5"	1:AA:1279:A:O4'	2.09	0.52
4:AD:88:VAL:HG13	5:AE:97:GLY:HA2	1.92	0.52
11:AK:21:ILE:HB	11:AK:84:VAL:HA	1.90	0.52
22:AW:58:A:O2'	22:AW:60:U:OP2	2.28	0.52
27:B2:53:LEU:O	27:B2:57:ILE:HG13	2.08	0.52
35:BA:51:G:N2	35:BA:120:U:O2	2.42	0.52
35:BA:784:A:O2'	35:BA:785:G:H5"	2.09	0.52
35:BA:987:G:O2'	35:BA:1000:A:N3	2.38	0.52
35:BA:1331:A:HO2'	35:BA:1332:G:H8	1.57	0.52
35:BA:1677:A:H2'	35:BA:1678:G:C8	2.44	0.52
35:BA:2174:C:H2'	35:BA:2175:C:C6	2.43	0.52
35:BA:2657:A:O2'	42:BH:160:LYS:HE2	2.10	0.52
45:BK:111:LYS:HB3	45:BK:115:LEU:HD11	1.91	0.52
49:BQ:30:GLY:O	49:BQ:134:ARG:NH1	2.42	0.52
56:BX:12:VAL:CB	56:BX:17:ALA:HB1	2.35	0.52
1:CA:35:G:O2'	12:CL:118:SER:O	2.17	0.52
1:CA:217:C:H2'	1:CA:218:C:C6	2.44	0.52
1:CA:360:A:H2'	1:CA:361:G:C8	2.44	0.52
24:CY:336:VAL:HA	24:CY:340:ASP:HB2	1.90	0.52
35:DA:527:C:H41	35:DA:2779:U:P	2.32	0.52
35:DA:1653:G:H3'	50:DR:4:LEU:HD23	1.91	0.52
35:DA:2720:U:C2	35:DA:2721:A:C8	2.97	0.52
39:DE:54:GLN:O	39:DE:75:VAL:HG23	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DH:27:LYS:HG2	42:DH:32:GLU:HG3	1.92	0.52
46:DN:55:VAL:HG22	46:DN:126:PRO:HA	1.90	0.52
48:DP:79:ARG:NE	48:DP:109:GLY:O	2.43	0.52
51:DS:85:VAL:HG23	51:DS:106:ARG:HG3	1.91	0.52
1:AA:911:U:H2'	1:AA:912:C:C6	2.45	0.52
1:AA:1344:C:O2'	1:AA:1348:U:O2'	2.27	0.52
4:AD:14:ARG:HB2	4:AD:40:PRO:HD2	1.91	0.52
11:AK:54:ARG:HH12	22:AW:40:C:P	2.32	0.52
12:AL:24:VAL:HG22	12:AL:97:ARG:HB3	1.91	0.52
24:AY:131:ASP:O	24:AY:135:MET:HG3	2.10	0.52
35:BA:82:G:N1	35:BA:103:A:OP2	2.42	0.52
35:BA:863:A:H2'	35:BA:864:G:H8	1.74	0.52
39:BE:4:ILE:HD13	39:BE:28:ALA:HB1	1.92	0.52
41:BG:32:PRO:HA	41:BG:162:THR:HB	1.91	0.52
52:BT:42:ILE:HG13	52:BT:42:ILE:O	2.08	0.52
1:CA:19:C:H5"	5:CE:86:ALA:HB3	1.90	0.52
1:CA:712:A:H2'	1:CA:713:G:C8	2.45	0.52
1:CA:1158:C:N4	1:CA:1181:G:H22	2.07	0.52
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.09	0.52
2:CB:140:HIS:O	2:CB:144:ARG:HG2	2.10	0.52
8:CH:36:LEU:HA	8:CH:39:LEU:HD23	1.92	0.52
31:D6:46:HIS:HA	31:D6:47:THR:CG2	2.37	0.52
35:DA:2075:U:OP2	35:DA:2238:G:O2'	2.28	0.52
41:DG:98:ARG:O	41:DG:101:ILE:HG13	2.08	0.52
45:DK:99:ILE:O	45:DK:138:VAL:HA	2.08	0.52
51:DS:106:ARG:HH11	51:DS:106:ARG:C	2.17	0.52
54:DV:15:GLU:HB3	54:DV:16:PRO:CD	2.39	0.52
1:AA:867:G:O2'	1:AA:873:A:N1	2.41	0.52
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.43	0.52
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.44	0.52
2:AB:73:THR:HG22	2:AB:95:GLN:O	2.09	0.52
4:AD:38:TYR:CD2	4:AD:45:GLN:HB3	2.45	0.52
24:AY:330:ARG:NH1	24:AY:340:ASP:OD2	2.34	0.52
33:B8:52:LYS:N	33:B8:53:PRO:HD2	2.24	0.52
35:BA:30:G:H2'	35:BA:31:C:C6	2.44	0.52
35:BA:459:U:H2'	35:BA:460:A:H8	1.75	0.52
35:BA:693:C:O2'	35:BA:1353:A:N3	2.36	0.52
35:BA:2262:U:H2'	35:BA:2263:C:C6	2.44	0.52
35:BA:2779:U:H1'	35:BA:2781:A:C5	2.45	0.52
36:BB:47:C:O2'	51:BS:93:LYS:HG2	2.10	0.52
38:BD:164:GLN:OE1	38:BD:176:ARG:NH2	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:56:SER:C	48:BP:57:THR:HG1	2.17	0.52
1:CA:954:G:H5'	13:CM:120:LYS:HZ1	1.74	0.52
3:CC:127:ARG:N	3:CC:127:ARG:HD2	2.25	0.52
17:CQ:59:ILE:HG21	17:CQ:71:PHE:HB3	1.92	0.52
22:CW:71:G:H2'	22:CW:72:C:C6	2.44	0.52
36:DB:50:G:OP1	51:DS:62:LYS:HB2	2.10	0.52
39:DE:111:ARG:HA	50:DR:2:ARG:CG	2.27	0.52
41:DG:16:ARG:HD3	41:DG:31:VAL:HG21	1.91	0.52
45:DK:2:LYS:HD3	45:DK:68:VAL:HG21	1.92	0.52
45:DK:41:PHE:C	45:DK:43:ALA:H	2.18	0.52
1:AA:1328:C:O2'	13:AM:29:ARG:NH2	2.43	0.52
2:AB:172:ILE:H	2:AB:172:ILE:CD1	2.12	0.52
4:AD:127:THR:HG23	4:AD:147:ALA:HB3	1.90	0.52
6:AF:60:PHE:HE2	18:AR:78:LEU:HD21	1.75	0.52
17:AQ:10:VAL:HG13	17:AQ:19:VAL:HB	1.91	0.52
35:BA:557:U:H2'	35:BA:558:G:H8	1.74	0.52
35:BA:1188:U:H4'	54:BV:79:VAL:HG22	1.91	0.52
35:BA:1210:A:H5'	35:BA:1210:A:C8	2.43	0.52
35:BA:2777:G:H5"	35:BA:2778:A:H5'	1.91	0.52
37:BC:11:LEU:HB3	37:BC:33:LEU:HD22	1.92	0.52
46:BN:19:GLU:HG3	46:BN:20:GLY:N	2.25	0.52
48:BP:23:PRO:HB3	48:BP:29:LYS:HB2	1.91	0.52
1:CA:9:G:OP1	5:CE:122:GLU:HB2	2.10	0.52
1:CA:59:A:H1'	1:CA:354:G:N2	2.25	0.52
1:CA:160:A:H2'	1:CA:161:A:C8	2.44	0.52
1:CA:416:G:H2'	1:CA:417:C:C6	2.44	0.52
1:CA:620:C:H2'	1:CA:621:A:C8	2.44	0.52
1:CA:913:A:H4'	1:CA:914:A:O5'	2.10	0.52
1:CA:1067:A:O2'	1:CA:1068:G:OP2	2.23	0.52
8:CH:6:ILE:H	8:CH:6:ILE:HD12	1.75	0.52
13:CM:32:GLU:O	13:CM:36:LYS:HG2	2.10	0.52
19:CS:48:THR:HG22	19:CS:61:TYR:HD1	1.74	0.52
29:D4:11:PRO:O	29:D4:29:PRO:HG3	2.09	0.52
35:DA:274:G:H1'	35:DA:275:G:C6	2.43	0.52
35:DA:307:G:N1	35:DA:310:A:OP2	2.43	0.52
35:DA:2098:U:O2	35:DA:2191:G:N2	2.30	0.52
41:DG:9:ARG:O	41:DG:13:GLU:HG2	2.09	0.52
41:DG:119:GLY:H	41:DG:181:ARG:HH21	1.58	0.52
42:DH:41:MET:HG3	42:DH:42:ARG:N	2.14	0.52
48:DP:24:GLY:O	48:DP:25:SER:HB3	2.09	0.52
48:DP:101:VAL:C	48:DP:103:ALA:H	2.17	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DU:91:ASP:OD1	53:DU:96:ALA:HB2	2.10	0.52
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.45	0.52
9:AI:5:TYR:HA	9:AI:17:VAL:O	2.08	0.52
10:AJ:26:ALA:CA	10:AJ:29:ARG:HH12	2.22	0.52
10:AJ:29:ARG:HG2	10:AJ:29:ARG:HH11	1.75	0.52
22:AW:67:C:H2'	22:AW:68:C:H6	1.75	0.52
24:AY:341:LEU:HA	24:AY:344:LEU:HD21	1.91	0.52
25:B0:53:MET:HA	25:B0:58:THR:O	2.09	0.52
30:B5:35:GLU:O	30:B5:36:CYS:HB3	2.09	0.52
35:BA:52:A:H2'	35:BA:53:A:C8	2.45	0.52
35:BA:144:C:H2'	35:BA:145:G:H8	1.74	0.52
35:BA:527:C:H41	35:BA:2779:U:P	2.33	0.52
35:BA:1525:G:H2'	35:BA:1526:G:C8	2.44	0.52
35:BA:2735:G:H2'	35:BA:2736:G:H8	1.75	0.52
38:BD:34:VAL:C	38:BD:36:PRO:HD2	2.35	0.52
42:BH:30:LYS:HE3	42:BH:81:GLU:N	2.25	0.52
44:BJ:27:UNK:C	44:BJ:84:UNK:HA	2.40	0.52
45:BK:30:HIS:N	45:BK:30:HIS:CD2	2.77	0.52
48:BP:64:LYS:O	48:BP:66:GLY:N	2.42	0.52
54:BV:21:ARG:HB3	54:BV:91:TYR:HB2	1.90	0.52
58:BZ:41:LEU:HD11	58:BZ:82:ARG:HH21	1.74	0.52
1:CA:28:G:O2'	1:CA:296:U:OP1	2.27	0.52
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.44	0.52
2:CB:97:TRP:CH2	2:CB:173:ALA:HA	2.45	0.52
2:CB:197:VAL:HB	2:CB:200:ILE:HG12	1.91	0.52
10:CJ:34:VAL:HG22	10:CJ:74:ILE:HG22	1.91	0.52
13:CM:83:ASP:OD1	13:CM:84:ILE:N	2.42	0.52
16:CP:48:TRP:O	16:CP:49:LEU:HB2	2.10	0.52
19:CS:46:GLY:H	19:CS:62:ILE:HG23	1.75	0.52
24:CY:246:ASP:HB2	35:DA:2493:U:H5'	1.92	0.52
24:CY:252:VAL:HG13	24:CY:259:THR:HG22	1.92	0.52
24:CY:304:PRO:HD2	24:CY:309:SER:OG	2.10	0.52
35:DA:1049:C:H2'	35:DA:1050:A:C8	2.45	0.52
35:DA:1088:A:N6	45:DK:129:GLY:O	2.42	0.52
35:DA:1095:A:C6	35:DA:1096:A:C6	2.98	0.52
35:DA:1357:U:H2'	35:DA:1358:G:O4'	2.10	0.52
47:DO:80:ASP:OD2	52:DT:64:ARG:NH2	2.39	0.52
52:DT:63:VAL:O	52:DT:73:GLU:HA	2.10	0.52
1:AA:641:U:O2	1:AA:642:A:N6	2.41	0.52
1:AA:868:C:H2'	1:AA:869:G:O4'	2.10	0.52
1:AA:1442(B):A:OP1	1:AA:1442(B):A:H4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:101:ILE:HD11	5:AE:119:LEU:CD2	2.40	0.52
24:AY:278:ILE:HG22	24:AY:282:ARG:HH22	1.75	0.52
35:BA:663:G:O3'	48:BP:21:ARG:NH2	2.43	0.52
35:BA:2241:A:H2'	35:BA:2242:G:C8	2.45	0.52
39:BE:103:ASP:CG	39:BE:201:THR:HA	2.35	0.52
52:BT:28:VAL:HG22	52:BT:46:GLU:HG3	1.92	0.52
58:BZ:4:ARG:NH1	58:BZ:60:GLU:OE1	2.43	0.52
1:CA:189(A):C:H42	1:CA:189(J):G:H1	1.56	0.52
1:CA:376:G:OP1	16:CP:5:ARG:HB2	2.10	0.52
1:CA:1127:G:H1'	1:CA:1148:U:H3	1.75	0.52
13:CM:124:PRO:HB2	24:CY:163:GLY:C	2.35	0.52
24:CY:344:LEU:H	24:CY:344:LEU:HD23	1.75	0.52
31:D6:27:LYS:O	31:D6:29:ASN:N	2.43	0.52
35:DA:948:G:H1	35:DA:969:U:H3	1.58	0.52
53:DU:92:ARG:CZ	54:DV:11:GLN:H	2.23	0.52
1:AA:129:U:H3	1:AA:232:G:H1	1.57	0.52
1:AA:985:C:H2'	1:AA:986:A:C8	2.45	0.52
1:AA:1275:A:H2'	1:AA:1276:G:C8	2.45	0.52
4:AD:3:ARG:O	4:AD:3:ARG:HD3	2.09	0.52
13:AM:83:ASP:OD1	13:AM:84:ILE:N	2.42	0.52
13:AM:87:TYR:HB3	19:AS:73:GLU:HG3	1.91	0.52
24:AY:295:LEU:HD13	24:AY:299:ARG:HE	1.74	0.52
35:BA:1078:U:H5'	45:BK:132:ARG:HH12	1.75	0.52
40:BF:51:THR:O	40:BF:93:LYS:NZ	2.34	0.52
42:BH:105:LEU:HD23	42:BH:113:VAL:HB	1.92	0.52
53:BU:9:VAL:O	53:BU:13:LYS:HG2	2.10	0.52
1:CA:243:A:H4'	1:CA:244:U:O5'	2.09	0.52
1:CA:543:C:H2'	1:CA:544:G:H8	1.75	0.52
1:CA:745:C:OP1	1:CA:851:G:O2'	2.28	0.52
6:CF:97:PHE:N	18:CR:30:ASP:OD1	2.43	0.52
35:DA:654(R):C:H2'	35:DA:654(S):G:C5	2.44	0.52
35:DA:724:U:H2'	35:DA:725:G:O4'	2.10	0.52
35:DA:1570:A:H2'	35:DA:1571:A:C8	2.45	0.52
40:DF:117:ARG:HH21	40:DF:187:VAL:HA	1.75	0.52
43:DI:101:LEU:HD12	43:DI:107:VAL:HB	1.92	0.52
45:DK:4:VAL:O	45:DK:5:VAL:HG12	2.09	0.52
1:AA:1075:C:H2'	1:AA:1076:C:C6	2.45	0.51
1:AA:1320:C:H42	19:AS:36:ARG:NE	2.08	0.51
8:AH:86:ILE:HG21	8:AH:133:LEU:HD22	1.93	0.51
9:AI:4:TYR:O	9:AI:18:PHE:HA	2.10	0.51
9:AI:50:LEU:O	9:AI:53:VAL:HG22	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:39:TYR:HE1	35:BA:2347:C:H4'	1.75	0.51
35:BA:32:C:O2'	35:BA:33:U:H5'	2.10	0.51
35:BA:71:A:H5'	35:BA:71:A:C8	2.44	0.51
35:BA:271(I):G:N2	35:BA:271(P):C:C2	2.78	0.51
35:BA:295:G:P	57:BY:2:ARG:HH22	2.34	0.51
35:BA:1539:G:C6	35:BA:1540:U:O2	2.62	0.51
35:BA:2158:A:H4'	35:BA:2159:G:H5'	1.91	0.51
35:BA:2291:U:H2'	35:BA:2292:C:H6	1.75	0.51
35:BA:2554:U:H2'	35:BA:2555:U:C6	2.45	0.51
41:BG:45:GLU:N	41:BG:88:ILE:HG13	2.24	0.51
45:BK:77:LEU:HB3	45:BK:107:ILE:CD1	2.40	0.51
48:BP:105:LEU:H	48:BP:105:LEU:HD12	1.76	0.51
58:BZ:101:PRO:O	58:BZ:102:LEU:HD12	2.11	0.51
1:CA:474:G:H2'	1:CA:475:G:C8	2.45	0.51
1:CA:483:C:OP2	1:CA:484:G:O2'	2.19	0.51
1:CA:596:C:H2'	1:CA:597:G:H8	1.75	0.51
1:CA:1388:C:H2'	1:CA:1389:C:H6	1.74	0.51
2:CB:25:ASN:O	2:CB:27:LYS:N	2.42	0.51
4:CD:31:CYS:C	4:CD:33:MET:H	2.17	0.51
4:CD:128:VAL:CG1	4:CD:129:ASN:H	2.18	0.51
7:CG:101:LEU:O	7:CG:105:VAL:HG23	2.10	0.51
24:CY:234:ALA:HB2	24:CY:247:SER:OG	2.11	0.51
35:DA:118:A:H5'	35:DA:119:A:H8	1.74	0.51
35:DA:142:A:H8	35:DA:1595:G:H21	1.53	0.51
35:DA:150:C:H2'	35:DA:151:C:H6	1.76	0.51
36:DB:22:U:O4	36:DB:61:G:O6	2.28	0.51
37:DC:6:LYS:HD2	37:DC:6:LYS:O	2.09	0.51
40:DF:7:TYR:HD2	40:DF:16:GLY:H	1.57	0.51
41:DG:45:GLU:H	41:DG:45:GLU:CD	2.18	0.51
41:DG:88:ILE:HD12	41:DG:88:ILE:H	1.75	0.51
43:DI:1:MET:O	43:DI:20:ASP:HA	2.10	0.51
43:DI:68:LEU:HA	43:DI:71:ILE:HG12	1.92	0.51
45:DK:76:TYR:OH	45:DK:80:LYS:HD2	2.09	0.51
50:DR:3:HIS:O	50:DR:4:LEU:HB3	2.10	0.51
52:DT:23:ARG:HB2	52:DT:24:PRO:HD2	1.92	0.51
1:AA:177:C:H2'	1:AA:178:C:H6	1.75	0.51
1:AA:178:C:C2	1:AA:179:A:C8	2.98	0.51
1:AA:1034:G:H2'	1:AA:1035:A:C5	2.45	0.51
1:AA:1107:C:P	3:AC:172:ARG:HD2	2.50	0.51
1:AA:1265:G:H2'	1:AA:1266:G:C8	2.45	0.51
6:AF:4:TYR:CD1	6:AF:92:LYS:HA	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:27:GLU:OE1	19:AS:27:GLU:N	2.42	0.51
20:AT:10:LEU:C	20:AT:12:ALA:H	2.18	0.51
22:AW:30:G:N2	22:AW:40:C:O2	2.39	0.51
35:BA:635:C:O2'	35:BA:639:U:OP1	2.26	0.51
35:BA:1024:G:C8	35:BA:1025:G:H2'	2.44	0.51
35:BA:2236:C:H2'	35:BA:2237:G:O4'	2.10	0.51
36:BB:91:C:OP2	49:BQ:16:ARG:NH1	2.43	0.51
38:BD:133:LEU:HD23	38:BD:136:ILE:HD12	1.91	0.51
40:BF:83:PHE:O	40:BF:85:GLY:N	2.43	0.51
45:BK:18:THR:H	45:BK:19:PRO:CD	2.23	0.51
1:CA:157:G:H1	1:CA:164:U:H3	1.55	0.51
1:CA:484:G:H5'	1:CA:486:U:O4'	2.10	0.51
1:CA:509:A:N3	1:CA:543:C:O2'	2.42	0.51
1:CA:1129:C:N4	1:CA:1133:G:N7	2.58	0.51
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.46	0.51
2:CB:54:THR:HG23	2:CB:199:TYR:HB3	1.91	0.51
3:CC:73:PRO:HG2	3:CC:74:GLY:H	1.75	0.51
13:CM:2:ALA:N	13:CM:9:ILE:HG23	2.25	0.51
22:CW:44:G:H2'	22:CW:45:U:O4'	2.11	0.51
35:DA:589:C:H2'	35:DA:590:A:C8	2.44	0.51
35:DA:690:G:H2'	35:DA:691:C:C6	2.45	0.51
35:DA:2494:G:HO2'	49:DQ:80:GLU:HA	1.75	0.51
38:DD:265:PRO:O	38:DD:267:SER:N	2.43	0.51
39:DE:101:ARG:HB2	39:DE:201:THR:HG21	1.93	0.51
41:DG:48:GLU:CD	41:DG:49:ASP:H	2.17	0.51
41:DG:113:ARG:NE	41:DG:113:ARG:HA	2.26	0.51
1:AA:235:C:H2'	1:AA:236:G:H8	1.75	0.51
1:AA:749:C:H2'	1:AA:750:G:H8	1.74	0.51
5:AE:146:ALA:O	5:AE:149:GLU:HG2	2.10	0.51
10:AJ:63:PHE:CD1	14:AN:58:LYS:HA	2.30	0.51
22:AW:50:U:O5'	22:AW:50:U:H6	1.94	0.51
35:BA:1049:C:H2'	35:BA:1050:A:C8	2.45	0.51
35:BA:1681:G:H8	35:BA:1681:G:OP2	1.93	0.51
42:BH:86:GLU:HB3	42:BH:132:ARG:HB3	1.92	0.51
45:BK:108:ALA:HB1	45:BK:120:LEU:HG	1.92	0.51
47:BO:23:ARG:HG3	47:BO:24:VAL:N	2.26	0.51
47:BO:97:ARG:HG3	47:BO:97:ARG:HH11	1.76	0.51
50:BR:2:ARG:HB2	50:BR:5:LYS:HE2	1.92	0.51
58:BZ:20:ARG:HH11	58:BZ:20:ARG:CB	2.22	0.51
1:CA:148:G:O2'	1:CA:149:A:H5'	2.10	0.51
1:CA:1289:A:H3'	1:CA:1290:G:H8	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1512:U:H3	1:CA:1523:G:H1	1.59	0.51
2:CB:80:ILE:H	2:CB:80:ILE:CD1	2.21	0.51
8:CH:51:VAL:HG11	8:CH:60:ARG:HB2	1.92	0.51
31:D6:15:GLU:HA	31:D6:49:HIS:HE1	1.74	0.51
35:DA:16:G:H2'	35:DA:17:G:H8	1.76	0.51
35:DA:1280:G:H2'	35:DA:1281:G:H5"	1.92	0.51
35:DA:1516:C:H2'	35:DA:1517:G:C8	2.46	0.51
35:DA:1791:A:H3'	35:DA:1792:G:H8	1.74	0.51
35:DA:2065:C:H1'	35:DA:2449:U:H3	1.75	0.51
41:DG:16:ARG:CZ	41:DG:31:VAL:HG11	2.40	0.51
45:DK:38:VAL:HG23	45:DK:39:LYS:H	1.76	0.51
48:DP:50:ARG:HG2	48:DP:50:ARG:HH21	1.75	0.51
1:AA:299:G:H2'	1:AA:300:A:C8	2.45	0.51
4:AD:128:VAL:CG1	4:AD:129:ASN:H	2.18	0.51
4:AD:132:ARG:HG2	4:AD:132:ARG:HH11	1.75	0.51
6:AF:60:PHE:C	6:AF:61:LEU:HD12	2.36	0.51
21:AU:9:ARG:HH11	21:AU:9:ARG:HA	1.75	0.51
25:B0:5:LYS:HE3	49:BQ:81:VAL:HG12	1.93	0.51
26:B1:25:LYS:C	26:B1:27:GLU:N	2.68	0.51
35:BA:922:U:H2'	35:BA:923:C:C6	2.46	0.51
42:BH:20:ALA:HB3	42:BH:23:ARG:HB2	1.92	0.51
42:BH:43:VAL:HG11	42:BH:52:VAL:HG22	1.92	0.51
48:BP:18:ARG:NH1	48:BP:18:ARG:O	2.42	0.51
48:BP:146:VAL:HG22	48:BP:147:LEU:H	1.75	0.51
58:BZ:81:ARG:HG2	58:BZ:81:ARG:NH1	2.26	0.51
1:CA:35:G:N2	12:CL:118:SER:OG	2.42	0.51
1:CA:955:U:H1'	1:CA:1227:A:H61	1.76	0.51
1:CA:1326:C:H2'	1:CA:1327:C:H6	1.74	0.51
2:CB:136:VAL:HG13	2:CB:140:HIS:ND1	2.26	0.51
4:CD:26:CYS:O	4:CD:31:CYS:HB2	2.11	0.51
5:CE:80:ILE:HG22	8:CH:104:ARG:NH1	2.25	0.51
6:CF:77:ARG:HB3	6:CF:77:ARG:HH11	1.74	0.51
6:CF:98:LEU:HA	18:CR:30:ASP:HA	1.91	0.51
9:CI:117:HIS:HE1	9:CI:123:PRO:HB3	1.75	0.51
10:CJ:16:LEU:HD13	10:CJ:70:ARG:HD2	1.93	0.51
26:D1:92:LYS:HE2	35:DA:153:C:OP1	2.11	0.51
29:D4:22:ILE:HG22	29:D4:24:THR:HG23	1.93	0.51
35:DA:1516:C:H2'	35:DA:1517:G:H8	1.75	0.51
35:DA:2359:C:H2'	35:DA:2360:A:O4'	2.10	0.51
38:DD:239:ARG:HH21	38:DD:239:ARG:HG2	1.75	0.51
45:DK:137:GLU:HG3	45:DK:138:VAL:N	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:108:LYS:C	48:DP:110:TYR:N	2.69	0.51
57:DY:8:LYS:HD3	57:DY:28:LYS:HZ3	1.76	0.51
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.93	0.51
1:AA:1373:G:H5"	7:AG:36:LYS:HZ2	1.75	0.51
2:AB:54:THR:HG21	2:AB:201:ILE:CD1	2.41	0.51
3:AC:150:LYS:HE2	3:AC:152:ILE:HD11	1.92	0.51
12:AL:84:LEU:HD12	12:AL:104:VAL:HG11	1.93	0.51
14:AN:26:ARG:HB2	14:AN:43:CYS:SG	2.51	0.51
22:AW:66:U:H2'	22:AW:67:C:C6	2.45	0.51
26:B1:6:GLU:C	26:B1:7:ILE:HD12	2.36	0.51
27:B2:55:ARG:NH1	35:BA:75:G:H4'	2.26	0.51
29:B4:20:ASN:OD1	29:B4:21:VAL:N	2.44	0.51
35:BA:1486:A:N1	35:BA:1504:C:N4	2.59	0.51
35:BA:1654:A:OP1	50:BR:3:HIS:HB2	2.11	0.51
35:BA:1720:U:H2'	35:BA:1721:G:O4'	2.10	0.51
35:BA:1902:C:O2'	38:BD:244:ARG:HB2	2.10	0.51
38:BD:106:ILE:HD11	38:BD:196:VAL:HG13	1.91	0.51
39:BE:16:ARG:O	39:BE:18:ASP:N	2.42	0.51
39:BE:178:GLU:HG3	39:BE:179:GLU:OE2	2.11	0.51
45:BK:77:LEU:HB3	45:BK:107:ILE:HD11	1.91	0.51
48:BP:40:SER:O	48:BP:41:ARG:NE	2.34	0.51
53:BU:90:VAL:HA	54:BV:39:LEU:HD12	1.91	0.51
1:CA:375:U:C2	1:CA:376:G:C8	2.98	0.51
1:CA:921:U:O2	5:CE:19:MET:HB2	2.09	0.51
1:CA:1119:C:H2'	1:CA:1120:G:H8	1.75	0.51
1:CA:1346:A:N1	1:CA:1374:A:H5"	2.25	0.51
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.45	0.51
7:CG:156:TRP:CD1	7:CG:156:TRP:H	2.28	0.51
17:CQ:9:VAL:HG12	17:CQ:56:VAL:HG22	1.93	0.51
17:CQ:12:SER:HB3	17:CQ:20:THR:HB	1.91	0.51
24:CY:267:SER:HB3	25:D0:3:HIS:ND1	2.25	0.51
34:D9:17:ILE:HB	34:D9:26:ILE:HD13	1.92	0.51
35:DA:754:C:H2'	35:DA:755:C:C6	2.45	0.51
35:DA:887:A:H1'	35:DA:889:C:N4	2.25	0.51
35:DA:996:A:H4'	53:DU:92:ARG:NE	2.25	0.51
35:DA:1677:A:H2'	35:DA:1678:G:C8	2.44	0.51
35:DA:2182:G:H2'	35:DA:2183:C:H6	1.75	0.51
38:DD:267:SER:C	38:DD:269:PHE:H	2.18	0.51
42:DH:84:SER:O	42:DH:85:LYS:HB3	2.09	0.51
49:DQ:26:TYR:HA	58:DZ:81:ARG:HH22	1.75	0.51
11:AK:124:LYS:HZ2	11:AK:125:PHE:HE1	1.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:32:PHE:HD1	12:AL:86:ARG:HA	1.74	0.51
24:AY:120:ILE:HG13	24:AY:208:VAL:HG22	1.93	0.51
25:B0:25:ARG:HG2	25:B0:25:ARG:HH11	1.74	0.51
28:B3:11:SER:HB3	35:BA:988:A:P	2.50	0.51
35:BA:675:A:N3	35:BA:2443:C:O2'	2.41	0.51
35:BA:754:C:H2'	35:BA:755:C:H6	1.75	0.51
35:BA:2311:A:O2'	35:BA:2312:U:O4'	2.24	0.51
35:BA:2695:C:H2'	35:BA:2696:U:C6	2.46	0.51
35:BA:2712(A):A:H5"	35:BA:2713:A:OP2	2.11	0.51
45:BK:119:ASP:OD1	45:BK:122:ALA:HB3	2.09	0.51
46:BN:46:VAL:O	46:BN:47:ALA:HB3	2.11	0.51
52:BT:89:VAL:C	52:BT:91:ARG:H	2.19	0.51
1:CA:59:A:H5'	1:CA:60:A:H5"	1.91	0.51
1:CA:328:C:H4'	1:CA:329:A:C5'	2.38	0.51
1:CA:1211:U:H5'	1:CA:1212:U:OP1	2.10	0.51
1:CA:1321:C:H5"	1:CA:1322:C:H2'	1.93	0.51
1:CA:1427:U:H2'	1:CA:1428:A:C8	2.46	0.51
4:CD:20:TYR:HA	4:CD:26:CYS:HB3	1.92	0.51
18:CR:31:LEU:H	18:CR:31:LEU:HD23	1.75	0.51
19:CS:5:LEU:HD13	19:CS:6:LYS:H	1.76	0.51
21:CU:2:GLY:O	21:CU:4:GLY:N	2.43	0.51
22:CW:16:U:C5	22:CW:18:G:H5"	2.45	0.51
22:CW:56:C:H1'	35:DA:2169:A:C2	2.45	0.51
22:CW:63:G:H2'	22:CW:64:A:O4'	2.11	0.51
24:CY:61:THR:O	24:CY:65:LEU:N	2.43	0.51
24:CY:68:ASP:OD2	24:CY:94:ALA:HB1	2.11	0.51
24:CY:180:LEU:O	24:CY:210:VAL:HG21	2.11	0.51
33:D8:33:ASN:ND2	35:DA:2419:U:OP2	2.43	0.51
35:DA:590:A:H2'	35:DA:591:C:C6	2.46	0.51
35:DA:1418:G:N2	35:DA:1579:A:N7	2.59	0.51
36:DB:40:U:C2	36:DB:43:C:H5"	2.45	0.51
37:DC:52:PRO:HG2	37:DC:53:ARG:HD3	1.92	0.51
41:DG:47:LYS:HG3	41:DG:48:GLU:H	1.76	0.51
41:DG:54:GLU:C	41:DG:56:ALA:H	2.17	0.51
49:DQ:43:THR:OG1	49:DQ:45:GLN:HG2	2.11	0.51
53:DU:108:GLU:O	53:DU:112:ARG:HG2	2.10	0.51
54:DV:2:PHE:HB3	54:DV:42:GLY:HA2	1.91	0.51
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.46	0.51
1:AA:1512:U:H2'	1:AA:1513:A:C8	2.46	0.51
5:AE:105:VAL:H	5:AE:106:PRO:HD2	1.76	0.51
7:AG:148:ASN:C	7:AG:150:ALA:N	2.66	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:3:C:H5'	35:BA:2255:G:O2'	2.11	0.51
24:AY:233:ARG:HB2	35:BA:2555:U:O2	2.11	0.51
34:B9:31:LYS:HE2	35:BA:2528:U:H5"	1.92	0.51
35:BA:128:C:H2'	35:BA:129:C:H6	1.75	0.51
35:BA:691:C:H2'	35:BA:692:C:H6	1.76	0.51
35:BA:918:A:H2	36:BB:80:U:H4'	1.75	0.51
35:BA:1308:A:H2'	35:BA:1309:G:O4'	2.10	0.51
35:BA:1449:A:O2'	35:BA:1530:C:N4	2.43	0.51
35:BA:1509(B):A:H2'	35:BA:1510:G:H8	1.74	0.51
35:BA:2412:A:H2'	35:BA:2413:G:O4'	2.11	0.51
44:BJ:54:UNK:O	44:BJ:56:UNK:N	2.44	0.51
54:BV:19:LYS:HZ3	54:BV:20:LEU:H	1.59	0.51
1:CA:237:C:H4'	17:CQ:25:ARG:HH12	1.75	0.51
1:CA:973:G:H3'	1:CA:974:A:H5"	1.92	0.51
1:CA:1225:A:N3	1:CA:1225:A:H2'	2.26	0.51
1:CA:1456:G:N2	1:CA:1457:G:N7	2.59	0.51
2:CB:187:LEU:HA	2:CB:201:ILE:HB	1.93	0.51
4:CD:61:LYS:NZ	4:CD:72:GLU:OE2	2.40	0.51
24:CY:288:ARG:HB3	24:CY:288:ARG:NH1	2.25	0.51
35:DA:327:G:H2'	35:DA:328:U:C6	2.45	0.51
35:DA:481:G:OP2	57:DY:47:LYS:HD3	2.10	0.51
35:DA:2175:C:H42	35:DA:2176:A:H62	1.59	0.51
35:DA:2282:G:H4'	35:DA:2283:C:O5'	2.11	0.51
35:DA:2408:U:H2'	35:DA:2409:G:H8	1.76	0.51
35:DA:2576:G:O2'	35:DA:2579:C:OP2	2.25	0.51
45:DK:99:ILE:HG23	45:DK:103:GLN:HB3	1.92	0.51
48:DP:97:PRO:C	48:DP:99:LEU:H	2.19	0.51
49:DQ:134:ARG:HA	49:DQ:137:TYR:CD2	2.45	0.51
54:DV:47:VAL:HG12	54:DV:52:VAL:HG13	1.93	0.51
57:DY:19:LYS:HB3	57:DY:20:TYR:CD1	2.46	0.51
1:AA:620:C:H2'	1:AA:621:A:C8	2.46	0.51
1:AA:688:G:H2'	1:AA:689:C:H6	1.76	0.51
1:AA:711:G:H2'	1:AA:712:A:H8	1.72	0.51
1:AA:952:U:H4'	1:AA:964:A:H61	1.75	0.51
17:AQ:26:GLN:O	17:AQ:27:PHE:HB3	2.10	0.51
24:AY:118:LEU:HD11	24:AY:180:LEU:HD13	1.93	0.51
31:B6:12:GLU:HA	31:B6:23:THR:HA	1.92	0.51
35:BA:414:C:O2	35:BA:1864:U:O2'	2.28	0.51
35:BA:729:G:C8	38:BD:208:LYS:HE3	2.46	0.51
35:BA:832:G:O2'	48:BP:52:GLU:HB3	2.11	0.51
35:BA:855:G:H2'	35:BA:856:C:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1176:G:OP2	35:BA:1177:A:N6	2.44	0.51
48:BP:24:GLY:O	48:BP:25:SER:HB3	2.11	0.51
48:BP:125:VAL:H	48:BP:145:PRO:HD2	1.74	0.51
52:BT:23:ARG:HB2	52:BT:24:PRO:HD2	1.93	0.51
1:CA:259:G:H2'	1:CA:260:G:C8	2.46	0.51
1:CA:430:A:OP1	4:CD:9:CYS:N	2.41	0.51
1:CA:940:C:H2'	1:CA:941:G:C8	2.46	0.51
1:CA:1376:U:OP1	7:CG:98:SER:OG	2.22	0.51
2:CB:7:VAL:HA	2:CB:217:ARG:HH22	1.76	0.51
13:CM:7:VAL:HG11	41:DG:139:LEU:CD2	2.40	0.51
13:CM:81:LEU:HB3	13:CM:89:GLY:HA2	1.92	0.51
35:DA:29:U:H2'	35:DA:30:G:C8	2.46	0.51
35:DA:459:U:H2'	35:DA:460:A:H8	1.76	0.51
35:DA:2136:C:H41	35:DA:2155:G:N2	2.09	0.51
35:DA:2142:C:H2'	35:DA:2143:C:C6	2.46	0.51
48:DP:7:ARG:HA	48:DP:7:ARG:HH11	1.75	0.51
48:DP:108:LYS:C	48:DP:110:TYR:H	2.17	0.51
52:DT:90:GLN:OE1	52:DT:120:ARG:NH1	2.44	0.51
1:AA:768:A:OP1	1:AA:804:U:H4'	2.11	0.51
1:AA:1293:G:HO2'	1:AA:1294:G:H8	1.58	0.51
2:AB:220:ASP:C	2:AB:222:ILE:H	2.19	0.51
3:AC:150:LYS:O	3:AC:201:TYR:N	2.44	0.51
12:AL:27:LEU:HB2	12:AL:33:ARG:HD2	1.93	0.51
22:AW:19:G:N2	22:AW:56:C:N3	2.58	0.51
24:AY:102:TYR:HE2	24:AY:346:TRP:NE1	2.09	0.51
34:B9:29:ASN:HD21	34:B9:32:HIS:CE1	2.29	0.51
35:BA:527:C:H2'	35:BA:2779:U:C5	2.46	0.51
35:BA:1058:G:H21	45:BK:126:MET:HE3	1.76	0.51
35:BA:1678:G:N2	35:BA:1989:G:N2	2.59	0.51
35:BA:1858:G:O2'	35:BA:1884:A:N6	2.44	0.51
35:BA:2148:G:H2'	35:BA:2149:G:H8	1.76	0.51
35:BA:2864:G:H2'	35:BA:2865:U:C6	2.46	0.51
37:BC:6:LYS:HA	37:BC:9:ARG:HB3	1.92	0.51
37:BC:197:LEU:C	37:BC:199:ALA:H	2.19	0.51
42:BH:136:ILE:HD12	42:BH:136:ILE:N	2.26	0.51
43:BI:77:LEU:HB2	43:BI:140:LEU:HA	1.92	0.51
45:BK:72:PRO:O	45:BK:111:LYS:NZ	2.41	0.51
48:BP:16:ARG:HG3	48:BP:17:LYS:N	2.25	0.51
1:CA:17:U:H2'	1:CA:18:C:C6	2.45	0.51
1:CA:636:U:H2'	1:CA:637:G:C8	2.46	0.51
1:CA:1054:C:O2'	1:CA:1055:A:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1158:C:H42	1:CA:1181:G:H22	1.57	0.51
3:CC:20:SER:HB2	3:CC:40:ARG:NH2	2.25	0.51
5:CE:40:ARG:HG2	5:CE:40:ARG:HH11	1.76	0.51
26:D1:11:ARG:HB2	26:D1:12:PRO:HD2	1.93	0.51
35:DA:1866:C:H2'	35:DA:1876:A:C8	2.46	0.51
35:DA:2031:A:N3	35:DA:2455:G:O2'	2.37	0.51
35:DA:2485:G:H5"	49:DQ:46:GLN:NE2	2.26	0.51
35:DA:2722:G:H2'	35:DA:2723:C:C6	2.45	0.51
38:DD:94:LEU:HB2	38:DD:104:TYR:CE1	2.46	0.51
39:DE:11:MET:HE3	39:DE:24:THR:HB	1.93	0.51
42:DH:41:MET:HE1	42:DH:53:GLU:H	1.76	0.51
45:DK:10:LEU:HD23	45:DK:23:VAL:HB	1.92	0.51
46:DN:34:LEU:HD23	46:DN:107:LEU:HD11	1.93	0.51
46:DN:35:ARG:O	46:DN:37:LYS:N	2.41	0.51
48:DP:80:TYR:CD1	48:DP:111:ARG:HB3	2.46	0.51
55:DW:11:ARG:HG3	55:DW:11:ARG:O	2.10	0.51
57:DY:20:TYR:CE1	57:DY:42:VAL:HA	2.46	0.51
1:AA:21:G:H2'	1:AA:22:G:C8	2.46	0.51
1:AA:1207:G:H2'	1:AA:1208:C:C6	2.46	0.51
1:AA:1298:C:H4'	1:AA:1299:A:C4	2.46	0.51
3:AC:73:PRO:HG2	3:AC:74:GLY:H	1.76	0.51
11:AK:121:PRO:HD2	11:AK:126:ARG:HD2	1.93	0.51
13:AM:3:ARG:HA	13:AM:9:ILE:HG13	1.93	0.51
15:AO:56:LEU:O	15:AO:60:VAL:HG23	2.11	0.51
35:BA:65:C:H5'	56:BX:71:GLY:HA3	1.91	0.51
35:BA:589:C:H2'	35:BA:590:A:C8	2.45	0.51
35:BA:2815:C:H2'	35:BA:2816:C:H6	1.76	0.51
35:BA:2865:U:OP2	35:BA:2866:U:O2'	2.18	0.51
38:BD:267:SER:C	38:BD:269:PHE:N	2.69	0.51
42:BH:56:SER:HB2	42:BH:61:HIS:CE1	2.46	0.51
49:BQ:31:ASP:HA	49:BQ:134:ARG:NH1	2.26	0.51
49:BQ:132:VAL:HG11	58:BZ:81:ARG:NH2	2.24	0.51
50:BR:28:LEU:O	50:BR:32:GLY:N	2.29	0.51
58:BZ:28:MET:HA	58:BZ:88:PHE:HB2	1.92	0.51
1:CA:426:G:P	4:CD:36:ARG:HH12	2.34	0.51
1:CA:539:A:H2'	1:CA:540:G:C8	2.46	0.51
1:CA:1157:A:N7	1:CA:1180:A:N6	2.58	0.51
1:CA:1347:G:H22	1:CA:1374:A:P	2.33	0.51
24:CY:312:ARG:HE	24:CY:344:LEU:HD12	1.74	0.51
29:D4:20:ASN:OD1	29:D4:21:VAL:N	2.44	0.51
31:D6:18:ARG:HH21	31:D6:47:THR:HG22	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1087:G:N2	35:DA:1102:C:H42	2.08	0.51
35:DA:1952:A:C5	47:DO:22:ILE:HD12	2.45	0.51
56:DX:12:VAL:CB	56:DX:17:ALA:HB1	2.37	0.51
1:AA:533:A:O2'	1:AA:534:U:H5"	2.10	0.50
1:AA:707:C:OP1	11:AK:85:ARG:NH1	2.42	0.50
1:AA:945:G:C2	1:AA:946:A:C8	2.99	0.50
9:AI:126:SER:O	9:AI:127:LYS:HB3	2.11	0.50
22:AW:14:A:H61	22:AW:48:C:N4	2.08	0.50
25:B0:27:GLU:HG3	25:B0:68:GLU:HA	1.93	0.50
35:BA:783:A:H8	35:BA:784:A:H4'	1.77	0.50
35:BA:1028:A:H2'	35:BA:1029:A:C8	2.46	0.50
35:BA:1175:U:O5'	35:BA:1176:G:H5'	2.10	0.50
35:BA:1187:G:H8	35:BA:1187:G:O5'	1.95	0.50
35:BA:1419:A:O2'	35:BA:1420:U:H5"	2.11	0.50
35:BA:1923:U:H2'	35:BA:1924:C:C6	2.46	0.50
35:BA:2722:G:H2'	35:BA:2723:C:C6	2.46	0.50
36:BB:50:G:OP1	51:BS:62:LYS:HB2	2.10	0.50
37:BC:191:ARG:HH11	37:BC:191:ARG:HG3	1.76	0.50
40:BF:205:ARG:O	40:BF:205:ARG:HG2	2.11	0.50
51:BS:17:ARG:O	51:BS:20:ARG:HG2	2.12	0.50
51:BS:35:ILE:O	51:BS:53:SER:HB2	2.10	0.50
52:BT:29:ARG:HB3	52:BT:85:LYS:HA	1.93	0.50
53:BU:101:ARG:HB2	53:BU:101:ARG:NH1	2.26	0.50
1:CA:126:G:OP1	1:CA:605:U:O2'	2.27	0.50
1:CA:1055:A:H62	1:CA:1200:C:N4	2.09	0.50
3:CC:155:GLY:O	3:CC:156:ARG:HB2	2.10	0.50
9:CI:18:PHE:HB2	9:CI:62:TYR:O	2.11	0.50
10:CJ:43:ARG:HB2	10:CJ:67:THR:HB	1.92	0.50
12:CL:25:PRO:C	12:CL:27:LEU:N	2.69	0.50
26:D1:25:LYS:NZ	35:DA:2396:G:OP1	2.43	0.50
27:D2:67:LYS:O	27:D2:71:ASN:HB3	2.12	0.50
35:DA:1494:A:H2'	35:DA:1495:A:H5"	1.92	0.50
35:DA:1518:U:H2'	35:DA:1519:G:O4'	2.11	0.50
35:DA:1720:U:H2'	35:DA:1721:G:O4'	2.11	0.50
42:DH:109:PHE:C	42:DH:111:HIS:H	2.19	0.50
43:DI:72:LEU:HD12	43:DI:138:ILE:HD11	1.92	0.50
48:DP:59:LEU:HA	48:DP:61:ARG:NH1	2.25	0.50
49:DQ:76:LYS:HB3	49:DQ:91:GLU:HG3	1.93	0.50
1:AA:359:U:H2'	1:AA:360:A:H8	1.76	0.50
1:AA:1346:A:H61	1:AA:1374:A:H3'	1.76	0.50
2:AB:97:TRP:CH2	2:AB:173:ALA:HA	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:127:THR:HA	4:AD:132:ARG:HA	1.92	0.50
16:AP:13:HIS:C	16:AP:15:PRO:HD3	2.36	0.50
27:B2:47:ASN:HD22	35:BA:94(A):G:H21	1.58	0.50
29:B4:14:ILE:N	29:B4:14:ILE:HD12	2.26	0.50
35:BA:1791:A:N6	35:BA:1828:G:O2'	2.43	0.50
43:BI:1:MET:HG3	43:BI:23:PRO:HG3	1.92	0.50
47:BO:122:LEU:HD13	52:BT:72:VAL:HG11	1.93	0.50
48:BP:80:TYR:CZ	48:BP:111:ARG:HD3	2.46	0.50
52:BT:57:PHE:CG	52:BT:58:ASN:N	2.80	0.50
53:BU:78:THR:O	53:BU:81:HIS:N	2.44	0.50
55:BW:36:LEU:HD11	55:BW:47:VAL:HG12	1.93	0.50
57:BY:86:ARG:HH21	57:BY:95:LYS:NZ	2.09	0.50
57:BY:86:ARG:HG2	57:BY:87:LYS:N	2.26	0.50
58:BZ:144:LEU:HD11	58:BZ:150:LEU:HB3	1.93	0.50
1:CA:551:U:H2'	1:CA:552:U:C6	2.46	0.50
1:CA:692:U:O4	11:CK:26:ASN:ND2	2.43	0.50
1:CA:1148:U:H4'	9:CI:14:VAL:HG11	1.93	0.50
2:CB:119:GLU:HA	2:CB:122:PHE:HB3	1.93	0.50
10:CJ:51:ARG:HG3	10:CJ:60:ARG:C	2.37	0.50
12:CL:127:GLU:O	12:CL:129:ALA:N	2.44	0.50
22:CV:8:U:H3	22:CV:14:A:H62	1.58	0.50
31:D6:37:ARG:O	31:D6:49:HIS:HB2	2.11	0.50
35:DA:536:A:H2'	35:DA:537:C:C6	2.46	0.50
35:DA:674:G:H1'	40:DF:74:ARG:HD2	1.92	0.50
35:DA:689:A:H2'	35:DA:690:G:H8	1.76	0.50
35:DA:1049:C:H2'	35:DA:1050:A:H8	1.75	0.50
35:DA:1299:G:H21	35:DA:1641:A:H62	1.58	0.50
35:DA:2713:A:OP1	50:DR:14:SER:OG	2.24	0.50
41:DG:138:GLN:C	41:DG:140:ILE:H	2.19	0.50
43:DI:60:GLU:C	43:DI:62:LYS:H	2.20	0.50
1:AA:83:U:N3	1:AA:84:U:O4	2.44	0.50
1:AA:224:C:H2'	1:AA:225:C:C6	2.46	0.50
1:AA:1075:C:H2'	1:AA:1076:C:H6	1.76	0.50
1:AA:1231:G:OP1	9:AI:128:ARG:NH2	2.44	0.50
1:AA:1237:C:H5"	1:AA:1238:A:C8	2.46	0.50
4:AD:112:VAL:HG12	4:AD:116:GLN:OE1	2.11	0.50
16:AP:75:ARG:HH11	16:AP:75:ARG:HG3	1.76	0.50
24:AY:175:ASN:O	24:AY:179:LEU:HD13	2.11	0.50
33:B8:39:LYS:HE3	35:BA:2365:G:O6	2.11	0.50
35:BA:534:U:H2'	35:BA:535:C:C6	2.46	0.50
35:BA:608:A:H2'	35:BA:609:A:H8	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2661:G:H5”	35:BA:2662:A:H2	1.76	0.50
53:BU:88:ILE:HG22	54:BV:47:VAL:CG2	2.41	0.50
53:BU:95:LEU:C	53:BU:97:ASP:H	2.18	0.50
53:BU:98:LEU:HA	53:BU:101:ARG:O	2.11	0.50
58:BZ:104:PHE:HB3	58:BZ:141:VAL:CG2	2.41	0.50
1:CA:97:G:C4	1:CA:98:G:C8	2.99	0.50
1:CA:285:G:H2’	1:CA:286:G:H8	1.77	0.50
1:CA:736:C:O2’	6:CF:90:VAL:O	2.23	0.50
4:CD:3:ARG:O	4:CD:5:ILE:HG13	2.12	0.50
9:CI:7:THR:HB	9:CI:83:ARG:NH1	2.26	0.50
9:CI:88:TYR:O	9:CI:89:ASN:HB2	2.11	0.50
24:CY:36:PRO:HB3	45:DK:29:GLN:CA	2.41	0.50
25:D0:77:ARG:NH2	35:DA:857:C:OP1	2.40	0.50
26:D1:86:SER:HB2	26:D1:89:GLU:HB2	1.94	0.50
28:D3:46:ASN:O	28:D3:50:VAL:HG22	2.10	0.50
34:D9:27:CYS:SG	34:D9:28:GLU:N	2.84	0.50
35:DA:272(B):G:H2’	35:DA:272(C):G:C8	2.46	0.50
35:DA:640:C:H2’	35:DA:641:C:C6	2.46	0.50
35:DA:833:U:H5”	48:DP:48:PRO:HB3	1.92	0.50
35:DA:1418:G:OP1	35:DA:1588:C:O2’	2.29	0.50
35:DA:1541:G:H1’	35:DA:1542:A:C2	2.46	0.50
35:DA:1590:U:C2	35:DA:1591:G:C8	2.99	0.50
35:DA:2175:C:N4	35:DA:2176:A:H62	2.10	0.50
35:DA:2417:C:H2’	35:DA:2418:A:H8	1.76	0.50
35:DA:2561:A:H5”	47:DO:57:VAL:HG11	1.93	0.50
38:DD:109:ASP:HB2	38:DD:197:GLY:HA2	1.93	0.50
46:DN:42:TRP:CE3	46:DN:48:MET:HE1	2.47	0.50
47:DO:107:ARG:C	47:DO:109:LYS:H	2.18	0.50
48:DP:83:VAL:H	48:DP:115:LEU:CD2	2.25	0.50
50:DR:2:ARG:HB2	50:DR:5:LYS:HE2	1.94	0.50
1:AA:192:U:H2’	1:AA:193:C:H6	1.77	0.50
1:AA:1069:C:O2’	1:AA:1192:C:O2	2.24	0.50
1:AA:1190:G:OP1	3:AC:5:ILE:HG13	2.10	0.50
1:AA:1411:C:H2’	1:AA:1412:C:C6	2.45	0.50
6:AF:30:LEU:CB	6:AF:35:ALA:HB3	2.41	0.50
9:AI:83:ARG:HA	9:AI:86:VAL:HG12	1.92	0.50
20:AT:23:ARG:O	20:AT:27:LYS:HB2	2.12	0.50
22:AW:50:U:HO2’	22:AW:65:G:H1	1.59	0.50
35:BA:271(L):U:H4’	35:BA:271(M):G:C4	2.46	0.50
35:BA:729:G:OP2	38:BD:13:ARG:NH1	2.45	0.50
35:BA:2183:C:H2’	35:BA:2184:G:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:23:ILE:O	37:BC:27:ALA:HB2	2.12	0.50
47:BO:13:ASN:C	47:BO:15:GLY:H	2.20	0.50
48:BP:83:VAL:HG11	48:BP:112:LEU:HD21	1.92	0.50
49:BQ:21:THR:OG1	49:BQ:99:PRO:O	2.29	0.50
1:CA:1152:A:H5"	10:CJ:13:HIS:CD2	2.46	0.50
1:CA:1255:G:HO2'	1:CA:1258:G:HO2'	1.57	0.50
5:CE:45:PHE:CE2	5:CE:47:LYS:HD2	2.46	0.50
8:CH:11:THR:HG22	8:CH:15:ASN:ND2	2.27	0.50
24:CY:81:ALA:HB3	24:CY:84:ARG:HE	1.76	0.50
26:D1:60:PHE:HZ	26:D1:94:LEU:HD12	1.76	0.50
28:D3:6:VAL:HG23	28:D3:28:LEU:HD11	1.94	0.50
35:DA:381:G:C6	35:DA:394:A:C6	3.00	0.50
35:DA:414:C:O2	35:DA:1864:U:O2'	2.28	0.50
35:DA:2474:C:H5"	35:DA:2475:C:H5	1.77	0.50
38:DD:44:ASN:HB2	38:DD:48:ARG:O	2.11	0.50
49:DQ:134:ARG:HA	49:DQ:137:TYR:HD2	1.77	0.50
1:AA:1241:G:H2'	1:AA:1242:C:C6	2.45	0.50
1:AA:1302:U:C5	13:AM:17:VAL:HG21	2.46	0.50
1:AA:1345:U:H5"	9:AI:120:ARG:NH1	2.26	0.50
1:AA:1407:C:H2'	1:AA:1408:A:H8	1.77	0.50
2:AB:194:PRO:HG2	2:AB:195:ASP:OD1	2.10	0.50
2:AB:231:GLU:HB2	2:AB:232:PRO:CD	2.41	0.50
11:AK:91:ARG:O	11:AK:95:ILE:HG13	2.12	0.50
12:AL:85:ILE:HG13	12:AL:98:TYR:HB3	1.93	0.50
17:AQ:12:SER:HB3	17:AQ:20:THR:HB	1.93	0.50
24:AY:344:LEU:HD23	24:AY:344:LEU:H	1.76	0.50
31:B6:27:LYS:O	31:B6:29:ASN:N	2.45	0.50
35:BA:57:C:H2'	35:BA:58:G:O4'	2.12	0.50
35:BA:483:A:C4	57:BY:60:PHE:HE1	2.29	0.50
35:BA:2853:C:H2'	35:BA:2854:G:C8	2.47	0.50
48:BP:36:LYS:HD3	48:BP:41:ARG:HB3	1.94	0.50
1:CA:1011:G:H2'	1:CA:1012:U:C6	2.46	0.50
3:CC:34:LEU:O	3:CC:38:ARG:HG3	2.11	0.50
3:CC:53:ALA:O	3:CC:54:ARG:HB2	2.10	0.50
4:CD:3:ARG:O	4:CD:3:ARG:HD3	2.11	0.50
22:CW:16:U:H3'	22:CW:17:C:C5'	2.42	0.50
27:D2:36:ARG:O	27:D2:40:SER:HB3	2.11	0.50
31:D6:17:LYS:O	31:D6:18:ARG:HB3	2.10	0.50
35:DA:127:A:H5"	35:DA:128:C:C6	2.45	0.50
35:DA:128:C:H2'	35:DA:129:C:C6	2.47	0.50
35:DA:139(A):G:H3'	35:DA:140:G:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1525:G:H2'	35:DA:1526:G:C8	2.46	0.50
41:DG:76:SER:OG	41:DG:84:LYS:HD2	2.11	0.50
45:DK:18:THR:H	45:DK:19:PRO:CD	2.24	0.50
48:DP:17:LYS:O	48:DP:17:LYS:HG2	2.12	0.50
53:DU:65:ILE:HD11	53:DU:93:LYS:HA	1.92	0.50
58:DZ:73:GLN:HB3	58:DZ:87:ASP:HB2	1.92	0.50
1:AA:1081:G:C5'	5:AE:18:ARG:HB3	2.42	0.50
1:AA:1382:C:H2'	1:AA:1383:C:H6	1.77	0.50
1:AA:1483:A:H2	35:BA:1959:G:N3	2.09	0.50
3:AC:14:ILE:HG12	3:AC:15:THR:N	2.20	0.50
6:AF:2:ARG:O	6:AF:66:GLU:HA	2.11	0.50
8:AH:10:LEU:HD22	8:AH:83:ILE:HD11	1.93	0.50
22:AW:8:U:C2	22:AW:48:C:C2	2.99	0.50
35:BA:1186:G:H2'	35:BA:1187:G:O4'	2.12	0.50
35:BA:1301:A:H4'	35:BA:1302:A:OP1	2.10	0.50
35:BA:1452:A:O2'	35:BA:1453:U:H2'	2.11	0.50
35:BA:2148:G:H2'	35:BA:2149:G:C8	2.46	0.50
35:BA:2677:G:H2'	35:BA:2678:C:C6	2.46	0.50
36:BB:3:C:N4	36:BB:119:G:O6	2.45	0.50
36:BB:7:G:H3'	36:BB:8:U:H5"	1.94	0.50
37:BC:46:ALA:HB2	37:BC:213:VAL:HG13	1.93	0.50
38:BD:165:ILE:HD13	38:BD:175:LEU:HD21	1.92	0.50
40:BF:20:LEU:HD12	40:BF:199:TRP:HH2	1.73	0.50
41:BG:164:GLU:N	41:BG:164:GLU:OE1	2.45	0.50
46:BN:9:VAL:HG12	46:BN:10:GLU:N	2.26	0.50
57:BY:86:ARG:HH21	57:BY:95:LYS:HZ2	1.59	0.50
1:CA:20:U:H2'	1:CA:21:G:O4'	2.12	0.50
1:CA:539:A:H2'	1:CA:540:G:H8	1.76	0.50
1:CA:738:C:H2'	1:CA:739:C:H6	1.77	0.50
1:CA:1172:C:H2'	1:CA:1173:G:C8	2.43	0.50
1:CA:1280:A:H5'	10:CJ:40:LEU:HD22	1.92	0.50
1:CA:1367:C:OP1	9:CI:115:GLY:N	2.37	0.50
10:CJ:48:THR:HA	10:CJ:62:HIS:HB3	1.94	0.50
34:D9:9:ARG:HB3	34:D9:9:ARG:HH11	1.76	0.50
35:DA:906:G:H5'	49:DQ:26:TYR:OH	2.11	0.50
35:DA:1341:U:OP1	35:DA:1397:U:N3	2.22	0.50
35:DA:1541:G:H4'	35:DA:1542:A:O4'	2.12	0.50
35:DA:1754:C:H2'	35:DA:1755:A:O4'	2.12	0.50
38:DD:111:LEU:HD13	38:DD:112:GLN:H	1.77	0.50
43:DI:79:ILE:HD11	43:DI:100:ALA:CB	2.41	0.50
52:DT:28:VAL:O	52:DT:28:VAL:HG12	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1414:U:H2'	1:AA:1415:G:H8	1.77	0.50
3:AC:83:ARG:C	3:AC:85:ARG:H	2.20	0.50
6:AF:50:TYR:OH	18:AR:74:ARG:O	2.27	0.50
10:AJ:76:ASN:O	10:AJ:78:ASN:N	2.42	0.50
30:B5:10:LYS:HE3	35:BA:1262:A:N3	2.27	0.50
35:BA:876:C:H2'	35:BA:877:U:O4'	2.12	0.50
35:BA:1266:G:O6	55:BW:13:SER:OG	2.20	0.50
38:BD:94:LEU:HB2	38:BD:104:TYR:CE1	2.45	0.50
42:BH:124:GLU:HB2	42:BH:132:ARG:HG2	1.93	0.50
50:BR:3:HIS:O	50:BR:4:LEU:HB3	2.10	0.50
57:BY:20:TYR:CZ	57:BY:42:VAL:HA	2.47	0.50
1:CA:32:A:H2'	1:CA:33:A:C8	2.46	0.50
1:CA:310:G:H2'	1:CA:311:C:H6	1.77	0.50
1:CA:861:G:O2'	1:CA:874:G:O2'	2.29	0.50
2:CB:208:ILE:HA	2:CB:211:ILE:HD12	1.93	0.50
21:CU:9:ARG:HA	21:CU:9:ARG:NH1	2.25	0.50
24:CY:36:PRO:O	24:CY:39:TRP:HB2	2.11	0.50
26:D1:3:LYS:HD2	35:DA:1364:G:OP2	2.11	0.50
31:D6:46:HIS:HA	31:D6:47:THR:CB	2.42	0.50
35:DA:71:A:H5'	35:DA:71:A:H8	1.77	0.50
35:DA:271(H):G:O2'	35:DA:271(I):G:H8	1.95	0.50
35:DA:654(H):G:N2	35:DA:654(J):A:H2'	2.27	0.50
35:DA:1061:U:OP2	45:DK:1:MET:HE1	2.12	0.50
35:DA:1499:C:C2	35:DA:1500:G:C8	2.99	0.50
35:DA:1543:C:H3'	35:DA:1544:A:C5'	2.42	0.50
35:DA:1948:G:H8	35:DA:1948:G:H5'	1.75	0.50
35:DA:2680:C:H5'	39:DE:189:PRO:HA	1.94	0.50
35:DA:2853:C:H2'	35:DA:2854:G:C8	2.45	0.50
39:DE:92:THR:O	39:DE:95:ILE:HG12	2.11	0.50
43:DI:58:LEU:C	43:DI:60:GLU:H	2.19	0.50
52:DT:33:LYS:NZ	52:DT:74:ARG:HH21	2.09	0.50
52:DT:42:ILE:O	52:DT:42:ILE:HG13	2.11	0.50
57:DY:20:TYR:CZ	57:DY:42:VAL:HA	2.47	0.50
1:AA:296:U:O2'	1:AA:556:C:O2	2.26	0.50
1:AA:510:A:N3	1:AA:543:C:H1'	2.26	0.50
1:AA:1238:A:N7	1:AA:1303:C:H1'	2.27	0.50
3:AC:83:ARG:C	3:AC:85:ARG:N	2.69	0.50
33:B8:25:MET:HG3	48:BP:64:LYS:HB3	1.94	0.50
35:BA:1290:C:H2'	35:BA:1291:C:H6	1.75	0.50
35:BA:2000:G:OP2	50:BR:3:HIS:NE2	2.45	0.50
35:BA:2141:G:H2'	35:BA:2142:C:H6	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:40:U:H3'	36:BB:41:U:H5"	1.93	0.50
36:BB:114:C:H4'	51:BS:46:VAL:HG13	1.92	0.50
37:BC:16:ASP:N	37:BC:21:TYR:HH	2.10	0.50
38:BD:43:ARG:HB3	38:BD:54:ARG:CB	2.42	0.50
41:BG:95:ARG:HG2	41:BG:95:ARG:HH11	1.76	0.50
42:BH:96:ALA:HB1	42:BH:103:LEU:HD11	1.93	0.50
45:BK:98:ARG:HH21	45:BK:139:VAL:HG13	1.76	0.50
51:BS:34:HIS:CD2	51:BS:54:LEU:HB2	2.46	0.50
54:BV:18:LEU:HD12	54:BV:19:LYS:N	2.27	0.50
57:BY:28:LYS:O	57:BY:29:GLU:C	2.55	0.50
1:CA:285:G:H2'	1:CA:286:G:C8	2.45	0.50
1:CA:429:U:H1'	1:CA:430:A:H5"	1.93	0.50
1:CA:542:G:P	4:CD:10:ARG:HH22	2.35	0.50
2:CB:61:LEU:HA	2:CB:64:ARG:HD2	1.92	0.50
3:CC:82:GLU:H	3:CC:82:GLU:CD	2.20	0.50
4:CD:175:SER:O	4:CD:183:GLY:HA2	2.12	0.50
12:CL:32:PHE:HD1	12:CL:86:ARG:HA	1.77	0.50
16:CP:20:VAL:HG23	16:CP:34:GLU:O	2.12	0.50
29:D4:14:ILE:HD12	29:D4:14:ILE:N	2.27	0.50
35:DA:225:A:O2'	35:DA:257:A:H4'	2.12	0.50
35:DA:660:G:O3'	40:DF:38:ARG:NH2	2.45	0.50
35:DA:839:U:H2'	35:DA:840:C:C6	2.47	0.50
35:DA:2154:G:H2'	35:DA:2155:G:C8	2.47	0.50
37:DC:181:PHE:HD2	37:DC:185:LYS:HB3	1.77	0.50
38:DD:267:SER:C	38:DD:269:PHE:N	2.69	0.50
39:DE:105:THR:HB	39:DE:197:ILE:HG12	1.94	0.50
39:DE:117:MET:O	39:DE:118:LYS:HB2	2.12	0.50
43:DI:113:ARG:HB2	43:DI:130:TYR:CE1	2.47	0.50
45:DK:95:LYS:HD3	45:DK:135:GLY:C	2.37	0.50
45:DK:119:ASP:OD1	45:DK:122:ALA:HB3	2.11	0.50
46:DN:120:LEU:C	46:DN:121:LYS:HD2	2.37	0.50
53:DU:95:LEU:C	53:DU:97:ASP:H	2.20	0.50
1:AA:280:C:N3	17:AQ:39:SER:OG	2.44	0.50
1:AA:684:A:O2'	11:AK:39:PRO:O	2.30	0.50
1:AA:926:G:C6	1:AA:1505:G:C6	3.00	0.50
1:AA:1067:A:H4'	1:AA:1387:G:O2'	2.12	0.50
2:AB:8:LYS:HD3	2:AB:217:ARG:NH1	2.26	0.50
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.12	0.50
11:AK:91:ARG:CZ	18:AR:88:LYS:HE3	2.42	0.50
11:AK:124:LYS:NZ	11:AK:125:PHE:HE1	2.10	0.50
34:B9:27:CYS:SG	34:B9:28:GLU:N	2.84	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:9:U:C4	35:BA:2629:A:C6	3.00	0.50
35:BA:654(T):C:H2'	35:BA:654(U):A:H5'	1.94	0.50
35:BA:1270:C:H5"	35:BA:1271:G:H5'	1.92	0.50
35:BA:1332:G:N2	35:BA:1610:A:C8	2.78	0.50
35:BA:2243:U:H2'	35:BA:2244:U:C6	2.47	0.50
35:BA:2537:U:H2'	35:BA:2538:C:H6	1.75	0.50
35:BA:2659:G:N2	35:BA:2663:G:O6	2.45	0.50
36:BB:79:C:H2'	36:BB:80:U:O4'	2.11	0.50
37:BC:195:ARG:HG3	37:BC:195:ARG:NH1	2.27	0.50
57:BY:68:HIS:ND1	57:BY:70:SER:HB3	2.27	0.50
58:BZ:18:LEU:HD22	58:BZ:23:LYS:HD2	1.94	0.50
58:BZ:54:HIS:CG	58:BZ:101:PRO:HD3	2.47	0.50
1:CA:171:A:H2'	1:CA:172:A:C8	2.47	0.50
1:CA:186:C:H2'	1:CA:187:C:H6	1.77	0.50
1:CA:356:A:H2'	1:CA:357:G:H8	1.76	0.50
1:CA:667:G:OP1	1:CA:732:C:O2'	2.23	0.50
1:CA:735:C:H2'	1:CA:736:C:H6	1.77	0.50
1:CA:824:C:H4'	8:CH:1:MET:H1	1.76	0.50
4:CD:23:GLY:O	4:CD:27:TYR:HD1	1.95	0.50
10:CJ:39:PRO:HB3	10:CJ:70:ARG:NH1	2.27	0.50
24:CY:49:SER:OG	35:DA:1067:A:H1'	2.11	0.50
35:DA:11:G:H2'	35:DA:12:U:C6	2.46	0.50
35:DA:637:A:P	48:DP:116:GLY:HA2	2.51	0.50
38:DD:34:VAL:C	38:DD:36:PRO:HD2	2.37	0.50
1:AA:784:C:H4'	35:BA:1837:C:OP1	2.12	0.49
1:AA:826:C:H5'	8:AH:12:ARG:HH21	1.77	0.49
3:AC:131:ARG:HH21	3:AC:166:GLU:HG3	1.77	0.49
9:AI:28:VAL:HA	9:AI:63:ILE:O	2.12	0.49
13:AM:20:THR:C	13:AM:22:ILE:H	2.20	0.49
15:AO:85:LEU:O	15:AO:85:LEU:HD23	2.12	0.49
26:B1:48:LYS:HA	26:B1:60:PHE:O	2.12	0.49
28:B3:4:LEU:O	28:B3:36:VAL:HA	2.12	0.49
29:B4:15:ILE:HB	29:B4:31:ILE:O	2.12	0.49
35:BA:646:A:H2'	35:BA:647:G:O4'	2.11	0.49
35:BA:1048:A:C2	35:BA:1109:C:H5	2.29	0.49
35:BA:1292:U:H2'	35:BA:1293:C:H6	1.77	0.49
35:BA:2092:U:H4'	35:BA:2093:G:H5"	1.94	0.49
35:BA:2095:C:H2'	35:BA:2096:U:O4'	2.11	0.49
35:BA:2707:G:H5'	50:BR:68:ARG:HH21	1.76	0.49
42:BH:78:GLY:HA2	42:BH:82:GLY:HA3	1.93	0.49
47:BO:47:ILE:HG23	47:BO:48:PRO:HD2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1287:A:N3	1:CA:1353:G:O2'	2.40	0.49
3:CC:180:ALA:HB1	3:CC:203:PHE:CE1	2.41	0.49
11:CK:24:SER:O	11:CK:26:ASN:N	2.45	0.49
15:CO:4:THR:OG1	15:CO:7:GLU:HB2	2.11	0.49
21:CU:2:GLY:C	21:CU:4:GLY:H	2.18	0.49
30:D5:33:CYS:O	30:D5:36:CYS:O	2.28	0.49
35:DA:1281:G:H5'	35:DA:1281:G:H8	1.75	0.49
35:DA:2698:U:H3	35:DA:2709:G:H1	1.60	0.49
35:DA:2838:G:C4	35:DA:2839:G:C8	3.00	0.49
38:DD:43:ARG:CB	38:DD:54:ARG:HB2	2.42	0.49
47:DO:49:ARG:HD3	47:DO:49:ARG:N	2.23	0.49
48:DP:16:ARG:NH1	48:DP:18:ARG:H	2.10	0.49
55:DW:12:ILE:O	55:DW:101:SER:OG	2.28	0.49
58:DZ:11:GLU:H	58:DZ:11:GLU:CD	2.20	0.49
1:AA:955:U:H1'	1:AA:1227:A:H61	1.77	0.49
1:AA:1027:C:N3	1:AA:1028:C:N4	2.59	0.49
1:AA:1500:A:H5"	1:AA:1508:G:H5"	1.94	0.49
3:AC:34:LEU:O	3:AC:38:ARG:HG3	2.12	0.49
5:AE:34:VAL:HG12	5:AE:62:ALA:HB1	1.94	0.49
5:AE:40:ARG:HG2	5:AE:40:ARG:HH11	1.77	0.49
6:AF:5:GLU:HG3	6:AF:93:SER:OG	2.12	0.49
10:AJ:81:THR:C	10:AJ:83:GLU:H	2.18	0.49
28:B3:19:GLN:HE22	28:B3:52:HIS:HE1	1.60	0.49
35:BA:274:G:O2'	35:BA:276:A:OP2	2.27	0.49
35:BA:321:G:C4	35:BA:341:G:H4'	2.47	0.49
35:BA:364:C:C2'	35:BA:365:C:H5'	2.42	0.49
35:BA:1076:C:H2'	35:BA:1077:A:H8	1.76	0.49
35:BA:1509(B):A:H2'	35:BA:1510:G:C8	2.47	0.49
35:BA:2114:A:N3	35:BA:2167:U:O2'	2.42	0.49
37:BC:181:PHE:HD2	37:BC:185:LYS:HB3	1.77	0.49
39:BE:34:VAL:HG11	39:BE:78:LEU:HD22	1.94	0.49
39:BE:93:VAL:HG21	39:BE:180:ASN:HA	1.94	0.49
45:BK:11:GLN:HB2	45:BK:52:ILE:HD11	1.94	0.49
55:BW:84:ARG:O	55:BW:95:ILE:HA	2.13	0.49
1:CA:520:A:OP1	12:CL:52:LEU:HB2	2.12	0.49
1:CA:1175:G:H2'	1:CA:1176:A:H8	1.76	0.49
1:CA:1414:U:H2'	1:CA:1415:G:H8	1.77	0.49
2:CB:88:ALA:HA	2:CB:226:ARG:HH22	1.76	0.49
3:CC:14:ILE:HG12	3:CC:15:THR:N	2.22	0.49
11:CK:124:LYS:HZ2	11:CK:125:PHE:HE1	1.60	0.49
15:CO:78:TYR:O	15:CO:82:ILE:HG22	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CY:25:ARG:O	24:CY:29:LEU:HB2	2.12	0.49
24:CY:131:ASP:HA	24:CY:163:GLY:HA2	1.94	0.49
35:DA:639:U:H3	35:DA:649:G:H1	1.60	0.49
35:DA:958:U:H5"	49:DQ:14:ARG:HD2	1.94	0.49
35:DA:2100:G:N2	35:DA:2189:U:O2	2.37	0.49
35:DA:2836:U:H2'	35:DA:2837:G:C8	2.46	0.49
39:DE:178:GLU:HG3	39:DE:179:GLU:OE2	2.11	0.49
45:DK:21:PRO:HB2	45:DK:22:PRO:CD	2.38	0.49
5:AE:8:GLU:N	5:AE:34:VAL:HG23	2.26	0.49
13:AM:90:LEU:HD13	13:AM:94:ARG:NH2	2.26	0.49
22:AV:2:C:H4'	25:B0:7:LEU:O	2.11	0.49
35:BA:10:G:N7	35:BA:2629:A:N6	2.61	0.49
35:BA:833:U:H5"	48:BP:48:PRO:CB	2.42	0.49
35:BA:1430:C:H2'	35:BA:1431:U:C6	2.47	0.49
35:BA:2025:C:H2'	35:BA:2026:C:H6	1.77	0.49
35:BA:2836:U:H2'	35:BA:2837:G:C8	2.47	0.49
38:BD:182:LEU:O	38:BD:271:ILE:HG13	2.11	0.49
40:BF:4:VAL:HA	40:BF:19:GLU:HB3	1.93	0.49
42:BH:85:LYS:HD2	42:BH:145:ALA:HB2	1.94	0.49
46:BN:42:TRP:O	53:BU:64:ARG:NH1	2.42	0.49
1:CA:768:A:OP1	1:CA:804:U:H4'	2.12	0.49
1:CA:944:G:N2	1:CA:1338:G:C8	2.81	0.49
2:CB:97:TRP:HZ3	2:CB:172:ILE:HG22	1.77	0.49
2:CB:167:PRO:HG2	2:CB:192:SER:OG	2.12	0.49
3:CC:85:ARG:O	3:CC:89:GLU:HB2	2.11	0.49
5:CE:47:LYS:HD3	5:CE:47:LYS:N	2.27	0.49
6:CF:88:VAL:O	6:CF:88:VAL:HG12	2.13	0.49
10:CJ:38:ILE:HD11	10:CJ:71:LEU:HD23	1.95	0.49
26:D1:57:GLU:O	26:D1:58:ILE:HG22	2.12	0.49
31:D6:31:PRO:HB2	35:DA:2286:A:H3'	1.93	0.49
35:DA:214:G:O2'	35:DA:216:A:O2'	2.27	0.49
35:DA:993:G:OP1	53:DU:50:ARG:NH2	2.45	0.49
35:DA:1245:G:OP1	48:DP:16:ARG:NE	2.45	0.49
35:DA:1294:U:O2	50:DR:23:ASN:ND2	2.45	0.49
35:DA:1527:G:N2	35:DA:1546:C:N3	2.59	0.49
40:DF:20:LEU:HD12	40:DF:199:TRP:CH2	2.47	0.49
40:DF:122:LYS:O	40:DF:191:ARG:HG3	2.13	0.49
41:DG:118:ARG:H	41:DG:181:ARG:NH2	2.08	0.49
43:DI:15:VAL:C	43:DI:17:GLN:H	2.20	0.49
1:AA:34:C:H2'	1:AA:35:G:H8	1.77	0.49
1:AA:552:U:O2'	12:AL:86:ARG:O	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:592:G:H2'	1:AA:593:G:C8	2.45	0.49
1:AA:757:U:H2'	1:AA:758:G:O4'	2.12	0.49
1:AA:1007:C:H2'	1:AA:1008:C:H6	1.77	0.49
1:AA:1076:C:O2	1:AA:1082:G:N2	2.44	0.49
1:AA:1312:G:H2'	1:AA:1313:U:C6	2.47	0.49
2:AB:36:ARG:HG2	2:AB:36:ARG:HH11	1.78	0.49
13:AM:66:LEU:O	13:AM:70:LEU:N	2.45	0.49
24:AY:223:LYS:C	24:AY:225:GLU:H	2.20	0.49
27:B2:19:VAL:O	27:B2:22:GLU:HG2	2.12	0.49
35:BA:807:U:OP2	48:BP:39:LYS:HG2	2.12	0.49
35:BA:2099:U:O4	35:BA:2190:G:O6	2.28	0.49
39:BE:51:PHE:CD1	39:BE:52:LEU:HD22	2.47	0.49
40:BF:178:PRO:HG2	40:BF:179:GLU:OE1	2.13	0.49
40:BF:185:ASP:HA	40:BF:188:ARG:HG2	1.94	0.49
49:BQ:29:PHE:HB2	49:BQ:105:GLU:OE2	2.12	0.49
52:BT:46:GLU:O	52:BT:65:LYS:HD3	2.11	0.49
52:BT:62:THR:HA	52:BT:74:ARG:O	2.12	0.49
53:BU:91:ASP:O	53:BU:95:LEU:HB2	2.12	0.49
56:BX:12:VAL:HB	56:BX:17:ALA:CB	2.37	0.49
56:BX:29:TRP:CZ3	56:BX:78:LYS:HB3	2.47	0.49
58:BZ:74:VAL:HG22	58:BZ:86:VAL:HG12	1.95	0.49
1:CA:1376:U:H2'	1:CA:1377:A:H8	1.77	0.49
2:CB:77:ALA:O	2:CB:81:VAL:HG23	2.12	0.49
4:CD:59:ARG:HE	4:CD:59:ARG:CA	2.20	0.49
19:CS:18:LYS:O	19:CS:22:LEU:HD23	2.11	0.49
25:D0:25:ARG:HG2	25:D0:25:ARG:HH11	1.76	0.49
27:D2:69:ARG:HH21	35:DA:111:A:H4'	1.77	0.49
33:D8:32:LEU:HD21	35:DA:2392:A:OP1	2.12	0.49
35:DA:573:G:O2'	35:DA:574:C:H3'	2.13	0.49
35:DA:604:G:C6	35:DA:625:G:C2	3.00	0.49
35:DA:1789:A:H2'	35:DA:1790:C:O4'	2.13	0.49
35:DA:2064:C:H2'	35:DA:2065:C:C6	2.48	0.49
35:DA:2086:U:H2'	35:DA:2087:G:H8	1.76	0.49
49:DQ:52:VAL:O	49:DQ:56:ARG:HG2	2.13	0.49
57:DY:28:LYS:CB	57:DY:37:VAL:HB	2.42	0.49
1:AA:628:G:H2'	1:AA:629:G:H8	1.74	0.49
1:AA:830:G:H2'	1:AA:831:U:O4'	2.12	0.49
1:AA:1130:A:C6	1:AA:1146:A:C5	3.00	0.49
1:AA:1171:G:H2'	1:AA:1172:C:C6	2.47	0.49
1:AA:1249:C:N4	1:AA:1288:A:H62	2.09	0.49
1:AA:1316:G:H22	1:AA:1319:A:P	2.36	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:92:TYR:H	2:AB:151:GLY:HA3	1.77	0.49
4:AD:26:CYS:HA	4:AD:31:CYS:HA	1.94	0.49
7:AG:143:ARG:CZ	22:AW:42:C:H5"	2.43	0.49
9:AI:50:LEU:HD21	9:AI:81:ILE:HG22	1.93	0.49
10:AJ:49:VAL:O	10:AJ:60:ARG:HB2	2.12	0.49
22:AW:10:G:C2	22:AW:26:A:H1'	2.47	0.49
24:AY:181:SER:N	24:AY:182:PRO:HD2	2.28	0.49
26:B1:59:THR:O	26:B1:91:LYS:NZ	2.39	0.49
35:BA:807:U:O2	40:BF:74:ARG:NH2	2.43	0.49
35:BA:839:U:H1'	35:BA:1191:G:H1'	1.93	0.49
35:BA:1747:G:H2'	35:BA:1747(A):G:C8	2.47	0.49
35:BA:2533:A:H2'	35:BA:2534:A:O4'	2.11	0.49
38:BD:148:GLU:CB	38:BD:151:LYS:HD2	2.42	0.49
48:BP:50:ARG:HH21	48:BP:50:ARG:HG2	1.77	0.49
48:BP:127:ALA:HB3	48:BP:130:PHE:CZ	2.48	0.49
56:BX:50:LYS:HB3	56:BX:84:ALA:HB2	1.95	0.49
1:CA:92:C:C2	1:CA:93:G:N7	2.81	0.49
1:CA:677:U:O2	1:CA:777:A:O2'	2.30	0.49
2:CB:20:GLU:HB2	2:CB:190:THR:OG1	2.13	0.49
8:CH:25:ASP:HA	8:CH:59:LEU:O	2.12	0.49
20:CT:73:HIS:HB3	20:CT:74:LYS:HG2	1.94	0.49
31:D6:19:ARG:HG2	31:D6:19:ARG:HH11	1.76	0.49
34:D9:18:ARG:HE	35:DA:1034:G:H5'	1.77	0.49
35:DA:582:G:H2'	35:DA:583:G:C8	2.47	0.49
35:DA:654(B):C:H5	35:DA:654(D):G:C4	2.31	0.49
35:DA:892:G:H2'	35:DA:893:C:C6	2.48	0.49
35:DA:1889:A:H2'	35:DA:1890:A:C8	2.47	0.49
36:DB:40:U:N3	36:DB:43:C:H5"	2.28	0.49
39:DE:109:LYS:HB2	50:DR:2:ARG:NH2	2.28	0.49
42:DH:144:VAL:O	42:DH:148:ILE:HG12	2.12	0.49
56:DX:12:VAL:HG12	56:DX:27:THR:HG23	1.93	0.49
1:AA:973:G:H1'	10:AJ:55:LYS:HE2	1.94	0.49
1:AA:1004:A:OP1	1:AA:1006:C:N4	2.45	0.49
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.47	0.49
2:AB:87:ARG:HE	2:AB:233:SER:CB	2.25	0.49
4:AD:18:LYS:HB2	4:AD:33:MET:HG2	1.94	0.49
33:B8:33:ASN:O	33:B8:34:TRP:HB3	2.11	0.49
35:BA:132:G:H2'	35:BA:133:C:H6	1.76	0.49
35:BA:1058:G:OP1	45:BK:1:MET:HG3	2.12	0.49
35:BA:1080:C:H2'	35:BA:1081:U:H6	1.78	0.49
35:BA:1535:A:H3'	35:BA:1536:C:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1540:U:H2'	35:BA:1541:G:C2	2.47	0.49
35:BA:2083:G:H2'	35:BA:2084:C:H6	1.78	0.49
35:BA:2801:A:H4'	35:BA:2801(A):A:C5	2.48	0.49
35:BA:2852:G:H2'	35:BA:2853:C:C6	2.48	0.49
38:BD:109:ASP:HB2	38:BD:197:GLY:CA	2.43	0.49
42:BH:153:LYS:H	42:BH:153:LYS:HD2	1.77	0.49
1:CA:170:U:O2'	1:CA:171:A:H5'	2.12	0.49
1:CA:1315:U:H2'	1:CA:1316:G:O4'	2.12	0.49
3:CC:101:LEU:HD23	3:CC:102:ASN:N	2.28	0.49
4:CD:112:VAL:HG12	4:CD:116:GLN:OE1	2.12	0.49
4:CD:173:TRP:CZ3	4:CD:193:ASP:HB3	2.48	0.49
10:CJ:33:GLN:HB2	10:CJ:75:ILE:HD11	1.95	0.49
28:D3:40:THR:HG23	28:D3:43:ILE:HG12	1.94	0.49
33:D8:53:PRO:O	33:D8:57:ARG:HB2	2.12	0.49
35:DA:557:U:H2'	35:DA:558:G:H8	1.78	0.49
35:DA:580:C:H2'	35:DA:581:C:C6	2.47	0.49
35:DA:1826:G:O2'	38:DD:242:ARG:NH2	2.46	0.49
35:DA:1858:G:HO2'	35:DA:1884:A:N6	2.11	0.49
35:DA:2141:G:H2'	35:DA:2142:C:C6	2.48	0.49
45:DK:33:ASN:ND2	45:DK:36:GLU:HG3	2.27	0.49
46:DN:46:VAL:O	46:DN:47:ALA:HB3	2.11	0.49
48:DP:97:PRO:O	48:DP:98:GLU:HB3	2.12	0.49
51:DS:26:LEU:HD23	51:DS:39:ILE:CG1	2.43	0.49
1:AA:555:C:H2'	1:AA:556:C:C6	2.48	0.49
1:AA:980:C:O2	14:AN:19:ARG:HA	2.13	0.49
1:AA:1053:G:N2	1:AA:1058:G:O6	2.46	0.49
1:AA:1346:A:N1	1:AA:1374:A:H5"	2.28	0.49
8:AH:86:ILE:HG12	8:AH:135:CYS:HA	1.93	0.49
13:AM:37:THR:HA	13:AM:55:ARG:NH2	2.27	0.49
13:AM:115:LYS:C	13:AM:117:VAL:N	2.70	0.49
15:AO:82:ILE:HG13	15:AO:87:ILE:HG13	1.94	0.49
16:AP:12:LYS:C	16:AP:14:ASN:H	2.21	0.49
22:AW:51:U:N3	22:AW:64:A:H2	2.11	0.49
31:B6:11:LEU:HD22	31:B6:51:GLU:OE2	2.12	0.49
35:BA:116:C:O2'	35:BA:126:A:N3	2.39	0.49
35:BA:637:A:OP1	48:BP:133:SER:HB3	2.12	0.49
35:BA:729:G:C5	38:BD:208:LYS:HB2	2.48	0.49
35:BA:2199:A:O2'	43:BI:28:ASN:OD1	2.21	0.49
41:BG:9:ARG:HB2	41:BG:9:ARG:NH1	2.28	0.49
52:BT:83:ILE:HG13	52:BT:84:GLN:H	1.78	0.49
53:BU:24:TYR:HB2	53:BU:29:SER:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:110:C:H3'	1:CA:111:G:H8	1.77	0.49
1:CA:189:G:H2'	1:CA:189(A):C:H6	1.77	0.49
1:CA:1010:G:H2'	1:CA:1011:G:C8	2.47	0.49
1:CA:1207:G:H2'	1:CA:1208:C:H6	1.77	0.49
6:CF:7:ASN:HD21	18:CR:34:TYR:HE1	1.59	0.49
6:CF:67:MET:HB2	6:CF:68:PRO:HD2	1.95	0.49
22:CV:6:G:N1	22:CV:67:C:N3	2.37	0.49
24:CY:287:GLU:O	24:CY:290:LYS:HG2	2.13	0.49
25:D0:48:GLY:HA3	25:D0:80:HIS:ND1	2.28	0.49
27:D2:2:LYS:CB	35:DA:97:C:H5"	2.39	0.49
34:D9:9:ARG:HH11	34:D9:9:ARG:CB	2.26	0.49
35:DA:574:C:N3	39:DE:145:LYS:HE2	2.27	0.49
35:DA:884:C:C4	35:DA:885:C:C4	3.00	0.49
35:DA:1014:U:H2'	35:DA:1015:G:H8	1.77	0.49
35:DA:1082:U:H5'	45:DK:117:THR:CG2	2.43	0.49
35:DA:1639:U:C2'	35:DA:1640:C:H5"	2.43	0.49
35:DA:2127:G:H2'	35:DA:2128:C:H6	1.75	0.49
41:DG:3:LEU:O	41:DG:4:ASP:HB2	2.12	0.49
41:DG:33:ARG:HH11	41:DG:33:ARG:HG3	1.78	0.49
43:DI:82:ARG:NH1	43:DI:145:VAL:O	2.45	0.49
1:AA:1298:C:H2'	7:AG:114:ARG:HH11	1.78	0.49
30:B5:35:GLU:O	30:B5:36:CYS:CB	2.60	0.49
35:BA:336:C:H5"	57:BY:7:VAL:HG11	1.95	0.49
35:BA:1683:C:H2'	35:BA:1684:C:H6	1.78	0.49
35:BA:1794:U:H2'	35:BA:1795:C:H6	1.78	0.49
35:BA:2099:U:H3	35:BA:2190:G:H1	1.61	0.49
35:BA:2839:G:H5'	50:BR:46:GLY:CA	2.43	0.49
37:BC:48:LEU:HB3	37:BC:50:ILE:HG13	1.95	0.49
38:BD:133:LEU:HD22	38:BD:165:ILE:HD11	1.95	0.49
41:BG:96:ARG:HG3	41:BG:100:TRP:HE1	1.77	0.49
43:BI:29:TYR:C	43:BI:32:PRO:HD2	2.37	0.49
47:BO:77:ILE:HD13	52:BT:74:ARG:HD3	1.94	0.49
48:BP:146:VAL:HG13	48:BP:147:LEU:N	2.28	0.49
49:BQ:67:ARG:HG2	49:BQ:67:ARG:HH11	1.78	0.49
49:BQ:97:VAL:HG21	49:BQ:103:MET:HE3	1.93	0.49
57:BY:26:LYS:HG3	57:BY:27:VAL:HG23	1.94	0.49
1:CA:562:C:O2	12:CL:16:GLU:N	2.43	0.49
1:CA:711:G:H2'	1:CA:712:A:H8	1.78	0.49
1:CA:1168:A:H2'	1:CA:1169:A:C8	2.48	0.49
24:CY:34:GLU:CD	45:DK:34:ILE:HG12	2.38	0.49
28:D3:31:LEU:HD12	35:DA:1157:G:O2'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:141:A:H8	35:DA:1408:C:HO2'	1.60	0.49
35:DA:528:A:C2	35:DA:2042:A:H2'	2.48	0.49
35:DA:740:U:H2'	35:DA:741:G:C8	2.48	0.49
35:DA:1348:G:C2'	35:DA:1349:A:H5"	2.41	0.49
35:DA:2131:G:H5'	35:DA:2133:G:O4'	2.12	0.49
35:DA:2208:A:H1'	35:DA:2219:G:C5	2.48	0.49
35:DA:2689:U:H4'	35:DA:2690:C:O5'	2.13	0.49
36:DB:101:G:H2'	36:DB:102:A:C8	2.48	0.49
37:DC:39:ASP:OD1	37:DC:178:LYS:HE3	2.13	0.49
38:DD:35:LYS:C	38:DD:37:LEU:H	2.21	0.49
38:DD:61:LEU:O	38:DD:63:ARG:NH1	2.45	0.49
46:DN:9:VAL:HG12	46:DN:10:GLU:H	1.76	0.49
49:DQ:76:LYS:HB3	49:DQ:91:GLU:CG	2.43	0.49
51:DS:61:ASN:OD1	51:DS:62:LYS:N	2.33	0.49
1:AA:67:C:O2	1:AA:171:A:H2	1.96	0.49
1:AA:176:C:H2'	1:AA:177:C:H6	1.77	0.49
1:AA:243:A:H4'	1:AA:244:U:O5'	2.12	0.49
1:AA:1224:G:H4'	13:AM:102:ARG:NH1	2.28	0.49
1:AA:1308:U:H5'	13:AM:110:ARG:HD2	1.94	0.49
1:AA:1350:A:OP1	9:AI:121:ARG:HG3	2.13	0.49
4:AD:128:VAL:HG12	4:AD:129:ASN:N	2.18	0.49
9:AI:5:TYR:HE2	9:AI:16:ARG:HG2	1.77	0.49
13:AM:10:PRO:CG	13:AM:18:ALA:HB1	2.42	0.49
13:AM:19:LEU:HA	13:AM:22:ILE:HD13	1.94	0.49
18:AR:45:SER:HB3	18:AR:51:LEU:HD21	1.95	0.49
31:B6:17:LYS:O	31:B6:18:ARG:HB3	2.12	0.49
31:B6:26:ASN:HD22	31:B6:32:ASN:CG	2.21	0.49
35:BA:189:G:H2'	35:BA:205:G:N2	2.27	0.49
35:BA:271(E):U:H2'	35:BA:271(F):C:H6	1.77	0.49
35:BA:590:A:H2'	35:BA:591:C:C6	2.48	0.49
35:BA:1024:G:H8	35:BA:1024:G:O5'	1.96	0.49
35:BA:1341:U:P	35:BA:1397:U:H3	2.31	0.49
35:BA:1656:C:H2'	35:BA:1657:C:H6	1.78	0.49
35:BA:2006:C:O2'	35:BA:2823:A:N3	2.46	0.49
35:BA:2329:G:H2'	35:BA:2330:G:H8	1.77	0.49
35:BA:2794:C:H42	35:BA:2801(A):A:H61	1.61	0.49
35:BA:2880:C:H1'	50:BR:92:GLY:O	2.13	0.49
40:BF:33:LEU:HD11	40:BF:112:MET:HB2	1.95	0.49
51:BS:89:ARG:NH1	51:BS:92:TYR:HA	2.28	0.49
1:CA:1107:C:C4	1:CA:1108:G:C8	3.00	0.49
1:CA:1388:C:H2'	1:CA:1389:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1409:C:H2'	1:CA:1410:G:C8	2.46	0.49
3:CC:70:VAL:O	3:CC:105:GLU:HA	2.12	0.49
24:CY:29:LEU:HD12	24:CY:52:ALA:HB2	1.95	0.49
35:DA:28:A:N6	35:DA:512:G:H1'	2.28	0.49
35:DA:480:A:H1'	57:DY:44:ILE:HG21	1.95	0.49
35:DA:796:C:OP1	40:DF:62:ARG:HD2	2.13	0.49
35:DA:1048:A:C2	35:DA:1109:C:H5	2.30	0.49
35:DA:1709:U:H2'	35:DA:1710:C:H6	1.76	0.49
35:DA:1935:G:H1'	35:DA:1964:G:N2	2.28	0.49
35:DA:2308:G:H2'	35:DA:2309:A:C8	2.48	0.49
35:DA:2375:G:N2	35:DA:2378:A:OP2	2.28	0.49
35:DA:2533:A:H2'	35:DA:2534:A:O4'	2.12	0.49
35:DA:2708:G:H2'	35:DA:2709:G:H8	1.78	0.49
39:DE:119:ARG:HA	39:DE:160:TYR:CD2	2.48	0.49
48:DP:105:LEU:HD12	48:DP:105:LEU:H	1.76	0.49
52:DT:33:LYS:HZ1	52:DT:74:ARG:HH21	1.61	0.49
54:DV:22:VAL:O	54:DV:23:GLU:HB2	2.13	0.49
54:DV:47:VAL:HG12	54:DV:52:VAL:N	2.28	0.49
1:AA:519:C:OP2	12:AL:50:SER:OG	2.26	0.49
1:AA:1054:C:H42	24:AY:201:ARG:HB2	1.77	0.49
1:AA:1081:G:H5'	5:AE:18:ARG:HB3	1.95	0.49
1:AA:1151:A:H5"	10:AJ:42:THR:H	1.78	0.49
1:AA:1249:C:H42	1:AA:1288:A:N6	2.11	0.49
1:AA:1432:G:N2	1:AA:1469:G:O6	2.46	0.49
1:AA:1522:U:H2'	1:AA:1523:G:H8	1.78	0.49
4:AD:68:TYR:HA	4:AD:114:ARG:HD2	1.95	0.49
6:AF:3:ARG:HG3	6:AF:3:ARG:HH11	1.78	0.49
24:AY:252:VAL:HG13	24:AY:259:THR:HG22	1.94	0.49
25:B0:23:VAL:HG22	25:B0:38:VAL:HG22	1.95	0.49
30:B5:33:CYS:O	30:B5:36:CYS:O	2.31	0.49
32:B7:10:ARG:NH2	35:BA:1378:A:OP1	2.46	0.49
35:BA:141:A:H8	35:BA:1408:C:HO2'	1.61	0.49
35:BA:407:G:H2'	35:BA:408:G:C8	2.47	0.49
35:BA:610:G:H2'	35:BA:611:C:C6	2.48	0.49
35:BA:1070:A:H5'	35:BA:1072:C:OP2	2.13	0.49
35:BA:1570:A:H2'	35:BA:1571:A:C8	2.47	0.49
35:BA:2807:G:H3'	35:BA:2808:U:H5"	1.94	0.49
39:BE:64:LYS:C	39:BE:66:HIS:N	2.67	0.49
41:BG:59:GLU:HA	41:BG:62:LEU:HD13	1.94	0.49
53:BU:13:LYS:HE2	53:BU:13:LYS:N	2.28	0.49
1:CA:859:A:H2'	1:CA:860:A:O4'	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:971:G:OP1	1:CA:971:G:H3'	2.13	0.49
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.28	0.49
2:CB:120:ALA:O	2:CB:121:LEU:HD23	2.13	0.49
7:CG:6:ARG:O	7:CG:6:ARG:HG2	2.13	0.49
10:CJ:44:VAL:HG12	10:CJ:46:ARG:HD2	1.94	0.49
17:CQ:95:TYR:HA	17:CQ:98:LEU:HD12	1.95	0.49
24:CY:150:GLN:HB3	24:CY:172:LYS:HD3	1.94	0.49
33:D8:14:VAL:CG2	33:D8:22:VAL:HG13	2.42	0.49
35:DA:38:A:H2'	35:DA:39:C:H6	1.78	0.49
35:DA:272(J):C:H5'	35:DA:274:G:OP2	2.13	0.49
35:DA:589:C:O3'	40:DF:95:ARG:NH1	2.45	0.49
35:DA:2103:C:H3'	35:DA:2104:G:H5"	1.95	0.49
39:DE:119:ARG:HD2	39:DE:120:TRP:CE2	2.48	0.49
41:DG:10:LYS:NZ	41:DG:14:GLU:OE1	2.45	0.49
52:DT:46:GLU:O	52:DT:65:LYS:HD3	2.13	0.49
55:DW:6:ILE:HA	55:DW:103:ILE:O	2.13	0.49
1:AA:166:G:H2'	1:AA:167:G:H8	1.77	0.48
1:AA:1029:C:O2'	1:AA:1033:G:N1	2.21	0.48
1:AA:1112:C:O2	3:AC:179:ARG:HG2	2.12	0.48
1:AA:1120:G:H2'	1:AA:1121:U:H6	1.76	0.48
1:AA:1258:G:H2'	1:AA:1259:C:H6	1.76	0.48
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.47	0.48
1:AA:1512:U:H2'	1:AA:1513:A:H8	1.78	0.48
13:AM:125:ARG:HA	24:AY:159:GLY:HA3	1.94	0.48
24:AY:19:ILE:O	24:AY:23:GLU:HB2	2.13	0.48
25:B0:18:ALA:HB1	35:BA:2271:G:OP1	2.13	0.48
25:B0:40:GLN:OE1	25:B0:44:ARG:N	2.46	0.48
32:B7:9:ARG:NE	35:BA:1310:G:OP2	2.44	0.48
35:BA:271(C):C:H2'	35:BA:271(D):G:H8	1.78	0.48
35:BA:579:G:H2'	35:BA:580:C:C6	2.48	0.48
35:BA:675:A:OP1	40:BF:63:LYS:HE2	2.13	0.48
35:BA:1043:C:H2'	35:BA:1044:G:C8	2.43	0.48
35:BA:1153:C:H2'	35:BA:1154:G:O4'	2.12	0.48
35:BA:1790:C:H5"	35:BA:1791:A:OP1	2.13	0.48
35:BA:2406:U:C4	48:BP:72:PRO:HB2	2.48	0.48
35:BA:2636:U:H3	35:BA:2782:G:H1	1.61	0.48
38:BD:24:ILE:HD12	38:BD:84:TYR:HB2	1.94	0.48
40:BF:66:PRO:O	40:BF:67:GLN:HB3	2.13	0.48
46:BN:55:VAL:CG2	46:BN:126:PRO:HA	2.44	0.48
54:BV:39:LEU:N	54:BV:39:LEU:HD23	2.28	0.48
1:CA:9:G:H2'	1:CA:10:A:C8	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:337:C:H2'	1:CA:338:A:C8	2.47	0.48
1:CA:415:A:H2'	1:CA:416:G:H8	1.78	0.48
1:CA:1152:A:H2'	1:CA:1153:C:C6	2.47	0.48
2:CB:114:ARG:O	2:CB:118:LEU:HG	2.13	0.48
3:CC:104:GLN:CD	3:CC:105:GLU:H	2.21	0.48
8:CH:51:VAL:CG1	8:CH:60:ARG:HB2	2.43	0.48
16:CP:56:ALA:O	16:CP:60:LEU:HG	2.13	0.48
19:CS:29:ARG:O	19:CS:31:ILE:HG22	2.13	0.48
24:CY:237:PRO:HD3	35:DA:2604:U:P	2.53	0.48
33:D8:33:ASN:HD22	35:DA:2419:U:P	2.36	0.48
35:DA:484:C:H2'	35:DA:485:C:C6	2.48	0.48
35:DA:861:A:N3	36:DB:79:C:O2'	2.45	0.48
35:DA:2377:A:H2'	35:DA:2378:A:C8	2.47	0.48
35:DA:2514:U:H2'	35:DA:2515:C:H6	1.78	0.48
40:DF:63:LYS:NZ	40:DF:67:GLN:HB2	2.28	0.48
47:DO:107:ARG:CZ	52:DT:35:LYS:HD2	2.43	0.48
48:DP:62:LEU:CD2	48:DP:62:LEU:H	2.26	0.48
52:DT:126:ALA:C	52:DT:128:GLU:H	2.20	0.48
1:AA:657:G:H4'	15:AO:28:GLN:HG2	1.95	0.48
1:AA:1093:A:H2	1:AA:1109:C:O2	1.96	0.48
2:AB:117:GLU:O	2:AB:117:GLU:HG2	2.13	0.48
4:AD:49:ARG:HA	4:AD:49:ARG:NE	2.28	0.48
9:AI:88:TYR:O	9:AI:89:ASN:HB2	2.12	0.48
12:AL:11:VAL:HG11	17:AQ:36:ILE:HG21	1.95	0.48
24:AY:342:MET:O	24:AY:346:TRP:CD1	2.66	0.48
27:B2:16:LEU:O	27:B2:20:GLU:HB3	2.14	0.48
29:B4:14:ILE:HD12	29:B4:14:ILE:H	1.77	0.48
30:B5:4:HIS:HB3	30:B5:5:PRO:HD3	1.94	0.48
34:B9:9:ARG:CB	34:B9:9:ARG:HH11	2.26	0.48
35:BA:764:A:C6	38:BD:209:ALA:HB1	2.48	0.48
35:BA:886:C:H4'	35:BA:888:C:H42	1.78	0.48
35:BA:952:G:C6	35:BA:966:G:C6	3.01	0.48
35:BA:1683:C:H2'	35:BA:1684:C:C6	2.48	0.48
35:BA:2176:A:H2'	35:BA:2177:C:C6	2.48	0.48
35:BA:2227:A:H5"	38:BD:263:ARG:NH1	2.28	0.48
39:BE:87:GLU:O	39:BE:89:ASP:N	2.45	0.48
41:BG:68:PRO:HA	41:BG:92:VAL:HB	1.93	0.48
53:BU:54:LYS:O	53:BU:58:ARG:HG3	2.13	0.48
1:CA:562:C:H1'	12:CL:15:ARG:HD2	1.94	0.48
1:CA:1130:A:O5'	9:CI:20:ARG:NH2	2.46	0.48
9:CI:43:ALA:O	9:CI:45:ALA:N	2.41	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:13:HIS:C	16:CP:15:PRO:HD3	2.39	0.48
24:CY:34:GLU:OE1	45:DK:34:ILE:HG12	2.13	0.48
35:DA:90:U:O2'	35:DA:92:A:OP2	2.28	0.48
35:DA:375:C:H2'	35:DA:376:C:H6	1.78	0.48
35:DA:893:C:H2'	35:DA:894:C:H6	1.77	0.48
35:DA:1099:G:H5"	45:DK:4:VAL:HG21	1.95	0.48
35:DA:1187:G:O5'	35:DA:1187:G:H8	1.95	0.48
35:DA:1479:G:H1	35:DA:1512:U:H3	1.60	0.48
35:DA:2243:U:H2'	35:DA:2244:U:C6	2.47	0.48
35:DA:2415:G:O3'	48:DP:66:GLY:HA3	2.13	0.48
40:DF:10:PRO:HA	40:DF:127:GLU:HB3	1.94	0.48
42:DH:13:LYS:O	42:DH:15:VAL:HG13	2.13	0.48
58:DZ:44:PHE:CD1	58:DZ:44:PHE:C	2.91	0.48
1:AA:353:A:H8	1:AA:353:A:H5'	1.78	0.48
1:AA:972:C:O2'	10:AJ:55:LYS:HG2	2.13	0.48
1:AA:1149:C:H2'	1:AA:1150:U:C6	2.49	0.48
1:AA:1313:U:O4	19:AS:4:SER:OG	2.31	0.48
1:AA:1428:A:H2'	1:AA:1429:C:H6	1.79	0.48
2:AB:197:VAL:HB	2:AB:200:ILE:HG12	1.95	0.48
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.27	0.48
5:AE:47:LYS:HD3	5:AE:47:LYS:N	2.28	0.48
8:AH:40:ALA:O	8:AH:42:GLU:N	2.46	0.48
35:BA:150:C:H2'	35:BA:151:C:C6	2.48	0.48
35:BA:191:A:H2'	35:BA:192:C:H6	1.77	0.48
35:BA:1380:G:H2'	35:BA:1381:G:H8	1.78	0.48
35:BA:1485:G:H1'	35:BA:1505:C:N4	2.29	0.48
35:BA:1578:U:H2'	35:BA:1579:A:H5'	1.95	0.48
35:BA:1717:G:C2'	35:BA:1718:G:H5"	2.43	0.48
35:BA:2894:G:H2'	35:BA:2894:G:N3	2.26	0.48
39:BE:1:MET:HB3	39:BE:200:GLU:OE1	2.14	0.48
43:BI:125:GLU:OE2	43:BI:141:LYS:HG2	2.13	0.48
46:BN:18:ALA:HB1	46:BN:21:LYS:HB2	1.96	0.48
56:BX:12:VAL:HG13	56:BX:27:THR:O	2.13	0.48
57:BY:7:VAL:CG2	57:BY:7:VAL:CG1	2.82	0.48
1:CA:113:G:H21	1:CA:353:A:H1'	1.78	0.48
1:CA:179:A:H2'	1:CA:180:U:H6	1.78	0.48
1:CA:202:U:H3'	1:CA:203:U:C5	2.47	0.48
1:CA:332:G:H2'	1:CA:333:G:H8	1.78	0.48
1:CA:407:G:H5"	4:CD:115:ARG:HB3	1.94	0.48
1:CA:1011:G:H1	1:CA:1018:C:H42	1.60	0.48
3:CC:6:HIS:CD2	3:CC:7:PRO:HD2	2.36	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:25:ARG:CG	4:CD:30:LYS:HG3	2.43	0.48
8:CH:40:ALA:C	8:CH:42:GLU:N	2.67	0.48
24:CY:303:ARG:HH12	35:DA:1914:C:H1'	1.78	0.48
25:D0:11:ARG:O	25:D0:14:ARG:NH2	2.47	0.48
35:DA:1024:G:C3'	35:DA:1025:G:H5"	2.42	0.48
35:DA:1799:G:OP1	35:DA:1799:G:H3'	2.12	0.48
35:DA:1906:G:H1	35:DA:1924:C:H42	1.61	0.48
35:DA:2106:G:H2'	35:DA:2107:C:O4'	2.13	0.48
50:DR:100:LEU:HD21	50:DR:113:LEU:HB3	1.94	0.48
1:AA:20:U:H2'	1:AA:21:G:O4'	2.13	0.48
1:AA:128:G:O2'	17:AQ:3:LYS:NZ	2.47	0.48
1:AA:531:U:P	24:AY:201:ARG:HH22	2.37	0.48
1:AA:596:C:H2'	1:AA:597:G:C8	2.45	0.48
1:AA:779:C:H2'	1:AA:780:A:O4'	2.13	0.48
1:AA:967:C:OP1	1:AA:969:A:H5'	2.13	0.48
1:AA:1098:C:H2'	1:AA:1099:G:C8	2.49	0.48
3:AC:89:GLU:O	3:AC:93:LYS:HB2	2.13	0.48
9:AI:26:VAL:HG22	9:AI:61:ALA:HB3	1.95	0.48
12:AL:17:LYS:HD3	12:AL:18:VAL:HG22	1.96	0.48
13:AM:93:ARG:HG3	35:BA:888:C:OP1	2.13	0.48
17:AQ:74:LEU:HD12	17:AQ:75:ARG:HG2	1.94	0.48
19:AS:5:LEU:HD13	19:AS:6:LYS:H	1.78	0.48
20:AT:50:GLU:HA	20:AT:100:ILE:HG22	1.95	0.48
25:B0:74:ARG:HG2	36:BB:12:C:O2'	2.13	0.48
32:B7:1:MET:SD	35:BA:752:A:H3'	2.53	0.48
35:BA:1568:G:P	38:BD:63:ARG:HH22	2.36	0.48
35:BA:2378:A:O5'	35:BA:2378:A:H8	1.96	0.48
38:BD:168:ARG:HH11	38:BD:168:ARG:HG3	1.78	0.48
39:BE:101:ARG:HA	39:BE:170:LEU:O	2.13	0.48
41:BG:116:ASP:O	41:BG:117:PHE:HB3	2.14	0.48
46:BN:65:LYS:O	46:BN:69:GLN:HB2	2.13	0.48
50:BR:33:ARG:NE	50:BR:115:GLU:HG3	2.29	0.48
1:CA:149:A:HO2'	1:CA:150:C:H6	1.60	0.48
1:CA:460:G:O6	1:CA:470:C:H5"	2.13	0.48
1:CA:533:A:O2'	1:CA:534:U:H5"	2.13	0.48
1:CA:908:A:H2'	1:CA:909:A:H8	1.79	0.48
1:CA:911:U:H2'	1:CA:912:C:C6	2.48	0.48
1:CA:954:G:H5'	13:CM:120:LYS:HZ2	1.77	0.48
5:CE:42:GLY:HA3	5:CE:66:MET:HG2	1.95	0.48
7:CG:100:ALA:O	7:CG:104:LEU:HD23	2.12	0.48
7:CG:116:ALA:HA	7:CG:119:ARG:HE	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:54:VAL:O	13:CM:58:GLU:HG2	2.14	0.48
30:D5:41:PRO:HG2	30:D5:44:THR:HG21	1.96	0.48
35:DA:712:G:H2'	35:DA:713:G:H8	1.77	0.48
35:DA:1899:G:N2	35:DA:1902:C:N4	2.45	0.48
35:DA:2630:G:H1'	35:DA:2894:G:C4	2.48	0.48
38:DD:72:LYS:HZ3	38:DD:75:ILE:HD12	1.78	0.48
42:DH:136:ILE:HD12	42:DH:136:ILE:N	2.28	0.48
52:DT:16:ARG:NH1	52:DT:19:LEU:HD21	2.28	0.48
52:DT:61:PHE:CE1	52:DT:76:PHE:HB2	2.49	0.48
1:AA:133:U:OP1	20:AT:74:LYS:NZ	2.40	0.48
1:AA:221:C:H2'	1:AA:222:U:H6	1.78	0.48
1:AA:672:U:H3	1:AA:734:G:H1	1.60	0.48
1:AA:859:A:H2'	1:AA:860:A:O4'	2.13	0.48
1:AA:946:A:H2'	1:AA:947:G:C8	2.48	0.48
3:AC:123:GLN:O	3:AC:128:PHE:HB2	2.13	0.48
4:AD:8:VAL:HG11	4:AD:115:ARG:CZ	2.43	0.48
4:AD:120:LEU:HB3	4:AD:126:ILE:HD11	1.96	0.48
16:AP:42:ARG:C	16:AP:43:LYS:HD2	2.38	0.48
26:B1:23:LYS:HD3	26:B1:28:GLY:HA3	1.96	0.48
27:B2:31:GLU:O	27:B2:34:GLU:HB3	2.14	0.48
35:BA:38:A:H2'	35:BA:39:C:H6	1.78	0.48
35:BA:556:G:H2'	35:BA:557:U:C6	2.48	0.48
35:BA:654(U):A:H5"	35:BA:654(V):A:OP2	2.13	0.48
35:BA:715:G:H2'	35:BA:716:A:C8	2.48	0.48
35:BA:746:A:O2'	35:BA:2611:U:O2'	2.18	0.48
35:BA:1027:A:C2	35:BA:2488:A:H5'	2.48	0.48
35:BA:1047:G:N3	35:BA:1111:A:N6	2.61	0.48
35:BA:1316:U:H2'	35:BA:1317:A:C8	2.49	0.48
35:BA:1657:C:H2'	35:BA:1658:C:H6	1.79	0.48
35:BA:1803:A:H4'	38:BD:259:THR:HG23	1.95	0.48
35:BA:2142:C:H2'	35:BA:2143:C:H6	1.78	0.48
35:BA:2626:C:H2'	35:BA:2627:G:H8	1.78	0.48
35:BA:2655:G:O2'	35:BA:2656:U:OP2	2.31	0.48
35:BA:2712:U:O2'	35:BA:2713:A:H5'	2.13	0.48
45:BK:20:ALA:H	45:BK:21:PRO:CD	2.26	0.48
52:BT:28:VAL:O	52:BT:28:VAL:HG12	2.13	0.48
53:BU:90:VAL:O	53:BU:92:ARG:N	2.47	0.48
1:CA:91:C:C2	1:CA:92:C:C5	3.02	0.48
1:CA:422:C:O2	1:CA:423:G:N2	2.46	0.48
3:CC:18:TRP:NE1	14:CN:53:LEU:O	2.42	0.48
27:D2:7:ARG:NH2	35:DA:102:G:OP2	2.41	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D3:4:LEU:O	28:D3:36:VAL:HA	2.14	0.48
35:DA:30:G:H2'	35:DA:31:C:C6	2.49	0.48
35:DA:862:G:H2'	35:DA:863:A:O4'	2.12	0.48
35:DA:1028:A:H2'	35:DA:1029:A:C8	2.49	0.48
35:DA:1175:U:O5'	35:DA:1176:G:H5'	2.13	0.48
35:DA:1490:A:H5'	35:DA:1491:G:OP2	2.12	0.48
39:DE:108:SER:HB3	39:DE:165:VAL:HG21	1.95	0.48
39:DE:132:HIS:CD2	39:DE:135:HIS:NE2	2.81	0.48
42:DH:111:HIS:CD2	42:DH:112:PRO:HD2	2.49	0.48
53:DU:95:LEU:HD12	54:DV:11:GLN:HB2	1.93	0.48
57:DY:28:LYS:HB3	57:DY:37:VAL:HB	1.96	0.48
58:DZ:44:PHE:CZ	58:DZ:86:VAL:HG11	2.48	0.48
58:DZ:185:GLU:O	58:DZ:187:ALA:N	2.47	0.48
1:AA:375:U:H2'	1:AA:376:G:H8	1.78	0.48
1:AA:385:C:H2'	1:AA:386:C:H6	1.78	0.48
2:AB:144:ARG:HA	2:AB:147:LYS:HB3	1.95	0.48
3:AC:155:GLY:O	3:AC:156:ARG:HB2	2.13	0.48
4:AD:86:LYS:HE3	4:AD:86:LYS:HB3	1.64	0.48
5:AE:144:THR:O	5:AE:148:VAL:HG23	2.14	0.48
5:AE:147:ASP:O	5:AE:151:LEU:HG	2.13	0.48
10:AJ:4:ILE:H	10:AJ:4:ILE:HD12	1.79	0.48
11:AK:105:VAL:HB	11:AK:108:ILE:HD11	1.95	0.48
16:AP:19:ILE:H	16:AP:19:ILE:HD12	1.79	0.48
34:B9:9:ARG:HH11	34:B9:9:ARG:HB3	1.76	0.48
35:BA:582:G:H2'	35:BA:583:G:C8	2.48	0.48
35:BA:760:G:H2'	35:BA:761:A:O4'	2.14	0.48
35:BA:1331:A:O2'	35:BA:1332:G:C8	2.65	0.48
35:BA:1358:G:O2'	35:BA:1359:A:H5"	2.14	0.48
35:BA:2113:U:H2'	35:BA:2114:A:O4'	2.12	0.48
35:BA:2668:G:H2'	35:BA:2669:G:H8	1.77	0.48
35:BA:2740:A:H2'	35:BA:2741:A:C8	2.48	0.48
35:BA:2807:G:H22	35:BA:2892:A:N6	2.10	0.48
39:BE:108:SER:HB3	39:BE:165:VAL:HG21	1.95	0.48
39:BE:197:ILE:HD11	39:BE:199:ARG:HE	1.78	0.48
40:BF:1:MET:O	40:BF:3:GLU:HG2	2.14	0.48
47:BO:104:ARG:NE	52:BT:33:LYS:HD2	2.29	0.48
52:BT:125:ARG:O	52:BT:128:GLU:HG3	2.14	0.48
1:CA:415:A:H2'	1:CA:416:G:C8	2.49	0.48
1:CA:833:U:H2'	1:CA:834:C:H6	1.77	0.48
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.47	0.48
1:CA:1322:C:O2'	1:CA:1323:G:OP2	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:111:ARG:HH21	2:CB:114:ARG:HG2	1.77	0.48
7:CG:79:ARG:NH1	22:CW:34:G:OP1	2.46	0.48
11:CK:82:VAL:HB	11:CK:108:ILE:HG13	1.96	0.48
13:CM:112:GLY:HA2	13:CM:113:PRO:HD2	1.96	0.48
18:CR:88:LYS:C	18:CR:88:LYS:HD3	2.38	0.48
22:CW:73:A:C5	22:CW:74:C:C4	3.01	0.48
24:CY:296:LYS:HG2	24:CY:299:ARG:NH1	2.29	0.48
26:D1:78:LYS:C	26:D1:80:LEU:H	2.22	0.48
27:D2:47:ASN:HB3	27:D2:48:HIS:H	1.31	0.48
33:D8:50:LEU:C	33:D8:53:PRO:HD2	2.39	0.48
35:DA:214:G:H1'	35:DA:216:A:O2'	2.13	0.48
35:DA:278:A:H2'	35:DA:279:C:C6	2.48	0.48
35:DA:1791:A:OP2	35:DA:1791:A:H8	1.97	0.48
40:DF:68:LYS:C	40:DF:70:THR:H	2.20	0.48
41:DG:82:LEU:CD2	41:DG:83:ARG:H	2.26	0.48
41:DG:88:ILE:HD12	41:DG:88:ILE:N	2.29	0.48
56:DX:55:ASN:HB2	56:DX:80:ILE:HG13	1.95	0.48
57:DY:71:LYS:HB2	57:DY:71:LYS:HZ3	1.79	0.48
1:AA:97:G:C4	1:AA:98:G:C8	3.01	0.48
1:AA:149:A:HO2'	1:AA:150:C:H6	1.57	0.48
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.49	0.48
1:AA:1143:G:H2'	1:AA:1144:G:C8	2.48	0.48
1:AA:1220:G:H2'	1:AA:1221:G:H8	1.78	0.48
2:AB:178:ARG:HD2	8:AH:71:GLY:C	2.39	0.48
3:AC:46:GLU:O	3:AC:47:LEU:HB2	2.14	0.48
3:AC:53:ALA:O	3:AC:54:ARG:HB2	2.12	0.48
4:AD:3:ARG:O	4:AD:5:ILE:HG13	2.13	0.48
4:AD:59:ARG:HE	4:AD:59:ARG:CA	2.23	0.48
6:AF:5:GLU:HB3	18:AR:34:TYR:OH	2.13	0.48
9:AI:93:ARG:NH1	9:AI:102:LEU:HD11	2.28	0.48
16:AP:48:TRP:CD1	16:AP:48:TRP:H	2.32	0.48
24:AY:23:GLU:O	24:AY:26:LEU:HG	2.14	0.48
24:AY:303:ARG:N	24:AY:304:PRO:HD3	2.26	0.48
25:B0:18:ALA:HB3	25:B0:20:ARG:NH1	2.28	0.48
27:B2:14:ARG:HA	27:B2:63:VAL:HG11	1.95	0.48
35:BA:278:A:H2'	35:BA:279:C:C6	2.48	0.48
35:BA:1394:U:H4'	35:BA:1603:A:H4'	1.96	0.48
38:BD:248:SER:HB2	38:BD:249:PRO:HD2	1.96	0.48
43:BI:99:GLU:HG2	43:BI:103:ARG:HH21	1.78	0.48
44:BJ:59:UNK:C	44:BJ:61:UNK:N	2.77	0.48
54:BV:59:ALA:HB2	54:BV:96:ILE:HD13	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:180:U:H2'	1:CA:181:G:H5'	1.95	0.48
1:CA:972:C:OP2	10:CJ:57:LYS:HE2	2.14	0.48
2:CB:27:LYS:HD2	2:CB:193:ASP:HB2	1.96	0.48
2:CB:185:ILE:CG2	2:CB:199:TYR:HB2	2.40	0.48
3:CC:46:GLU:O	3:CC:47:LEU:HB2	2.14	0.48
10:CJ:49:VAL:CG2	14:CN:41:ARG:HB2	2.43	0.48
12:CL:53:ARG:HG2	12:CL:93:LEU:HD11	1.96	0.48
17:CQ:26:GLN:O	17:CQ:27:PHE:HB3	2.14	0.48
19:CS:6:LYS:O	19:CS:7:LYS:HD3	2.13	0.48
35:DA:52:A:H2'	35:DA:53:A:C8	2.49	0.48
35:DA:364:C:C2'	35:DA:365:C:H5'	2.44	0.48
35:DA:626:U:O2	48:DP:105:LEU:HG	2.14	0.48
35:DA:812:C:H3'	48:DP:25:SER:HB2	1.95	0.48
35:DA:813:U:H2'	35:DA:814:C:C6	2.48	0.48
35:DA:834:C:C2	35:DA:835:A:C8	3.01	0.48
35:DA:1099:G:C5'	45:DK:4:VAL:HG21	2.44	0.48
35:DA:1234:U:H2'	35:DA:1235:G:O4'	2.13	0.48
35:DA:1300:U:H4'	35:DA:1301:A:O5'	2.13	0.48
35:DA:2176:A:H4'	37:DC:222:SER:HB3	1.94	0.48
35:DA:2626:C:H2'	35:DA:2627:G:H8	1.79	0.48
48:DP:16:ARG:HH12	48:DP:18:ARG:CB	2.25	0.48
49:DQ:16:ARG:CB	49:DQ:18:LYS:HZ1	2.26	0.48
54:DV:55:ALA:HA	54:DV:101:GLY:HA2	1.95	0.48
1:AA:848:C:H2'	1:AA:849:C:C6	2.48	0.48
1:AA:1119:C:H2'	1:AA:1120:G:H8	1.79	0.48
1:AA:1275:A:H2'	1:AA:1276:G:H8	1.79	0.48
6:AF:88:VAL:O	6:AF:88:VAL:HG12	2.14	0.48
7:AG:135:VAL:HG12	7:AG:139:GLU:OE2	2.14	0.48
9:AI:116:LYS:HD3	9:AI:119:ALA:O	2.14	0.48
22:AW:64:A:H2'	22:AW:65:G:H8	1.77	0.48
35:BA:195:A:H5"	35:BA:196:A:OP2	2.14	0.48
35:BA:279:C:N3	35:BA:361:G:N2	2.55	0.48
35:BA:640:C:H2'	35:BA:641:C:C6	2.49	0.48
35:BA:1012:U:P	53:BU:70:ARG:HH22	2.36	0.48
35:BA:1562:A:H2'	35:BA:1563:G:H8	1.77	0.48
35:BA:2648:C:H2'	35:BA:2649:U:H6	1.77	0.48
35:BA:2689:U:H4'	35:BA:2690:C:O5'	2.14	0.48
39:BE:92:THR:O	39:BE:95:ILE:HG12	2.14	0.48
41:BG:142:PRO:C	41:BG:144:ILE:H	2.22	0.48
48:BP:17:LYS:O	48:BP:18:ARG:C	2.56	0.48
50:BR:103:ARG:HH12	50:BR:110:PRO:HD3	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:91:PRO:HG2	2:CB:155:LEU:HB2	1.94	0.48
3:CC:16:ARG:HB2	3:CC:16:ARG:CZ	2.44	0.48
3:CC:179:ARG:O	3:CC:206:GLU:HG3	2.13	0.48
6:CF:75:LEU:O	6:CF:79:LEU:HG	2.14	0.48
13:CM:124:PRO:N	24:CY:163:GLY:H	2.11	0.48
22:CW:19:G:C4'	22:CW:57:G:H22	2.27	0.48
35:DA:565:C:OP2	54:DV:78:LYS:N	2.37	0.48
35:DA:1419:A:O2'	35:DA:1420:U:H5"	2.14	0.48
35:DA:1605:C:H2'	35:DA:1606:G:O4'	2.13	0.48
35:DA:2074:U:H2'	35:DA:2075:U:C6	2.49	0.48
35:DA:2492:U:H2'	35:DA:2493:U:C6	2.49	0.48
36:DB:66:A:O2'	36:DB:67:G:O5'	2.29	0.48
39:DE:48:GLN:CD	39:DE:78:LEU:HD13	2.39	0.48
45:DK:60:TYR:OH	45:DK:66:THR:OG1	2.32	0.48
54:DV:81:TYR:C	54:DV:82:ARG:HD2	2.38	0.48
57:DY:96:ILE:HG22	57:DY:97:ARG:N	2.29	0.48
1:AA:513:C:H2'	1:AA:514:C:C6	2.49	0.48
1:AA:741:G:H5"	15:AO:59:MET:HE1	1.95	0.48
1:AA:1345:U:H5"	9:AI:120:ARG:HH11	1.77	0.48
1:AA:1479:C:H2'	1:AA:1480:G:H8	1.78	0.48
3:AC:47:LEU:HD23	3:AC:52:LEU:HD13	1.94	0.48
10:AJ:78:ASN:O	10:AJ:82:ILE:HG12	2.12	0.48
12:AL:70:ILE:HD13	12:AL:77:LEU:HD12	1.96	0.48
13:AM:67:GLU:O	13:AM:69:GLU:N	2.47	0.48
35:BA:538:G:H2'	35:BA:539:G:C8	2.48	0.48
35:BA:1243:G:O2'	48:BP:9:ASN:HA	2.14	0.48
35:BA:1499:C:C2	35:BA:1500:G:C8	3.01	0.48
35:BA:1568:G:OP1	38:BD:63:ARG:NH1	2.41	0.48
35:BA:2313:C:H4'	41:BG:91:ARG:HG3	1.93	0.48
35:BA:2455:G:H2'	35:BA:2456:C:C6	2.48	0.48
35:BA:2752:C:H2'	35:BA:2753:A:O4'	2.13	0.48
36:BB:80:U:H2'	36:BB:81:G:N2	2.14	0.48
45:BK:99:ILE:HG23	45:BK:103:GLN:HB3	1.96	0.48
52:BT:55:ASN:O	52:BT:57:PHE:N	2.47	0.48
56:BX:57:LEU:HD11	56:BX:78:LYS:HE2	1.96	0.48
58:BZ:23:LYS:HA	58:BZ:40:ASP:HA	1.96	0.48
1:CA:617:G:H8	1:CA:617:G:O5'	1.96	0.48
1:CA:715:A:H2'	1:CA:716:A:C8	2.49	0.48
1:CA:1241:G:H2'	1:CA:1242:C:H6	1.79	0.48
1:CA:1269:A:H2	1:CA:1312:G:N3	2.12	0.48
1:CA:1440:C:H2'	1:CA:1441:G:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:128:VAL:HG12	4:CD:129:ASN:N	2.19	0.48
4:CD:156:GLU:O	4:CD:159:ARG:N	2.44	0.48
7:CG:145:ALA:O	7:CG:147:ALA:N	2.40	0.48
16:CP:42:ARG:C	16:CP:43:LYS:HD2	2.39	0.48
22:CW:48:C:C5	22:CW:59:U:H1'	2.49	0.48
24:CY:186:VAL:HB	24:CY:309:SER:O	2.13	0.48
25:D0:36:ILE:HG23	35:DA:2354:G:O2'	2.13	0.48
29:D4:10:VAL:HB	29:D4:11:PRO:HD2	1.96	0.48
35:DA:272(B):G:H2'	35:DA:272(C):G:H8	1.78	0.48
35:DA:1068:G:N2	35:DA:1096:A:H5'	2.28	0.48
35:DA:1140:C:H5"	46:DN:66:LYS:NZ	2.29	0.48
35:DA:1289:C:H2'	35:DA:1290:C:H6	1.79	0.48
35:DA:1536:C:H2'	35:DA:1537:G:O4'	2.14	0.48
35:DA:2152:G:H2'	35:DA:2153:G:C8	2.49	0.48
40:DF:34:TRP:HB2	48:DP:10:PRO:O	2.14	0.48
41:DG:96:ARG:O	41:DG:99:MET:HB3	2.13	0.48
58:DZ:179:ASP:C	58:DZ:181:GLU:H	2.21	0.48
1:AA:411:A:N6	1:AA:413:G:N3	2.62	0.48
1:AA:688:G:H2'	1:AA:689:C:C6	2.48	0.48
1:AA:771:G:H2'	1:AA:772:U:C6	2.49	0.48
1:AA:794:A:H4'	1:AA:1521:G:O2'	2.14	0.48
1:AA:923:A:OP1	5:AE:21:ALA:HB2	2.12	0.48
2:AB:223:ILE:HG12	2:AB:226:ARG:CZ	2.43	0.48
10:AJ:63:PHE:CE1	14:AN:58:LYS:HG2	2.49	0.48
11:AK:73:MET:HE1	11:AK:102:GLY:HA3	1.96	0.48
20:AT:89:ARG:HD2	20:AT:104:LEU:HD11	1.96	0.48
29:B4:14:ILE:HB	29:B4:22:ILE:HB	1.95	0.48
33:B8:51:ALA:N	33:B8:53:PRO:HD2	2.28	0.48
35:BA:1429:G:H2'	35:BA:1430:C:C6	2.49	0.48
35:BA:1532:C:H2'	35:BA:1533:G:O4'	2.14	0.48
35:BA:1992:G:N2	35:BA:1996:C:O2'	2.47	0.48
35:BA:2033:A:O2'	35:BA:2035:G:OP2	2.25	0.48
35:BA:2688:U:H5	35:BA:2720:U:OP2	1.97	0.48
43:BI:126:TYR:O	43:BI:127:VAL:HG23	2.13	0.48
46:BN:67:LEU:O	46:BN:68:GLU:HB2	2.14	0.48
51:BS:89:ARG:HH11	51:BS:92:TYR:HA	1.79	0.48
58:BZ:175:VAL:HB	58:BZ:176:PRO:HD2	1.95	0.48
1:CA:188:C:H2'	1:CA:189:G:H8	1.78	0.48
1:CA:939:G:H2'	1:CA:940:C:C6	2.49	0.48
1:CA:1372:U:H2'	1:CA:1373:G:O4'	2.13	0.48
4:CD:9:CYS:HB3	4:CD:32:ALA:HB2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:120:LYS:C	13:CM:121:LYS:HD2	2.39	0.48
22:CW:16:U:H5"	22:CW:60:U:O2	2.14	0.48
24:CY:244:THR:HA	35:DA:2573:C:H41	1.78	0.48
29:D4:14:ILE:HD12	29:D4:14:ILE:H	1.79	0.48
33:D8:52:LYS:N	33:D8:53:PRO:HD2	2.29	0.48
35:DA:654(B):C:H42	35:DA:654(R):C:H42	1.61	0.48
35:DA:1059:G:H3'	35:DA:1060:U:H2'	1.96	0.48
35:DA:1495:A:H2'	35:DA:1496:A:C2	2.48	0.48
35:DA:1748:G:H5'	35:DA:1748:G:H8	1.78	0.48
35:DA:2008:C:H2'	35:DA:2009:G:H8	1.78	0.48
35:DA:2063:C:C4	35:DA:2064:C:C5	3.02	0.48
35:DA:2092:U:H4'	35:DA:2093:G:H5"	1.96	0.48
39:DE:9:VAL:HG22	39:DE:25:VAL:HB	1.96	0.48
46:DN:9:VAL:HG12	46:DN:10:GLU:N	2.28	0.48
49:DQ:14:ARG:HG2	49:DQ:41:TRP:CH2	2.45	0.48
52:DT:45:PHE:HE2	52:DT:63:VAL:HB	1.78	0.48
53:DU:92:ARG:O	53:DU:93:LYS:C	2.57	0.48
55:DW:92:ARG:HH11	55:DW:92:ARG:CB	2.19	0.48
58:DZ:112:ARG:HD2	58:DZ:112:ARG:HA	1.62	0.48
1:AA:216:G:H2'	1:AA:217:C:C6	2.49	0.47
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.96	0.47
1:AA:427:U:OP2	1:AA:428:G:O2'	2.32	0.47
1:AA:543:C:H2'	1:AA:544:G:H8	1.78	0.47
1:AA:551:U:H2'	1:AA:552:U:H6	1.79	0.47
1:AA:587:G:N2	1:AA:754:C:OP2	2.47	0.47
1:AA:715:A:H2'	1:AA:716:A:C8	2.49	0.47
1:AA:1158:C:H42	1:AA:1181:G:H22	1.61	0.47
1:AA:1300:G:O2'	1:AA:1301:U:H6	1.97	0.47
2:AB:14:GLY:O	2:AB:15:VAL:HG13	2.14	0.47
4:AD:145:GLU:HG2	4:AD:184:LYS:NZ	2.29	0.47
10:AJ:37:PRO:HA	10:AJ:72:VAL:HG22	1.96	0.47
24:AY:32:ARG:HB3	24:AY:38:LEU:HD22	1.96	0.47
28:B3:1:MET:HE3	28:B3:39:ASP:HB3	1.95	0.47
31:B6:13:CYS:O	31:B6:21:TYR:HA	2.14	0.47
33:B8:26:LYS:HA	33:B8:47:LYS:HZ2	1.79	0.47
35:BA:281:G:H21	35:BA:359:A:N6	2.07	0.47
35:BA:545:C:H2'	35:BA:547:A:C8	2.49	0.47
35:BA:1188:U:C4'	54:BV:79:VAL:HG22	2.44	0.47
35:BA:2110:G:C6	35:BA:2120:G:C8	3.01	0.47
35:BA:2693:A:H2'	35:BA:2694:G:H8	1.79	0.47
36:BB:80:U:C2	36:BB:81:G:N2	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:42:GLY:O	41:BG:44:GLY:N	2.45	0.47
45:BK:21:PRO:HB2	45:BK:22:PRO:CD	2.38	0.47
50:BR:47:PHE:O	50:BR:51:LEU:HD13	2.14	0.47
58:BZ:150:LEU:O	58:BZ:151:HIS:HB3	2.13	0.47
1:CA:192:U:H1'	20:CT:103:GLY:HA2	1.95	0.47
1:CA:519:C:OP2	12:CL:50:SER:OG	2.30	0.47
1:CA:645:C:H2'	1:CA:646:U:C6	2.49	0.47
1:CA:1060:C:N4	1:CA:1198:G:O6	2.47	0.47
1:CA:1150:U:O4	1:CA:1151:A:N6	2.47	0.47
2:CB:121:LEU:O	2:CB:127:ILE:HD11	2.14	0.47
5:CE:76:ILE:HD11	5:CE:142:LEU:HD21	1.95	0.47
8:CH:40:ALA:O	8:CH:42:GLU:N	2.47	0.47
19:CS:18:LYS:O	19:CS:21:GLU:HG2	2.14	0.47
22:CV:48:C:H2'	22:CV:59:U:H4'	1.95	0.47
35:DA:52:A:H2'	35:DA:53:A:H8	1.79	0.47
35:DA:654(D):G:H22	35:DA:654(P):C:N4	2.12	0.47
35:DA:900:A:C5	35:DA:901:A:C8	3.02	0.47
35:DA:1080:C:H2'	35:DA:1081:U:H6	1.78	0.47
35:DA:1113:U:H2'	35:DA:1114:G:C8	2.48	0.47
35:DA:1882:C:H3'	35:DA:1883:G:H8	1.78	0.47
35:DA:1923:U:H2'	35:DA:1924:C:C6	2.48	0.47
35:DA:2130:U:H2'	35:DA:2158:A:N1	2.28	0.47
35:DA:2626:C:H2'	35:DA:2627:G:C8	2.49	0.47
35:DA:2790:A:O2'	35:DA:2893:G:N2	2.45	0.47
40:DF:117:ARG:NH2	40:DF:187:VAL:HA	2.29	0.47
42:DH:44:VAL:O	42:DH:45:VAL:C	2.57	0.47
42:DH:111:HIS:CG	42:DH:112:PRO:HD2	2.48	0.47
48:DP:17:LYS:O	48:DP:18:ARG:C	2.56	0.47
49:DQ:21:THR:OG1	49:DQ:99:PRO:O	2.31	0.47
1:AA:894:G:H2'	1:AA:895:G:H8	1.79	0.47
1:AA:1128:C:C4	1:AA:1139:G:C4	3.02	0.47
2:AB:71:VAL:HG13	2:AB:93:VAL:HB	1.95	0.47
7:AG:78:ARG:HG2	7:AG:79:ARG:N	2.29	0.47
10:AJ:58:ASP:O	10:AJ:59:SER:C	2.57	0.47
14:AN:7:ILE:C	14:AN:9:LYS:H	2.22	0.47
18:AR:60:ALA:O	18:AR:63:GLN:HB3	2.14	0.47
35:BA:191:A:HO2'	35:BA:678:C:HO2'	1.62	0.47
35:BA:582:G:H2'	35:BA:583:G:H8	1.79	0.47
35:BA:768:G:O2'	35:BA:1379:A:N6	2.47	0.47
35:BA:1079:C:O2	45:BK:129:GLY:HA3	2.14	0.47
35:BA:1384:A:N3	35:BA:1405:U:H1'	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2648:C:H2'	35:BA:2649:U:C6	2.49	0.47
35:BA:2692:C:H2'	35:BA:2693:A:H8	1.78	0.47
38:BD:133:LEU:HD11	38:BD:175:LEU:HD11	1.95	0.47
42:BH:111:HIS:CD2	42:BH:112:PRO:HD2	2.49	0.47
57:BY:28:LYS:HB3	57:BY:37:VAL:HB	1.95	0.47
1:CA:41:G:H2'	1:CA:42:G:C8	2.48	0.47
1:CA:528:C:N4	12:CL:49:ASN:OD1	2.45	0.47
1:CA:553:A:H2'	1:CA:554:C:C6	2.48	0.47
1:CA:840:C:H1'	1:CA:848:C:N4	2.29	0.47
1:CA:963:G:N2	10:CJ:55:LYS:HD2	2.29	0.47
1:CA:1512:U:H2'	1:CA:1513:A:H8	1.79	0.47
4:CD:14:ARG:HA	4:CD:39:PRO:HB3	1.97	0.47
4:CD:126:ILE:HG22	4:CD:127:THR:N	2.28	0.47
14:CN:26:ARG:HB2	14:CN:43:CYS:SG	2.54	0.47
15:CO:64:ARG:HH12	15:CO:88:ARG:NH1	2.12	0.47
16:CP:19:ILE:H	16:CP:19:ILE:HD12	1.79	0.47
29:D4:14:ILE:HD11	29:D4:24:THR:OG1	2.13	0.47
35:DA:271(Q):G:O2'	35:DA:271(R):G:H8	1.96	0.47
35:DA:588:U:H2'	35:DA:589:C:C6	2.49	0.47
35:DA:892:G:H2'	35:DA:893:C:H6	1.78	0.47
35:DA:1366:A:H2'	35:DA:1367:A:O4'	2.14	0.47
35:DA:2115:G:H21	35:DA:2117:A:H62	1.63	0.47
35:DA:2657:A:O2'	42:DH:160:LYS:HE2	2.13	0.47
35:DA:2668:G:H2'	35:DA:2669:G:H8	1.78	0.47
38:DD:44:ASN:ND2	38:DD:47:GLY:O	2.46	0.47
39:DE:143:ASN:HB2	39:DE:147:PRO:HD2	1.96	0.47
43:DI:113:ARG:HB2	43:DI:130:TYR:HE1	1.78	0.47
1:AA:396:G:O2'	1:AA:398:C:OP1	2.28	0.47
1:AA:399:G:H2'	1:AA:400:C:C6	2.49	0.47
1:AA:476:G:H2'	1:AA:477:A:H8	1.79	0.47
1:AA:1061:G:H5'	10:AJ:56:HIS:HB3	1.96	0.47
1:AA:1231:G:O3'	9:AI:126:SER:OG	2.32	0.47
2:AB:50:GLU:OE1	2:AB:200:ILE:HB	2.13	0.47
2:AB:106:LYS:O	2:AB:110:GLN:HG3	2.13	0.47
2:AB:187:LEU:HA	2:AB:201:ILE:HB	1.96	0.47
15:AO:26:GLU:OE2	15:AO:77:ARG:NH1	2.47	0.47
24:AY:299:ARG:HD3	24:AY:303:ARG:HH22	1.79	0.47
26:B1:62:VAL:HG11	26:B1:70:VAL:HG21	1.95	0.47
27:B2:69:ARG:HG3	27:B2:69:ARG:HH11	1.78	0.47
35:BA:270:A:OP2	35:BA:271(X):G:N2	2.47	0.47
35:BA:811:U:OP2	48:BP:24:GLY:HA2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:870:A:P	49:BQ:6:ARG:HH21	2.37	0.47
35:BA:1800:C:OP1	38:BD:266:SER:OG	2.19	0.47
37:BC:16:ASP:HB3	37:BC:19:LYS:HB2	1.96	0.47
38:BD:24:ILE:O	38:BD:25:THR:O	2.32	0.47
38:BD:209:ALA:C	38:BD:210:GLY:O	2.57	0.47
45:BK:41:PHE:C	45:BK:43:ALA:H	2.23	0.47
48:BP:88:LEU:H	48:BP:88:LEU:HD12	1.79	0.47
49:BQ:16:ARG:O	49:BQ:17:LEU:HD23	2.14	0.47
1:CA:135:C:H2'	1:CA:136:C:H5'	1.96	0.47
1:CA:227:G:H2'	1:CA:228:A:C8	2.50	0.47
1:CA:287:U:H2'	1:CA:288:A:C8	2.48	0.47
1:CA:1238:A:N7	1:CA:1301:U:O4	2.47	0.47
24:CY:239:GLY:O	24:CY:242:VAL:HG12	2.14	0.47
33:D8:17:THR:OG1	35:DA:651:G:OP1	2.28	0.47
35:DA:242:G:O2'	35:DA:254:G:O6	2.26	0.47
35:DA:1170:G:H1	35:DA:1179:C:H42	1.62	0.47
35:DA:2101:G:H2'	35:DA:2102:U:C6	2.49	0.47
35:DA:2227:A:H5"	38:DD:263:ARG:NH1	2.29	0.47
38:DD:68:LYS:HB2	38:DD:70:TRP:CZ2	2.49	0.47
38:DD:248:SER:HB2	38:DD:249:PRO:HD2	1.97	0.47
41:DG:86:MET:O	41:DG:87:PRO:O	2.33	0.47
42:DH:29:PRO:HD2	42:DH:79:VAL:O	2.14	0.47
42:DH:74:ASN:OD1	42:DH:138:LYS:HD3	2.14	0.47
45:DK:54:PRO:HG3	45:DK:71:THR:O	2.13	0.47
46:DN:18:ALA:HB1	46:DN:21:LYS:HB2	1.96	0.47
47:DO:107:ARG:NH2	52:DT:35:LYS:HD2	2.29	0.47
48:DP:41:ARG:NH1	48:DP:45:LEU:HG	2.29	0.47
52:DT:89:VAL:C	52:DT:91:ARG:H	2.22	0.47
1:AA:593:G:H1	1:AA:646:U:H3	1.62	0.47
1:AA:766:A:OP2	61:AA:1701:HOH:O	2.20	0.47
1:AA:1427:U:H2'	1:AA:1428:A:C8	2.50	0.47
2:AB:19:HIS:CG	2:AB:20:GLU:H	2.32	0.47
2:AB:77:ALA:O	2:AB:81:VAL:HG23	2.14	0.47
8:AH:40:ALA:C	8:AH:42:GLU:N	2.69	0.47
18:AR:87:ARG:HB3	18:AR:87:ARG:NH1	2.30	0.47
25:B0:16:SER:OG	35:BA:2261:C:H3'	2.14	0.47
26:B1:75:GLU:HA	26:B1:75:GLU:OE2	2.13	0.47
26:B1:86:SER:O	26:B1:90:ILE:HG12	2.13	0.47
27:B2:50:ILE:O	27:B2:54:LYS:HB2	2.15	0.47
31:B6:12:GLU:HB3	31:B6:21:TYR:HD2	1.78	0.47
33:B8:34:TRP:CG	33:B8:35:GLN:N	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:914:C:H2'	35:BA:915:C:H5'	1.95	0.47
35:BA:1771:C:H2'	35:BA:1772:G:C8	2.50	0.47
50:BR:28:LEU:HD12	50:BR:44:LEU:HD11	1.97	0.47
52:BT:61:PHE:CE1	52:BT:76:PHE:HB2	2.49	0.47
54:BV:22:VAL:O	54:BV:23:GLU:HB2	2.14	0.47
57:BY:87:LYS:HG3	57:BY:89:PHE:H	1.79	0.47
1:CA:262:A:H2'	1:CA:263:A:C8	2.50	0.47
1:CA:501:C:H2'	1:CA:502:G:H8	1.79	0.47
1:CA:1076:C:C2	1:CA:1082:G:N2	2.82	0.47
4:CD:17:VAL:HG12	4:CD:17:VAL:O	2.15	0.47
4:CD:33:MET:O	4:CD:35:ARG:N	2.46	0.47
4:CD:117:ALA:O	4:CD:121:VAL:HG23	2.14	0.47
10:CJ:6:ILE:O	10:CJ:6:ILE:HD12	2.13	0.47
10:CJ:26:ALA:HB3	10:CJ:85:LEU:HD21	1.97	0.47
17:CQ:67:LYS:O	17:CQ:69:LYS:N	2.47	0.47
24:CY:6:LEU:C	24:CY:8:GLN:H	2.23	0.47
24:CY:304:PRO:C	24:CY:306:GLU:H	2.22	0.47
28:D3:25:ALA:HB2	35:DA:849:A:N1	2.29	0.47
31:D6:26:ASN:N	31:D6:26:ASN:OD1	2.48	0.47
35:DA:272(J):C:N3	35:DA:274:G:C8	2.83	0.47
35:DA:392:C:H5"	35:DA:409:C:H5"	1.95	0.47
35:DA:1316:U:O2'	35:DA:1317:A:H5'	2.13	0.47
35:DA:1429:G:H2'	35:DA:1430:C:C6	2.50	0.47
35:DA:1711:C:H2'	35:DA:1712:C:H6	1.80	0.47
35:DA:2208:A:H1'	35:DA:2219:G:C4	2.50	0.47
35:DA:2852:G:H1	35:DA:2865:U:H3	1.62	0.47
38:DD:80:ALA:HB3	38:DD:94:LEU:HD13	1.97	0.47
47:DO:93:PRO:HD3	47:DO:114:ILE:HD11	1.96	0.47
54:DV:21:ARG:HA	54:DV:92:THR:O	2.15	0.47
57:DY:2:ARG:O	57:DY:4:LYS:HG3	2.14	0.47
57:DY:44:ILE:O	57:DY:62:GLU:HB3	2.14	0.47
1:AA:662:G:O2'	1:AA:836:G:OP1	2.33	0.47
1:AA:954:G:H5'	13:AM:120:LYS:HZ1	1.80	0.47
1:AA:1268:A:N3	1:AA:1326:C:O2'	2.43	0.47
1:AA:1355:G:H2'	1:AA:1356:G:C8	2.50	0.47
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.49	0.47
2:AB:46:LYS:HD3	2:AB:46:LYS:HA	1.66	0.47
4:AD:173:TRP:CD2	4:AD:189:PRO:HB3	2.50	0.47
13:AM:8:GLU:C	13:AM:9:ILE:HD12	2.40	0.47
28:B3:44:ARG:O	28:B3:48:GLU:HG2	2.14	0.47
30:B5:2:ALA:CA	35:BA:2015:A:H1'	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:26:ASN:O	31:B6:27:LYS:HD3	2.13	0.47
33:B8:50:LEU:C	33:B8:53:PRO:HD2	2.40	0.47
35:BA:1175:U:O5'	35:BA:1176:G:H8	1.97	0.47
35:BA:1831:G:C4	35:BA:1975:G:N2	2.83	0.47
35:BA:2184:G:H8	35:BA:2184:G:O5'	1.97	0.47
35:BA:2286:A:H4'	35:BA:2287:A:O4'	2.14	0.47
35:BA:2801(A):A:O4'	35:BA:2802:G:H2'	2.15	0.47
35:BA:2873:A:O2'	35:BA:2874:C:H5'	2.15	0.47
41:BG:74:LYS:HD3	41:BG:74:LYS:N	2.29	0.47
41:BG:139:LEU:HA	41:BG:144:ILE:CG2	2.45	0.47
47:BO:65:THR:OG1	47:BO:69:ILE:HD11	2.14	0.47
1:CA:593:G:H2'	1:CA:594:G:H8	1.78	0.47
1:CA:701:C:OP1	1:CA:702:A:O2'	2.21	0.47
1:CA:881:G:H2'	1:CA:882:C:O4'	2.14	0.47
1:CA:1007:C:N4	1:CA:1023:G:O6	2.48	0.47
1:CA:1040:U:H2'	1:CA:1041:A:H8	1.80	0.47
4:CD:18:LYS:HB2	4:CD:33:MET:HG2	1.97	0.47
4:CD:33:MET:SD	4:CD:37:PRO:HA	2.55	0.47
15:CO:70:LEU:HD11	15:CO:77:ARG:HG3	1.96	0.47
17:CQ:10:VAL:HG23	17:CQ:55:ASP:O	2.14	0.47
35:DA:1175:U:H1'	35:DA:1177:A:N1	2.30	0.47
35:DA:1474:C:H3'	35:DA:1475:G:H8	1.79	0.47
35:DA:1841:U:C2	35:DA:1842:G:C8	3.02	0.47
38:DD:24:ILE:O	38:DD:25:THR:O	2.32	0.47
40:DF:11:VAL:O	40:DF:12:LEU:C	2.58	0.47
45:DK:9:LYS:O	45:DK:9:LYS:HG3	2.13	0.47
51:DS:87:PHE:HB2	51:DS:106:ARG:CD	2.43	0.47
1:AA:849:C:H2'	1:AA:850:U:C6	2.50	0.47
1:AA:955:U:H2'	1:AA:956:U:C6	2.50	0.47
1:AA:1325:C:H5'	21:AU:15:ARG:HE	1.79	0.47
2:AB:219:VAL:O	2:AB:222:ILE:HB	2.15	0.47
4:AD:182:LYS:HB3	4:AD:183:GLY:H	1.58	0.47
6:AF:94:GLN:HB3	18:AR:32:ARG:HH21	1.79	0.47
7:AG:69:VAL:HG22	7:AG:135:VAL:HG22	1.97	0.47
17:AQ:67:LYS:C	17:AQ:69:LYS:H	2.21	0.47
24:AY:189:LEU:HD21	24:AY:191:ARG:CG	2.45	0.47
29:B4:22:ILE:HG22	29:B4:24:THR:HG23	1.96	0.47
31:B6:26:ASN:OD1	31:B6:26:ASN:N	2.47	0.47
35:BA:974:G:N2	35:BA:989:G:H1'	2.29	0.47
35:BA:1523:U:H2'	35:BA:1524:G:H8	1.79	0.47
35:BA:1653:G:H3'	50:BR:4:LEU:CD2	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1676:A:H2	35:BA:1993:U:H5'	1.80	0.47
35:BA:2844:G:H3'	35:BA:2845:G:H8	1.79	0.47
45:BK:20:ALA:HA	45:BK:25:PRO:HD3	1.97	0.47
48:BP:108:LYS:C	48:BP:110:TYR:H	2.23	0.47
52:BT:35:LYS:NZ	52:BT:41:ARG:HE	2.12	0.47
1:CA:524:G:H2'	1:CA:525:C:C6	2.50	0.47
1:CA:538:G:OP2	12:CL:115:LYS:HG3	2.14	0.47
1:CA:807:A:H2'	1:CA:808:C:H6	1.80	0.47
1:CA:1235:U:H4'	21:CU:3:LYS:HB2	1.97	0.47
3:CC:119:ARG:HH11	3:CC:119:ARG:HG3	1.79	0.47
6:CF:19:LEU:HD23	6:CF:19:LEU:O	2.15	0.47
8:CH:120:THR:OG1	8:CH:123:GLU:HG3	2.15	0.47
10:CJ:90:LEU:N	10:CJ:91:PRO:HD3	2.29	0.47
11:CK:33:THR:HB	11:CK:37:GLY:C	2.40	0.47
13:CM:90:LEU:HD13	13:CM:94:ARG:NH2	2.30	0.47
18:CR:45:SER:HB3	18:CR:51:LEU:HD21	1.97	0.47
24:CY:14:ARG:HD3	24:CY:350:GLU:OE2	2.15	0.47
33:D8:22:VAL:HB	33:D8:53:PRO:HB3	1.95	0.47
35:DA:315:G:H2'	35:DA:316:C:C6	2.50	0.47
35:DA:675:A:C8	35:DA:804:A:C6	3.02	0.47
35:DA:2102:U:H2'	35:DA:2103:C:C6	2.49	0.47
35:DA:2135:A:N6	35:DA:2136:C:H42	2.12	0.47
37:DC:7:ARG:HD3	37:DC:35:THR:O	2.15	0.47
37:DC:195:ARG:HG3	37:DC:195:ARG:HH11	1.79	0.47
49:DQ:67:ARG:HG2	49:DQ:67:ARG:HH11	1.79	0.47
1:AA:1082:G:H2'	1:AA:1083:U:O4'	2.15	0.47
1:AA:1225:A:H2'	1:AA:1225:A:N3	2.30	0.47
1:AA:1232:U:H5"	9:AI:124:GLN:O	2.14	0.47
1:AA:1401:G:H8	1:AA:1401:G:O5'	1.98	0.47
2:AB:86:GLU:C	2:AB:88:ALA:H	2.23	0.47
4:AD:117:ALA:O	4:AD:121:VAL:HG23	2.14	0.47
8:AH:69:ARG:NE	8:AH:75:ARG:O	2.48	0.47
9:AI:15:ALA:HB2	9:AI:65:VAL:HG23	1.95	0.47
9:AI:118:LYS:O	9:AI:119:ALA:HB3	2.14	0.47
13:AM:33:ALA:O	13:AM:37:THR:OG1	2.28	0.47
16:AP:51:VAL:HG11	16:AP:74:LEU:CD2	2.45	0.47
22:AV:57:G:H2'	22:AV:58:A:H5'	1.96	0.47
22:AW:23:A:C2	22:AW:24:G:C5	3.02	0.47
24:AY:114:LYS:HD2	24:AY:115:ASN:OD1	2.14	0.47
35:BA:94(A):G:H2'	35:BA:95:G:O4'	2.15	0.47
35:BA:265:A:H1'	35:BA:266:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:598:G:H5'	48:BP:15:ARG:HB2	1.96	0.47
35:BA:754:C:H2'	35:BA:755:C:C6	2.50	0.47
35:BA:793:A:OP2	35:BA:2071:A:O2'	2.28	0.47
35:BA:1049:C:H2'	35:BA:1050:A:H8	1.79	0.47
35:BA:1204:A:O2'	35:BA:1205:U:OP2	2.33	0.47
35:BA:1526:G:H2'	35:BA:1527:G:O4'	2.15	0.47
35:BA:1779:U:H5"	35:BA:1780:A:H5'	1.96	0.47
35:BA:2064:C:H2'	35:BA:2065:C:H6	1.78	0.47
35:BA:2135:A:H61	35:BA:2157:G:H1'	1.78	0.47
35:BA:2163:C:H3'	35:BA:2164:C:H6	1.80	0.47
35:BA:2469:A:H2	35:BA:2481:G:H21	1.61	0.47
35:BA:2663:G:H2'	35:BA:2664:G:O4'	2.15	0.47
35:BA:2698:U:H2'	35:BA:2699:C:H6	1.75	0.47
38:BD:108:PRO:HA	38:BD:196:VAL:O	2.15	0.47
42:BH:109:PHE:C	42:BH:111:HIS:H	2.23	0.47
45:BK:11:GLN:HA	45:BK:54:PRO:HA	1.97	0.47
48:BP:97:PRO:C	48:BP:99:LEU:N	2.71	0.47
49:BQ:108:GLY:HA3	58:BZ:116:VAL:CG2	2.45	0.47
52:BT:98:LYS:HB3	52:BT:100:TYR:CE1	2.50	0.47
52:BT:126:ALA:C	52:BT:128:GLU:H	2.23	0.47
58:BZ:102:LEU:HD23	58:BZ:104:PHE:CE1	2.50	0.47
1:CA:105:G:H2'	1:CA:106:C:C6	2.49	0.47
1:CA:264:U:O2'	17:CQ:64:PRO:O	2.32	0.47
1:CA:334:C:H2'	1:CA:335:C:H6	1.80	0.47
1:CA:486:U:H2'	1:CA:487:A:H8	1.79	0.47
1:CA:537:G:H5"	12:CL:113:ARG:NH1	2.28	0.47
1:CA:683:G:H2'	1:CA:684:A:H8	1.78	0.47
1:CA:738:C:H5"	6:CF:69:GLU:HB2	1.97	0.47
1:CA:1212:U:H2'	24:CY:78:GLU:OE2	2.15	0.47
1:CA:1349:A:H5"	9:CI:121:ARG:HB2	1.96	0.47
2:CB:98:LEU:O	2:CB:101:MET:HG3	2.14	0.47
2:CB:170:GLU:O	2:CB:174:VAL:HG23	2.14	0.47
3:CC:16:ARG:NH2	3:CC:182:ILE:O	2.48	0.47
5:CE:101:ILE:HD11	5:CE:119:LEU:CD2	2.45	0.47
6:CF:9:VAL:HB	6:CF:87:ARG:HB2	1.96	0.47
6:CF:62:TRP:CH2	6:CF:64:GLN:HB2	2.50	0.47
8:CH:20:TYR:HD1	8:CH:65:TYR:CD2	2.32	0.47
10:CJ:25:GLU:C	10:CJ:27:ALA:H	2.23	0.47
10:CJ:63:PHE:HA	14:CN:59:ALA:H	1.80	0.47
18:CR:66:LEU:O	18:CR:70:ILE:HG13	2.15	0.47
22:CW:2:C:H2'	22:CW:3:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CW:19:G:H4'	22:CW:57:G:H22	1.80	0.47
22:CW:53:G:HO2'	37:DC:55:SER:HG	1.50	0.47
24:CY:117:ILE:HB	24:CY:211:ILE:HG13	1.95	0.47
27:D2:2:LYS:O	27:D2:2:LYS:HD3	2.13	0.47
33:D8:33:ASN:O	33:D8:34:TRP:HB3	2.14	0.47
35:DA:142:A:C8	35:DA:1408:C:H1'	2.50	0.47
35:DA:194:G:H2'	35:DA:195:A:O4'	2.15	0.47
35:DA:401:A:H2'	35:DA:402:A:C8	2.50	0.47
35:DA:443:A:H1'	35:DA:1201:C:O4'	2.15	0.47
35:DA:833:U:H1'	48:DP:55:ARG:NH1	2.29	0.47
35:DA:848:G:OP2	35:DA:928:G:N2	2.48	0.47
35:DA:907:U:OP1	49:DQ:24:GLY:N	2.48	0.47
35:DA:1014:U:H2'	35:DA:1015:G:C8	2.50	0.47
35:DA:1939:U:OP1	35:DA:2604:U:O2'	2.32	0.47
35:DA:2133:G:C6	35:DA:2157:G:C6	3.03	0.47
35:DA:2334:G:N3	51:DS:18:ILE:HD11	2.30	0.47
35:DA:2562:U:H1'	47:DO:23:ARG:CD	2.44	0.47
35:DA:2695:C:H2'	35:DA:2696:U:C6	2.49	0.47
35:DA:2720:U:H2'	35:DA:2721:A:H8	1.80	0.47
38:DD:111:LEU:HD13	38:DD:112:GLN:N	2.30	0.47
40:DF:34:TRP:CH2	48:DP:12:ALA:HB2	2.49	0.47
40:DF:178:PRO:HG2	40:DF:179:GLU:OE1	2.14	0.47
41:DG:28:VAL:O	41:DG:31:VAL:HG12	2.15	0.47
41:DG:33:ARG:H	41:DG:162:THR:HB	1.80	0.47
42:DH:103:LEU:O	42:DH:114:VAL:HA	2.14	0.47
46:DN:1:MET:HG2	46:DN:2:LYS:N	2.30	0.47
48:DP:18:ARG:NH1	48:DP:18:ARG:O	2.47	0.47
49:DQ:16:ARG:O	49:DQ:17:LEU:HD23	2.14	0.47
51:DS:17:ARG:O	51:DS:20:ARG:HG2	2.15	0.47
52:DT:90:GLN:O	52:DT:120:ARG:NH2	2.48	0.47
52:DT:98:LYS:HB3	52:DT:100:TYR:CE1	2.48	0.47
53:DU:92:ARG:NH2	54:DV:10:LYS:HB3	2.29	0.47
57:DY:28:LYS:NZ	57:DY:37:VAL:HG11	2.25	0.47
1:AA:100:C:H2'	1:AA:101:A:C8	2.50	0.47
1:AA:1149:C:O2'	1:AA:1280:A:N1	2.43	0.47
1:AA:1175:G:H2'	1:AA:1176:A:H8	1.79	0.47
1:AA:1241:G:H2'	1:AA:1242:C:H6	1.80	0.47
1:AA:1440:C:H2'	1:AA:1441:G:O4'	2.15	0.47
1:AA:1466:C:H2'	1:AA:1467:G:O4'	2.14	0.47
2:AB:120:ALA:O	2:AB:121:LEU:HD23	2.15	0.47
2:AB:162:ILE:O	2:AB:185:ILE:HG12	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:88:VAL:O	4:AD:92:VAL:HG23	2.15	0.47
5:AE:33:VAL:HG22	5:AE:43:LEU:HD13	1.97	0.47
10:AJ:4:ILE:HD12	10:AJ:4:ILE:N	2.29	0.47
13:AM:67:GLU:CD	13:AM:68:GLY:H	2.23	0.47
20:AT:38:LYS:HB3	20:AT:38:LYS:HE2	1.71	0.47
27:B2:2:LYS:HG2	35:BA:97:C:H5"	1.97	0.47
35:BA:71:A:C2	56:BX:31:HIS:CE1	3.02	0.47
35:BA:2051:A:H5'	35:BA:2578:G:O4'	2.14	0.47
35:BA:2141:G:O6	35:BA:2150:U:O2	2.33	0.47
35:BA:2163:C:H3'	35:BA:2164:C:C6	2.50	0.47
35:BA:2377:A:H4'	51:BS:107:GLU:HB3	1.97	0.47
35:BA:2626:C:H2'	35:BA:2627:G:C8	2.49	0.47
35:BA:2761:G:H3'	35:BA:2762:G:H5"	1.96	0.47
35:BA:2818:G:OP2	50:BR:42:LYS:NZ	2.47	0.47
35:BA:2821:A:P	50:BR:5:LYS:HZ2	2.38	0.47
37:BC:14:LYS:HE3	37:BC:32:GLU:OE1	2.15	0.47
38:BD:35:LYS:C	38:BD:37:LEU:H	2.23	0.47
38:BD:69:ARG:HH21	38:BD:192:THR:HB	1.79	0.47
39:BE:37:ARG:O	39:BE:45:THR:HA	2.15	0.47
39:BE:55:ASN:O	39:BE:57:LYS:N	2.46	0.47
41:BG:56:ALA:HB1	41:BG:153:ARG:NH1	2.27	0.47
51:BS:106:ARG:HH11	51:BS:106:ARG:C	2.23	0.47
58:BZ:104:PHE:HD1	58:BZ:139:VAL:HB	1.79	0.47
1:CA:17:U:H2'	1:CA:18:C:H6	1.78	0.47
1:CA:501:C:H2'	1:CA:502:G:C8	2.50	0.47
1:CA:584:G:H1	1:CA:757:U:H3	1.63	0.47
1:CA:609:A:C5	1:CA:610:G:C8	3.03	0.47
1:CA:992:U:O2'	1:CA:993:G:OP2	2.31	0.47
2:CB:114:ARG:O	2:CB:114:ARG:HD3	2.14	0.47
10:CJ:56:HIS:C	10:CJ:58:ASP:H	2.23	0.47
22:CV:66:U:H2'	22:CV:67:C:C6	2.50	0.47
34:D9:2:LYS:O	34:D9:34:GLN:HA	2.14	0.47
35:DA:89:G:OP1	57:DY:33:LYS:HE2	2.15	0.47
35:DA:1198:U:H2'	35:DA:1199:U:C6	2.50	0.47
35:DA:2389:G:H5"	35:DA:2390:U:O4'	2.14	0.47
41:DG:51:ARG:HA	41:DG:51:ARG:NE	2.24	0.47
47:DO:49:ARG:HA	47:DO:53:LYS:NZ	2.30	0.47
49:DQ:116:GLU:O	49:DQ:120:ILE:HG12	2.15	0.47
49:DQ:134:ARG:HH11	49:DQ:134:ARG:HG3	1.79	0.47
1:AA:189(E):U:O2'	1:AA:189(F):U:H5'	2.15	0.47
1:AA:948:C:H2'	1:AA:949:A:H8	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1109:C:H2'	1:AA:1110:A:O4'	2.15	0.47
9:AI:63:ILE:HG21	9:AI:77:ILE:HG23	1.96	0.47
24:AY:130:CYS:CB	24:AY:163:GLY:HA3	2.45	0.47
28:B3:40:THR:HG23	28:B3:43:ILE:HG12	1.97	0.47
30:B5:55:ARG:CD	30:B5:56:LYS:H	2.14	0.47
33:B8:14:VAL:CG2	33:B8:22:VAL:HG13	2.45	0.47
33:B8:42:ARG:C	33:B8:44:LYS:H	2.22	0.47
35:BA:78:A:H2'	35:BA:79:G:C8	2.50	0.47
35:BA:2696:U:H2'	35:BA:2697:G:H8	1.76	0.47
37:BC:194:ILE:O	37:BC:198:GLU:HG3	2.15	0.47
41:BG:36:LYS:HE2	41:BG:95:ARG:HH12	1.79	0.47
41:BG:104:GLU:C	41:BG:106:LEU:H	2.22	0.47
46:BN:42:TRP:HE3	46:BN:48:MET:HE1	1.80	0.47
51:BS:95:HIS:O	51:BS:98:VAL:HG23	2.15	0.47
53:BU:61:TRP:CB	53:BU:93:LYS:HB3	2.45	0.47
1:CA:448:A:P	1:CA:485:G:H22	2.38	0.47
1:CA:509:A:H2	1:CA:544:G:O4'	1.98	0.47
1:CA:580:U:H2'	1:CA:581:G:O4'	2.15	0.47
1:CA:1151:A:H5"	10:CJ:42:THR:H	1.80	0.47
1:CA:1242:C:H2'	1:CA:1243:C:H6	1.80	0.47
2:CB:218:ALA:O	2:CB:222:ILE:HG12	2.14	0.47
3:CC:131:ARG:HH21	3:CC:166:GLU:HG3	1.80	0.47
7:CG:17:VAL:HG12	7:CG:18:TYR:CD1	2.50	0.47
12:CL:91:LYS:O	12:CL:92:ASP:HB2	2.15	0.47
16:CP:71:ARG:O	16:CP:74:LEU:HB2	2.14	0.47
24:CY:326:THR:HG23	24:CY:328:LEU:H	1.80	0.47
31:D6:19:ARG:NH2	35:DA:2401:U:H5"	2.30	0.47
35:DA:1316:U:H2'	35:DA:1317:A:C8	2.50	0.47
39:DE:144:ARG:HB3	39:DE:145:LYS:H	1.42	0.47
54:DV:39:LEU:N	54:DV:39:LEU:HD23	2.29	0.47
1:AA:158:G:H2'	1:AA:159:G:C8	2.50	0.47
1:AA:376:G:P	16:AP:67:THR:HG21	2.55	0.47
1:AA:1226:C:OP1	19:AS:81:ARG:NH2	2.48	0.47
7:AG:47:CYS:HB3	7:AG:58:PRO:HG3	1.97	0.47
9:AI:97:LYS:HB3	9:AI:98:PRO:HD3	1.97	0.47
16:AP:56:ALA:O	16:AP:60:LEU:HG	2.14	0.47
24:AY:292:GLU:O	24:AY:296:LYS:HG3	2.15	0.47
33:B8:30:ARG:HA	33:B8:30:ARG:NE	2.30	0.47
35:BA:94:C:H5'	35:BA:94(A):G:OP2	2.14	0.47
35:BA:203:C:H3'	35:BA:204:A:H5"	1.97	0.47
35:BA:691:C:C2	35:BA:692:C:C5	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1024:G:C3'	35:BA:1025:G:H5"	2.45	0.47
35:BA:1759:A:H4'	35:BA:2715:C:O4'	2.15	0.47
35:BA:1842:G:H1	35:BA:1898:U:H3	1.62	0.47
36:BB:45:A:H8	41:BG:95:ARG:HE	1.58	0.47
37:BC:46:ALA:HB1	37:BC:213:VAL:HG22	1.96	0.47
38:BD:53:PHE:C	38:BD:218:ARG:HB2	2.40	0.47
39:BE:110:GLY:O	50:BR:2:ARG:HD3	2.15	0.47
39:BE:176:ILE:HB	39:BE:181:LEU:HB2	1.97	0.47
41:BG:71:THR:O	41:BG:89:GLY:HA3	2.15	0.47
46:BN:2:LYS:HZ3	53:BU:95:LEU:HD21	1.80	0.47
48:BP:97:PRO:O	48:BP:98:GLU:HB3	2.14	0.47
50:BR:87:TYR:O	50:BR:90:ARG:N	2.47	0.47
54:BV:28:GLU:HB2	54:BV:31:ALA:HB2	1.97	0.47
58:BZ:11:GLU:H	58:BZ:11:GLU:CD	2.23	0.47
1:CA:607:A:H2'	1:CA:608:A:H8	1.80	0.47
1:CA:643:C:H5'	8:CH:31:PHE:CD1	2.50	0.47
1:CA:1234:C:H2'	1:CA:1235:U:C6	2.49	0.47
1:CA:1255:G:O2'	1:CA:1258:G:O2'	2.23	0.47
2:CB:55:PHE:HA	2:CB:58:ILE:HD12	1.97	0.47
2:CB:187:LEU:HD23	2:CB:201:ILE:HG22	1.96	0.47
18:CR:31:LEU:HD11	18:CR:62:GLU:HB2	1.96	0.47
21:CU:5:ASP:C	21:CU:7:ARG:H	2.23	0.47
24:CY:83:GLU:HB3	24:CY:84:ARG:NH1	2.30	0.47
35:DA:626:U:H5"	35:DA:627:A:C5'	2.44	0.47
35:DA:672:C:H2'	35:DA:673:C:H5'	1.97	0.47
35:DA:1151:G:H2'	35:DA:1152:C:C6	2.50	0.47
35:DA:1205:U:C2	40:DF:171:PRO:HB3	2.49	0.47
35:DA:1359:A:N7	35:DA:1372:U:O4	2.48	0.47
35:DA:2047:U:H2'	35:DA:2048:G:C8	2.50	0.47
35:DA:2123:G:H2'	35:DA:2124:G:H8	1.79	0.47
35:DA:2840:C:H2'	35:DA:2841:C:H6	1.80	0.47
37:DC:194:ILE:O	37:DC:198:GLU:HG3	2.15	0.47
40:DF:202:PHE:O	40:DF:206:ILE:HG12	2.15	0.47
46:DN:18:ALA:HB3	46:DN:26:LEU:HD22	1.96	0.47
52:DT:35:LYS:HZ1	52:DT:41:ARG:NE	2.12	0.47
1:AA:444:C:H2'	1:AA:445:G:H8	1.80	0.46
1:AA:539:A:OP2	12:AL:115:LYS:HE3	2.14	0.46
1:AA:1376:U:H2'	1:AA:1377:A:H8	1.80	0.46
1:AA:1388:C:H2'	1:AA:1389:C:H6	1.76	0.46
1:AA:1491:G:H5"	1:AA:1492:A:OP2	2.15	0.46
3:AC:107:GLN:H	3:AC:107:GLN:CD	2.22	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:25:ARG:HG3	4:AD:30:LYS:HG3	1.96	0.46
8:AH:44:PHE:HD1	8:AH:79:VAL:HG12	1.80	0.46
21:AU:10:ARG:HA	21:AU:13:ILE:HB	1.97	0.46
35:BA:882:G:H2'	35:BA:883:G:H8	1.80	0.46
35:BA:1019:U:HO2'	35:BA:1021:A:H2	1.59	0.46
35:BA:1198:U:C2	35:BA:1199:U:C5	3.03	0.46
35:BA:1374:G:H2'	35:BA:1375:C:C6	2.50	0.46
35:BA:1717:G:C2	35:BA:1718:G:C8	3.02	0.46
35:BA:2031:A:N3	35:BA:2455:G:O2'	2.42	0.46
35:BA:2083:G:H2'	35:BA:2084:C:C6	2.50	0.46
35:BA:2646:C:OP2	35:BA:2732:G:O2'	2.16	0.46
37:BC:191:ARG:HB3	37:BC:195:ARG:NH1	2.29	0.46
40:BF:63:LYS:HE3	40:BF:67:GLN:HB2	1.97	0.46
40:BF:89:VAL:HG12	40:BF:90:PHE:N	2.30	0.46
48:BP:124:LYS:HD3	48:BP:143:GLY:HA2	1.97	0.46
1:CA:33:A:H2'	1:CA:34:C:C6	2.50	0.46
1:CA:165:C:H2'	1:CA:166:G:H8	1.80	0.46
1:CA:178:C:H2'	1:CA:179:A:H8	1.80	0.46
1:CA:404:U:H2'	1:CA:405:U:H6	1.81	0.46
1:CA:416:G:H2'	1:CA:417:C:H6	1.80	0.46
1:CA:476:G:H2'	1:CA:477:A:C8	2.51	0.46
1:CA:875:C:H1'	8:CH:15:ASN:OD1	2.14	0.46
4:CD:20:TYR:HA	4:CD:26:CYS:CB	2.46	0.46
4:CD:126:ILE:HD12	4:CD:126:ILE:N	2.30	0.46
9:CI:17:VAL:HG21	9:CI:80:GLY:HA3	1.97	0.46
10:CJ:27:ALA:HB2	10:CJ:85:LEU:HD11	1.96	0.46
20:CT:56:MET:HE1	20:CT:104:LEU:H	1.80	0.46
22:CW:31:A:H2'	22:CW:32:U:C6	2.50	0.46
31:D6:33:LYS:O	31:D6:34:LEU:HB2	2.15	0.46
35:DA:729:G:C8	38:DD:208:LYS:HE3	2.50	0.46
35:DA:1509(B):A:H2'	35:DA:1510:G:H8	1.80	0.46
35:DA:2574:G:H2'	35:DA:2575:C:O4'	2.14	0.46
37:DC:21:TYR:HB2	37:DC:225:ILE:HG22	1.96	0.46
38:DD:265:PRO:C	38:DD:267:SER:N	2.73	0.46
46:DN:57:ALA:HB3	46:DN:124:ALA:HA	1.97	0.46
48:DP:38:GLN:HG3	48:DP:39:LYS:N	2.25	0.46
48:DP:136:GLU:O	48:DP:139:LYS:N	2.48	0.46
48:DP:146:VAL:HG13	48:DP:147:LEU:N	2.30	0.46
58:DZ:97:GLU:HG2	58:DZ:125:LEU:CD2	2.40	0.46
1:AA:45:U:H2'	1:AA:46:G:H8	1.80	0.46
1:AA:277:C:P	17:AQ:68:ARG:HH12	2.38	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:979:C:H3'	1:AA:980:C:H5"	1.97	0.46
4:AD:20:TYR:HA	4:AD:26:CYS:CB	2.45	0.46
4:AD:20:TYR:N	4:AD:20:TYR:CD1	2.83	0.46
9:AI:113:LYS:N	9:AI:113:LYS:HD2	2.31	0.46
22:AW:63:G:H3'	22:AW:64:A:C8	2.50	0.46
23:AX:14:A:H3'	23:AX:14:A:N3	2.30	0.46
24:AY:237:PRO:HD3	35:BA:2604:U:P	2.55	0.46
26:B1:95:LEU:HD13	26:B1:95:LEU:HA	1.79	0.46
27:B2:50:ILE:C	27:B2:52:ASP:N	2.73	0.46
33:B8:54:GLU:O	33:B8:58:ILE:HG12	2.15	0.46
35:BA:321:G:C4	40:BF:165:ARG:NH2	2.83	0.46
35:BA:834:C:H2'	35:BA:835:A:H8	1.80	0.46
35:BA:1061:U:OP2	45:BK:9:LYS:HE2	2.14	0.46
35:BA:1149:G:H2'	35:BA:1150:C:H6	1.78	0.46
35:BA:1536:C:H2'	35:BA:1537:G:O4'	2.15	0.46
35:BA:1820:U:H4'	35:BA:1821:A:OP2	2.15	0.46
37:BC:40:GLU:HB2	37:BC:179:ALA:HB2	1.97	0.46
40:BF:34:TRP:CH2	48:BP:12:ALA:HB2	2.50	0.46
40:BF:196:LEU:HD23	40:BF:196:LEU:HA	1.79	0.46
51:BS:93:LYS:O	51:BS:94:TYR:C	2.58	0.46
53:BU:92:ARG:O	53:BU:93:LYS:C	2.58	0.46
55:BW:6:ILE:HA	55:BW:103:ILE:O	2.15	0.46
1:CA:148:G:C2	1:CA:175:C:C2	3.03	0.46
1:CA:966:G:C2	22:CV:34:G:H5'	2.50	0.46
1:CA:1309:G:C6	1:CA:1329:A:N1	2.83	0.46
1:CA:1479:C:H2'	1:CA:1480:G:C8	2.49	0.46
2:CB:209:ARG:HD3	2:CB:239:VAL:HG13	1.97	0.46
12:CL:60:LEU:HD23	12:CL:64:TYR:HB2	1.97	0.46
13:CM:90:LEU:C	13:CM:92:HIS:N	2.70	0.46
35:DA:221:A:H4'	35:DA:222:A:O5'	2.15	0.46
35:DA:389:G:N1	48:DP:71:VAL:HG12	2.31	0.46
35:DA:483:A:H4'	57:DY:49:VAL:HA	1.97	0.46
35:DA:1153:C:H2'	35:DA:1154:G:O4'	2.15	0.46
35:DA:1800:C:OP1	38:DD:266:SER:OG	2.32	0.46
35:DA:2340:G:H2'	35:DA:2341:G:C8	2.50	0.46
35:DA:2761:G:H3'	35:DA:2762:G:H5"	1.96	0.46
35:DA:2876:G:H4'	52:DT:3:ARG:NE	2.27	0.46
37:DC:194:ILE:HG13	37:DC:227:PRO:HB2	1.97	0.46
37:DC:197:LEU:C	37:DC:199:ALA:N	2.74	0.46
37:DC:214:TYR:HE1	37:DC:224:ARG:NH1	2.12	0.46
42:DH:47:GLU:C	42:DH:49:VAL:H	2.22	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:49:ARG:HH11	58:DZ:49:ARG:CG	2.26	0.46
1:AA:473:G:H2'	1:AA:474:G:H8	1.81	0.46
1:AA:1181:G:H2'	1:AA:1182:G:C4	2.50	0.46
1:AA:1250:A:H4'	9:AI:68:GLY:N	2.31	0.46
1:AA:1254:C:OP1	10:AJ:45:ARG:HG3	2.16	0.46
3:AC:18:TRP:NE1	14:AN:53:LEU:O	2.47	0.46
3:AC:82:GLU:H	3:AC:82:GLU:CD	2.24	0.46
9:AI:45:ALA:HA	9:AI:48:GLU:OE1	2.15	0.46
26:B1:71:TYR:C	26:B1:73:LEU:N	2.73	0.46
28:B3:21:ALA:HB1	35:BA:849:A:N3	2.31	0.46
35:BA:128:C:H2'	35:BA:129:C:C6	2.50	0.46
35:BA:898:C:H2'	35:BA:899:A:O4'	2.15	0.46
35:BA:1344:G:H4'	35:BA:1384:A:C5	2.49	0.46
35:BA:1529:G:H2'	35:BA:1530:C:C6	2.51	0.46
35:BA:2064:C:H2'	35:BA:2065:C:C6	2.50	0.46
35:BA:2178:C:O2'	37:BC:169:THR:OG1	2.23	0.46
35:BA:2278:A:OP1	49:BQ:10:ARG:NH2	2.48	0.46
35:BA:2298:A:H2'	35:BA:2299:G:O4'	2.15	0.46
35:BA:2838:G:C4	35:BA:2839:G:C8	3.04	0.46
41:BG:55:LYS:NZ	41:BG:148:MET:HG2	2.29	0.46
45:BK:20:ALA:CA	45:BK:25:PRO:HD3	2.45	0.46
46:BN:126:PRO:O	46:BN:127:ASP:HB2	2.15	0.46
48:BP:124:LYS:HD3	48:BP:143:GLY:CA	2.45	0.46
55:BW:18:ARG:HH11	55:BW:18:ARG:HG2	1.80	0.46
57:BY:2:ARG:O	57:BY:4:LYS:N	2.48	0.46
57:BY:13:VAL:HG22	57:BY:73:ARG:O	2.16	0.46
58:BZ:24:LEU:HD12	58:BZ:41:LEU:HD23	1.96	0.46
58:BZ:97:GLU:CG	58:BZ:127:LYS:HG2	2.44	0.46
1:CA:552:U:H2'	1:CA:553:A:C8	2.48	0.46
1:CA:555:C:H2'	1:CA:556:C:C6	2.50	0.46
1:CA:760:G:O2'	17:CQ:98:LEU:HD23	2.15	0.46
1:CA:1210:C:H2'	1:CA:1211:U:O4'	2.16	0.46
2:CB:93:VAL:HG11	2:CB:97:TRP:CD1	2.46	0.46
3:CC:23:TYR:CG	3:CC:24:ALA:N	2.83	0.46
9:CI:111:ARG:HG2	9:CI:112:LYS:N	2.28	0.46
10:CJ:7:LYS:HD3	10:CJ:71:LEU:HD13	1.98	0.46
10:CJ:18:ALA:O	10:CJ:22:LYS:HB2	2.16	0.46
13:CM:58:GLU:O	13:CM:60:VAL:N	2.48	0.46
16:CP:51:VAL:O	16:CP:53:VAL:N	2.49	0.46
24:CY:339:GLY:C	24:CY:341:LEU:H	2.23	0.46
25:D0:74:ARG:HG2	36:DB:12:C:O2'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:271(F):C:H2'	35:DA:271(G):C:C6	2.50	0.46
35:DA:654(T):C:N4	35:DA:654(U):A:N3	2.63	0.46
35:DA:1542:A:C8	35:DA:1544:A:H5'	2.51	0.46
35:DA:1657:C:H2'	35:DA:1658:C:C6	2.49	0.46
35:DA:1991:U:H2'	35:DA:1992:G:H5"	1.97	0.46
35:DA:2073:C:H5"	38:DD:229:VAL:HG13	1.98	0.46
35:DA:2101:G:O6	35:DA:2188:C:N4	2.47	0.46
35:DA:2127:G:H4'	37:DC:38:PHE:HB3	1.96	0.46
35:DA:2605:U:H2'	35:DA:2606:C:C6	2.50	0.46
35:DA:2663:G:H2'	35:DA:2664:G:O4'	2.16	0.46
36:DB:12:C:O4'	36:DB:15:A:N6	2.48	0.46
37:DC:185:LYS:HD2	37:DC:185:LYS:N	2.31	0.46
39:DE:132:HIS:O	39:DE:135:HIS:NE2	2.48	0.46
42:DH:43:VAL:HG11	42:DH:52:VAL:HG22	1.97	0.46
48:DP:16:ARG:HH12	48:DP:18:ARG:H	1.63	0.46
51:DS:89:ARG:HH11	51:DS:92:TYR:HA	1.80	0.46
58:DZ:108:PRO:HD3	58:DZ:141:VAL:HG11	1.95	0.46
1:AA:890:G:O2'	1:AA:906:G:O6	2.25	0.46
1:AA:1429:C:H2'	1:AA:1430:C:C6	2.50	0.46
2:AB:17:PHE:HD1	2:AB:17:PHE:H	1.62	0.46
2:AB:72:GLY:HA2	2:AB:165:VAL:CG2	2.46	0.46
4:AD:126:ILE:HD12	4:AD:126:ILE:N	2.30	0.46
24:AY:91:LEU:HA	24:AY:94:ALA:HB3	1.98	0.46
35:BA:481:G:OP2	57:BY:47:LYS:HD3	2.15	0.46
35:BA:654(S):G:H2'	35:BA:654(T):C:N1	2.31	0.46
35:BA:1173:G:H2'	35:BA:1175:U:H5	1.81	0.46
35:BA:1889:A:H2'	35:BA:1890:A:H8	1.80	0.46
35:BA:2057:A:H2'	35:BA:2058:A:C8	2.50	0.46
35:BA:2343:C:O2'	35:BA:2373:G:O2'	2.26	0.46
35:BA:2468:G:H22	35:BA:2481:G:H2'	1.79	0.46
35:BA:2745:C:H4'	42:BH:142:GLY:O	2.16	0.46
35:BA:2757:A:H2'	35:BA:2758:A:H5'	1.97	0.46
40:BF:117:ARG:HG2	40:BF:192:LEU:HB2	1.97	0.46
41:BG:101:ILE:HG22	41:BG:105:LYS:HD2	1.97	0.46
48:BP:107:LYS:C	48:BP:109:GLY:H	2.23	0.46
49:BQ:39:PRO:HB3	49:BQ:99:PRO:HD3	1.98	0.46
50:BR:116:LEU:HA	50:BR:116:LEU:HD23	1.61	0.46
1:CA:1106:G:H2'	1:CA:1107:C:C6	2.50	0.46
2:CB:185:ILE:HA	2:CB:199:TYR:O	2.15	0.46
10:CJ:84:GLN:HB3	10:CJ:88:LEU:HD22	1.97	0.46
12:CL:115:LYS:O	12:CL:117:ARG:HG3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:67:GLU:CD	13:CM:68:GLY:H	2.22	0.46
15:CO:11:VAL:HG21	15:CO:34:LEU:HD22	1.97	0.46
15:CO:27:VAL:O	15:CO:31:LEU:HD23	2.16	0.46
22:CV:74:C:P	24:CY:266:ARG:HH12	2.38	0.46
24:CY:27:LYS:C	24:CY:29:LEU:H	2.23	0.46
26:D1:35:THR:OG1	35:DA:2079:U:O3'	2.33	0.46
33:D8:54:GLU:O	33:D8:58:ILE:HG12	2.16	0.46
35:DA:654(H):G:H3'	35:DA:654(I):C:H4'	1.98	0.46
35:DA:1019:U:H3	35:DA:1142(A):A:H62	1.63	0.46
35:DA:1070:A:N1	35:DA:1097:U:O2'	2.49	0.46
35:DA:1138:G:N2	46:DN:106:MET:SD	2.74	0.46
35:DA:1188:U:H4'	54:DV:79:VAL:HG22	1.96	0.46
35:DA:2415:G:H4'	48:DP:67:MET:N	2.29	0.46
39:DE:176:ILE:HB	39:DE:181:LEU:HB2	1.96	0.46
41:DG:138:GLN:OE1	41:DG:153:ARG:N	2.41	0.46
43:DI:6:LEU:HA	43:DI:15:VAL:HG12	1.96	0.46
45:DK:6:ALA:HB1	45:DK:59:ILE:HB	1.97	0.46
45:DK:90:LYS:HG3	58:DZ:112:ARG:NH2	2.31	0.46
1:AA:294:U:OP1	1:AA:610:G:O2'	2.28	0.46
1:AA:687:A:H62	1:AA:703:G:N2	2.14	0.46
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.50	0.46
2:AB:111:ARG:NH2	2:AB:114:ARG:HG2	2.28	0.46
4:AD:145:GLU:HG2	4:AD:184:LYS:HZ2	1.81	0.46
6:AF:67:MET:HE1	6:AF:75:LEU:HD22	1.98	0.46
9:AI:53:VAL:HG23	9:AI:55:ALA:N	2.27	0.46
27:B2:13:ALA:O	27:B2:15:LYS:N	2.48	0.46
29:B4:14:ILE:HG23	29:B4:31:ILE:HG21	1.97	0.46
33:B8:2:PRO:HA	35:BA:591:C:O2	2.15	0.46
35:BA:8:A:H2'	35:BA:9:U:C5	2.50	0.46
35:BA:886:C:H4'	35:BA:888:C:N4	2.31	0.46
35:BA:1542:A:H8	35:BA:1542:A:H3'	1.81	0.46
35:BA:1651:G:H2'	35:BA:1652:A:O4'	2.16	0.46
35:BA:2241:A:H2'	35:BA:2242:G:H8	1.80	0.46
35:BA:2766:G:C2	35:BA:2767:C:C6	3.03	0.46
40:BF:11:VAL:O	40:BF:12:LEU:C	2.58	0.46
41:BG:96:ARG:HG2	41:BG:97:ASP:N	2.24	0.46
51:BS:61:ASN:OD1	51:BS:62:LYS:N	2.32	0.46
57:BY:31:LEU:HD23	57:BY:36:ALA:C	2.40	0.46
57:BY:76:CYS:SG	57:BY:102:CYS:N	2.89	0.46
1:CA:475:G:H2'	1:CA:476:G:H8	1.79	0.46
1:CA:511:C:H1'	4:CD:43:HIS:HE2	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:974:A:H8	1:CA:974:A:OP1	1.99	0.46
4:CD:28:SER:O	4:CD:30:LYS:N	2.49	0.46
10:CJ:4:ILE:HD12	10:CJ:4:ILE:N	2.31	0.46
16:CP:48:TRP:CD1	16:CP:48:TRP:H	2.34	0.46
35:DA:272(J):C:H3'	35:DA:274:G:H5"	1.97	0.46
35:DA:468:G:H5"	40:DF:60:SER:HB2	1.98	0.46
35:DA:534:U:H2'	35:DA:535:C:H6	1.78	0.46
35:DA:639:U:C2	35:DA:640:C:C5	3.03	0.46
35:DA:699:A:N3	35:DA:1633:G:O2'	2.38	0.46
35:DA:712:G:H2'	35:DA:713:G:C8	2.50	0.46
35:DA:958:U:H5"	49:DQ:14:ARG:CD	2.46	0.46
35:DA:1201:C:H2'	35:DA:1202:C:H6	1.81	0.46
35:DA:1509(A):A:H2'	35:DA:1509(B):A:H8	1.80	0.46
35:DA:1721:G:C6	35:DA:1739:U:H5'	2.51	0.46
35:DA:1899:G:O2'	35:DA:1900:A:H5"	2.16	0.46
35:DA:2155:G:C6	35:DA:2156:G:C2	3.04	0.46
35:DA:2467:C:H2'	35:DA:2468:G:O4'	2.16	0.46
35:DA:2649:U:H2'	35:DA:2650:U:H6	1.81	0.46
35:DA:2660:A:H5'	35:DA:2661:G:N3	2.29	0.46
35:DA:2836:U:H2'	35:DA:2837:G:H8	1.81	0.46
40:DF:181:LEU:HD11	40:DF:186:ILE:HD11	1.96	0.46
51:DS:97:ARG:O	51:DS:97:ARG:NH1	2.46	0.46
52:DT:35:LYS:NZ	52:DT:41:ARG:HE	2.12	0.46
52:DT:83:ILE:HG13	52:DT:84:GLN:HG2	1.97	0.46
57:DY:28:LYS:O	57:DY:29:GLU:C	2.58	0.46
1:AA:631:G:H2'	1:AA:632:A:C8	2.50	0.46
1:AA:1158:C:H2'	1:AA:1159:U:H4'	1.98	0.46
2:AB:80:ILE:H	2:AB:80:ILE:CD1	2.26	0.46
3:AC:67:THR:HG23	3:AC:102:ASN:HB3	1.98	0.46
6:AF:62:TRP:CH2	6:AF:64:GLN:HB2	2.51	0.46
6:AF:76:ALA:HB1	6:AF:80:ARG:NH2	2.31	0.46
10:AJ:29:ARG:HG2	10:AJ:29:ARG:NH1	2.31	0.46
22:AW:46:G:O2'	22:AW:47:U:O5'	2.31	0.46
31:B6:35:GLU:HB3	31:B6:51:GLU:OE2	2.15	0.46
35:BA:520:G:H2'	35:BA:521:G:H8	1.80	0.46
35:BA:796:C:OP1	40:BF:62:ARG:HD2	2.16	0.46
35:BA:1077:A:H2'	35:BA:1078:U:O4'	2.14	0.46
35:BA:1542:A:C8	35:BA:1544:A:H5'	2.50	0.46
35:BA:1789:A:H2'	35:BA:1790:C:O4'	2.16	0.46
35:BA:1803:A:O2'	38:BD:259:THR:HG21	2.16	0.46
35:BA:2047:U:H2'	35:BA:2048:G:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2100:G:N2	35:BA:2189:U:O2	2.43	0.46
41:BG:87:PRO:O	41:BG:88:ILE:HD13	2.15	0.46
48:BP:29:LYS:HB3	48:BP:34:GLY:N	2.29	0.46
53:BU:95:LEU:HA	53:BU:95:LEU:HD23	1.72	0.46
57:BY:44:ILE:O	57:BY:62:GLU:HB3	2.16	0.46
58:BZ:40:ASP:OD1	58:BZ:42:VAL:HG12	2.16	0.46
1:CA:310:G:OP1	16:CP:26:ARG:NH1	2.48	0.46
1:CA:392:G:H2'	1:CA:393:A:H8	1.80	0.46
1:CA:457:C:H2'	1:CA:458:C:H6	1.79	0.46
1:CA:1029:C:H2'	1:CA:1030(A):G:C6	2.50	0.46
10:CJ:7:LYS:HB2	10:CJ:97:GLU:HB2	1.98	0.46
11:CK:124:LYS:NZ	11:CK:125:PHE:HE1	2.13	0.46
30:D5:12:SER:OG	35:DA:2021:C:OP1	2.27	0.46
35:DA:673:C:H5'	35:DA:673:C:H6	1.81	0.46
35:DA:902:C:H2'	35:DA:903:C:C6	2.51	0.46
35:DA:1047:G:H2'	35:DA:1110:G:N2	2.30	0.46
35:DA:1198:U:H2'	35:DA:1199:U:H6	1.81	0.46
35:DA:1747:G:H2'	35:DA:1747(A):G:C8	2.50	0.46
35:DA:1956:U:O2	35:DA:1985:G:H4'	2.16	0.46
38:DD:131:LEU:HD13	38:DD:136:ILE:HG12	1.96	0.46
39:DE:77:ILE:HG22	39:DE:78:LEU:HG	1.98	0.46
53:DU:93:LYS:HD2	53:DU:93:LYS:H	1.80	0.46
53:DU:101:ARG:HB2	53:DU:101:ARG:NH1	2.29	0.46
56:DX:27:THR:HA	56:DX:79:ALA:O	2.16	0.46
1:AA:152:A:H62	1:AA:169:C:N4	2.12	0.46
1:AA:199:G:H1	1:AA:218:C:H42	1.64	0.46
1:AA:322:C:H42	1:AA:329:A:H62	1.64	0.46
1:AA:322:C:HO2'	20:AT:23:ARG:HB2	1.80	0.46
1:AA:385:C:H2'	1:AA:386:C:C6	2.50	0.46
1:AA:894:G:H2'	1:AA:895:G:C8	2.51	0.46
1:AA:1152:A:H2'	1:AA:1153:C:H6	1.81	0.46
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.16	0.46
3:AC:112:SER:HB3	3:AC:115:LEU:HD12	1.98	0.46
4:AD:166:LYS:HD3	4:AD:178:VAL:HG11	1.98	0.46
9:AI:15:ALA:HA	9:AI:65:VAL:HA	1.98	0.46
10:AJ:50:ILE:HA	10:AJ:60:ARG:CB	2.46	0.46
10:AJ:50:ILE:HA	10:AJ:60:ARG:HB2	1.97	0.46
14:AN:29:ARG:NH1	14:AN:31:ARG:HB2	2.31	0.46
15:AO:81:LEU:HD11	15:AO:85:LEU:HD12	1.96	0.46
21:AU:10:ARG:HG2	21:AU:13:ILE:HD12	1.96	0.46
22:AW:29:G:H2'	22:AW:30:G:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:12:GLY:O	24:AY:16:TYR:HD2	1.99	0.46
24:AY:88:LYS:HB2	24:AY:89:PRO:HD3	1.96	0.46
29:B4:25:TYR:O	29:B4:26:SER:HB3	2.16	0.46
35:BA:184:C:H2'	35:BA:185:U:C6	2.51	0.46
37:BC:190:ILE:O	37:BC:194:ILE:HG12	2.15	0.46
40:BF:36:VAL:CG1	40:BF:183:VAL:HG11	2.45	0.46
43:BI:114:LEU:HD23	43:BI:130:TYR:HA	1.98	0.46
45:BK:5:VAL:O	45:BK:6:ALA:HB2	2.16	0.46
48:BP:78:PRO:HB2	48:BP:111:ARG:HD2	1.97	0.46
49:BQ:14:ARG:HG2	49:BQ:41:TRP:CH2	2.39	0.46
51:BS:34:HIS:CG	51:BS:54:LEU:HB2	2.51	0.46
52:BT:60:THR:HG22	52:BT:77:PRO:HA	1.98	0.46
1:CA:632:A:H8	1:CA:632:A:OP2	1.99	0.46
1:CA:1117:G:H5'	1:CA:1118:C:OP2	2.15	0.46
2:CB:210:SER:O	2:CB:214:ILE:HG12	2.15	0.46
12:CL:59:ARG:NH2	12:CL:65:GLU:OE2	2.49	0.46
16:CP:75:ARG:HH11	16:CP:75:ARG:HG3	1.80	0.46
21:CU:25:LYS:HG2	21:CU:26:LYS:N	2.31	0.46
22:CV:42:C:H6	22:CV:42:C:H5'	1.81	0.46
22:CV:48:C:C2	22:CV:59:U:H1'	2.51	0.46
26:D1:73:LEU:HD21	26:D1:94:LEU:HB3	1.98	0.46
31:D6:48:VAL:O	31:D6:49:HIS:ND1	2.49	0.46
35:DA:372:G:N2	35:DA:401:A:OP2	2.40	0.46
35:DA:1030:G:OP2	49:DQ:128:LYS:HE2	2.16	0.46
35:DA:1095:A:H2'	35:DA:1096:A:C8	2.51	0.46
35:DA:1155:A:P	53:DU:55:ARG:HD2	2.56	0.46
35:DA:2311:A:O2'	35:DA:2312:U:O4'	2.19	0.46
36:DB:45:A:C4	36:DB:46:A:C8	3.03	0.46
37:DC:213:VAL:O	37:DC:224:ARG:HA	2.15	0.46
39:DE:1:MET:HB3	39:DE:200:GLU:OE1	2.16	0.46
40:DF:16:GLY:O	40:DF:17:ARG:HG3	2.16	0.46
40:DF:22:ALA:O	40:DF:26:ALA:HB2	2.16	0.46
47:DO:104:ARG:HH12	52:DT:35:LYS:HD3	1.80	0.46
48:DP:88:LEU:HD12	48:DP:88:LEU:H	1.81	0.46
51:DS:95:HIS:CG	51:DS:96:GLY:N	2.83	0.46
1:AA:1157:A:H5'	1:AA:1158:C:C6	2.51	0.46
1:AA:1399:C:N3	1:AA:1502:A:N6	2.64	0.46
5:AE:27:ARG:HG2	5:AE:28:PHE:N	2.30	0.46
6:AF:42:GLU:C	6:AF:44:GLY:H	2.23	0.46
6:AF:55:ASP:C	6:AF:57:GLN:H	2.24	0.46
7:AG:79:ARG:HG3	7:AG:83:ALA:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:100:ALA:O	7:AG:104:LEU:HD23	2.15	0.46
27:B2:2:LYS:HA	27:B2:5:GLU:OE1	2.16	0.46
28:B3:31:LEU:O	35:BA:1158:C:H4'	2.16	0.46
29:B4:10:VAL:HB	29:B4:11:PRO:HD2	1.98	0.46
31:B6:19:ARG:HH21	35:BA:2401:U:C5'	2.29	0.46
35:BA:271(M):G:C6	35:BA:271(O):C:C4	3.04	0.46
35:BA:551:G:O2'	35:BA:1220:A:N3	2.40	0.46
35:BA:580:C:H2'	35:BA:581:C:C6	2.51	0.46
35:BA:659:C:H2'	35:BA:660:G:C8	2.50	0.46
35:BA:904:C:H2'	35:BA:905:U:C6	2.51	0.46
35:BA:994:C:O2'	35:BA:996:A:OP1	2.28	0.46
35:BA:1028:A:N3	35:BA:2486:G:O2'	2.46	0.46
35:BA:2345:G:N3	35:BA:2381:C:H2'	2.31	0.46
41:BG:145:THR:OG1	41:BG:146:TYR:N	2.44	0.46
42:BH:154:PRO:HD3	42:BH:162:ILE:O	2.16	0.46
43:BI:80:PRO:HA	43:BI:143:SER:OG	2.15	0.46
45:BK:92:GLY:HA3	58:BZ:112:ARG:NH1	2.31	0.46
51:BS:52:SER:CB	51:BS:55:ALA:HB3	2.46	0.46
57:BY:28:LYS:CB	57:BY:37:VAL:HB	2.46	0.46
1:CA:389:A:H2'	1:CA:390:C:O4'	2.16	0.46
1:CA:396:G:O2'	1:CA:398:C:OP1	2.31	0.46
1:CA:1163:C:H2'	1:CA:1164:G:H8	1.81	0.46
1:CA:1304:G:OP1	21:CU:2:GLY:N	2.48	0.46
2:CB:14:GLY:O	2:CB:15:VAL:HG13	2.16	0.46
3:CC:58:GLU:O	3:CC:65:ALA:N	2.39	0.46
9:CI:76:ALA:C	9:CI:78:LYS:H	2.24	0.46
10:CJ:39:PRO:HB3	10:CJ:70:ARG:HH12	1.81	0.46
10:CJ:45:ARG:HB3	10:CJ:65:LEU:HB3	1.98	0.46
10:CJ:58:ASP:O	10:CJ:59:SER:C	2.58	0.46
10:CJ:75:ILE:HG13	10:CJ:76:ASN:N	2.31	0.46
12:CL:25:PRO:O	12:CL:27:LEU:N	2.48	0.46
27:D2:50:ILE:O	27:D2:52:ASP:N	2.38	0.46
35:DA:1070:A:C5	35:DA:1097:U:H4'	2.50	0.46
35:DA:1306:C:H2'	35:DA:1307:A:C8	2.51	0.46
35:DA:1322:A:C5	35:DA:1323:U:C5	3.04	0.46
35:DA:1535:A:H3'	35:DA:1536:C:C6	2.51	0.46
35:DA:2877:G:H5'	52:DT:3:ARG:HH21	1.79	0.46
36:DB:42:C:C6	41:DG:69:ALA:HB2	2.50	0.46
41:DG:71:THR:HG23	41:DG:89:GLY:HA3	1.97	0.46
41:DG:97:ASP:O	41:DG:101:ILE:HG23	2.15	0.46
44:DJ:26:UNK:HA	44:DJ:85:UNK:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:7:ARG:O	48:DP:10:PRO:HD3	2.16	0.46
52:DT:131:ALA:O	52:DT:133:GLU:N	2.48	0.46
57:DY:8:LYS:HB2	57:DY:28:LYS:HZ1	1.80	0.46
58:DZ:151:HIS:CB	58:DZ:170:THR:HA	2.45	0.46
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.98	0.46
1:AA:1360:A:H2'	1:AA:1361:G:C8	2.51	0.46
2:AB:178:ARG:HD2	8:AH:71:GLY:O	2.16	0.46
5:AE:41:VAL:O	5:AE:66:MET:HA	2.15	0.46
5:AE:102:ALA:HB1	5:AE:106:PRO:CG	2.37	0.46
11:AK:21:ILE:N	11:AK:21:ILE:HD12	2.31	0.46
13:AM:58:GLU:C	13:AM:60:VAL:H	2.23	0.46
13:AM:125:ARG:HD2	24:AY:165:ASP:CA	2.44	0.46
18:AR:33:ASP:C	18:AR:35:ARG:H	2.23	0.46
27:B2:39:ALA:HA	27:B2:45:SER:OG	2.16	0.46
31:B6:25:LYS:HD3	33:B8:34:TRP:HZ2	1.80	0.46
35:BA:547:A:H2'	35:BA:548:A:C8	2.51	0.46
35:BA:1494:A:H2'	35:BA:1495:A:H5"	1.98	0.46
35:BA:2008:C:H2'	35:BA:2009:G:H8	1.80	0.46
42:BH:154:PRO:HB3	42:BH:163:TYR:CZ	2.51	0.46
43:BI:120:ILE:O	43:BI:122:GLU:N	2.46	0.46
51:BS:87:PHE:HB2	51:BS:106:ARG:HD3	1.97	0.46
1:CA:335:C:O2'	1:CA:1433:A:N3	2.42	0.46
3:CC:91:LEU:C	3:CC:93:LYS:H	2.24	0.46
26:D1:61:ARG:HG3	26:D1:61:ARG:HH11	1.80	0.46
33:D8:34:TRP:CG	33:D8:35:GLN:N	2.84	0.46
35:DA:140:G:H1'	35:DA:141:A:H2	1.81	0.46
35:DA:581:C:H2'	35:DA:582:G:H8	1.81	0.46
35:DA:597:U:O3'	48:DP:15:ARG:HD2	2.16	0.46
35:DA:598:G:H2'	35:DA:599:G:O4'	2.16	0.46
35:DA:1508:A:O2'	35:DA:1509(A):A:N7	2.48	0.46
36:DB:8:U:H3	36:DB:113:G:H1	1.64	0.46
48:DP:47:ASP:HB3	48:DP:48:PRO:CA	2.46	0.46
50:DR:2:ARG:HD2	50:DR:5:LYS:HE2	1.98	0.46
1:AA:203:U:H3'	1:AA:203:U:OP2	2.16	0.46
1:AA:1057:G:H5"	3:AC:154:SER:CB	2.46	0.46
1:AA:1128:C:C5'	9:AI:16:ARG:HH12	2.29	0.46
1:AA:1237:C:O4'	1:AA:1334:G:N2	2.49	0.46
1:AA:1326:C:H2'	1:AA:1327:C:H6	1.81	0.46
2:AB:22:LYS:H	2:AB:40:HIS:CE1	2.34	0.46
10:AJ:6:ILE:HD12	10:AJ:6:ILE:O	2.16	0.46
11:AK:111:ASP:HA	18:AR:84:LYS:HD2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:116:THR:O	13:AM:118:ALA:N	2.49	0.46
16:AP:82:GLN:OE1	16:AP:82:GLN:N	2.41	0.46
22:AW:16:U:H3'	22:AW:17:C:C5'	2.46	0.46
27:B2:57:ILE:O	27:B2:61:LEU:HG	2.16	0.46
30:B5:52:TYR:O	30:B5:53:ALA:C	2.58	0.46
35:BA:330:A:H2	35:BA:1210:A:H2'	1.81	0.46
35:BA:863:A:O3'	36:BB:101:G:N2	2.49	0.46
35:BA:1427:A:H4'	35:BA:1428:C:O5'	2.15	0.46
35:BA:1599:C:OP1	56:BX:36:LYS:HG2	2.15	0.46
35:BA:2126:A:H4'	35:BA:2127:G:O5'	2.16	0.46
36:BB:112:U:H2'	36:BB:113:G:H8	1.81	0.46
40:BF:3:GLU:CA	40:BF:24:LEU:HG	2.46	0.46
40:BF:21:ALA:C	40:BF:23:ASP:N	2.74	0.46
41:BG:100:TRP:CD1	41:BG:100:TRP:H	2.34	0.46
42:BH:84:SER:O	42:BH:85:LYS:HB3	2.15	0.46
48:BP:48:PRO:HG2	48:BP:49:ARG:H	1.81	0.46
48:BP:50:ARG:HG3	48:BP:51:PHE:H	1.81	0.46
48:BP:122:PRO:HA	48:BP:142:GLY:HA2	1.98	0.46
50:BR:4:LEU:O	50:BR:5:LYS:HD3	2.16	0.46
52:BT:20:PRO:HD2	52:BT:85:LYS:HB2	1.96	0.46
1:CA:188:C:C2	1:CA:189:G:C8	3.04	0.46
1:CA:189(K):U:H2'	1:CA:189(L):G:H8	1.79	0.46
1:CA:868:C:H2'	1:CA:869:G:O4'	2.15	0.46
1:CA:939:G:O3'	7:CG:102:ARG:NH1	2.49	0.46
1:CA:1347:G:H1'	1:CA:1348:U:H5	1.81	0.46
1:CA:1399:C:C2	1:CA:1502:A:N6	2.84	0.46
4:CD:176:LEU:CG	4:CD:177:ASP:H	2.27	0.46
6:CF:16:GLN:O	6:CF:20:ALA:HB2	2.16	0.46
9:CI:116:LYS:HG2	9:CI:122:ALA:HA	1.98	0.46
19:CS:37:ARG:H	19:CS:37:ARG:HG3	1.51	0.46
22:CW:18:G:H1'	22:CW:58:A:C2	2.51	0.46
25:D0:74:ARG:HH11	25:D0:74:ARG:HG3	1.80	0.46
31:D6:28:ARG:HA	31:D6:32:ASN:HD22	1.80	0.46
32:D7:24:THR:HG23	32:D7:27:GLY:HA3	1.97	0.46
33:D8:32:LEU:HD11	35:DA:2392:A:OP1	2.16	0.46
35:DA:239:U:H2'	35:DA:240:G:O4'	2.16	0.46
35:DA:1494:A:H4'	35:DA:1494:A:OP1	2.16	0.46
35:DA:1548:C:H2'	35:DA:1549:C:C6	2.49	0.46
35:DA:1717:G:H2'	35:DA:1718:G:H5"	1.98	0.46
35:DA:2092:U:H4'	35:DA:2093:G:C5'	2.46	0.46
35:DA:2757:A:N1	42:DH:67:LEU:HD22	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DE:39:PRO:HA	39:DE:43:GLY:CA	2.46	0.46
40:DF:89:VAL:HG12	40:DF:90:PHE:N	2.32	0.46
46:DN:57:ALA:O	46:DN:58:ASP:C	2.59	0.46
48:DP:57:THR:OG1	48:DP:58:THR:N	2.47	0.46
49:DQ:30:GLY:O	49:DQ:134:ARG:NH1	2.49	0.46
52:DT:129:ARG:CZ	52:DT:131:ALA:HB3	2.46	0.46
55:DW:18:ARG:HG2	55:DW:18:ARG:HH11	1.81	0.46
55:DW:36:LEU:HD11	55:DW:47:VAL:HG12	1.96	0.46
1:AA:180:U:H2'	1:AA:181:G:H5'	1.97	0.45
1:AA:357:G:O2'	43:DI:89:TYR:HB3	2.16	0.45
1:AA:426:G:H4'	4:AD:41:GLY:O	2.15	0.45
1:AA:645:C:H2'	1:AA:646:U:C6	2.52	0.45
1:AA:719:C:O2'	18:AR:49:LYS:HB3	2.15	0.45
1:AA:1285:A:H1'	1:AA:1286:A:OP2	2.16	0.45
1:AA:1298:C:H2'	7:AG:114:ARG:NH1	2.31	0.45
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.79	0.45
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.84	0.45
7:AG:143:ARG:NE	22:AW:42:C:H5"	2.31	0.45
8:AH:51:VAL:HG11	8:AH:60:ARG:HB2	1.98	0.45
8:AH:88:LYS:HB3	8:AH:89:PRO:HD2	1.97	0.45
13:AM:58:GLU:O	13:AM:62:ASN:HB2	2.15	0.45
13:AM:90:LEU:C	13:AM:92:HIS:N	2.64	0.45
24:AY:115:ASN:OD1	24:AY:115:ASN:N	2.47	0.45
24:AY:304:PRO:C	24:AY:306:GLU:H	2.24	0.45
35:BA:214:G:H1'	35:BA:216:A:O2'	2.16	0.45
35:BA:218:A:H2	35:BA:235:U:H4'	1.80	0.45
35:BA:307:G:C2	35:BA:310:A:OP2	2.69	0.45
35:BA:962:G:O2'	35:BA:963:U:H5'	2.17	0.45
35:BA:1351:C:H2'	35:BA:1352:U:C6	2.51	0.45
35:BA:2208:A:H1'	35:BA:2219:G:C4	2.51	0.45
35:BA:2227:A:H5"	38:BD:263:ARG:HH11	1.81	0.45
35:BA:2308:G:H2'	35:BA:2309:A:C8	2.51	0.45
35:BA:2443:C:H2'	35:BA:2444:G:C8	2.49	0.45
39:BE:23:VAL:HA	39:BE:186:GLY:H	1.81	0.45
39:BE:24:THR:HG23	39:BE:184:VAL:HG23	1.99	0.45
39:BE:77:ILE:CG2	39:BE:78:LEU:H	2.27	0.45
40:BF:157:VAL:HA	40:BF:176:LEU:O	2.16	0.45
45:BK:54:PRO:HG3	45:BK:71:THR:O	2.15	0.45
47:BO:43:VAL:HG12	47:BO:54:GLU:HA	1.98	0.45
49:BQ:134:ARG:NE	58:BZ:122:ARG:HH21	2.13	0.45
51:BS:52:SER:HB3	51:BS:55:ALA:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:8:LYS:HB2	57:BY:28:LYS:HZ1	1.81	0.45
1:CA:192:U:H4'	20:CT:103:GLY:H	1.82	0.45
1:CA:363:A:OP1	12:CL:34:ARG:N	2.29	0.45
1:CA:975:A:N1	10:CJ:48:THR:HB	2.30	0.45
1:CA:1060:C:H5"	10:CJ:51:ARG:HB3	1.97	0.45
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.16	0.45
22:CW:19:G:OP2	22:CW:60:U:N3	2.49	0.45
33:D8:62:LEU:CD1	35:DA:242:G:H5"	2.35	0.45
35:DA:804:A:H2'	35:DA:806:C:C4	2.50	0.45
35:DA:1047:G:H2'	35:DA:1110:G:H22	1.81	0.45
35:DA:1173:G:N2	35:DA:1175:U:O4	2.49	0.45
35:DA:1678:G:N2	35:DA:1989:G:N2	2.64	0.45
43:DI:88:ILE:HG22	43:DI:90:GLY:N	2.24	0.45
45:DK:137:GLU:HG3	45:DK:138:VAL:H	1.82	0.45
46:DN:65:LYS:O	46:DN:69:GLN:HB2	2.15	0.45
48:DP:61:ARG:H	48:DP:61:ARG:CD	2.29	0.45
52:DT:125:ARG:O	52:DT:128:GLU:HG3	2.17	0.45
57:DY:28:LYS:HB2	57:DY:28:LYS:HE3	1.67	0.45
58:DZ:28:MET:O	58:DZ:34:ASN:HA	2.16	0.45
1:AA:267:C:OP2	17:AQ:67:LYS:HD2	2.16	0.45
1:AA:997:U:H2'	1:AA:998:G:C8	2.51	0.45
1:AA:1183:A:H5"	1:AA:1184:G:OP2	2.16	0.45
3:AC:71:ALA:HB2	3:AC:106:VAL:HB	1.98	0.45
3:AC:91:LEU:HB3	3:AC:99:VAL:HG11	1.98	0.45
4:AD:98:GLU:OE2	4:AD:103:ASN:ND2	2.47	0.45
8:AH:11:THR:HA	8:AH:14:ARG:NH1	2.30	0.45
12:AL:60:LEU:C	12:AL:62:SER:H	2.24	0.45
18:AR:31:LEU:HD23	18:AR:31:LEU:H	1.82	0.45
22:AV:2:C:H2'	22:AV:3:C:C6	2.52	0.45
22:AW:53:G:C6	22:AW:62:C:N4	2.84	0.45
33:B8:48:PHE:C	33:B8:49:VAL:HG22	2.42	0.45
35:BA:1331:A:O2'	35:BA:1332:G:H8	1.97	0.45
35:BA:1711:C:H2'	35:BA:1712:C:H6	1.81	0.45
35:BA:2070:G:C2	35:BA:2442:C:C2	3.04	0.45
35:BA:2651:C:H42	35:BA:2669:G:H1	1.63	0.45
41:BG:181:ARG:HG2	41:BG:181:ARG:O	2.17	0.45
43:BI:40:THR:C	43:BI:42:SER:H	2.24	0.45
43:BI:108:THR:C	43:BI:109:ILE:HD12	2.41	0.45
45:BK:95:LYS:HE2	45:BK:95:LYS:HB3	1.75	0.45
46:BN:1:MET:O	46:BN:2:LYS:HG3	2.16	0.45
52:BT:13:ARG:CZ	52:BT:13:ARG:HA	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BW:23:LEU:HD12	55:BW:23:LEU:HA	1.81	0.45
55:BW:92:ARG:HH11	55:BW:92:ARG:CB	2.22	0.45
57:BY:10:GLY:CA	57:BY:27:VAL:HG13	2.46	0.45
58:BZ:144:LEU:HD13	58:BZ:144:LEU:HA	1.76	0.45
1:CA:687:A:N3	1:CA:688:G:H1'	2.31	0.45
1:CA:885:G:H2'	1:CA:886:G:H8	1.82	0.45
1:CA:1235:U:H5"	21:CU:3:LYS:HD2	1.98	0.45
1:CA:1286:A:H2'	1:CA:1287:A:H4'	1.98	0.45
8:CH:20:TYR:HE2	8:CH:75:ARG:HD2	1.80	0.45
10:CJ:50:ILE:HA	10:CJ:60:ARG:HB2	1.98	0.45
22:CW:72:C:H2'	22:CW:73:A:O4'	2.16	0.45
34:D9:20:HIS:H	35:DA:2757:A:P	2.39	0.45
35:DA:962:G:O2'	35:DA:963:U:H5'	2.16	0.45
35:DA:1058:G:H21	45:DK:126:MET:HE3	1.80	0.45
35:DA:1187:G:H5"	54:DV:81:TYR:CE2	2.51	0.45
35:DA:1316:U:H2'	35:DA:1317:A:H8	1.79	0.45
35:DA:1496:A:C8	35:DA:1498:C:C4	3.04	0.45
35:DA:1721:G:N3	35:DA:1721:G:H5"	2.32	0.45
35:DA:1857:G:H8	35:DA:1857:G:O5'	1.98	0.45
35:DA:2506:U:OP1	39:DE:144:ARG:NH2	2.49	0.45
35:DA:2773:C:OP1	39:DE:164:ARG:NE	2.48	0.45
39:DE:69:LYS:C	39:DE:71:GLY:N	2.70	0.45
44:DJ:22:UNK:O	44:DJ:119:UNK:HA	2.15	0.45
46:DN:1:MET:O	46:DN:2:LYS:HG3	2.15	0.45
46:DN:17:ASP:OD1	46:DN:19:GLU:HB3	2.16	0.45
46:DN:19:GLU:HG3	46:DN:20:GLY:H	1.82	0.45
48:DP:108:LYS:O	48:DP:110:TYR:N	2.49	0.45
51:DS:64:GLU:O	51:DS:68:GLN:HG3	2.16	0.45
54:DV:5:VAL:HG23	54:DV:37:VAL:O	2.16	0.45
57:DY:2:ARG:HD3	57:DY:3:VAL:HG23	1.98	0.45
58:DZ:44:PHE:CE2	58:DZ:86:VAL:HG11	2.51	0.45
1:AA:645:C:H2'	1:AA:646:U:H6	1.81	0.45
1:AA:1227:A:OP2	13:AM:111:LYS:HE2	2.15	0.45
1:AA:1494:G:O2'	35:BA:1912:A:O2'	2.27	0.45
2:AB:158:LEU:HD22	2:AB:182:ILE:HD11	1.98	0.45
2:AB:228:GLY:O	2:AB:230:VAL:HG13	2.15	0.45
3:AC:16:ARG:HB2	3:AC:16:ARG:CZ	2.45	0.45
4:AD:156:GLU:O	4:AD:159:ARG:N	2.45	0.45
6:AF:7:ASN:O	6:AF:8:ILE:HG13	2.17	0.45
8:AH:12:ARG:NH1	8:AH:27:PRO:HD2	2.31	0.45
13:AM:90:LEU:O	13:AM:92:HIS:N	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:37:VAL:HG12	18:AR:78:LEU:HB3	1.98	0.45
19:AS:66:MET:HA	19:AS:69:HIS:HD2	1.81	0.45
22:AW:27:G:H2'	22:AW:28:G:H8	1.81	0.45
28:B3:1:MET:O	28:B3:2:PRO:C	2.59	0.45
35:BA:70:G:H21	35:BA:71:A:H62	1.64	0.45
35:BA:633:A:N3	35:BA:2403:C:H4'	2.31	0.45
35:BA:864:G:OP2	49:BQ:22:LYS:HE2	2.17	0.45
35:BA:1198:U:H2'	35:BA:1199:U:H6	1.81	0.45
35:BA:1722:A:C2	35:BA:1740:G:C8	3.04	0.45
35:BA:1827:C:H2'	35:BA:1828:G:O4'	2.16	0.45
35:BA:1899:G:N2	35:BA:1902:C:C5	2.84	0.45
38:BD:69:ARG:NH2	38:BD:128:GLY:O	2.47	0.45
41:BG:47:LYS:HB2	41:BG:51:ARG:HD2	1.99	0.45
47:BO:49:ARG:HA	47:BO:53:LYS:NZ	2.32	0.45
49:BQ:21:THR:HG21	49:BQ:101:ARG:HB2	1.97	0.45
51:BS:64:GLU:O	51:BS:68:GLN:HG3	2.16	0.45
55:BW:17:VAL:O	55:BW:20:VAL:HG22	2.15	0.45
57:BY:2:ARG:O	57:BY:4:LYS:HG3	2.16	0.45
57:BY:52:SER:O	57:BY:53:PRO:C	2.59	0.45
58:BZ:97:GLU:HA	58:BZ:126:VAL:O	2.17	0.45
1:CA:34:C:H2'	1:CA:35:G:H8	1.80	0.45
1:CA:35:G:H21	12:CL:118:SER:CB	2.30	0.45
1:CA:320:C:H2'	1:CA:321:A:C8	2.51	0.45
1:CA:939:G:H5"	7:CG:102:ARG:NH1	2.30	0.45
1:CA:1415:G:C6	1:CA:1486:G:C6	3.04	0.45
1:CA:1442(A):G:N2	35:DA:2864:G:OP1	2.42	0.45
4:CD:88:VAL:O	4:CD:92:VAL:HG23	2.16	0.45
4:CD:100:ARG:O	4:CD:103:ASN:N	2.45	0.45
5:CE:34:VAL:HG12	5:CE:62:ALA:HB1	1.98	0.45
13:CM:90:LEU:O	13:CM:92:HIS:N	2.49	0.45
21:CU:12:LYS:CB	21:CU:22:ARG:HD2	2.47	0.45
35:DA:676:A:H2	35:DA:802:A:H61	1.64	0.45
35:DA:780:G:H21	35:DA:783:A:H62	1.64	0.45
35:DA:817:C:H4'	35:DA:932:G:C5	2.51	0.45
35:DA:852:G:H2'	35:DA:853:G:H8	1.82	0.45
35:DA:1100:C:H2'	35:DA:1101:U:O4'	2.16	0.45
35:DA:1243:G:H2'	35:DA:1244:G:O4'	2.16	0.45
35:DA:1973:G:H2'	35:DA:1974:C:C6	2.51	0.45
35:DA:2317:C:H2'	35:DA:2318:G:O4'	2.16	0.45
38:DD:210:GLY:C	38:DD:212:SER:N	2.74	0.45
38:DD:260:ARG:NH2	38:DD:264:LYS:HD3	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DE:77:ILE:HG22	39:DE:78:LEU:N	2.30	0.45
40:DF:83:PHE:O	40:DF:85:GLY:N	2.49	0.45
45:DK:12:LEU:HB3	45:DK:13:PRO:HD2	1.98	0.45
49:DQ:21:THR:O	49:DQ:22:LYS:HB3	2.16	0.45
50:DR:116:LEU:HA	50:DR:116:LEU:HD23	1.62	0.45
51:DS:106:ARG:O	51:DS:106:ARG:HD2	2.15	0.45
58:DZ:119:GLU:O	58:DZ:120:ILE:C	2.60	0.45
58:DZ:165:VAL:HG12	58:DZ:166:SER:N	2.30	0.45
1:AA:444:C:H2'	1:AA:445:G:C8	2.52	0.45
1:AA:1280:A:H5'	10:AJ:40:LEU:HD22	1.97	0.45
1:AA:1304:G:OP1	21:AU:2:GLY:N	2.48	0.45
2:AB:114:ARG:O	2:AB:114:ARG:HD3	2.15	0.45
3:AC:173:VAL:O	3:AC:175:LEU:HD12	2.16	0.45
7:AG:101:LEU:O	7:AG:105:VAL:HG23	2.15	0.45
7:AG:121:ALA:O	7:AG:125:MET:HG3	2.16	0.45
11:AK:95:ILE:O	11:AK:99:GLN:HG3	2.17	0.45
24:AY:193:SER:HB2	24:AY:202:HIS:HB2	1.98	0.45
35:BA:16:G:H2'	35:BA:17:G:H8	1.82	0.45
35:BA:29:U:H2'	35:BA:30:G:C8	2.52	0.45
35:BA:817:C:O2'	35:BA:839:U:H5"	2.17	0.45
35:BA:1277:G:O2'	50:BR:24:GLN:HG2	2.17	0.45
35:BA:1336:A:OP1	56:BX:64:LYS:HE3	2.17	0.45
35:BA:1523:U:H2'	35:BA:1524:G:C8	2.51	0.45
35:BA:1528:A:H2'	35:BA:1528(A):A:O4'	2.17	0.45
35:BA:1853:A:N6	35:BA:1889:A:N7	2.65	0.45
35:BA:1902:C:H1'	38:BD:244:ARG:HG3	1.98	0.45
35:BA:2655:G:O2'	35:BA:2664:G:O6	2.22	0.45
35:BA:2802:G:O2'	35:BA:2803:C:H5"	2.16	0.45
37:BC:6:LYS:HD2	37:BC:6:LYS:O	2.16	0.45
38:BD:239:ARG:HG2	38:BD:239:ARG:HH21	1.81	0.45
39:BE:144:ARG:HB3	39:BE:145:LYS:H	1.39	0.45
41:BG:119:GLY:HA2	41:BG:179:PRO:HB2	1.98	0.45
41:BG:142:PRO:O	41:BG:144:ILE:N	2.48	0.45
44:BJ:81:UNK:C	44:BJ:83:UNK:N	2.79	0.45
48:BP:40:SER:C	48:BP:41:ARG:HE	2.23	0.45
49:BQ:97:VAL:HG11	49:BQ:103:MET:HE3	1.98	0.45
56:BX:8:ILE:HD12	56:BX:8:ILE:N	2.32	0.45
1:CA:227:G:H2'	1:CA:228:A:H8	1.81	0.45
1:CA:643:C:C2	1:CA:644:G:C8	3.04	0.45
1:CA:817:C:H1'	1:CA:819:A:H5'	1.99	0.45
1:CA:908:A:H2'	1:CA:909:A:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:925:G:H1	1:CA:1391:U:H3	1.64	0.45
1:CA:954:G:H21	1:CA:1227:A:H62	1.63	0.45
1:CA:1073:U:H2'	1:CA:1074:G:C8	2.49	0.45
1:CA:1095:U:OP1	1:CA:1108:G:N1	2.49	0.45
1:CA:1183:A:H5"	1:CA:1184:G:OP2	2.17	0.45
5:CE:50:GLU:HB3	5:CE:53:LEU:HD12	1.98	0.45
10:CJ:32:ALA:HB3	10:CJ:76:ASN:HB2	1.96	0.45
13:CM:64:TRP:CD1	13:CM:64:TRP:H	2.32	0.45
28:D3:6:VAL:HB	28:D3:54:VAL:CG1	2.46	0.45
35:DA:32:C:O2'	35:DA:33:U:H5'	2.16	0.45
35:DA:255:A:H1'	35:DA:384:U:C6	2.51	0.45
35:DA:582:G:H2'	35:DA:583:G:H8	1.81	0.45
35:DA:1055:G:N7	35:DA:1056:G:C2	2.84	0.45
35:DA:1292:U:H2'	35:DA:1293:C:H6	1.81	0.45
35:DA:1466:G:H2'	35:DA:1547:C:C5	2.52	0.45
35:DA:1999:C:H5"	35:DA:2723:C:O2'	2.16	0.45
35:DA:2115:G:N2	35:DA:2117:A:H62	2.13	0.45
35:DA:2142:C:H2'	35:DA:2143:C:H6	1.82	0.45
35:DA:2225:A:H4'	35:DA:2226:C:O5'	2.17	0.45
35:DA:2409:G:H2'	35:DA:2410:G:O4'	2.17	0.45
35:DA:2521:C:C2	35:DA:2545:G:N2	2.84	0.45
36:DB:61:G:H2'	36:DB:62:C:C6	2.51	0.45
38:DD:24:ILE:HD12	38:DD:84:TYR:HB2	1.98	0.45
38:DD:43:ARG:NH1	38:DD:49:ILE:HG22	2.32	0.45
38:DD:209:ALA:C	38:DD:210:GLY:O	2.55	0.45
38:DD:239:ARG:HG2	38:DD:239:ARG:NH2	2.31	0.45
38:DD:261:LYS:HB3	38:DD:264:LYS:HB2	1.98	0.45
41:DG:124:SER:HB2	41:DG:131:TYR:CE1	2.52	0.45
41:DG:125:PHE:CZ	41:DG:173:LEU:HD12	2.51	0.45
43:DI:68:LEU:HA	43:DI:71:ILE:CD1	2.46	0.45
43:DI:112:LYS:H	43:DI:112:LYS:CD	2.19	0.45
43:DI:131:LYS:HB3	43:DI:132:PRO:HA	1.99	0.45
48:DP:16:ARG:HG3	48:DP:17:LYS:N	2.31	0.45
48:DP:83:VAL:HG11	48:DP:112:LEU:HD21	1.98	0.45
49:DQ:136:ALA:C	49:DQ:138:ASP:H	2.24	0.45
57:DY:86:ARG:HD2	57:DY:88:LYS:HD2	1.97	0.45
58:DZ:56:VAL:HG22	58:DZ:70:LEU:HD21	1.97	0.45
58:DZ:70:LEU:HG	58:DZ:91:LEU:HD21	1.99	0.45
1:AA:93:G:O2'	1:AA:96:U:H5'	2.17	0.45
1:AA:189(A):C:C2	1:AA:189(B):C:C5	3.04	0.45
1:AA:288:A:H2'	1:AA:289:G:H4'	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:584:G:H2'	1:AA:585:G:H8	1.81	0.45
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.36	0.45
1:AA:1126:U:P	1:AA:1126:U:H6	2.39	0.45
1:AA:1348:U:OP1	9:AI:110:GLU:HG2	2.16	0.45
1:AA:1372:U:OP1	9:AI:71:SER:HB3	2.17	0.45
1:AA:1442(A):G:C8	52:BT:118:ARG:HD2	2.51	0.45
2:AB:97:TRP:HZ3	2:AB:172:ILE:HG22	1.81	0.45
9:AI:17:VAL:CG1	9:AI:81:ILE:HD13	2.46	0.45
10:AJ:24:VAL:O	10:AJ:28:ARG:HG3	2.17	0.45
14:AN:29:ARG:HG2	14:AN:40:CYS:HB2	1.99	0.45
24:AY:10:LEU:O	24:AY:14:ARG:HG3	2.17	0.45
24:AY:107:LEU:O	24:AY:107:LEU:HD23	2.17	0.45
24:AY:244:THR:HA	35:BA:2573:C:H41	1.81	0.45
24:AY:315:VAL:HG11	24:AY:320:TYR:CZ	2.51	0.45
31:B6:11:LEU:C	31:B6:11:LEU:HD12	2.42	0.45
35:BA:144:C:H2'	35:BA:145:G:C8	2.50	0.45
35:BA:476:G:N1	35:BA:479:A:OP2	2.49	0.45
35:BA:588:U:H1'	40:BF:90:PHE:HB3	1.99	0.45
35:BA:871:U:OP1	49:BQ:5:ARG:HB2	2.16	0.45
35:BA:935:C:H2'	35:BA:936:C:H6	1.81	0.45
35:BA:1349:A:H62	35:BA:1598:C:N4	2.15	0.45
35:BA:2840:C:H4'	50:BR:53:HIS:HD2	1.82	0.45
39:BE:69:LYS:C	39:BE:71:GLY:H	2.25	0.45
41:BG:91:ARG:HD2	41:BG:92:VAL:N	2.31	0.45
41:BG:120:LEU:HB2	41:BG:179:PRO:O	2.15	0.45
42:BH:76:VAL:O	42:BH:80:SER:OG	2.34	0.45
43:BI:98:ALA:HA	43:BI:101:LEU:HB3	1.99	0.45
46:BN:120:LEU:CD1	46:BN:122:VAL:HG23	2.47	0.45
51:BS:18:ILE:C	51:BS:20:ARG:H	2.24	0.45
51:BS:95:HIS:CG	51:BS:96:GLY:N	2.84	0.45
53:BU:92:ARG:NH1	54:BV:11:GLN:O	2.50	0.45
58:BZ:5:LEU:HD21	58:BZ:39:VAL:HG21	1.97	0.45
1:CA:225:C:H2'	1:CA:226:G:H8	1.82	0.45
1:CA:314:C:O2'	1:CA:315:A:H5'	2.16	0.45
1:CA:390:C:H2'	1:CA:391:G:C8	2.52	0.45
1:CA:607:A:H2'	1:CA:608:A:C8	2.52	0.45
1:CA:645:C:H2'	1:CA:646:U:H6	1.80	0.45
1:CA:678:U:H2'	1:CA:679:C:H6	1.81	0.45
1:CA:806:C:H2'	1:CA:807:A:H8	1.81	0.45
1:CA:824:C:H4'	8:CH:1:MET:N	2.32	0.45
4:CD:160:GLN:C	4:CD:162:LEU:H	2.24	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:24:SER:O	11:CK:27:ASN:N	2.46	0.45
30:D5:55:ARG:CD	30:D5:56:LYS:H	2.18	0.45
35:DA:86:C:OP1	57:DY:32:PRO:HD2	2.16	0.45
35:DA:608:A:OP1	40:DF:100:THR:OG1	2.34	0.45
35:DA:753:C:O5'	35:DA:753:C:H6	1.98	0.45
35:DA:1592:C:H2'	35:DA:1593:G:H8	1.81	0.45
35:DA:1983:C:H4'	35:DA:2606:C:H4'	1.97	0.45
35:DA:2328:A:H2'	35:DA:2329:G:H8	1.80	0.45
35:DA:2408:U:H2'	35:DA:2409:G:C8	2.51	0.45
37:DC:23:ILE:HG22	37:DC:187:ALA:HA	1.98	0.45
45:DK:48:MET:SD	45:DK:69:THR:HG21	2.57	0.45
48:DP:50:ARG:HG3	48:DP:51:PHE:H	1.81	0.45
50:DR:7:GLY:HA3	50:DR:8:ARG:NH2	2.31	0.45
50:DR:9:LYS:HE3	50:DR:9:LYS:HB2	1.75	0.45
52:DT:53:ARG:HB2	52:DT:53:ARG:HH11	1.81	0.45
57:DY:32:PRO:C	57:DY:34:LYS:N	2.74	0.45
57:DY:51:VAL:HB	57:DY:53:PRO:HD2	1.97	0.45
1:AA:376:G:H5"	16:AP:5:ARG:HD2	1.98	0.45
1:AA:740:U:H2'	1:AA:741:G:H8	1.81	0.45
1:AA:922:G:N3	1:AA:1398:A:H2	2.14	0.45
1:AA:950:U:H3	1:AA:1231:G:H1	1.64	0.45
1:AA:1098:C:H2'	1:AA:1099:G:H8	1.81	0.45
1:AA:1239:A:C4	1:AA:1298:C:N4	2.84	0.45
1:AA:1256:A:H5'	1:AA:1257:U:OP1	2.16	0.45
1:AA:1320:C:H42	19:AS:36:ARG:HE	1.63	0.45
2:AB:220:ASP:C	2:AB:222:ILE:N	2.74	0.45
3:AC:119:ARG:HH11	3:AC:119:ARG:HG3	1.82	0.45
19:AS:33:THR:CG2	19:AS:51:VAL:HA	2.47	0.45
22:AV:51:U:O2	22:AV:64:A:C2	2.70	0.45
22:AW:67:C:H2'	22:AW:68:C:C6	2.52	0.45
35:BA:210:C:H2'	35:BA:211:A:C8	2.51	0.45
35:BA:1206:G:H2'	35:BA:1207:C:C6	2.52	0.45
35:BA:1349:A:N6	35:BA:1598:C:H42	2.14	0.45
35:BA:1542:A:H3'	35:BA:1542:A:C8	2.52	0.45
35:BA:1580:A:C8	35:BA:1581:G:C8	3.04	0.45
36:BB:66:A:O2'	36:BB:67:G:O5'	2.34	0.45
39:BE:87:GLU:C	39:BE:89:ASP:H	2.25	0.45
46:BN:90:MET:HE2	46:BN:90:MET:HA	1.99	0.45
47:BO:111:PHE:HB3	47:BO:114:ILE:HD13	1.98	0.45
49:BQ:84:GLY:O	49:BQ:85:LYS:HB2	2.17	0.45
52:BT:65:LYS:NZ	52:BT:66:VAL:H	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:2:ARG:N	57:BY:5:MET:HG3	2.32	0.45
58:BZ:97:GLU:HG2	58:BZ:125:LEU:HD21	1.97	0.45
1:CA:59:A:C5'	1:CA:60:A:H5"	2.47	0.45
1:CA:67:C:O2	1:CA:171:A:H2	2.00	0.45
1:CA:833:U:H2'	1:CA:834:C:C6	2.51	0.45
1:CA:1386:G:H2'	1:CA:1387:G:H8	1.82	0.45
6:CF:30:LEU:CB	6:CF:35:ALA:HB3	2.46	0.45
13:CM:108:ARG:HD2	13:CM:108:ARG:H	1.81	0.45
15:CO:33:THR:HG21	15:CO:85:LEU:CD2	2.47	0.45
24:CY:233:ARG:HD3	35:DA:2573:C:N4	2.31	0.45
24:CY:233:ARG:NH2	35:DA:2555:U:O2'	2.50	0.45
25:D0:42:GLY:HA2	35:DA:2330:G:H21	1.81	0.45
35:DA:176:G:O2'	35:DA:177:G:H5'	2.17	0.45
35:DA:1114:G:H3'	35:DA:1115:G:H5"	1.98	0.45
35:DA:1292:U:H2'	35:DA:1293:C:C6	2.51	0.45
35:DA:1494:A:H2'	35:DA:1495:A:H3'	1.97	0.45
35:DA:1547:C:H2'	35:DA:1548:C:C6	2.52	0.45
35:DA:2182:G:H2'	35:DA:2183:C:C6	2.52	0.45
35:DA:2266:A:H4'	35:DA:2267:A:N3	2.32	0.45
36:DB:30:C:H1'	36:DB:57:A:H61	1.82	0.45
41:DG:173:LEU:HD22	41:DG:178:PHE:CZ	2.52	0.45
45:DK:91:PRO:O	58:DZ:112:ARG:NH2	2.43	0.45
48:DP:85:LEU:CD2	48:DP:114:ILE:HD11	2.43	0.45
52:DT:60:THR:HG22	52:DT:77:PRO:HA	1.97	0.45
54:DV:57:VAL:HB	54:DV:99:ILE:HG22	1.98	0.45
57:DY:26:LYS:HG3	57:DY:27:VAL:HG23	1.98	0.45
1:AA:251:G:N2	1:AA:253:U:C5	2.85	0.45
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.16	0.45
1:AA:1242:C:H2'	1:AA:1243:C:H6	1.81	0.45
1:AA:1367:C:H5"	9:AI:114:TYR:HB2	1.97	0.45
9:AI:26:VAL:HG13	9:AI:61:ALA:O	2.17	0.45
17:AQ:24:GLU:HG2	17:AQ:39:SER:HB3	1.98	0.45
19:AS:24:ALA:O	19:AS:25:LYS:HB2	2.17	0.45
22:AV:18:G:N2	22:AV:58:A:O4'	2.49	0.45
28:B3:5:LYS:HB3	28:B3:57:GLU:HB3	1.98	0.45
33:B8:32:LEU:HD11	35:BA:2392:A:OP1	2.17	0.45
35:BA:109:G:H2'	35:BA:110:G:H8	1.81	0.45
35:BA:527:C:H2'	35:BA:2779:U:H5	1.80	0.45
35:BA:1223:G:O6	54:BV:69:LYS:NZ	2.46	0.45
35:BA:1853:A:H2'	35:BA:1854:A:C8	2.52	0.45
35:BA:2161:C:O2'	35:BA:2173:A:O4'	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2405:G:HO2'	35:BA:2406:U:P	2.37	0.45
35:BA:2864:G:H2'	35:BA:2865:U:H6	1.82	0.45
38:BD:9:TYR:CZ	38:BD:13:ARG:HD3	2.51	0.45
38:BD:241:PRO:O	38:BD:243:GLY:N	2.50	0.45
40:BF:25:PRO:O	40:BF:26:ALA:C	2.60	0.45
41:BG:106:LEU:HA	41:BG:110:ALA:CB	2.47	0.45
41:BG:135:LEU:O	41:BG:154:GLY:HA3	2.16	0.45
42:BH:125:VAL:HG12	42:BH:127:GLU:O	2.17	0.45
48:BP:45:LEU:HD23	48:BP:45:LEU:HA	1.86	0.45
51:BS:58:LEU:HG	51:BS:59:LYS:H	1.82	0.45
57:BY:2:ARG:C	57:BY:4:LYS:N	2.75	0.45
57:BY:76:CYS:CB	57:BY:96:ILE:HD11	2.46	0.45
1:CA:21:G:H2'	1:CA:22:G:H8	1.82	0.45
1:CA:407:G:OP1	4:CD:115:ARG:NH1	2.50	0.45
1:CA:451:A:OP1	1:CA:481:G:N2	2.45	0.45
1:CA:918:A:H2'	1:CA:919:A:C8	2.51	0.45
1:CA:1237:C:H5"	1:CA:1238:A:H8	1.79	0.45
1:CA:1240:U:OP2	7:CG:116:ALA:HB2	2.16	0.45
1:CA:1254:C:H42	1:CA:1283:G:H1	1.65	0.45
1:CA:1433:A:H2'	1:CA:1434:A:O4'	2.17	0.45
2:CB:67:THR:HG21	2:CB:155:LEU:HG	1.98	0.45
3:CC:143:GLU:C	3:CC:145:GLY:H	2.25	0.45
24:CY:130:CYS:CB	24:CY:163:GLY:HA3	2.46	0.45
24:CY:273:GLU:O	24:CY:277:LYS:HB2	2.15	0.45
35:DA:271(M):G:C6	35:DA:271(O):C:C4	3.04	0.45
35:DA:1641:A:H2'	35:DA:1642:G:O4'	2.17	0.45
35:DA:1790:C:H5"	35:DA:1791:A:OP1	2.15	0.45
35:DA:2406:U:OP2	35:DA:2411:A:N6	2.49	0.45
40:DF:40:GLN:NE2	40:DF:182:ASN:HB2	2.32	0.45
40:DF:53:THR:HG23	40:DF:55:GLY:N	2.18	0.45
41:DG:21:ARG:HH12	41:DG:22:ARG:HG2	1.81	0.45
41:DG:96:ARG:O	41:DG:97:ASP:C	2.59	0.45
43:DI:76:THR:HA	43:DI:139:GLN:O	2.16	0.45
45:DK:128:ALA:O	45:DK:132:ARG:HG3	2.16	0.45
47:DO:107:ARG:NH1	52:DT:35:LYS:HD2	2.31	0.45
52:DT:29:ARG:HB3	52:DT:85:LYS:HA	1.98	0.45
52:DT:55:ASN:O	52:DT:57:PHE:N	2.50	0.45
53:DU:13:LYS:N	53:DU:13:LYS:HE2	2.32	0.45
54:DV:25:LEU:H	54:DV:92:THR:HG21	1.80	0.45
1:AA:224:C:H2'	1:AA:225:C:H6	1.82	0.45
1:AA:500:G:O5'	12:AL:124:LYS:NZ	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:23:GLY:O	4:AD:24:GLU:C	2.60	0.45
5:AE:71:LEU:O	5:AE:72:GLN:HG3	2.17	0.45
7:AG:36:LYS:HZ2	7:AG:36:LYS:HB2	1.81	0.45
8:AH:12:ARG:HH12	8:AH:27:PRO:CD	2.28	0.45
12:AL:25:PRO:C	12:AL:27:LEU:N	2.73	0.45
13:AM:23:TYR:O	13:AM:66:LEU:HA	2.17	0.45
13:AM:56:LEU:HD13	13:AM:60:VAL:HG21	1.99	0.45
16:AP:64:ALA:O	16:AP:65:GLN:C	2.59	0.45
24:AY:348:GLY:O	24:AY:352:LYS:HB2	2.17	0.45
35:BA:274:G:H1'	35:BA:275:G:C6	2.51	0.45
35:BA:444:C:C2	35:BA:445:C:C5	3.05	0.45
35:BA:515:A:H1'	35:BA:581:C:H1'	1.97	0.45
35:BA:835:A:H2'	35:BA:836:G:H8	1.82	0.45
35:BA:1030:G:OP2	49:BQ:128:LYS:HE2	2.17	0.45
35:BA:1264:G:H3'	35:BA:1265:A:H5"	1.99	0.45
35:BA:1747:G:H2'	35:BA:1747(A):G:H8	1.81	0.45
35:BA:2109:U:H2'	35:BA:2110:G:C4	2.52	0.45
35:BA:2708:G:H2'	35:BA:2709:G:H8	1.81	0.45
38:BD:267:SER:O	38:BD:269:PHE:N	2.50	0.45
41:BG:60:LEU:HD12	41:BG:68:PRO:HB3	1.99	0.45
42:BH:130:ARG:NH1	42:BH:130:ARG:HB3	2.32	0.45
43:BI:92:VAL:HG13	43:BI:120:ILE:HD12	1.99	0.45
45:BK:18:THR:HG23	45:BK:38:VAL:HG11	1.99	0.45
48:BP:85:LEU:CD2	48:BP:114:ILE:HD11	2.47	0.45
48:BP:108:LYS:C	48:BP:110:TYR:N	2.75	0.45
48:BP:112:LEU:HD13	48:BP:113:LYS:N	2.32	0.45
54:BV:89:GLN:OE1	54:BV:90:PRO:HD2	2.17	0.45
1:CA:437:U:H2'	1:CA:438:G:O4'	2.16	0.45
1:CA:936:C:H2'	1:CA:937:A:O4'	2.17	0.45
1:CA:994:A:C2	14:CN:5:ALA:HA	2.52	0.45
1:CA:1429:C:H2'	1:CA:1430:C:C6	2.52	0.45
1:CA:1521:G:H2'	1:CA:1522:U:C6	2.52	0.45
8:CH:4:ASP:CG	8:CH:85:ARG:HH21	2.24	0.45
9:CI:13:ALA:CB	9:CI:68:GLY:HA3	2.43	0.45
10:CJ:4:ILE:HD12	10:CJ:4:ILE:H	1.82	0.45
11:CK:58:PRO:HB2	11:CK:93:GLN:HG3	1.99	0.45
13:CM:126:LYS:N	24:CY:161:GLU:H	2.14	0.45
16:CP:74:LEU:HD22	16:CP:79:VAL:HG21	1.99	0.45
23:CX:21:A:O2'	24:CY:200:ARG:NH2	2.49	0.45
30:D5:49:CYS:HB2	30:D5:50:GLY:H	1.48	0.45
32:D7:34:ARG:NH1	32:D7:41:ARG:O	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:375:C:H2'	35:DA:376:C:C6	2.51	0.45
35:DA:545:C:H2'	35:DA:547:A:C8	2.52	0.45
35:DA:661:C:O3'	48:DP:18:ARG:HD2	2.17	0.45
35:DA:2437:U:O2'	35:DA:2438:U:H5'	2.17	0.45
35:DA:2455:G:H2'	35:DA:2456:C:C6	2.52	0.45
37:DC:225:ILE:HD12	37:DC:225:ILE:O	2.16	0.45
42:DH:41:MET:HG3	42:DH:43:VAL:H	1.82	0.45
43:DI:75:LEU:O	43:DI:139:GLN:HB3	2.17	0.45
43:DI:114:LEU:C	43:DI:116:LEU:H	2.25	0.45
45:DK:27:LEU:HD13	45:DK:57:ILE:CD1	2.44	0.45
47:DO:107:ARG:C	47:DO:109:LYS:N	2.75	0.45
49:DQ:44:ALA:HB2	49:DQ:70:PRO:HG3	1.97	0.45
52:DT:48:ILE:N	52:DT:48:ILE:HD12	2.32	0.45
57:DY:50:ARG:HB2	57:DY:57:GLN:HA	1.99	0.45
1:AA:334:C:H2'	1:AA:335:C:H6	1.81	0.45
1:AA:632:A:OP2	1:AA:632:A:H8	2.00	0.45
1:AA:1083:U:H5	1:AA:1084:G:C6	2.34	0.45
4:AD:92:VAL:O	4:AD:96:LEU:HD13	2.17	0.45
6:AF:7:ASN:HD21	18:AR:34:TYR:HE1	1.64	0.45
7:AG:17:VAL:HG12	7:AG:18:TYR:CD1	2.52	0.45
9:AI:9:ARG:C	9:AI:104:ARG:HH12	2.20	0.45
9:AI:97:LYS:HD3	9:AI:102:LEU:HD13	1.99	0.45
18:AR:84:LYS:HD3	18:AR:84:LYS:HA	1.62	0.45
22:AW:19:G:C4'	22:AW:57:G:H22	2.28	0.45
35:BA:324:A:H2'	35:BA:325:G:O4'	2.17	0.45
35:BA:971:C:OP1	35:BA:974:G:C8	2.70	0.45
35:BA:1534:U:H2'	35:BA:1535:A:O4'	2.17	0.45
35:BA:2483:C:N3	49:BQ:124:LYS:NZ	2.64	0.45
35:BA:2808:U:N3	35:BA:2809:A:N7	2.65	0.45
37:BC:213:VAL:HG21	37:BC:227:PRO:HB3	1.99	0.45
38:BD:85:ASP:OD2	38:BD:88:ARG:NH1	2.48	0.45
41:BG:28:VAL:O	41:BG:31:VAL:HG12	2.17	0.45
41:BG:110:ALA:HB1	41:BG:140:ILE:HD13	1.99	0.45
42:BH:88:LEU:HD22	42:BH:130:ARG:HG2	1.99	0.45
48:BP:92:GLU:HG3	48:BP:93:GLY:H	1.82	0.45
57:BY:14:LEU:HD12	57:BY:15:VAL:H	1.82	0.45
1:CA:189(E):U:O2'	1:CA:189(F):U:H5'	2.17	0.45
1:CA:877:C:H2'	1:CA:878:G:H8	1.81	0.45
1:CA:914:A:H2'	1:CA:915:A:H8	1.82	0.45
1:CA:1095:U:P	1:CA:1108:G:H1	2.40	0.45
1:CA:1417:G:C6	1:CA:1482:G:C6	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:54:ARG:HH12	3:CC:56:ASP:HB2	1.81	0.45
5:CE:19:MET:O	5:CE:20:GLN:HB2	2.17	0.45
13:CM:27:LYS:O	13:CM:30:ALA:HB3	2.17	0.45
15:CO:62:GLN:O	15:CO:66:LEU:HD13	2.17	0.45
24:CY:60:ASP:CG	24:CY:61:THR:N	2.74	0.45
24:CY:106:LEU:HD11	24:CY:179:LEU:HD11	1.99	0.45
28:D3:1:MET:HE3	28:D3:39:ASP:HB3	1.97	0.45
31:D6:19:ARG:HG3	31:D6:20:ASN:N	2.31	0.45
31:D6:39:TYR:HE1	35:DA:2347:C:H4'	1.82	0.45
33:D8:48:PHE:HB3	33:D8:49:VAL:H	1.48	0.45
35:DA:271(F):C:H2'	35:DA:271(G):C:H6	1.81	0.45
35:DA:2226:C:C2	35:DA:2227:A:C8	3.05	0.45
35:DA:2649:U:H2'	35:DA:2650:U:C6	2.52	0.45
35:DA:2668:G:H2'	35:DA:2669:G:C8	2.52	0.45
35:DA:2757:A:H2'	35:DA:2758:A:H5'	1.99	0.45
35:DA:2773:C:H5"	39:DE:164:ARG:HD3	1.98	0.45
35:DA:2894:G:H2'	35:DA:2894:G:N3	2.32	0.45
37:DC:6:LYS:C	37:DC:8:TYR:N	2.74	0.45
38:DD:11:PRO:C	38:DD:13:ARG:N	2.75	0.45
40:DF:28:ILE:HD13	40:DF:119:ARG:HH21	1.82	0.45
40:DF:34:TRP:CZ3	48:DP:12:ALA:HB2	2.52	0.45
40:DF:72:ARG:HA	40:DF:72:ARG:HD2	1.83	0.45
41:DG:17:PRO:HG2	41:DG:18:GLU:H	1.81	0.45
48:DP:98:GLU:O	48:DP:101:VAL:HG22	2.17	0.45
51:DS:52:SER:CB	51:DS:55:ALA:HB3	2.46	0.45
51:DS:89:ARG:NH1	51:DS:92:TYR:HA	2.32	0.45
54:DV:13:ARG:HH11	54:DV:13:ARG:HG3	1.81	0.45
1:AA:189(B):C:H2'	1:AA:189(C):C:C6	2.51	0.45
1:AA:953:G:N7	13:AM:104:ARG:NH2	2.60	0.45
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.51	0.45
1:AA:1410:G:H2'	1:AA:1411:C:H6	1.82	0.45
4:AD:23:GLY:O	4:AD:27:TYR:HD1	2.00	0.45
6:AF:75:LEU:O	6:AF:79:LEU:HG	2.17	0.45
17:AQ:57:VAL:HG12	17:AQ:76:LEU:HA	1.98	0.45
22:AW:23:A:H2'	22:AW:24:G:C8	2.52	0.45
35:BA:249:C:OP2	35:BA:2394:C:O2'	2.23	0.45
35:BA:836:G:H2'	35:BA:837:C:C6	2.52	0.45
35:BA:1071:G:N2	35:BA:1089:G:O2'	2.44	0.45
35:BA:1220:A:OP2	53:BU:19:LYS:NZ	2.39	0.45
35:BA:2247:A:H2'	35:BA:2248:C:H6	1.82	0.45
35:BA:2674:G:H2'	35:BA:2675:A:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:16:ASP:HB3	37:BC:19:LYS:CB	2.47	0.45
37:BC:202:PRO:HB2	37:BC:205:ALA:HB2	1.99	0.45
38:BD:245:PRO:O	38:BD:246:PRO:C	2.60	0.45
40:BF:24:LEU:HD13	40:BF:118:ALA:HB1	1.99	0.45
48:BP:8:PRO:C	48:BP:10:PRO:HD3	2.42	0.45
52:BT:53:ARG:HH11	52:BT:53:ARG:HB2	1.82	0.45
57:BY:90:LEU:HD12	57:BY:91:GLU:HG2	1.98	0.45
58:BZ:108:PRO:O	58:BZ:111:VAL:HG22	2.17	0.45
1:CA:79:G:N2	1:CA:91:C:C2	2.85	0.45
2:CB:17:PHE:CD2	2:CB:44:LEU:HD11	2.51	0.45
7:CG:104:LEU:HD22	7:CG:134:ALA:HB1	1.99	0.45
10:CJ:23:ILE:HG23	10:CJ:85:LEU:HD13	1.98	0.45
17:CQ:22:LEU:HD11	17:CQ:39:SER:HB2	1.98	0.45
24:CY:115:ASN:CB	24:CY:172:LYS:HA	2.47	0.45
25:D0:73:GLY:HA3	36:DB:12:C:H2'	1.99	0.45
26:D1:3:LYS:HG2	26:D1:4:VAL:H	1.81	0.45
35:DA:94(A):G:H2'	35:DA:95:G:O4'	2.17	0.45
35:DA:272(C):G:H1	35:DA:365:C:N4	2.11	0.45
35:DA:510:C:H2'	35:DA:511:U:O4'	2.16	0.45
35:DA:1434:A:H2'	35:DA:1435:G:C8	2.52	0.45
35:DA:1509(B):A:C4	35:DA:1510:G:C8	3.05	0.45
35:DA:1546:C:H5'	35:DA:1547:C:H5'	1.99	0.45
35:DA:1803:A:O2'	38:DD:259:THR:HG21	2.17	0.45
35:DA:1860:G:H5"	37:DC:207:GLY:HA2	1.98	0.45
35:DA:2690:C:OP2	50:DR:14:SER:HB3	2.16	0.45
42:DH:24:VAL:HG12	42:DH:35:VAL:HB	1.99	0.45
45:DK:20:ALA:CA	45:DK:25:PRO:HD3	2.47	0.45
48:DP:16:ARG:NH1	48:DP:18:ARG:N	2.65	0.45
48:DP:18:ARG:O	48:DP:20:GLY:N	2.50	0.45
1:AA:194:C:H2'	1:AA:195:A:H5"	1.97	0.44
1:AA:505:G:H2'	1:AA:506:G:H8	1.81	0.44
1:AA:570:G:H2'	1:AA:571:U:C6	2.53	0.44
1:AA:626:U:H5"	16:AP:38:TYR:CD2	2.51	0.44
1:AA:642:A:C5	8:AH:115:SER:HA	2.52	0.44
1:AA:971:G:OP1	1:AA:971:G:H3'	2.17	0.44
1:AA:1294:G:H2'	1:AA:1295:G:H8	1.81	0.44
2:AB:145:LEU:O	2:AB:149:LEU:HB2	2.16	0.44
3:AC:130:VAL:O	3:AC:134:ILE:HG13	2.18	0.44
4:AD:55:ALA:O	4:AD:59:ARG:HG2	2.17	0.44
6:AF:45:LEU:HB2	6:AF:59:TYR:HD1	1.82	0.44
13:AM:96:LEU:C	13:AM:110:ARG:HE	2.25	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AY:270:LYS:O	24:AY:274:LEU:HB2	2.17	0.44
24:AY:299:ARG:HD3	24:AY:303:ARG:NH2	2.32	0.44
27:B2:48:HIS:NE2	35:BA:96:G:H4'	2.32	0.44
35:BA:109:G:H2'	35:BA:110:G:C8	2.51	0.44
35:BA:116:C:H2'	35:BA:117:G:O4'	2.16	0.44
35:BA:195:A:H61	35:BA:198:C:H3'	1.82	0.44
35:BA:520:G:H2'	35:BA:521:G:C8	2.52	0.44
35:BA:836:G:H2'	35:BA:837:C:H6	1.83	0.44
35:BA:1282:U:H2'	35:BA:1283:G:O4'	2.17	0.44
35:BA:1666:G:O2'	47:BO:6:THR:OG1	2.24	0.44
35:BA:1857:G:O5'	35:BA:1857:G:H8	2.01	0.44
35:BA:2359:C:H2'	35:BA:2360:A:O4'	2.17	0.44
39:BE:9:VAL:HG22	39:BE:25:VAL:HB	1.99	0.44
41:BG:61:ALA:HB2	41:BG:68:PRO:CD	2.47	0.44
47:BO:88:ASN:HD21	47:BO:90:GLN:HB2	1.81	0.44
58:BZ:52:SER:OG	58:BZ:53:ILE:N	2.49	0.44
58:BZ:110:GLY:HA3	58:BZ:174:VAL:HG11	1.99	0.44
1:CA:161:A:H2'	1:CA:162:A:C8	2.51	0.44
1:CA:165:C:H2'	1:CA:166:G:C8	2.52	0.44
1:CA:189(B):C:H2'	1:CA:189(C):C:C6	2.52	0.44
1:CA:835:U:H3	1:CA:851:G:H1	1.64	0.44
1:CA:1250:A:H2	1:CA:1370:G:H1'	1.82	0.44
1:CA:1300:G:O2'	1:CA:1301:U:O5'	2.34	0.44
1:CA:1392:G:N2	1:CA:1502:A:C8	2.77	0.44
3:CC:75:VAL:O	3:CC:83:ARG:HG2	2.17	0.44
6:CF:69:GLU:O	6:CF:72:VAL:HG12	2.18	0.44
10:CJ:57:LYS:HG3	10:CJ:57:LYS:O	2.16	0.44
13:CM:19:LEU:HA	13:CM:22:ILE:HD13	2.00	0.44
15:CO:39:LEU:HD12	15:CO:56:LEU:HB2	1.98	0.44
16:CP:82:GLN:OE1	16:CP:82:GLN:N	2.42	0.44
24:CY:87:LEU:O	24:CY:91:LEU:HD23	2.16	0.44
31:D6:31:PRO:CB	35:DA:2286:A:H3'	2.46	0.44
35:DA:265:A:H1'	35:DA:266:G:O4'	2.17	0.44
35:DA:605:C:O2	35:DA:657:U:O2'	2.35	0.44
35:DA:1453:U:H5'	50:DR:63:ARG:NE	2.32	0.44
35:DA:1503:U:N3	35:DA:1504:C:N4	2.66	0.44
35:DA:1747:G:H2'	35:DA:1747(A):G:H8	1.82	0.44
35:DA:2003:G:C6	35:DA:2004:G:C5	3.05	0.44
35:DA:2588:G:C6	35:DA:2607:G:C2	3.04	0.44
35:DA:2712:U:O2	35:DA:2712:U:H5'	2.16	0.44
35:DA:2869:G:H2'	35:DA:2870:C:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DH:125:VAL:HG12	42:DH:127:GLU:O	2.17	0.44
42:DH:159:GLU:HB3	42:DH:160:LYS:H	1.44	0.44
48:DP:39:LYS:HD2	48:DP:39:LYS:HA	1.75	0.44
48:DP:48:PRO:HG2	48:DP:49:ARG:H	1.82	0.44
1:AA:105:G:H2'	1:AA:106:C:C6	2.53	0.44
1:AA:971:G:H22	1:AA:1363(A):A:P	2.39	0.44
1:AA:1031:G:H2'	1:AA:1032:G:O4'	2.16	0.44
1:AA:1117:G:H22	1:AA:1180:A:H1'	1.82	0.44
1:AA:1238:A:C5	1:AA:1303:C:H1'	2.52	0.44
2:AB:17:PHE:CD2	2:AB:44:LEU:HD11	2.51	0.44
4:AD:61:LYS:HD3	4:AD:206:PHE:CE2	2.51	0.44
6:AF:30:LEU:H	6:AF:30:LEU:HD23	1.81	0.44
7:AG:131:LYS:HG3	7:AG:131:LYS:O	2.17	0.44
10:AJ:20:ALA:O	10:AJ:24:VAL:HG23	2.17	0.44
10:AJ:40:LEU:HB2	10:AJ:69:ASN:O	2.17	0.44
10:AJ:75:ILE:HG13	10:AJ:76:ASN:N	2.32	0.44
17:AQ:22:LEU:HD11	17:AQ:39:SER:HB2	1.99	0.44
24:AY:130:CYS:HB2	24:AY:163:GLY:HA3	1.99	0.44
25:B0:72:ARG:NE	36:BB:11:C:OP1	2.51	0.44
27:B2:4:SER:HA	27:B2:7:ARG:HG2	1.99	0.44
27:B2:47:ASN:ND2	35:BA:94(A):G:H21	2.15	0.44
30:B5:37:LYS:HB2	30:B5:37:LYS:HE3	1.77	0.44
31:B6:33:LYS:O	31:B6:34:LEU:HB2	2.17	0.44
35:BA:877:U:O2'	35:BA:878:A:H5"	2.18	0.44
35:BA:882:G:H2'	35:BA:883:G:C8	2.52	0.44
35:BA:1177:A:H5'	35:BA:1178:C:C6	2.52	0.44
35:BA:1285:G:O3'	50:BR:105:ARG:NH1	2.50	0.44
35:BA:1490:A:H5'	35:BA:1491:G:OP2	2.17	0.44
36:BB:28:C:H2'	36:BB:29:A:C8	2.52	0.44
38:BD:210:GLY:C	38:BD:212:SER:N	2.75	0.44
40:BF:63:LYS:NZ	40:BF:67:GLN:HB2	2.32	0.44
41:BG:41:GLN:NE2	41:BG:154:GLY:O	2.49	0.44
41:BG:106:LEU:HA	41:BG:110:ALA:HB3	1.99	0.44
48:BP:70:GLN:HB3	48:BP:72:PRO:HD2	1.99	0.44
50:BR:44:LEU:O	50:BR:48:VAL:HG23	2.17	0.44
51:BS:59:LYS:HG2	51:BS:60:GLY:H	1.81	0.44
1:CA:148:G:H2'	1:CA:149:A:H8	1.83	0.44
1:CA:512:U:H2'	1:CA:513:C:H6	1.82	0.44
1:CA:570:G:H2'	1:CA:571:U:C6	2.52	0.44
1:CA:687:A:C2	1:CA:704:A:C6	3.05	0.44
1:CA:974:A:OP1	14:CN:31:ARG:HD3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:165:VAL:HG23	2:CB:166:ASP:N	2.30	0.44
5:CE:10:MET:HE2	5:CE:55:VAL:HG11	1.99	0.44
22:CV:1:G:C2	22:CV:2:C:C5	3.05	0.44
28:D3:8:LEU:HB2	28:D3:28:LEU:HD13	2.00	0.44
32:D7:4:THR:HG22	35:DA:687:C:H1'	1.99	0.44
35:DA:534:U:C2	35:DA:535:C:C5	3.04	0.44
35:DA:579:G:H2'	35:DA:580:C:C6	2.52	0.44
35:DA:829:A:N7	35:DA:2247:A:O2'	2.47	0.44
35:DA:1047:G:N2	35:DA:1111:A:H62	2.15	0.44
35:DA:1496:A:H2'	35:DA:1498:C:C5	2.53	0.44
35:DA:1946:U:H2'	35:DA:1947:C:H6	1.80	0.44
35:DA:2032:G:OP2	35:DA:2454:G:O2'	2.22	0.44
35:DA:2071:A:H2'	35:DA:2072:G:H8	1.82	0.44
35:DA:2110:G:C6	35:DA:2120:G:C8	3.06	0.44
35:DA:2835:A:N6	35:DA:2878:U:H3'	2.32	0.44
38:DD:118:VAL:HG22	38:DD:119:ALA:H	1.81	0.44
41:DG:56:ALA:HA	41:DG:59:GLU:HB3	1.98	0.44
45:DK:82:ALA:HB2	45:DK:99:ILE:HG13	1.98	0.44
46:DN:1:MET:C	46:DN:2:LYS:HG3	2.42	0.44
47:DO:65:THR:OG1	47:DO:69:ILE:HD11	2.18	0.44
48:DP:143:GLY:O	48:DP:144:GLU:HB2	2.18	0.44
1:AA:38:G:H22	1:AA:397:A:P	2.40	0.44
1:AA:179:A:H2'	1:AA:180:U:H6	1.81	0.44
1:AA:194:C:C2'	1:AA:195:A:H5"	2.48	0.44
1:AA:640:A:O2'	1:AA:641:U:H5'	2.18	0.44
1:AA:1469:G:H2'	1:AA:1470:G:H8	1.83	0.44
2:AB:70:PHE:HA	2:AB:163:PHE:O	2.17	0.44
6:AF:35:ALA:HB2	6:AF:67:MET:HE3	1.99	0.44
13:AM:9:ILE:HD12	13:AM:9:ILE:N	2.33	0.44
17:AQ:9:VAL:HG12	17:AQ:56:VAL:HG22	1.99	0.44
24:AY:295:LEU:HD13	24:AY:295:LEU:O	2.18	0.44
25:B0:43:THR:HG22	35:BA:2331:G:O3'	2.17	0.44
26:B1:77:ALA:O	26:B1:78:LYS:C	2.61	0.44
34:B9:30:PRO:HB2	35:BA:2527:C:H4'	1.98	0.44
35:BA:152:G:H2'	35:BA:153:C:C6	2.52	0.44
35:BA:227:A:C2	35:BA:2407:G:H1'	2.52	0.44
35:BA:1270:C:H5"	35:BA:1271:G:C5'	2.48	0.44
35:BA:1538:G:N1	35:BA:1539:G:C6	2.85	0.44
35:BA:1668:A:N3	35:BA:1670:C:N4	2.66	0.44
35:BA:2112:G:H2'	35:BA:2112:G:N3	2.31	0.44
35:BA:2481:G:O2'	35:BA:2482:G:O5'	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:126:ASP:N	41:BG:126:ASP:OD1	2.50	0.44
47:BO:69:ILE:HD12	47:BO:69:ILE:N	2.32	0.44
1:CA:180:U:H3	1:CA:195:A:H62	1.63	0.44
1:CA:186:C:C2	1:CA:187:C:C5	3.06	0.44
1:CA:565:U:OP2	1:CA:566:G:O2'	2.24	0.44
1:CA:881:G:OP2	12:CL:12:ARG:NH2	2.51	0.44
1:CA:1073:U:C2	1:CA:1074:G:C8	3.06	0.44
1:CA:1176:A:H2'	1:CA:1177:G:C8	2.51	0.44
11:CK:105:VAL:HB	11:CK:108:ILE:HD11	1.99	0.44
14:CN:4:LYS:C	14:CN:6:LEU:H	2.25	0.44
15:CO:7:GLU:O	15:CO:10:LYS:HB3	2.17	0.44
24:CY:183:GLU:OE2	24:CY:312:ARG:NH2	2.50	0.44
35:DA:359:A:H2'	35:DA:360:G:O4'	2.17	0.44
35:DA:580:C:H2'	35:DA:581:C:H6	1.81	0.44
35:DA:671:C:H2'	35:DA:672:C:H6	1.82	0.44
35:DA:1061:U:OP2	45:DK:9:LYS:HE2	2.18	0.44
35:DA:1923:U:H2'	35:DA:1924:C:H6	1.82	0.44
35:DA:2105:C:C2	35:DA:2106:G:N7	2.86	0.44
35:DA:2693:A:H2'	35:DA:2694:G:H8	1.83	0.44
38:DD:68:LYS:HB2	38:DD:70:TRP:CH2	2.52	0.44
38:DD:70:TRP:CH2	38:DD:150:LYS:HA	2.52	0.44
39:DE:38:THR:C	39:DE:40:GLU:H	2.25	0.44
40:DF:2:LYS:HE2	40:DF:2:LYS:HB3	1.79	0.44
40:DF:113:ALA:HB2	40:DF:183:VAL:HG23	2.00	0.44
40:DF:157:VAL:CG1	40:DF:194:MET:HG2	2.47	0.44
41:DG:125:PHE:HE1	41:DG:180:PHE:CE2	2.36	0.44
45:DK:84:LEU:HD23	45:DK:84:LEU:H	1.82	0.44
46:DN:17:ASP:C	46:DN:19:GLU:H	2.26	0.44
51:DS:89:ARG:HG2	51:DS:92:TYR:HA	1.99	0.44
52:DT:130:ALA:O	52:DT:132:LYS:HE2	2.17	0.44
1:AA:552:U:C2	1:AA:553:A:C8	3.06	0.44
1:AA:1137:C:H4'	1:AA:1138:G:C2	2.53	0.44
6:AF:3:ARG:HB3	6:AF:93:SER:HB2	1.99	0.44
7:AG:78:ARG:HG2	7:AG:79:ARG:H	1.82	0.44
9:AI:21:PRO:HA	9:AI:59:PHE:HA	2.00	0.44
14:AN:51:GLY:C	14:AN:53:LEU:H	2.26	0.44
19:AS:36:ARG:HA	19:AS:71:LEU:HB2	1.99	0.44
24:AY:33:LEU:HD21	24:AY:48:VAL:HG12	2.00	0.44
31:B6:19:ARG:HG2	31:B6:19:ARG:NH1	2.32	0.44
34:B9:15:LYS:HE2	34:B9:17:ILE:HD11	1.99	0.44
35:BA:184:C:H2'	35:BA:185:U:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:272(G):C:H3'	35:BA:272(H):C:H5"	1.99	0.44
35:BA:561:G:HO2'	53:BU:45:TYR:HE1	1.62	0.44
35:BA:783:A:H2'	35:BA:784:A:H4'	1.99	0.44
35:BA:1080:C:H2'	35:BA:1081:U:C6	2.52	0.44
35:BA:1290:C:H2'	35:BA:1291:C:C6	2.51	0.44
35:BA:1538:G:C6	35:BA:1539:G:C6	3.05	0.44
35:BA:1543:C:H3'	35:BA:1544:A:C5'	2.46	0.44
35:BA:1819:A:H2'	38:BD:178:PRO:HB2	1.98	0.44
35:BA:2784:C:H2'	35:BA:2785:C:H6	1.82	0.44
37:BC:52:PRO:C	37:BC:54:ARG:H	2.25	0.44
41:BG:18:GLU:O	41:BG:21:ARG:HB3	2.17	0.44
41:BG:105:LYS:HE2	41:BG:143:GLU:OE2	2.17	0.44
52:BT:92:GLY:O	52:BT:94:ALA:N	2.51	0.44
53:BU:101:ARG:HH11	53:BU:101:ARG:CB	2.30	0.44
58:BZ:99:TYR:HA	58:BZ:124:ILE:O	2.18	0.44
58:BZ:127:LYS:HE2	58:BZ:164:ALA:HB2	2.00	0.44
1:CA:335:C:H2'	1:CA:336:C:H6	1.82	0.44
1:CA:452:A:N7	1:CA:480:U:O4	2.51	0.44
1:CA:515:G:C6	1:CA:537:G:C6	3.06	0.44
1:CA:693:G:H2'	1:CA:694:A:C8	2.52	0.44
1:CA:784:C:H2'	1:CA:785:G:H8	1.82	0.44
1:CA:980:C:H5'	1:CA:981:U:C5	2.52	0.44
1:CA:1051:C:H2'	1:CA:1052:U:C6	2.50	0.44
1:CA:1304:G:N2	1:CA:1332:A:OP2	2.37	0.44
2:CB:223:ILE:C	2:CB:225:ALA:N	2.75	0.44
13:CM:97:PRO:HB2	13:CM:101:GLN:OE1	2.18	0.44
22:CW:7:A:N6	22:CW:67:C:C2	2.79	0.44
30:D5:35:GLU:O	30:D5:36:CYS:HB3	2.17	0.44
30:D5:56:LYS:HE3	30:D5:59:GLU:OE2	2.18	0.44
33:D8:61:LEU:HD12	33:D8:62:LEU:HG	2.00	0.44
35:DA:29:U:H2'	35:DA:30:G:H8	1.79	0.44
35:DA:922:U:H2'	35:DA:923:C:H6	1.82	0.44
35:DA:1012:U:OP1	53:DU:70:ARG:NH2	2.48	0.44
35:DA:1264:G:H3'	35:DA:1265:A:H5"	1.99	0.44
35:DA:1637:A:H4'	35:DA:2711:A:O2'	2.18	0.44
35:DA:2114:A:H62	35:DA:2115:G:H21	1.65	0.44
35:DA:2165:G:C6	35:DA:2166:G:C6	3.06	0.44
41:DG:127:GLY:O	41:DG:129:GLY:N	2.50	0.44
41:DG:151:ALA:O	41:DG:153:ARG:NH1	2.50	0.44
42:DH:43:VAL:HA	42:DH:46:GLU:OE2	2.18	0.44
48:DP:115:LEU:HA	48:DP:134:ALA:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DQ:60:ARG:HG2	58:DZ:179:ASP:OD1	2.18	0.44
51:DS:90:GLY:O	51:DS:92:TYR:HD1	2.00	0.44
52:DT:65:LYS:HZ3	52:DT:66:VAL:H	1.65	0.44
53:DU:68:ALA:HB2	53:DU:99:ALA:HB1	1.99	0.44
58:DZ:8:TYR:O	58:DZ:37:VAL:HB	2.17	0.44
1:AA:745:C:OP1	1:AA:851:G:O2'	2.35	0.44
4:AD:17:VAL:O	4:AD:17:VAL:HG12	2.18	0.44
7:AG:120:ILE:H	7:AG:120:ILE:HD12	1.83	0.44
22:AW:57:G:H2'	22:AW:58:A:H5'	2.00	0.44
27:B2:63:VAL:O	27:B2:67:LYS:HG2	2.18	0.44
35:BA:660:G:H5'	40:BF:99:TYR:CD2	2.53	0.44
35:BA:1278:A:OP1	50:BR:36:THR:HG22	2.16	0.44
35:BA:1558:A:O2'	35:BA:1559:G:OP2	2.35	0.44
35:BA:1590:U:H2'	35:BA:1591:G:H5"	1.99	0.44
35:BA:1763:G:H4'	35:BA:1763:G:OP1	2.18	0.44
35:BA:1876:A:H2'	35:BA:1877:A:C8	2.53	0.44
35:BA:2475:C:H2'	35:BA:2477:C:OP1	2.17	0.44
35:BA:2530:A:O2'	35:BA:2532:G:OP2	2.32	0.44
35:BA:2840:C:H4'	50:BR:53:HIS:CD2	2.53	0.44
40:BF:63:LYS:CE	40:BF:67:GLN:HB2	2.47	0.44
40:BF:157:VAL:CG1	40:BF:194:MET:HG2	2.47	0.44
41:BG:161:THR:HG22	41:BG:162:THR:H	1.82	0.44
43:BI:73:GLU:OE1	43:BI:136:VAL:HG23	2.15	0.44
44:BJ:36:UNK:C	44:BJ:38:UNK:H	2.30	0.44
51:BS:89:ARG:HG2	51:BS:92:TYR:HA	1.98	0.44
1:CA:109:A:C6	1:CA:326:G:C6	3.06	0.44
1:CA:116:A:H2'	1:CA:117:G:O4'	2.18	0.44
1:CA:309:G:H2'	1:CA:310:G:C8	2.52	0.44
1:CA:743:U:H2'	1:CA:744:C:H6	1.81	0.44
1:CA:1015:A:H2'	1:CA:1016:A:C8	2.53	0.44
1:CA:1126:U:H6	1:CA:1126:U:P	2.41	0.44
1:CA:1226:C:OP2	13:CM:103:THR:OG1	2.11	0.44
1:CA:1493:A:N6	24:CY:306:GLU:OE2	2.50	0.44
2:CB:180:LEU:O	2:CB:182:ILE:N	2.50	0.44
4:CD:100:ARG:HB3	4:CD:102:ASP:OD1	2.18	0.44
24:CY:330:ARG:HH12	24:CY:340:ASP:HB3	1.81	0.44
27:D2:43:GLN:O	27:D2:44:LEU:C	2.60	0.44
31:D6:45:LYS:HD3	31:D6:45:LYS:HA	1.33	0.44
35:DA:6:A:H2'	35:DA:7:G:C8	2.52	0.44
35:DA:307:G:H21	35:DA:330:A:N6	2.15	0.44
35:DA:866:A:C6	35:DA:914:C:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:910:A:H2'	35:DA:911:A:C8	2.53	0.44
35:DA:1509(A):A:C4	35:DA:1509(B):A:C8	3.05	0.44
35:DA:2161:C:H2'	35:DA:2162:G:H8	1.82	0.44
36:DB:106:G:H2'	36:DB:107:G:H8	1.83	0.44
41:DG:52:ILE:O	41:DG:53:LEU:HB2	2.17	0.44
41:DG:166:ASP:HA	41:DG:169:ALA:HB3	1.98	0.44
42:DH:30:LYS:HE3	42:DH:81:GLU:H	1.82	0.44
45:DK:13:PRO:O	45:DK:53:VAL:HG22	2.16	0.44
46:DN:87:LEU:HA	46:DN:87:LEU:HD23	1.78	0.44
48:DP:97:PRO:C	48:DP:99:LEU:N	2.76	0.44
52:DT:125:ARG:O	52:DT:126:ALA:C	2.61	0.44
1:AA:216:G:C2	1:AA:217:C:C4	3.06	0.44
1:AA:324:G:OP1	20:AT:70:SER:HB2	2.18	0.44
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.52	0.44
1:AA:1113:C:H2'	1:AA:1114:C:H6	1.83	0.44
4:AD:189:PRO:HB2	4:AD:194:LEU:HD21	2.00	0.44
6:AF:21:LEU:O	6:AF:25:ILE:HG12	2.17	0.44
6:AF:59:TYR:HD2	6:AF:61:LEU:HD11	1.83	0.44
6:AF:97:PHE:O	18:AR:31:LEU:HD23	2.18	0.44
8:AH:104:ARG:HB3	8:AH:108:GLY:N	2.33	0.44
12:AL:6:THR:HG23	12:AL:9:GLN:OE1	2.17	0.44
16:AP:21:VAL:HG11	16:AP:59:TRP:NE1	2.33	0.44
19:AS:32:LYS:HA	19:AS:50:ALA:HB3	1.99	0.44
22:AW:14:A:H61	22:AW:48:C:H42	1.64	0.44
25:B0:74:ARG:NH2	36:BB:13:A:OP2	2.51	0.44
32:B7:13:ALA:O	32:B7:17:GLY:HA3	2.18	0.44
32:B7:24:THR:HG23	32:B7:27:GLY:HA3	2.00	0.44
35:BA:271(H):G:O2'	35:BA:271(I):G:H8	2.00	0.44
35:BA:304:G:H2'	35:BA:305:U:C6	2.52	0.44
35:BA:429:A:H2'	35:BA:430:G:C8	2.53	0.44
35:BA:657:U:H2'	35:BA:658:C:C6	2.51	0.44
35:BA:1351:C:O2'	35:BA:1571:A:O2'	2.35	0.44
35:BA:1551:C:H2'	35:BA:1552:G:O4'	2.17	0.44
35:BA:1818:U:H2'	38:BD:157:ARG:HG3	1.99	0.44
35:BA:2086:U:H2'	35:BA:2087:G:H8	1.82	0.44
35:BA:2101:G:O6	35:BA:2188:C:N4	2.47	0.44
38:BD:44:ASN:ND2	38:BD:47:GLY:O	2.50	0.44
38:BD:122:ASP:CG	38:BD:123:ALA:H	2.25	0.44
41:BG:54:GLU:O	41:BG:58:GLN:HG3	2.18	0.44
41:BG:96:ARG:HA	41:BG:100:TRP:NE1	2.33	0.44
43:BI:69:LYS:HB2	43:BI:136:VAL:HG21	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:65:LYS:HG3	52:BT:66:VAL:N	2.32	0.44
57:BY:87:LYS:O	57:BY:88:LYS:HB2	2.17	0.44
58:BZ:97:GLU:O	58:BZ:98:MET:HB3	2.17	0.44
1:CA:707:C:H2'	1:CA:708:C:C6	2.53	0.44
1:CA:951:G:OP2	13:CM:102:ARG:NH2	2.50	0.44
1:CA:1410:G:H2'	1:CA:1411:C:H6	1.82	0.44
1:CA:1466:C:H2'	1:CA:1467:G:O4'	2.18	0.44
2:CB:119:GLU:C	2:CB:121:LEU:N	2.72	0.44
3:CC:18:TRP:HB3	3:CC:19:GLU:H	1.61	0.44
3:CC:19:GLU:HG2	3:CC:19:GLU:O	2.18	0.44
3:CC:84:ILE:O	3:CC:88:ARG:HG3	2.17	0.44
4:CD:25:ARG:HG3	4:CD:30:LYS:HG3	1.99	0.44
4:CD:53:ASP:O	4:CD:57:ARG:HD3	2.16	0.44
6:CF:60:PHE:C	6:CF:61:LEU:HD12	2.42	0.44
8:CH:42:GLU:HG3	8:CH:109:ILE:HD12	1.99	0.44
9:CI:113:LYS:HD2	9:CI:113:LYS:H	1.82	0.44
11:CK:125:PHE:N	11:CK:125:PHE:CD1	2.85	0.44
13:CM:49:THR:O	13:CM:53:VAL:HG23	2.17	0.44
13:CM:126:LYS:N	24:CY:162:ALA:H	2.15	0.44
18:CR:68:LYS:O	18:CR:72:ARG:HG3	2.18	0.44
22:CW:1:G:C6	22:CW:2:C:C4	3.06	0.44
24:CY:196:ASP:OD1	24:CY:197:ALA:N	2.51	0.44
31:D6:10:LEU:HD11	33:D8:34:TRP:CE2	2.53	0.44
35:DA:143(A):C:H4'	56:DX:38:GLU:OE2	2.18	0.44
35:DA:310:A:OP1	57:DY:18:GLY:HA2	2.17	0.44
35:DA:350:U:H2'	35:DA:351:G:O4'	2.17	0.44
35:DA:556:G:H2'	35:DA:557:U:H6	1.81	0.44
35:DA:583:G:OP2	53:DU:10:ARG:HD2	2.17	0.44
35:DA:1056:G:OP1	44:DJ:34:UNK:HA	2.16	0.44
35:DA:1239:G:H2'	35:DA:1240:U:O4'	2.17	0.44
35:DA:1270:C:O2'	35:DA:1648:C:OP2	2.29	0.44
35:DA:1528(A):A:N7	35:DA:1529:G:C8	2.85	0.44
35:DA:1657:C:C2	35:DA:1658:C:C5	3.06	0.44
35:DA:1813:G:H1'	38:DD:50:THR:OG1	2.17	0.44
35:DA:2037:G:H2'	35:DA:2038:G:C8	2.52	0.44
35:DA:2154:G:H2'	35:DA:2155:G:H8	1.82	0.44
36:DB:50:G:P	51:DS:62:LYS:HB2	2.58	0.44
42:DH:158:HIS:CE1	42:DH:170:ARG:HA	2.53	0.44
45:DK:99:ILE:HG23	45:DK:103:GLN:HG2	1.99	0.44
45:DK:102:GLU:OE1	45:DK:102:GLU:N	2.45	0.44
48:DP:50:ARG:HG2	48:DP:50:ARG:NH2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DU:88:ILE:C	53:DU:90:VAL:H	2.26	0.44
57:DY:52:SER:O	57:DY:53:PRO:C	2.60	0.44
1:AA:878:G:C5'	8:AH:89:PRO:HG2	2.48	0.44
1:AA:1225:A:O3'	19:AS:81:ARG:NH1	2.50	0.44
1:AA:1493:A:H1'	24:AY:125:GLY:H	1.82	0.44
3:AC:46:GLU:HB3	3:AC:83:ARG:NH2	2.33	0.44
4:AD:27:TYR:OH	6:CF:15:ASP:OD2	2.25	0.44
4:AD:61:LYS:HG3	4:AD:203:VAL:HG13	1.99	0.44
9:AI:111:ARG:HG2	9:AI:112:LYS:N	2.33	0.44
20:AT:56:MET:HG3	20:AT:84:LEU:HD12	2.00	0.44
22:AV:27:G:H1	22:AV:43:C:N4	2.16	0.44
27:B2:11:GLU:HA	27:B2:14:ARG:HB2	1.99	0.44
35:BA:291:C:H2'	35:BA:292:C:C6	2.53	0.44
35:BA:1186:G:H8	35:BA:1186:G:O5'	2.00	0.44
35:BA:1247:A:OP1	40:BF:95:ARG:NH2	2.48	0.44
35:BA:1548:C:H2'	35:BA:1549:C:H6	1.83	0.44
35:BA:1637:A:H4'	35:BA:2711:A:O2'	2.17	0.44
35:BA:2129:C:H2'	35:BA:2130:U:C6	2.53	0.44
35:BA:2327:A:H2'	35:BA:2328:A:H8	1.77	0.44
35:BA:2341:G:H2'	35:BA:2342:C:H6	1.83	0.44
35:BA:2404:C:H2'	35:BA:2405:G:O4'	2.18	0.44
38:BD:160:GLY:HA3	38:BD:199:ALA:HB2	1.98	0.44
40:BF:4:VAL:HG22	40:BF:19:GLU:OE1	2.17	0.44
41:BG:111:LEU:HB2	41:BG:112:PRO:HD3	2.00	0.44
43:BI:109:ILE:HG23	43:BI:130:TYR:CE1	2.53	0.44
45:BK:20:ALA:N	45:BK:21:PRO:CD	2.81	0.44
45:BK:74:ALA:HB2	45:BK:111:LYS:HE3	2.00	0.44
46:BN:17:ASP:HB2	46:BN:55:VAL:HG13	1.99	0.44
48:BP:17:LYS:O	48:BP:17:LYS:HG2	2.17	0.44
52:BT:32:TYR:HD1	52:BT:33:LYS:H	1.65	0.44
57:BY:19:LYS:HE3	57:BY:19:LYS:HB2	1.74	0.44
58:BZ:82:ARG:HG2	58:BZ:82:ARG:HH11	1.82	0.44
58:BZ:165:VAL:HG12	58:BZ:166:SER:H	1.82	0.44
1:CA:30:U:H4'	1:CA:31:G:OP2	2.18	0.44
1:CA:250:A:H8	1:CA:250:A:O5'	2.00	0.44
1:CA:411:A:H2'	1:CA:412:A:H4'	1.99	0.44
1:CA:615:C:H2'	1:CA:616:G:O4'	2.17	0.44
1:CA:1250:A:H4'	9:CI:68:GLY:N	2.33	0.44
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.53	0.44
1:CA:1426:C:H2'	1:CA:1427:U:C6	2.52	0.44
13:CM:20:THR:C	13:CM:22:ILE:H	2.26	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:91:ARG:HB2	13:CM:98:VAL:HG22	1.98	0.44
17:CQ:66:SER:O	17:CQ:70:ARG:NH1	2.50	0.44
19:CS:19:VAL:HA	19:CS:22:LEU:HB2	1.99	0.44
19:CS:40:ILE:HG21	19:CS:62:ILE:HD11	2.00	0.44
19:CS:65:ASN:O	19:CS:67:VAL:HG22	2.18	0.44
24:CY:164:ILE:HD13	24:CY:167:ALA:HB2	2.00	0.44
35:DA:654(D):G:O3'	35:DA:654(E):G:H8	2.01	0.44
35:DA:1434:A:H61	35:DA:1558:A:N6	2.16	0.44
35:DA:1688:U:H5'	35:DA:1689:A:OP1	2.18	0.44
35:DA:1752:C:H42	35:DA:1756:G:H1	1.63	0.44
36:DB:28:C:OP2	51:DS:33:LYS:HD2	2.18	0.44
42:DH:24:VAL:CG1	42:DH:35:VAL:HB	2.48	0.44
42:DH:41:MET:CG	42:DH:43:VAL:HG13	2.48	0.44
45:DK:117:THR:HB	45:DK:119:ASP:OD1	2.18	0.44
57:DY:21:LYS:HG2	57:DY:22:GLY:H	1.81	0.44
57:DY:61:ILE:HD12	57:DY:62:GLU:N	2.33	0.44
1:AA:176:C:H2'	1:AA:177:C:C6	2.52	0.44
1:AA:678:U:H2'	1:AA:679:C:H6	1.83	0.44
1:AA:881:G:H2'	1:AA:882:C:O4'	2.18	0.44
1:AA:914:A:H2'	1:AA:915:A:H8	1.82	0.44
1:AA:972:C:OP2	10:AJ:57:LYS:HE2	2.18	0.44
1:AA:1225:A:O2'	19:AS:81:ARG:NH1	2.51	0.44
3:AC:104:GLN:CD	3:AC:105:GLU:H	2.25	0.44
4:AD:100:ARG:O	4:AD:103:ASN:N	2.42	0.44
6:AF:15:ASP:HB2	6:AF:16:GLN:NE2	2.32	0.44
12:AL:28:LYS:HG2	12:AL:28:LYS:O	2.17	0.44
12:AL:53:ARG:NH1	12:AL:92:ASP:OD2	2.51	0.44
16:AP:51:VAL:HG11	16:AP:74:LEU:HD22	2.00	0.44
17:AQ:10:VAL:HG23	17:AQ:55:ASP:O	2.17	0.44
22:AV:40:C:H2'	22:AV:41:C:C6	2.53	0.44
22:AV:57:G:C2'	22:AV:58:A:H5'	2.47	0.44
27:B2:36:ARG:NH2	56:BX:5:TYR:O	2.47	0.44
28:B3:6:VAL:HB	28:B3:54:VAL:CG1	2.41	0.44
34:B9:31:LYS:NZ	35:BA:2478:A:OP1	2.34	0.44
35:BA:127:A:H5"	35:BA:128:C:C6	2.52	0.44
35:BA:1069:A:C4	35:BA:1073:A:N7	2.86	0.44
35:BA:1094:U:N3	35:BA:1097:U:OP2	2.46	0.44
35:BA:1155:A:P	53:BU:55:ARG:HD2	2.58	0.44
35:BA:1449:A:H5'	35:BA:1450:G:OP2	2.18	0.44
35:BA:2199:A:N3	35:BA:2199:A:H2'	2.32	0.44
35:BA:2431:U:N3	35:BA:2434:A:OP2	2.34	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2689:U:P	35:BA:2719:G:H22	2.41	0.44
40:BF:68:LYS:HB3	40:BF:69:HIS:H	1.43	0.44
41:BG:118:ARG:HH11	41:BG:118:ARG:HG3	1.82	0.44
45:BK:10:LEU:HD13	45:BK:12:LEU:HG	1.99	0.44
46:BN:42:TRP:CE3	46:BN:48:MET:HE1	2.53	0.44
47:BO:107:ARG:C	47:BO:109:LYS:N	2.76	0.44
51:BS:89:ARG:O	51:BS:92:TYR:HB3	2.18	0.44
52:BT:57:PHE:O	52:BT:59:THR:HG22	2.18	0.44
1:CA:542:G:OP1	4:CD:10:ARG:NH2	2.51	0.44
1:CA:677:U:H3	1:CA:713:G:H22	1.65	0.44
1:CA:986:A:N3	19:CS:52:TYR:OH	2.47	0.44
2:CB:86:GLU:C	2:CB:88:ALA:H	2.25	0.44
2:CB:119:GLU:OE2	2:CB:153:ARG:NH2	2.42	0.44
3:CC:21:ARG:H	3:CC:21:ARG:HG2	1.59	0.44
6:CF:10:LEU:HD13	6:CF:61:LEU:HD13	2.00	0.44
6:CF:45:LEU:HD21	6:CF:57:GLN:OE1	2.17	0.44
7:CG:79:ARG:HG3	7:CG:83:ALA:H	1.83	0.44
11:CK:73:MET:HE1	11:CK:102:GLY:O	2.17	0.44
12:CL:27:LEU:C	12:CL:29:GLY:N	2.76	0.44
19:CS:46:GLY:N	19:CS:62:ILE:HG23	2.33	0.44
25:D0:5:LYS:HE3	49:DQ:81:VAL:HG12	2.00	0.44
29:D4:25:TYR:O	29:D4:26:SER:HB3	2.17	0.44
35:DA:33:U:H4'	35:DA:34:C:OP1	2.18	0.44
35:DA:271(N):U:O2'	35:DA:271(O):C:OP1	2.32	0.44
35:DA:618:C:H2'	35:DA:619:G:O4'	2.18	0.44
35:DA:675:A:OP1	40:DF:63:LYS:HE2	2.18	0.44
35:DA:1048:A:H62	35:DA:1052:C:N4	1.93	0.44
35:DA:1097:U:C2	45:DK:30:HIS:HE1	2.36	0.44
35:DA:1332:G:N2	35:DA:1610:A:C8	2.85	0.44
35:DA:1427:A:H4'	35:DA:1428:C:O5'	2.16	0.44
35:DA:1485:G:N2	35:DA:1505:C:C2	2.84	0.44
35:DA:2364:C:H2'	35:DA:2365:G:O4'	2.18	0.44
35:DA:2420:C:O5'	35:DA:2420:C:H6	2.01	0.44
37:DC:194:ILE:HG13	37:DC:227:PRO:CB	2.48	0.44
38:DD:168:ARG:HG3	38:DD:168:ARG:HH11	1.81	0.44
39:DE:131:ALA:HB1	61:DE:301:HOH:O	2.17	0.44
40:DF:28:ILE:HD13	40:DF:119:ARG:NH2	2.33	0.44
42:DH:85:LYS:HZ2	42:DH:133:VAL:HG23	1.82	0.44
42:DH:121:ILE:HD11	42:DH:140:LYS:HB3	2.00	0.44
52:DT:28:VAL:HG13	52:DT:46:GLU:HA	1.98	0.44
1:AA:33:A:H2'	1:AA:34:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:157:G:C2	1:AA:165:C:C2	3.06	0.44
1:AA:382:A:H2'	1:AA:383:A:C8	2.53	0.44
1:AA:507:C:H3'	1:AA:508:C:H2'	2.00	0.44
1:AA:967:C:H5"	1:AA:968:A:OP2	2.18	0.44
1:AA:1065:U:O5'	1:AA:1190:G:N2	2.51	0.44
1:AA:1242:C:H2'	1:AA:1243:C:C6	2.53	0.44
2:AB:69:LEU:HD23	2:AB:159:PRO:HG2	2.00	0.44
4:AD:33:MET:C	4:AD:35:ARG:N	2.75	0.44
22:AW:34:G:C6	22:AW:35:A:N6	2.86	0.44
22:AW:35:A:H2'	22:AW:36:A:C8	2.53	0.44
22:AW:62:C:C4'	37:BC:53:ARG:HG3	2.42	0.44
24:AY:276:LEU:HB3	24:AY:280:LYS:HE3	2.00	0.44
33:B8:13:ARG:HD2	48:BP:61:ARG:NH1	2.33	0.44
35:BA:221:A:H4'	35:BA:222:A:O5'	2.18	0.44
35:BA:1265:A:H8	35:BA:1265:A:OP1	2.00	0.44
35:BA:2306:C:H5'	35:BA:2307:G:O5'	2.18	0.44
35:BA:2391:G:O6	35:BA:2425:A:H8	2.00	0.44
35:BA:2668:G:H2'	35:BA:2669:G:C8	2.52	0.44
37:BC:42:VAL:HG22	37:BC:217:THR:HG22	2.00	0.44
39:BE:59:VAL:HG13	39:BE:60:ASN:N	2.31	0.44
40:BF:122:LYS:O	40:BF:191:ARG:HG3	2.18	0.44
41:BG:132:ASN:HA	41:BG:157:ILE:O	2.18	0.44
48:BP:62:LEU:H	48:BP:62:LEU:CD2	2.31	0.44
49:BQ:58:PHE:HD1	49:BQ:58:PHE:O	2.00	0.44
49:BQ:109:VAL:CG1	49:BQ:113:GLN:HB2	2.47	0.44
53:BU:65:ILE:HD11	53:BU:96:ALA:HB3	1.99	0.44
57:BY:67:LEU:HA	57:BY:67:LEU:HD12	1.87	0.44
58:BZ:63:ASP:C	58:BZ:65:GLN:H	2.26	0.44
1:CA:224:C:C2	1:CA:225:C:C5	3.06	0.44
1:CA:630:G:H2'	1:CA:631:G:H5'	1.99	0.44
1:CA:779:C:H2'	1:CA:780:A:O4'	2.17	0.44
3:CC:95:THR:C	3:CC:97:LYS:H	2.25	0.44
4:CD:127:THR:HG23	4:CD:147:ALA:HB3	2.00	0.44
5:CE:76:ILE:HG13	5:CE:142:LEU:HD13	1.99	0.44
9:CI:20:ARG:HG3	9:CI:20:ARG:HH11	1.83	0.44
15:CO:82:ILE:HG23	15:CO:83:GLU:N	2.33	0.44
16:CP:15:PRO:O	16:CP:16:HIS:ND1	2.51	0.44
19:CS:18:LYS:HG2	19:CS:31:ILE:CD1	2.48	0.44
23:CX:21:A:N1	24:CY:201:ARG:HD3	2.32	0.44
35:DA:271(Q):G:N3	35:DA:271(R):G:C8	2.85	0.44
35:DA:659:C:H2'	35:DA:660:G:H8	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:954:G:OP1	49:DQ:15:GLY:N	2.39	0.44
35:DA:2176:A:N3	37:DC:45:HIS:NE2	2.65	0.44
35:DA:2314:C:H2'	35:DA:2315:G:C8	2.52	0.44
35:DA:2500:U:O2'	35:DA:2504:U:OP1	2.27	0.44
35:DA:2756:U:H4'	35:DA:2757:A:OP1	2.17	0.44
38:DD:30:GLU:HB2	38:DD:35:LYS:HE2	2.00	0.44
42:DH:94:TYR:CE1	42:DH:160:LYS:HD3	2.53	0.44
43:DI:1:MET:O	43:DI:21:VAL:N	2.46	0.44
49:DQ:84:GLY:O	49:DQ:85:LYS:HB2	2.17	0.44
50:DR:99:LYS:H	50:DR:99:LYS:HG2	1.57	0.44
52:DT:31:SER:C	52:DT:32:TYR:CD2	2.96	0.44
57:DY:61:ILE:HD12	57:DY:62:GLU:H	1.82	0.44
1:AA:513:C:H2'	1:AA:514:C:H6	1.82	0.43
1:AA:824:C:H2'	1:AA:825:G:C8	2.53	0.43
1:AA:1012:U:H2'	1:AA:1013:G:C8	2.53	0.43
1:AA:1072:G:H2'	1:AA:1073:U:H6	1.81	0.43
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.18	0.43
2:AB:42:ILE:HD11	2:AB:202:PRO:HB2	2.00	0.43
2:AB:43:ASP:OD2	2:AB:45:GLN:HB3	2.18	0.43
2:AB:76:GLN:H	2:AB:76:GLN:HG3	1.55	0.43
7:AG:137:LYS:HD2	7:AG:137:LYS:HA	1.76	0.43
8:AH:6:ILE:H	8:AH:6:ILE:CD1	2.30	0.43
8:AH:48:TYR:CD1	8:AH:48:TYR:C	2.96	0.43
10:AJ:98:ILE:O	10:AJ:99:LYS:HD3	2.18	0.43
11:AK:51:LYS:HB3	11:AK:51:LYS:HE2	1.81	0.43
14:AN:7:ILE:O	14:AN:11:LYS:HG2	2.17	0.43
19:AS:46:GLY:H	19:AS:62:ILE:HG23	1.82	0.43
22:AW:8:U:H3	22:AW:14:A:N6	2.13	0.43
35:BA:510:C:H2'	35:BA:511:U:O4'	2.18	0.43
35:BA:533:G:H5'	53:BU:24:TYR:CD1	2.53	0.43
35:BA:761:A:H8	35:BA:761:A:O5'	2.01	0.43
35:BA:999:U:H5"	35:BA:1154:G:O6	2.18	0.43
35:BA:1291:C:H2'	35:BA:1292:U:H6	1.83	0.43
35:BA:1654:A:OP1	35:BA:1654:A:H4'	2.18	0.43
35:BA:1799:G:H8	35:BA:1799:G:H2'	1.70	0.43
35:BA:2491:U:H5'	35:BA:2570:G:H5"	2.00	0.43
35:BA:2661:G:H2'	35:BA:2662:A:C4	2.52	0.43
38:BD:43:ARG:CB	38:BD:54:ARG:HB2	2.46	0.43
38:BD:45:ASN:OD1	38:BD:46:GLN:N	2.51	0.43
41:BG:26:GLN:O	41:BG:27:ASN:HB2	2.16	0.43
41:BG:29:TRP:HA	41:BG:29:TRP:CE3	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:97:ASP:C	41:BG:99:MET:N	2.75	0.43
42:BH:94:TYR:CD1	42:BH:94:TYR:N	2.86	0.43
47:BO:98:VAL:CG2	47:BO:118:ALA:HA	2.48	0.43
51:BS:97:ARG:O	51:BS:97:ARG:NH1	2.45	0.43
58:BZ:8:TYR:O	58:BZ:37:VAL:HB	2.18	0.43
1:CA:76:C:N4	1:CA:93:G:H1	2.15	0.43
1:CA:166:G:H2'	1:CA:167:G:H8	1.83	0.43
1:CA:191:G:H2'	1:CA:192:U:C6	2.53	0.43
1:CA:335:C:C2	1:CA:336:C:C5	3.06	0.43
1:CA:390:C:H2'	1:CA:391:G:H8	1.82	0.43
1:CA:520:A:OP2	12:CL:51:ALA:HB1	2.18	0.43
1:CA:893:C:C4	1:CA:894:G:N7	2.86	0.43
2:CB:8:LYS:HD3	2:CB:217:ARG:NH1	2.33	0.43
2:CB:17:PHE:HD1	2:CB:17:PHE:H	1.65	0.43
6:CF:97:PHE:O	18:CR:31:LEU:HD23	2.17	0.43
7:CG:95:ARG:O	7:CG:96:GLN:C	2.61	0.43
13:CM:16:ASP:OD1	13:CM:17:VAL:HG23	2.18	0.43
14:CN:24:CYS:SG	14:CN:40:CYS:N	2.80	0.43
15:CO:44:LYS:HB2	15:CO:44:LYS:HE3	1.79	0.43
17:CQ:99:SER:C	17:CQ:100:LYS:HG3	2.43	0.43
18:CR:24:ALA:C	18:CR:26:LEU:H	2.27	0.43
24:CY:285:GLU:HA	24:CY:288:ARG:NH1	2.33	0.43
31:D6:16:CYS:O	31:D6:17:LYS:HB2	2.18	0.43
35:DA:35:G:H1'	35:DA:454:A:C4	2.53	0.43
35:DA:530:G:C5	35:DA:2022:U:H5"	2.52	0.43
35:DA:679:C:H2'	35:DA:680:G:C8	2.53	0.43
35:DA:797:C:H2'	35:DA:798:G:O4'	2.18	0.43
35:DA:902:C:H2'	35:DA:903:C:H6	1.83	0.43
35:DA:1048:A:C2	35:DA:1109:C:C5	3.06	0.43
35:DA:1876:A:H8	35:DA:1876:A:OP2	2.01	0.43
35:DA:1946:U:H2'	35:DA:1947:C:C6	2.53	0.43
35:DA:2740:A:H2'	35:DA:2741:A:C8	2.53	0.43
37:DC:48:LEU:HD13	37:DC:172:ILE:HB	1.99	0.43
39:DE:87:GLU:O	39:DE:89:ASP:N	2.49	0.43
45:DK:23:VAL:HG13	45:DK:26:ALA:HB3	2.00	0.43
48:DP:136:GLU:O	48:DP:139:LYS:HB3	2.17	0.43
49:DQ:58:PHE:O	49:DQ:58:PHE:HD1	2.01	0.43
53:DU:31:SER:C	53:DU:33:ARG:H	2.21	0.43
1:AA:195:A:H1'	1:AA:222:U:O2'	2.18	0.43
1:AA:421:U:O4	3:AC:127:ARG:NH1	2.50	0.43
1:AA:1386:G:H2'	1:AA:1387:G:C8	2.42	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:28:GLN:O	3:AC:29:TYR:C	2.61	0.43
3:AC:92:ALA:C	3:AC:94:LEU:H	2.25	0.43
3:AC:167:TRP:O	3:AC:168:ALA:HB3	2.18	0.43
5:AE:57:LYS:HA	5:AE:60:TYR:HB3	2.00	0.43
10:AJ:8:LEU:C	10:AJ:16:LEU:HD21	2.42	0.43
11:AK:80:VAL:HG22	11:AK:103:LEU:HD12	2.00	0.43
13:AM:67:GLU:OE1	13:AM:71:ARG:NH2	2.43	0.43
17:AQ:6:LEU:O	17:AQ:58:GLU:HA	2.18	0.43
20:AT:18:GLN:O	20:AT:22:ARG:HG3	2.18	0.43
20:AT:73:HIS:O	20:AT:74:LYS:C	2.61	0.43
22:AW:63:G:H3'	22:AW:64:A:H8	1.83	0.43
26:B1:80:LEU:HD23	26:B1:81:LYS:N	2.32	0.43
27:B2:48:HIS:CE1	35:BA:96:G:H4'	2.54	0.43
33:B8:50:LEU:C	33:B8:52:LYS:H	2.25	0.43
35:BA:638:G:C6	35:BA:651:G:C6	3.06	0.43
35:BA:958:U:O2	36:BB:90:A:H4'	2.18	0.43
35:BA:1057:A:H2'	35:BA:1058:G:C8	2.53	0.43
35:BA:1079:C:H2'	35:BA:1080:C:C6	2.53	0.43
35:BA:1264:G:H8	35:BA:1264:G:O5'	2.02	0.43
35:BA:1496:A:C8	35:BA:1498:C:C4	3.05	0.43
35:BA:1543:C:H3'	35:BA:1544:A:H5"	2.00	0.43
35:BA:2136:C:H41	35:BA:2156:G:H21	1.66	0.43
35:BA:2250:G:O2'	35:BA:2496:C:OP1	2.30	0.43
35:BA:2415:G:O3'	48:BP:66:GLY:HA3	2.18	0.43
35:BA:2712:U:HO2'	35:BA:2712(A):A:P	2.40	0.43
36:BB:29:A:H2'	36:BB:30:C:O4'	2.17	0.43
36:BB:62:C:C2	36:BB:63:G:C8	3.06	0.43
37:BC:4:HIS:HD1	37:BC:8:TYR:HE2	1.64	0.43
38:BD:30:GLU:HB2	38:BD:35:LYS:NZ	2.33	0.43
41:BG:8:LYS:HE3	41:BG:96:ARG:HH21	1.82	0.43
41:BG:141:PHE:O	41:BG:144:ILE:HG22	2.18	0.43
46:BN:1:MET:HG2	46:BN:2:LYS:N	2.33	0.43
48:BP:18:ARG:NH1	48:BP:18:ARG:HB3	2.32	0.43
49:BQ:76:LYS:HB3	49:BQ:91:GLU:HG3	2.00	0.43
1:CA:1309:G:C6	1:CA:1310:G:C6	3.06	0.43
7:CG:76:ARG:HG2	7:CG:76:ARG:HH11	1.83	0.43
17:CQ:11:VAL:O	17:CQ:12:SER:HB2	2.18	0.43
24:CY:346:TRP:N	24:CY:346:TRP:CE3	2.86	0.43
25:D0:43:THR:HG22	35:DA:2331:G:O2'	2.18	0.43
27:D2:32:LEU:HD22	27:D2:36:ARG:HH11	1.83	0.43
35:DA:184:C:H1'	35:DA:217:G:H1'	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:958:U:O2	36:DB:90:A:O2'	2.34	0.43
35:DA:1292:U:O2'	35:DA:1293:C:H5'	2.19	0.43
35:DA:2461:C:H2'	35:DA:2462:U:C6	2.53	0.43
36:DB:52:A:O2'	36:DB:53:A:H8	2.00	0.43
38:DD:37:LEU:HD23	38:DD:37:LEU:HA	1.67	0.43
38:DD:147:LEU:HD12	38:DD:147:LEU:HA	1.90	0.43
43:DI:71:ILE:O	43:DI:72:LEU:HD23	2.17	0.43
43:DI:127:VAL:HG13	43:DI:138:ILE:C	2.43	0.43
1:AA:23:C:OP2	1:AA:561:U:N3	2.42	0.43
1:AA:198:G:H2'	1:AA:199:G:H8	1.82	0.43
1:AA:368:U:OP1	43:DI:91:SER:HB3	2.18	0.43
1:AA:630:G:C2'	1:AA:631:G:H5'	2.47	0.43
1:AA:832:C:O2'	1:AA:833:U:H6	2.02	0.43
1:AA:1113:C:H2'	1:AA:1114:C:C6	2.53	0.43
2:AB:119:GLU:HA	2:AB:122:PHE:HB3	2.00	0.43
2:AB:165:VAL:HG23	2:AB:166:ASP:N	2.30	0.43
2:AB:185:ILE:CG2	2:AB:199:TYR:HB2	2.46	0.43
3:AC:11:ARG:HB3	3:AC:15:THR:HB	1.99	0.43
3:AC:32:LEU:HB3	3:AC:59:ARG:HH22	1.84	0.43
10:AJ:8:LEU:HB3	10:AJ:16:LEU:HD21	2.00	0.43
13:AM:93:ARG:CD	35:BA:888:C:H5'	2.42	0.43
35:BA:814:C:OP1	54:BV:83:ARG:HA	2.18	0.43
35:BA:1081:U:H5'	45:BK:125:ARG:HG3	2.00	0.43
35:BA:1497:U:H5'	35:BA:1498:C:H5	1.83	0.43
36:BB:21:G:O2'	36:BB:22:U:H6	2.02	0.43
36:BB:75:G:O2'	58:BZ:85:HIS:NE2	2.51	0.43
39:BE:77:ILE:HG22	39:BE:78:LEU:N	2.31	0.43
43:BI:93:THR:HG23	43:BI:96:ASP:H	1.84	0.43
46:BN:54:VAL:HB	46:BN:122:VAL:HG22	2.00	0.43
47:BO:88:ASN:OD1	47:BO:92:GLU:N	2.43	0.43
49:BQ:52:VAL:O	49:BQ:56:ARG:HG2	2.17	0.43
49:BQ:108:GLY:HA3	58:BZ:116:VAL:HG21	2.01	0.43
51:BS:59:LYS:HB2	51:BS:59:LYS:HE3	1.81	0.43
52:BT:26:ASP:HB3	52:BT:89:VAL:O	2.19	0.43
52:BT:83:ILE:HG13	52:BT:84:GLN:HG2	1.99	0.43
54:BV:57:VAL:HB	54:BV:99:ILE:HG22	1.99	0.43
1:CA:33:A:H2'	1:CA:34:C:H6	1.83	0.43
1:CA:195:A:OP1	20:CT:65:LYS:NZ	2.49	0.43
1:CA:954:G:H4'	13:CM:120:LYS:HG3	2.00	0.43
1:CA:1015:A:H2'	1:CA:1016:A:H8	1.83	0.43
1:CA:1491:G:H5"	1:CA:1492:A:OP2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:123:GLN:O	3:CC:128:PHE:HB2	2.18	0.43
4:CD:38:TYR:CD2	4:CD:45:GLN:HB3	2.53	0.43
4:CD:159:ARG:O	4:CD:162:LEU:HB2	2.19	0.43
5:CE:96:PRO:HA	5:CE:117:ASP:OD2	2.18	0.43
5:CE:150:ARG:HA	5:CE:153:LYS:HE2	1.99	0.43
6:CF:8:ILE:HG22	6:CF:9:VAL:N	2.34	0.43
9:CI:89:ASN:O	9:CI:92:TYR:HB2	2.19	0.43
13:CM:28:ALA:C	13:CM:30:ALA:H	2.26	0.43
13:CM:105:THR:O	13:CM:106:ASN:C	2.61	0.43
22:CW:19:G:N7	35:DA:2112:G:C5	2.86	0.43
26:D1:52:ARG:NH1	26:D1:55:GLY:O	2.51	0.43
32:D7:3:ARG:HA	32:D7:3:ARG:HD3	1.77	0.43
35:DA:299:A:N1	35:DA:322:A:O2'	2.39	0.43
35:DA:654(S):G:H2'	35:DA:654(T):C:C6	2.52	0.43
35:DA:660:G:H5'	40:DF:99:TYR:CE2	2.53	0.43
35:DA:1484:G:N2	35:DA:1505:C:H42	2.17	0.43
35:DA:1589:C:H2'	35:DA:1590:U:H6	1.83	0.43
35:DA:2132:U:H3	37:DC:6:LYS:HZ1	1.65	0.43
35:DA:2162:G:H2'	35:DA:2163:C:H6	1.84	0.43
35:DA:2820:A:C4'	50:DR:5:LYS:HD2	2.47	0.43
37:DC:191:ARG:HH11	37:DC:191:ARG:HG3	1.82	0.43
39:DE:197:ILE:HD11	39:DE:199:ARG:HE	1.83	0.43
40:DF:36:VAL:HG22	40:DF:101:LEU:HD21	2.00	0.43
40:DF:117:ARG:HD3	40:DF:120:GLU:OE1	2.17	0.43
41:DG:115:ARG:HG3	41:DG:116:ASP:N	2.25	0.43
41:DG:154:GLY:O	41:DG:155:MET:HB3	2.18	0.43
41:DG:173:LEU:HD23	41:DG:176:LEU:HD12	2.00	0.43
52:DT:54:ARG:HA	52:DT:59:THR:HB	2.00	0.43
52:DT:57:PHE:O	52:DT:59:THR:HG22	2.17	0.43
55:DW:4:LYS:HE2	55:DW:6:ILE:HD11	1.99	0.43
1:AA:84:U:C4	1:AA:88:A:N7	2.86	0.43
1:AA:132:C:H5'	1:AA:262:A:H1'	2.00	0.43
1:AA:664:G:H22	1:AA:741:G:H1	1.65	0.43
1:AA:690:G:H2'	1:AA:691:G:C8	2.53	0.43
1:AA:735:C:H2'	1:AA:736:C:C6	2.54	0.43
1:AA:740:U:H2'	1:AA:741:G:C8	2.53	0.43
1:AA:1206:G:C4	1:AA:1207:G:C8	3.06	0.43
2:AB:168:THR:O	2:AB:169:LYS:C	2.61	0.43
4:AD:110:PHE:CD1	4:AD:110:PHE:N	2.84	0.43
4:AD:175:SER:HB3	4:AD:186:LEU:HD11	2.00	0.43
4:AD:176:LEU:CG	4:AD:177:ASP:H	2.28	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:99:GLN:HG2	11:AK:105:VAL:HG11	2.00	0.43
14:AN:4:LYS:C	14:AN:6:LEU:H	2.27	0.43
17:AQ:11:VAL:O	17:AQ:12:SER:HB2	2.18	0.43
19:AS:18:LYS:HB2	19:AS:18:LYS:HE2	1.84	0.43
33:B8:31:HIS:NE2	35:BA:2392:A:OP2	2.46	0.43
35:BA:226:G:H21	35:BA:228:A:H62	1.66	0.43
35:BA:404:C:H4'	35:BA:405:U:C5'	2.47	0.43
35:BA:443:A:N7	40:BF:45:ARG:HG2	2.33	0.43
35:BA:638:G:C6	35:BA:639:U:C4	3.07	0.43
35:BA:1366:A:H2'	35:BA:1367:A:O4'	2.18	0.43
35:BA:2392:A:O2'	48:BP:60:MET:HB3	2.18	0.43
35:BA:2653:U:OP2	35:BA:2654:A:H2'	2.19	0.43
35:BA:2839:G:H5'	50:BR:46:GLY:HA2	2.00	0.43
37:BC:6:LYS:HA	37:BC:9:ARG:CB	2.49	0.43
38:BD:48:ARG:HH11	38:BD:48:ARG:HG3	1.83	0.43
50:BR:99:LYS:H	50:BR:99:LYS:HG2	1.53	0.43
50:BR:101:ALA:O	50:BR:102:GLU:HB2	2.18	0.43
52:BT:48:ILE:HD12	52:BT:48:ILE:N	2.33	0.43
58:BZ:23:LYS:HD3	58:BZ:38:TYR:CD1	2.53	0.43
1:CA:575:G:H4'	1:CA:575:G:OP1	2.17	0.43
1:CA:690:G:C6	1:CA:691:G:C6	3.06	0.43
1:CA:923:A:H2'	1:CA:924:C:C6	2.54	0.43
1:CA:940:C:H2'	1:CA:941:G:H8	1.81	0.43
1:CA:1118:C:H5'	9:CI:104:ARG:HD2	2.00	0.43
1:CA:1265:G:H2'	1:CA:1266:G:C8	2.54	0.43
2:CB:32:ILE:HA	2:CB:42:ILE:HA	1.99	0.43
2:CB:115:LEU:O	2:CB:118:LEU:HB2	2.18	0.43
3:CC:30:ARG:HB2	14:CN:36:PHE:O	2.18	0.43
3:CC:54:ARG:NH1	3:CC:56:ASP:HB2	2.33	0.43
3:CC:152:ILE:O	3:CC:198:VAL:HA	2.19	0.43
4:CD:61:LYS:HD3	4:CD:206:PHE:CD2	2.53	0.43
5:CE:144:THR:O	5:CE:148:VAL:HG23	2.18	0.43
16:CP:43:LYS:C	16:CP:45:THR:H	2.26	0.43
20:CT:89:ARG:HD2	20:CT:104:LEU:HD11	1.99	0.43
20:CT:104:LEU:HD23	20:CT:105:SER:N	2.34	0.43
22:CV:25:C:H2'	22:CV:26:A:O4'	2.19	0.43
22:CV:66:U:H2'	22:CV:67:C:H6	1.81	0.43
30:D5:52:TYR:O	30:D5:53:ALA:C	2.61	0.43
35:DA:271(P):C:O2'	35:DA:271(Q):G:H5'	2.17	0.43
35:DA:1291:C:H2'	35:DA:1292:U:H6	1.84	0.43
35:DA:1423:G:H2'	35:DA:1424:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1718:G:H2'	35:DA:1719:G:H8	1.83	0.43
35:DA:1762:A:H8	35:DA:1762:A:O5'	2.02	0.43
35:DA:1777:U:O2'	35:DA:1778:U:H5'	2.18	0.43
35:DA:1779:U:C5	35:DA:1784:A:N7	2.83	0.43
35:DA:1790:C:H2'	35:DA:1791:A:C5	2.54	0.43
35:DA:2238:G:H2'	35:DA:2238:G:N3	2.33	0.43
35:DA:2514:U:H2'	35:DA:2515:C:C6	2.52	0.43
35:DA:2712:U:O2'	35:DA:2713:A:H5'	2.18	0.43
35:DA:2840:C:H5"	50:DR:53:HIS:CD2	2.52	0.43
39:DE:55:ASN:HB2	39:DE:72:VAL:CG1	2.48	0.43
39:DE:103:ASP:OD2	39:DE:201:THR:HA	2.19	0.43
45:DK:2:LYS:HG3	45:DK:3:LYS:HG3	2.01	0.43
48:DP:97:PRO:O	48:DP:99:LEU:N	2.45	0.43
49:DQ:21:THR:O	49:DQ:21:THR:HG22	2.18	0.43
50:DR:59:ASP:N	50:DR:59:ASP:OD1	2.51	0.43
52:DT:62:THR:HA	52:DT:74:ARG:O	2.18	0.43
58:DZ:99:TYR:CE1	58:DZ:125:LEU:HD12	2.53	0.43
58:DZ:152:ALA:C	58:DZ:154:ASP:H	2.25	0.43
1:AA:115:G:O5'	1:AA:115:G:H8	2.02	0.43
1:AA:373:A:H2'	1:AA:374:A:H8	1.83	0.43
1:AA:520:A:OP1	12:AL:52:LEU:HB2	2.17	0.43
1:AA:939:G:C5'	7:AG:102:ARG:HH12	2.32	0.43
1:AA:1003:G:H21	1:AA:1038:C:N4	2.17	0.43
1:AA:1005:A:H8	1:AA:1006:C:O4'	2.02	0.43
1:AA:1117:G:N2	1:AA:1179:A:C2	2.86	0.43
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.19	0.43
1:AA:1373:G:H5"	7:AG:36:LYS:NZ	2.32	0.43
2:AB:163:PHE:CD2	2:AB:185:ILE:HG13	2.54	0.43
8:AH:8:ASP:O	8:AH:12:ARG:HG3	2.18	0.43
13:AM:14:ARG:C	13:AM:16:ASP:H	2.26	0.43
19:AS:80:TYR:O	19:AS:80:TYR:CG	2.70	0.43
25:B0:39:ARG:HH21	35:BA:2355:C:H1'	1.82	0.43
27:B2:37:PHE:O	27:B2:41:ILE:HG12	2.19	0.43
30:B5:56:LYS:HE3	30:B5:59:GLU:OE2	2.18	0.43
31:B6:25:LYS:CE	35:BA:2285:C:H41	2.31	0.43
35:BA:40:C:H2'	35:BA:41:C:H6	1.83	0.43
35:BA:210:C:H4'	35:BA:1367:A:H1'	1.98	0.43
35:BA:398:G:H2'	35:BA:399:G:C8	2.53	0.43
35:BA:903:C:C2'	35:BA:904:C:H5'	2.49	0.43
35:BA:1486:A:N6	35:BA:1504:C:H42	2.16	0.43
35:BA:2163:C:H2'	35:BA:2164:C:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2189:U:H2'	35:BA:2190:G:O4'	2.18	0.43
35:BA:2272:U:H5"	35:BA:2273:A:OP1	2.18	0.43
35:BA:2521:C:O2'	35:BA:2564:A:N3	2.42	0.43
35:BA:2821:A:H2'	35:BA:2822:G:C8	2.54	0.43
38:BD:265:PRO:O	38:BD:267:SER:N	2.51	0.43
39:BE:132:HIS:CD2	39:BE:135:HIS:CE1	3.07	0.43
40:BF:36:VAL:HG11	40:BF:183:VAL:HG11	2.00	0.43
41:BG:61:ALA:HA	41:BG:64:THR:HG22	1.99	0.43
47:BO:3:GLN:HB2	47:BO:4:PRO:HD2	2.00	0.43
48:BP:57:THR:OG1	48:BP:58:THR:N	2.47	0.43
48:BP:114:ILE:O	48:BP:115:LEU:HB3	2.18	0.43
49:BQ:132:VAL:HG11	58:BZ:81:ARG:NE	2.33	0.43
1:CA:370:C:H2'	1:CA:371:G:H8	1.83	0.43
2:CB:7:VAL:C	2:CB:217:ARG:HH12	2.27	0.43
2:CB:15:VAL:C	2:CB:16:HIS:CG	2.97	0.43
2:CB:55:PHE:HA	2:CB:58:ILE:HB	2.00	0.43
7:CG:120:ILE:H	7:CG:120:ILE:HD12	1.82	0.43
10:CJ:49:VAL:O	10:CJ:60:ARG:HB2	2.18	0.43
24:CY:76:MET:HE2	24:CY:88:LYS:HE2	1.99	0.43
24:CY:304:PRO:O	24:CY:305:ILE:HB	2.17	0.43
26:D1:19:GLN:HG3	35:DA:2080:G:H5'	2.00	0.43
26:D1:52:ARG:HA	26:D1:52:ARG:HD2	1.68	0.43
26:D1:67:ILE:N	26:D1:68:PRO:HD2	2.33	0.43
29:D4:30:GLU:O	29:D4:31:ILE:HD13	2.18	0.43
35:DA:710:G:H2'	35:DA:711:G:H8	1.83	0.43
35:DA:865:C:H42	35:DA:909:A:H62	1.65	0.43
35:DA:1103:A:C8	35:DA:1104:C:C5	3.06	0.43
35:DA:2023:G:H4'	35:DA:2617:C:O3'	2.19	0.43
35:DA:2153:G:H2'	35:DA:2154:G:H8	1.84	0.43
35:DA:2845:G:O2'	35:DA:2846:G:H5'	2.18	0.43
38:DD:245:PRO:O	38:DD:246:PRO:C	2.61	0.43
40:DF:36:VAL:CG1	40:DF:183:VAL:HG11	2.48	0.43
46:DN:42:TRP:HE3	46:DN:48:MET:HE1	1.81	0.43
51:DS:26:LEU:HD12	51:DS:87:PHE:CD1	2.54	0.43
52:DT:14:TYR:N	52:DT:14:TYR:CD1	2.87	0.43
53:DU:101:ARG:HH11	53:DU:101:ARG:CB	2.31	0.43
1:AA:18:C:H5"	5:AE:127:ASN:ND2	2.34	0.43
1:AA:45:U:H2'	1:AA:46:G:C8	2.53	0.43
1:AA:377:G:OP1	16:AP:3:LYS:HD2	2.18	0.43
1:AA:553:A:H2'	1:AA:554:C:H6	1.84	0.43
1:AA:992:U:O2'	1:AA:993:G:OP2	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1104:G:H2'	1:AA:1105:A:O4'	2.18	0.43
1:AA:1155:G:H2'	1:AA:1156:G:C8	2.53	0.43
2:AB:118:LEU:HD23	2:AB:118:LEU:HA	1.89	0.43
2:AB:217:ARG:O	2:AB:221:LEU:HB2	2.18	0.43
3:AC:182:ILE:HG12	3:AC:203:PHE:CD1	2.49	0.43
5:AE:6:PHE:HD1	5:AE:63:ARG:NH1	2.17	0.43
9:AI:43:ALA:C	9:AI:45:ALA:N	2.77	0.43
16:AP:4:ILE:HB	16:AP:66:PRO:HB3	2.01	0.43
17:AQ:43:LEU:HD12	17:AQ:68:ARG:HB3	1.99	0.43
24:AY:89:PRO:HA	24:AY:92:GLU:HG2	2.00	0.43
26:B1:67:ILE:N	26:B1:68:PRO:HD2	2.34	0.43
27:B2:59:ARG:HG2	35:BA:77:C:H5'	2.01	0.43
31:B6:39:TYR:OH	35:BA:2348:U:H5'	2.18	0.43
33:B8:33:ASN:HD22	35:BA:2419:U:P	2.39	0.43
35:BA:71:A:H4'	35:BA:72:U:O5'	2.18	0.43
35:BA:205:G:O2'	35:BA:206:U:OP2	2.36	0.43
35:BA:278:A:H2'	35:BA:279:C:H6	1.84	0.43
35:BA:1054:A:H2'	35:BA:1055:G:O4'	2.19	0.43
35:BA:1380:G:H2'	35:BA:1381:G:C8	2.53	0.43
35:BA:1429:G:H2'	35:BA:1430:C:H6	1.83	0.43
35:BA:2839:G:H2'	35:BA:2840:C:H6	1.83	0.43
37:BC:213:VAL:HG12	37:BC:225:ILE:HD11	2.01	0.43
41:BG:56:ALA:CB	41:BG:153:ARG:HH12	2.28	0.43
47:BO:77:ILE:HD11	52:BT:72:VAL:CG1	2.45	0.43
58:BZ:4:ARG:O	58:BZ:5:LEU:HB2	2.18	0.43
58:BZ:126:VAL:HA	58:BZ:163:LEU:HA	1.99	0.43
1:CA:83:U:O5'	1:CA:83:U:H6	2.01	0.43
1:CA:676:A:H61	1:CA:714:G:H1	1.67	0.43
1:CA:1131:G:H2'	1:CA:1132:C:C6	2.54	0.43
1:CA:1410:G:H2'	1:CA:1411:C:C6	2.54	0.43
4:CD:20:TYR:N	4:CD:20:TYR:CD1	2.86	0.43
6:CF:3:ARG:HD3	6:CF:64:GLN:NE2	2.34	0.43
6:CF:39:LYS:HB3	6:CF:62:TRP:CZ3	2.54	0.43
7:CG:80:VAL:H	7:CG:83:ALA:HB3	1.84	0.43
10:CJ:63:PHE:HB3	14:CN:57:ARG:O	2.17	0.43
12:CL:25:PRO:O	12:CL:27:LEU:HD13	2.18	0.43
22:CW:20:U:H5	22:CW:60:U:O4	2.00	0.43
22:CW:64:A:H2'	22:CW:65:G:C8	2.54	0.43
30:D5:55:ARG:HG2	50:DR:33:ARG:NH1	2.34	0.43
35:DA:82:G:N1	35:DA:103:A:OP2	2.50	0.43
35:DA:272(I):U:C5	35:DA:363(A):A:N1	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1146:C:O2'	35:DA:1147:C:H5'	2.18	0.43
35:DA:2321:G:H2'	35:DA:2321:G:N3	2.33	0.43
35:DA:2493:U:O2'	49:DQ:80:GLU:OE1	2.25	0.43
35:DA:2512:C:H2'	35:DA:2513:G:O4'	2.19	0.43
35:DA:2839:G:H5'	50:DR:46:GLY:HA3	2.00	0.43
38:DD:53:PHE:HA	38:DD:218:ARG:HB2	2.00	0.43
40:DF:25:PRO:O	40:DF:26:ALA:C	2.62	0.43
42:DH:49:VAL:HG23	42:DH:50:VAL:N	2.34	0.43
42:DH:52:VAL:HG12	42:DH:65:HIS:CD2	2.53	0.43
48:DP:45:LEU:HD23	48:DP:45:LEU:HA	1.82	0.43
54:DV:52:VAL:HG23	54:DV:55:ALA:HB3	2.00	0.43
57:DY:77:PRO:O	57:DY:78:ALA:HB2	2.18	0.43
58:DZ:30:ASN:C	58:DZ:32:HIS:H	2.26	0.43
1:AA:67:C:O2'	1:AA:171:A:H1'	2.19	0.43
1:AA:429:U:H3'	4:AD:9:CYS:HB2	2.01	0.43
1:AA:584:G:H2'	1:AA:585:G:C8	2.53	0.43
1:AA:647:C:H2'	1:AA:648:A:C8	2.54	0.43
1:AA:805:C:O2'	1:AA:806:C:H5'	2.18	0.43
1:AA:1054:C:H6	1:AA:1196:U:C2	2.36	0.43
1:AA:1077:G:N1	1:AA:1081:G:C6	2.86	0.43
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.83	0.43
1:AA:1342:C:H1'	9:AI:124:GLN:HG3	2.00	0.43
4:AD:159:ARG:O	4:AD:162:LEU:HB2	2.18	0.43
6:AF:19:LEU:O	6:AF:19:LEU:HD23	2.19	0.43
9:AI:43:ALA:O	9:AI:45:ALA:N	2.42	0.43
9:AI:76:ALA:C	9:AI:78:LYS:H	2.26	0.43
13:AM:124:PRO:HB2	24:AY:163:GLY:C	2.44	0.43
24:AY:267:SER:OG	24:AY:270:LYS:HB2	2.19	0.43
30:B5:28:PRO:HD2	55:BW:35:ILE:HG23	2.01	0.43
30:B5:40:LYS:NZ	30:B5:49:CYS:SG	2.79	0.43
35:BA:2171:A:H4'	35:BA:2172:U:OP1	2.17	0.43
35:BA:2307:G:N3	35:BA:2307:G:H5"	2.33	0.43
38:BD:108:PRO:HB3	38:BD:143:HIS:NE2	2.33	0.43
40:BF:125:LEU:H	40:BF:125:LEU:CD2	2.28	0.43
41:BG:46:ALA:HB2	41:BG:88:ILE:CD1	2.39	0.43
41:BG:155:MET:O	41:BG:155:MET:HG3	2.17	0.43
42:BH:127:GLU:HB3	42:BH:128:PRO:HD2	2.01	0.43
44:BJ:58:UNK:CB	44:BJ:62:UNK:HA	2.48	0.43
47:BO:93:PRO:HD3	47:BO:114:ILE:HD11	2.00	0.43
48:BP:18:ARG:O	48:BP:20:GLY:N	2.52	0.43
53:BU:84:LYS:HD3	53:BU:84:LYS:HA	1.88	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:51:VAL:HB	57:BY:53:PRO:HD2	2.01	0.43
58:BZ:103:ARG:HH11	58:BZ:103:ARG:HG3	1.83	0.43
58:BZ:145:GLU:HG3	58:BZ:146:ILE:N	2.33	0.43
1:CA:312:C:H2'	1:CA:313:A:H8	1.83	0.43
1:CA:385:C:H2'	1:CA:386:C:H6	1.81	0.43
1:CA:552:U:N3	1:CA:553:A:N7	2.67	0.43
1:CA:707:C:H2'	1:CA:708:C:H6	1.83	0.43
1:CA:1431:C:H2'	1:CA:1432:G:O4'	2.19	0.43
2:CB:50:GLU:O	2:CB:51:LEU:C	2.62	0.43
3:CC:81:GLY:O	3:CC:85:ARG:HB2	2.18	0.43
4:CD:88:VAL:HG13	5:CE:97:GLY:CA	2.48	0.43
5:CE:71:LEU:O	5:CE:72:GLN:HG3	2.19	0.43
6:CF:42:GLU:C	6:CF:44:GLY:N	2.77	0.43
6:CF:84:ASN:O	6:CF:86:ARG:HG3	2.18	0.43
10:CJ:90:LEU:N	10:CJ:91:PRO:CD	2.81	0.43
11:CK:53:SER:C	11:CK:55:LYS:H	2.25	0.43
12:CL:17:LYS:HD3	12:CL:18:VAL:HG22	2.00	0.43
13:CM:9:ILE:N	13:CM:9:ILE:HD12	2.34	0.43
17:CQ:67:LYS:C	17:CQ:69:LYS:H	2.26	0.43
22:CW:54:U:O4	22:CW:61:C:N3	2.51	0.43
24:CY:283:LEU:HB3	24:CY:287:GLU:OE2	2.19	0.43
25:D0:11:ARG:HH11	25:D0:11:ARG:CB	2.28	0.43
27:D2:26:ARG:HE	27:D2:26:ARG:HB2	1.50	0.43
35:DA:7:G:H2'	35:DA:8:A:H8	1.78	0.43
35:DA:272(H):C:H2'	35:DA:272(I):U:H5'	1.99	0.43
35:DA:481:G:H1'	35:DA:506:G:H21	1.83	0.43
35:DA:710:G:H2'	35:DA:711:G:C8	2.54	0.43
35:DA:1062:G:H2'	35:DA:1063:G:H8	1.82	0.43
35:DA:1532:C:H2'	35:DA:1533:G:O4'	2.18	0.43
35:DA:2833:G:H3'	35:DA:2834:G:H5'	2.00	0.43
38:DD:211:ARG:HA	38:DD:214:TRP:CE3	2.54	0.43
43:DI:92:VAL:CG1	43:DI:120:ILE:HB	2.47	0.43
44:DJ:77:UNK:C	44:DJ:79:UNK:N	2.81	0.43
45:DK:102:GLU:O	45:DK:106:GLU:HG3	2.17	0.43
45:DK:111:LYS:C	45:DK:112:MET:HG3	2.42	0.43
49:DQ:34:LEU:HD12	49:DQ:34:LEU:HA	1.84	0.43
51:DS:17:ARG:HA	51:DS:20:ARG:NH1	2.33	0.43
52:DT:102:ILE:HB	52:DT:110:ILE:CD1	2.48	0.43
1:AA:199:G:H2'	1:AA:200:G:C8	2.54	0.43
1:AA:237:C:H4'	17:AQ:25:ARG:HH12	1.84	0.43
1:AA:575:G:OP1	1:AA:575:G:H4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:687:A:N3	1:AA:688:G:H1'	2.33	0.43
1:AA:1067:A:O2'	1:AA:1068:G:OP2	2.31	0.43
2:AB:7:VAL:N	2:AB:10:LEU:HB2	2.34	0.43
2:AB:72:GLY:HA2	2:AB:165:VAL:HG22	1.99	0.43
2:AB:164:VAL:O	2:AB:186:ALA:HB1	2.18	0.43
2:AB:204:ASN:OD1	2:AB:207:ALA:N	2.46	0.43
4:AD:196:LEU:HA	6:CF:16:GLN:HG3	2.01	0.43
11:AK:17:GLY:O	11:AK:80:VAL:HA	2.19	0.43
12:AL:58:VAL:O	12:AL:60:LEU:HD22	2.18	0.43
17:AQ:10:VAL:CG1	17:AQ:19:VAL:HB	2.49	0.43
27:B2:10:LEU:O	27:B2:13:ALA:N	2.52	0.43
28:B3:25:ALA:HB2	35:BA:849:A:N1	2.33	0.43
31:B6:13:CYS:HB2	31:B6:22:ALA:HB3	2.01	0.43
35:BA:176:G:O2'	35:BA:177:G:H5'	2.19	0.43
35:BA:1243:G:H2'	35:BA:1244:G:O4'	2.19	0.43
35:BA:1378:A:H4'	35:BA:1379:A:OP1	2.18	0.43
35:BA:1428:C:O2'	35:BA:1429:G:H5'	2.19	0.43
35:BA:1812:A:H2'	35:BA:1813:G:H8	1.84	0.43
35:BA:1857:G:N2	35:BA:1886:C:N4	2.67	0.43
35:BA:2315:G:H2'	35:BA:2316:C:C6	2.54	0.43
38:BD:211:ARG:HA	38:BD:214:TRP:CE3	2.54	0.43
45:BK:7:VAL:HG12	45:BK:58:THR:HA	1.99	0.43
54:BV:49:THR:HG22	54:BV:50:PRO:HD3	2.00	0.43
56:BX:31:HIS:HA	56:BX:32:PRO:HD2	1.87	0.43
1:CA:374:A:C6	1:CA:375:U:C4	3.06	0.43
1:CA:401:C:H2'	1:CA:402:G:H8	1.84	0.43
1:CA:403:C:H2'	1:CA:404:U:H6	1.83	0.43
1:CA:408:A:N1	1:CA:435:C:N4	2.61	0.43
1:CA:450:G:C8	1:CA:481:G:C6	3.06	0.43
1:CA:608:A:C4	1:CA:609:A:C8	3.07	0.43
1:CA:1005:A:H3'	1:CA:1006:C:H6	1.84	0.43
1:CA:1216:G:H5"	14:CN:5:ALA:CB	2.49	0.43
4:CD:68:TYR:HA	4:CD:114:ARG:HD2	2.00	0.43
7:CG:79:ARG:HH21	7:CG:82:GLY:HA2	1.84	0.43
8:CH:6:ILE:H	8:CH:6:ILE:CD1	2.32	0.43
11:CK:91:ARG:HD2	11:CK:91:ARG:C	2.43	0.43
13:CM:19:LEU:HD22	13:CM:19:LEU:H	1.83	0.43
19:CS:27:GLU:OE1	19:CS:27:GLU:N	2.52	0.43
19:CS:64:GLU:HG3	19:CS:65:ASN:H	1.81	0.43
22:CV:18:G:HO2'	22:CV:57:G:H22	1.63	0.43
24:CY:109:PHE:CZ	24:CY:353:ALA:HB2	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CY:178:GLY:O	24:CY:349:LEU:HD21	2.19	0.43
31:D6:15:GLU:HG2	31:D6:15:GLU:O	2.19	0.43
35:DA:141:A:H8	35:DA:1408:C:O2'	2.01	0.43
35:DA:150:C:H2'	35:DA:151:C:C6	2.53	0.43
35:DA:270:A:OP2	35:DA:271(X):G:N2	2.52	0.43
35:DA:307:G:H21	35:DA:330:A:H62	1.66	0.43
35:DA:321:G:C2	35:DA:341:G:H4'	2.54	0.43
35:DA:643:A:H2'	35:DA:644:A:O4'	2.18	0.43
35:DA:654(R):C:H2'	35:DA:654(S):G:N7	2.33	0.43
35:DA:1265:A:H8	35:DA:1265:A:OP1	2.01	0.43
35:DA:1452:A:O2'	35:DA:1453:U:H2'	2.18	0.43
35:DA:1547:C:C2	35:DA:1548:C:C5	3.07	0.43
35:DA:1682:G:P	35:DA:1699:G:H22	2.42	0.43
35:DA:1897:G:H2'	35:DA:1898:U:O4'	2.18	0.43
35:DA:2307:G:N3	35:DA:2307:G:H5"	2.33	0.43
35:DA:2401:U:C2'	35:DA:2402:C:H5"	2.48	0.43
37:DC:6:LYS:HD2	37:DC:6:LYS:C	2.44	0.43
37:DC:46:ALA:O	37:DC:172:ILE:HG22	2.19	0.43
44:DJ:99:UNK:O	44:DJ:101:UNK:N	2.52	0.43
49:DQ:29:PHE:HB2	49:DQ:105:GLU:OE2	2.19	0.43
51:DS:106:ARG:HH11	51:DS:106:ARG:CB	2.30	0.43
53:DU:92:ARG:HD2	54:DV:11:GLN:HB2	2.01	0.43
55:DW:17:VAL:O	55:DW:20:VAL:HG22	2.19	0.43
1:AA:512:U:C2	1:AA:513:C:C5	3.07	0.43
1:AA:930:C:H2'	1:AA:931:C:O4'	2.19	0.43
1:AA:1304:G:N2	1:AA:1333:A:H62	2.12	0.43
1:AA:1431:C:H2'	1:AA:1432:G:O4'	2.19	0.43
1:AA:1490:C:H2'	1:AA:1491:G:O4'	2.18	0.43
2:AB:179:LYS:HA	8:AH:72:PRO:HG3	2.01	0.43
3:AC:6:HIS:ND1	14:AN:49:HIS:HB3	2.34	0.43
3:AC:28:GLN:O	3:AC:31:HIS:N	2.51	0.43
4:AD:23:GLY:H	4:AD:26:CYS:HB2	1.84	0.43
7:AG:106:GLN:O	7:AG:110:GLN:HG3	2.18	0.43
8:AH:118:VAL:O	8:AH:119:LEU:HD23	2.19	0.43
27:B2:69:ARG:O	27:B2:70:GLN:HB3	2.18	0.43
33:B8:5:LYS:HG2	35:BA:242:G:C8	2.54	0.43
35:BA:557:U:H2'	35:BA:558:G:C8	2.53	0.43
35:BA:654(B):C:H5	35:BA:654(D):G:N3	2.17	0.43
35:BA:953:A:H2'	35:BA:954:G:H8	1.82	0.43
35:BA:1097:U:C2	45:BK:30:HIS:CE1	3.07	0.43
35:BA:1151:G:H2'	35:BA:1152:C:H6	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1510:G:H2'	35:BA:1511:C:H6	1.84	0.43
35:BA:1535:A:H5"	35:BA:1536:C:OP2	2.19	0.43
35:BA:2114:A:H2'	35:BA:2115:G:O4'	2.18	0.43
35:BA:2179:C:OP2	37:BC:169:THR:HB	2.19	0.43
35:BA:2574:G:H2'	35:BA:2575:C:O4'	2.19	0.43
38:BD:72:LYS:NZ	38:BD:99:ASP:OD2	2.46	0.43
39:BE:119:ARG:HD2	39:BE:120:TRP:CE2	2.54	0.43
40:BF:162:LEU:HD12	40:BF:162:LEU:HA	1.82	0.43
47:BO:69:ILE:HD13	47:BO:77:ILE:HG23	2.01	0.43
52:BT:35:LYS:C	52:BT:37:GLY:N	2.76	0.43
53:BU:114:LYS:HG2	53:BU:114:LYS:H	1.70	0.43
58:BZ:44:PHE:CD1	58:BZ:44:PHE:C	2.97	0.43
1:CA:979:C:H42	14:CN:18:VAL:HB	1.83	0.43
6:CF:15:ASP:OD1	6:CF:18:GLN:N	2.38	0.43
8:CH:93:VAL:O	8:CH:132:GLU:HA	2.18	0.43
9:CI:45:ALA:O	9:CI:78:LYS:HE3	2.19	0.43
9:CI:53:VAL:HG23	9:CI:55:ALA:N	2.26	0.43
26:D1:8:SER:OG	26:D1:10:LYS:HG3	2.19	0.43
26:D1:57:GLU:HB3	26:D1:58:ILE:H	1.66	0.43
35:DA:1007:C:H5"	46:DN:35:ARG:HH11	1.83	0.43
35:DA:1042:G:H3'	35:DA:1043:C:C6	2.54	0.43
35:DA:1448:G:H2'	35:DA:1449:A:C8	2.54	0.43
35:DA:1792:G:H5'	38:DD:205:VAL:HG13	2.00	0.43
35:DA:1819:A:H2'	38:DD:178:PRO:HB2	2.00	0.43
35:DA:1971:A:H1'	38:DD:240:ALA:O	2.18	0.43
35:DA:2131:G:C8	35:DA:2158:A:N6	2.87	0.43
35:DA:2443:C:H2'	35:DA:2444:G:H8	1.82	0.43
35:DA:2562:U:H4'	47:DO:25:LEU:CD2	2.49	0.43
35:DA:2661:G:H5"	35:DA:2662:A:C2	2.53	0.43
35:DA:2820:A:O3'	50:DR:5:LYS:NZ	2.49	0.43
36:DB:104:U:H5"	49:DQ:141:GLN:OE1	2.19	0.43
38:DD:182:LEU:N	38:DD:272:ALA:HB3	2.27	0.43
42:DH:74:ASN:HD22	42:DH:74:ASN:N	2.17	0.43
42:DH:167:GLU:O	42:DH:169:VAL:N	2.49	0.43
43:DI:81:VAL:HG11	43:DI:88:ILE:HD13	2.01	0.43
45:DK:76:TYR:O	45:DK:79:ARG:N	2.48	0.43
54:DV:47:VAL:HG12	54:DV:52:VAL:H	1.84	0.43
57:DY:68:HIS:CE1	57:DY:70:SER:HB3	2.53	0.43
58:DZ:54:HIS:CE1	58:DZ:123:ASP:OD2	2.72	0.43
1:AA:32:A:H2'	1:AA:33:A:C8	2.53	0.43
1:AA:294:U:H2'	1:AA:295:C:H6	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:434:U:H2'	1:AA:435:C:N1	2.34	0.43
1:AA:554:C:H2'	1:AA:555:C:H6	1.83	0.43
1:AA:619:U:O2	4:AD:135:LEU:HD22	2.19	0.43
1:AA:1057:G:H5"	3:AC:154:SER:HB2	2.00	0.43
1:AA:1158:C:N4	1:AA:1181:G:H22	2.16	0.43
1:AA:1347:G:O2'	1:AA:1373:G:N1	2.42	0.43
1:AA:1392:G:N2	1:AA:1502:A:H8	2.14	0.43
1:AA:1415:G:C6	1:AA:1486:G:C6	3.07	0.43
1:AA:1458:G:OP1	20:AT:35:THR:OG1	2.26	0.43
2:AB:9:GLU:HA	2:AB:12:GLU:OE1	2.19	0.43
4:AD:173:TRP:CD1	4:AD:174:LEU:HG	2.53	0.43
7:AG:150:ALA:HA	11:AK:59:TYR:HB3	2.01	0.43
12:AL:25:PRO:O	12:AL:27:LEU:N	2.51	0.43
24:AY:182:PRO:HG3	24:AY:345:ILE:HG23	2.00	0.43
24:AY:189:LEU:HA	24:AY:314:TYR:O	2.19	0.43
26:B1:45:ASN:O	26:B1:64:ALA:HB2	2.19	0.43
27:B2:2:LYS:CB	35:BA:97:C:H5"	2.49	0.43
33:B8:46:ARG:NH2	35:BA:631:A:OP2	2.52	0.43
35:BA:534:U:O2'	53:BU:49:HIS:ND1	2.37	0.43
35:BA:817:C:H2'	35:BA:818:G:O4'	2.19	0.43
35:BA:1142:U:H5"	35:BA:1142(A):A:H5"	2.00	0.43
35:BA:1518:U:H2'	35:BA:1519:G:O4'	2.19	0.43
35:BA:1569:A:H4'	38:BD:61:LEU:HD21	2.01	0.43
35:BA:1754:C:H5'	52:BT:101:PHE:CZ	2.54	0.43
35:BA:2075:U:C4	35:BA:2238:G:C6	3.06	0.43
35:BA:2076:U:OP2	35:BA:2238:G:N2	2.44	0.43
35:BA:2249:U:N3	35:BA:2253:G:OP2	2.50	0.43
35:BA:2671:A:H2'	35:BA:2672:G:O4'	2.19	0.43
35:BA:2704:C:H2'	35:BA:2705:A:O4'	2.19	0.43
36:BB:90:A:C5	36:BB:91:C:H1'	2.54	0.43
38:BD:73:VAL:C	38:BD:75:ILE:H	2.27	0.43
38:BD:102:LYS:C	38:BD:103:ARG:HG2	2.44	0.43
38:BD:241:PRO:C	38:BD:242:ARG:HD2	2.43	0.43
39:BE:73:GLU:HA	39:BE:74:PRO:HD3	1.87	0.43
40:BF:149:ASP:OD1	40:BF:150:GLY:N	2.52	0.43
40:BF:165:ARG:CB	40:BF:165:ARG:HH11	2.32	0.43
41:BG:74:LYS:O	41:BG:75:LYS:HD3	2.19	0.43
52:BT:27:THR:OG1	52:BT:28:VAL:N	2.52	0.43
53:BU:61:TRP:CZ2	53:BU:94:ASN:HB2	2.54	0.43
57:BY:8:LYS:HD2	57:BY:8:LYS:N	2.33	0.43
58:BZ:54:HIS:HA	58:BZ:98:MET:HE1	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:922:G:N3	1:CA:1398:A:H2	2.16	0.43
1:CA:1077:G:N2	1:CA:1079:G:H3'	2.33	0.43
3:CC:79:ARG:HH11	3:CC:79:ARG:HG3	1.83	0.43
6:CF:7:ASN:O	6:CF:8:ILE:HG13	2.19	0.43
6:CF:21:LEU:O	6:CF:25:ILE:HG12	2.19	0.43
6:CF:39:LYS:HB3	6:CF:62:TRP:HZ3	1.84	0.43
11:CK:110:ASP:O	18:CR:84:LYS:HD2	2.19	0.43
13:CM:58:GLU:C	13:CM:60:VAL:N	2.76	0.43
16:CP:18:ARG:HH11	16:CP:35:LYS:HD2	1.84	0.43
24:CY:136:LEU:HD11	24:CY:187:HIS:HB2	2.00	0.43
27:D2:21:LEU:HD23	27:D2:21:LEU:HA	1.86	0.43
35:DA:638:G:O6	35:DA:651:G:C6	2.72	0.43
35:DA:775:G:C5	35:DA:794:G:C8	3.07	0.43
35:DA:1061:U:C5	45:DK:10:LEU:HA	2.53	0.43
35:DA:1608:A:H1'	35:DA:1610:A:OP2	2.18	0.43
35:DA:2179:C:OP2	37:DC:169:THR:HB	2.19	0.43
36:DB:77:U:P	58:DZ:19:ARG:HH21	2.42	0.43
39:DE:39:PRO:HD3	39:DE:45:THR:OG1	2.19	0.43
45:DK:37:PHE:CD1	45:DK:41:PHE:HB2	2.54	0.43
47:DO:2:ILE:HD12	47:DO:6:THR:HG21	2.00	0.43
49:DQ:97:VAL:HG21	49:DQ:103:MET:HE3	2.01	0.43
52:DT:107:ASP:HB2	52:DT:108:ARG:H	1.60	0.43
54:DV:18:LEU:HD12	54:DV:19:LYS:H	1.84	0.43
1:AA:139:G:H2'	1:AA:140:A:H8	1.83	0.42
1:AA:377:G:OP1	16:AP:5:ARG:NH1	2.47	0.42
1:AA:509:A:H2	1:AA:544:G:O4'	2.02	0.42
1:AA:564:C:C5	17:AQ:31:LEU:HD11	2.54	0.42
1:AA:607:A:H2'	1:AA:608:A:O4'	2.19	0.42
1:AA:832:C:C2	1:AA:833:U:C6	3.07	0.42
1:AA:1295:G:O2'	13:AM:14:ARG:NH1	2.52	0.42
5:AE:36:ASP:OD2	5:AE:40:ARG:HB2	2.19	0.42
8:AH:30:ARG:CB	8:AH:30:ARG:HH11	2.32	0.42
12:AL:8:ASN:O	12:AL:12:ARG:HG3	2.19	0.42
14:AN:23:ARG:NH1	14:AN:30:ALA:HB2	2.34	0.42
33:B8:32:LEU:HD11	35:BA:2391:G:H3'	2.00	0.42
35:BA:455:C:N3	35:BA:473:G:H5'	2.34	0.42
35:BA:572:A:H2'	35:BA:573:G:O4'	2.18	0.42
35:BA:654:A:H2	35:BA:654(A):G:C6	2.37	0.42
35:BA:656:G:H2'	35:BA:657:U:C6	2.53	0.42
35:BA:895:U:O2'	35:BA:897:C:OP2	2.28	0.42
35:BA:1060:U:OP2	45:BK:73:PRO:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1418:G:OP1	35:BA:1588:C:O2'	2.37	0.42
35:BA:1802:A:H2'	35:BA:1803:A:C8	2.53	0.42
35:BA:2415:G:C6	35:BA:2416:C:C4	3.07	0.42
35:BA:2455:G:H2'	35:BA:2456:C:H6	1.84	0.42
35:BA:2660:A:H5'	35:BA:2661:G:C2	2.54	0.42
35:BA:2817:G:OP1	50:BR:99:LYS:NZ	2.51	0.42
36:BB:21:G:O2'	36:BB:22:U:C6	2.71	0.42
36:BB:118:G:C2	36:BB:119:G:N7	2.87	0.42
37:BC:6:LYS:HD2	37:BC:6:LYS:C	2.44	0.42
37:BC:7:ARG:O	37:BC:7:ARG:HD2	2.19	0.42
42:BH:94:TYR:H	42:BH:94:TYR:HD1	1.67	0.42
43:BI:96:ASP:O	43:BI:99:GLU:HB3	2.19	0.42
50:BR:56:LYS:HE3	50:BR:88:ARG:HA	2.01	0.42
51:BS:90:GLY:O	51:BS:92:TYR:HD1	2.02	0.42
57:BY:76:CYS:O	57:BY:77:PRO:C	2.61	0.42
58:BZ:63:ASP:CB	58:BZ:65:GLN:HG3	2.49	0.42
1:CA:324:G:N2	1:CA:326:G:H3'	2.33	0.42
1:CA:513:C:H2'	1:CA:514:C:C6	2.54	0.42
1:CA:1043:C:H2'	1:CA:1044:A:C8	2.54	0.42
1:CA:1058:G:H2'	1:CA:1059:C:C6	2.54	0.42
1:CA:1065:U:O5'	1:CA:1190:G:N2	2.48	0.42
1:CA:1355:G:H2'	1:CA:1356:G:H8	1.82	0.42
4:CD:57:ARG:NE	4:CD:205:GLU:OE2	2.43	0.42
7:CG:146:GLU:HG2	7:CG:149:ARG:NH1	2.28	0.42
9:CI:97:LYS:HB3	9:CI:98:PRO:HD3	1.99	0.42
10:CJ:5:ARG:HA	10:CJ:73:ASP:OD1	2.19	0.42
16:CP:49:LEU:HD12	16:CP:50:LYS:H	1.84	0.42
24:CY:99:ASP:O	24:CY:103:HIS:ND1	2.52	0.42
24:CY:214:VAL:HG13	24:CY:215:ASP:N	2.31	0.42
26:D1:50:ARG:HH21	35:DA:2199:A:H5'	1.84	0.42
33:D8:4:MET:HE2	35:DA:593:G:H1'	2.01	0.42
35:DA:1221(A):C:O2'	35:DA:1222:C:H5'	2.18	0.42
35:DA:1265:A:H61	35:DA:2013:A:H5"	1.84	0.42
35:DA:1331:A:O2'	35:DA:1332:G:C8	2.72	0.42
35:DA:1534:U:H2'	35:DA:1535:A:O4'	2.19	0.42
35:DA:2720:U:H2'	35:DA:2721:A:C8	2.54	0.42
35:DA:2790:A:O2'	35:DA:2893:G:C2	2.72	0.42
38:DD:265:PRO:C	38:DD:267:SER:H	2.26	0.42
39:DE:36:ARG:HH12	39:DE:86:PRO:HD2	1.83	0.42
39:DE:69:LYS:HE3	39:DE:90:THR:HG1	1.83	0.42
39:DE:120:TRP:CD2	39:DE:155:LYS:HD3	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:120:LEU:CD1	46:DN:122:VAL:HG23	2.48	0.42
54:DV:22:VAL:O	54:DV:23:GLU:CB	2.67	0.42
58:DZ:72:ARG:HD3	58:DZ:72:ARG:HA	1.88	0.42
1:AA:192:U:H2'	1:AA:193:C:C6	2.54	0.42
1:AA:227:G:H2'	1:AA:228:A:H8	1.84	0.42
1:AA:271:C:H2'	1:AA:272:C:H6	1.83	0.42
1:AA:540:G:H2'	1:AA:541:G:O4'	2.19	0.42
1:AA:728:A:N7	15:AO:54:ARG:HD2	2.34	0.42
1:AA:946:A:H2'	1:AA:947:G:H8	1.84	0.42
1:AA:953:G:H2'	1:AA:954:G:O4'	2.19	0.42
1:AA:984:C:H2'	1:AA:985:C:H6	1.83	0.42
1:AA:1165:C:H2'	1:AA:1166:G:C8	2.53	0.42
1:AA:1399:C:C2	1:AA:1502:A:N6	2.88	0.42
3:AC:155:GLY:O	3:AC:196:LEU:HD13	2.19	0.42
13:AM:108:ARG:HD2	13:AM:108:ARG:N	2.34	0.42
15:AO:62:GLN:O	15:AO:66:LEU:HD13	2.18	0.42
16:AP:43:LYS:C	16:AP:45:THR:H	2.27	0.42
19:AS:37:ARG:H	19:AS:37:ARG:HG3	1.51	0.42
20:AT:56:MET:HG3	20:AT:84:LEU:CD1	2.49	0.42
23:AX:21:A:C2	24:AY:201:ARG:HD3	2.53	0.42
25:B0:12:ASN:OD1	35:BA:2278:A:C8	2.72	0.42
32:B7:3:ARG:HA	32:B7:3:ARG:HD3	1.84	0.42
33:B8:13:ARG:CD	48:BP:61:ARG:HG2	2.49	0.42
35:BA:626:U:O2	48:BP:105:LEU:HG	2.18	0.42
35:BA:733:G:C8	35:BA:761:A:N6	2.88	0.42
35:BA:790:C:H6	35:BA:790:C:H2'	1.65	0.42
35:BA:2675:A:H5'	47:BO:31:LYS:HZ3	1.83	0.42
35:BA:2695:C:H2'	35:BA:2696:U:H6	1.83	0.42
39:BE:103:ASP:OD2	39:BE:201:THR:HA	2.20	0.42
41:BG:161:THR:HG22	41:BG:162:THR:N	2.34	0.42
52:BT:45:PHE:HE2	52:BT:63:VAL:HB	1.83	0.42
58:BZ:71:VAL:HA	58:BZ:87:ASP:O	2.18	0.42
1:CA:110:C:H3'	1:CA:111:G:C8	2.54	0.42
1:CA:532:A:H2	1:CA:1207:G:H4'	1.84	0.42
1:CA:582:U:OP2	1:CA:758:G:N1	2.48	0.42
1:CA:694:A:H5"	11:CK:53:SER:OG	2.18	0.42
1:CA:1181:G:H2'	1:CA:1182:G:C8	2.54	0.42
1:CA:1226:C:H4'	1:CA:1227:A:OP1	2.19	0.42
2:CB:90:MET:HA	2:CB:90:MET:HE2	2.00	0.42
3:CC:25:GLY:C	3:CC:27:LYS:H	2.28	0.42
4:CD:86:LYS:HE3	4:CD:86:LYS:HB3	1.65	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:44:TYR:O	7:CG:48:LYS:HG3	2.19	0.42
8:CH:49:GLU:OE1	8:CH:62:TYR:OH	2.34	0.42
8:CH:64:LYS:HG2	8:CH:79:VAL:HG21	2.00	0.42
8:CH:104:ARG:HB3	8:CH:108:GLY:N	2.33	0.42
11:CK:21:ILE:HD12	11:CK:21:ILE:N	2.34	0.42
11:CK:125:PHE:N	11:CK:125:PHE:HD1	2.16	0.42
13:CM:14:ARG:NH2	13:CM:16:ASP:OD2	2.52	0.42
15:CO:85:LEU:O	15:CO:85:LEU:HD23	2.19	0.42
16:CP:3:LYS:C	16:CP:4:ILE:HD12	2.44	0.42
29:D4:35:VAL:O	41:DG:113:ARG:NH1	2.52	0.42
31:D6:37:ARG:NE	31:D6:37:ARG:N	2.66	0.42
33:D8:32:LEU:HD22	33:D8:32:LEU:N	2.35	0.42
35:DA:240:G:O2'	35:DA:257:A:N6	2.46	0.42
35:DA:247:G:H4'	35:DA:386:G:C5	2.54	0.42
35:DA:1120:G:H2'	35:DA:1121:C:C6	2.54	0.42
35:DA:1993:U:H4'	39:DE:128:SER:OG	2.19	0.42
35:DA:2659:G:C2	35:DA:2661:G:H8	2.37	0.42
35:DA:2666:C:H5'	35:DA:2667:C:OP2	2.19	0.42
35:DA:2802:G:O2'	35:DA:2803:C:H5"	2.18	0.42
35:DA:2805:G:N1	35:DA:2893:G:O6	2.50	0.42
38:DD:48:ARG:HG3	38:DD:48:ARG:HH11	1.84	0.42
42:DH:41:MET:CE	42:DH:53:GLU:H	2.32	0.42
48:DP:114:ILE:O	48:DP:115:LEU:HB3	2.18	0.42
48:DP:126:VAL:HA	48:DP:145:PRO:HB2	2.00	0.42
58:DZ:92:SER:O	58:DZ:93:ASP:HB3	2.19	0.42
58:DZ:152:ALA:HB1	58:DZ:167:PRO:HB2	2.01	0.42
1:AA:116:A:H2'	1:AA:117:G:O4'	2.19	0.42
1:AA:766:A:H2'	1:AA:767:A:O4'	2.19	0.42
1:AA:1316:G:O2'	14:AN:18:VAL:HG11	2.18	0.42
1:AA:1327:C:OP1	21:AU:21:TYR:HD1	2.02	0.42
2:AB:25:ASN:HA	2:AB:26:PRO:HD2	1.82	0.42
2:AB:90:MET:HE2	2:AB:90:MET:HA	2.02	0.42
3:AC:151:VAL:HA	3:AC:199:LYS:O	2.19	0.42
9:AI:125:TYR:HD1	9:AI:126:SER:H	1.68	0.42
12:AL:47:LYS:C	12:AL:49:ASN:H	2.26	0.42
16:AP:1:MET:HE2	16:AP:65:GLN:HG3	2.00	0.42
16:AP:28:ARG:HG2	16:AP:28:ARG:NH1	2.32	0.42
24:AY:81:ALA:HB3	24:AY:84:ARG:HE	1.84	0.42
24:AY:226:GLU:H	24:AY:226:GLU:HG2	1.73	0.42
33:B8:18:ALA:HB2	35:BA:628:G:H5"	2.00	0.42
35:BA:322:A:P	40:BF:168:ARG:HH21	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:593:G:H2'	35:BA:594:U:C6	2.54	0.42
35:BA:602:G:O2'	35:BA:604:G:O2'	2.22	0.42
35:BA:654(G):C:H2'	35:BA:654(H):G:C8	2.55	0.42
35:BA:709:U:H2'	35:BA:710:G:C8	2.53	0.42
35:BA:721:C:H3'	35:BA:722:A:H8	1.84	0.42
35:BA:839:U:H2'	35:BA:840:C:C6	2.55	0.42
35:BA:1206:G:H2'	35:BA:1207:C:H6	1.84	0.42
35:BA:2840:C:H2'	35:BA:2841:C:C6	2.55	0.42
37:BC:29:LEU:O	37:BC:33:LEU:HG	2.19	0.42
40:BF:11:VAL:HG12	40:BF:12:LEU:H	1.84	0.42
40:BF:68:LYS:O	40:BF:70:THR:N	2.45	0.42
42:BH:159:GLU:HB3	42:BH:160:LYS:H	1.38	0.42
46:BN:19:GLU:HG3	46:BN:20:GLY:H	1.84	0.42
48:BP:61:ARG:H	48:BP:61:ARG:CD	2.33	0.42
52:BT:29:ARG:CD	52:BT:86:ILE:HG22	2.43	0.42
53:BU:89:GLU:O	53:BU:89:GLU:HG2	2.19	0.42
54:BV:15:GLU:HB3	54:BV:16:PRO:CD	2.48	0.42
56:BX:72:LYS:N	56:BX:72:LYS:HD2	2.34	0.42
57:BY:15:VAL:HG22	57:BY:72:VAL:HG12	2.02	0.42
1:CA:236:G:H2'	1:CA:237:C:C6	2.54	0.42
1:CA:447:G:H2'	1:CA:485:G:N2	2.34	0.42
1:CA:900:A:H2'	1:CA:901:A:C8	2.54	0.42
1:CA:1201:A:H1'	1:CA:1202:G:OP2	2.19	0.42
3:CC:173:VAL:O	3:CC:175:LEU:HD12	2.18	0.42
4:CD:55:ALA:O	4:CD:59:ARG:HG2	2.19	0.42
7:CG:79:ARG:NH2	23:CX:14:A:H61	2.16	0.42
9:CI:102:LEU:HD23	9:CI:103:THR:N	2.35	0.42
22:CV:2:C:C2	22:CV:3:C:C5	3.07	0.42
24:CY:117:ILE:O	24:CY:210:VAL:HA	2.19	0.42
25:D0:3:HIS:CD2	25:D0:4:LYS:N	2.87	0.42
33:D8:3:LYS:HE2	35:DA:242:G:O5'	2.19	0.42
33:D8:13:ARG:HD2	48:DP:61:ARG:NH1	2.34	0.42
35:DA:7:G:H5'	46:DN:130:HIS:HE1	1.84	0.42
35:DA:250:G:H2'	35:DA:251:A:C8	2.54	0.42
35:DA:1331:A:O2'	35:DA:1332:G:H8	2.02	0.42
35:DA:1358:G:O2'	35:DA:1359:A:H5"	2.19	0.42
35:DA:2343:C:O2'	35:DA:2373:G:O2'	2.26	0.42
35:DA:2399:G:C6	35:DA:2418:A:C6	3.07	0.42
35:DA:2688:U:H5	35:DA:2720:U:OP2	2.01	0.42
36:DB:76:G:O3'	58:DZ:19:ARG:NH2	2.52	0.42
40:DF:205:ARG:HG2	40:DF:205:ARG:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DH:56:SER:HB2	42:DH:61:HIS:ND1	2.33	0.42
42:DH:97:ARG:HG3	42:DH:98:LEU:N	2.31	0.42
43:DI:68:LEU:HD23	43:DI:68:LEU:O	2.18	0.42
49:DQ:1:MET:O	49:DQ:2:LEU:HB2	2.18	0.42
52:DT:57:PHE:O	52:DT:58:ASN:C	2.62	0.42
54:DV:46:VAL:HG12	54:DV:47:VAL:N	2.34	0.42
57:DY:2:ARG:O	57:DY:4:LYS:N	2.51	0.42
1:AA:164:U:O2'	1:AA:165:C:H5'	2.19	0.42
1:AA:413:G:H4'	1:AA:414:A:H5"	2.01	0.42
1:AA:893:C:C4	1:AA:894:G:N7	2.87	0.42
1:AA:1117:G:N2	1:AA:1180:A:H1'	2.34	0.42
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.54	0.42
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.84	0.42
5:AE:26:PHE:CD1	5:AE:26:PHE:N	2.88	0.42
6:AF:12:PRO:HG3	6:AF:57:GLN:O	2.20	0.42
9:AI:102:LEU:HD23	9:AI:103:THR:N	2.34	0.42
10:AJ:86:MET:HG3	10:AJ:87:THR:HG23	2.02	0.42
11:AK:24:SER:O	11:AK:25:TYR:C	2.62	0.42
12:AL:85:ILE:HA	12:AL:85:ILE:HD12	1.74	0.42
15:AO:64:ARG:HH11	15:AO:64:ARG:HG3	1.83	0.42
20:AT:100:ILE:C	20:AT:102:GLY:H	2.27	0.42
22:AV:21:A:C8	22:AV:48:C:N4	2.87	0.42
24:AY:243:ASN:HB3	35:BA:2507:C:O4'	2.18	0.42
31:B6:30:THR:HB	31:B6:31:PRO:CD	2.50	0.42
33:B8:13:ARG:HD2	48:BP:61:ARG:HG2	2.00	0.42
35:BA:279:C:H3'	35:BA:280:C:H5"	2.01	0.42
35:BA:531:C:H4'	35:BA:532:A:H5"	2.01	0.42
35:BA:654(C):G:N7	35:BA:654(D):G:H1'	2.33	0.42
35:BA:654(L):G:C8	35:BA:654(M):C:H1'	2.54	0.42
35:BA:1058:G:C2	35:BA:1059:G:C6	3.07	0.42
35:BA:1290:C:C2	35:BA:1291:C:C5	3.08	0.42
35:BA:1445:A:O2'	35:BA:1445(A):C:H5'	2.20	0.42
35:BA:1469:A:H2'	35:BA:1470:G:C8	2.55	0.42
35:BA:1721:G:H5'	35:BA:1722:A:OP2	2.19	0.42
35:BA:1876:A:H2'	35:BA:1877:A:H8	1.84	0.42
35:BA:2091:U:OP2	35:BA:2092:U:O2'	2.24	0.42
35:BA:2134:A:H61	35:BA:2157:G:C2'	2.33	0.42
35:BA:2193:G:C4	35:BA:2194:G:C8	3.08	0.42
35:BA:2459:A:C5	35:BA:2460:U:C5	3.07	0.42
35:BA:2712:U:O2'	35:BA:2712(A):A:P	2.77	0.42
35:BA:2767:C:C2	35:BA:2768:C:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:8:TYR:CZ	37:BC:12:LEU:HD21	2.54	0.42
38:BD:61:LEU:HD13	38:BD:61:LEU:HA	1.79	0.42
38:BD:147:LEU:HD13	38:BD:155:LEU:HD11	2.01	0.42
39:BE:6:GLY:HA2	39:BE:51:PHE:CZ	2.54	0.42
39:BE:60:ASN:O	39:BE:63:LEU:HB2	2.19	0.42
41:BG:5:VAL:HG12	41:BG:6:ALA:H	1.83	0.42
42:BH:44:VAL:O	42:BH:45:VAL:C	2.62	0.42
42:BH:137:ASP:HB3	42:BH:140:LYS:HB2	2.01	0.42
44:BJ:73:UNK:O	44:BJ:75:UNK:N	2.52	0.42
45:BK:77:LEU:HD13	45:BK:107:ILE:HD11	2.01	0.42
47:BO:26:LYS:HB3	47:BO:27:GLY:H	1.65	0.42
47:BO:88:ASN:ND2	47:BO:90:GLN:HB2	2.35	0.42
47:BO:104:ARG:C	47:BO:106:LEU:N	2.78	0.42
52:BT:117:ASP:O	52:BT:118:ARG:C	2.62	0.42
57:BY:21:LYS:HG2	57:BY:22:GLY:N	2.34	0.42
57:BY:61:ILE:HD12	57:BY:62:GLU:H	1.83	0.42
58:BZ:108:PRO:HD3	58:BZ:141:VAL:HG12	2.01	0.42
1:CA:149:A:O2'	1:CA:150:C:H6	2.02	0.42
1:CA:158:G:H2'	1:CA:159:G:O4'	2.20	0.42
1:CA:160:A:H2'	1:CA:161:A:O4'	2.19	0.42
1:CA:513:C:H2'	1:CA:514:C:H6	1.84	0.42
1:CA:837:G:H2'	1:CA:838:G:H8	1.81	0.42
1:CA:953:G:H2'	1:CA:954:G:O4'	2.19	0.42
1:CA:954:G:H2'	1:CA:955:U:C6	2.54	0.42
1:CA:1133:G:C2	1:CA:1142:G:N2	2.87	0.42
1:CA:1242:C:H2'	1:CA:1243:C:C6	2.54	0.42
1:CA:1416:G:H2'	1:CA:1417:G:C8	2.55	0.42
1:CA:1512:U:H2'	1:CA:1513:A:C8	2.54	0.42
2:CB:76:GLN:H	2:CB:76:GLN:HG3	1.60	0.42
3:CC:175:LEU:HD21	3:CC:201:TYR:CE2	2.54	0.42
5:CE:139:LEU:C	5:CE:141:GLN:H	2.26	0.42
24:CY:29:LEU:HG	24:CY:51:GLU:HB2	2.01	0.42
24:CY:149:PHE:CD1	24:CY:173:GLY:HA3	2.55	0.42
30:D5:16:ARG:NH1	30:D5:17:ASP:OD1	2.52	0.42
30:D5:47:PRO:CB	30:D5:57:VAL:HG11	2.46	0.42
35:DA:1309:G:O2'	35:DA:1611:C:O2'	2.30	0.42
35:DA:1408:C:H2'	35:DA:1409:C:C6	2.55	0.42
35:DA:1654:A:OP1	35:DA:1654:A:H4'	2.20	0.42
35:DA:2532:G:H2'	35:DA:2533:A:C8	2.54	0.42
36:DB:86:G:H2'	36:DB:87:G:C8	2.54	0.42
37:DC:31:LYS:HE3	37:DC:180:SER:HA	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DD:102:LYS:C	38:DD:103:ARG:HG2	2.44	0.42
41:DG:125:PHE:CE1	41:DG:180:PHE:HE2	2.36	0.42
41:DG:145:THR:O	41:DG:148:MET:N	2.51	0.42
43:DI:6:LEU:O	43:DI:7:GLU:HB2	2.19	0.42
43:DI:25:TYR:O	43:DI:29:TYR:HB3	2.19	0.42
51:DS:93:LYS:O	51:DS:94:TYR:C	2.61	0.42
1:AA:36:C:H2'	1:AA:37:U:O4'	2.20	0.42
1:AA:265:G:O3'	17:AQ:66:SER:HA	2.19	0.42
1:AA:346:G:H2'	1:AA:347:G:O4'	2.20	0.42
1:AA:458:C:H2'	1:AA:460:G:O4'	2.20	0.42
1:AA:568:G:O6	12:AL:5:PRO:HD3	2.20	0.42
1:AA:1130:A:N6	1:AA:1131:G:O6	2.53	0.42
1:AA:1218:C:H2'	1:AA:1219:U:C5	2.55	0.42
1:AA:1319:A:C8	1:AA:1323:G:C6	3.07	0.42
2:AB:19:HIS:CG	2:AB:20:GLU:N	2.88	0.42
3:AC:148:GLY:HA2	3:AC:171:GLY:HA3	2.00	0.42
4:AD:18:LYS:HG3	4:AD:31:CYS:SG	2.60	0.42
13:AM:66:LEU:N	13:AM:70:LEU:HG	2.34	0.42
15:AO:75:PRO:HA	15:AO:78:TYR:HB3	2.01	0.42
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.54	0.42
20:AT:29:LYS:HE2	20:AT:29:LYS:HB3	1.86	0.42
24:AY:158:PRO:HB2	24:AY:159:GLY:H	1.71	0.42
26:B1:57:GLU:O	26:B1:58:ILE:O	2.37	0.42
34:B9:9:ARG:HB3	34:B9:9:ARG:NH1	2.35	0.42
35:BA:610:G:H2'	35:BA:611:C:H6	1.85	0.42
35:BA:909:A:H2'	35:BA:912:C:H5	1.84	0.42
35:BA:1227:G:OP1	53:BU:13:LYS:HD3	2.19	0.42
35:BA:1605:C:H2'	35:BA:1606:G:O4'	2.20	0.42
35:BA:1717:G:N1	35:BA:1745(A):C:N3	2.67	0.42
35:BA:2010:G:H5"	55:BW:42:ARG:HB2	2.02	0.42
35:BA:2022:U:O2'	35:BA:2616:C:O2'	2.35	0.42
35:BA:2090:G:C6	35:BA:2230:G:C6	3.08	0.42
35:BA:2149:G:H2'	35:BA:2150:U:O4'	2.20	0.42
35:BA:2225:A:H1'	35:BA:2226:C:OP2	2.20	0.42
35:BA:2467:C:H2'	35:BA:2468:G:O4'	2.20	0.42
36:BB:32:C:C2	36:BB:51:G:N2	2.88	0.42
41:BG:144:ILE:HD12	41:BG:144:ILE:HA	1.86	0.42
48:BP:48:PRO:O	48:BP:49:ARG:C	2.62	0.42
49:BQ:21:THR:O	49:BQ:22:LYS:HB3	2.20	0.42
54:BV:82:ARG:HD2	54:BV:82:ARG:N	2.34	0.42
57:BY:17:SER:HB2	57:BY:71:LYS:HD2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:28:LYS:HE3	57:BY:28:LYS:HB2	1.82	0.42
1:CA:109:A:C4	1:CA:327:A:C2	3.08	0.42
1:CA:202:U:O2'	1:CA:203:U:O5'	2.35	0.42
1:CA:489:C:OP1	4:CD:132:ARG:NH2	2.52	0.42
1:CA:511:C:C2	1:CA:512:U:C5	3.07	0.42
1:CA:625:G:H2'	1:CA:626:U:C6	2.54	0.42
1:CA:1058:G:OP1	3:CC:199:LYS:HE3	2.19	0.42
2:CB:168:THR:O	2:CB:169:LYS:C	2.62	0.42
9:CI:118:LYS:O	9:CI:119:ALA:HB3	2.19	0.42
10:CJ:6:ILE:O	10:CJ:71:LEU:HD12	2.19	0.42
19:CS:24:ALA:O	19:CS:25:LYS:HB2	2.19	0.42
22:CW:34:G:H2'	22:CW:35:A:C8	2.55	0.42
35:DA:474:G:O2'	35:DA:475:U:H5"	2.19	0.42
35:DA:649:G:H2'	35:DA:650:C:C6	2.55	0.42
35:DA:755:C:H2'	35:DA:756:C:C6	2.54	0.42
35:DA:1636:C:H2'	35:DA:1637:A:H8	1.85	0.42
35:DA:1683:C:H2'	35:DA:1684:C:H6	1.83	0.42
35:DA:2130:U:O2'	35:DA:2133:G:O2'	2.27	0.42
35:DA:2148:G:H2'	35:DA:2149:G:H8	1.84	0.42
35:DA:2236:C:H2'	35:DA:2237:G:O4'	2.20	0.42
35:DA:2375:G:N2	35:DA:2377:A:H3'	2.35	0.42
35:DA:2523:G:C2'	35:DA:2524:G:H5"	2.47	0.42
35:DA:2777:G:C5'	35:DA:2778:A:H5'	2.47	0.42
36:DB:29:A:H2'	36:DB:30:C:O4'	2.19	0.42
38:DD:85:ASP:OD2	38:DD:88:ARG:NH1	2.53	0.42
38:DD:175:LEU:HD23	38:DD:175:LEU:HA	1.82	0.42
39:DE:14:ILE:HG13	39:DE:21:VAL:HG23	2.00	0.42
39:DE:69:LYS:O	39:DE:71:GLY:N	2.53	0.42
46:DN:1:MET:HG2	46:DN:2:LYS:H	1.85	0.42
46:DN:16:ILE:O	46:DN:54:VAL:HA	2.19	0.42
52:DT:102:ILE:HB	52:DT:110:ILE:HD12	2.02	0.42
53:DU:31:SER:C	53:DU:33:ARG:N	2.76	0.42
56:DX:24:GLY:O	56:DX:82:GLN:HA	2.18	0.42
56:DX:71:GLY:C	56:DX:72:LYS:HD2	2.44	0.42
57:DY:98:VAL:O	57:DY:99:CYS:SG	2.77	0.42
1:AA:116:A:O5'	1:AA:116:A:H8	2.02	0.42
1:AA:139:G:H2'	1:AA:140:A:C8	2.54	0.42
1:AA:298:A:C6	1:AA:299:G:C2	3.07	0.42
1:AA:374:A:C6	1:AA:375:U:C4	3.08	0.42
1:AA:686:U:O4	1:AA:703:G:H1'	2.19	0.42
1:AA:909:A:OP1	12:AL:21:LYS:HD3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1081:G:H5”	5:AE:18:ARG:HD3	2.00	0.42
1:AA:1236:A:O2’	1:AA:1334:G:N2	2.52	0.42
1:AA:1324:A:H4’	1:AA:1362:C:H4’	2.02	0.42
1:AA:1347:G:N1	1:AA:1374:A:OP2	2.41	0.42
2:AB:180:LEU:C	2:AB:182:ILE:H	2.26	0.42
4:AD:61:LYS:HD3	4:AD:206:PHE:CD2	2.54	0.42
11:AK:108:ILE:O	18:AR:87:ARG:N	2.52	0.42
11:AK:110:ASP:O	18:AR:84:LYS:HD2	2.20	0.42
13:AM:112:GLY:HA2	13:AM:113:PRO:HD2	2.01	0.42
27:B2:34:GLU:O	27:B2:38:GLN:HG2	2.20	0.42
27:B2:47:ASN:ND2	35:BA:94(A):G:N3	2.68	0.42
31:B6:15:GLU:HG2	31:B6:15:GLU:O	2.19	0.42
35:BA:671:C:H2’	35:BA:672:C:C6	2.54	0.42
35:BA:1105:U:H2’	35:BA:1106:G:C8	2.53	0.42
35:BA:1198:U:H2’	35:BA:1199:U:C6	2.54	0.42
35:BA:1653:G:H3’	50:BR:4:LEU:HD23	2.01	0.42
35:BA:2061:G:H5”	35:BA:2503:A:C2	2.54	0.42
39:BE:188:VAL:HG13	39:BE:189:PRO:HD2	2.00	0.42
40:BF:8:GLN:HB3	40:BF:126:VAL:HA	2.00	0.42
40:BF:123:LEU:HD12	40:BF:124:LEU:N	2.32	0.42
41:BG:87:PRO:C	41:BG:88:ILE:HD13	2.44	0.42
42:BH:8:PRO:HA	42:BH:69:ARG:NH2	2.33	0.42
42:BH:130:ARG:HB3	42:BH:130:ARG:HH11	1.85	0.42
43:BI:123:LEU:O	43:BI:125:GLU:N	2.53	0.42
57:BY:34:LYS:HB3	57:BY:34:LYS:HE2	1.73	0.42
57:BY:68:HIS:CE1	57:BY:70:SER:HB3	2.55	0.42
58:BZ:73:GLN:HB3	58:BZ:87:ASP:OD1	2.19	0.42
58:BZ:114:GLY:C	58:BZ:177:PRO:HD3	2.45	0.42
1:CA:106:C:H2’	1:CA:107:G:C8	2.54	0.42
1:CA:236:G:H5”	17:CQ:42:TYR:OH	2.19	0.42
1:CA:325:A:OP2	20:CT:70:SER:HB3	2.19	0.42
1:CA:656:C:H4’	15:CO:62:GLN:NE2	2.35	0.42
1:CA:957:U:H4’	19:CS:79:THR:HB	2.02	0.42
1:CA:1309:G:H2’	1:CA:1310:G:C8	2.55	0.42
2:CB:35:GLU:HA	2:CB:39:ILE:O	2.20	0.42
2:CB:162:ILE:HD11	2:CB:184:VAL:HG13	2.02	0.42
4:CD:57:ARG:HH22	5:CE:107:ARG:HD3	1.82	0.42
6:CF:64:GLN:O	6:CF:65:VAL:HB	2.19	0.42
14:CN:33:VAL:HG12	14:CN:40:CYS:HA	2.01	0.42
17:CQ:5:VAL:HA	17:CQ:59:ILE:O	2.20	0.42
18:CR:51:LEU:HA	18:CR:52:PRO:HD3	1.93	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CY:115:ASN:HB2	24:CY:171:VAL:O	2.19	0.42
24:CY:131:ASP:O	24:CY:135:MET:HG3	2.19	0.42
27:D2:16:LEU:O	27:D2:17:SER:HB3	2.19	0.42
28:D3:17:LYS:HA	28:D3:17:LYS:HD3	1.86	0.42
35:DA:57:C:H2'	35:DA:58:G:O4'	2.19	0.42
35:DA:1062:G:H2'	35:DA:1063:G:C8	2.55	0.42
35:DA:1444:G:H2'	35:DA:1445(A):C:C5	2.54	0.42
35:DA:1949:G:H2'	35:DA:1950:G:C8	2.54	0.42
36:DB:3:C:C2	36:DB:4:C:C5	3.08	0.42
37:DC:52:PRO:C	37:DC:54:ARG:H	2.27	0.42
38:DD:133:LEU:HD23	38:DD:136:ILE:HD12	2.02	0.42
39:DE:59:VAL:HG13	39:DE:60:ASN:N	2.30	0.42
40:DF:8:GLN:HG2	40:DF:126:VAL:HG12	2.02	0.42
40:DF:68:LYS:HB3	40:DF:69:HIS:H	1.50	0.42
46:DN:43:THR:H	46:DN:48:MET:HE2	1.85	0.42
1:AA:28:G:O2'	1:AA:296:U:OP1	2.38	0.42
1:AA:617:G:O5'	1:AA:617:G:H8	2.03	0.42
22:AV:9:A:O2'	22:AV:10:G:N7	2.53	0.42
22:AW:39:U:OP1	22:AW:39:U:H4'	2.20	0.42
24:AY:177:TYR:CE1	24:AY:212:PRO:HD3	2.55	0.42
31:B6:25:LYS:HE3	35:BA:2285:C:H41	1.83	0.42
34:B9:17:ILE:HB	34:B9:26:ILE:HD13	2.02	0.42
35:BA:184:C:O2'	35:BA:217:G:N3	2.47	0.42
35:BA:272(G):C:N4	35:BA:363(C):G:H1	2.00	0.42
35:BA:639:U:C2	35:BA:640:C:C5	3.07	0.42
35:BA:941:A:O2'	48:BP:35:HIS:CE1	2.73	0.42
35:BA:1405:U:H2'	35:BA:1406:U:C6	2.53	0.42
35:BA:1669:A:H5"	35:BA:2550:G:OP1	2.20	0.42
35:BA:2101:G:H2'	35:BA:2102:U:C6	2.55	0.42
35:BA:2132:U:N3	37:BC:6:LYS:HG3	2.33	0.42
35:BA:2722:G:H2'	35:BA:2723:C:H6	1.84	0.42
38:BD:27:THR:O	38:BD:27:THR:HG23	2.19	0.42
38:BD:111:LEU:HD13	38:BD:112:GLN:N	2.34	0.42
40:BF:60:SER:OG	40:BF:61:GLY:N	2.53	0.42
41:BG:70:VAL:HA	41:BG:89:GLY:O	2.19	0.42
41:BG:143:GLU:H	41:BG:143:GLU:CD	2.26	0.42
43:BI:95:LYS:O	43:BI:99:GLU:HB2	2.20	0.42
48:BP:32:THR:HG22	48:BP:37:GLY:HA2	2.00	0.42
50:BR:59:ASP:OD1	50:BR:59:ASP:N	2.52	0.42
57:BY:2:ARG:NH1	57:BY:3:VAL:HG23	2.35	0.42
2:CB:212:GLN:CD	2:CB:235:SER:HB2	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:44:GLU:HA	3:CC:52:LEU:HD11	2.01	0.42
6:CF:5:GLU:HG2	6:CF:62:TRP:HZ2	1.85	0.42
6:CF:26:ILE:O	6:CF:29:ALA:HB3	2.19	0.42
10:CJ:8:LEU:HB2	10:CJ:70:ARG:O	2.20	0.42
12:CL:44:THR:HA	12:CL:45:PRO:HD3	1.90	0.42
26:D1:3:LYS:HG2	26:D1:4:VAL:HG12	2.01	0.42
27:D2:50:ILE:C	27:D2:52:ASP:N	2.78	0.42
29:D4:35:VAL:O	41:DG:113:ARG:CZ	2.67	0.42
31:D6:30:THR:HB	31:D6:31:PRO:CD	2.50	0.42
35:DA:306:U:H2'	35:DA:307:G:O4'	2.19	0.42
35:DA:613:G:H5"	35:DA:613:G:H8	1.85	0.42
35:DA:657:U:H2'	35:DA:658:C:C6	2.55	0.42
35:DA:748:G:C8	55:DW:89:ALA:HB1	2.55	0.42
35:DA:903:C:C2'	35:DA:904:C:H5'	2.50	0.42
35:DA:1078:U:H5"	35:DA:1079:C:OP1	2.20	0.42
35:DA:1165:U:H2'	35:DA:1166:C:H6	1.83	0.42
35:DA:1291:C:H2'	35:DA:1292:U:C6	2.54	0.42
35:DA:1664:A:H2	47:DO:1:MET:SD	2.42	0.42
35:DA:1754:C:H5'	52:DT:101:PHE:CZ	2.54	0.42
35:DA:1791:A:H3'	35:DA:1792:G:C8	2.55	0.42
35:DA:2065:C:H2'	35:DA:2066:C:C6	2.49	0.42
35:DA:2123:G:C4	35:DA:2124:G:C8	3.08	0.42
35:DA:2341:G:H2'	35:DA:2342:C:H6	1.81	0.42
35:DA:2839:G:C4	35:DA:2840:C:C5	3.08	0.42
35:DA:2839:G:H2'	35:DA:2840:C:C6	2.54	0.42
37:DC:208:THR:HB	37:DC:211:ARG:HG3	2.02	0.42
40:DF:128:ALA:O	40:DF:130:ALA:N	2.50	0.42
45:DK:53:VAL:O	45:DK:55:VAL:N	2.46	0.42
49:DQ:39:PRO:HB3	49:DQ:99:PRO:HD3	2.00	0.42
51:DS:12:PHE:H	51:DS:12:PHE:HD1	1.68	0.42
51:DS:95:HIS:O	51:DS:98:VAL:HG23	2.19	0.42
57:DY:76:CYS:O	57:DY:77:PRO:C	2.62	0.42
1:AA:951:G:C6	1:AA:1231:G:C6	3.07	0.42
1:AA:1029:C:O2'	1:AA:1030:C:H5	2.03	0.42
1:AA:1111:A:H2'	1:AA:1112:C:C6	2.54	0.42
1:AA:1302:U:C6	13:AM:17:VAL:HG21	2.55	0.42
2:AB:16:HIS:CD2	2:AB:209:ARG:HB3	2.54	0.42
5:AE:32:VAL:HB	5:AE:58:ALA:HB1	2.01	0.42
5:AE:55:VAL:O	5:AE:58:ALA:HB3	2.19	0.42
8:AH:20:TYR:HD1	8:AH:65:TYR:CD2	2.37	0.42
13:AM:91:ARG:CB	13:AM:98:VAL:HG22	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B8:32:LEU:HD12	35:BA:2391:G:OP1	2.19	0.42
35:BA:71:A:OP2	35:BA:71:A:H3'	2.20	0.42
35:BA:272(D):G:H1	35:BA:364:C:H42	1.68	0.42
35:BA:1107:G:H8	35:BA:1107:G:H3'	1.84	0.42
35:BA:1841:U:C2	35:BA:1842:G:C8	3.07	0.42
35:BA:2317:C:H2'	35:BA:2318:G:O4'	2.20	0.42
37:BC:16:ASP:OD2	37:BC:19:LYS:HB2	2.20	0.42
38:BD:131:LEU:HD13	38:BD:136:ILE:HG12	2.02	0.42
40:BF:132:VAL:O	40:BF:133:ASN:C	2.63	0.42
41:BG:171:ALA:O	41:BG:172:LEU:C	2.63	0.42
51:BS:107:GLU:O	51:BS:109:GLY:N	2.53	0.42
56:BX:27:THR:HA	56:BX:79:ALA:O	2.20	0.42
1:CA:226:G:H2'	1:CA:227:G:H8	1.85	0.42
1:CA:605:U:H2'	1:CA:606:G:O4'	2.20	0.42
1:CA:1178:G:OP2	9:CI:97:LYS:NZ	2.49	0.42
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.34	0.42
2:CB:80:ILE:HD12	2:CB:80:ILE:N	2.27	0.42
6:CF:12:PRO:HG3	6:CF:57:GLN:O	2.20	0.42
10:CJ:20:ALA:O	10:CJ:24:VAL:HG23	2.20	0.42
19:CS:16:LEU:O	19:CS:17:GLU:C	2.63	0.42
22:CW:16:U:C5	22:CW:18:G:H2'	2.54	0.42
24:CY:295:LEU:HD13	24:CY:299:ARG:HE	1.84	0.42
24:CY:330:ARG:NH2	24:CY:343:ASP:OD2	2.53	0.42
31:D6:11:LEU:HD23	31:D6:26:ASN:CG	2.44	0.42
35:DA:118:A:H5'	35:DA:119:A:C8	2.53	0.42
35:DA:613:G:C6	35:DA:614:U:C4	3.08	0.42
35:DA:849:A:N6	35:DA:928:G:O2'	2.45	0.42
35:DA:963:U:H2'	35:DA:964:C:C6	2.55	0.42
35:DA:987:G:O2'	35:DA:1000:A:N3	2.41	0.42
35:DA:1139:G:O2'	35:DA:1143:A:N1	2.44	0.42
35:DA:1176:G:O2'	35:DA:1177:A:H5'	2.20	0.42
35:DA:2123:G:H2'	35:DA:2124:G:C8	2.54	0.42
35:DA:2127:G:H8	35:DA:2127:G:OP2	2.03	0.42
35:DA:2408:U:O5'	35:DA:2408:U:H6	2.03	0.42
35:DA:2443:C:H2'	35:DA:2444:G:C8	2.54	0.42
35:DA:2591:C:OP1	38:DD:239:ARG:HG2	2.19	0.42
35:DA:2771:C:C2	35:DA:2772:C:C5	3.08	0.42
38:DD:218:ARG:HH11	38:DD:218:ARG:HG3	1.84	0.42
40:DF:46:ARG:HD2	40:DF:46:ARG:HA	1.88	0.42
40:DF:101:LEU:O	40:DF:106:ARG:NH1	2.50	0.42
41:DG:112:PRO:CB	41:DG:113:ARG:HH21	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DG:120:LEU:HG	41:DG:179:PRO:HG2	2.02	0.42
45:DK:38:VAL:HG23	45:DK:39:LYS:N	2.35	0.42
45:DK:115:LEU:HB3	45:DK:126:MET:SD	2.60	0.42
46:DN:128:HIS:HE1	46:DN:130:HIS:O	2.03	0.42
53:DU:54:LYS:O	53:DU:58:ARG:HG3	2.20	0.42
53:DU:80:ILE:HD13	53:DU:80:ILE:HA	1.91	0.42
57:DY:52:SER:N	57:DY:53:PRO:HD2	2.34	0.42
58:DZ:15:PRO:O	58:DZ:19:ARG:HG3	2.20	0.42
58:DZ:77:ASP:O	58:DZ:79:ARG:N	2.53	0.42
1:AA:126:G:OP1	1:AA:605:U:O2'	2.33	0.42
1:AA:375:U:H2'	1:AA:376:G:C8	2.55	0.42
1:AA:384:G:H2'	1:AA:385:C:C6	2.54	0.42
1:AA:971:G:N2	1:AA:1363(A):A:OP2	2.49	0.42
1:AA:1286:A:N3	21:AU:22:ARG:NH2	2.68	0.42
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.55	0.42
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.55	0.42
2:AB:178:ARG:HH11	2:AB:178:ARG:CB	2.29	0.42
2:AB:228:GLY:O	2:AB:230:VAL:N	2.53	0.42
3:AC:16:ARG:HH11	3:AC:16:ARG:CB	2.33	0.42
4:AD:15:GLU:O	4:AD:17:VAL:HG23	2.19	0.42
4:AD:20:TYR:HA	4:AD:26:CYS:SG	2.59	0.42
12:AL:42:THR:OG1	12:AL:52:LEU:HB3	2.19	0.42
13:AM:37:THR:O	13:AM:39:ILE:HG13	2.20	0.42
13:AM:125:ARG:HD2	24:AY:165:ASP:CB	2.50	0.42
13:AM:126:LYS:N	24:AY:160:PRO:HG2	2.35	0.42
20:AT:75:ASN:OD1	20:AT:75:ASN:N	2.53	0.42
24:AY:332:ASP:O	24:AY:336:VAL:HG23	2.20	0.42
25:B0:11:ARG:HH11	25:B0:11:ARG:CB	2.30	0.42
35:BA:631:A:N3	35:BA:2415:G:O2'	2.44	0.42
35:BA:1349:A:H62	35:BA:1598:C:H42	1.65	0.42
35:BA:1682:G:H5'	35:BA:1762:A:O2'	2.19	0.42
35:BA:2043:C:C2	35:BA:2044:C:C5	3.08	0.42
35:BA:2238:G:N3	35:BA:2238:G:H2'	2.35	0.42
35:BA:2331:G:N2	35:BA:2385:C:C4	2.88	0.42
35:BA:2677:G:H2'	35:BA:2678:C:H6	1.84	0.42
36:BB:15:A:OP2	36:BB:69:G:N2	2.53	0.42
38:BD:118:VAL:HG22	38:BD:119:ALA:H	1.84	0.42
39:BE:100:GLU:O	39:BE:172:VAL:HG23	2.20	0.42
39:BE:111:ARG:HA	50:BR:2:ARG:CG	2.49	0.42
40:BF:143:ALA:HB1	40:BF:148:LEU:HB2	2.02	0.42
41:BG:16:ARG:O	41:BG:20:ILE:HG13	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:67:LEU:O	42:BH:71:LEU:HD22	2.20	0.42
43:BI:114:LEU:O	43:BI:131:LYS:HD3	2.20	0.42
46:BN:72:TYR:OH	46:BN:98:VAL:HG13	2.20	0.42
46:BN:74:ARG:NH2	46:BN:85:ILE:HD11	2.34	0.42
48:BP:16:ARG:HH22	48:BP:18:ARG:CG	2.32	0.42
48:BP:50:ARG:HG2	48:BP:50:ARG:NH2	2.34	0.42
48:BP:98:GLU:O	48:BP:101:VAL:HG22	2.20	0.42
52:BT:38:ASN:CG	52:BT:39:ARG:H	2.25	0.42
54:BV:19:LYS:HG3	54:BV:20:LEU:N	2.34	0.42
54:BV:52:VAL:CG2	54:BV:55:ALA:HB3	2.47	0.42
57:BY:20:TYR:CE2	57:BY:42:VAL:HA	2.55	0.42
57:BY:31:LEU:HB2	57:BY:32:PRO:HA	2.00	0.42
58:BZ:102:LEU:HD23	58:BZ:104:PHE:HE1	1.85	0.42
1:CA:189(C):C:N3	1:CA:189(H):G:N1	2.43	0.42
1:CA:235:C:H2'	1:CA:236:G:H8	1.83	0.42
1:CA:335:C:H2'	1:CA:336:C:C6	2.55	0.42
1:CA:339:C:OP2	47:DO:97:ARG:NH1	2.53	0.42
1:CA:355:C:N4	1:CA:356:A:H62	2.18	0.42
1:CA:895:G:H2'	1:CA:896:C:C6	2.55	0.42
1:CA:1302:U:C6	13:CM:17:VAL:HG21	2.54	0.42
4:CD:13:ARG:C	4:CD:15:GLU:N	2.78	0.42
6:CF:3:ARG:NH1	6:CF:38:GLU:OE1	2.53	0.42
8:CH:110:ALA:HB3	8:CH:121:ASP:HB3	2.02	0.42
11:CK:51:LYS:HA	11:CK:55:LYS:HD3	2.02	0.42
11:CK:107:SER:C	11:CK:108:ILE:HD12	2.44	0.42
12:CL:62:SER:HB2	12:CL:64:TYR:CD1	2.55	0.42
13:CM:28:ALA:C	13:CM:30:ALA:N	2.77	0.42
14:CN:34:TYR:N	14:CN:34:TYR:CD1	2.88	0.42
20:CT:12:ALA:O	20:CT:15:ARG:HB2	2.20	0.42
24:CY:41:ASP:HB3	24:CY:44:ALA:HB3	2.01	0.42
35:DA:286:C:H2'	35:DA:287:C:C6	2.55	0.42
35:DA:1429:G:H2'	35:DA:1430:C:H6	1.85	0.42
35:DA:1564:C:H2'	35:DA:1565:C:C6	2.55	0.42
35:DA:2087:G:O2'	35:DA:2088:G:H5'	2.20	0.42
35:DA:2099:U:C2	35:DA:2100:G:C8	3.08	0.42
35:DA:2262:U:H2'	35:DA:2263:C:H6	1.84	0.42
35:DA:2620:C:C4	35:DA:2621:A:N7	2.88	0.42
38:DD:142:VAL:HG23	38:DD:192:THR:C	2.45	0.42
38:DD:186:HIS:CE1	38:DD:188:GLU:HB2	2.54	0.42
38:DD:211:ARG:O	38:DD:215:LEU:HG	2.20	0.42
41:DG:125:PHE:HB3	41:DG:166:ASP:CB	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DH:124:GLU:HB2	42:DH:132:ARG:CG	2.49	0.42
46:DN:90:MET:HE2	46:DN:90:MET:HA	2.02	0.42
47:DO:69:ILE:HD12	47:DO:69:ILE:N	2.34	0.42
52:DT:57:PHE:O	52:DT:59:THR:N	2.53	0.42
55:DW:76:VAL:CG2	55:DW:101:SER:HB3	2.50	0.42
56:DX:65:ARG:HG2	56:DX:65:ARG:HH11	1.85	0.42
57:DY:80:GLY:O	57:DY:81:LYS:HB2	2.20	0.42
57:DY:101:LYS:HG2	57:DY:102:CYS:N	2.35	0.42
1:AA:79:G:C2	1:AA:80:G:N3	2.88	0.42
1:AA:88:A:C8	1:AA:89:C:H5	2.37	0.42
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.37	0.42
1:AA:684:A:H2'	1:AA:685:G:C8	2.55	0.42
1:AA:1015:A:H2'	1:AA:1016:A:H8	1.83	0.42
1:AA:1074:G:H2'	1:AA:1075:C:H6	1.85	0.42
1:AA:1245:A:C6	1:AA:1293:G:C6	3.07	0.42
1:AA:1483:A:H1'	35:BA:1948:G:O4'	2.20	0.42
2:AB:25:ASN:C	2:AB:27:LYS:H	2.28	0.42
3:AC:64:VAL:O	3:AC:100:ALA:HB3	2.20	0.42
4:AD:153:ARG:NH1	4:AD:181:MET:SD	2.93	0.42
4:AD:175:SER:OG	4:AD:184:LYS:HB2	2.19	0.42
7:AG:108:ALA:C	7:AG:110:GLN:H	2.27	0.42
10:AJ:75:ILE:HG13	10:AJ:76:ASN:H	1.85	0.42
12:AL:44:THR:HA	12:AL:45:PRO:HD3	1.90	0.42
15:AO:3:ILE:O	15:AO:3:ILE:HG13	2.20	0.42
16:AP:49:LEU:O	16:AP:50:LYS:HB2	2.20	0.42
22:AW:22:G:C2	22:AW:23:A:N7	2.88	0.42
25:B0:72:ARG:O	25:B0:75:LEU:HB2	2.19	0.42
32:B7:35:ARG:HD3	35:BA:54:G:O2'	2.20	0.42
35:BA:949:C:H2'	35:BA:950:G:H8	1.85	0.42
35:BA:958:U:OP2	49:BQ:14:ARG:HD3	2.20	0.42
35:BA:1169:G:H2'	35:BA:1170:G:O4'	2.20	0.42
35:BA:1525:G:H2'	35:BA:1526:G:H8	1.82	0.42
35:BA:1527:G:O2'	35:BA:1544:A:N6	2.40	0.42
35:BA:1602:U:H3'	35:BA:1603:A:H5'	2.02	0.42
35:BA:1790:C:H2'	35:BA:1791:A:C5	2.54	0.42
35:BA:1930:G:N2	35:BA:1968:G:H2'	2.35	0.42
35:BA:2807:G:H1	35:BA:2892:A:H62	1.66	0.42
35:BA:2833:G:H3'	35:BA:2834:G:H5'	2.02	0.42
40:BF:4:VAL:CG1	40:BF:17:ARG:HD3	2.47	0.42
41:BG:38:VAL:HG22	41:BG:93:THR:HA	2.01	0.42
50:BR:84:ALA:HB3	50:BR:85:PRO:HD3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:44:LYS:O	51:BS:46:VAL:HG23	2.20	0.42
57:BY:61:ILE:HD12	57:BY:62:GLU:N	2.35	0.42
58:BZ:112:ARG:O	58:BZ:112:ARG:HD2	2.20	0.42
58:BZ:127:LYS:HB2	58:BZ:162:GLU:O	2.19	0.42
1:CA:259:G:H2'	1:CA:260:G:H8	1.84	0.42
1:CA:1049:U:H4'	1:CA:1050:G:C5'	2.50	0.42
1:CA:1285:A:H1'	1:CA:1286:A:OP2	2.20	0.42
1:CA:1425:U:H2'	1:CA:1426:C:H6	1.85	0.42
3:CC:71:ALA:HB2	3:CC:106:VAL:HB	2.02	0.42
3:CC:149:ALA:N	3:CC:170:GLN:O	2.42	0.42
7:CG:108:ALA:C	7:CG:110:GLN:H	2.27	0.42
9:CI:15:ALA:HA	9:CI:65:VAL:HA	2.01	0.42
9:CI:25:LYS:HE3	9:CI:25:LYS:HB2	1.81	0.42
9:CI:82:ALA:HB1	9:CI:96:LEU:HD21	2.02	0.42
12:CL:38:THR:HG23	12:CL:57:LYS:O	2.20	0.42
13:CM:19:LEU:HB3	13:CM:25:ILE:HG21	2.02	0.42
13:CM:37:THR:O	13:CM:39:ILE:HG13	2.20	0.42
22:CW:21:A:C4	22:CW:48:C:N4	2.88	0.42
22:CW:56:C:H2'	22:CW:57:G:C8	2.54	0.42
24:CY:288:ARG:HB3	24:CY:288:ARG:HH11	1.84	0.42
33:D8:26:LYS:NZ	35:DA:2361:A:OP2	2.53	0.42
35:DA:607:U:C5	35:DA:620:G:C5	3.08	0.42
35:DA:924:C:H2'	35:DA:925:C:C6	2.55	0.42
35:DA:1043:C:H2'	35:DA:1044:G:H8	1.85	0.42
35:DA:1573:G:H2'	35:DA:1574:C:H5'	2.02	0.42
35:DA:1971:A:P	38:DD:242:ARG:HH22	2.43	0.42
35:DA:2308:G:H8	35:DA:2309:A:H3'	1.85	0.42
35:DA:2378:A:H2	51:DS:20:ARG:HH21	1.65	0.42
35:DA:2406:U:C4	48:DP:72:PRO:HB2	2.55	0.42
35:DA:2513:G:H2'	35:DA:2514:U:C6	2.55	0.42
35:DA:2708:G:H2'	35:DA:2709:G:C8	2.54	0.42
36:DB:33:G:H5'	41:DG:3:LEU:HD21	2.01	0.42
38:DD:3:VAL:HG23	38:DD:200:ASP:OD2	2.20	0.42
39:DE:46:ALA:HB2	39:DE:82:ARG:HA	2.02	0.42
40:DF:3:GLU:HA	40:DF:24:LEU:CG	2.39	0.42
41:DG:10:LYS:O	41:DG:15:VAL:HG23	2.19	0.42
45:DK:135:GLY:O	45:DK:136:VAL:C	2.63	0.42
48:DP:48:PRO:O	48:DP:49:ARG:C	2.63	0.42
49:DQ:30:GLY:HA2	49:DQ:107:ALA:HB2	2.02	0.42
55:DW:62:HIS:O	55:DW:63:ASP:C	2.62	0.42
57:DY:2:ARG:N	57:DY:5:MET:HG3	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:191:G:N2	20:AT:103:GLY:O	2.46	0.41
1:AA:672:U:H2'	1:AA:673:G:H8	1.85	0.41
1:AA:683:G:H2'	1:AA:684:A:C8	2.55	0.41
1:AA:877:C:H2'	1:AA:878:G:H8	1.85	0.41
1:AA:978:A:C5	1:AA:1319:A:C2	3.08	0.41
1:AA:1048:G:O3'	1:AA:1049:U:H3'	2.20	0.41
1:AA:1128:C:H4'	9:AI:16:ARG:HH12	1.85	0.41
6:AF:64:GLN:O	6:AF:65:VAL:HB	2.19	0.41
7:AG:146:GLU:HG2	7:AG:149:ARG:NH1	2.33	0.41
7:AG:156:TRP:CD1	7:AG:156:TRP:H	2.38	0.41
13:AM:7:VAL:CG1	41:BG:139:LEU:HD21	2.48	0.41
13:AM:13:LYS:HA	13:AM:44:ARG:NH1	2.35	0.41
22:AV:20:U:O2	22:AV:20:U:H2'	2.19	0.41
22:AW:18:G:H22	22:AW:55:U:C2'	2.32	0.41
24:AY:153:VAL:HG13	24:AY:153:VAL:O	2.20	0.41
24:AY:233:ARG:NH1	35:BA:2555:U:O2'	2.53	0.41
26:B1:70:VAL:O	26:B1:74:VAL:HG23	2.20	0.41
27:B2:71:ASN:HB3	27:B2:72:ALA:H	1.59	0.41
30:B5:16:ARG:HH11	30:B5:16:ARG:HG2	1.85	0.41
31:B6:30:THR:O	31:B6:32:ASN:N	2.53	0.41
32:B7:16:HIS:HA	32:B7:21:ARG:NH1	2.34	0.41
33:B8:25:MET:SD	48:BP:64:LYS:HD2	2.59	0.41
33:B8:53:PRO:O	33:B8:57:ARG:HB2	2.19	0.41
35:BA:154:G:C6	35:BA:173:G:C6	3.07	0.41
35:BA:881:G:O6	35:BA:895:U:O4	2.38	0.41
35:BA:2406:U:N3	48:BP:72:PRO:HB2	2.35	0.41
41:BG:96:ARG:HA	41:BG:100:TRP:HE1	1.84	0.41
42:BH:8:PRO:CB	42:BH:52:VAL:HB	2.50	0.41
49:BQ:21:THR:CG2	49:BQ:101:ARG:HB2	2.50	0.41
58:BZ:82:ARG:NH1	58:BZ:82:ARG:HG2	2.35	0.41
1:CA:108:G:N7	20:CT:15:ARG:HG3	2.35	0.41
1:CA:552:U:C2	1:CA:553:A:N7	2.88	0.41
1:CA:695:A:OP1	11:CK:52:GLY:HA3	2.20	0.41
1:CA:1049:U:O2'	14:CN:2:ALA:HB3	2.19	0.41
1:CA:1067:A:H8	1:CA:1067:A:O5'	2.02	0.41
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.55	0.41
1:CA:1127:G:N2	1:CA:1147:C:H41	2.18	0.41
2:CB:220:ASP:C	2:CB:222:ILE:H	2.28	0.41
6:CF:94:GLN:HB3	18:CR:32:ARG:HE	1.84	0.41
8:CH:121:ASP:CG	8:CH:122:ARG:H	2.27	0.41
11:CK:81:ASP:OD1	11:CK:106:LYS:HD2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:116:THR:O	13:CM:118:ALA:N	2.53	0.41
14:CN:7:ILE:C	14:CN:9:LYS:H	2.28	0.41
17:CQ:58:GLU:O	17:CQ:59:ILE:HD13	2.20	0.41
24:CY:33:LEU:HD12	45:DK:20:ALA:CB	2.50	0.41
30:D5:59:GLU:O	30:D5:60:VAL:HG23	2.19	0.41
35:DA:11:G:H8	35:DA:11:G:O5'	2.03	0.41
35:DA:141:A:H1'	35:DA:1408:C:O2'	2.20	0.41
35:DA:412:A:H2'	35:DA:413:C:H5'	2.02	0.41
35:DA:828:U:H4'	35:DA:831:G:N1	2.35	0.41
35:DA:922:U:H2'	35:DA:923:C:C6	2.55	0.41
35:DA:1448:G:N3	35:DA:1528(A):A:H2	2.18	0.41
35:DA:1541:G:H1'	35:DA:1542:A:C4	2.55	0.41
35:DA:2507:C:C2	35:DA:2583:G:C2	3.08	0.41
35:DA:2662:A:N3	35:DA:2662:A:H2'	2.35	0.41
36:DB:15:A:O2'	36:DB:16:G:H5'	2.19	0.41
40:DF:200:GLU:C	40:DF:202:PHE:N	2.77	0.41
41:DG:111:LEU:HB2	41:DG:112:PRO:HD3	2.01	0.41
45:DK:3:LYS:O	45:DK:7:VAL:HG21	2.20	0.41
52:DT:29:ARG:HG2	52:DT:85:LYS:HA	2.02	0.41
54:DV:24:LYS:HA	54:DV:92:THR:HG23	2.02	0.41
57:DY:62:GLU:HG2	57:DY:63:LYS:H	1.84	0.41
58:DZ:134:PRO:HB2	58:DZ:137:ILE:HD11	2.02	0.41
1:AA:334:C:H2'	1:AA:335:C:C6	2.56	0.41
1:AA:370:C:H2'	1:AA:371:G:H8	1.85	0.41
1:AA:625:G:H2'	1:AA:626:U:C6	2.56	0.41
1:AA:663:A:H2'	1:AA:664:G:O4'	2.21	0.41
1:AA:925:G:C2	1:AA:927:G:C8	3.08	0.41
1:AA:1028:C:H42	1:AA:1034:G:H21	1.67	0.41
1:AA:1059:C:O2'	14:AN:45:ARG:NH2	2.53	0.41
1:AA:1086:U:H2'	1:AA:1087:G:C8	2.55	0.41
1:AA:1119:C:H2'	1:AA:1120:G:C8	2.55	0.41
1:AA:1288:A:H4'	21:AU:13:ILE:HD13	2.02	0.41
2:AB:145:LEU:CD1	2:AB:149:LEU:HD12	2.49	0.41
2:AB:179:LYS:HA	8:AH:72:PRO:CG	2.50	0.41
4:AD:171:GLY:HA2	4:AD:172:PRO:HD3	1.93	0.41
4:AD:172:PRO:HD3	6:CF:21:LEU:HD11	2.02	0.41
9:AI:121:ARG:C	9:AI:121:ARG:HD3	2.45	0.41
13:AM:105:THR:O	13:AM:106:ASN:C	2.62	0.41
24:AY:303:ARG:H	24:AY:304:PRO:CD	2.29	0.41
27:B2:20:GLU:C	27:B2:22:GLU:H	2.28	0.41
29:B4:34:GLU:HB2	41:BG:113:ARG:HD2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:25:U:H5”	55:BW:80:PRO:HD3	2.03	0.41
35:BA:654(D):G:H22	35:BA:654(P):C:H42	1.67	0.41
35:BA:1074:G:H2’	35:BA:1075:C:C6	2.55	0.41
35:BA:1124:C:H2’	35:BA:1125:G:O4’	2.20	0.41
35:BA:1281:G:H5’	35:BA:1281:G:C8	2.55	0.41
35:BA:2273:A:O2’	35:BA:2274:A:H5’	2.20	0.41
35:BA:2491:U:H4’	35:BA:2570:G:OP1	2.19	0.41
35:BA:2839:G:H5’	50:BR:46:GLY:HA3	2.01	0.41
45:BK:12:LEU:HD11	45:BK:37:PHE:HE2	1.85	0.41
45:BK:26:ALA:HA	45:BK:29:GLN:NE2	2.34	0.41
45:BK:125:ARG:H	45:BK:125:ARG:HG2	1.65	0.41
48:BP:95:VAL:HG22	48:BP:125:VAL:HA	2.01	0.41
53:BU:92:ARG:NH1	53:BU:94:ASN:OD1	2.53	0.41
54:BV:47:VAL:HG12	54:BV:52:VAL:CG1	2.50	0.41
55:BW:5:ALA:HB2	55:BW:54:ALA:HB2	2.02	0.41
1:CA:69:G:H2’	1:CA:70:G:C8	2.55	0.41
1:CA:277:C:OP1	17:CQ:41:LYS:HE3	2.19	0.41
1:CA:430:A:OP2	4:CD:8:VAL:HG22	2.19	0.41
1:CA:832:C:C2	1:CA:833:U:C6	3.07	0.41
1:CA:1004:A:H2’	1:CA:1036:G:O6	2.20	0.41
1:CA:1004:A:H1’	1:CA:1038:C:H42	1.84	0.41
1:CA:1124:G:N7	1:CA:1145:C:O2’	2.40	0.41
1:CA:1181:G:H2’	1:CA:1182:G:C5	2.55	0.41
1:CA:1207:G:H2’	1:CA:1208:C:C6	2.55	0.41
1:CA:1245:A:H2’	1:CA:1246:C:C6	2.55	0.41
2:CB:42:ILE:O	2:CB:44:LEU:HD12	2.18	0.41
2:CB:158:LEU:HD23	2:CB:158:LEU:HA	1.87	0.41
5:CE:96:PRO:HA	5:CE:117:ASP:CG	2.45	0.41
10:CJ:50:ILE:HA	10:CJ:60:ARG:CB	2.51	0.41
12:CL:47:LYS:C	12:CL:49:ASN:H	2.28	0.41
13:CM:2:ALA:O	13:CM:4:ILE:HG13	2.20	0.41
19:CS:38:SER:O	19:CS:70:LYS:HB3	2.20	0.41
22:CW:38:A:H3’	22:CW:39:U:H5”	2.01	0.41
24:CY:55:LEU:HA	24:CY:58:THR:OG1	2.20	0.41
24:CY:153:VAL:HG13	24:CY:153:VAL:O	2.21	0.41
31:D6:35:GLU:CD	31:D6:37:ARG:HH12	2.23	0.41
34:D9:37:GLY:HA2	35:DA:1125:G:H5’	2.02	0.41
35:DA:184:C:H2’	35:DA:185:U:C6	2.55	0.41
35:DA:607:U:C5	35:DA:620:G:C6	3.08	0.41
35:DA:855:G:H1	35:DA:922:U:H3	1.67	0.41
35:DA:971:C:H2’	35:DA:972:G:O4’	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1230:C:H2'	35:DA:1231:G:H8	1.84	0.41
35:DA:1400:G:H2'	35:DA:1401:G:H8	1.85	0.41
35:DA:1748:G:H2'	35:DA:1749:A:C8	2.55	0.41
35:DA:1763:G:H4'	35:DA:1763:G:OP1	2.20	0.41
35:DA:2055:C:H4'	35:DA:2056:G:H5"	2.01	0.41
35:DA:2120:G:H2'	35:DA:2121:G:C8	2.55	0.41
35:DA:2824:C:H2'	35:DA:2825:C:O4'	2.20	0.41
36:DB:45:A:O4'	41:DG:95:ARG:NH1	2.43	0.41
38:DD:73:VAL:O	38:DD:75:ILE:HG13	2.21	0.41
40:DF:117:ARG:HD3	40:DF:117:ARG:HA	1.86	0.41
40:DF:185:ASP:HA	40:DF:188:ARG:CG	2.49	0.41
41:DG:118:ARG:HD2	41:DG:181:ARG:HD3	2.03	0.41
46:DN:18:ALA:HB1	46:DN:21:LYS:CB	2.50	0.41
47:DO:114:ILE:N	47:DO:114:ILE:HD12	2.35	0.41
48:DP:78:PRO:HB2	48:DP:111:ARG:HD2	2.02	0.41
50:DR:88:ARG:NH2	50:DR:89:ASP:OD1	2.53	0.41
50:DR:101:ALA:O	50:DR:102:GLU:HB2	2.20	0.41
50:DR:103:ARG:HH12	50:DR:110:PRO:HD3	1.83	0.41
51:DS:59:LYS:HG2	51:DS:60:GLY:N	2.35	0.41
54:DV:47:VAL:HG12	54:DV:52:VAL:CG1	2.50	0.41
57:DY:96:ILE:HG21	57:DY:96:ILE:HD13	1.81	0.41
58:DZ:130:PRO:HA	58:DZ:133:ILE:HD11	2.01	0.41
1:AA:73:G:C6	1:AA:76:C:C4	3.08	0.41
1:AA:123:C:OP1	1:AA:311:C:O2'	2.34	0.41
1:AA:521:G:O2'	1:AA:522:C:H5'	2.20	0.41
1:AA:1030(A):G:O2'	1:AA:1030(C):G:N7	2.40	0.41
1:AA:1321:C:C5'	1:AA:1322:C:H5"	2.50	0.41
1:AA:1355:G:C6	1:AA:1368:G:C6	3.09	0.41
3:AC:173:VAL:N	3:AC:174:PRO:HD3	2.35	0.41
11:AK:81:ASP:OD1	11:AK:106:LYS:HD2	2.19	0.41
12:AL:27:LEU:C	12:AL:29:GLY:N	2.78	0.41
33:B8:29:LYS:HG3	33:B8:29:LYS:O	2.20	0.41
35:BA:327:G:H2'	35:BA:328:U:C6	2.55	0.41
35:BA:1105:U:C2	35:BA:1106:G:C8	3.08	0.41
35:BA:2136:C:N3	35:BA:2155:G:N2	2.68	0.41
35:BA:2178:C:H3'	35:BA:2179:C:H5"	2.03	0.41
35:BA:2271:G:H2'	35:BA:2272:U:H6	1.82	0.41
35:BA:2364:C:H2'	35:BA:2365:G:O4'	2.19	0.41
35:BA:2395:C:H2'	35:BA:2396:G:O4'	2.21	0.41
35:BA:2455:G:C4	35:BA:2456:C:C5	3.08	0.41
35:BA:2538:C:H2'	35:BA:2539:C:C6	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2635:C:H4'	39:BE:78:LEU:HD12	2.01	0.41
35:BA:2659:G:N2	35:BA:2663:G:C6	2.88	0.41
35:BA:2870:C:H2'	35:BA:2871:C:O4'	2.20	0.41
38:BD:43:ARG:NH1	38:BD:49:ILE:HG22	2.35	0.41
40:BF:163:VAL:O	40:BF:166:ALA:HB3	2.20	0.41
41:BG:60:LEU:O	41:BG:64:THR:HG22	2.20	0.41
41:BG:131:TYR:H	41:BG:159:VAL:HG13	1.85	0.41
47:BO:2:ILE:HD12	47:BO:6:THR:HG21	2.02	0.41
48:BP:16:ARG:NH1	48:BP:18:ARG:H	2.18	0.41
50:BR:67:LEU:HD21	50:BR:76:VAL:HG11	2.02	0.41
52:BT:31:SER:OG	52:BT:32:TYR:N	2.52	0.41
52:BT:32:TYR:HD2	52:BT:81:PRO:HB2	1.84	0.41
53:BU:62:ILE:HG23	53:BU:76:TYR:CE1	2.56	0.41
53:BU:65:ILE:HD11	53:BU:93:LYS:HA	2.01	0.41
1:CA:22:G:H4'	1:CA:885:G:C8	2.56	0.41
1:CA:69:G:H2'	1:CA:70:G:H8	1.85	0.41
1:CA:93:G:O2'	1:CA:96:U:H5'	2.20	0.41
1:CA:97:G:C4	1:CA:98:G:N7	2.88	0.41
1:CA:240:C:H2'	1:CA:241:C:H6	1.86	0.41
1:CA:327:A:C2	1:CA:329:A:C4	3.08	0.41
1:CA:935:A:N1	7:CG:3:ARG:NH2	2.68	0.41
1:CA:961:U:OP2	1:CA:1223:C:O2'	2.28	0.41
1:CA:1329:A:O2'	13:CM:24:GLY:HA2	2.20	0.41
3:CC:64:VAL:HG12	3:CC:66:VAL:HG23	2.03	0.41
3:CC:92:ALA:C	3:CC:94:LEU:H	2.28	0.41
3:CC:130:VAL:O	3:CC:134:ILE:HG13	2.20	0.41
4:CD:18:LYS:HG3	4:CD:31:CYS:SG	2.61	0.41
4:CD:174:LEU:HD21	4:CD:185:PHE:CD1	2.56	0.41
5:CE:32:VAL:HB	5:CE:58:ALA:HB1	2.02	0.41
5:CE:36:ASP:OD2	5:CE:40:ARG:HB2	2.19	0.41
20:CT:10:LEU:C	20:CT:12:ALA:N	2.77	0.41
22:CV:8:U:O4	22:CV:14:A:N7	2.53	0.41
24:CY:29:LEU:HD11	24:CY:48:VAL:O	2.21	0.41
24:CY:336:VAL:C	24:CY:338:ASP:H	2.28	0.41
26:D1:72:GLU:OE2	26:D1:76:ARG:NH1	2.54	0.41
32:D7:35:ARG:HD3	35:DA:54:G:O2'	2.20	0.41
35:DA:70:G:H2'	35:DA:113:G:O2'	2.20	0.41
35:DA:73:A:H8	35:DA:73:A:O5'	2.03	0.41
35:DA:626:U:C2	48:DP:105:LEU:HG	2.55	0.41
35:DA:1384:A:N3	35:DA:1405:U:H1'	2.35	0.41
35:DA:1400:G:H2'	35:DA:1401:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1510:G:H2'	35:DA:1511:C:C6	2.55	0.41
35:DA:1656:C:H2'	35:DA:1657:C:H6	1.85	0.41
35:DA:1668:A:N3	35:DA:1670:C:N4	2.67	0.41
35:DA:2115:G:H2'	35:DA:2116:G:H5"	2.02	0.41
38:DD:139:GLY:H	38:DD:165:ILE:HB	1.84	0.41
39:DE:183:LEU:HD21	52:DT:11:GLU:CD	2.45	0.41
40:DF:188:ARG:HA	48:DP:7:ARG:CD	2.50	0.41
41:DG:15:VAL:HG12	41:DG:19:LEU:HD11	2.02	0.41
41:DG:113:ARG:NE	41:DG:113:ARG:CA	2.82	0.41
41:DG:128:ARG:O	41:DG:130:ASN:ND2	2.54	0.41
42:DH:121:ILE:HA	42:DH:134:SER:O	2.20	0.41
45:DK:14:ALA:HB1	45:DK:50:ASP:HA	2.02	0.41
54:DV:35:LEU:HB2	54:DV:57:VAL:O	2.20	0.41
1:AA:240:C:H2'	1:AA:241:C:H6	1.85	0.41
9:AI:56:LEU:HD23	9:AI:56:LEU:O	2.21	0.41
16:AP:74:LEU:O	16:AP:79:VAL:HG23	2.21	0.41
27:B2:16:LEU:O	27:B2:17:SER:HB3	2.21	0.41
35:BA:373:U:H1'	35:BA:423:A:C2	2.55	0.41
35:BA:935:C:H2'	35:BA:936:C:C6	2.56	0.41
35:BA:1009:A:H2'	35:BA:1010:A:C8	2.56	0.41
35:BA:1322:A:C5	35:BA:1323:U:C5	3.09	0.41
35:BA:1825:A:H2'	35:BA:1826:G:C8	2.55	0.41
35:BA:2108:C:N3	35:BA:2182:G:N1	2.68	0.41
35:BA:2134:A:N6	35:BA:2157:G:H1'	2.35	0.41
35:BA:2282:G:H4'	35:BA:2283:C:O5'	2.19	0.41
35:BA:2392:A:H1'	48:BP:60:MET:SD	2.60	0.41
35:BA:2839:G:H2'	35:BA:2840:C:C6	2.55	0.41
37:BC:214:TYR:HD2	37:BC:222:SER:HB2	1.85	0.41
38:BD:144:ALA:HB3	38:BD:192:THR:CG2	2.50	0.41
46:BN:58:ASP:C	46:BN:60:ILE:N	2.76	0.41
48:BP:47:ASP:HB3	48:BP:48:PRO:CA	2.50	0.41
48:BP:97:PRO:O	48:BP:99:LEU:N	2.42	0.41
50:BR:103:ARG:NH1	50:BR:110:PRO:HD3	2.35	0.41
1:CA:308:C:H2'	1:CA:309:G:H8	1.85	0.41
1:CA:327:A:O2'	1:CA:328:C:O4'	2.35	0.41
1:CA:452:A:O3'	16:CP:72:ARG:HD2	2.21	0.41
1:CA:646:U:H2'	1:CA:647:C:C6	2.55	0.41
1:CA:824:C:O2'	8:CH:1:MET:N	2.45	0.41
1:CA:939:G:H5"	7:CG:102:ARG:NH2	2.36	0.41
1:CA:1095:U:H2'	1:CA:1096:C:O4'	2.20	0.41
1:CA:1112:C:H1'	3:CC:179:ARG:HD3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1117:G:O3'	9:CI:104:ARG:NE	2.54	0.41
1:CA:1157:A:C5	1:CA:1180:A:C6	3.08	0.41
3:CC:156:ARG:HH21	3:CC:160:ALA:C	2.28	0.41
11:CK:54:ARG:HH12	22:CW:40:C:P	2.43	0.41
11:CK:120:ARG:HA	11:CK:121:PRO:HD3	1.86	0.41
12:CL:47:LYS:HE2	12:CL:48:PRO:HD3	2.02	0.41
14:CN:53:LEU:HD23	14:CN:53:LEU:HA	1.64	0.41
19:CS:64:GLU:O	19:CS:67:VAL:HG13	2.20	0.41
25:D0:70:GLN:OE1	25:D0:80:HIS:NE2	2.45	0.41
26:D1:50:ARG:NH2	35:DA:2200:C:OP2	2.36	0.41
35:DA:634:C:H2'	35:DA:635:C:C6	2.55	0.41
35:DA:1509(A):A:H2'	35:DA:1509(B):A:C8	2.55	0.41
35:DA:1528:A:H2	35:DA:1541:G:C5	2.37	0.41
35:DA:2111:C:N4	35:DA:2144:U:O3'	2.53	0.41
35:DA:2260:C:O2'	35:DA:2388:A:O2'	2.36	0.41
35:DA:2712(A):A:H5"	35:DA:2713:A:OP2	2.20	0.41
38:DD:31:LYS:HD2	38:DD:31:LYS:HA	1.84	0.41
39:DE:6:GLY:O	39:DE:195:LEU:HD12	2.20	0.41
40:DF:18:ARG:HG2	40:DF:19:GLU:N	2.35	0.41
41:DG:127:GLY:C	41:DG:129:GLY:H	2.28	0.41
41:DG:138:GLN:OE1	41:DG:152:LEU:HA	2.20	0.41
46:DN:2:LYS:HZ1	54:DV:12:TYR:HA	1.85	0.41
47:DO:13:ASN:C	47:DO:15:GLY:H	2.28	0.41
56:DX:8:ILE:HD12	56:DX:8:ILE:N	2.36	0.41
58:DZ:119:GLU:HG3	58:DZ:122:ARG:NH1	2.34	0.41
58:DZ:128:VAL:HG22	58:DZ:129:SER:N	2.34	0.41
1:AA:533:A:H1'	1:AA:534:U:OP1	2.20	0.41
1:AA:781:A:C8	1:AA:782:A:C8	3.09	0.41
1:AA:1269:A:H2	1:AA:1312:G:N3	2.18	0.41
1:AA:1300:G:O2'	1:AA:1301:U:P	2.78	0.41
1:AA:1322:C:O2'	1:AA:1323:G:OP2	2.35	0.41
1:AA:1326:C:H2'	1:AA:1327:C:C6	2.55	0.41
1:AA:1415:G:H1	1:AA:1485:U:H3	1.69	0.41
5:AE:19:MET:O	5:AE:20:GLN:HB2	2.19	0.41
9:AI:95:LYS:HE3	9:AI:95:LYS:HB2	1.81	0.41
13:AM:10:PRO:HG3	13:AM:18:ALA:HB1	2.01	0.41
13:AM:19:LEU:H	13:AM:19:LEU:HD22	1.86	0.41
25:B0:41:ARG:HD2	25:B0:41:ARG:HA	1.63	0.41
25:B0:41:ARG:NH2	35:BA:2387:U:H4'	2.35	0.41
30:B5:2:ALA:N	35:BA:2015:A:N3	2.68	0.41
31:B6:30:THR:O	31:B6:31:PRO:C	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:B8:30:ARG:NH1	35:BA:2419:U:O4	2.53	0.41
35:BA:130:C:O3'	35:BA:1349:A:H1'	2.21	0.41
35:BA:315:G:H2'	35:BA:316:C:O4'	2.20	0.41
35:BA:933:A:C5	35:BA:934:G:C8	3.08	0.41
35:BA:974:G:C6	35:BA:1186:G:C6	3.09	0.41
35:BA:1064:C:H2'	35:BA:1065:U:O4'	2.20	0.41
35:BA:1190:G:H5'	48:BP:35:HIS:N	2.35	0.41
35:BA:1541:G:H1'	35:BA:1542:A:C4	2.55	0.41
35:BA:1542:A:H5'	35:BA:1543:C:OP2	2.20	0.41
35:BA:2153:G:H2'	35:BA:2154:G:C8	2.55	0.41
35:BA:2231:C:H2'	35:BA:2232:U:O4'	2.20	0.41
35:BA:2773:C:OP1	39:BE:164:ARG:NE	2.54	0.41
39:BE:152:LYS:HE2	39:BE:152:LYS:HB2	1.89	0.41
42:BH:85:LYS:NZ	42:BH:87:LEU:HG	2.35	0.41
45:BK:72:PRO:HA	45:BK:73:PRO:HD3	1.90	0.41
48:BP:83:VAL:H	48:BP:115:LEU:CD2	2.32	0.41
51:BS:30:ARG:HH22	51:BS:62:LYS:HD2	1.85	0.41
54:BV:22:VAL:O	54:BV:23:GLU:CB	2.68	0.41
58:BZ:99:TYR:CE1	58:BZ:125:LEU:HD12	2.56	0.41
1:CA:32:A:H2'	1:CA:33:A:H8	1.84	0.41
1:CA:189:G:H2'	1:CA:189(A):C:C6	2.56	0.41
1:CA:678:U:H2'	1:CA:679:C:C6	2.56	0.41
1:CA:824:C:H2'	1:CA:825:G:H8	1.85	0.41
1:CA:973:G:H1'	10:CJ:55:LYS:HE2	2.02	0.41
1:CA:1106:G:H2'	1:CA:1107:C:H6	1.85	0.41
1:CA:1278:U:H5'	1:CA:1279:A:C8	2.56	0.41
1:CA:1401:G:H2'	1:CA:1402:C:O4'	2.21	0.41
2:CB:209:ARG:HH11	2:CB:239:VAL:HG11	1.84	0.41
4:CD:23:GLY:O	4:CD:24:GLU:C	2.63	0.41
9:CI:126:SER:O	9:CI:127:LYS:HB3	2.20	0.41
14:CN:14:PRO:O	14:CN:15:LYS:C	2.63	0.41
14:CN:46:GLU:O	14:CN:50:LYS:HG3	2.20	0.41
16:CP:64:ALA:O	16:CP:65:GLN:C	2.62	0.41
35:DA:1066:U:O2'	35:DA:1068:G:N7	2.41	0.41
35:DA:1106:G:C6	35:DA:1107:G:N3	2.89	0.41
35:DA:1508:A:H4'	35:DA:1509(A):A:C5	2.56	0.41
35:DA:1509(B):A:H2'	35:DA:1510:G:C8	2.55	0.41
35:DA:1680:U:O2	35:DA:1763:G:C8	2.74	0.41
35:DA:2025:C:H2'	35:DA:2026:C:H6	1.83	0.41
35:DA:2450:A:OP1	35:DA:2497:A:O2'	2.35	0.41
35:DA:2766:G:H2'	35:DA:2766:G:N3	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2842:G:C6	35:DA:2876:G:C6	3.08	0.41
36:DB:21:G:O2'	36:DB:22:U:O4'	2.37	0.41
36:DB:32:C:C2	36:DB:51:G:N2	2.89	0.41
39:DE:117:MET:HA	39:DE:122:PHE:H	1.85	0.41
42:DH:122:THR:HB	42:DH:134:SER:HB2	2.02	0.41
43:DI:50:ARG:C	43:DI:51:ILE:HD13	2.45	0.41
43:DI:77:LEU:HD22	43:DI:79:ILE:HG12	2.02	0.41
44:DJ:55:UNK:O	44:DJ:57:UNK:N	2.53	0.41
48:DP:147:LEU:O	48:DP:149:GLU:HG2	2.20	0.41
51:DS:36:TYR:CD1	51:DS:36:TYR:N	2.88	0.41
51:DS:64:GLU:OE2	51:DS:64:GLU:N	2.52	0.41
52:DT:10:VAL:O	52:DT:13:ARG:HG2	2.21	0.41
52:DT:51:ARG:HH21	52:DT:53:ARG:CD	2.33	0.41
52:DT:67:SER:O	52:DT:68:TYR:HB2	2.20	0.41
1:AA:457:C:H2'	1:AA:458:C:H6	1.85	0.41
1:AA:511:C:C2	1:AA:512:U:C5	3.09	0.41
1:AA:689:C:H2'	1:AA:690:G:C8	2.56	0.41
1:AA:1127:G:H1'	1:AA:1148:U:H3	1.85	0.41
1:AA:1245:A:H2'	1:AA:1246:C:C6	2.56	0.41
1:AA:1302:U:P	13:AM:21:TYR:HH	2.43	0.41
1:AA:1426:C:H2'	1:AA:1427:U:C6	2.56	0.41
2:AB:25:ASN:C	2:AB:27:LYS:N	2.79	0.41
2:AB:189:ASP:N	2:AB:189:ASP:OD1	2.53	0.41
4:AD:15:GLU:OE1	4:AD:15:GLU:HA	2.21	0.41
6:AF:27:GLN:HE21	6:AF:27:GLN:HA	1.85	0.41
10:AJ:23:ILE:HG23	10:AJ:85:LEU:HD13	2.01	0.41
12:AL:23:LYS:O	12:AL:24:VAL:HG23	2.19	0.41
21:AU:2:GLY:C	21:AU:4:GLY:N	2.77	0.41
22:AW:27:G:H22	22:AW:43:C:H42	1.68	0.41
25:B0:55:ARG:HG3	35:BA:2365:G:OP1	2.21	0.41
26:B1:25:LYS:O	26:B1:27:GLU:N	2.54	0.41
30:B5:52:TYR:C	30:B5:54:GLY:N	2.79	0.41
31:B6:15:GLU:OE1	31:B6:43:CYS:HB3	2.20	0.41
31:B6:34:LEU:HD23	31:B6:34:LEU:HA	1.95	0.41
35:BA:208:C:H2'	35:BA:209:C:H6	1.86	0.41
35:BA:247:G:H4'	35:BA:386:G:C4	2.55	0.41
35:BA:271(L):U:H4'	35:BA:271(M):G:C2	2.55	0.41
35:BA:407:G:H2'	35:BA:408:G:H8	1.84	0.41
35:BA:858:U:O2	35:BA:2268:A:H2'	2.21	0.41
35:BA:1068:G:N1	35:BA:1069:A:C6	2.88	0.41
35:BA:1295:C:H2'	35:BA:1296:G:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1579:A:H2'	35:BA:1580:A:O4'	2.20	0.41
35:BA:2096:U:C2	35:BA:2097:C:C5	3.09	0.41
37:BC:226:ASN:HA	37:BC:227:PRO:HD2	1.94	0.41
38:BD:168:ARG:O	38:BD:169:GLU:HB2	2.21	0.41
38:BD:267:SER:HA	38:BD:270:ILE:HG13	2.02	0.41
39:BE:9:VAL:HG22	39:BE:25:VAL:O	2.21	0.41
40:BF:101:LEU:HD12	40:BF:102:PRO:CD	2.48	0.41
40:BF:117:ARG:NH2	40:BF:186:ILE:O	2.52	0.41
40:BF:178:PRO:HB2	40:BF:201:VAL:HG11	2.03	0.41
41:BG:16:ARG:NH2	41:BG:33:ARG:HG3	2.33	0.41
48:BP:34:GLY:O	48:BP:35:HIS:CG	2.74	0.41
54:BV:25:LEU:HD23	54:BV:25:LEU:HA	1.77	0.41
58:BZ:4:ARG:HA	58:BZ:58:VAL:HB	2.02	0.41
58:BZ:28:MET:O	58:BZ:34:ASN:HA	2.20	0.41
58:BZ:155:LEU:O	58:BZ:157:LEU:HD12	2.20	0.41
1:CA:321:A:N6	1:CA:329:A:OP2	2.54	0.41
1:CA:906:G:H8	1:CA:906:G:O5'	2.04	0.41
1:CA:1058:G:H2'	1:CA:1059:C:H6	1.86	0.41
1:CA:1164:G:C6	1:CA:1173:G:C6	3.09	0.41
1:CA:1258:G:H2'	1:CA:1259:C:H6	1.83	0.41
1:CA:1381:U:H5	1:CA:1382:C:C5	2.38	0.41
1:CA:1442(A):G:O2'	52:DT:122:ASP:OD2	2.38	0.41
1:CA:1510:U:H2'	1:CA:1511:G:H8	1.85	0.41
3:CC:45:LYS:O	3:CC:47:LEU:N	2.53	0.41
4:CD:152:SER:HA	4:CD:155:LEU:HD12	2.03	0.41
4:CD:182:LYS:HB3	4:CD:183:GLY:H	1.66	0.41
7:CG:131:LYS:HG3	7:CG:131:LYS:O	2.20	0.41
8:CH:24:THR:HG22	8:CH:63:LEU:HD21	2.03	0.41
8:CH:82:HIS:HE1	8:CH:136:GLU:OE2	2.04	0.41
8:CH:112:LEU:O	8:CH:114:THR:HG23	2.20	0.41
9:CI:78:LYS:HD3	9:CI:101:PHE:CD1	2.55	0.41
9:CI:112:LYS:HE3	9:CI:116:LYS:O	2.21	0.41
15:CO:83:GLU:C	15:CO:85:LEU:H	2.28	0.41
25:D0:41:ARG:HA	25:D0:41:ARG:HD2	1.73	0.41
25:D0:55:ARG:HG3	35:DA:2365:G:OP1	2.20	0.41
26:D1:92:LYS:HA	26:D1:92:LYS:HD2	1.88	0.41
30:D5:41:PRO:O	30:D5:44:THR:OG1	2.27	0.41
35:DA:236:C:H2'	35:DA:237:C:H6	1.85	0.41
35:DA:547:A:H2'	35:DA:548:A:C8	2.55	0.41
35:DA:558:G:P	46:DN:111:PRO:HD2	2.60	0.41
35:DA:588:U:H2'	35:DA:589:C:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:811:U:OP1	48:DP:30:THR:HG22	2.21	0.41
35:DA:1007:C:H5"	46:DN:35:ARG:NH1	2.35	0.41
35:DA:1337:G:H2'	35:DA:1338:G:O4'	2.21	0.41
35:DA:1589:C:H2'	35:DA:1590:U:C6	2.56	0.41
35:DA:1668:A:N6	35:DA:1676:A:H61	2.18	0.41
35:DA:1802:A:H2'	35:DA:1803:A:C8	2.55	0.41
35:DA:2498:C:O2'	35:DA:2499:C:H5'	2.20	0.41
35:DA:2579:C:O3'	39:DE:131:ALA:HB2	2.21	0.41
35:DA:2839:G:H2'	35:DA:2840:C:H6	1.85	0.41
38:DD:267:SER:O	38:DD:269:PHE:N	2.53	0.41
40:DF:101:LEU:HD12	40:DF:102:PRO:CD	2.48	0.41
41:DG:54:GLU:C	41:DG:56:ALA:N	2.79	0.41
41:DG:115:ARG:CG	41:DG:116:ASP:N	2.82	0.41
46:DN:29:LYS:O	46:DN:33:LEU:HB2	2.21	0.41
46:DN:133:GLN:C	46:DN:134:ARG:HG2	2.46	0.41
48:DP:16:ARG:NH1	48:DP:18:ARG:HB2	2.27	0.41
52:DT:38:ASN:CG	52:DT:39:ARG:N	2.77	0.41
58:DZ:23:LYS:HD3	58:DZ:38:TYR:CE1	2.55	0.41
1:AA:1066:C:O2	1:AA:1066:C:H2'	2.20	0.41
1:AA:1155:G:H2'	1:AA:1156:G:O4'	2.21	0.41
1:AA:1309:G:OP1	13:AM:88:ARG:NH2	2.49	0.41
2:AB:180:LEU:O	2:AB:182:ILE:N	2.53	0.41
3:AC:34:LEU:HD12	14:AN:25:VAL:HG11	2.02	0.41
8:AH:121:ASP:CG	8:AH:122:ARG:H	2.29	0.41
10:AJ:49:VAL:HG23	14:AN:41:ARG:HD3	2.03	0.41
14:AN:9:LYS:HE3	14:AN:9:LYS:HB2	1.94	0.41
18:AR:38:GLU:HA	18:AR:41:LYS:HB3	2.02	0.41
20:AT:30:LYS:HA	20:AT:30:LYS:HD2	1.77	0.41
21:AU:12:LYS:N	21:AU:12:LYS:HD2	2.36	0.41
22:AW:18:G:N1	22:AW:55:U:O2'	2.45	0.41
28:B3:3:ARG:HG3	28:B3:59:VAL:O	2.21	0.41
28:B3:17:LYS:HA	28:B3:17:LYS:HD3	1.74	0.41
32:B7:29:LYS:O	32:B7:33:ARG:HB2	2.21	0.41
35:BA:217:G:H2'	35:BA:218:A:C8	2.56	0.41
35:BA:271(U):G:H2'	35:BA:271(V):G:C8	2.56	0.41
35:BA:569:U:H5"	35:BA:821:A:C2	2.56	0.41
35:BA:953:A:H61	35:BA:964:C:H42	1.68	0.41
35:BA:996:A:H4'	53:BU:92:ARG:NE	2.32	0.41
35:BA:1062:G:H1'	45:BK:133:SER:OG	2.20	0.41
35:BA:1129:A:N6	35:BA:2491:U:OP1	2.53	0.41
35:BA:1416:G:C4	35:BA:1417:C:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1529:G:H2'	35:BA:1530:C:H6	1.86	0.41
35:BA:1837:C:O2'	35:BA:1927:A:N3	2.52	0.41
35:BA:2684:U:H2'	35:BA:2685:G:O4'	2.20	0.41
35:BA:2849:U:N3	35:BA:2867:G:N3	2.69	0.41
38:BD:37:LEU:HD23	38:BD:37:LEU:HA	1.83	0.41
39:BE:59:VAL:CG1	39:BE:63:LEU:HG	2.51	0.41
40:BF:53:THR:HG22	40:BF:56:GLU:CD	2.46	0.41
41:BG:19:LEU:HD23	41:BG:19:LEU:HA	1.90	0.41
43:BI:84:GLY:O	43:BI:85:GLU:HB3	2.20	0.41
45:BK:14:ALA:HB1	45:BK:50:ASP:HA	2.01	0.41
45:BK:18:THR:HA	45:BK:38:VAL:HG12	2.03	0.41
47:BO:48:PRO:HB3	47:BO:49:ARG:HD3	2.02	0.41
48:BP:32:THR:CG2	48:BP:37:GLY:HA2	2.50	0.41
48:BP:125:VAL:HG23	48:BP:125:VAL:O	2.20	0.41
49:BQ:15:GLY:O	49:BQ:16:ARG:HG2	2.20	0.41
52:BT:132:LYS:HE3	52:BT:132:LYS:HB2	1.90	0.41
54:BV:43:GLU:O	54:BV:44:LYS:C	2.64	0.41
54:BV:91:TYR:CD1	54:BV:91:TYR:C	2.98	0.41
58:BZ:64:GLY:O	58:BZ:66:SER:N	2.53	0.41
1:CA:80:G:H3'	1:CA:81:U:H5'	2.02	0.41
1:CA:99:U:H2'	1:CA:100:C:C6	2.55	0.41
1:CA:190:U:H2'	1:CA:191:G:C8	2.55	0.41
1:CA:392:G:H2'	1:CA:393:A:C8	2.55	0.41
1:CA:741:G:H2'	1:CA:742:G:C8	2.56	0.41
1:CA:1109:C:H2'	1:CA:1110:A:O4'	2.21	0.41
1:CA:1119:C:H2'	1:CA:1120:G:C8	2.56	0.41
1:CA:1171:G:H2'	1:CA:1172:C:C6	2.55	0.41
1:CA:1323:G:H2'	1:CA:1324:A:H8	1.85	0.41
1:CA:1373:G:H5"	7:CG:36:LYS:NZ	2.36	0.41
7:CG:144:MET:HE1	22:CW:40:C:H1'	2.02	0.41
22:CV:73:A:OP1	22:CV:73:A:H4'	2.20	0.41
22:CW:16:U:C6	22:CW:18:G:H5"	2.56	0.41
24:CY:141:THR:HG23	24:CY:151:VAL:HG11	2.01	0.41
32:D7:10:ARG:NH2	35:DA:1378:A:OP1	2.54	0.41
33:D8:48:PHE:C	33:D8:49:VAL:HG22	2.45	0.41
35:DA:287:C:H2'	35:DA:288:C:H6	1.85	0.41
35:DA:489:G:N2	35:DA:1321:A:OP1	2.54	0.41
35:DA:840:C:H2'	35:DA:841:A:H8	1.85	0.41
35:DA:889:C:H1'	35:DA:890:A:O4'	2.19	0.41
35:DA:1151:G:H2'	35:DA:1152:C:H6	1.86	0.41
35:DA:1467:C:H5	35:DA:1546:C:H2'	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1534:U:H3'	35:DA:1535:A:C8	2.56	0.41
35:DA:1636:C:H2'	35:DA:1637:A:C8	2.55	0.41
35:DA:2135:A:H62	35:DA:2136:C:H42	1.69	0.41
35:DA:2455:G:C4	35:DA:2456:C:C5	3.09	0.41
35:DA:2803:C:H2'	35:DA:2804:C:C6	2.56	0.41
40:DF:140:LEU:HD12	40:DF:140:LEU:HA	1.89	0.41
41:DG:129:GLY:HA2	41:DG:165:THR:O	2.20	0.41
52:DT:129:ARG:HG3	52:DT:129:ARG:O	2.20	0.41
53:DU:92:ARG:NH1	53:DU:94:ASN:OD1	2.54	0.41
1:AA:610:G:H2'	1:AA:611:A:H8	1.86	0.41
1:AA:833:U:H2'	1:AA:834:C:C6	2.56	0.41
1:AA:881:G:OP2	12:AL:9:GLN:NE2	2.51	0.41
1:AA:1073:U:C2	1:AA:1074:G:C8	3.09	0.41
1:AA:1157:A:C2	1:AA:1181:G:N3	2.89	0.41
1:AA:1246:C:H2'	1:AA:1247:U:C6	2.56	0.41
3:AC:40:ARG:O	3:AC:44:GLU:HB2	2.21	0.41
4:AD:100:ARG:HB3	4:AD:102:ASP:OD1	2.20	0.41
5:AE:107:ARG:O	5:AE:108:ALA:C	2.64	0.41
7:AG:87:VAL:HG11	7:AG:154:TYR:O	2.20	0.41
9:AI:4:TYR:HE1	9:AI:21:PRO:HD3	1.85	0.41
11:AK:125:PHE:N	11:AK:125:PHE:CD1	2.88	0.41
35:BA:811:U:H3	35:BA:1250:G:P	2.44	0.41
35:BA:852:G:C6	35:BA:926:A:C6	3.09	0.41
35:BA:1374:G:H2'	35:BA:1375:C:H6	1.84	0.41
35:BA:1448:G:H2'	35:BA:1449:A:C8	2.56	0.41
35:BA:1564:C:O2'	35:BA:1565:C:H5'	2.21	0.41
35:BA:1791:A:H3'	35:BA:1792:G:H8	1.86	0.41
35:BA:1902:C:H5'	38:BD:246:PRO:HD3	2.03	0.41
35:BA:2655:G:N3	35:BA:2655:G:H2'	2.35	0.41
40:BF:1:MET:HE3	40:BF:3:GLU:OE2	2.20	0.41
41:BG:16:ARG:HH11	41:BG:16:ARG:HG3	1.86	0.41
41:BG:111:LEU:HD22	41:BG:120:LEU:HD21	2.03	0.41
45:BK:2:LYS:HB3	45:BK:3:LYS:H	1.60	0.41
48:BP:92:GLU:HG3	48:BP:93:GLY:N	2.35	0.41
50:BR:29:LEU:HB3	50:BR:75:LEU:HD21	2.02	0.41
52:BT:53:ARG:HB2	52:BT:53:ARG:NH1	2.35	0.41
53:BU:8:VAL:HG23	53:BU:11:ARG:NH2	2.34	0.41
54:BV:6:LYS:HB2	54:BV:39:LEU:HD21	2.03	0.41
58:BZ:64:GLY:O	58:BZ:65:GLN:C	2.63	0.41
1:CA:109:A:C6	1:CA:327:A:C6	3.09	0.41
1:CA:255:G:H1'	17:CQ:16:GLN:OE1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:298:A:H2'	1:CA:299:G:C8	2.56	0.41
1:CA:591:U:H2'	1:CA:592:G:H8	1.86	0.41
1:CA:1005:A:H3'	1:CA:1006:C:C6	2.56	0.41
1:CA:1060:C:N3	1:CA:1198:G:N1	2.69	0.41
1:CA:1181:G:H2'	1:CA:1182:G:C4	2.56	0.41
2:CB:178:ARG:HH21	8:CH:68:ARG:HH22	1.68	0.41
4:CD:127:THR:HA	4:CD:132:ARG:HA	2.03	0.41
8:CH:31:PHE:O	8:CH:35:ILE:HG12	2.21	0.41
9:CI:78:LYS:O	9:CI:78:LYS:HG2	2.21	0.41
9:CI:122:ALA:HB1	9:CI:123:PRO:HD2	2.01	0.41
11:CK:70:LYS:O	11:CK:71:LYS:C	2.62	0.41
13:CM:116:THR:O	13:CM:116:THR:HG22	2.21	0.41
18:CR:66:LEU:HG	18:CR:70:ILE:HD11	2.03	0.41
24:CY:228:ARG:NH1	24:CY:230:ASP:OD2	2.54	0.41
26:D1:94:LEU:O	26:D1:96:LYS:N	2.54	0.41
26:D1:95:LEU:HD22	26:D1:95:LEU:HA	1.94	0.41
32:D7:34:ARG:HG2	32:D7:39:ARG:HG3	2.03	0.41
35:DA:7:G:H5'	46:DN:130:HIS:CE1	2.56	0.41
35:DA:71:A:H5'	35:DA:71:A:C8	2.55	0.41
35:DA:106:C:O2'	57:DY:2:ARG:NH2	2.54	0.41
35:DA:143:G:H1'	56:DX:37:THR:CG2	2.47	0.41
35:DA:755:C:H2'	35:DA:756:C:H6	1.85	0.41
35:DA:884:C:H42	35:DA:892:G:H1	1.69	0.41
35:DA:1528:A:H2'	35:DA:1528(A):A:O4'	2.20	0.41
35:DA:2110:G:N1	35:DA:2120:G:C8	2.89	0.41
35:DA:2112:G:H8	35:DA:2112:G:OP1	2.03	0.41
35:DA:2312:U:H2'	35:DA:2313:C:H5'	2.01	0.41
35:DA:2688:U:C5	35:DA:2720:U:OP2	2.73	0.41
36:DB:45:A:H1'	41:DG:95:ARG:HH22	1.85	0.41
36:DB:90:A:N7	36:DB:91:C:H1'	2.35	0.41
41:DG:113:ARG:O	41:DG:140:ILE:HG13	2.21	0.41
50:DR:103:ARG:HD3	55:DW:40:ASN:ND2	2.35	0.41
53:DU:78:THR:O	53:DU:81:HIS:N	2.53	0.41
1:AA:93:G:C6	1:AA:96:U:C4	3.09	0.41
1:AA:130:A:N3	1:AA:263:A:O2'	2.41	0.41
1:AA:266:G:O2'	1:AA:267:C:P	2.79	0.41
1:AA:514:C:C2	1:AA:515:G:C8	3.09	0.41
1:AA:610:G:C4	1:AA:611:A:C8	3.08	0.41
1:AA:748:C:O2'	1:AA:749:C:OP2	2.36	0.41
1:AA:921:U:H5"	1:AA:1082:G:H5'	2.01	0.41
1:AA:997:U:H2'	1:AA:998:G:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1007:C:H2'	1:AA:1008:C:C6	2.55	0.41
1:AA:1011:G:H2'	1:AA:1012:U:C6	2.56	0.41
1:AA:1100:C:OP2	2:AB:96:ARG:HG2	2.21	0.41
1:AA:1179:A:H8	1:AA:1179:A:O5'	2.04	0.41
1:AA:1250:A:C2	1:AA:1370:G:H1'	2.53	0.41
1:AA:1288:A:H2'	1:AA:1289:A:C8	2.56	0.41
1:AA:1371:G:OP2	9:AI:11:LYS:HD2	2.21	0.41
2:AB:22:LYS:H	2:AB:40:HIS:HE1	1.67	0.41
2:AB:50:GLU:OE1	2:AB:202:PRO:HD3	2.21	0.41
2:AB:85:ALA:HB1	2:AB:92:TYR:CD2	2.56	0.41
3:AC:30:ARG:HB2	14:AN:36:PHE:O	2.21	0.41
4:AD:13:ARG:HA	4:AD:33:MET:CE	2.51	0.41
4:AD:61:LYS:HE2	4:AD:61:LYS:HB3	1.92	0.41
4:AD:103:ASN:C	4:AD:105:VAL:H	2.27	0.41
5:AE:139:LEU:C	5:AE:141:GLN:H	2.27	0.41
8:AH:125:ARG:HE	8:AH:125:ARG:HB2	1.67	0.41
10:AJ:48:THR:HA	10:AJ:62:HIS:CB	2.50	0.41
12:AL:91:LYS:O	12:AL:92:ASP:HB2	2.20	0.41
13:AM:83:ASP:CG	13:AM:84:ILE:N	2.77	0.41
15:AO:88:ARG:HD3	15:AO:88:ARG:HA	1.89	0.41
19:AS:16:LEU:O	19:AS:17:GLU:C	2.64	0.41
22:AW:52:G:N3	22:AW:63:G:O6	2.54	0.41
24:AY:27:LYS:HE3	24:AY:31:ARG:NH1	2.36	0.41
24:AY:303:ARG:N	24:AY:304:PRO:CD	2.84	0.41
25:B0:14:ARG:NH1	35:BA:2279:G:O6	2.51	0.41
25:B0:48:GLY:HA3	25:B0:80:HIS:ND1	2.36	0.41
26:B1:12:PRO:HG3	35:BA:1365:A:H5'	2.02	0.41
27:B2:19:VAL:O	27:B2:20:GLU:C	2.64	0.41
29:B4:14:ILE:HD11	29:B4:24:THR:OG1	2.20	0.41
29:B4:30:GLU:O	29:B4:31:ILE:HD13	2.21	0.41
31:B6:19:ARG:HG3	31:B6:20:ASN:H	1.86	0.41
34:B9:30:PRO:O	34:B9:32:HIS:N	2.54	0.41
35:BA:155:U:H3	35:BA:156:U:H3	1.69	0.41
35:BA:452:G:C4	35:BA:458:G:C6	3.08	0.41
35:BA:637:A:O5'	48:BP:116:GLY:HA2	2.20	0.41
35:BA:860:U:H5	35:BA:917:A:H62	1.68	0.41
35:BA:889:C:O2'	35:BA:890:A:O5'	2.33	0.41
35:BA:894:C:O2'	35:BA:895:U:H5'	2.20	0.41
35:BA:943:U:OP1	48:BP:38:GLN:HB3	2.21	0.41
35:BA:957:A:N6	35:BA:959:A:C2	2.89	0.41
35:BA:1067:A:H2'	35:BA:1068:G:H5'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1208:C:C2	35:BA:1239:G:N2	2.89	0.41
35:BA:1494:A:C2'	35:BA:1495:A:H5"	2.51	0.41
35:BA:2335:A:O2'	35:BA:2336:A:H5"	2.21	0.41
35:BA:2620:C:O2'	39:BE:157:ALA:O	2.33	0.41
35:BA:2649:U:H2'	35:BA:2650:U:H6	1.85	0.41
35:BA:2660:A:C4	35:BA:2661:G:H4'	2.55	0.41
35:BA:2693:A:H2'	35:BA:2694:G:C8	2.56	0.41
37:BC:172:ILE:HD12	37:BC:172:ILE:HA	1.96	0.41
38:BD:95:LEU:HD13	38:BD:97:TYR:CE1	2.56	0.41
39:BE:34:VAL:CG1	39:BE:48:GLN:HG2	2.50	0.41
40:BF:53:THR:HG23	40:BF:55:GLY:N	2.21	0.41
41:BG:109:VAL:CG1	41:BG:142:PRO:HD3	2.50	0.41
45:BK:20:ALA:HA	45:BK:24:GLY:HA3	2.03	0.41
45:BK:59:ILE:N	45:BK:59:ILE:HD12	2.36	0.41
46:BN:57:ALA:O	46:BN:58:ASP:C	2.63	0.41
48:BP:108:LYS:O	48:BP:110:TYR:N	2.54	0.41
50:BR:9:LYS:HE3	50:BR:9:LYS:HB2	1.71	0.41
52:BT:54:ARG:HA	52:BT:59:THR:HB	2.02	0.41
54:BV:13:ARG:HG3	54:BV:13:ARG:HH11	1.86	0.41
55:BW:91:GLY:O	55:BW:92:ARG:C	2.63	0.41
56:BX:65:ARG:O	56:BX:66:LEU:HB2	2.21	0.41
57:BY:88:LYS:NZ	57:BY:93:GLY:HA3	2.35	0.41
58:BZ:40:ASP:CG	58:BZ:42:VAL:HG12	2.46	0.41
58:BZ:73:GLN:HB3	58:BZ:87:ASP:CG	2.46	0.41
1:CA:79:G:H22	1:CA:80:G:N2	2.19	0.41
1:CA:457:C:H2'	1:CA:458:C:C6	2.55	0.41
1:CA:472:A:O2'	16:CP:81:ARG:HA	2.21	0.41
1:CA:473:G:H2'	1:CA:474:G:H8	1.85	0.41
1:CA:562:C:N3	12:CL:16:GLU:HB3	2.36	0.41
1:CA:591:U:OP2	8:CH:30:ARG:NH1	2.53	0.41
1:CA:624:C:H4'	16:CP:10:GLY:C	2.46	0.41
1:CA:980:C:O2	14:CN:19:ARG:HA	2.21	0.41
1:CA:1014:A:H2	1:CA:1219:U:H1'	1.85	0.41
1:CA:1180:A:H5'	9:CI:103:THR:HG23	2.03	0.41
1:CA:1350:A:H2'	1:CA:1351:U:O4'	2.21	0.41
1:CA:1505:G:H5"	1:CA:1506:U:OP1	2.20	0.41
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	2.03	0.41
4:CD:64:LEU:O	4:CD:67:ILE:HB	2.21	0.41
8:CH:14:ARG:O	8:CH:18:ARG:HD3	2.21	0.41
9:CI:53:VAL:O	9:CI:54:ASP:HB2	2.21	0.41
11:CK:78:GLN:O	11:CK:103:LEU:HD13	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:45:THR:HG23	16:CP:46:PRO:HD2	2.02	0.41
16:CP:72:ARG:C	16:CP:74:LEU:N	2.79	0.41
16:CP:72:ARG:C	16:CP:74:LEU:H	2.29	0.41
19:CS:22:LEU:HB3	19:CS:47:HIS:HE2	1.86	0.41
19:CS:51:VAL:O	19:CS:57:HIS:HA	2.21	0.41
21:CU:17:THR:O	21:CU:22:ARG:NH1	2.53	0.41
22:CV:25:C:C2	22:CV:26:A:C8	3.08	0.41
23:CX:21:A:C2	24:CY:201:ARG:HD3	2.56	0.41
24:CY:8:GLN:HA	24:CY:11:GLU:OE1	2.21	0.41
24:CY:97:LYS:C	24:CY:99:ASP:H	2.29	0.41
24:CY:114:LYS:HE3	24:CY:214:VAL:HA	2.03	0.41
24:CY:267:SER:HB3	25:D0:3:HIS:HD1	1.86	0.41
24:CY:270:LYS:CD	25:D0:5:LYS:HD3	2.50	0.41
26:D1:68:PRO:C	26:D1:70:VAL:H	2.29	0.41
31:D6:27:LYS:HD2	35:DA:2285:C:OP2	2.20	0.41
35:DA:25:U:H5"	55:DW:80:PRO:HD3	2.03	0.41
35:DA:352:G:O2'	35:DA:353:G:O5'	2.36	0.41
35:DA:363(C):G:H2'	35:DA:363(D):G:H8	1.85	0.41
35:DA:564:C:OP1	54:DV:77:ALA:HB2	2.21	0.41
35:DA:572:A:H2'	35:DA:573:G:O4'	2.20	0.41
35:DA:654(D):G:N2	35:DA:654(P):C:H42	2.17	0.41
35:DA:733:G:C8	35:DA:761:A:N6	2.89	0.41
35:DA:772:C:O2'	35:DA:773:U:H5'	2.21	0.41
35:DA:852:G:H2'	35:DA:853:G:C8	2.56	0.41
35:DA:1039:G:H2'	35:DA:1040:C:C6	2.55	0.41
35:DA:1071:G:H1'	35:DA:1089:G:C8	2.56	0.41
35:DA:1280:G:C2'	35:DA:1281:G:H5"	2.51	0.41
35:DA:1323:U:OP1	55:DW:98:LYS:NZ	2.54	0.41
35:DA:2531:A:H2'	35:DA:2532:G:H8	1.85	0.41
35:DA:2607:G:H2'	35:DA:2608:G:O4'	2.21	0.41
35:DA:2635:C:H4'	39:DE:78:LEU:CD1	2.51	0.41
35:DA:2687:U:H2'	35:DA:2688:U:O4'	2.21	0.41
35:DA:2704:C:H2'	35:DA:2705:A:O4'	2.21	0.41
35:DA:2726:U:O2'	35:DA:2727:G:H8	2.04	0.41
35:DA:2789:C:N3	35:DA:2894:G:O6	2.53	0.41
38:DD:53:PHE:CA	38:DD:218:ARG:HB2	2.51	0.41
38:DD:73:VAL:C	38:DD:75:ILE:H	2.28	0.41
38:DD:115:GLN:HG2	38:DD:116:GLN:N	2.36	0.41
39:DE:110:GLY:CA	39:DE:162:ALA:HB2	2.51	0.41
40:DF:18:ARG:CZ	40:DF:199:TRP:CZ3	3.04	0.41
40:DF:21:ALA:C	40:DF:23:ASP:N	2.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DF:164:ARG:HG2	40:DF:164:ARG:NH1	2.31	0.41
41:DG:10:LYS:HG3	41:DG:14:GLU:OE2	2.21	0.41
41:DG:113:ARG:CA	41:DG:113:ARG:HE	2.34	0.41
41:DG:125:PHE:CE1	41:DG:180:PHE:CE2	3.09	0.41
43:DI:29:TYR:HD2	43:DI:30:LEU:HD23	1.86	0.41
43:DI:57:ARG:HG2	43:DI:61:ARG:NH1	2.30	0.41
43:DI:129:THR:HG22	43:DI:130:TYR:N	2.36	0.41
49:DQ:63:LYS:HD3	49:DQ:65:PHE:CZ	2.55	0.41
50:DR:7:GLY:C	50:DR:8:ARG:NE	2.78	0.41
50:DR:46:GLY:HA2	50:DR:49:ASP:HB2	2.01	0.41
50:DR:79:LEU:HD22	50:DR:83:ILE:HB	2.02	0.41
51:DS:28:VAL:O	51:DS:89:ARG:HD2	2.21	0.41
52:DT:107:ASP:H	52:DT:110:ILE:HG12	1.85	0.41
53:DU:95:LEU:HD13	54:DV:4:ILE:CG2	2.51	0.41
54:DV:15:GLU:O	54:DV:16:PRO:C	2.64	0.41
54:DV:21:ARG:HG2	54:DV:91:TYR:CG	2.55	0.41
55:DW:99:ARG:HH11	55:DW:99:ARG:HG2	1.86	0.41
57:DY:34:LYS:HB3	57:DY:34:LYS:HE2	1.84	0.41
57:DY:38:ILE:CG2	57:DY:39:VAL:N	2.83	0.41
1:AA:171:A:H2'	1:AA:172:A:C8	2.56	0.41
1:AA:276:G:O2'	17:AQ:68:ARG:NH1	2.54	0.41
1:AA:372:C:H42	1:AA:389:A:N6	2.14	0.41
1:AA:408:A:H2'	1:AA:409:G:H8	1.85	0.41
1:AA:1084:G:C5	1:AA:1085:U:C4	3.09	0.41
1:AA:1127:G:H1'	1:AA:1148:U:N3	2.36	0.41
1:AA:1184:G:H2'	1:AA:1185:G:H8	1.86	0.41
1:AA:1417:G:C6	1:AA:1482:G:C6	3.08	0.41
9:AI:40:LEU:C	9:AI:42:ARG:N	2.68	0.41
10:AJ:38:ILE:HG12	10:AJ:71:LEU:O	2.21	0.41
10:AJ:90:LEU:N	10:AJ:91:PRO:HD3	2.35	0.41
13:AM:2:ALA:N	13:AM:9:ILE:HG23	2.35	0.41
22:AW:50:U:O2'	22:AW:65:G:N1	2.48	0.41
27:B2:12:GLU:OE2	27:B2:16:LEU:HD21	2.21	0.41
35:BA:130:C:OP1	35:BA:1348:G:N2	2.46	0.41
35:BA:586:A:H5'	40:BF:89:VAL:HG21	2.03	0.41
35:BA:654(P):C:H2'	35:BA:654(Q):C:C6	2.56	0.41
35:BA:729:G:O2'	35:BA:763:G:H4'	2.21	0.41
35:BA:779:U:H2'	35:BA:780:G:O4'	2.21	0.41
35:BA:896:A:H5"	58:BZ:147:GLY:HA3	2.02	0.41
35:BA:975(A):G:H1'	35:BA:990:A:C2	2.56	0.41
35:BA:1050:A:C6	35:BA:1051:G:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1075:C:OP1	49:BQ:59:ARG:NH1	2.54	0.41
35:BA:1175:U:H1'	35:BA:1177:A:C2	2.56	0.41
35:BA:1628:G:H2'	35:BA:1629:U:C6	2.56	0.41
35:BA:1647:G:OP2	35:BA:1647:G:H3'	2.21	0.41
35:BA:1769:G:C6	35:BA:1984:G:C6	3.09	0.41
35:BA:1801:G:OP2	38:BD:154:LYS:HE2	2.21	0.41
35:BA:2037:G:H2'	35:BA:2038:G:H8	1.81	0.41
35:BA:2846:G:OP2	52:BT:54:ARG:HB2	2.20	0.41
37:BC:14:LYS:O	37:BC:29:LEU:HD21	2.21	0.41
37:BC:23:ILE:HG21	37:BC:191:ARG:HH12	1.85	0.41
37:BC:225:ILE:HD12	37:BC:225:ILE:O	2.20	0.41
39:BE:132:HIS:CD2	39:BE:135:HIS:NE2	2.89	0.41
41:BG:38:VAL:CG2	41:BG:93:THR:HG23	2.51	0.41
41:BG:173:LEU:HD23	41:BG:173:LEU:HA	1.87	0.41
42:BH:41:MET:CG	42:BH:42:ARG:N	2.82	0.41
43:BI:119:PRO:O	43:BI:120:ILE:C	2.63	0.41
46:BN:34:LEU:O	46:BN:49:GLY:HA3	2.21	0.41
47:BO:43:VAL:HG21	47:BO:52:VAL:CG1	2.51	0.41
48:BP:126:VAL:HG12	48:BP:148:LEU:HD11	2.02	0.41
55:BW:11:ARG:HG3	55:BW:11:ARG:O	2.21	0.41
56:BX:71:GLY:C	56:BX:72:LYS:HD2	2.46	0.41
1:CA:12:U:H2'	1:CA:13:U:H5"	2.02	0.41
1:CA:15:G:H2'	1:CA:16:A:C8	2.56	0.41
1:CA:376:G:H2'	1:CA:377:G:H8	1.86	0.41
1:CA:652:U:O4	1:CA:752:G:O2'	2.39	0.41
1:CA:887:G:H2'	1:CA:888:G:O4'	2.21	0.41
1:CA:954:G:H21	1:CA:1227:A:N6	2.19	0.41
1:CA:1022:G:H2'	1:CA:1023:G:H8	1.86	0.41
1:CA:1027:C:O5'	1:CA:1027:C:H6	2.04	0.41
1:CA:1028:C:N4	1:CA:1034:G:H21	2.19	0.41
1:CA:1522:U:C2	1:CA:1523:G:C8	3.09	0.41
2:CB:77:ALA:O	2:CB:78:GLN:C	2.63	0.41
4:CD:33:MET:C	4:CD:35:ARG:N	2.70	0.41
7:CG:15:ASP:OD1	7:CG:16:LEU:N	2.53	0.41
9:CI:56:LEU:HD23	9:CI:56:LEU:O	2.21	0.41
13:CM:115:LYS:C	13:CM:117:VAL:N	2.78	0.41
22:CW:16:U:C4	22:CW:18:G:H2'	2.56	0.41
24:CY:98:LEU:HD23	24:CY:98:LEU:O	2.21	0.41
24:CY:107:LEU:O	24:CY:107:LEU:HD23	2.21	0.41
24:CY:122:PRO:HG3	24:CY:164:ILE:O	2.21	0.41
35:DA:654(J):A:O2'	35:DA:654(K):C:OP1	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:816:C:H2'	35:DA:817:C:H6	1.86	0.41
35:DA:1044:G:HO2'	35:DA:1111:A:H61	1.60	0.41
35:DA:1097:U:C2	45:DK:30:HIS:CE1	3.09	0.41
35:DA:1494:A:H3'	35:DA:1494:A:N3	2.36	0.41
35:DA:1510:G:H2'	35:DA:1511:C:H6	1.85	0.41
35:DA:2141:G:H2'	35:DA:2142:C:H6	1.84	0.41
35:DA:2722:G:H2'	35:DA:2723:C:H6	1.85	0.41
35:DA:2815:C:H2'	35:DA:2816:C:H6	1.85	0.41
37:DC:54:ARG:HD3	37:DC:54:ARG:HA	1.89	0.41
40:DF:163:VAL:O	40:DF:166:ALA:HB3	2.21	0.41
45:DK:98:ARG:NH2	45:DK:139:VAL:HG22	2.35	0.41
45:DK:111:LYS:HB3	45:DK:115:LEU:HD11	2.03	0.41
46:DN:16:ILE:HG23	46:DN:54:VAL:HG22	2.03	0.41
49:DQ:133:ARG:HB3	49:DQ:134:ARG:H	1.73	0.41
49:DQ:134:ARG:NH2	58:DZ:122:ARG:NH1	2.69	0.41
51:DS:14:VAL:HG12	51:DS:16:ASN:H	1.86	0.41
57:DY:59:GLY:O	57:DY:60:PHE:HD1	2.04	0.41
1:AA:438:G:N1	1:AA:495:A:OP2	2.49	0.40
1:AA:509:A:H5"	4:AD:55:ALA:HB2	2.03	0.40
1:AA:828:A:H62	1:AA:858:G:H21	1.68	0.40
1:AA:936:C:H2'	1:AA:937:A:O4'	2.20	0.40
2:AB:16:HIS:HB3	2:AB:210:SER:CA	2.51	0.40
3:AC:152:ILE:O	3:AC:198:VAL:HA	2.21	0.40
4:AD:60:GLU:HG2	4:AD:202:LEU:HD12	2.03	0.40
6:AF:8:ILE:HG22	6:AF:9:VAL:N	2.35	0.40
9:AI:8:GLY:O	9:AI:14:VAL:HA	2.21	0.40
11:AK:53:SER:C	11:AK:55:LYS:H	2.28	0.40
12:AL:115:LYS:HB3	12:AL:116:SER:H	1.69	0.40
17:AQ:46:ASP:C	17:AQ:48:GLU:H	2.29	0.40
20:AT:87:LYS:O	20:AT:91:LEU:HG	2.21	0.40
22:AW:18:G:H1'	22:AW:58:A:C2	2.56	0.40
22:AW:23:A:H2'	22:AW:24:G:H8	1.86	0.40
25:B0:25:ARG:HD2	25:B0:29:GLN:NE2	2.36	0.40
27:B2:13:ALA:C	27:B2:15:LYS:N	2.71	0.40
27:B2:32:LEU:HD22	27:B2:36:ARG:HH11	1.86	0.40
35:BA:212:G:H2'	35:BA:213:A:C8	2.56	0.40
35:BA:518:G:H4'	55:BW:18:ARG:NH1	2.36	0.40
35:BA:570:G:H2'	35:BA:2030:A:C5	2.55	0.40
35:BA:654(U):A:N7	35:BA:654(V):A:C6	2.89	0.40
35:BA:958:U:H5"	49:BQ:14:ARG:CD	2.50	0.40
35:BA:1061:U:H4'	35:BA:1070:A:O3'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1348:G:N1	35:BA:1599:C:C4	2.89	0.40
35:BA:1482:G:N2	35:BA:1507:A:H1'	2.36	0.40
35:BA:2303:G:H21	41:BG:132:ASN:CG	2.29	0.40
35:BA:2877:G:H2'	35:BA:2878:U:O4'	2.21	0.40
39:BE:75:VAL:C	39:BE:77:ILE:N	2.80	0.40
46:BN:133:GLN:C	46:BN:134:ARG:HG2	2.46	0.40
48:BP:38:GLN:HG3	48:BP:39:LYS:N	2.24	0.40
48:BP:101:VAL:C	48:BP:103:ALA:N	2.79	0.40
48:BP:108:LYS:HD2	48:BP:108:LYS:N	2.36	0.40
56:BX:39:ILE:HG12	56:BX:39:ILE:H	1.69	0.40
57:BY:13:VAL:HG13	57:BY:14:LEU:N	2.35	0.40
57:BY:95:LYS:HG2	57:BY:96:ILE:N	2.35	0.40
58:BZ:57:ILE:N	58:BZ:57:ILE:HD12	2.36	0.40
1:CA:172:A:OP2	1:CA:172:A:H8	2.04	0.40
1:CA:310:G:H2'	1:CA:311:C:C6	2.55	0.40
1:CA:559:A:H4'	1:CA:560:U:C5'	2.51	0.40
1:CA:825:G:H1'	8:CH:2:LEU:HD21	2.03	0.40
1:CA:1152:A:H2'	1:CA:1153:C:H6	1.86	0.40
1:CA:1298:C:N4	7:CG:114:ARG:HB3	2.37	0.40
3:CC:91:LEU:C	3:CC:93:LYS:N	2.79	0.40
12:CL:119:LYS:O	12:CL:120:TYR:HB2	2.22	0.40
24:CY:16:TYR:HD1	24:CY:16:TYR:O	2.03	0.40
24:CY:129:ALA:HA	24:CY:204:SER:HB3	2.02	0.40
26:D1:84:GLY:O	26:D1:85:LEU:C	2.64	0.40
28:D3:8:LEU:HD13	28:D3:31:LEU:HA	2.03	0.40
35:DA:118:A:OP2	35:DA:119:A:H2'	2.21	0.40
35:DA:157:U:H6	35:DA:157:U:H2'	1.67	0.40
35:DA:272(J):C:C4	35:DA:274:G:C8	3.09	0.40
35:DA:528:A:O2'	35:DA:529:A:H5'	2.21	0.40
35:DA:836:G:H2'	35:DA:837:C:C6	2.56	0.40
35:DA:960:A:C8	35:DA:962:G:C8	3.08	0.40
35:DA:1050:A:C2	35:DA:2751:G:C4	3.10	0.40
35:DA:1056:G:N2	35:DA:1102:C:P	2.94	0.40
35:DA:1602:U:H3'	35:DA:1603:A:H5'	2.02	0.40
35:DA:2111:C:C4	35:DA:2145:C:H2'	2.56	0.40
35:DA:2179:C:H4'	35:DA:2179:C:OP1	2.22	0.40
35:DA:2472:G:C5'	35:DA:2473:U:H5"	2.49	0.40
38:DD:48:ARG:HG3	38:DD:48:ARG:NH1	2.37	0.40
39:DE:9:VAL:HG22	39:DE:25:VAL:O	2.21	0.40
39:DE:132:HIS:CD2	39:DE:135:HIS:CE1	3.09	0.40
40:DF:199:TRP:O	40:DF:203:GLN:HG2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DH:89:ILE:HD11	42:DH:95:ARG:CA	2.45	0.40
43:DI:109:ILE:HG13	43:DI:130:TYR:CZ	2.56	0.40
45:DK:35:MET:SD	45:DK:35:MET:N	2.90	0.40
45:DK:59:ILE:N	45:DK:59:ILE:HD12	2.36	0.40
45:DK:72:PRO:HA	45:DK:73:PRO:HD3	1.95	0.40
45:DK:117:THR:HG21	45:DK:122:ALA:HB1	2.04	0.40
46:DN:58:ASP:C	46:DN:60:ILE:N	2.65	0.40
48:DP:83:VAL:HG13	48:DP:114:ILE:HA	2.02	0.40
53:DU:91:ASP:O	53:DU:95:LEU:HB2	2.21	0.40
56:DX:12:VAL:HG23	56:DX:13:LEU:N	2.33	0.40
58:DZ:99:TYR:CZ	58:DZ:125:LEU:HD12	2.56	0.40
1:AA:97:G:O2'	1:AA:98:G:H5"	2.21	0.40
1:AA:170:U:O2'	1:AA:171:A:H5'	2.20	0.40
1:AA:272:C:C2	1:AA:273:A:C8	3.10	0.40
1:AA:942:G:N2	9:AI:124:GLN:OE1	2.29	0.40
1:AA:1106:G:OP1	3:AC:172:ARG:HD3	2.21	0.40
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.21	0.40
1:AA:1158:C:C4	1:AA:1160:G:C5	3.10	0.40
1:AA:1228:C:O2'	13:AM:118:ALA:HB2	2.21	0.40
1:AA:1298:C:P	7:AG:114:ARG:HH12	2.45	0.40
2:AB:142:LEU:C	2:AB:144:ARG:N	2.77	0.40
19:AS:46:GLY:N	19:AS:62:ILE:HG23	2.36	0.40
24:AY:83:GLU:C	24:AY:84:ARG:HD3	2.47	0.40
26:B1:84:GLY:O	26:B1:86:SER:N	2.54	0.40
26:B1:92:LYS:HG3	26:B1:93:GLU:N	2.36	0.40
32:B7:5:TRP:CZ3	35:BA:464:U:H4'	2.56	0.40
34:B9:24:TYR:CE2	34:B9:35:ARG:HG3	2.55	0.40
35:BA:141:A:H8	35:BA:1408:C:O2'	2.03	0.40
35:BA:654(R):C:H2'	35:BA:654(S):G:C8	2.56	0.40
35:BA:671:C:H2'	35:BA:672:C:H6	1.86	0.40
35:BA:1485:G:N3	35:BA:1505:C:N4	2.69	0.40
35:BA:1779:U:C5	35:BA:1784:A:N7	2.84	0.40
35:BA:1876:A:OP2	35:BA:1876:A:H8	2.04	0.40
35:BA:2092:U:H4'	35:BA:2093:G:C5'	2.51	0.40
35:BA:2342:C:O2'	35:BA:2374:C:H5"	2.21	0.40
35:BA:2531:A:H2'	35:BA:2532:G:H8	1.87	0.40
38:BD:51:VAL:HG12	38:BD:54:ARG:HG2	2.03	0.40
42:BH:49:VAL:HG23	42:BH:50:VAL:N	2.36	0.40
45:BK:76:TYR:O	45:BK:79:ARG:N	2.51	0.40
48:BP:143:GLY:O	48:BP:144:GLU:HB2	2.21	0.40
53:BU:81:HIS:CE1	53:BU:85:LYS:HD2	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:45:VAL:CG1	57:BY:60:PHE:HD2	2.34	0.40
1:CA:92:C:C2	1:CA:93:G:C8	3.09	0.40
1:CA:106:C:H2'	1:CA:107:G:H8	1.85	0.40
1:CA:225:C:C2	1:CA:226:G:C8	3.10	0.40
1:CA:1137:C:H4'	1:CA:1138:G:C2	2.56	0.40
1:CA:1425:U:H2'	1:CA:1426:C:C6	2.56	0.40
2:CB:72:GLY:HA2	2:CB:165:VAL:HG22	2.03	0.40
2:CB:112:VAL:O	2:CB:116:GLU:HG2	2.21	0.40
7:CG:145:ALA:O	7:CG:146:GLU:HB3	2.21	0.40
10:CJ:16:LEU:HD23	10:CJ:94:VAL:HG11	2.04	0.40
12:CL:85:ILE:HD12	12:CL:85:ILE:HA	1.86	0.40
16:CP:12:LYS:C	16:CP:14:ASN:H	2.29	0.40
24:CY:246:ASP:H	35:DA:2493:U:H5"	1.85	0.40
24:CY:295:LEU:CD1	24:CY:299:ARG:HH21	2.34	0.40
24:CY:306:GLU:HG3	24:CY:307:TRP:H	1.85	0.40
31:D6:17:LYS:HB2	31:D6:18:ARG:HH12	1.86	0.40
35:DA:435:C:H2'	35:DA:436:C:H5'	2.04	0.40
35:DA:790:C:H6	35:DA:790:C:H2'	1.62	0.40
35:DA:1048:A:N6	35:DA:1052:C:H42	1.93	0.40
35:DA:1683:C:C2	35:DA:1684:C:C5	3.09	0.40
35:DA:2114:A:H2'	35:DA:2115:G:O4'	2.22	0.40
35:DA:2455:G:H2'	35:DA:2456:C:H6	1.86	0.40
35:DA:2468:G:H22	35:DA:2481:G:H2'	1.85	0.40
36:DB:30:C:C4	36:DB:31:C:C6	3.10	0.40
37:DC:52:PRO:O	37:DC:54:ARG:N	2.55	0.40
38:DD:145:VAL:HG22	38:DD:191:ALA:HB1	2.02	0.40
39:DE:75:VAL:C	39:DE:77:ILE:N	2.79	0.40
39:DE:109:LYS:HB2	50:DR:2:ARG:HH21	1.85	0.40
41:DG:16:ARG:N	41:DG:17:PRO:HD2	2.36	0.40
42:DH:41:MET:HE3	42:DH:42:ARG:N	2.35	0.40
42:DH:127:GLU:HB3	42:DH:128:PRO:HD2	2.03	0.40
43:DI:15:VAL:O	43:DI:17:GLN:N	2.54	0.40
43:DI:51:ILE:C	43:DI:53:ALA:H	2.29	0.40
45:DK:19:PRO:HB2	45:DK:21:PRO:HD2	2.03	0.40
45:DK:53:VAL:HG23	45:DK:53:VAL:O	2.21	0.40
47:DO:3:GLN:HB2	47:DO:4:PRO:HD2	2.04	0.40
51:DS:18:ILE:C	51:DS:20:ARG:N	2.78	0.40
52:DT:117:ASP:O	52:DT:118:ARG:C	2.64	0.40
54:DV:69:LYS:HA	54:DV:87:HIS:O	2.21	0.40
57:DY:26:LYS:O	57:DY:27:VAL:C	2.64	0.40
58:DZ:80:ARG:O	58:DZ:81:ARG:C	2.64	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:153:SER:H	58:DZ:167:PRO:CB	2.30	0.40
1:AA:324:G:N2	1:AA:326:G:H3'	2.35	0.40
1:AA:332:G:C2	1:AA:333:G:C8	3.10	0.40
1:AA:784:C:H2'	1:AA:785:G:H8	1.87	0.40
1:AA:820:U:H4'	1:AA:821:G:OP2	2.21	0.40
1:AA:984:C:H2'	1:AA:985:C:C6	2.56	0.40
1:AA:1502:A:H2	1:AA:1505:G:H22	1.64	0.40
2:AB:138:LEU:O	2:AB:141:GLU:HB3	2.21	0.40
2:AB:164:VAL:HG12	2:AB:165:VAL:N	2.36	0.40
4:AD:88:VAL:HG13	5:AE:97:GLY:CA	2.51	0.40
4:AD:126:ILE:HG22	4:AD:127:THR:H	1.87	0.40
9:AI:97:LYS:HA	9:AI:102:LEU:HD13	2.02	0.40
11:AK:48:ILE:HD11	11:AK:64:ALA:HA	2.03	0.40
16:AP:3:LYS:C	16:AP:4:ILE:HD12	2.46	0.40
22:AW:16:U:C5	22:AW:18:G:H2'	2.55	0.40
25:B0:51:VAL:N	25:B0:62:LEU:HD12	2.37	0.40
30:B5:3:LYS:HB2	35:BA:747:U:C5	2.57	0.40
31:B6:11:LEU:O	31:B6:23:THR:HA	2.22	0.40
31:B6:39:TYR:CG	31:B6:40:CYS:N	2.90	0.40
33:B8:52:LYS:N	33:B8:53:PRO:CD	2.83	0.40
35:BA:181:A:H2'	35:BA:182:A:C8	2.57	0.40
35:BA:272(E):G:C6	35:BA:364:C:N4	2.89	0.40
35:BA:272(I):U:C5	35:BA:363(A):A:N1	2.89	0.40
35:BA:272(J):C:H6	35:BA:272(J):C:H5"	1.87	0.40
35:BA:443:A:OP1	40:BF:46:ARG:HB2	2.21	0.40
35:BA:532:A:H4'	35:BA:533:G:C8	2.57	0.40
35:BA:573:G:N1	35:BA:2031:A:OP2	2.34	0.40
35:BA:857:C:O2'	35:BA:858:U:H5'	2.22	0.40
35:BA:1601:G:OP2	56:BX:58:HIS:HD2	2.05	0.40
35:BA:1635:G:H2'	35:BA:1636:C:C6	2.56	0.40
37:BC:46:ALA:O	37:BC:172:ILE:HG22	2.21	0.40
37:BC:49:GLY:HA2	37:BC:211:ARG:NH2	2.37	0.40
38:BD:45:ASN:CG	38:BD:46:GLN:H	2.29	0.40
41:BG:64:THR:OG1	41:BG:94:LEU:HD21	2.21	0.40
41:BG:141:PHE:HA	41:BG:142:PRO:HD2	1.92	0.40
42:BH:89:ILE:HB	42:BH:162:ILE:HD13	2.04	0.40
46:BN:1:MET:C	46:BN:2:LYS:HG3	2.46	0.40
52:BT:76:PHE:HA	52:BT:77:PRO:HD3	1.94	0.40
58:BZ:98:MET:O	58:BZ:98:MET:HG3	2.21	0.40
1:CA:1074:G:O2'	1:CA:1101:A:N1	2.44	0.40
1:CA:1104:G:H4'	2:CB:111:ARG:NH1	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:119:GLU:O	2:CB:122:PHE:N	2.53	0.40
5:CE:57:LYS:O	5:CE:61:TYR:HD2	2.04	0.40
8:CH:101:PRO:HG2	8:CH:133:LEU:HD11	2.02	0.40
10:CJ:75:ILE:HG13	10:CJ:76:ASN:H	1.85	0.40
19:CS:29:ARG:HD2	19:CS:30:LEU:H	1.87	0.40
29:D4:15:ILE:HA	29:D4:21:VAL:HG22	2.02	0.40
29:D4:31:ILE:HG22	29:D4:33:VAL:HG23	2.03	0.40
35:DA:310:A:C4	35:DA:312:G:C8	3.09	0.40
35:DA:579:G:O2'	35:DA:2019:A:OP1	2.33	0.40
35:DA:646:A:H2'	35:DA:647:G:O4'	2.20	0.40
35:DA:949:C:H2'	35:DA:950:G:C8	2.55	0.40
35:DA:2056:G:N3	35:DA:2056:G:H2'	2.36	0.40
35:DA:2592:G:C5	35:DA:2593:U:C5	3.09	0.40
41:DG:17:PRO:O	41:DG:20:ILE:N	2.53	0.40
42:DH:115:VAL:HG11	42:DH:148:ILE:HD11	2.03	0.40
44:DJ:61:UNK:O	44:DJ:64:UNK:N	2.55	0.40
46:DN:108:PRO:O	46:DN:113:GLY:HA3	2.22	0.40
50:DR:2:ARG:HD2	50:DR:5:LYS:CE	2.50	0.40
51:DS:27:SER:O	51:DS:37:ALA:HA	2.21	0.40
55:DW:3:ALA:O	55:DW:106:ILE:HA	2.21	0.40
56:DX:47:PHE:O	56:DX:48:LYS:C	2.64	0.40
58:DZ:97:GLU:HA	58:DZ:126:VAL:O	2.21	0.40
58:DZ:153:SER:HB3	58:DZ:167:PRO:HG3	2.02	0.40
1:AA:259:G:H2'	1:AA:260:G:C8	2.57	0.40
1:AA:735:C:H2'	1:AA:736:C:H6	1.87	0.40
1:AA:1130:A:C6	1:AA:1131:G:C6	3.10	0.40
1:AA:1238:A:H2'	1:AA:1238:A:N3	2.36	0.40
3:AC:6:HIS:CD2	3:AC:7:PRO:HD2	2.43	0.40
3:AC:179:ARG:O	3:AC:206:GLU:HG3	2.22	0.40
5:AE:127:ASN:O	5:AE:128:PRO:C	2.65	0.40
7:AG:20:ASP:HB3	7:AG:23:VAL:H	1.86	0.40
8:AH:5:PRO:O	8:AH:8:ASP:HB3	2.22	0.40
8:AH:26:VAL:O	8:AH:27:PRO:C	2.64	0.40
9:AI:127:LYS:NZ	22:AV:33:U:OP1	2.51	0.40
14:AN:34:TYR:CD1	14:AN:34:TYR:N	2.90	0.40
15:AO:82:ILE:HG23	15:AO:83:GLU:N	2.36	0.40
16:AP:19:ILE:HD11	16:AP:39:TYR:HB2	2.02	0.40
22:AV:25:C:C2	22:AV:26:A:C8	3.09	0.40
26:B1:32:LYS:HB2	35:BA:387:U:O3'	2.22	0.40
35:BA:271(U):G:H2'	35:BA:271(V):G:H8	1.86	0.40
35:BA:332:A:OP2	35:BA:332:A:H3'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:468:G:H2'	35:BA:469:G:O4'	2.21	0.40
35:BA:968:G:H2'	35:BA:969:U:C6	2.57	0.40
35:BA:1472:A:H2'	35:BA:1473:G:C8	2.57	0.40
35:BA:1689:A:H62	35:BA:1698:A:H2	1.68	0.40
35:BA:1709:U:H2'	35:BA:1710:C:C6	2.56	0.40
35:BA:2133:G:N1	35:BA:2157:G:C6	2.89	0.40
35:BA:2321:G:N3	35:BA:2321:G:H2'	2.37	0.40
35:BA:2376:A:H2'	35:BA:2377:A:O4'	2.22	0.40
35:BA:2512:C:H2'	35:BA:2513:G:O4'	2.22	0.40
36:BB:13:A:O2'	36:BB:14:U:H3'	2.22	0.40
36:BB:52:A:HO2'	36:BB:53:A:H8	1.67	0.40
36:BB:87:G:H3'	36:BB:88:C:H5"	2.03	0.40
37:BC:45:HIS:HD2	37:BC:216:THR:CG2	2.34	0.40
38:BD:139:GLY:H	38:BD:165:ILE:HB	1.86	0.40
39:BE:61:ARG:HB3	39:BE:62:PRO:HD3	2.04	0.40
39:BE:91:VAL:HG13	39:BE:95:ILE:HG13	2.02	0.40
41:BG:36:LYS:HG2	41:BG:38:VAL:HG23	2.03	0.40
48:BP:47:ASP:HB3	48:BP:48:PRO:O	2.21	0.40
48:BP:57:THR:O	48:BP:58:THR:OG1	2.37	0.40
49:BQ:67:ARG:HG2	49:BQ:67:ARG:NH1	2.36	0.40
49:BQ:137:TYR:OH	58:BZ:81:ARG:HD3	2.22	0.40
51:BS:13:ARG:O	51:BS:15:ARG:N	2.55	0.40
52:BT:78:LEU:C	52:BT:79:HIS:ND1	2.79	0.40
1:CA:555:C:H2'	1:CA:556:C:H6	1.86	0.40
1:CA:870:U:H4'	1:CA:871:U:H5"	2.03	0.40
1:CA:936:C:H1'	1:CA:1382:C:H42	1.86	0.40
1:CA:945:G:N2	1:CA:1334:G:O2'	2.54	0.40
1:CA:1017:G:H2'	1:CA:1018:C:H6	1.86	0.40
1:CA:1037:C:H2'	1:CA:1038:C:C5	2.57	0.40
1:CA:1092:A:H2'	1:CA:1093:A:C8	2.56	0.40
1:CA:1302:U:O2'	1:CA:1303:C:H5'	2.22	0.40
2:CB:27:LYS:HB2	2:CB:193:ASP:HB2	2.03	0.40
2:CB:119:GLU:O	2:CB:121:LEU:N	2.54	0.40
5:CE:142:LEU:HD23	5:CE:142:LEU:HA	1.92	0.40
10:CJ:63:PHE:HD1	14:CN:58:LYS:HA	1.86	0.40
18:CR:31:LEU:H	18:CR:31:LEU:CD2	2.35	0.40
22:CV:27:G:H2'	22:CV:28:G:C8	2.53	0.40
26:D1:40:ARG:C	26:D1:40:ARG:HD3	2.47	0.40
27:D2:8:LYS:O	27:D2:9:GLN:C	2.63	0.40
31:D6:15:GLU:O	31:D6:16:CYS:C	2.64	0.40
35:DA:271(D):G:H1	35:DA:271(T):C:N4	2.00	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:572:A:OP2	54:DV:78:LYS:HE2	2.21	0.40
35:DA:607:U:H5	35:DA:620:G:C6	2.40	0.40
35:DA:987:G:H2'	35:DA:988:A:O4'	2.21	0.40
35:DA:1178:C:C2	35:DA:1179:C:C5	3.09	0.40
35:DA:1432:C:H2'	35:DA:1433:U:O4'	2.21	0.40
35:DA:1688:U:H1'	35:DA:1701:A:C6	2.56	0.40
35:DA:2040:C:H2'	35:DA:2041:U:C6	2.56	0.40
35:DA:2537:U:H2'	35:DA:2538:C:C6	2.57	0.40
35:DA:2630:G:C8	35:DA:2894:G:C2	3.09	0.40
39:DE:59:VAL:O	39:DE:60:ASN:CG	2.64	0.40
42:DH:91:GLY:HA2	42:DH:160:LYS:HG2	2.03	0.40
43:DI:58:LEU:C	43:DI:60:GLU:N	2.77	0.40
45:DK:10:LEU:HD13	45:DK:12:LEU:HG	2.02	0.40
45:DK:95:LYS:HD3	45:DK:135:GLY:O	2.21	0.40
47:DO:44:LYS:HD3	47:DO:44:LYS:HA	1.84	0.40
48:DP:101:VAL:C	48:DP:103:ALA:N	2.79	0.40
48:DP:125:VAL:HG23	48:DP:125:VAL:O	2.21	0.40
49:DQ:2:LEU:HB3	49:DQ:44:ALA:HB1	2.04	0.40
52:DT:29:ARG:HA	52:DT:29:ARG:HD2	1.85	0.40
1:AA:216:G:H2'	1:AA:217:C:H6	1.86	0.40
1:AA:977:A:H2'	1:AA:978:A:H5'	2.03	0.40
1:AA:1058:G:H2'	1:AA:1059:C:C6	2.56	0.40
1:AA:1168:A:P	1:AA:1168:A:H8	2.45	0.40
1:AA:1333:A:C2	1:AA:1334:G:H1'	2.57	0.40
2:AB:231:GLU:H	2:AB:231:GLU:HG2	1.78	0.40
3:AC:82:GLU:O	3:AC:86:VAL:HG13	2.22	0.40
4:AD:61:LYS:HA	4:AD:203:VAL:HG22	2.04	0.40
8:AH:51:VAL:CG1	8:AH:60:ARG:HB2	2.51	0.40
8:AH:109:ILE:HG12	8:AH:110:ALA:N	2.37	0.40
9:AI:4:TYR:HB3	9:AI:84:ALA:HB1	2.03	0.40
11:AK:111:ASP:HA	18:AR:84:LYS:CD	2.51	0.40
13:AM:94:ARG:CZ	19:AS:81:ARG:HB2	2.52	0.40
13:AM:116:THR:O	13:AM:116:THR:HG22	2.22	0.40
26:B1:29:GLY:O	26:B1:31:GLY:N	2.51	0.40
27:B2:32:LEU:O	27:B2:33:MET:C	2.65	0.40
30:B5:29:THR:H	30:B5:29:THR:HG23	1.63	0.40
35:BA:119:A:H4'	35:BA:120:U:H5'	2.04	0.40
35:BA:723:G:H2'	35:BA:724:U:C6	2.56	0.40
35:BA:1208:C:C4	35:BA:1209:G:N7	2.90	0.40
35:BA:1275:A:O2'	35:BA:1645:G:N3	2.54	0.40
35:BA:1900:A:N1	35:BA:1970:A:C6	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:65:GLY:HA2	39:BE:70:ALA:CB	2.52	0.40
41:BG:5:VAL:HG12	41:BG:6:ALA:N	2.37	0.40
41:BG:19:LEU:HD22	41:BG:23:PHE:HE2	1.86	0.40
45:BK:98:ARG:NH2	45:BK:139:VAL:HG22	2.36	0.40
46:BN:56:ASN:H	46:BN:125:GLY:HA3	1.85	0.40
47:BO:13:ASN:C	47:BO:15:GLY:N	2.79	0.40
48:BP:71:VAL:CG1	48:BP:72:PRO:HD3	2.51	0.40
48:BP:126:VAL:HG13	48:BP:148:LEU:HD21	2.03	0.40
52:BT:16:ARG:NH2	52:BT:82:LEU:O	2.42	0.40
54:BV:47:VAL:HB	54:BV:49:THR:O	2.22	0.40
1:CA:193:C:O2'	1:CA:194:C:H5'	2.22	0.40
1:CA:399:G:H2'	1:CA:400:C:C6	2.57	0.40
1:CA:1181:G:O2'	1:CA:1182:G:O4'	2.20	0.40
1:CA:1190:G:OP1	3:CC:5:ILE:HG13	2.22	0.40
1:CA:1256:A:H5'	1:CA:1257:U:OP1	2.22	0.40
1:CA:1320:C:H2'	1:CA:1321:C:O4'	2.22	0.40
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.82	0.40
1:CA:1522:U:N3	1:CA:1523:G:N7	2.70	0.40
2:CB:109:SER:C	2:CB:111:ARG:N	2.79	0.40
4:CD:15:GLU:O	4:CD:17:VAL:HG23	2.22	0.40
6:CF:16:GLN:H	6:CF:16:GLN:NE2	2.19	0.40
8:CH:48:TYR:HA	8:CH:60:ARG:O	2.22	0.40
8:CH:58:TYR:O	8:CH:59:LEU:HD23	2.22	0.40
9:CI:96:LEU:HD12	9:CI:96:LEU:HA	1.89	0.40
10:CJ:81:THR:C	10:CJ:83:GLU:N	2.78	0.40
17:CQ:87:LYS:O	17:CQ:91:ARG:NH1	2.55	0.40
22:CW:6:G:N2	22:CW:7:A:H62	1.99	0.40
24:CY:312:ARG:HD2	24:CY:314:TYR:OH	2.22	0.40
27:D2:53:LEU:O	27:D2:57:ILE:HG13	2.22	0.40
34:D9:9:ARG:HB3	34:D9:9:ARG:NH1	2.35	0.40
35:DA:116:C:H2'	35:DA:117:G:O4'	2.21	0.40
35:DA:191:A:H2'	35:DA:192:C:H6	1.86	0.40
35:DA:394:A:O2'	35:DA:395:U:H5'	2.22	0.40
35:DA:1372:U:H2'	35:DA:1373:A:O4'	2.21	0.40
35:DA:1782:C:H2'	35:DA:1783:A:H5'	2.04	0.40
35:DA:2481:G:O2'	35:DA:2482:G:O5'	2.39	0.40
35:DA:2809:A:H2'	35:DA:2810:A:C8	2.56	0.40
38:DD:118:VAL:HG22	38:DD:119:ALA:N	2.36	0.40
39:DE:36:ARG:NH1	39:DE:86:PRO:HD2	2.36	0.40
41:DG:71:THR:N	41:DG:89:GLY:O	2.54	0.40
42:DH:119:GLU:O	42:DH:140:LYS:NZ	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DJ:118:UNK:N	44:DJ:121:UNK:O	2.54	0.40
45:DK:107:ILE:HD12	45:DK:110:GLN:HB2	2.04	0.40
46:DN:28:THR:HG22	46:DN:29:LYS:N	2.36	0.40
52:DT:29:ARG:CD	52:DT:86:ILE:HG22	2.51	0.40
52:DT:53:ARG:HB2	52:DT:53:ARG:NH1	2.37	0.40
54:DV:19:LYS:HE3	54:DV:22:VAL:CG1	2.52	0.40
55:DW:77:ASP:HB2	55:DW:102:HIS:HB2	2.03	0.40
58:DZ:8:TYR:CD1	58:DZ:8:TYR:N	2.89	0.40

There are no symmetry-related clashes.

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	233/256 (91%)	128 (55%)	71 (30%)	34 (15%)	0	1
2	CB	233/256 (91%)	131 (56%)	67 (29%)	35 (15%)	0	1
3	AC	205/239 (86%)	131 (64%)	39 (19%)	35 (17%)	0	0
3	CC	205/239 (86%)	130 (63%)	41 (20%)	34 (17%)	0	0
4	AD	206/209 (99%)	138 (67%)	45 (22%)	23 (11%)	0	2
4	CD	206/209 (99%)	141 (68%)	42 (20%)	23 (11%)	0	2
5	AE	149/162 (92%)	116 (78%)	23 (15%)	10 (7%)	1	7
5	CE	149/162 (92%)	117 (78%)	22 (15%)	10 (7%)	1	7
6	AF	99/101 (98%)	71 (72%)	21 (21%)	7 (7%)	1	6
6	CF	99/101 (98%)	73 (74%)	19 (19%)	7 (7%)	1	6
7	AG	153/156 (98%)	116 (76%)	29 (19%)	8 (5%)	1	12
7	CG	153/156 (98%)	118 (77%)	27 (18%)	8 (5%)	1	12
8	AH	136/138 (99%)	106 (78%)	23 (17%)	7 (5%)	1	13

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
8	CH	136/138 (99%)	106 (78%)	23 (17%)	7 (5%)	1 13
9	AI	123/128 (96%)	86 (70%)	27 (22%)	10 (8%)	1 4
9	CI	123/128 (96%)	86 (70%)	26 (21%)	11 (9%)	0 3
10	AJ	97/105 (92%)	69 (71%)	23 (24%)	5 (5%)	1 12
10	CJ	97/105 (92%)	72 (74%)	20 (21%)	5 (5%)	1 12
11	AK	117/129 (91%)	87 (74%)	26 (22%)	4 (3%)	3 20
11	CK	117/129 (91%)	87 (74%)	26 (22%)	4 (3%)	3 20
12	AL	123/132 (93%)	85 (69%)	21 (17%)	17 (14%)	0 1
12	CL	123/132 (93%)	84 (68%)	20 (16%)	19 (15%)	0 0
13	AM	117/126 (93%)	72 (62%)	30 (26%)	15 (13%)	0 1
13	CM	117/126 (93%)	72 (62%)	28 (24%)	17 (14%)	0 1
14	AN	58/61 (95%)	40 (69%)	12 (21%)	6 (10%)	0 2
14	CN	58/61 (95%)	41 (71%)	11 (19%)	6 (10%)	0 2
15	AO	86/89 (97%)	68 (79%)	16 (19%)	2 (2%)	5 29
15	CO	86/89 (97%)	67 (78%)	17 (20%)	2 (2%)	5 29
16	AP	82/88 (93%)	58 (71%)	17 (21%)	7 (8%)	0 3
16	CP	82/88 (93%)	58 (71%)	16 (20%)	8 (10%)	0 2
17	AQ	98/105 (93%)	75 (76%)	14 (14%)	9 (9%)	0 3
17	CQ	98/105 (93%)	76 (78%)	12 (12%)	10 (10%)	0 2
18	AR	68/88 (77%)	45 (66%)	16 (24%)	7 (10%)	0 2
18	CR	68/88 (77%)	43 (63%)	19 (28%)	6 (9%)	0 3
19	AS	77/93 (83%)	44 (57%)	22 (29%)	11 (14%)	0 1
19	CS	77/93 (83%)	43 (56%)	22 (29%)	12 (16%)	0 0
20	AT	97/106 (92%)	64 (66%)	25 (26%)	8 (8%)	0 4
20	CT	97/106 (92%)	63 (65%)	26 (27%)	8 (8%)	0 4
21	AU	23/27 (85%)	15 (65%)	6 (26%)	2 (9%)	0 3
21	CU	23/27 (85%)	16 (70%)	6 (26%)	1 (4%)	2 16
24	AY	348/357 (98%)	303 (87%)	37 (11%)	8 (2%)	5 29
24	CY	348/357 (98%)	297 (85%)	40 (12%)	11 (3%)	3 21
25	B0	81/85 (95%)	69 (85%)	11 (14%)	1 (1%)	10 42
25	D0	81/85 (95%)	69 (85%)	11 (14%)	1 (1%)	10 42

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
26	B1	92/98 (94%)	64 (70%)	15 (16%)	13 (14%)	0 1
26	D1	92/98 (94%)	72 (78%)	11 (12%)	9 (10%)	0 2
27	B2	69/72 (96%)	45 (65%)	14 (20%)	10 (14%)	0 1
27	D2	69/72 (96%)	42 (61%)	18 (26%)	9 (13%)	0 1
28	B3	58/60 (97%)	51 (88%)	7 (12%)	0	100 100
28	D3	58/60 (97%)	52 (90%)	6 (10%)	0	100 100
29	B4	29/71 (41%)	16 (55%)	10 (34%)	3 (10%)	0 2
29	D4	29/71 (41%)	16 (55%)	10 (34%)	3 (10%)	0 2
30	B5	57/60 (95%)	41 (72%)	6 (10%)	10 (18%)	0 0
30	D5	57/60 (95%)	41 (72%)	5 (9%)	11 (19%)	0 0
31	B6	41/54 (76%)	19 (46%)	7 (17%)	15 (37%)	0 0
31	D6	43/54 (80%)	19 (44%)	7 (16%)	17 (40%)	0 0
32	B7	47/49 (96%)	47 (100%)	0	0	100 100
32	D7	47/49 (96%)	47 (100%)	0	0	100 100
33	B8	62/65 (95%)	43 (69%)	12 (19%)	7 (11%)	0 2
33	D8	62/65 (95%)	42 (68%)	12 (19%)	8 (13%)	0 1
34	B9	34/37 (92%)	31 (91%)	2 (6%)	1 (3%)	3 24
34	D9	34/37 (92%)	31 (91%)	2 (6%)	1 (3%)	3 24
37	BC	116/229 (51%)	89 (77%)	18 (16%)	9 (8%)	1 5
37	DC	116/229 (51%)	88 (76%)	20 (17%)	8 (7%)	1 7
38	BD	271/276 (98%)	205 (76%)	35 (13%)	31 (11%)	0 2
38	DD	271/276 (98%)	205 (76%)	38 (14%)	28 (10%)	0 2
39	BE	203/206 (98%)	147 (72%)	32 (16%)	24 (12%)	0 1
39	DE	203/206 (98%)	149 (73%)	32 (16%)	22 (11%)	0 2
40	BF	206/210 (98%)	152 (74%)	30 (15%)	24 (12%)	0 1
40	DF	206/210 (98%)	149 (72%)	35 (17%)	22 (11%)	0 2
41	BG	177/182 (97%)	99 (56%)	48 (27%)	30 (17%)	0 0
41	DG	179/182 (98%)	126 (70%)	23 (13%)	30 (17%)	0 0
42	BH	163/180 (91%)	107 (66%)	31 (19%)	25 (15%)	0 0
42	DH	163/180 (91%)	109 (67%)	31 (19%)	23 (14%)	0 1
43	BI	144/148 (97%)	85 (59%)	36 (25%)	23 (16%)	0 0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
43	DI	144/148 (97%)	91 (63%)	39 (27%)	14 (10%)	0	3
45	BK	139/147 (95%)	80 (58%)	37 (27%)	22 (16%)	0	0
45	DK	139/147 (95%)	81 (58%)	36 (26%)	22 (16%)	0	0
46	BN	137/140 (98%)	106 (77%)	25 (18%)	6 (4%)	2	15
46	DN	137/140 (98%)	104 (76%)	26 (19%)	7 (5%)	1	13
47	BO	120/122 (98%)	101 (84%)	14 (12%)	5 (4%)	2	16
47	DO	120/122 (98%)	101 (84%)	15 (12%)	4 (3%)	3	21
48	BP	144/150 (96%)	72 (50%)	32 (22%)	40 (28%)	0	0
48	DP	144/150 (96%)	72 (50%)	31 (22%)	41 (28%)	0	0
49	BQ	139/141 (99%)	109 (78%)	23 (16%)	7 (5%)	1	13
49	DQ	139/141 (99%)	110 (79%)	22 (16%)	7 (5%)	1	13
50	BR	115/118 (98%)	93 (81%)	14 (12%)	8 (7%)	1	6
50	DR	115/118 (98%)	93 (81%)	15 (13%)	7 (6%)	1	9
51	BS	97/112 (87%)	52 (54%)	28 (29%)	17 (18%)	0	0
51	DS	97/112 (87%)	52 (54%)	28 (29%)	17 (18%)	0	0
52	BT	136/146 (93%)	86 (63%)	31 (23%)	19 (14%)	0	1
52	DT	136/146 (93%)	87 (64%)	30 (22%)	19 (14%)	0	1
53	BU	115/118 (98%)	96 (84%)	13 (11%)	6 (5%)	1	12
53	DU	115/118 (98%)	97 (84%)	11 (10%)	7 (6%)	1	9
54	BV	99/101 (98%)	72 (73%)	11 (11%)	16 (16%)	0	0
54	DV	99/101 (98%)	72 (73%)	11 (11%)	16 (16%)	0	0
55	BW	111/113 (98%)	94 (85%)	10 (9%)	7 (6%)	1	8
55	DW	111/113 (98%)	94 (85%)	9 (8%)	8 (7%)	1	6
56	BX	91/96 (95%)	74 (81%)	10 (11%)	7 (8%)	1	5
56	DX	91/96 (95%)	75 (82%)	8 (9%)	8 (9%)	0	3
57	BY	99/110 (90%)	55 (56%)	18 (18%)	26 (26%)	0	0
57	DY	99/110 (90%)	54 (54%)	18 (18%)	27 (27%)	0	0
58	BZ	183/206 (89%)	109 (60%)	43 (24%)	31 (17%)	0	0
58	DZ	183/206 (89%)	125 (68%)	39 (21%)	19 (10%)	0	2
All	All	12544/13594 (92%)	8912 (71%)	2295 (18%)	1337 (11%)	0	2

All (1337) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	12	GLU
2	AB	15	VAL
2	AB	20	GLU
2	AB	64	ARG
2	AB	97	TRP
2	AB	123	ALA
2	AB	135	GLN
2	AB	194	PRO
2	AB	195	ASP
3	AC	15	THR
3	AC	47	LEU
3	AC	52	LEU
3	AC	79	ARG
3	AC	165	THR
3	AC	167	TRP
3	AC	207	VAL
4	AD	3	ARG
4	AD	4	TYR
4	AD	5	ILE
4	AD	30	LYS
4	AD	44	GLY
4	AD	110	PHE
4	AD	129	ASN
4	AD	177	ASP
5	AE	11	ILE
5	AE	21	ALA
5	AE	153	LYS
6	AF	40	VAL
7	AG	115	ARG
8	AH	2	LEU
9	AI	41	VAL
9	AI	44	VAL
9	AI	89	ASN
10	AJ	57	LYS
11	AK	25	TYR
12	AL	18	VAL
12	AL	46	LYS
12	AL	89	ARG
12	AL	91	LYS
12	AL	92	ASP
12	AL	115	LYS
13	AM	4	ILE
13	AM	63	THR

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Mol	Chain	Res	Type
13	AM	107	ALA
13	AM	116	THR
13	AM	117	VAL
16	AP	52	ASP
18	AR	20	ALA
18	AR	37	VAL
19	AS	10	PHE
19	AS	28	LYS
20	AT	11	SER
20	AT	74	LYS
21	AU	3	LYS
21	AU	25	LYS
24	AY	160	PRO
24	AY	305	ILE
26	B1	52	ARG
26	B1	58	ILE
26	B1	78	LYS
26	B1	95	LEU
27	B2	10	LEU
27	B2	20	GLU
27	B2	47	ASN
27	B2	70	GLN
29	B4	26	SER
30	B5	4	HIS
30	B5	36	CYS
30	B5	49	CYS
30	B5	53	ALA
30	B5	57	VAL
31	B6	17	LYS
31	B6	19	ARG
31	B6	20	ASN
31	B6	23	THR
31	B6	28	ARG
31	B6	31	PRO
31	B6	33	LYS
31	B6	49	HIS
33	B8	33	ASN
33	B8	34	TRP
38	BD	24	ILE
38	BD	25	THR
38	BD	27	THR
38	BD	123	ALA

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Mol	Chain	Res	Type
38	BD	169	GLU
38	BD	239	ARG
38	BD	271	ILE
39	BE	18	ASP
39	BE	72	VAL
39	BE	87	GLU
39	BE	90	THR
39	BE	118	LYS
39	BE	203	LYS
40	BF	21	ALA
40	BF	59	TYR
40	BF	68	LYS
40	BF	132	VAL
40	BF	134	GLY
41	BG	47	LYS
41	BG	49	ASP
41	BG	84	LYS
41	BG	126	ASP
41	BG	143	GLU
41	BG	146	TYR
41	BG	159	VAL
42	BH	8	PRO
42	BH	9	ILE
42	BH	42	ARG
42	BH	45	VAL
42	BH	80	SER
42	BH	83	TYR
42	BH	92	ILE
42	BH	137	ASP
42	BH	138	LYS
42	BH	156	ALA
42	BH	159	GLU
42	BH	165	ALA
43	BI	6	LEU
43	BI	15	VAL
43	BI	73	GLU
43	BI	85	GLU
43	BI	120	ILE
43	BI	122	GLU
43	BI	127	VAL
43	BI	131	LYS
43	BI	133	HIS

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Mol	Chain	Res	Type
43	BI	145	VAL
45	BK	6	ALA
45	BK	19	PRO
45	BK	113	PRO
45	BK	136	VAL
45	BK	139	VAL
46	BN	4	TYR
46	BN	57	ALA
46	BN	59	LYS
47	BO	48	PRO
48	BP	11	GLY
48	BP	17	LYS
48	BP	18	ARG
48	BP	19	VAL
48	BP	35	HIS
48	BP	40	SER
48	BP	47	ASP
48	BP	49	ARG
48	BP	83	VAL
48	BP	144	GLU
48	BP	147	LEU
49	BQ	2	LEU
50	BR	8	ARG
50	BR	45	ARG
51	BS	13	ARG
51	BS	59	LYS
51	BS	97	ARG
51	BS	102	ALA
51	BS	103	GLU
51	BS	104	GLY
51	BS	108	GLY
52	BT	24	PRO
52	BT	28	VAL
52	BT	30	VAL
52	BT	33	LYS
52	BT	39	ARG
52	BT	42	ILE
52	BT	58	ASN
52	BT	80	SER
52	BT	91	ARG
53	BU	32	PHE
53	BU	74	LEU

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Mol	Chain	Res	Type
53	BU	90	VAL
53	BU	91	ASP
53	BU	93	LYS
54	BV	2	PHE
54	BV	19	LYS
54	BV	23	GLU
54	BV	31	ALA
54	BV	46	VAL
54	BV	79	VAL
55	BW	11	ARG
55	BW	92	ARG
55	BW	111	HIS
56	BX	12	VAL
56	BX	48	LYS
56	BX	66	LEU
57	BY	3	VAL
57	BY	17	SER
57	BY	38	ILE
57	BY	39	VAL
57	BY	42	VAL
57	BY	60	PHE
57	BY	77	PRO
57	BY	78	ALA
57	BY	96	ILE
57	BY	101	LYS
58	BZ	42	VAL
58	BZ	51	ALA
58	BZ	52	SER
58	BZ	65	GLN
58	BZ	92	SER
58	BZ	120	ILE
58	BZ	136	PHE
58	BZ	163	LEU
58	BZ	185	GLU
2	CB	12	GLU
2	CB	15	VAL
2	CB	20	GLU
2	CB	64	ARG
2	CB	123	ALA
2	CB	135	GLN
2	CB	194	PRO
2	CB	195	ASP

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Mol	Chain	Res	Type
3	CC	15	THR
3	CC	45	LYS
3	CC	47	LEU
3	CC	52	LEU
3	CC	79	ARG
3	CC	165	THR
3	CC	167	TRP
4	CD	3	ARG
4	CD	4	TYR
4	CD	5	ILE
4	CD	30	LYS
4	CD	110	PHE
4	CD	129	ASN
4	CD	156	GLU
4	CD	177	ASP
5	CE	11	ILE
5	CE	21	ALA
5	CE	153	LYS
6	CF	40	VAL
7	CG	115	ARG
8	CH	2	LEU
9	CI	41	VAL
9	CI	44	VAL
9	CI	89	ASN
10	CJ	57	LYS
11	CK	25	TYR
12	CL	18	VAL
12	CL	27	LEU
12	CL	46	LYS
12	CL	89	ARG
12	CL	91	LYS
12	CL	92	ASP
12	CL	115	LYS
12	CL	128	ALA
13	CM	4	ILE
13	CM	107	ALA
13	CM	116	THR
13	CM	117	VAL
16	CP	52	ASP
18	CR	20	ALA
18	CR	37	VAL
19	CS	10	PHE

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Mol	Chain	Res	Type
19	CS	28	LYS
20	CT	11	SER
20	CT	74	LYS
21	CU	3	LYS
24	CY	110	PRO
24	CY	305	ILE
27	D2	17	SER
27	D2	44	LEU
27	D2	48	HIS
27	D2	71	ASN
29	D4	26	SER
30	D5	4	HIS
30	D5	36	CYS
30	D5	49	CYS
30	D5	53	ALA
30	D5	57	VAL
31	D6	17	LYS
31	D6	19	ARG
31	D6	20	ASN
31	D6	23	THR
31	D6	28	ARG
31	D6	31	PRO
31	D6	33	LYS
31	D6	45	LYS
31	D6	46	HIS
31	D6	48	VAL
33	D8	33	ASN
33	D8	34	TRP
38	DD	24	ILE
38	DD	25	THR
38	DD	27	THR
38	DD	123	ALA
38	DD	169	GLU
38	DD	239	ARG
38	DD	271	ILE
39	DE	18	ASP
39	DE	72	VAL
39	DE	87	GLU
39	DE	90	THR
39	DE	118	LYS
39	DE	203	LYS
40	DF	21	ALA

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Mol	Chain	Res	Type
40	DF	59	TYR
40	DF	68	LYS
40	DF	132	VAL
40	DF	134	GLY
41	DG	3	LEU
41	DG	4	ASP
41	DG	47	LYS
41	DG	48	GLU
41	DG	52	ILE
41	DG	82	LEU
41	DG	87	PRO
41	DG	96	ARG
41	DG	110	ALA
41	DG	115	ARG
41	DG	125	PHE
41	DG	127	GLY
41	DG	149	VAL
41	DG	150	ASP
42	DH	42	ARG
42	DH	45	VAL
42	DH	80	SER
42	DH	83	TYR
42	DH	92	ILE
42	DH	137	ASP
42	DH	138	LYS
42	DH	156	ALA
42	DH	159	GLU
42	DH	165	ALA
43	DI	7	GLU
43	DI	8	PRO
43	DI	15	VAL
43	DI	133	HIS
45	DK	6	ALA
45	DK	19	PRO
45	DK	113	PRO
45	DK	136	VAL
45	DK	139	VAL
46	DN	4	TYR
46	DN	57	ALA
46	DN	59	LYS
47	DO	48	PRO
48	DP	11	GLY

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Mol	Chain	Res	Type
48	DP	17	LYS
48	DP	18	ARG
48	DP	19	VAL
48	DP	35	HIS
48	DP	40	SER
48	DP	47	ASP
48	DP	49	ARG
48	DP	52	GLU
48	DP	83	VAL
48	DP	144	GLU
48	DP	147	LEU
49	DQ	2	LEU
50	DR	8	ARG
50	DR	45	ARG
51	DS	13	ARG
51	DS	59	LYS
51	DS	97	ARG
51	DS	102	ALA
51	DS	103	GLU
51	DS	104	GLY
52	DT	24	PRO
52	DT	28	VAL
52	DT	30	VAL
52	DT	33	LYS
52	DT	39	ARG
52	DT	42	ILE
52	DT	58	ASN
52	DT	80	SER
52	DT	91	ARG
53	DU	32	PHE
53	DU	74	LEU
53	DU	90	VAL
53	DU	91	ASP
53	DU	93	LYS
54	DV	2	PHE
54	DV	19	LYS
54	DV	23	GLU
54	DV	31	ALA
54	DV	46	VAL
54	DV	79	VAL
55	DW	11	ARG
55	DW	92	ARG

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Mol	Chain	Res	Type
55	DW	111	HIS
56	DX	12	VAL
56	DX	48	LYS
56	DX	66	LEU
57	DY	3	VAL
57	DY	17	SER
57	DY	38	ILE
57	DY	39	VAL
57	DY	42	VAL
57	DY	53	PRO
57	DY	60	PHE
57	DY	77	PRO
57	DY	78	ALA
57	DY	80	GLY
57	DY	96	ILE
58	DZ	80	ARG
58	DZ	93	ASP
58	DZ	120	ILE
58	DZ	137	ILE
58	DZ	146	ILE
58	DZ	158	PRO
58	DZ	165	VAL
58	DZ	166	SER
2	AB	19	HIS
2	AB	24	TRP
2	AB	26	PRO
2	AB	66	GLY
2	AB	83	MET
2	AB	154	LEU
2	AB	165	VAL
2	AB	181	PHE
2	AB	204	ASN
2	AB	230	VAL
2	AB	240	GLN
3	AC	4	LYS
3	AC	18	TRP
3	AC	45	LYS
3	AC	61	ALA
3	AC	73	PRO
3	AC	74	GLY
3	AC	94	LEU
3	AC	156	ARG

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Mol	Chain	Res	Type
4	AD	18	LYS
4	AD	24	GLU
4	AD	99	SER
4	AD	156	GLU
4	AD	157	LEU
4	AD	176	LEU
4	AD	178	VAL
6	AF	29	ALA
7	AG	17	VAL
7	AG	54	THR
8	AH	41	ARG
8	AH	91	ARG
9	AI	95	LYS
9	AI	98	PRO
9	AI	109	VAL
10	AJ	36	GLY
10	AJ	59	SER
11	AK	89	ALA
11	AK	101	SER
12	AL	19	ARG
12	AL	22	SER
12	AL	26	ALA
12	AL	27	LEU
12	AL	47	LYS
12	AL	66	VAL
12	AL	121	GLY
13	AM	3	ARG
13	AM	12	ASN
13	AM	15	VAL
13	AM	68	GLY
13	AM	100	GLY
13	AM	124	PRO
14	AN	15	LYS
14	AN	36	PHE
14	AN	60	SER
16	AP	50	LYS
16	AP	63	GLY
17	AQ	66	SER
17	AQ	68	ARG
17	AQ	74	LEU
18	AR	52	PRO
18	AR	61	LYS

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Mol	Chain	Res	Type
19	AS	29	ARG
19	AS	30	LEU
19	AS	64	GLU
20	AT	25	ARG
20	AT	103	GLY
24	AY	158	PRO
26	B1	27	GLU
26	B1	28	GLY
26	B1	30	VAL
27	B2	14	ARG
27	B2	41	ILE
27	B2	48	HIS
29	B4	35	VAL
30	B5	46	CYS
30	B5	51	TYR
31	B6	16	CYS
31	B6	18	ARG
31	B6	29	ASN
31	B6	34	LEU
31	B6	45	LYS
33	B8	43	GLN
33	B8	49	VAL
33	B8	61	LEU
34	B9	31	LYS
37	BC	53	ARG
37	BC	167	ASP
38	BD	58	HIS
38	BD	122	ASP
38	BD	238	GLY
38	BD	266	SER
38	BD	267	SER
39	BE	54	GLN
39	BE	57	LYS
39	BE	70	ALA
39	BE	74	PRO
39	BE	77	ILE
39	BE	88	GLY
39	BE	130	GLY
39	BE	186	GLY
40	BF	8	GLN
40	BF	16	GLY
40	BF	27	GLU

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Mol	Chain	Res	Type
40	BF	84	VAL
40	BF	89	VAL
40	BF	133	ASN
41	BG	27	ASN
41	BG	43	LEU
41	BG	50	ALA
41	BG	87	PRO
41	BG	117	PHE
41	BG	120	LEU
41	BG	129	GLY
41	BG	148	MET
41	BG	171	ALA
42	BH	81	GLU
42	BH	154	PRO
42	BH	155	SER
43	BI	5	LEU
43	BI	60	GLU
43	BI	97	ILE
43	BI	123	LEU
45	BK	5	VAL
45	BK	13	PRO
45	BK	18	THR
45	BK	112	MET
45	BK	116	ASN
47	BO	5	GLN
47	BO	29	ASN
48	BP	14	LYS
48	BP	23	PRO
48	BP	25	SER
48	BP	31	ALA
48	BP	33	ARG
48	BP	34	GLY
48	BP	51	PHE
48	BP	52	GLU
48	BP	58	THR
48	BP	88	LEU
48	BP	103	ALA
48	BP	107	LYS
48	BP	111	ARG
48	BP	116	GLY
48	BP	136	GLU
49	BQ	19	GLY

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Mol	Chain	Res	Type
49	BQ	62	GLY
49	BQ	135	ASP
50	BR	107	ASP
50	BR	117	VAL
51	BS	53	SER
51	BS	92	TYR
51	BS	94	TYR
51	BS	96	GLY
52	BT	38	ASN
52	BT	90	GLN
52	BT	107	ASP
54	BV	44	LYS
55	BW	63	ASP
57	BY	27	VAL
57	BY	29	GLU
57	BY	33	LYS
57	BY	37	VAL
57	BY	53	PRO
57	BY	57	GLN
57	BY	80	GLY
57	BY	90	LEU
57	BY	99	CYS
58	BZ	5	LEU
58	BZ	40	ASP
58	BZ	98	MET
58	BZ	147	GLY
58	BZ	150	LEU
58	BZ	184	ALA
2	CB	19	HIS
2	CB	24	TRP
2	CB	26	PRO
2	CB	66	GLY
2	CB	83	MET
2	CB	97	TRP
2	CB	154	LEU
2	CB	165	VAL
2	CB	181	PHE
2	CB	204	ASN
2	CB	230	VAL
3	CC	4	LYS
3	CC	18	TRP
3	CC	61	ALA

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Mol	Chain	Res	Type
3	CC	73	PRO
3	CC	74	GLY
3	CC	156	ARG
3	CC	207	VAL
4	CD	18	LYS
4	CD	24	GLU
4	CD	44	GLY
4	CD	99	SER
4	CD	157	LEU
4	CD	176	LEU
4	CD	178	VAL
6	CF	80	ARG
7	CG	7	ALA
7	CG	17	VAL
7	CG	54	THR
8	CH	41	ARG
8	CH	91	ARG
9	CI	95	LYS
9	CI	98	PRO
9	CI	109	VAL
10	CJ	36	GLY
10	CJ	59	SER
11	CK	101	SER
12	CL	19	ARG
12	CL	22	SER
12	CL	26	ALA
12	CL	47	LYS
12	CL	66	VAL
12	CL	121	GLY
13	CM	3	ARG
13	CM	12	ASN
13	CM	15	VAL
13	CM	59	TYR
13	CM	63	THR
13	CM	68	GLY
13	CM	100	GLY
13	CM	124	PRO
14	CN	15	LYS
14	CN	36	PHE
14	CN	60	SER
16	CP	50	LYS
16	CP	63	GLY

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Mol	Chain	Res	Type
17	CQ	68	ARG
17	CQ	74	LEU
19	CS	29	ARG
19	CS	30	LEU
19	CS	64	GLU
20	CT	25	ARG
20	CT	103	GLY
24	CY	40	ASN
24	CY	160	PRO
24	CY	218	VAL
25	D0	6	GLY
26	D1	53	VAL
26	D1	58	ILE
26	D1	85	LEU
26	D1	95	LEU
27	D2	51	ARG
27	D2	69	ARG
29	D4	35	VAL
30	D5	46	CYS
30	D5	51	TYR
30	D5	52	TYR
31	D6	16	CYS
31	D6	18	ARG
31	D6	29	ASN
31	D6	34	LEU
31	D6	44	ARG
31	D6	49	HIS
33	D8	49	VAL
34	D9	31	LYS
37	DC	52	PRO
38	DD	58	HIS
38	DD	122	ASP
38	DD	238	GLY
38	DD	266	SER
38	DD	267	SER
39	DE	54	GLN
39	DE	57	LYS
39	DE	74	PRO
39	DE	77	ILE
39	DE	88	GLY
39	DE	130	GLY
39	DE	186	GLY

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Mol	Chain	Res	Type
40	DF	8	GLN
40	DF	16	GLY
40	DF	27	GLU
40	DF	58	ALA
40	DF	69	HIS
40	DF	84	VAL
40	DF	89	VAL
40	DF	133	ASN
40	DF	167	ALA
41	DG	14	GLU
41	DG	24	GLY
41	DG	45	GLU
41	DG	70	VAL
41	DG	84	LYS
41	DG	97	ASP
41	DG	128	ARG
41	DG	130	ASN
42	DH	14	GLY
42	DH	81	GLU
42	DH	98	LEU
42	DH	154	PRO
42	DH	155	SER
43	DI	16	GLY
43	DI	68	LEU
43	DI	119	PRO
45	DK	5	VAL
45	DK	13	PRO
45	DK	18	THR
45	DK	88	ALA
45	DK	112	MET
45	DK	116	ASN
47	DO	5	GLN
47	DO	29	ASN
48	DP	14	LYS
48	DP	23	PRO
48	DP	25	SER
48	DP	31	ALA
48	DP	33	ARG
48	DP	34	GLY
48	DP	51	PHE
48	DP	58	THR
48	DP	88	LEU

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Mol	Chain	Res	Type
48	DP	107	LYS
48	DP	111	ARG
48	DP	116	GLY
48	DP	136	GLU
49	DQ	19	GLY
49	DQ	62	GLY
49	DQ	135	ASP
50	DR	107	ASP
50	DR	117	VAL
51	DS	53	SER
51	DS	92	TYR
51	DS	94	TYR
51	DS	96	GLY
52	DT	38	ASN
52	DT	56	GLY
52	DT	90	GLN
52	DT	107	ASP
54	DV	44	LYS
55	DW	63	ASP
56	DX	19	ALA
57	DY	27	VAL
57	DY	29	GLU
57	DY	33	LYS
57	DY	57	GLN
57	DY	90	LEU
57	DY	99	CYS
58	DZ	81	ARG
58	DZ	111	VAL
58	DZ	186	GLU
2	AB	62	ALA
2	AB	120	ALA
2	AB	153	ARG
2	AB	232	PRO
3	AC	29	TYR
3	AC	81	GLY
3	AC	91	LEU
3	AC	206	GLU
5	AE	20	GLN
5	AE	27	ARG
6	AF	80	ARG
6	AF	81	ILE
7	AG	7	ALA

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Mol	Chain	Res	Type
7	AG	58	PRO
7	AG	116	ALA
8	AH	27	PRO
8	AH	50	ARG
8	AH	133	LEU
9	AI	102	LEU
10	AJ	32	ALA
13	AM	59	TYR
13	AM	106	ASN
15	AO	23	GLY
16	AP	49	LEU
17	AQ	12	SER
17	AQ	34	LYS
17	AQ	99	SER
20	AT	73	HIS
24	AY	303	ARG
25	B0	6	GLY
27	B2	44	LEU
29	B4	29	PRO
30	B5	52	TYR
30	B5	56	LYS
33	B8	31	HIS
37	BC	52	PRO
37	BC	205	ALA
38	BD	32	SER
38	BD	127	VAL
38	BD	156	ALA
38	BD	246	PRO
39	BE	68	ALA
39	BE	185	LYS
39	BE	204	ALA
40	BF	5	ALA
40	BF	17	ARG
40	BF	24	LEU
40	BF	58	ALA
40	BF	69	HIS
40	BF	128	ALA
40	BF	167	ALA
41	BG	6	ALA
41	BG	110	ALA
41	BG	145	THR
41	BG	176	LEU

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Mol	Chain	Res	Type
42	BH	14	GLY
42	BH	98	LEU
43	BI	72	LEU
43	BI	114	LEU
43	BI	134	PRO
45	BK	67	PHE
45	BK	88	ALA
45	BK	114	ASP
46	BN	47	ALA
46	BN	134	ARG
47	BO	14	THR
48	BP	9	ASN
48	BP	106	LEU
48	BP	115	LEU
49	BQ	134	ARG
51	BS	57	LYS
52	BT	32	TYR
52	BT	56	GLY
54	BV	18	LEU
54	BV	49	THR
56	BX	13	LEU
56	BX	19	ALA
56	BX	40	LYS
57	BY	48	ALA
57	BY	56	PRO
57	BY	82	PRO
58	BZ	101	PRO
58	BZ	134	PRO
58	BZ	151	HIS
58	BZ	166	SER
58	BZ	169	GLU
58	BZ	183	LEU
2	CB	113	HIS
2	CB	120	ALA
2	CB	153	ARG
2	CB	232	PRO
3	CC	29	TYR
3	CC	81	GLY
3	CC	94	LEU
3	CC	181	ASN
3	CC	206	GLU
5	CE	7	GLU

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Mol	Chain	Res	Type
5	CE	20	GLN
5	CE	27	ARG
6	CF	29	ALA
6	CF	65	VAL
6	CF	70	ASP
7	CG	58	PRO
7	CG	116	ALA
8	CH	27	PRO
8	CH	133	LEU
9	CI	102	LEU
10	CJ	32	ALA
11	CK	89	ALA
12	CL	23	LYS
13	CM	106	ASN
15	CO	23	GLY
16	CP	49	LEU
17	CQ	12	SER
17	CQ	34	LYS
17	CQ	66	SER
17	CQ	99	SER
18	CR	52	PRO
18	CR	61	LYS
19	CS	26	GLY
20	CT	73	HIS
24	CY	158	PRO
26	D1	24	ALA
26	D1	57	GLU
26	D1	86	SER
27	D2	43	GLN
27	D2	47	ASN
29	D4	29	PRO
30	D5	56	LYS
33	D8	31	HIS
33	D8	43	GLN
33	D8	61	LEU
37	DC	53	ARG
37	DC	167	ASP
37	DC	198	GLU
37	DC	205	ALA
38	DD	32	SER
38	DD	74	GLY
38	DD	127	VAL

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Mol	Chain	Res	Type
38	DD	156	ALA
38	DD	245	PRO
38	DD	246	PRO
39	DE	68	ALA
39	DE	70	ALA
39	DE	185	LYS
40	DF	5	ALA
40	DF	7	TYR
40	DF	17	ARG
40	DF	22	ALA
40	DF	24	LEU
40	DF	128	ALA
41	DG	81	LYS
41	DG	126	ASP
41	DG	146	TYR
41	DG	155	MET
43	DI	145	VAL
45	DK	114	ASP
48	DP	103	ALA
48	DP	106	LEU
48	DP	110	TYR
48	DP	115	LEU
49	DQ	134	ARG
51	DS	42	ASP
51	DS	57	LYS
52	DT	31	SER
54	DV	18	LEU
54	DV	49	THR
56	DX	13	LEU
56	DX	40	LYS
57	DY	37	VAL
57	DY	56	PRO
57	DY	82	PRO
57	DY	101	LYS
58	DZ	31	ARG
58	DZ	34	ASN
58	DZ	78	LYS
58	DZ	108	PRO
58	DZ	180	VAL
2	AB	18	GLY
2	AB	52	GLU
2	AB	84	GLU

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Mol	Chain	Res	Type
2	AB	113	HIS
2	AB	130	ARG
2	AB	227	GLY
3	AC	20	SER
3	AC	46	GLU
3	AC	127	ARG
3	AC	180	ALA
3	AC	181	ASN
3	AC	196	LEU
4	AD	104	VAL
4	AD	162	LEU
5	AE	7	GLU
5	AE	72	GLN
5	AE	105	VAL
6	AF	70	ASP
8	AH	86	ILE
9	AI	10	ARG
9	AI	121	ARG
12	AL	23	LYS
12	AL	51	ALA
13	AM	21	TYR
13	AM	28	ALA
14	AN	16	PHE
16	AP	64	ALA
18	AR	54	ARG
19	AS	17	GLU
19	AS	26	GLY
20	AT	28	ALA
20	AT	97	ALA
26	B1	26	ARG
27	B2	19	VAL
31	B6	44	ARG
37	BC	198	GLU
38	BD	36	PRO
38	BD	45	ASN
38	BD	74	GLY
38	BD	242	ARG
38	BD	244	ARG
38	BD	245	PRO
39	BE	4	ILE
39	BE	55	ASN
39	BE	69	LYS

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Mol	Chain	Res	Type
39	BE	129	HIS
39	BE	187	ALA
40	BF	7	TYR
40	BF	22	ALA
41	BG	7	LEU
41	BG	42	GLY
41	BG	68	PRO
42	BH	158	HIS
43	BI	62	LYS
43	BI	121	LYS
43	BI	129	THR
45	BK	42	ASN
46	BN	125	GLY
48	BP	39	LYS
48	BP	55	ARG
48	BP	63	PRO
48	BP	108	LYS
48	BP	110	TYR
50	BR	14	SER
50	BR	106	GLY
51	BS	35	ILE
51	BS	100	ALA
52	BT	31	SER
52	BT	41	ARG
54	BV	53	GLU
55	BW	6	ILE
58	BZ	45	ASP
58	BZ	111	VAL
58	BZ	164	ALA
2	CB	13	ALA
2	CB	18	GLY
2	CB	52	GLU
2	CB	62	ALA
2	CB	84	GLU
2	CB	130	ARG
3	CC	20	SER
3	CC	46	GLU
3	CC	91	LEU
3	CC	180	ALA
4	CD	34	GLU
4	CD	47	ARG
4	CD	104	VAL

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Mol	Chain	Res	Type
4	CD	162	LEU
5	CE	72	GLN
5	CE	105	VAL
6	CF	81	ILE
8	CH	50	ARG
8	CH	86	ILE
9	CI	10	ARG
9	CI	121	ARG
13	CM	21	TYR
14	CN	16	PHE
16	CP	44	THR
16	CP	83	GLU
18	CR	54	ARG
19	CS	17	GLU
19	CS	65	ASN
19	CS	81	ARG
20	CT	28	ALA
20	CT	97	ALA
24	CY	340	ASP
27	D2	67	LYS
33	D8	48	PHE
37	DC	15	VAL
38	DD	36	PRO
38	DD	242	ARG
38	DD	244	ARG
39	DE	4	ILE
39	DE	55	ASN
39	DE	69	LYS
39	DE	129	HIS
39	DE	187	ALA
41	DG	117	PHE
42	DH	47	GLU
42	DH	84	SER
43	DI	78	THR
43	DI	103	ARG
43	DI	115	ALA
43	DI	131	LYS
45	DK	42	ASN
45	DK	67	PHE
46	DN	47	ALA
46	DN	125	GLY
46	DN	134	ARG

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Mol	Chain	Res	Type
48	DP	9	ASN
48	DP	39	LYS
48	DP	57	THR
48	DP	87	ASP
48	DP	108	LYS
50	DR	88	ARG
50	DR	106	GLY
51	DS	35	ILE
51	DS	100	ALA
52	DT	32	TYR
52	DT	41	ARG
54	DV	16	PRO
54	DV	40	LEU
55	DW	6	ILE
57	DY	48	ALA
58	DZ	14	LYS
58	DZ	148	ASP
2	AB	8	LYS
2	AB	229	VAL
3	AC	14	ILE
3	AC	54	ARG
3	AC	168	ALA
3	AC	193	TYR
4	AD	7	PRO
4	AD	29	PRO
4	AD	34	GLU
4	AD	47	ARG
4	AD	108	LEU
5	AE	8	GLU
6	AF	65	VAL
7	AG	149	ARG
10	AJ	84	GLN
12	AL	90	VAL
16	AP	44	THR
17	AQ	30	PRO
18	AR	25	THR
18	AR	38	GLU
19	AS	65	ASN
20	AT	71	THR
26	B1	54	ALA
26	B1	65	SER
26	B1	85	LEU

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Mol	Chain	Res	Type
26	B1	94	LEU
33	B8	3	LYS
37	BC	15	VAL
38	BD	3	VAL
38	BD	12	SER
38	BD	241	PRO
39	BE	45	THR
40	BF	12	LEU
41	BG	3	LEU
41	BG	82	LEU
41	BG	86	MET
41	BG	105	LYS
41	BG	133	LEU
41	BG	172	LEU
42	BH	47	GLU
42	BH	84	SER
42	BH	110	SER
42	BH	169	VAL
43	BI	14	ASP
43	BI	103	ARG
45	BK	21	PRO
47	BO	91	LEU
48	BP	57	THR
48	BP	67	MET
48	BP	87	ASP
49	BQ	27	VAL
49	BQ	60	ARG
50	BR	88	ARG
50	BR	102	GLU
51	BS	42	ASP
51	BS	89	ARG
52	BT	68	TYR
53	BU	33	ARG
54	BV	16	PRO
54	BV	40	LEU
54	BV	42	GLY
55	BW	93	ALA
57	BY	81	LYS
58	BZ	15	PRO
58	BZ	80	ARG
58	BZ	148	ASP
2	CB	8	LYS

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Mol	Chain	Res	Type
2	CB	76	GLN
2	CB	131	PRO
2	CB	227	GLY
3	CC	14	ILE
3	CC	54	ARG
3	CC	127	ARG
3	CC	168	ALA
3	CC	196	LEU
4	CD	7	PRO
4	CD	29	PRO
4	CD	108	LEU
5	CE	8	GLU
7	CG	100	ALA
7	CG	109	ASN
10	CJ	84	GLN
12	CL	51	ALA
12	CL	71	PRO
12	CL	90	VAL
13	CM	28	ALA
13	CM	31	LYS
13	CM	67	GLU
14	CN	14	PRO
14	CN	23	ARG
16	CP	64	ALA
17	CQ	30	PRO
17	CQ	77	VAL
18	CR	25	THR
19	CS	18	LYS
19	CS	42	PRO
20	CT	71	THR
24	CY	333	PRO
31	D6	47	THR
33	D8	3	LYS
38	DD	3	VAL
38	DD	12	SER
38	DD	45	ASN
39	DE	45	THR
41	DG	139	LEU
42	DH	110	SER
42	DH	158	HIS
42	DH	169	VAL
43	DI	71	ILE

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Mol	Chain	Res	Type
45	DK	21	PRO
45	DK	22	PRO
45	DK	23	VAL
46	DN	58	ASP
47	DO	91	LEU
48	DP	55	ARG
48	DP	63	PRO
48	DP	67	MET
49	DQ	60	ARG
50	DR	102	GLU
51	DS	89	ARG
52	DT	68	TYR
53	DU	33	ARG
54	DV	3	ALA
54	DV	35	LEU
54	DV	53	GLU
55	DW	65	LEU
55	DW	93	ALA
57	DY	81	LYS
58	DZ	142	SER
2	AB	131	PRO
3	AC	22	TRP
3	AC	26	LYS
3	AC	141	VAL
7	AG	109	ASN
9	AI	77	ILE
11	AK	102	GLY
12	AL	71	PRO
14	AN	14	PRO
14	AN	52	GLN
16	AP	65	GLN
17	AQ	47	PRO
17	AQ	77	VAL
19	AS	18	LYS
27	B2	21	LEU
37	BC	174	ALA
38	BD	236	GLY
38	BD	268	ARG
43	BI	12	LEU
45	BK	20	ALA
45	BK	22	PRO
45	BK	23	VAL

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Mol	Chain	Res	Type
48	BP	146	VAL
52	BT	88	ILE
54	BV	3	ALA
54	BV	35	LEU
58	BZ	135	GLU
58	BZ	165	VAL
2	CB	229	VAL
3	CC	22	TRP
3	CC	141	VAL
3	CC	179	ARG
3	CC	193	TYR
9	CI	117	HIS
11	CK	102	GLY
16	CP	65	GLN
17	CQ	47	PRO
24	CY	303	ARG
30	D5	48	GLU
37	DC	174	ALA
38	DD	236	GLY
38	DD	241	PRO
41	DG	17	PRO
41	DG	46	ALA
42	DH	49	VAL
43	DI	92	VAL
45	DK	20	ALA
48	DP	42	SER
48	DP	146	VAL
51	DS	19	LYS
52	DT	88	ILE
54	DV	42	GLY
57	DY	7	VAL
57	DY	69	ALA
57	DY	98	VAL
19	AS	42	PRO
19	AS	45	VAL
24	AY	164	ILE
24	AY	214	VAL
38	BD	11	PRO
38	BD	35	LYS
42	BH	49	VAL
42	BH	168	PRO
51	BS	14	VAL

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Mol	Chain	Res	Type
57	BY	31	LEU
57	BY	98	VAL
38	DD	11	PRO
38	DD	35	LYS
51	DS	14	VAL
52	DT	92	GLY
4	AD	105	VAL
6	AF	88	VAL
24	AY	224	PRO
37	BC	176	VAL
38	BD	125	ILE
40	BF	66	PRO
45	BK	12	LEU
52	BT	92	GLY
56	BX	32	PRO
58	BZ	146	ILE
4	CD	105	VAL
5	CE	148	VAL
6	CF	88	VAL
15	CO	87	ILE
19	CS	45	VAL
24	CY	224	PRO
26	D1	28	GLY
37	DC	176	VAL
40	DF	14	PRO
42	DH	168	PRO
49	DQ	27	VAL
57	DY	31	LEU
2	AB	239	VAL
26	B1	53	VAL
30	B5	50	GLY
38	BD	10	THR
40	BF	14	PRO
40	BF	25	PRO
41	BG	142	PRO
45	BK	38	VAL
57	BY	7	VAL
2	CB	239	VAL
9	CI	77	ILE
17	CQ	33	GLY
24	CY	164	ILE
30	D5	50	GLY

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Mol	Chain	Res	Type
40	DF	25	PRO
45	DK	12	LEU
45	DK	38	VAL
48	DP	109	GLY
56	DX	32	PRO
56	DX	94	GLY
3	AC	55	VAL
3	AC	75	VAL
3	AC	145	GLY
5	AE	148	VAL
15	AO	87	ILE
24	AY	237	PRO
39	BE	33	VAL
45	BK	25	PRO
45	BK	54	PRO
48	BP	109	GLY
48	BP	122	PRO
55	BW	112	GLY
3	CC	55	VAL
3	CC	145	GLY
12	CL	101	VAL
26	D1	30	VAL
42	DH	55	PRO
45	DK	54	PRO
48	DP	122	PRO
53	DU	102	GLU
31	B6	41	PRO
37	BC	221	PRO
42	BH	55	PRO
54	BV	22	VAL
58	BZ	177	PRO
45	DK	25	PRO
54	DV	22	VAL
55	DW	112	GLY

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	202/220 (92%)	191 (95%)	11 (5%)	20	53
2	CB	202/220 (92%)	191 (95%)	11 (5%)	20	53
3	AC	160/188 (85%)	153 (96%)	7 (4%)	25	59
3	CC	160/188 (85%)	154 (96%)	6 (4%)	29	62
4	AD	180/181 (99%)	165 (92%)	15 (8%)	10	38
4	CD	180/181 (99%)	164 (91%)	16 (9%)	9	34
5	AE	115/123 (94%)	114 (99%)	1 (1%)	70	81
5	CE	115/123 (94%)	114 (99%)	1 (1%)	70	81
6	AF	90/90 (100%)	88 (98%)	2 (2%)	45	71
6	CF	90/90 (100%)	88 (98%)	2 (2%)	45	71
7	AG	126/127 (99%)	123 (98%)	3 (2%)	43	70
7	CG	126/127 (99%)	123 (98%)	3 (2%)	43	70
8	AH	119/119 (100%)	114 (96%)	5 (4%)	26	60
8	CH	119/119 (100%)	114 (96%)	5 (4%)	26	60
9	AI	98/99 (99%)	90 (92%)	8 (8%)	10	39
9	CI	98/99 (99%)	90 (92%)	8 (8%)	10	39
10	AJ	88/92 (96%)	85 (97%)	3 (3%)	32	64
10	CJ	88/92 (96%)	83 (94%)	5 (6%)	18	51
11	AK	90/99 (91%)	87 (97%)	3 (3%)	33	65
11	CK	90/99 (91%)	87 (97%)	3 (3%)	33	65
12	AL	104/109 (95%)	91 (88%)	13 (12%)	4	21
12	CL	104/109 (95%)	91 (88%)	13 (12%)	4	21
13	AM	99/101 (98%)	94 (95%)	5 (5%)	21	54
13	CM	99/101 (98%)	95 (96%)	4 (4%)	28	61
14	AN	49/50 (98%)	45 (92%)	4 (8%)	10	39
14	CN	49/50 (98%)	45 (92%)	4 (8%)	10	39
15	AO	79/80 (99%)	76 (96%)	3 (4%)	29	62
15	CO	79/80 (99%)	76 (96%)	3 (4%)	29	62
16	AP	72/74 (97%)	70 (97%)	2 (3%)	38	68
16	CP	72/74 (97%)	70 (97%)	2 (3%)	38	68
17	AQ	94/97 (97%)	91 (97%)	3 (3%)	34	65
17	CQ	94/97 (97%)	91 (97%)	3 (3%)	34	65

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
18	AR	61/77 (79%)	59 (97%)	2 (3%)	33 65
18	CR	61/77 (79%)	59 (97%)	2 (3%)	33 65
19	AS	69/80 (86%)	61 (88%)	8 (12%)	5 24
19	CS	69/80 (86%)	61 (88%)	8 (12%)	5 24
20	AT	76/82 (93%)	71 (93%)	5 (7%)	15 47
20	CT	76/82 (93%)	72 (95%)	4 (5%)	20 53
21	AU	19/22 (86%)	19 (100%)	0	100 100
21	CU	19/22 (86%)	19 (100%)	0	100 100
24	AY	297/303 (98%)	286 (96%)	11 (4%)	30 63
24	CY	297/303 (98%)	291 (98%)	6 (2%)	48 72
25	B0	66/67 (98%)	63 (96%)	3 (4%)	24 58
25	D0	66/67 (98%)	63 (96%)	3 (4%)	24 58
26	B1	78/83 (94%)	69 (88%)	9 (12%)	5 24
26	D1	78/83 (94%)	73 (94%)	5 (6%)	16 48
27	B2	66/67 (98%)	63 (96%)	3 (4%)	24 58
27	D2	66/67 (98%)	57 (86%)	9 (14%)	3 18
28	B3	51/52 (98%)	49 (96%)	2 (4%)	28 62
28	D3	51/52 (98%)	49 (96%)	2 (4%)	28 62
29	B4	27/63 (43%)	25 (93%)	2 (7%)	13 43
29	D4	27/63 (43%)	25 (93%)	2 (7%)	13 43
30	B5	51/52 (98%)	43 (84%)	8 (16%)	2 13
30	D5	51/52 (98%)	43 (84%)	8 (16%)	2 13
31	B6	43/52 (83%)	36 (84%)	7 (16%)	2 12
31	D6	43/52 (83%)	35 (81%)	8 (19%)	1 9
32	B7	41/42 (98%)	40 (98%)	1 (2%)	43 70
32	D7	41/42 (98%)	40 (98%)	1 (2%)	43 70
33	B8	53/55 (96%)	47 (89%)	6 (11%)	5 24
33	D8	53/55 (96%)	47 (89%)	6 (11%)	5 24
34	B9	33/34 (97%)	32 (97%)	1 (3%)	36 66
34	D9	33/34 (97%)	31 (94%)	2 (6%)	17 49
37	BC	99/181 (55%)	97 (98%)	2 (2%)	48 72

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
37	DC	99/181 (55%)	97 (98%)	2 (2%)	48 72
38	BD	214/218 (98%)	188 (88%)	26 (12%)	5 22
38	DD	214/218 (98%)	190 (89%)	24 (11%)	6 25
39	BE	165/166 (99%)	142 (86%)	23 (14%)	3 17
39	DE	165/166 (99%)	142 (86%)	23 (14%)	3 17
40	BF	165/166 (99%)	151 (92%)	14 (8%)	10 37
40	DF	165/166 (99%)	149 (90%)	16 (10%)	8 32
41	BG	155/156 (99%)	145 (94%)	10 (6%)	15 47
41	DG	155/156 (99%)	137 (88%)	18 (12%)	5 24
42	BH	132/148 (89%)	122 (92%)	10 (8%)	12 42
42	DH	132/148 (89%)	122 (92%)	10 (8%)	12 42
43	BI	122/124 (98%)	108 (88%)	14 (12%)	5 24
43	DI	122/124 (98%)	107 (88%)	15 (12%)	4 22
45	BK	106/111 (96%)	97 (92%)	9 (8%)	10 37
45	DK	106/111 (96%)	98 (92%)	8 (8%)	12 42
46	BN	117/119 (98%)	110 (94%)	7 (6%)	17 50
46	DN	117/119 (98%)	110 (94%)	7 (6%)	17 50
47	BO	100/100 (100%)	95 (95%)	5 (5%)	22 55
47	DO	100/100 (100%)	94 (94%)	6 (6%)	17 50
48	BP	112/116 (97%)	96 (86%)	16 (14%)	3 16
48	DP	112/116 (97%)	96 (86%)	16 (14%)	3 16
49	BQ	111/111 (100%)	103 (93%)	8 (7%)	13 44
49	DQ	111/111 (100%)	102 (92%)	9 (8%)	11 39
50	BR	100/101 (99%)	88 (88%)	12 (12%)	5 23
50	DR	100/101 (99%)	87 (87%)	13 (13%)	4 20
51	BS	77/88 (88%)	68 (88%)	9 (12%)	5 23
51	DS	77/88 (88%)	67 (87%)	10 (13%)	4 20
52	BT	120/127 (94%)	101 (84%)	19 (16%)	2 13
52	DT	120/127 (94%)	102 (85%)	18 (15%)	3 15
53	BU	92/94 (98%)	86 (94%)	6 (6%)	15 47
53	DU	92/94 (98%)	86 (94%)	6 (6%)	15 47

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
54	BV	82/82 (100%)	66 (80%)	16 (20%)	1 8
54	DV	82/82 (100%)	67 (82%)	15 (18%)	2 9
55	BW	91/92 (99%)	79 (87%)	12 (13%)	4 19
55	DW	91/92 (99%)	78 (86%)	13 (14%)	3 16
56	BX	74/78 (95%)	69 (93%)	5 (7%)	14 46
56	DX	74/78 (95%)	68 (92%)	6 (8%)	11 39
57	BY	84/91 (92%)	69 (82%)	15 (18%)	2 9
57	DY	84/91 (92%)	68 (81%)	16 (19%)	1 9
58	BZ	162/179 (90%)	152 (94%)	10 (6%)	16 49
58	DZ	162/179 (90%)	143 (88%)	19 (12%)	5 23
All	All	10552/11256 (94%)	9723 (92%)	829 (8%)	11 40

All (829) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	46	LYS
2	AB	69	LEU
2	AB	119	GLU
2	AB	140	HIS
2	AB	145	LEU
2	AB	172	ILE
2	AB	178	ARG
2	AB	179	LYS
2	AB	196	LEU
2	AB	232	PRO
3	AC	3	ASN
3	AC	16	ARG
3	AC	34	LEU
3	AC	52	LEU
3	AC	104	GLN
3	AC	107	GLN
3	AC	196	LEU
4	AD	3	ARG
4	AD	9	CYS
4	AD	10	ARG
4	AD	13	ARG
4	AD	15	GLU

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Mol	Chain	Res	Type
4	AD	20	TYR
4	AD	35	ARG
4	AD	38	TYR
4	AD	97	LEU
4	AD	110	PHE
4	AD	126	ILE
4	AD	135	LEU
4	AD	158	ILE
4	AD	170	VAL
4	AD	200	GLU
5	AE	16	THR
6	AF	30	LEU
6	AF	92	LYS
7	AG	36	LYS
7	AG	60	LYS
7	AG	113	GLU
8	AH	6	ILE
8	AH	26	VAL
8	AH	27	PRO
8	AH	65	TYR
8	AH	137	VAL
9	AI	41	VAL
9	AI	47	LEU
9	AI	48	GLU
9	AI	78	LYS
9	AI	92	TYR
9	AI	95	LYS
9	AI	96	LEU
9	AI	118	LYS
10	AJ	4	ILE
10	AJ	80	LYS
10	AJ	84	GLN
11	AK	21	ILE
11	AK	103	LEU
11	AK	125	PHE
12	AL	24	VAL
12	AL	27	LEU
12	AL	38	THR
12	AL	40	VAL
12	AL	41	ARG
12	AL	47	LYS
12	AL	53	ARG

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Mol	Chain	Res	Type
12	AL	80	HIS
12	AL	83	VAL
12	AL	84	LEU
12	AL	102	ARG
12	AL	104	VAL
12	AL	110	VAL
13	AM	47	ASP
13	AM	64	TRP
13	AM	79	LYS
13	AM	92	HIS
13	AM	108	ARG
14	AN	6	LEU
14	AN	16	PHE
14	AN	33	VAL
14	AN	41	ARG
15	AO	22	THR
15	AO	39	LEU
15	AO	41	GLU
16	AP	17	TYR
16	AP	69	THR
17	AQ	38	ARG
17	AQ	52	LYS
17	AQ	74	LEU
18	AR	31	LEU
18	AR	32	ARG
19	AS	5	LEU
19	AS	6	LYS
19	AS	15	LEU
19	AS	16	LEU
19	AS	27	GLU
19	AS	37	ARG
19	AS	65	ASN
19	AS	77	THR
20	AT	54	LYS
20	AT	57	ARG
20	AT	73	HIS
20	AT	93	GLU
20	AT	100	ILE
24	AY	56	ARG
24	AY	66	GLU
24	AY	97	LYS
24	AY	102	TYR

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Mol	Chain	Res	Type
24	AY	115	ASN
24	AY	189	LEU
24	AY	274	LEU
24	AY	305	ILE
24	AY	315	VAL
24	AY	316	LEU
24	AY	344	LEU
25	B0	5	LYS
25	B0	19	LYS
25	B0	36	ILE
26	B1	27	GLU
26	B1	39	LYS
26	B1	40	ARG
26	B1	46	LEU
26	B1	58	ILE
26	B1	61	ARG
26	B1	78	LYS
26	B1	82	LEU
26	B1	95	LEU
27	B2	50	ILE
27	B2	52	ASP
27	B2	64	LEU
28	B3	8	LEU
28	B3	40	THR
29	B4	14	ILE
29	B4	32	TYR
30	B5	4	HIS
30	B5	6	VAL
30	B5	11	THR
30	B5	29	THR
30	B5	36	CYS
30	B5	49	CYS
30	B5	56	LYS
30	B5	60	VAL
31	B6	10	LEU
31	B6	18	ARG
31	B6	31	PRO
31	B6	37	ARG
31	B6	41	PRO
31	B6	42	TRP
31	B6	46	HIS
32	B7	43	THR

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Mol	Chain	Res	Type
33	B8	6	THR
33	B8	16	ILE
33	B8	30	ARG
33	B8	33	ASN
33	B8	49	VAL
33	B8	61	LEU
34	B9	33	LYS
37	BC	19	LYS
37	BC	50	ILE
38	BD	10	THR
38	BD	18	VAL
38	BD	24	ILE
38	BD	35	LYS
38	BD	46	GLN
38	BD	61	LEU
38	BD	64	ILE
38	BD	72	LYS
38	BD	94	LEU
38	BD	95	LEU
38	BD	99	ASP
38	BD	103	ARG
38	BD	106	ILE
38	BD	111	LEU
38	BD	117	VAL
38	BD	131	LEU
38	BD	138	VAL
38	BD	166	GLN
38	BD	173	VAL
38	BD	192	THR
38	BD	200	ASP
38	BD	221	VAL
38	BD	229	VAL
38	BD	268	ARG
38	BD	270	ILE
38	BD	271	ILE
39	BE	7	VAL
39	BE	9	VAL
39	BE	12	THR
39	BE	16	ARG
39	BE	18	ASP
39	BE	24	THR
39	BE	33	VAL

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Mol	Chain	Res	Type
39	BE	52	LEU
39	BE	63	LEU
39	BE	67	PHE
39	BE	78	LEU
39	BE	79	ARG
39	BE	92	THR
39	BE	94	GLU
39	BE	119	ARG
39	BE	144	ARG
39	BE	145	LYS
39	BE	167	VAL
39	BE	175	VAL
39	BE	179	GLU
39	BE	196	VAL
39	BE	197	ILE
39	BE	202	LYS
40	BF	2	LYS
40	BF	24	LEU
40	BF	57	VAL
40	BF	66	PRO
40	BF	88	VAL
40	BF	107	LYS
40	BF	110	LEU
40	BF	125	LEU
40	BF	162	LEU
40	BF	165	ARG
40	BF	183	VAL
40	BF	192	LEU
40	BF	196	LEU
40	BF	199	TRP
41	BG	31	VAL
41	BG	43	LEU
41	BG	48	GLU
41	BG	54	GLU
41	BG	70	VAL
41	BG	77	ILE
41	BG	121	ASN
41	BG	133	LEU
41	BG	150	ASP
41	BG	152	LEU
42	BH	42	ARG
42	BH	71	LEU

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Mol	Chain	Res	Type
42	BH	85	LYS
42	BH	86	GLU
42	BH	88	LEU
42	BH	89	ILE
42	BH	94	TYR
42	BH	111	HIS
42	BH	136	ILE
42	BH	159	GLU
43	BI	22	LYS
43	BI	38	LEU
43	BI	77	LEU
43	BI	79	ILE
43	BI	92	VAL
43	BI	93	THR
43	BI	114	LEU
43	BI	122	GLU
43	BI	123	LEU
43	BI	125	GLU
43	BI	127	VAL
43	BI	128	LEU
43	BI	129	THR
43	BI	134	PRO
45	BK	5	VAL
45	BK	10	LEU
45	BK	35	MET
45	BK	41	PHE
45	BK	42	ASN
45	BK	84	LEU
45	BK	95	LYS
45	BK	112	MET
45	BK	121	GLU
46	BN	4	TYR
46	BN	28	THR
46	BN	34	LEU
46	BN	43	THR
46	BN	48	MET
46	BN	61	ARG
46	BN	71	ILE
47	BO	10	VAL
47	BO	32	TYR
47	BO	48	PRO
47	BO	85	VAL

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Mol	Chain	Res	Type
47	BO	91	LEU
48	BP	18	ARG
48	BP	29	LYS
48	BP	30	THR
48	BP	32	THR
48	BP	42	SER
48	BP	47	ASP
48	BP	59	LEU
48	BP	62	LEU
48	BP	64	LYS
48	BP	67	MET
48	BP	70	GLN
48	BP	83	VAL
48	BP	95	VAL
48	BP	105	LEU
48	BP	114	ILE
48	BP	135	LEU
49	BQ	18	LYS
49	BQ	45	GLN
49	BQ	55	VAL
49	BQ	75	THR
49	BQ	81	VAL
49	BQ	110	THR
49	BQ	134	ARG
49	BQ	139	GLU
50	BR	2	ARG
50	BR	8	ARG
50	BR	18	LEU
50	BR	28	LEU
50	BR	29	LEU
50	BR	34	ILE
50	BR	44	LEU
50	BR	49	ASP
50	BR	54	LEU
50	BR	65	LEU
50	BR	67	LEU
50	BR	79	LEU
51	BS	36	TYR
51	BS	41	ASP
51	BS	73	LEU
51	BS	89	ARG
51	BS	92	TYR

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Mol	Chain	Res	Type
51	BS	97	ARG
51	BS	101	LEU
51	BS	103	GLU
51	BS	106	ARG
52	BT	3	ARG
52	BT	6	LEU
52	BT	13	ARG
52	BT	14	TYR
52	BT	24	PRO
52	BT	32	TYR
52	BT	36	GLU
52	BT	42	ILE
52	BT	51	ARG
52	BT	59	THR
52	BT	63	VAL
52	BT	72	VAL
52	BT	74	ARG
52	BT	78	LEU
52	BT	82	LEU
52	BT	89	VAL
52	BT	93	ARG
52	BT	99	LEU
52	BT	123	GLN
53	BU	16	LYS
53	BU	60	LEU
53	BU	70	ARG
53	BU	74	LEU
53	BU	88	ILE
53	BU	108	GLU
54	BV	16	PRO
54	BV	21	ARG
54	BV	22	VAL
54	BV	33	VAL
54	BV	35	LEU
54	BV	37	VAL
54	BV	39	LEU
54	BV	40	LEU
54	BV	49	THR
54	BV	52	VAL
54	BV	57	VAL
54	BV	61	VAL
54	BV	79	VAL

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Mol	Chain	Res	Type
54	BV	89	GLN
54	BV	95	LEU
54	BV	99	ILE
55	BW	15	ARG
55	BW	23	LEU
55	BW	39	THR
55	BW	50	VAL
55	BW	51	LEU
55	BW	52	GLU
55	BW	59	VAL
55	BW	78	GLU
55	BW	92	ARG
55	BW	95	ILE
55	BW	106	ILE
55	BW	107	LEU
56	BX	8	ILE
56	BX	15	GLU
56	BX	27	THR
56	BX	49	VAL
56	BX	81	VAL
57	BY	6	HIS
57	BY	7	VAL
57	BY	13	VAL
57	BY	29	GLU
57	BY	32	PRO
57	BY	38	ILE
57	BY	40	GLU
57	BY	42	VAL
57	BY	53	PRO
57	BY	54	LYS
57	BY	60	PHE
57	BY	76	CYS
57	BY	77	PRO
57	BY	90	LEU
57	BY	97	ARG
58	BZ	6	LYS
58	BZ	11	GLU
58	BZ	20	ARG
58	BZ	80	ARG
58	BZ	101	PRO
58	BZ	140	ASP
58	BZ	144	LEU

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Mol	Chain	Res	Type
58	BZ	150	LEU
58	BZ	168	GLU
58	BZ	180	VAL
2	CB	15	VAL
2	CB	32	ILE
2	CB	69	LEU
2	CB	119	GLU
2	CB	140	HIS
2	CB	145	LEU
2	CB	172	ILE
2	CB	178	ARG
2	CB	179	LYS
2	CB	196	LEU
2	CB	232	PRO
3	CC	3	ASN
3	CC	16	ARG
3	CC	34	LEU
3	CC	52	LEU
3	CC	104	GLN
3	CC	196	LEU
4	CD	3	ARG
4	CD	9	CYS
4	CD	10	ARG
4	CD	13	ARG
4	CD	15	GLU
4	CD	20	TYR
4	CD	35	ARG
4	CD	38	TYR
4	CD	97	LEU
4	CD	110	PHE
4	CD	126	ILE
4	CD	132	ARG
4	CD	135	LEU
4	CD	158	ILE
4	CD	170	VAL
4	CD	200	GLU
5	CE	16	THR
6	CF	30	LEU
6	CF	92	LYS
7	CG	36	LYS
7	CG	60	LYS
7	CG	113	GLU

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Mol	Chain	Res	Type
8	CH	6	ILE
8	CH	26	VAL
8	CH	27	PRO
8	CH	65	TYR
8	CH	137	VAL
9	CI	41	VAL
9	CI	48	GLU
9	CI	78	LYS
9	CI	91	ASP
9	CI	92	TYR
9	CI	95	LYS
9	CI	96	LEU
9	CI	118	LYS
10	CJ	4	ILE
10	CJ	55	LYS
10	CJ	63	PHE
10	CJ	80	LYS
10	CJ	91	PRO
11	CK	21	ILE
11	CK	103	LEU
11	CK	125	PHE
12	CL	24	VAL
12	CL	27	LEU
12	CL	38	THR
12	CL	40	VAL
12	CL	41	ARG
12	CL	47	LYS
12	CL	53	ARG
12	CL	80	HIS
12	CL	83	VAL
12	CL	84	LEU
12	CL	85	ILE
12	CL	102	ARG
12	CL	110	VAL
13	CM	47	ASP
13	CM	64	TRP
13	CM	92	HIS
13	CM	108	ARG
14	CN	6	LEU
14	CN	16	PHE
14	CN	33	VAL
14	CN	41	ARG

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Mol	Chain	Res	Type
15	CO	22	THR
15	CO	39	LEU
15	CO	41	GLU
16	CP	17	TYR
16	CP	69	THR
17	CQ	38	ARG
17	CQ	52	LYS
17	CQ	74	LEU
18	CR	31	LEU
18	CR	32	ARG
19	CS	5	LEU
19	CS	6	LYS
19	CS	15	LEU
19	CS	16	LEU
19	CS	27	GLU
19	CS	29	ARG
19	CS	65	ASN
19	CS	77	THR
20	CT	54	LYS
20	CT	73	HIS
20	CT	93	GLU
20	CT	100	ILE
24	CY	8	GLN
24	CY	23	GLU
24	CY	210	VAL
24	CY	315	VAL
24	CY	344	LEU
24	CY	346	TRP
25	D0	5	LYS
25	D0	19	LYS
25	D0	36	ILE
26	D1	14	VAL
26	D1	35	THR
26	D1	40	ARG
26	D1	80	LEU
26	D1	95	LEU
27	D2	3	LEU
27	D2	32	LEU
27	D2	51	ARG
27	D2	59	ARG
27	D2	61	LEU
27	D2	62	THR

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Mol	Chain	Res	Type
27	D2	64	LEU
27	D2	65	ASN
27	D2	70	GLN
28	D3	8	LEU
28	D3	40	THR
29	D4	14	ILE
29	D4	32	TYR
30	D5	4	HIS
30	D5	6	VAL
30	D5	11	THR
30	D5	29	THR
30	D5	36	CYS
30	D5	49	CYS
30	D5	56	LYS
30	D5	60	VAL
31	D6	10	LEU
31	D6	18	ARG
31	D6	31	PRO
31	D6	33	LYS
31	D6	41	PRO
31	D6	42	TRP
31	D6	45	LYS
31	D6	47	THR
32	D7	43	THR
33	D8	16	ILE
33	D8	30	ARG
33	D8	33	ASN
33	D8	49	VAL
33	D8	61	LEU
33	D8	62	LEU
34	D9	9	ARG
34	D9	33	LYS
37	DC	19	LYS
37	DC	50	ILE
38	DD	10	THR
38	DD	18	VAL
38	DD	24	ILE
38	DD	35	LYS
38	DD	46	GLN
38	DD	72	LYS
38	DD	94	LEU
38	DD	95	LEU

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Mol	Chain	Res	Type
38	DD	99	ASP
38	DD	103	ARG
38	DD	106	ILE
38	DD	111	LEU
38	DD	117	VAL
38	DD	131	LEU
38	DD	138	VAL
38	DD	166	GLN
38	DD	173	VAL
38	DD	192	THR
38	DD	200	ASP
38	DD	221	VAL
38	DD	229	VAL
38	DD	268	ARG
38	DD	270	ILE
38	DD	271	ILE
39	DE	7	VAL
39	DE	9	VAL
39	DE	12	THR
39	DE	16	ARG
39	DE	18	ASP
39	DE	24	THR
39	DE	33	VAL
39	DE	52	LEU
39	DE	63	LEU
39	DE	67	PHE
39	DE	78	LEU
39	DE	79	ARG
39	DE	92	THR
39	DE	94	GLU
39	DE	119	ARG
39	DE	144	ARG
39	DE	145	LYS
39	DE	167	VAL
39	DE	175	VAL
39	DE	179	GLU
39	DE	196	VAL
39	DE	197	ILE
39	DE	202	LYS
40	DF	2	LYS
40	DF	24	LEU
40	DF	57	VAL

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Mol	Chain	Res	Type
40	DF	66	PRO
40	DF	74	ARG
40	DF	88	VAL
40	DF	107	LYS
40	DF	110	LEU
40	DF	125	LEU
40	DF	162	LEU
40	DF	164	ARG
40	DF	183	VAL
40	DF	189	THR
40	DF	192	LEU
40	DF	196	LEU
40	DF	199	TRP
41	DG	18	GLU
41	DG	33	ARG
41	DG	39	ILE
41	DG	51	ARG
41	DG	63	ILE
41	DG	70	VAL
41	DG	82	LEU
41	DG	88	ILE
41	DG	90	LEU
41	DG	101	ILE
41	DG	113	ARG
41	DG	128	ARG
41	DG	130	ASN
41	DG	133	LEU
41	DG	138	GLN
41	DG	139	LEU
41	DG	152	LEU
41	DG	166	ASP
42	DH	42	ARG
42	DH	85	LYS
42	DH	86	GLU
42	DH	88	LEU
42	DH	89	ILE
42	DH	94	TYR
42	DH	111	HIS
42	DH	136	ILE
42	DH	153	LYS
42	DH	159	GLU
43	DI	8	PRO

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Mol	Chain	Res	Type
43	DI	9	LEU
43	DI	12	LEU
43	DI	18	VAL
43	DI	47	LEU
43	DI	52	ARG
43	DI	54	GLN
43	DI	58	LEU
43	DI	89	TYR
43	DI	95	LYS
43	DI	101	LEU
43	DI	108	THR
43	DI	112	LYS
43	DI	128	LEU
43	DI	134	PRO
45	DK	5	VAL
45	DK	10	LEU
45	DK	35	MET
45	DK	41	PHE
45	DK	84	LEU
45	DK	95	LYS
45	DK	112	MET
45	DK	121	GLU
46	DN	4	TYR
46	DN	28	THR
46	DN	34	LEU
46	DN	43	THR
46	DN	48	MET
46	DN	61	ARG
46	DN	71	ILE
47	DO	5	GLN
47	DO	10	VAL
47	DO	32	TYR
47	DO	48	PRO
47	DO	85	VAL
47	DO	91	LEU
48	DP	18	ARG
48	DP	29	LYS
48	DP	30	THR
48	DP	32	THR
48	DP	42	SER
48	DP	47	ASP
48	DP	59	LEU

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Mol	Chain	Res	Type
48	DP	62	LEU
48	DP	64	LYS
48	DP	67	MET
48	DP	70	GLN
48	DP	83	VAL
48	DP	95	VAL
48	DP	105	LEU
48	DP	114	ILE
48	DP	135	LEU
49	DQ	18	LYS
49	DQ	45	GLN
49	DQ	55	VAL
49	DQ	75	THR
49	DQ	81	VAL
49	DQ	110	THR
49	DQ	134	ARG
49	DQ	139	GLU
49	DQ	141	GLN
50	DR	2	ARG
50	DR	8	ARG
50	DR	18	LEU
50	DR	28	LEU
50	DR	29	LEU
50	DR	34	ILE
50	DR	44	LEU
50	DR	49	ASP
50	DR	54	LEU
50	DR	65	LEU
50	DR	67	LEU
50	DR	75	LEU
50	DR	79	LEU
51	DS	36	TYR
51	DS	41	ASP
51	DS	56	LEU
51	DS	73	LEU
51	DS	89	ARG
51	DS	92	TYR
51	DS	97	ARG
51	DS	101	LEU
51	DS	103	GLU
51	DS	106	ARG
52	DT	3	ARG

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Mol	Chain	Res	Type
52	DT	6	LEU
52	DT	13	ARG
52	DT	14	TYR
52	DT	24	PRO
52	DT	32	TYR
52	DT	36	GLU
52	DT	42	ILE
52	DT	59	THR
52	DT	63	VAL
52	DT	72	VAL
52	DT	74	ARG
52	DT	78	LEU
52	DT	82	LEU
52	DT	89	VAL
52	DT	93	ARG
52	DT	99	LEU
52	DT	123	GLN
53	DU	17	ILE
53	DU	60	LEU
53	DU	70	ARG
53	DU	74	LEU
53	DU	88	ILE
53	DU	108	GLU
54	DV	1	MET
54	DV	16	PRO
54	DV	21	ARG
54	DV	22	VAL
54	DV	33	VAL
54	DV	37	VAL
54	DV	39	LEU
54	DV	40	LEU
54	DV	49	THR
54	DV	52	VAL
54	DV	61	VAL
54	DV	79	VAL
54	DV	89	GLN
54	DV	95	LEU
54	DV	99	ILE
55	DW	14	PRO
55	DW	15	ARG
55	DW	23	LEU
55	DW	39	THR

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Mol	Chain	Res	Type
55	DW	50	VAL
55	DW	51	LEU
55	DW	52	GLU
55	DW	59	VAL
55	DW	78	GLU
55	DW	92	ARG
55	DW	95	ILE
55	DW	106	ILE
55	DW	107	LEU
56	DX	8	ILE
56	DX	15	GLU
56	DX	27	THR
56	DX	49	VAL
56	DX	53	LYS
56	DX	81	VAL
57	DY	6	HIS
57	DY	7	VAL
57	DY	13	VAL
57	DY	29	GLU
57	DY	32	PRO
57	DY	38	ILE
57	DY	40	GLU
57	DY	42	VAL
57	DY	53	PRO
57	DY	54	LYS
57	DY	60	PHE
57	DY	61	ILE
57	DY	76	CYS
57	DY	77	PRO
57	DY	90	LEU
57	DY	97	ARG
58	DZ	11	GLU
58	DZ	37	VAL
58	DZ	41	LEU
58	DZ	44	PHE
58	DZ	49	ARG
58	DZ	71	VAL
58	DZ	81	ARG
58	DZ	87	ASP
58	DZ	97	GLU
58	DZ	102	LEU
58	DZ	119	GLU

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Mol	Chain	Res	Type
58	DZ	121	HIS
58	DZ	140	ASP
58	DZ	145	GLU
58	DZ	150	LEU
58	DZ	154	ASP
58	DZ	155	LEU
58	DZ	158	PRO
58	DZ	166	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (124) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	19	HIS
2	AB	40	HIS
2	AB	78	GLN
2	AB	135	GLN
2	AB	146	GLN
2	AB	212	GLN
3	AC	6	HIS
3	AC	28	GLN
3	AC	37	GLN
3	AC	107	GLN
3	AC	108	ASN
3	AC	110	ASN
4	AD	161	ASN
5	AE	72	GLN
6	AF	16	GLN
6	AF	18	GLN
6	AF	27	GLN
7	AG	28	ASN
7	AG	86	GLN
8	AH	81	HIS
9	AI	31	GLN
9	AI	38	GLN
9	AI	87	GLN
11	AK	38	ASN
11	AK	93	GLN
13	AM	62	ASN
15	AO	13	GLN
16	AP	13	HIS
16	AP	16	HIS
19	AS	57	HIS

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Mol	Chain	Res	Type
20	AT	90	GLN
24	AY	108	ASN
24	AY	147	GLN
24	AY	324	HIS
25	B0	35	ASN
26	B1	66	HIS
28	B3	19	GLN
28	B3	52	HIS
30	B5	4	HIS
31	B6	32	ASN
33	B8	35	GLN
34	B9	29	ASN
37	BC	228	HIS
38	BD	87	ASN
40	BF	40	GLN
40	BF	203	GLN
41	BG	121	ASN
43	BI	133	HIS
45	BK	33	ASN
45	BK	103	GLN
46	BN	94	HIS
48	BP	35	HIS
49	BQ	13	GLN
51	BS	34	HIS
52	BT	55	ASN
53	BU	81	HIS
54	BV	11	GLN
54	BV	80	GLN
55	BW	60	ASN
57	BY	6	HIS
57	BY	92	ASN
58	BZ	65	GLN
2	CB	110	GLN
2	CB	135	GLN
2	CB	212	GLN
3	CC	31	HIS
3	CC	108	ASN
6	CF	16	GLN
7	CG	28	ASN
7	CG	37	ASN
7	CG	68	ASN
7	CG	86	GLN

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Mol	Chain	Res	Type
8	CH	70	GLN
8	CH	82	HIS
9	CI	3	GLN
9	CI	23	ASN
9	CI	38	GLN
9	CI	87	GLN
10	CJ	13	HIS
10	CJ	84	GLN
11	CK	38	ASN
11	CK	93	GLN
11	CK	116	HIS
12	CL	8	ASN
13	CM	62	ASN
14	CN	49	HIS
15	CO	9	GLN
15	CO	13	GLN
15	CO	46	HIS
17	CQ	94	ASN
19	CS	57	HIS
24	CY	150	GLN
24	CY	268	GLN
25	D0	3	HIS
25	D0	29	GLN
25	D0	35	ASN
27	D2	47	ASN
27	D2	56	GLN
28	D3	19	GLN
31	D6	32	ASN
31	D6	46	HIS
34	D9	34	GLN
38	DD	87	ASN
38	DD	115	GLN
38	DD	166	GLN
38	DD	201	HIS
39	DE	132	HIS
40	DF	160	ASN
40	DF	204	ASN
41	DG	40	ASN
41	DG	79	ASN
42	DH	111	HIS
43	DI	133	HIS
43	DI	139	GLN

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Mol	Chain	Res	Type
45	DK	33	ASN
45	DK	42	ASN
47	DO	3	GLN
47	DO	89	ASN
49	DQ	12	GLN
49	DQ	13	GLN
49	DQ	57	HIS
52	DT	136	GLN
54	DV	11	GLN
54	DV	80	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1503/1522 (98%)	233 (15%)	31 (2%)
1	CA	1503/1522 (98%)	240 (15%)	32 (2%)
22	AV	75/76 (98%)	22 (29%)	0
22	AW	74/76 (97%)	22 (29%)	0
22	CV	75/76 (98%)	18 (24%)	0
22	CW	74/76 (97%)	21 (28%)	1 (1%)
23	AX	7/25 (28%)	3 (42%)	0
23	CX	7/25 (28%)	3 (42%)	1 (14%)
35	BA	2900/2915 (99%)	576 (19%)	38 (1%)
35	DA	2900/2915 (99%)	588 (20%)	36 (1%)
36	BB	118/122 (96%)	16 (13%)	1 (0%)
36	DB	118/122 (96%)	17 (14%)	1 (0%)
All	All	9354/9472 (98%)	1759 (18%)	141 (1%)

All (1759) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	G
1	AA	31	G
1	AA	32	A
1	AA	39	G
1	AA	48	C
1	AA	51	A
1	AA	61	G
1	AA	76	C
1	AA	79	G
1	AA	80	G

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Mol	Chain	Res	Type
1	AA	81	U
1	AA	89	C
1	AA	90	U
1	AA	92	C
1	AA	97	G
1	AA	101	A
1	AA	116	A
1	AA	120	A
1	AA	121	C
1	AA	122	G
1	AA	131	C
1	AA	138	G
1	AA	144	G
1	AA	147	G
1	AA	150	C
1	AA	173	U
1	AA	181	G
1	AA	189(F)	U
1	AA	189(H)	G
1	AA	195	A
1	AA	197	A
1	AA	203	U
1	AA	204	U
1	AA	220	G
1	AA	244	U
1	AA	245	C
1	AA	247	G
1	AA	251	G
1	AA	266	G
1	AA	267	C
1	AA	270	A
1	AA	289	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	367	U
1	AA	372	C

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Mol	Chain	Res	Type
1	AA	373	A
1	AA	388	G
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	422	C
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	485	G
1	AA	496	A
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	532	A
1	AA	533	A
1	AA	534	U
1	AA	547	A
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	564	C
1	AA	572	A
1	AA	573	A
1	AA	574	A
1	AA	575	G
1	AA	576	G
1	AA	577	G
1	AA	607	A

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Mol	Chain	Res	Type
1	AA	630	G
1	AA	631	G
1	AA	632	A
1	AA	653	A
1	AA	665	A
1	AA	687	A
1	AA	688	G
1	AA	702	A
1	AA	731	G
1	AA	749	C
1	AA	755	G
1	AA	777	A
1	AA	793	U
1	AA	794	A
1	AA	817	C
1	AA	818	G
1	AA	819	A
1	AA	821	G
1	AA	828	A
1	AA	833	U
1	AA	839	U
1	AA	840	C
1	AA	841	U
1	AA	848	C
1	AA	859	A
1	AA	873	A
1	AA	902	G
1	AA	914	A
1	AA	921	U
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	961	U
1	AA	966	G
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	972	C
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	991	U
1	AA	992	U
1	AA	993	G
1	AA	1001(A)	G
1	AA	1004	A
1	AA	1023	G
1	AA	1027	C
1	AA	1030	C
1	AA	1035	A
1	AA	1036	G
1	AA	1050	G
1	AA	1054	C
1	AA	1055	A
1	AA	1065	U
1	AA	1066	C
1	AA	1068	G
1	AA	1081	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	1129	C
1	AA	1130	A
1	AA	1131	G
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1146	A
1	AA	1152	A
1	AA	1159	U
1	AA	1181	G
1	AA	1182	G

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Mol	Chain	Res	Type
1	AA	1196	U
1	AA	1197	G
1	AA	1202	G
1	AA	1212	U
1	AA	1213	A
1	AA	1225	A
1	AA	1227	A
1	AA	1238	A
1	AA	1249	C
1	AA	1255	G
1	AA	1256	A
1	AA	1257	U
1	AA	1258	G
1	AA	1280	A
1	AA	1281	U
1	AA	1282	C
1	AA	1286	A
1	AA	1287	A
1	AA	1294	G
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	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1347	G
1	AA	1363	C
1	AA	1364	U
1	AA	1370	G
1	AA	1388	C
1	AA	1397	C
1	AA	1419	G
1	AA	1442	G
1	AA	1442(A)	G
1	AA	1442(B)	A
1	AA	1447	A
1	AA	1452	C
1	AA	1492	A
1	AA	1493	A

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Mol	Chain	Res	Type
1	AA	1497	G
1	AA	1499	A
1	AA	1502	A
1	AA	1504	G
1	AA	1505	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
1	AA	1531	A
22	AV	2	C
22	AV	6	G
22	AV	8	U
22	AV	17	C
22	AV	18	G
22	AV	19	G
22	AV	20	U
22	AV	21	A
22	AV	22	G
22	AV	32	U
22	AV	36	A
22	AV	37	A
22	AV	41	C
22	AV	42	C
22	AV	46	G
22	AV	47	U
22	AV	48	C
22	AV	62	C
22	AV	70	G
22	AV	72	C
22	AV	73	A
22	AV	76	A
22	AW	2	C
22	AW	6	G
22	AW	8	U
22	AW	16	U
22	AW	17	C
22	AW	18	G
22	AW	19	G

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Mol	Chain	Res	Type
22	AW	20	U
22	AW	21	A
22	AW	32	U
22	AW	39	U
22	AW	41	C
22	AW	42	C
22	AW	46	G
22	AW	47	U
22	AW	48	C
22	AW	50	U
22	AW	51	U
22	AW	52	G
22	AW	54	U
22	AW	71	G
22	AW	73	A
23	AX	15	A
23	AX	16	U
23	AX	21	A
35	BA	9	U
35	BA	10	G
35	BA	15	G
35	BA	34	C
35	BA	35	G
35	BA	45	C
35	BA	49	A
35	BA	50	U
35	BA	51	G
35	BA	55	G
35	BA	63	U
35	BA	69	C
35	BA	71	A
35	BA	72	U
35	BA	74	A
35	BA	75	G
35	BA	88	G
35	BA	90	U
35	BA	94	C
35	BA	95	G
35	BA	100	G
35	BA	102	G
35	BA	118	A
35	BA	119	A

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Mol	Chain	Res	Type
35	BA	120	U
35	BA	129	C
35	BA	131	G
35	BA	139(A)	G
35	BA	140	G
35	BA	141	A
35	BA	146	G
35	BA	149	A
35	BA	153	C
35	BA	154(A)	C
35	BA	155	U
35	BA	157	U
35	BA	171	G
35	BA	173	G
35	BA	175	G
35	BA	182	A
35	BA	196	A
35	BA	197	A
35	BA	199	A
35	BA	204	A
35	BA	205	G
35	BA	215	G
35	BA	216	A
35	BA	221	A
35	BA	222	A
35	BA	228	A
35	BA	229	A
35	BA	230	U
35	BA	233	A
35	BA	248	G
35	BA	252	G
35	BA	261	G
35	BA	266	G
35	BA	269	U
35	BA	271(I)	G
35	BA	271(J)	C
35	BA	271(K)	U
35	BA	271(N)	U
35	BA	271(O)	C
35	BA	271(P)	C
35	BA	271(R)	G
35	BA	271(X)	G

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Mol	Chain	Res	Type
35	BA	271(Y)	U
35	BA	272(A)	U
35	BA	272(B)	G
35	BA	272(H)	C
35	BA	272(I)	U
35	BA	274	G
35	BA	275	G
35	BA	276	A
35	BA	279	C
35	BA	280	C
35	BA	298	G
35	BA	310	A
35	BA	311	A
35	BA	324	A
35	BA	329	G
35	BA	330	A
35	BA	332	A
35	BA	333	G
35	BA	349	G
35	BA	352	G
35	BA	353	G
35	BA	356	G
35	BA	362	U
35	BA	363(B)	G
35	BA	363(E)	U
35	BA	363(F)	A
35	BA	365	C
35	BA	372	G
35	BA	386	G
35	BA	388	G
35	BA	396	G
35	BA	405	U
35	BA	406	G
35	BA	411	G
35	BA	412	A
35	BA	428	A
35	BA	444	C
35	BA	448	U
35	BA	456	C
35	BA	457	A
35	BA	470	A
35	BA	475	U

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Mol	Chain	Res	Type
35	BA	481	G
35	BA	494	G
35	BA	504	U
35	BA	505	A
35	BA	508	G
35	BA	509	C
35	BA	513	A
35	BA	526	A
35	BA	528	A
35	BA	530	G
35	BA	531	C
35	BA	532	A
35	BA	533	G
35	BA	548	A
35	BA	562	U
35	BA	563	G
35	BA	573	G
35	BA	575	A
35	BA	588	U
35	BA	603	A
35	BA	604	G
35	BA	607	U
35	BA	610	G
35	BA	613	G
35	BA	614	U
35	BA	614(B)	G
35	BA	615	G
35	BA	620	G
35	BA	622	G
35	BA	626	U
35	BA	627	A
35	BA	637	A
35	BA	645	C
35	BA	646	A
35	BA	651	G
35	BA	653	A
35	BA	654	A
35	BA	654(A)	G
35	BA	654(B)	C
35	BA	654(D)	G
35	BA	654(G)	C
35	BA	654(I)	C

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Mol	Chain	Res	Type
35	BA	654(J)	A
35	BA	654(K)	C
35	BA	654(L)	G
35	BA	654(M)	C
35	BA	654(U)	A
35	BA	655	A
35	BA	673	C
35	BA	686	G
35	BA	708	C
35	BA	717	G
35	BA	722	A
35	BA	726	G
35	BA	730	C
35	BA	752	A
35	BA	753	C
35	BA	762	U
35	BA	776	G
35	BA	782	A
35	BA	784	A
35	BA	785	G
35	BA	791	C
35	BA	805	G
35	BA	812	C
35	BA	819	A
35	BA	827	U
35	BA	828	U
35	BA	830	G
35	BA	846	C
35	BA	848	G
35	BA	856	C
35	BA	859	G
35	BA	878	A
35	BA	890	A
35	BA	896	A
35	BA	897	C
35	BA	901	A
35	BA	904	C
35	BA	906	G
35	BA	910	A
35	BA	917	A
35	BA	931	G
35	BA	932	G

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Mol	Chain	Res	Type
35	BA	941	A
35	BA	945	A
35	BA	946	G
35	BA	958	U
35	BA	959	A
35	BA	961	C
35	BA	965	C
35	BA	973	A
35	BA	974	G
35	BA	975	C
35	BA	980	A
35	BA	983	A
35	BA	991	C
35	BA	996	A
35	BA	1012	U
35	BA	1013	C
35	BA	1022	G
35	BA	1023	U
35	BA	1025	G
35	BA	1026	U
35	BA	1039	G
35	BA	1041	C
35	BA	1045	A
35	BA	1046	A
35	BA	1047	G
35	BA	1049	C
35	BA	1051	G
35	BA	1055	G
35	BA	1060	U
35	BA	1067	A
35	BA	1068	G
35	BA	1070	A
35	BA	1088	A
35	BA	1090	U
35	BA	1108	U
35	BA	1109	C
35	BA	1111	A
35	BA	1112	G
35	BA	1113	U
35	BA	1114	G
35	BA	1115	G
35	BA	1116	C

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Mol	Chain	Res	Type
35	BA	1122	G
35	BA	1129	A
35	BA	1130	U
35	BA	1135	C
35	BA	1136	G
35	BA	1142	U
35	BA	1155	A
35	BA	1159	U
35	BA	1171	G
35	BA	1173	G
35	BA	1174	A
35	BA	1175	U
35	BA	1176	G
35	BA	1178	C
35	BA	1195	G
35	BA	1204	A
35	BA	1205	U
35	BA	1211	U
35	BA	1221	C
35	BA	1236	G
35	BA	1247	A
35	BA	1253	A
35	BA	1256	G
35	BA	1265	A
35	BA	1271	G
35	BA	1272	A
35	BA	1273	U
35	BA	1281	G
35	BA	1300	U
35	BA	1301	A
35	BA	1302	A
35	BA	1307	A
35	BA	1314	C
35	BA	1319	G
35	BA	1321	A
35	BA	1332	G
35	BA	1349	A
35	BA	1359	A
35	BA	1379	A
35	BA	1380	G
35	BA	1384	A
35	BA	1385	G

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Mol	Chain	Res	Type
35	BA	1386	C
35	BA	1407	C
35	BA	1416	G
35	BA	1417	C
35	BA	1419	A
35	BA	1420	U
35	BA	1421	G
35	BA	1428	C
35	BA	1437	C
35	BA	1445	A
35	BA	1449	A
35	BA	1450	G
35	BA	1455	G
35	BA	1460	A
35	BA	1461	G
35	BA	1471	A
35	BA	1475	G
35	BA	1476	C
35	BA	1478	G
35	BA	1481	U
35	BA	1482	G
35	BA	1485	G
35	BA	1488	G
35	BA	1490	A
35	BA	1491	G
35	BA	1493	C
35	BA	1494	A
35	BA	1495	A
35	BA	1497	U
35	BA	1502	C
35	BA	1503	U
35	BA	1505	C
35	BA	1508	A
35	BA	1509	C
35	BA	1509(A)	A
35	BA	1512	U
35	BA	1520	G
35	BA	1529	G
35	BA	1530	C
35	BA	1534	U
35	BA	1537	G
35	BA	1541	G

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Mol	Chain	Res	Type
35	BA	1542	A
35	BA	1544	A
35	BA	1547	C
35	BA	1554	A
35	BA	1558	A
35	BA	1559	G
35	BA	1569	A
35	BA	1578	U
35	BA	1579	A
35	BA	1581	G
35	BA	1584	C
35	BA	1586	A
35	BA	1588	C
35	BA	1589	C
35	BA	1591	G
35	BA	1594	G
35	BA	1598	C
35	BA	1603	A
35	BA	1608	A
35	BA	1616	A
35	BA	1617	C
35	BA	1618	A
35	BA	1640	C
35	BA	1648	C
35	BA	1654	A
35	BA	1674	G
35	BA	1678	G
35	BA	1694	C
35	BA	1695	G
35	BA	1696	G
35	BA	1718	G
35	BA	1721	G
35	BA	1722	A
35	BA	1739	U
35	BA	1740	G
35	BA	1742	G
35	BA	1746	G
35	BA	1748	G
35	BA	1749	A
35	BA	1754	C
35	BA	1756	G
35	BA	1763	G

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Mol	Chain	Res	Type
35	BA	1764	G
35	BA	1773	A
35	BA	1780	A
35	BA	1787	A
35	BA	1791	A
35	BA	1799	G
35	BA	1800	C
35	BA	1802	A
35	BA	1816	G
35	BA	1820	U
35	BA	1821	A
35	BA	1829	A
35	BA	1835	G
35	BA	1846	G
35	BA	1847	A
35	BA	1848	A
35	BA	1858	G
35	BA	1865	G
35	BA	1866	C
35	BA	1876	A
35	BA	1878	G
35	BA	1881	C
35	BA	1882	C
35	BA	1885	A
35	BA	1888	G
35	BA	1889	A
35	BA	1900	A
35	BA	1906	G
35	BA	1912	A
35	BA	1914	C
35	BA	1929	G
35	BA	1930	G
35	BA	1936	A
35	BA	1938	A
35	BA	1948	G
35	BA	1955	U
35	BA	1963	U
35	BA	1964	G
35	BA	1967	C
35	BA	1969	A
35	BA	1970	A
35	BA	1971	A

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Mol	Chain	Res	Type
35	BA	1972	A
35	BA	1982	C
35	BA	1987	G
35	BA	1993	U
35	BA	1997	G
35	BA	2023	G
35	BA	2031	A
35	BA	2033	A
35	BA	2034	U
35	BA	2036	C
35	BA	2043	C
35	BA	2055	C
35	BA	2056	G
35	BA	2060	A
35	BA	2061	G
35	BA	2062	A
35	BA	2069	G
35	BA	2093	G
35	BA	2099	U
35	BA	2103	C
35	BA	2104	G
35	BA	2108	C
35	BA	2110	G
35	BA	2111	C
35	BA	2112	G
35	BA	2116	G
35	BA	2118	U
35	BA	2121	G
35	BA	2127	G
35	BA	2130	U
35	BA	2131	G
35	BA	2132	U
35	BA	2133	G
35	BA	2134	A
35	BA	2145	C
35	BA	2148	G
35	BA	2172	U
35	BA	2173	A
35	BA	2177	C
35	BA	2179	C
35	BA	2187	G
35	BA	2189	U

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Mol	Chain	Res	Type
35	BA	2190	G
35	BA	2193	G
35	BA	2198	A
35	BA	2199	A
35	BA	2200	C
35	BA	2207	G
35	BA	2208	A
35	BA	2218	U
35	BA	2219	G
35	BA	2225	A
35	BA	2226	C
35	BA	2238	G
35	BA	2239	G
35	BA	2273	A
35	BA	2275	C
35	BA	2283	C
35	BA	2287	A
35	BA	2288	A
35	BA	2305	A
35	BA	2306	C
35	BA	2307	G
35	BA	2308	G
35	BA	2311	A
35	BA	2313	C
35	BA	2316	C
35	BA	2319	G
35	BA	2320	A
35	BA	2336	A
35	BA	2345	G
35	BA	2346	A
35	BA	2347	C
35	BA	2350	C
35	BA	2360	A
35	BA	2383	G
35	BA	2385	C
35	BA	2399	G
35	BA	2402	C
35	BA	2406	U
35	BA	2423	U
35	BA	2425	A
35	BA	2428	G
35	BA	2429	G

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Mol	Chain	Res	Type
35	BA	2430	A
35	BA	2431	U
35	BA	2435	A
35	BA	2439	A
35	BA	2441	C
35	BA	2448	A
35	BA	2459	A
35	BA	2469	A
35	BA	2470	G
35	BA	2476	A
35	BA	2477	C
35	BA	2478	A
35	BA	2482	G
35	BA	2484	G
35	BA	2491	U
35	BA	2502	G
35	BA	2504	U
35	BA	2505	G
35	BA	2506	U
35	BA	2518	A
35	BA	2520	C
35	BA	2524	G
35	BA	2529	G
35	BA	2543	G
35	BA	2545	G
35	BA	2554	U
35	BA	2566	A
35	BA	2567	G
35	BA	2573	C
35	BA	2582	G
35	BA	2585	U
35	BA	2602	A
35	BA	2609	U
35	BA	2611	U
35	BA	2612	C
35	BA	2615	U
35	BA	2630	G
35	BA	2645	G
35	BA	2654	A
35	BA	2657	A
35	BA	2658	C
35	BA	2659	G

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Mol	Chain	Res	Type
35	BA	2660	A
35	BA	2661	G
35	BA	2662	A
35	BA	2673	G
35	BA	2682	U
35	BA	2689	U
35	BA	2690	C
35	BA	2691	C
35	BA	2703	C
35	BA	2711	A
35	BA	2712	U
35	BA	2712(A)	A
35	BA	2713	A
35	BA	2726	U
35	BA	2733	A
35	BA	2744	G
35	BA	2762	G
35	BA	2765	A
35	BA	2770	G
35	BA	2778	A
35	BA	2779	U
35	BA	2780	G
35	BA	2789	C
35	BA	2790	A
35	BA	2791	C
35	BA	2792	G
35	BA	2794	C
35	BA	2795	G
35	BA	2796	U
35	BA	2801(A)	A
35	BA	2802	G
35	BA	2803	C
35	BA	2808	U
35	BA	2818	G
35	BA	2820	A
35	BA	2821	A
35	BA	2833	G
35	BA	2834	G
35	BA	2835	A
35	BA	2836	U
35	BA	2845	G
35	BA	2849	U

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Mol	Chain	Res	Type
35	BA	2872	G
35	BA	2879	C
35	BA	2892	A
35	BA	2893	G
35	BA	2894	G
35	BA	2895	U
36	BB	3	C
36	BB	8	U
36	BB	13	A
36	BB	15	A
36	BB	22	U
36	BB	24	G
36	BB	41	U
36	BB	42	C
36	BB	45	A
36	BB	53	A
36	BB	67	G
36	BB	73	A
36	BB	81	G
36	BB	88	C
36	BB	102	A
36	BB	110	G
1	CA	9	G
1	CA	31	G
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	49	U
1	CA	51	A
1	CA	61	G
1	CA	79	G
1	CA	80	G
1	CA	81	U
1	CA	89	C
1	CA	90	U
1	CA	92	C
1	CA	97	G
1	CA	101	A
1	CA	116	A
1	CA	120	A
1	CA	121	C

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Mol	Chain	Res	Type
1	CA	129(A)	G
1	CA	131	C
1	CA	137	C
1	CA	144	G
1	CA	146	G
1	CA	147	G
1	CA	150	C
1	CA	172	A
1	CA	173	U
1	CA	181	G
1	CA	189(F)	U
1	CA	189(H)	G
1	CA	195	A
1	CA	197	A
1	CA	203	U
1	CA	204	U
1	CA	220	G
1	CA	243	A
1	CA	244	U
1	CA	245	C
1	CA	247	G
1	CA	251	G
1	CA	266	G
1	CA	267	C
1	CA	270	A
1	CA	289	G
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	332	G
1	CA	345	C
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	367	U
1	CA	372	C
1	CA	373	A
1	CA	397	A
1	CA	398	C
1	CA	406	G
1	CA	412	A
1	CA	413	G

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Mol	Chain	Res	Type
1	CA	414	A
1	CA	422	C
1	CA	424	G
1	CA	429	U
1	CA	430	A
1	CA	435	C
1	CA	436	C
1	CA	437	U
1	CA	438	G
1	CA	439	A
1	CA	452	A
1	CA	461	A
1	CA	485	G
1	CA	496	A
1	CA	498	U
1	CA	509	A
1	CA	510	A
1	CA	511	C
1	CA	518	C
1	CA	521	G
1	CA	527	G
1	CA	532	A
1	CA	533	A
1	CA	534	U
1	CA	547	A
1	CA	559	A
1	CA	560	U
1	CA	561	U
1	CA	572	A
1	CA	573	A
1	CA	575	G
1	CA	576	G
1	CA	577	G
1	CA	588	G
1	CA	630	G
1	CA	631	G
1	CA	632	A
1	CA	633	G
1	CA	653	A
1	CA	665	A
1	CA	687	A
1	CA	688	G

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Mol	Chain	Res	Type
1	CA	731	G
1	CA	749	C
1	CA	755	G
1	CA	777	A
1	CA	793	U
1	CA	794	A
1	CA	802	A
1	CA	816	A
1	CA	817	C
1	CA	818	G
1	CA	819	A
1	CA	821	G
1	CA	828	A
1	CA	833	U
1	CA	839	U
1	CA	840	C
1	CA	841	U
1	CA	848	C
1	CA	859	A
1	CA	873	A
1	CA	902	G
1	CA	914	A
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	966	G
1	CA	968	A
1	CA	969	A
1	CA	971	G
1	CA	972	C
1	CA	974	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	978	A
1	CA	980	C
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	994	A

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Mol	Chain	Res	Type
1	CA	1001(A)	G
1	CA	1005	A
1	CA	1007	C
1	CA	1027	C
1	CA	1030	C
1	CA	1035	A
1	CA	1036	G
1	CA	1050	G
1	CA	1054	C
1	CA	1055	A
1	CA	1065	U
1	CA	1066	C
1	CA	1068	G
1	CA	1081	G
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1108	G
1	CA	1117	G
1	CA	1124	G
1	CA	1125	U
1	CA	1126	U
1	CA	1129	C
1	CA	1130	A
1	CA	1131	G
1	CA	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1146	A
1	CA	1152	A
1	CA	1159	U
1	CA	1182	G
1	CA	1196	U
1	CA	1197	G
1	CA	1201	A
1	CA	1202	G
1	CA	1212	U
1	CA	1213	A
1	CA	1225	A
1	CA	1227	A
1	CA	1238	A

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Mol	Chain	Res	Type
1	CA	1249	C
1	CA	1255	G
1	CA	1256	A
1	CA	1257	U
1	CA	1258	G
1	CA	1280	A
1	CA	1281	U
1	CA	1282	C
1	CA	1286	A
1	CA	1287	A
1	CA	1290	G
1	CA	1293	G
1	CA	1294	G
1	CA	1300	G
1	CA	1301	U
1	CA	1302	U
1	CA	1305	G
1	CA	1306	A
1	CA	1317	C
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1331	G
1	CA	1338	G
1	CA	1347	G
1	CA	1353	G
1	CA	1363	C
1	CA	1364	U
1	CA	1387	G
1	CA	1388	C
1	CA	1397	C
1	CA	1419	G
1	CA	1442	G
1	CA	1442(A)	G
1	CA	1442(B)	A
1	CA	1447	A
1	CA	1452	C
1	CA	1492	A
1	CA	1493	A
1	CA	1497	G
1	CA	1499	A
1	CA	1502	A

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Mol	Chain	Res	Type
1	CA	1504	G
1	CA	1505	G
1	CA	1506	U
1	CA	1507	A
1	CA	1517	G
1	CA	1519	A
1	CA	1520	G
1	CA	1529	G
1	CA	1530	G
1	CA	1531	A
22	CV	8	U
22	CV	17	C
22	CV	18	G
22	CV	19	G
22	CV	20	U
22	CV	21	A
22	CV	22	G
22	CV	37	A
22	CV	41	C
22	CV	42	C
22	CV	46	G
22	CV	47	U
22	CV	48	C
22	CV	61	C
22	CV	62	C
22	CV	72	C
22	CV	73	A
22	CV	76	A
22	CW	4	C
22	CW	8	U
22	CW	16	U
22	CW	17	C
22	CW	18	G
22	CW	19	G
22	CW	20	U
22	CW	21	A
22	CW	22	G
22	CW	36	A
22	CW	39	U
22	CW	40	C
22	CW	41	C
22	CW	46	G

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Mol	Chain	Res	Type
22	CW	47	U
22	CW	48	C
22	CW	51	U
22	CW	52	G
22	CW	62	C
22	CW	71	G
22	CW	73	A
23	CX	15	A
23	CX	16	U
23	CX	21	A
35	DA	9	U
35	DA	10	G
35	DA	15	G
35	DA	34	C
35	DA	35	G
35	DA	45	C
35	DA	50	U
35	DA	51	G
35	DA	55	G
35	DA	69	C
35	DA	71	A
35	DA	72	U
35	DA	74	A
35	DA	75	G
35	DA	86	C
35	DA	88	G
35	DA	90	U
35	DA	94	C
35	DA	100	G
35	DA	102	G
35	DA	118	A
35	DA	120	U
35	DA	129	C
35	DA	131	G
35	DA	139(A)	G
35	DA	141	A
35	DA	144	C
35	DA	146	G
35	DA	149	A
35	DA	154	G
35	DA	154(A)	C
35	DA	155	U

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Mol	Chain	Res	Type
35	DA	157	U
35	DA	171	G
35	DA	173	G
35	DA	174	C
35	DA	175	G
35	DA	182	A
35	DA	196	A
35	DA	197	A
35	DA	199	A
35	DA	204	A
35	DA	205	G
35	DA	215	G
35	DA	216	A
35	DA	221	A
35	DA	222	A
35	DA	228	A
35	DA	229	A
35	DA	230	U
35	DA	233	A
35	DA	248	G
35	DA	252	G
35	DA	260	G
35	DA	261	G
35	DA	268	C
35	DA	269	U
35	DA	271(I)	G
35	DA	271(J)	C
35	DA	271(K)	U
35	DA	271(N)	U
35	DA	271(O)	C
35	DA	271(P)	C
35	DA	271(R)	G
35	DA	271(W)	G
35	DA	271(X)	G
35	DA	271(Y)	U
35	DA	272(A)	U
35	DA	272(B)	G
35	DA	272(H)	C
35	DA	272(I)	U
35	DA	274	G
35	DA	275	G
35	DA	276	A

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Mol	Chain	Res	Type
35	DA	278	A
35	DA	279	C
35	DA	280	C
35	DA	311	A
35	DA	324	A
35	DA	329	G
35	DA	330	A
35	DA	332	A
35	DA	333	G
35	DA	352	G
35	DA	353	G
35	DA	356	G
35	DA	362	U
35	DA	363(B)	G
35	DA	363(E)	U
35	DA	363(F)	A
35	DA	365	C
35	DA	372	G
35	DA	386	G
35	DA	388	G
35	DA	396	G
35	DA	405	U
35	DA	406	G
35	DA	411	G
35	DA	412	A
35	DA	428	A
35	DA	441	U
35	DA	444	C
35	DA	448	U
35	DA	451	C
35	DA	456	C
35	DA	457	A
35	DA	470	A
35	DA	475	U
35	DA	479	A
35	DA	481	G
35	DA	494	G
35	DA	504	U
35	DA	505	A
35	DA	508	G
35	DA	509	C
35	DA	513	A

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Mol	Chain	Res	Type
35	DA	525	U
35	DA	526	A
35	DA	528	A
35	DA	530	G
35	DA	531	C
35	DA	532	A
35	DA	533	G
35	DA	562	U
35	DA	563	G
35	DA	573	G
35	DA	575	A
35	DA	588	U
35	DA	603	A
35	DA	604	G
35	DA	607	U
35	DA	613	G
35	DA	614	U
35	DA	614(B)	G
35	DA	615	G
35	DA	620	G
35	DA	622	G
35	DA	626	U
35	DA	627	A
35	DA	637	A
35	DA	645	C
35	DA	646	A
35	DA	651	G
35	DA	653	A
35	DA	654(A)	G
35	DA	654(B)	C
35	DA	654(D)	G
35	DA	654(G)	C
35	DA	654(I)	C
35	DA	654(J)	A
35	DA	654(K)	C
35	DA	654(L)	G
35	DA	654(U)	A
35	DA	655	A
35	DA	670	A
35	DA	673	C
35	DA	686	G
35	DA	708	C

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Mol	Chain	Res	Type
35	DA	717	G
35	DA	722	A
35	DA	730	C
35	DA	738	G
35	DA	753	C
35	DA	762	U
35	DA	776	G
35	DA	782	A
35	DA	784	A
35	DA	785	G
35	DA	791	C
35	DA	805	G
35	DA	812	C
35	DA	819	A
35	DA	827	U
35	DA	828	U
35	DA	830	G
35	DA	845	G
35	DA	848	G
35	DA	856	C
35	DA	859	G
35	DA	878	A
35	DA	879	G
35	DA	890	A
35	DA	896	A
35	DA	897	C
35	DA	901	A
35	DA	904	C
35	DA	910	A
35	DA	917	A
35	DA	932	G
35	DA	933	A
35	DA	941	A
35	DA	945	A
35	DA	946	G
35	DA	958	U
35	DA	959	A
35	DA	961	C
35	DA	964	C
35	DA	965	C
35	DA	973	A
35	DA	974	G

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Mol	Chain	Res	Type
35	DA	975	C
35	DA	983	A
35	DA	991	C
35	DA	996	A
35	DA	1005	C
35	DA	1012	U
35	DA	1013	C
35	DA	1022	G
35	DA	1023	U
35	DA	1025	G
35	DA	1026	U
35	DA	1033	U
35	DA	1039	G
35	DA	1041	C
35	DA	1045	A
35	DA	1046	A
35	DA	1047	G
35	DA	1049	C
35	DA	1051	G
35	DA	1055	G
35	DA	1057	A
35	DA	1060	U
35	DA	1067	A
35	DA	1070	A
35	DA	1071	G
35	DA	1088	A
35	DA	1102	C
35	DA	1108	U
35	DA	1109	C
35	DA	1111	A
35	DA	1112	G
35	DA	1113	U
35	DA	1114	G
35	DA	1115	G
35	DA	1122	G
35	DA	1129	A
35	DA	1130	U
35	DA	1135	C
35	DA	1136	G
35	DA	1141	U
35	DA	1142	U
35	DA	1143	A

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Mol	Chain	Res	Type
35	DA	1155	A
35	DA	1160	G
35	DA	1170	G
35	DA	1173	G
35	DA	1174	A
35	DA	1175	U
35	DA	1176	G
35	DA	1178	C
35	DA	1195	G
35	DA	1204	A
35	DA	1205	U
35	DA	1211	U
35	DA	1212	G
35	DA	1221	C
35	DA	1236	G
35	DA	1247	A
35	DA	1253	A
35	DA	1256	G
35	DA	1265	A
35	DA	1269	A
35	DA	1271	G
35	DA	1272	A
35	DA	1273	U
35	DA	1281	G
35	DA	1287	A
35	DA	1300	U
35	DA	1301	A
35	DA	1302	A
35	DA	1307	A
35	DA	1314	C
35	DA	1319	G
35	DA	1321	A
35	DA	1332	G
35	DA	1345	C
35	DA	1349	A
35	DA	1352	U
35	DA	1359	A
35	DA	1379	A
35	DA	1380	G
35	DA	1384	A
35	DA	1385	G
35	DA	1386	C

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Mol	Chain	Res	Type
35	DA	1407	C
35	DA	1416	G
35	DA	1417	C
35	DA	1419	A
35	DA	1420	U
35	DA	1421	G
35	DA	1428	C
35	DA	1437	C
35	DA	1445	A
35	DA	1449	A
35	DA	1450	G
35	DA	1455	G
35	DA	1458	C
35	DA	1460	A
35	DA	1461	G
35	DA	1471	A
35	DA	1475	G
35	DA	1476	C
35	DA	1478	G
35	DA	1481	U
35	DA	1482	G
35	DA	1485	G
35	DA	1488	G
35	DA	1490	A
35	DA	1491	G
35	DA	1493	C
35	DA	1494	A
35	DA	1495	A
35	DA	1496	A
35	DA	1497	U
35	DA	1500	G
35	DA	1502	C
35	DA	1503	U
35	DA	1505	C
35	DA	1509	C
35	DA	1509(A)	A
35	DA	1520	G
35	DA	1529	G
35	DA	1530	C
35	DA	1534	U
35	DA	1537	G
35	DA	1541	G

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Mol	Chain	Res	Type
35	DA	1542	A
35	DA	1544	A
35	DA	1547	C
35	DA	1554	A
35	DA	1558	A
35	DA	1559	G
35	DA	1569	A
35	DA	1578	U
35	DA	1579	A
35	DA	1584	C
35	DA	1586	A
35	DA	1588	C
35	DA	1591	G
35	DA	1594	G
35	DA	1598	C
35	DA	1603	A
35	DA	1608	A
35	DA	1617	C
35	DA	1618	A
35	DA	1640	C
35	DA	1648	C
35	DA	1654	A
35	DA	1674	G
35	DA	1678	G
35	DA	1694	C
35	DA	1695	G
35	DA	1696	G
35	DA	1703	G
35	DA	1717	G
35	DA	1718	G
35	DA	1722	A
35	DA	1739	U
35	DA	1740	G
35	DA	1742	G
35	DA	1746	G
35	DA	1748	G
35	DA	1749	A
35	DA	1754	C
35	DA	1756	G
35	DA	1763	G
35	DA	1764	G
35	DA	1773	A

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Mol	Chain	Res	Type
35	DA	1780	A
35	DA	1787	A
35	DA	1791	A
35	DA	1800	C
35	DA	1801	G
35	DA	1802	A
35	DA	1816	G
35	DA	1820	U
35	DA	1821	A
35	DA	1829	A
35	DA	1835	G
35	DA	1836	C
35	DA	1846	G
35	DA	1847	A
35	DA	1848	A
35	DA	1850	G
35	DA	1858	G
35	DA	1865	G
35	DA	1866	C
35	DA	1876	A
35	DA	1878	G
35	DA	1881	C
35	DA	1882	C
35	DA	1885	A
35	DA	1888	G
35	DA	1889	A
35	DA	1900	A
35	DA	1906	G
35	DA	1912	A
35	DA	1914	C
35	DA	1916	A
35	DA	1929	G
35	DA	1930	G
35	DA	1936	A
35	DA	1938	A
35	DA	1948	G
35	DA	1955	U
35	DA	1963	U
35	DA	1967	C
35	DA	1969	A
35	DA	1970	A
35	DA	1971	A

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Mol	Chain	Res	Type
35	DA	1972	A
35	DA	1982	C
35	DA	1987	G
35	DA	1993	U
35	DA	1997	G
35	DA	2023	G
35	DA	2031	A
35	DA	2033	A
35	DA	2034	U
35	DA	2036	C
35	DA	2043	C
35	DA	2055	C
35	DA	2056	G
35	DA	2060	A
35	DA	2061	G
35	DA	2062	A
35	DA	2069	G
35	DA	2093	G
35	DA	2094	G
35	DA	2099	U
35	DA	2103	C
35	DA	2104	G
35	DA	2108	C
35	DA	2110	G
35	DA	2111	C
35	DA	2112	G
35	DA	2116	G
35	DA	2117	A
35	DA	2118	U
35	DA	2121	G
35	DA	2127	G
35	DA	2128	C
35	DA	2130	U
35	DA	2131	G
35	DA	2132	U
35	DA	2133	G
35	DA	2134	A
35	DA	2145	C
35	DA	2159	G
35	DA	2172	U
35	DA	2173	A
35	DA	2177	C

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Mol	Chain	Res	Type
35	DA	2179	C
35	DA	2187	G
35	DA	2189	U
35	DA	2190	G
35	DA	2193	G
35	DA	2198	A
35	DA	2199	A
35	DA	2200	C
35	DA	2207	G
35	DA	2208	A
35	DA	2218	U
35	DA	2219	G
35	DA	2222	G
35	DA	2225	A
35	DA	2226	C
35	DA	2239	G
35	DA	2266	A
35	DA	2275	C
35	DA	2283	C
35	DA	2287	A
35	DA	2288	A
35	DA	2303	G
35	DA	2305	A
35	DA	2306	C
35	DA	2307	G
35	DA	2308	G
35	DA	2310	A
35	DA	2311	A
35	DA	2313	C
35	DA	2316	C
35	DA	2319	G
35	DA	2320	A
35	DA	2336	A
35	DA	2345	G
35	DA	2346	A
35	DA	2347	C
35	DA	2350	C
35	DA	2383	G
35	DA	2385	C
35	DA	2399	G
35	DA	2402	C
35	DA	2406	U

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Mol	Chain	Res	Type
35	DA	2423	U
35	DA	2425	A
35	DA	2429	G
35	DA	2430	A
35	DA	2435	A
35	DA	2439	A
35	DA	2441	C
35	DA	2448	A
35	DA	2459	A
35	DA	2469	A
35	DA	2470	G
35	DA	2476	A
35	DA	2477	C
35	DA	2482	G
35	DA	2483	C
35	DA	2484	G
35	DA	2491	U
35	DA	2502	G
35	DA	2504	U
35	DA	2505	G
35	DA	2506	U
35	DA	2518	A
35	DA	2520	C
35	DA	2524	G
35	DA	2529	G
35	DA	2542	A
35	DA	2543	G
35	DA	2545	G
35	DA	2554	U
35	DA	2566	A
35	DA	2567	G
35	DA	2573	C
35	DA	2576	G
35	DA	2578	G
35	DA	2581	G
35	DA	2585	U
35	DA	2602	A
35	DA	2609	U
35	DA	2611	U
35	DA	2612	C
35	DA	2615	U
35	DA	2630	G

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Mol	Chain	Res	Type
35	DA	2646	C
35	DA	2654	A
35	DA	2657	A
35	DA	2658	C
35	DA	2659	G
35	DA	2660	A
35	DA	2661	G
35	DA	2662	A
35	DA	2673	G
35	DA	2689	U
35	DA	2690	C
35	DA	2691	C
35	DA	2703	C
35	DA	2712	U
35	DA	2712(A)	A
35	DA	2713	A
35	DA	2726	U
35	DA	2733	A
35	DA	2758	A
35	DA	2762	G
35	DA	2764	A
35	DA	2765	A
35	DA	2770	G
35	DA	2771	C
35	DA	2778	A
35	DA	2779	U
35	DA	2780	G
35	DA	2789	C
35	DA	2790	A
35	DA	2791	C
35	DA	2794	C
35	DA	2795	G
35	DA	2796	U
35	DA	2801(A)	A
35	DA	2802	G
35	DA	2803	C
35	DA	2808	U
35	DA	2818	G
35	DA	2820	A
35	DA	2821	A
35	DA	2823	A
35	DA	2833	G

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Mol	Chain	Res	Type
35	DA	2834	G
35	DA	2835	A
35	DA	2836	U
35	DA	2844	G
35	DA	2849	U
35	DA	2872	G
35	DA	2892	A
35	DA	2893	G
35	DA	2894	G
35	DA	2895	U
36	DB	8	U
36	DB	15	A
36	DB	16	G
36	DB	22	U
36	DB	27	C
36	DB	41	U
36	DB	42	C
36	DB	45	A
36	DB	53	A
36	DB	67	G
36	DB	73	A
36	DB	76	G
36	DB	81	G
36	DB	82	G
36	DB	88	C
36	DB	89	G
36	DB	110	G

All (141) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	30	U
1	AA	60	A
1	AA	115	G
1	AA	119	A
1	AA	243	A
1	AA	250	A
1	AA	266	G
1	AA	328	C
1	AA	366	C
1	AA	428	G
1	AA	429	U

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Mol	Chain	Res	Type
1	AA	438	G
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	913	A
1	AA	991	U
1	AA	992	U
1	AA	1049	U
1	AA	1065	U
1	AA	1067	A
1	AA	1201	A
1	AA	1281	U
1	AA	1285	A
1	AA	1300	G
1	AA	1498	U
1	AA	1504	G
35	BA	49	A
35	BA	71	A
35	BA	74	A
35	BA	128	C
35	BA	221	A
35	BA	331	A
35	BA	332	A
35	BA	387	U
35	BA	474	G
35	BA	512	G
35	BA	587	C
35	BA	603	A
35	BA	614(C)	A
35	BA	752	A
35	BA	790	C
35	BA	1022	G
35	BA	1048	A
35	BA	1210	A
35	BA	1300	U
35	BA	1301	A
35	BA	1427	A
35	BA	1541	G

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Mol	Chain	Res	Type
35	BA	1558	A
35	BA	1653	G
35	BA	1799	G
35	BA	1819	A
35	BA	1820	U
35	BA	1970	A
35	BA	1992	G
35	BA	2033	A
35	BA	2126	A
35	BA	2171	A
35	BA	2225	A
35	BA	2282	G
35	BA	2422	A
35	BA	2481	G
35	BA	2689	U
35	BA	2791	C
36	BB	66	A
1	CA	30	U
1	CA	60	A
1	CA	115	G
1	CA	119	A
1	CA	243	A
1	CA	250	A
1	CA	266	G
1	CA	328	C
1	CA	353	A
1	CA	366	C
1	CA	428	G
1	CA	429	U
1	CA	438	G
1	CA	484	G
1	CA	509	A
1	CA	533	A
1	CA	560	U
1	CA	575	G
1	CA	687	A
1	CA	748	C
1	CA	913	A
1	CA	991	U
1	CA	992	U
1	CA	1049	U
1	CA	1065	U

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Mol	Chain	Res	Type
1	CA	1067	A
1	CA	1201	A
1	CA	1281	U
1	CA	1285	A
1	CA	1300	G
1	CA	1498	U
1	CA	1504	G
22	CW	70	G
23	CX	15	A
35	DA	49	A
35	DA	71	A
35	DA	74	A
35	DA	128	C
35	DA	221	A
35	DA	331	A
35	DA	332	A
35	DA	387	U
35	DA	474	G
35	DA	512	G
35	DA	587	C
35	DA	603	A
35	DA	614(C)	A
35	DA	752	A
35	DA	790	C
35	DA	1022	G
35	DA	1210	A
35	DA	1300	U
35	DA	1301	A
35	DA	1427	A
35	DA	1541	G
35	DA	1558	A
35	DA	1653	G
35	DA	1799	G
35	DA	1819	A
35	DA	1820	U
35	DA	1970	A
35	DA	1992	G
35	DA	2033	A
35	DA	2126	A
35	DA	2171	A
35	DA	2225	A
35	DA	2282	G

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Mol	Chain	Res	Type
35	DA	2422	A
35	DA	2481	G
35	DA	2689	U
36	DB	66	A

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

2 non-standard protein/DNA/RNA residues are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
24	MEQ	CY	240	24	8,9,10	1.38	2 (25%)	5,10,12	1.79	2 (40%)
24	MEQ	AY	240	24	8,9,10	1.40	2 (25%)	5,10,12	1.80	2 (40%)

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
24	MEQ	CY	240	24	-	3/8/9/11	-
24	MEQ	AY	240	24	-	2/8/9/11	-

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	AY	240	MEQ	CD-NE2	2.49	1.45	1.34
24	CY	240	MEQ	CD-NE2	2.47	1.45	1.34
24	CY	240	MEQ	OE1-CD	-2.22	1.18	1.23
24	AY	240	MEQ	OE1-CD	-2.20	1.18	1.23

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	AY	240	MEQ	CG-CD-NE2	3.08	120.71	116.39
24	CY	240	MEQ	CG-CD-NE2	2.83	120.36	116.39
24	CY	240	MEQ	CB-CG-CD	-2.52	107.45	113.06
24	AY	240	MEQ	CB-CG-CD	-2.06	108.47	113.06

There are no chirality outliers.

All (5) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
24	AY	240	MEQ	N-CA-CB-CG
24	AY	240	MEQ	C-CA-CB-CG
24	CY	240	MEQ	N-CA-CB-CG
24	CY	240	MEQ	C-CA-CB-CG
24	CY	240	MEQ	O-C-CA-CB

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 480 ligands modelled in this entry, 480 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

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
13	AM	3
13	CM	3
31	B6	1
9	AI	1
41	BG	1
9	CI	1
48	BP	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B6	46:HIS	C	47:THR	N	7.71
1	AM	112:GLY	C	113:PRO	N	4.87
1	CM	112:GLY	C	113:PRO	N	4.87
1	AI	104:ARG	C	105:ASP	N	4.73
1	AM	65:LYS	C	66:LEU	N	4.57
1	BG	112:PRO	C	113:ARG	N	4.54
1	CM	69:GLU	C	70:LEU	N	4.53
1	CI	104:ARG	C	105:ASP	N	4.52
1	AM	69:GLU	C	70:LEU	N	4.39
1	CM	65:LYS	C	66:LEU	N	3.21
1	BP	61:ARG	C	62:LEU	N	1.20

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	1504/1522 (98%)	-0.83	1 (0%) 92 89	101, 160, 266, 374	0
1	CA	1504/1522 (98%)	-0.81	0 100 100	99, 164, 261, 390	0
2	AB	235/256 (91%)	-0.12	3 (1%) 75 55	171, 220, 260, 279	0
2	CB	235/256 (91%)	-0.20	3 (1%) 75 55	135, 195, 239, 253	0
3	AC	207/239 (86%)	-0.30	3 (1%) 73 54	160, 205, 242, 281	0
3	CC	207/239 (86%)	-0.27	5 (2%) 59 40	146, 179, 215, 234	0
4	AD	208/209 (99%)	-0.04	3 (1%) 73 54	122, 157, 189, 209	0
4	CD	208/209 (99%)	0.25	15 (7%) 21 14	141, 181, 208, 229	0
5	AE	151/162 (93%)	-0.22	1 (0%) 84 69	129, 168, 201, 221	0
5	CE	151/162 (93%)	-0.45	0 100 100	120, 152, 184, 213	0
6	AF	101/101 (100%)	-0.30	0 100 100	157, 189, 218, 247	0
6	CF	101/101 (100%)	-0.41	0 100 100	128, 162, 192, 226	0
7	AG	155/156 (99%)	-0.27	1 (0%) 85 73	166, 199, 235, 255	0
7	CG	155/156 (99%)	-0.29	1 (0%) 85 73	136, 188, 223, 253	0
8	AH	138/138 (100%)	0.03	1 (0%) 84 69	143, 170, 199, 216	0
8	CH	138/138 (100%)	0.01	3 (2%) 62 42	136, 162, 186, 202	0
9	AI	127/128 (99%)	0.28	10 (7%) 18 12	172, 227, 248, 264	0
9	CI	127/128 (99%)	0.06	4 (3%) 51 32	145, 202, 241, 246	0
10	AJ	99/105 (94%)	0.17	0 100 100	174, 216, 246, 256	0
10	CJ	99/105 (94%)	0.18	1 (1%) 79 63	164, 201, 235, 250	0
11	AK	119/129 (92%)	-0.26	3 (2%) 58 39	135, 176, 211, 255	0
11	CK	119/129 (92%)	-0.12	3 (2%) 58 39	130, 159, 197, 249	0
12	AL	125/132 (94%)	-0.06	1 (0%) 82 67	112, 136, 173, 203	0
12	CL	125/132 (94%)	-0.02	2 (1%) 70 51	118, 140, 180, 220	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AM	125/126 (99%)	0.12	7 (5%) 30 19	173, 220, 245, 273	0
13	CM	125/126 (99%)	0.11	6 (4%) 35 22	151, 197, 224, 244	0
14	AN	60/61 (98%)	0.40	3 (5%) 34 22	179, 202, 223, 232	0
14	CN	60/61 (98%)	0.40	2 (3%) 49 30	146, 177, 200, 208	0
15	AO	88/89 (98%)	-0.15	0 100 100	132, 161, 202, 213	0
15	CO	88/89 (98%)	0.04	2 (2%) 61 41	120, 151, 187, 202	0
16	AP	84/88 (95%)	-0.12	3 (3%) 46 28	123, 143, 182, 198	0
16	CP	84/88 (95%)	0.72	10 (11%) 9 6	154, 185, 231, 243	0
17	AQ	100/105 (95%)	-0.16	2 (2%) 65 45	123, 150, 178, 188	0
17	CQ	100/105 (95%)	-0.03	4 (4%) 42 26	121, 152, 181, 200	0
18	AR	70/88 (79%)	-0.32	0 100 100	162, 190, 227, 235	0
18	CR	70/88 (79%)	-0.39	0 100 100	120, 161, 192, 205	0
19	AS	79/93 (84%)	0.29	7 (8%) 15 10	180, 225, 257, 264	0
19	CS	79/93 (84%)	0.17	1 (1%) 75 55	152, 200, 248, 260	0
20	AT	99/106 (93%)	0.26	8 (8%) 18 11	112, 149, 188, 211	0
20	CT	99/106 (93%)	0.44	9 (9%) 15 9	133, 171, 215, 243	0
21	AU	25/27 (92%)	1.25	4 (16%) 5 3	187, 213, 239, 242	0
21	CU	25/27 (92%)	0.54	2 (8%) 18 12	156, 181, 195, 199	0
22	AV	76/76 (100%)	-0.85	0 100 100	152, 210, 242, 302	0
22	AW	75/76 (98%)	-0.34	1 (1%) 75 55	323, 391, 436, 444	0
22	CV	76/76 (100%)	-0.95	0 100 100	141, 191, 230, 296	0
22	CW	75/76 (98%)	-0.35	1 (1%) 75 55	342, 398, 492, 499	0
23	AX	8/25 (32%)	0.86	2 (25%) 2 2	93, 149, 231, 248	0
23	CX	8/25 (32%)	0.55	1 (12%) 8 6	91, 140, 225, 232	0
24	AY	350/357 (98%)	-0.20	11 (3%) 51 32	154, 199, 282, 305	0
24	CY	350/357 (98%)	-0.12	10 (2%) 53 35	149, 202, 279, 297	0
25	B0	83/85 (97%)	0.31	5 (6%) 27 17	114, 138, 194, 242	0
25	D0	83/85 (97%)	-0.02	5 (6%) 27 17	104, 125, 189, 229	0
26	B1	94/98 (95%)	-0.10	0 100 100	94, 124, 167, 203	0
26	D1	94/98 (95%)	-0.06	1 (1%) 78 61	88, 120, 172, 191	0
27	B2	71/72 (98%)	-0.00	2 (2%) 55 35	132, 166, 193, 229	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
27	D2	71/72 (98%)	-0.13	2 (2%) 55 35	87, 125, 166, 194	0
28	B3	60/60 (100%)	0.26	0 100 100	113, 142, 177, 204	0
28	D3	60/60 (100%)	-0.14	1 (1%) 69 49	106, 122, 158, 204	0
29	B4	31/71 (43%)	-0.26	1 (3%) 50 31	200, 226, 244, 255	0
29	D4	31/71 (43%)	-0.55	1 (3%) 50 31	173, 195, 213, 223	0
30	B5	59/60 (98%)	0.01	2 (3%) 48 30	102, 134, 247, 283	0
30	D5	59/60 (98%)	-0.19	2 (3%) 48 30	85, 122, 245, 254	0
31	B6	45/54 (83%)	-0.01	0 100 100	199, 239, 256, 271	0
31	D6	45/54 (83%)	0.11	0 100 100	206, 233, 253, 260	0
32	B7	49/49 (100%)	-0.02	4 (8%) 17 11	90, 105, 164, 187	0
32	D7	49/49 (100%)	-0.25	0 100 100	70, 90, 135, 203	0
33	B8	64/65 (98%)	0.81	7 (10%) 10 7	95, 125, 170, 193	0
33	D8	64/65 (98%)	0.60	5 (7%) 19 12	100, 121, 164, 195	0
34	B9	36/37 (97%)	1.01	3 (8%) 17 11	147, 185, 220, 226	0
34	D9	36/37 (97%)	1.22	5 (13%) 6 5	140, 159, 201, 218	0
35	BA	2901/2915 (99%)	-0.94	2 (0%) 92 89	84, 127, 274, 441	0
35	DA	2901/2915 (99%)	-0.96	2 (0%) 92 89	74, 114, 282, 427	0
36	BB	119/122 (97%)	-0.77	0 100 100	134, 193, 232, 248	0
36	DB	119/122 (97%)	-0.95	0 100 100	122, 159, 190, 222	0
37	BC	120/229 (52%)	0.18	7 (5%) 29 18	214, 309, 343, 358	0
37	DC	120/229 (52%)	0.01	2 (1%) 69 49	227, 322, 369, 374	0
38	BD	273/276 (98%)	-0.13	2 (0%) 84 69	80, 117, 153, 183	0
38	DD	273/276 (98%)	-0.25	5 (1%) 67 48	78, 106, 143, 194	0
39	BE	205/206 (99%)	-0.07	2 (0%) 79 63	88, 126, 179, 217	0
39	DE	205/206 (99%)	-0.09	1 (0%) 87 76	84, 126, 183, 224	0
40	BF	208/210 (99%)	-0.18	0 100 100	88, 134, 196, 257	0
40	DF	208/210 (99%)	-0.28	1 (0%) 87 76	71, 118, 193, 245	0
41	BG	181/182 (99%)	-0.17	3 (1%) 69 49	157, 199, 231, 260	0
41	DG	181/182 (99%)	-0.34	1 (0%) 85 73	133, 165, 214, 276	0
42	BH	165/180 (91%)	-0.12	4 (2%) 59 40	146, 198, 246, 270	0
42	DH	165/180 (91%)	-0.26	1 (0%) 85 73	98, 145, 186, 222	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
43	BI	146/148 (98%)	-0.28	1 (0%) 84 69	117, 175, 202, 218	0
43	DI	146/148 (98%)	-0.50	0 100 100	119, 157, 195, 216	0
44	BJ	0/130	-	-	-	-
44	DJ	0/130	-	-	-	-
45	BK	141/147 (95%)	-0.08	0 100 100	224, 266, 287, 294	0
45	DK	141/147 (95%)	-0.03	3 (2%) 63 43	233, 278, 303, 327	0
46	BN	139/140 (99%)	-0.01	3 (2%) 62 42	106, 144, 181, 204	0
46	DN	139/140 (99%)	-0.05	0 100 100	95, 123, 166, 192	0
47	BO	122/122 (100%)	-0.26	2 (1%) 70 51	88, 118, 144, 157	0
47	DO	122/122 (100%)	-0.29	1 (0%) 82 67	89, 119, 150, 168	0
48	BP	146/150 (97%)	0.16	3 (2%) 63 43	85, 148, 190, 235	0
48	DP	146/150 (97%)	0.30	7 (4%) 35 22	82, 134, 170, 225	0
49	BQ	141/141 (100%)	-0.15	2 (1%) 73 54	113, 141, 176, 223	0
49	DQ	141/141 (100%)	-0.16	1 (0%) 84 69	91, 127, 164, 214	0
50	BR	117/118 (99%)	-0.01	2 (1%) 69 49	98, 125, 162, 200	0
50	DR	117/118 (99%)	0.08	3 (2%) 57 37	95, 123, 158, 187	0
51	BS	99/112 (88%)	0.35	7 (7%) 22 14	131, 183, 209, 216	0
51	DS	99/112 (88%)	0.14	6 (6%) 27 17	122, 163, 196, 216	0
52	BT	138/146 (94%)	0.01	4 (2%) 53 35	91, 137, 214, 284	0
52	DT	138/146 (94%)	0.03	4 (2%) 53 35	106, 145, 229, 264	0
53	BU	117/118 (99%)	0.23	3 (2%) 57 37	100, 138, 184, 207	0
53	DU	117/118 (99%)	-0.14	0 100 100	79, 112, 163, 196	0
54	BV	101/101 (100%)	-0.16	2 (1%) 65 45	96, 159, 197, 229	0
54	DV	101/101 (100%)	-0.33	1 (0%) 79 63	90, 141, 180, 211	0
55	BW	113/113 (100%)	-0.03	1 (0%) 81 64	94, 122, 155, 225	0
55	DW	113/113 (100%)	-0.41	1 (0%) 81 64	81, 106, 145, 264	0
56	BX	93/96 (96%)	0.03	0 100 100	111, 142, 163, 204	0
56	DX	93/96 (96%)	-0.07	1 (1%) 78 61	84, 113, 145, 172	0
57	BY	101/110 (91%)	0.72	13 (12%) 7 6	122, 163, 211, 239	0
57	DY	101/110 (91%)	0.22	5 (4%) 34 22	101, 137, 193, 221	0
58	BZ	185/206 (89%)	-0.31	1 (0%) 87 76	146, 176, 218, 239	0
58	DZ	185/206 (89%)	-0.43	1 (0%) 87 76	117, 165, 209, 235	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
All	All	22142/23326 (94%)	-0.41	317 (1%)	73	54	70, 153, 269, 499	0

All (317) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
11	CK	129	SER	14.4
53	BU	91	ASP	7.8
13	CM	123	ALA	5.3
2	AB	70	PHE	5.2
48	DP	51	PHE	5.0
16	CP	19	ILE	4.8
21	AU	16	GLY	4.8
52	BT	11	GLU	4.8
24	CY	236	GLY	4.7
4	CD	203	VAL	4.7
21	CU	16	GLY	4.7
19	CS	81	ARG	4.6
17	AQ	24	GLU	4.5
25	B0	8	GLY	4.5
51	DS	11	LYS	4.5
25	D0	3	HIS	4.5
38	DD	35	LYS	4.3
30	B5	2	ALA	4.2
37	BC	197	LEU	4.1
41	DG	35	GLU	4.1
25	B0	4	LYS	4.1
9	AI	77	ILE	4.1
33	D8	65	GLU	4.1
51	BS	11	LYS	4.0
30	D5	2	ALA	4.0
57	BY	43	ASN	4.0
25	D0	6	GLY	3.9
32	B7	48	LYS	3.9
52	BT	1	MET	3.9
54	BV	80	GLN	3.9
25	B0	7	LEU	3.9
34	D9	26	ILE	3.8
33	B8	48	PHE	3.7
3	CC	200	ALA	3.6
25	D0	4	LYS	3.6
2	CB	163	PHE	3.6
17	CQ	35	VAL	3.6

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Mol	Chain	Res	Type	RSRZ
20	AT	12	ALA	3.6
14	AN	15	LYS	3.6
4	AD	67	ILE	3.6
38	BD	38	LYS	3.6
24	CY	235	SER	3.5
39	BE	151	TYR	3.5
25	B0	3	HIS	3.5
32	B7	14	LYS	3.5
24	CY	246	ASP	3.4
48	BP	51	PHE	3.4
32	B7	49	ARG	3.4
37	BC	172	ILE	3.4
42	DH	171	LEU	3.4
17	CQ	28	PRO	3.4
13	CM	122	LYS	3.3
23	AX	20	G	3.3
11	AK	129	SER	3.3
35	BA	654(H)	G	3.3
47	DO	1	MET	3.3
13	CM	124	PRO	3.3
19	AS	15	LEU	3.3
57	BY	39	VAL	3.3
20	CT	14	LYS	3.2
19	AS	13	ASP	3.2
24	CY	263	GLN	3.2
57	BY	44	ILE	3.2
23	CX	20	G	3.2
57	DY	102	CYS	3.1
4	CD	4	TYR	3.1
13	AM	99	ARG	3.1
48	DP	70	GLN	3.1
52	BT	25	GLY	3.1
3	CC	151	VAL	3.1
33	B8	23	VAL	3.1
3	CC	162	GLN	3.1
27	B2	5	GLU	3.1
24	AY	199	GLY	3.1
17	AQ	35	VAL	3.1
57	BY	45	VAL	3.1
51	DS	12	PHE	3.1
15	CO	48	LYS	3.1
26	D1	95	LEU	3.0

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Mol	Chain	Res	Type	RSRZ
51	DS	14	VAL	3.0
9	AI	66	ARG	3.0
33	D8	63	PRO	3.0
14	CN	50	LYS	3.0
37	DC	30	VAL	3.0
23	AX	14	A	3.0
24	AY	162	ALA	3.0
16	AP	29	ASP	3.0
24	AY	259	THR	3.0
47	BO	22	ILE	3.0
41	BG	34	LEU	2.9
27	D2	11	GLU	2.9
20	AT	70	SER	2.9
4	CD	207	TYR	2.9
24	AY	202	HIS	2.9
49	BQ	12	GLN	2.9
47	BO	1	MET	2.9
24	AY	194	PRO	2.9
2	AB	163	PHE	2.9
22	CW	75	C	2.9
4	AD	49	ARG	2.9
48	DP	33	ARG	2.9
51	BS	26	LEU	2.9
20	AT	11	SER	2.8
16	CP	2	VAL	2.8
13	CM	94	ARG	2.8
55	BW	106	ILE	2.8
51	BS	15	ARG	2.8
24	AY	125	GLY	2.8
52	DT	25	GLY	2.8
20	CT	70	SER	2.8
2	CB	165	VAL	2.8
4	CD	120	LEU	2.8
13	AM	18	ALA	2.8
54	DV	80	GLN	2.8
51	BS	14	VAL	2.8
49	BQ	47	ILE	2.8
16	CP	17	TYR	2.8
48	DP	27	HIS	2.8
39	BE	149	ARG	2.8
55	DW	82	LEU	2.8
33	D8	56	GLU	2.8

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Mol	Chain	Res	Type	RSRZ
8	AH	13	ILE	2.8
3	AC	167	TRP	2.7
11	AK	128	ALA	2.7
16	CP	6	LEU	2.7
16	CP	36	ILE	2.7
16	CP	29	ASP	2.7
20	CT	80	ARG	2.7
50	DR	40	LYS	2.7
34	D9	21	GLY	2.7
4	CD	77	ASN	2.7
20	CT	18	GLN	2.7
43	BI	4	ILE	2.7
19	AS	81	ARG	2.7
4	CD	32	ALA	2.7
11	CK	128	ALA	2.7
1	AA	89	C	2.7
13	AM	10	PRO	2.7
56	DX	68	ARG	2.6
34	B9	2	LYS	2.6
22	AW	75	C	2.6
21	AU	17	THR	2.6
53	BU	97	ASP	2.6
20	AT	25	ARG	2.6
30	B5	3	LYS	2.6
51	BS	99	LYS	2.6
20	CT	10	LEU	2.6
50	DR	113	LEU	2.6
9	AI	104	ARG	2.6
32	B7	47	ARG	2.6
9	AI	123	PRO	2.6
33	B8	56	GLU	2.6
37	BC	48	LEU	2.6
50	BR	10	LEU	2.6
9	CI	127	LYS	2.6
48	DP	65	ARG	2.6
51	BS	12	PHE	2.6
4	CD	80	GLU	2.6
49	DQ	136	ALA	2.6
4	CD	110	PHE	2.6
29	D4	40	HIS	2.6
9	AI	109	VAL	2.6
11	CK	127	LYS	2.6

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Mol	Chain	Res	Type	RSRZ
53	BU	28	ARG	2.6
13	CM	4	ILE	2.5
16	CP	66	PRO	2.5
24	CY	237	PRO	2.5
4	CD	93	PHE	2.5
12	AL	17	LYS	2.5
24	CY	230	ASP	2.5
38	BD	270	ILE	2.5
9	CI	118	LYS	2.5
24	AY	198	SER	2.5
12	CL	32	PHE	2.5
52	DT	26	ASP	2.5
24	CY	241	GLY	2.5
4	CD	204	ILE	2.4
24	CY	262	CYS	2.4
17	CQ	37	LYS	2.4
34	D9	12	ASP	2.4
41	BG	97	ASP	2.4
57	DY	28	LYS	2.4
12	CL	28	LYS	2.4
50	DR	2	ARG	2.4
33	B8	50	LEU	2.4
57	DY	44	ILE	2.4
19	AS	35	SER	2.4
20	CT	11	SER	2.4
51	DS	13	ARG	2.4
37	BC	193	PHE	2.4
35	DA	34	C	2.4
24	AY	335	ASN	2.4
27	B2	52	ASP	2.4
27	D2	15	LYS	2.4
20	AT	22	ARG	2.4
21	CU	14	TRP	2.4
48	BP	28	GLY	2.3
2	AB	214	ILE	2.3
39	DE	151	TYR	2.3
46	BN	4	TYR	2.3
16	CP	73	LEU	2.3
57	BY	3	VAL	2.3
58	BZ	80	ARG	2.3
9	AI	106	ALA	2.3
11	AK	117	ASN	2.3

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Mol	Chain	Res	Type	RSRZ
19	AS	11	VAL	2.3
20	CT	21	LYS	2.3
4	CD	146	ILE	2.3
21	AU	4	GLY	2.3
16	CP	13	HIS	2.3
57	BY	55	TYR	2.3
35	BA	654(G)	C	2.3
51	DS	15	ARG	2.3
13	CM	98	VAL	2.3
30	D5	59	GLU	2.3
37	BC	30	VAL	2.3
38	DD	257	LEU	2.3
3	CC	201	TYR	2.3
13	AM	121	LYS	2.3
34	D9	2	LYS	2.3
9	AI	65	VAL	2.3
14	AN	56	VAL	2.3
33	B8	49	VAL	2.3
45	DK	5	VAL	2.3
45	DK	23	VAL	2.3
41	BG	35	GLU	2.2
40	DF	69	HIS	2.2
25	D0	5	LYS	2.2
4	CD	31	CYS	2.2
7	AG	80	VAL	2.2
52	BT	2	ASN	2.2
8	CH	13	ILE	2.2
20	AT	73	HIS	2.2
42	BH	170	ARG	2.2
50	BR	8	ARG	2.2
24	CY	193	SER	2.2
20	AT	9	ASN	2.2
4	AD	9	CYS	2.2
9	AI	122	ALA	2.2
45	DK	108	ALA	2.2
57	BY	80	GLY	2.2
9	AI	127	LYS	2.2
20	AT	74	LYS	2.2
57	BY	47	LYS	2.2
8	CH	133	LEU	2.2
19	AS	75	ALA	2.2
57	DY	80	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
19	AS	70	LYS	2.2
21	AU	14	TRP	2.2
15	CO	51	HIS	2.2
48	DP	30	THR	2.2
57	DY	3	VAL	2.2
16	AP	19	ILE	2.2
4	CD	64	LEU	2.2
33	D8	59	LYS	2.2
34	B9	13	LYS	2.2
51	DS	99	LYS	2.2
14	AN	37	PHE	2.2
35	DA	508	G	2.2
42	BH	169	VAL	2.1
4	CD	96	LEU	2.1
16	CP	3	LYS	2.1
57	BY	28	LYS	2.1
37	BC	46	ALA	2.1
57	BY	65	ALA	2.1
57	BY	7	VAL	2.1
54	BV	45	THR	2.1
20	CT	56	MET	2.1
16	AP	25	ARG	2.1
14	CN	28	GLY	2.1
3	AC	10	PHE	2.1
9	CI	109	VAL	2.1
42	BH	37	VAL	2.1
3	AC	175	LEU	2.1
13	AM	122	LYS	2.1
37	BC	210	LEU	2.1
13	AM	88	ARG	2.1
9	AI	115	GLY	2.1
28	D3	12	PRO	2.1
25	B0	9	SER	2.1
52	DT	106	SER	2.1
33	B8	59	LYS	2.1
34	B9	32	HIS	2.1
34	D9	32	HIS	2.1
48	BP	29	LYS	2.1
2	CB	214	ILE	2.1
4	CD	9	CYS	2.1
7	CG	101	LEU	2.1
46	BN	26	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
57	BY	31	LEU	2.1
33	D8	64	TYR	2.1
58	DZ	172	ALA	2.1
24	AY	192	PRO	2.1
10	CJ	59	SER	2.1
24	AY	118	LEU	2.1
38	DD	274	ARG	2.1
13	AM	97	PRO	2.1
33	B8	63	PRO	2.1
20	CT	58	LYS	2.0
37	DC	176	VAL	2.0
51	BS	85	VAL	2.0
8	CH	91	ARG	2.0
46	BN	33	LEU	2.0
9	CI	117	HIS	2.0
29	B4	40	HIS	2.0
5	AE	21	ALA	2.0
24	AY	7	ALA	2.0
38	DD	251	GLY	2.0
52	DT	92	GLY	2.0
42	BH	24	VAL	2.0
38	DD	44	ASN	2.0
48	DP	53	GLY	2.0
24	CY	158	PRO	2.0
57	BY	32	PRO	2.0
17	CQ	24	GLU	2.0
3	CC	43	LEU	2.0
25	D0	7	LEU	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
24	MEQ	CY	240	10/11	0.90	0.28	149,152,186,247	0
24	MEQ	AY	240	10/11	0.93	0.22	143,154,163,163	0

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (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
59	MG	BA	3105	1/1	0.69	0.24	85,85,85,85	0
59	MG	BA	3145	1/1	0.69	0.14	114,114,114,114	0
59	MG	CA	1617	1/1	0.70	0.20	125,125,125,125	0
60	ZN	B9	101	1/1	0.70	0.21	205,205,205,205	1
59	MG	DA	3213	1/1	0.72	0.19	101,101,101,101	0
59	MG	DA	3137	1/1	0.74	0.26	92,92,92,92	0
59	MG	DA	3073	1/1	0.75	0.17	129,129,129,129	0
59	MG	BA	3144	1/1	0.76	0.26	91,91,91,91	0
59	MG	DA	3203	1/1	0.76	0.17	93,93,93,93	0
59	MG	BA	3125	1/1	0.77	0.25	100,100,100,100	0
59	MG	BA	3179	1/1	0.77	0.21	104,104,104,104	0
59	MG	BQ	201	1/1	0.77	0.17	104,104,104,104	0
59	MG	BB	202	1/1	0.78	0.26	95,95,95,95	0
59	MG	BA	3081	1/1	0.78	0.21	107,107,107,107	0
59	MG	DA	3219	1/1	0.79	0.16	115,115,115,115	0
59	MG	AA	1618	1/1	0.79	0.23	94,94,94,94	0
59	MG	BA	3165	1/1	0.80	0.14	111,111,111,111	0
59	MG	DA	3033	1/1	0.80	0.27	77,77,77,77	0
59	MG	AA	1622	1/1	0.80	0.23	96,96,96,96	0
59	MG	CA	1615	1/1	0.80	0.23	98,98,98,98	0
59	MG	DA	3111	1/1	0.81	0.23	80,80,80,80	0
59	MG	BA	3079	1/1	0.81	0.22	83,83,83,83	0
59	MG	DA	3133	1/1	0.82	0.17	91,91,91,91	0
59	MG	DA	3104	1/1	0.82	0.26	82,82,82,82	0
59	MG	DA	3220	1/1	0.82	0.25	99,99,99,99	0
59	MG	BF	301	1/1	0.82	0.16	120,120,120,120	0
59	MG	DA	3202	1/1	0.83	0.21	97,97,97,97	0
59	MG	AA	1628	1/1	0.83	0.23	99,99,99,99	0
59	MG	DA	3080	1/1	0.83	0.25	68,68,68,68	0
59	MG	BA	3114	1/1	0.84	0.11	110,110,110,110	0
59	MG	BA	3152	1/1	0.84	0.20	91,91,91,91	0
59	MG	DA	3141	1/1	0.84	0.18	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3190	1/1	0.84	0.15	91,91,91,91	0
59	MG	DA	3120	1/1	0.84	0.21	83,83,83,83	0
59	MG	BA	3117	1/1	0.85	0.14	100,100,100,100	0
59	MG	DA	3192	1/1	0.85	0.21	86,86,86,86	0
59	MG	DA	3195	1/1	0.85	0.21	100,100,100,100	0
59	MG	DA	3124	1/1	0.85	0.19	97,97,97,97	0
59	MG	BA	3088	1/1	0.85	0.17	83,83,83,83	0
59	MG	DA	3207	1/1	0.85	0.14	104,104,104,104	0
59	MG	BA	3148	1/1	0.85	0.21	90,90,90,90	0
59	MG	BA	3138	1/1	0.85	0.17	93,93,93,93	0
59	MG	DA	3179	1/1	0.85	0.15	93,93,93,93	0
59	MG	DA	3180	1/1	0.85	0.14	86,86,86,86	0
59	MG	BA	3120	1/1	0.86	0.09	81,81,81,81	0
59	MG	CA	1603	1/1	0.86	0.19	89,89,89,89	0
59	MG	DA	3114	1/1	0.86	0.17	107,107,107,107	0
59	MG	CA	1621	1/1	0.86	0.13	136,136,136,136	0
59	MG	DA	3164	1/1	0.86	0.14	91,91,91,91	0
59	MG	DA	3176	1/1	0.86	0.29	87,87,87,87	0
59	MG	AA	1627	1/1	0.87	0.14	90,90,90,90	0
59	MG	CA	1626	1/1	0.87	0.22	97,97,97,97	0
59	MG	BA	3159	1/1	0.87	0.21	81,81,81,81	0
59	MG	DA	3046	1/1	0.87	0.30	74,74,74,74	0
59	MG	AA	1614	1/1	0.87	0.17	105,105,105,105	0
59	MG	DA	3148	1/1	0.87	0.12	87,87,87,87	0
59	MG	AA	1624	1/1	0.87	0.10	110,110,110,110	0
59	MG	BA	3106	1/1	0.87	0.27	90,90,90,90	0
59	MG	CA	1619	1/1	0.87	0.22	87,87,87,87	0
59	MG	CA	1620	1/1	0.87	0.09	121,121,121,121	0
59	MG	BA	3003	1/1	0.88	0.26	62,62,62,62	0
59	MG	DA	3191	1/1	0.88	0.16	83,83,83,83	0
59	MG	BA	3027	1/1	0.88	0.17	76,76,76,76	0
59	MG	BA	3164	1/1	0.88	0.21	84,84,84,84	0
59	MG	BA	3045	1/1	0.88	0.24	63,63,63,63	0
59	MG	BA	3169	1/1	0.88	0.12	94,94,94,94	0
59	MG	CA	1618	1/1	0.88	0.12	105,105,105,105	0
59	MG	BA	3174	1/1	0.88	0.18	87,87,87,87	0
59	MG	AA	1603	1/1	0.88	0.10	102,102,102,102	0
59	MG	BA	3151	1/1	0.88	0.15	87,87,87,87	0
59	MG	DA	3182	1/1	0.88	0.24	80,80,80,80	0
59	MG	CA	1606	1/1	0.89	0.20	75,75,75,75	0
59	MG	BA	3072	1/1	0.89	0.18	80,80,80,80	0
59	MG	DA	3102	1/1	0.89	0.20	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3075	1/1	0.89	0.19	78,78,78,78	0
59	MG	AA	1607	1/1	0.89	0.20	83,83,83,83	0
59	MG	BA	3044	1/1	0.89	0.18	81,81,81,81	0
59	MG	AA	1623	1/1	0.89	0.25	83,83,83,83	0
59	MG	BA	3047	1/1	0.89	0.23	72,72,72,72	0
59	MG	CA	1623	1/1	0.89	0.14	151,151,151,151	0
59	MG	CA	1625	1/1	0.89	0.14	110,110,110,110	0
59	MG	DA	3204	1/1	0.89	0.25	85,85,85,85	0
59	MG	BA	3053	1/1	0.89	0.29	71,71,71,71	0
59	MG	DA	3142	1/1	0.89	0.12	84,84,84,84	0
59	MG	BA	3054	1/1	0.89	0.18	74,74,74,74	0
59	MG	DA	3157	1/1	0.89	0.12	80,80,80,80	0
59	MG	DB	202	1/1	0.89	0.12	101,101,101,101	0
59	MG	DW	201	1/1	0.89	0.19	70,70,70,70	0
59	MG	BA	3061	1/1	0.89	0.22	74,74,74,74	0
59	MG	DA	3147	1/1	0.90	0.27	91,91,91,91	0
59	MG	BA	3034	1/1	0.90	0.24	75,75,75,75	0
59	MG	AA	1629	1/1	0.90	0.09	120,120,120,120	0
59	MG	DA	3163	1/1	0.90	0.20	84,84,84,84	0
59	MG	BA	3178	1/1	0.90	0.11	96,96,96,96	0
59	MG	DA	3205	1/1	0.90	0.10	86,86,86,86	0
59	MG	DA	3171	1/1	0.90	0.13	104,104,104,104	0
59	MG	AA	1602	1/1	0.90	0.13	87,87,87,87	0
59	MG	DA	3218	1/1	0.90	0.06	82,82,82,82	0
59	MG	DA	3127	1/1	0.90	0.22	78,78,78,78	0
59	MG	BA	3093	1/1	0.90	0.07	110,110,110,110	0
59	MG	BA	3046	1/1	0.90	0.16	77,77,77,77	0
59	MG	BA	3143	1/1	0.90	0.22	86,86,86,86	0
59	MG	AA	1626	1/1	0.90	0.15	132,132,132,132	0
59	MG	BA	3141	1/1	0.91	0.11	72,72,72,72	0
59	MG	BA	3098	1/1	0.91	0.14	66,66,66,66	0
59	MG	DA	3178	1/1	0.91	0.13	79,79,79,79	0
59	MG	BA	3055	1/1	0.91	0.17	85,85,85,85	0
59	MG	BA	3031	1/1	0.91	0.20	82,82,82,82	0
59	MG	DA	3088	1/1	0.91	0.13	75,75,75,75	0
59	MG	BA	3146	1/1	0.91	0.16	104,104,104,104	0
59	MG	BA	3147	1/1	0.91	0.09	70,70,70,70	0
59	MG	BA	3086	1/1	0.91	0.15	69,69,69,69	0
59	MG	BA	3116	1/1	0.91	0.22	75,75,75,75	0
59	MG	CA	1609	1/1	0.91	0.10	110,110,110,110	0
59	MG	BA	3087	1/1	0.91	0.14	74,74,74,74	0
59	MG	BA	3153	1/1	0.91	0.17	98,98,98,98	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3154	1/1	0.91	0.29	92,92,92,92	0
59	MG	AA	1619	1/1	0.91	0.18	90,90,90,90	0
59	MG	BA	3162	1/1	0.91	0.13	79,79,79,79	0
59	MG	BA	3092	1/1	0.91	0.11	80,80,80,80	0
59	MG	CA	1622	1/1	0.91	0.11	104,104,104,104	0
59	MG	BA	3126	1/1	0.91	0.10	108,108,108,108	0
59	MG	CA	1624	1/1	0.91	0.16	91,91,91,91	0
59	MG	BA	3036	1/1	0.91	0.20	76,76,76,76	0
59	MG	BA	3172	1/1	0.91	0.17	78,78,78,78	0
59	MG	DA	3086	1/1	0.92	0.18	65,65,65,65	0
59	MG	BA	3121	1/1	0.92	0.14	65,65,65,65	0
59	MG	BA	3168	1/1	0.92	0.13	78,78,78,78	0
59	MG	BA	3024	1/1	0.92	0.18	50,50,50,50	0
59	MG	BA	3171	1/1	0.92	0.18	91,91,91,91	0
59	MG	BA	3150	1/1	0.92	0.08	94,94,94,94	0
59	MG	DA	3183	1/1	0.92	0.16	82,82,82,82	0
59	MG	DA	3189	1/1	0.92	0.14	75,75,75,75	0
59	MG	BA	3080	1/1	0.92	0.20	77,77,77,77	0
59	MG	AA	1630	1/1	0.92	0.26	86,86,86,86	0
59	MG	BA	3082	1/1	0.92	0.25	75,75,75,75	0
59	MG	DA	3131	1/1	0.92	0.38	91,91,91,91	0
59	MG	DA	3197	1/1	0.92	0.09	84,84,84,84	0
59	MG	DA	3198	1/1	0.92	0.18	85,85,85,85	0
59	MG	BB	201	1/1	0.92	0.13	85,85,85,85	0
59	MG	BA	3068	1/1	0.92	0.16	76,76,76,76	0
59	MG	BA	3155	1/1	0.92	0.19	93,93,93,93	0
59	MG	DA	3007	1/1	0.92	0.23	53,53,53,53	0
59	MG	DA	3146	1/1	0.92	0.19	92,92,92,92	0
59	MG	BA	3069	1/1	0.92	0.17	72,72,72,72	0
59	MG	DA	3037	1/1	0.92	0.22	58,58,58,58	0
59	MG	DA	3156	1/1	0.92	0.10	59,59,59,59	0
59	MG	BA	3160	1/1	0.92	0.23	98,98,98,98	0
59	MG	BA	3030	1/1	0.92	0.29	62,62,62,62	0
59	MG	AA	1612	1/1	0.92	0.27	75,75,75,75	0
59	MG	DA	3170	1/1	0.92	0.21	80,80,80,80	0
59	MG	BA	3032	1/1	0.93	0.13	69,69,69,69	0
59	MG	BA	3033	1/1	0.93	0.16	65,65,65,65	0
59	MG	BA	3131	1/1	0.93	0.17	76,76,76,76	0
59	MG	DA	3061	1/1	0.93	0.13	50,50,50,50	0
59	MG	BA	3001	1/1	0.93	0.25	56,56,56,56	0
59	MG	DA	3172	1/1	0.93	0.09	66,66,66,66	0
59	MG	DA	3174	1/1	0.93	0.14	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3076	1/1	0.93	0.15	73,73,73,73	0
59	MG	DA	3078	1/1	0.93	0.13	90,90,90,90	0
59	MG	CA	1605	1/1	0.93	0.12	94,94,94,94	0
59	MG	AA	1615	1/1	0.93	0.18	87,87,87,87	0
59	MG	DA	3181	1/1	0.93	0.09	82,82,82,82	0
59	MG	BA	3163	1/1	0.93	0.19	104,104,104,104	0
59	MG	CA	1613	1/1	0.93	0.24	80,80,80,80	0
59	MG	DA	3186	1/1	0.93	0.12	93,93,93,93	0
59	MG	BA	3103	1/1	0.93	0.15	88,88,88,88	0
59	MG	BA	3009	1/1	0.93	0.21	46,46,46,46	0
59	MG	BA	3020	1/1	0.93	0.15	69,69,69,69	0
59	MG	BA	3111	1/1	0.93	0.15	71,71,71,71	0
59	MG	BA	3112	1/1	0.93	0.29	84,84,84,84	0
59	MG	DA	3125	1/1	0.93	0.25	80,80,80,80	0
59	MG	AA	1621	1/1	0.93	0.21	81,81,81,81	0
59	MG	DA	3129	1/1	0.93	0.25	75,75,75,75	0
59	MG	BA	3173	1/1	0.93	0.11	84,84,84,84	0
59	MG	AA	1616	1/1	0.93	0.14	77,77,77,77	0
59	MG	DA	3135	1/1	0.93	0.11	56,56,56,56	0
59	MG	BA	3176	1/1	0.93	0.10	98,98,98,98	0
59	MG	DA	3212	1/1	0.93	0.37	92,92,92,92	0
59	MG	DA	3139	1/1	0.93	0.17	90,90,90,90	0
59	MG	BA	3029	1/1	0.93	0.26	59,59,59,59	0
59	MG	AA	1617	1/1	0.93	0.14	73,73,73,73	0
59	MG	D5	102	1/1	0.93	0.16	82,82,82,82	0
59	MG	DA	3003	1/1	0.93	0.24	53,53,53,53	0
59	MG	AA	1609	1/1	0.93	0.33	83,83,83,83	0
59	MG	DA	3013	1/1	0.93	0.23	46,46,46,46	0
59	MG	DA	3122	1/1	0.94	0.12	56,56,56,56	0
59	MG	BA	3059	1/1	0.94	0.20	66,66,66,66	0
59	MG	DA	3011	1/1	0.94	0.17	67,67,67,67	0
59	MG	BA	3102	1/1	0.94	0.14	78,78,78,78	0
59	MG	DA	3019	1/1	0.94	0.18	66,66,66,66	0
59	MG	DA	3023	1/1	0.94	0.16	51,51,51,51	0
59	MG	DA	3187	1/1	0.94	0.12	92,92,92,92	0
59	MG	DA	3188	1/1	0.94	0.12	87,87,87,87	0
59	MG	CA	1614	1/1	0.94	0.20	81,81,81,81	0
59	MG	AA	1605	1/1	0.94	0.19	76,76,76,76	0
59	MG	BA	3022	1/1	0.94	0.11	68,68,68,68	0
59	MG	DA	3054	1/1	0.94	0.14	68,68,68,68	0
59	MG	BA	3016	1/1	0.94	0.19	69,69,69,69	0
59	MG	BA	3158	1/1	0.94	0.15	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3108	1/1	0.94	0.16	67,67,67,67	0
59	MG	BA	3084	1/1	0.94	0.16	87,87,87,87	0
59	MG	BA	3070	1/1	0.94	0.12	87,87,87,87	0
59	MG	BA	3056	1/1	0.94	0.18	76,76,76,76	0
59	MG	BA	3115	1/1	0.94	0.17	90,90,90,90	0
59	MG	DA	3092	1/1	0.94	0.14	70,70,70,70	0
59	MG	DA	3210	1/1	0.94	0.20	77,77,77,77	0
59	MG	BT	201	1/1	0.94	0.24	108,108,108,108	0
59	MG	DA	3168	1/1	0.94	0.06	72,72,72,72	0
59	MG	DA	3103	1/1	0.94	0.14	59,59,59,59	0
59	MG	BA	3073	1/1	0.94	0.17	91,91,91,91	0
59	MG	BA	3057	1/1	0.94	0.11	61,61,61,61	0
59	MG	DA	3002	1/1	0.94	0.23	58,58,58,58	0
59	MG	DA	3119	1/1	0.94	0.08	85,85,85,85	0
59	MG	BA	3078	1/1	0.94	0.13	65,65,65,65	0
60	ZN	D9	101	1/1	0.94	0.17	223,223,223,223	0
59	MG	DA	3126	1/1	0.95	0.14	71,71,71,71	0
59	MG	BA	3123	1/1	0.95	0.09	105,105,105,105	0
59	MG	BA	3091	1/1	0.95	0.19	71,71,71,71	0
59	MG	BA	3166	1/1	0.95	0.13	80,80,80,80	0
59	MG	BA	3049	1/1	0.95	0.15	63,63,63,63	0
59	MG	BA	3051	1/1	0.95	0.15	75,75,75,75	0
59	MG	DA	3136	1/1	0.95	0.22	71,71,71,71	0
59	MG	BA	3170	1/1	0.95	0.11	77,77,77,77	0
59	MG	DA	3138	1/1	0.95	0.12	64,64,64,64	0
59	MG	BA	3133	1/1	0.95	0.12	83,83,83,83	0
59	MG	BA	3136	1/1	0.95	0.12	67,67,67,67	0
59	MG	BA	3094	1/1	0.95	0.09	62,62,62,62	0
59	MG	DA	3143	1/1	0.95	0.15	72,72,72,72	0
59	MG	BA	3139	1/1	0.95	0.07	61,61,61,61	0
59	MG	BA	3097	1/1	0.95	0.11	69,69,69,69	0
59	MG	BA	3177	1/1	0.95	0.20	80,80,80,80	0
59	MG	DA	3150	1/1	0.95	0.09	100,100,100,100	0
59	MG	DA	3151	1/1	0.95	0.09	70,70,70,70	0
59	MG	BA	3052	1/1	0.95	0.12	62,62,62,62	0
59	MG	DA	3029	1/1	0.95	0.14	63,63,63,63	0
59	MG	DA	3032	1/1	0.95	0.21	57,57,57,57	0
59	MG	BA	3101	1/1	0.95	0.09	86,86,86,86	0
59	MG	BA	3012	1/1	0.95	0.27	72,72,72,72	0
59	MG	BA	3074	1/1	0.95	0.16	69,69,69,69	0
59	MG	DA	3049	1/1	0.95	0.16	64,64,64,64	0
59	MG	DA	3053	1/1	0.95	0.14	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BD	301	1/1	0.95	0.15	71,71,71,71	0
59	MG	DA	3175	1/1	0.95	0.08	60,60,60,60	0
59	MG	DA	3056	1/1	0.95	0.11	54,54,54,54	0
59	MG	DA	3177	1/1	0.95	0.10	86,86,86,86	0
59	MG	DA	3058	1/1	0.95	0.11	54,54,54,54	0
59	MG	AA	1601	1/1	0.95	0.16	69,69,69,69	0
59	MG	DA	3064	1/1	0.95	0.15	48,48,48,48	0
59	MG	DA	3065	1/1	0.95	0.08	79,79,79,79	0
59	MG	BA	3077	1/1	0.95	0.14	93,93,93,93	0
59	MG	DA	3074	1/1	0.95	0.15	61,61,61,61	0
59	MG	DA	3075	1/1	0.95	0.16	74,74,74,74	0
59	MG	BA	3037	1/1	0.95	0.18	98,98,98,98	0
59	MG	BA	3110	1/1	0.95	0.19	75,75,75,75	0
59	MG	DA	3079	1/1	0.95	0.15	66,66,66,66	0
59	MG	BA	3042	1/1	0.95	0.14	66,66,66,66	0
59	MG	DA	3081	1/1	0.95	0.07	62,62,62,62	0
59	MG	BA	3018	1/1	0.95	0.19	52,52,52,52	0
59	MG	AA	1613	1/1	0.95	0.12	117,117,117,117	0
59	MG	DA	3196	1/1	0.95	0.20	69,69,69,69	0
59	MG	DA	3089	1/1	0.95	0.10	67,67,67,67	0
59	MG	CA	1610	1/1	0.95	0.10	71,71,71,71	0
59	MG	DA	3201	1/1	0.95	0.13	82,82,82,82	0
59	MG	DA	3094	1/1	0.95	0.22	64,64,64,64	0
59	MG	CA	1611	1/1	0.95	0.14	72,72,72,72	0
59	MG	CA	1612	1/1	0.95	0.18	77,77,77,77	0
59	MG	BA	3060	1/1	0.95	0.17	76,76,76,76	0
59	MG	DA	3108	1/1	0.95	0.18	69,69,69,69	0
59	MG	DA	3109	1/1	0.95	0.10	80,80,80,80	0
59	MG	BA	3157	1/1	0.95	0.11	107,107,107,107	0
59	MG	AA	1620	1/1	0.95	0.20	69,69,69,69	0
59	MG	DA	3116	1/1	0.95	0.21	71,71,71,71	0
59	MG	BA	3063	1/1	0.95	0.16	74,74,74,74	0
59	MG	BA	3066	1/1	0.95	0.15	75,75,75,75	0
59	MG	BA	3161	1/1	0.95	0.07	80,80,80,80	0
59	MG	DD	301	1/1	0.95	0.20	53,53,53,53	0
59	MG	DP	201	1/1	0.95	0.07	57,57,57,57	0
59	MG	DA	3123	1/1	0.95	0.13	77,77,77,77	0
59	MG	BA	3011	1/1	0.95	0.14	58,58,58,58	0
59	MG	BA	3122	1/1	0.95	0.17	67,67,67,67	0
59	MG	BA	3038	1/1	0.96	0.13	63,63,63,63	0
59	MG	DA	3085	1/1	0.96	0.13	52,52,52,52	0
59	MG	DA	3159	1/1	0.96	0.11	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3161	1/1	0.96	0.06	58,58,58,58	0
59	MG	DA	3162	1/1	0.96	0.05	70,70,70,70	0
59	MG	BA	3076	1/1	0.96	0.12	68,68,68,68	0
59	MG	DA	3087	1/1	0.96	0.12	73,73,73,73	0
59	MG	DA	3165	1/1	0.96	0.12	60,60,60,60	0
59	MG	BA	3167	1/1	0.96	0.12	79,79,79,79	0
59	MG	DA	3016	1/1	0.96	0.17	58,58,58,58	0
59	MG	BA	3039	1/1	0.96	0.17	60,60,60,60	0
59	MG	BA	3062	1/1	0.96	0.12	70,70,70,70	0
59	MG	DA	3096	1/1	0.96	0.27	62,62,62,62	0
59	MG	DA	3099	1/1	0.96	0.18	71,71,71,71	0
59	MG	DA	3101	1/1	0.96	0.14	71,71,71,71	0
59	MG	DA	3028	1/1	0.96	0.11	51,51,51,51	0
59	MG	BA	3096	1/1	0.96	0.08	76,76,76,76	0
59	MG	BA	3041	1/1	0.96	0.15	63,63,63,63	0
59	MG	AA	1606	1/1	0.96	0.12	87,87,87,87	0
59	MG	DA	3036	1/1	0.96	0.17	40,40,40,40	0
59	MG	DA	3110	1/1	0.96	0.10	77,77,77,77	0
59	MG	BA	3100	1/1	0.96	0.08	102,102,102,102	0
59	MG	DA	3184	1/1	0.96	0.17	85,85,85,85	0
59	MG	DA	3113	1/1	0.96	0.20	74,74,74,74	0
59	MG	DA	3042	1/1	0.96	0.08	45,45,45,45	0
59	MG	DA	3044	1/1	0.96	0.20	56,56,56,56	0
59	MG	AA	1611	1/1	0.96	0.19	69,69,69,69	0
59	MG	DA	3047	1/1	0.96	0.10	63,63,63,63	0
59	MG	BA	3175	1/1	0.96	0.07	69,69,69,69	0
59	MG	BA	3019	1/1	0.96	0.14	64,64,64,64	0
59	MG	BA	3083	1/1	0.96	0.14	64,64,64,64	0
59	MG	BA	3104	1/1	0.96	0.13	80,80,80,80	0
59	MG	DA	3057	1/1	0.96	0.15	52,52,52,52	0
59	MG	BA	3132	1/1	0.96	0.08	71,71,71,71	0
59	MG	DA	3199	1/1	0.96	0.07	81,81,81,81	0
59	MG	DA	3200	1/1	0.96	0.11	79,79,79,79	0
59	MG	DA	3059	1/1	0.96	0.14	66,66,66,66	0
59	MG	DA	3060	1/1	0.96	0.15	57,57,57,57	0
59	MG	BA	3180	1/1	0.96	0.07	99,99,99,99	0
59	MG	DA	3063	1/1	0.96	0.17	54,54,54,54	0
59	MG	BA	3007	1/1	0.96	0.33	54,54,54,54	0
59	MG	DA	3206	1/1	0.96	0.10	67,67,67,67	0
59	MG	BA	3085	1/1	0.96	0.09	76,76,76,76	0
59	MG	DA	3208	1/1	0.96	0.12	87,87,87,87	0
59	MG	DA	3069	1/1	0.96	0.14	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3070	1/1	0.96	0.12	71,71,71,71	0
59	MG	DA	3072	1/1	0.96	0.17	61,61,61,61	0
59	MG	BA	3015	1/1	0.96	0.20	59,59,59,59	0
59	MG	BA	3109	1/1	0.96	0.11	74,74,74,74	0
59	MG	D5	101	1/1	0.96	0.07	78,78,78,78	0
59	MG	DB	201	1/1	0.96	0.15	78,78,78,78	0
59	MG	BA	3058	1/1	0.96	0.15	66,66,66,66	0
59	MG	BA	3048	1/1	0.96	0.18	54,54,54,54	0
59	MG	DD	302	1/1	0.96	0.12	54,54,54,54	0
59	MG	DA	3149	1/1	0.96	0.17	59,59,59,59	0
59	MG	CA	1602	1/1	0.96	0.13	64,64,64,64	0
59	MG	DA	3004	1/1	0.96	0.16	52,52,52,52	0
59	MG	DA	3154	1/1	0.96	0.09	80,80,80,80	0
59	MG	AA	1625	1/1	0.97	0.19	78,78,78,78	0
59	MG	BA	3026	1/1	0.97	0.14	58,58,58,58	0
59	MG	BA	3050	1/1	0.97	0.07	66,66,66,66	0
59	MG	DA	3105	1/1	0.97	0.12	60,60,60,60	0
59	MG	DA	3173	1/1	0.97	0.07	102,102,102,102	0
59	MG	BA	3134	1/1	0.97	0.08	86,86,86,86	0
59	MG	DA	3052	1/1	0.97	0.16	51,51,51,51	0
59	MG	BA	3135	1/1	0.97	0.08	71,71,71,71	0
59	MG	AA	1604	1/1	0.97	0.22	76,76,76,76	0
59	MG	DA	3112	1/1	0.97	0.17	75,75,75,75	0
59	MG	BA	3137	1/1	0.97	0.08	80,80,80,80	0
59	MG	BA	3113	1/1	0.97	0.08	74,74,74,74	0
59	MG	BA	3065	1/1	0.97	0.15	74,74,74,74	0
59	MG	BA	3004	1/1	0.97	0.08	49,49,49,49	0
59	MG	BA	3142	1/1	0.97	0.15	74,74,74,74	0
59	MG	BA	3005	1/1	0.97	0.16	59,59,59,59	0
59	MG	DA	3185	1/1	0.97	0.18	76,76,76,76	0
59	MG	DA	3062	1/1	0.97	0.13	51,51,51,51	0
59	MG	DA	3010	1/1	0.97	0.15	47,47,47,47	0
59	MG	AA	1610	1/1	0.97	0.17	64,64,64,64	0
59	MG	BA	3119	1/1	0.97	0.14	80,80,80,80	0
59	MG	DA	3067	1/1	0.97	0.11	57,57,57,57	0
59	MG	DA	3014	1/1	0.97	0.19	61,61,61,61	0
59	MG	DA	3015	1/1	0.97	0.19	51,51,51,51	0
59	MG	DA	3193	1/1	0.97	0.06	96,96,96,96	0
59	MG	DA	3194	1/1	0.97	0.11	67,67,67,67	0
59	MG	BA	3043	1/1	0.97	0.10	67,67,67,67	0
59	MG	DA	3134	1/1	0.97	0.09	64,64,64,64	0
59	MG	BA	3071	1/1	0.97	0.08	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3021	1/1	0.97	0.15	56,56,56,56	0
59	MG	BA	3008	1/1	0.97	0.21	58,58,58,58	0
59	MG	DA	3024	1/1	0.97	0.20	53,53,53,53	0
59	MG	DA	3025	1/1	0.97	0.17	44,44,44,44	0
59	MG	DA	3140	1/1	0.97	0.09	69,69,69,69	0
59	MG	BA	3149	1/1	0.97	0.09	84,84,84,84	0
59	MG	B5	101	1/1	0.97	0.05	73,73,73,73	0
59	MG	DA	3030	1/1	0.97	0.14	42,42,42,42	0
59	MG	DA	3082	1/1	0.97	0.06	73,73,73,73	0
59	MG	DA	3084	1/1	0.97	0.09	56,56,56,56	0
59	MG	CA	1616	1/1	0.97	0.07	98,98,98,98	0
59	MG	BA	3124	1/1	0.97	0.07	90,90,90,90	0
59	MG	DA	3211	1/1	0.97	0.07	80,80,80,80	0
59	MG	DA	3034	1/1	0.97	0.14	47,47,47,47	0
59	MG	DA	3035	1/1	0.97	0.12	50,50,50,50	0
59	MG	DA	3215	1/1	0.97	0.12	54,54,54,54	0
59	MG	DA	3153	1/1	0.97	0.21	66,66,66,66	0
59	MG	BA	3010	1/1	0.97	0.23	54,54,54,54	0
59	MG	BA	3035	1/1	0.97	0.18	51,51,51,51	0
59	MG	DA	3221	1/1	0.97	0.10	92,92,92,92	0
59	MG	DA	3093	1/1	0.97	0.14	74,74,74,74	0
59	MG	DA	3038	1/1	0.97	0.14	62,62,62,62	0
59	MG	DA	3040	1/1	0.97	0.22	63,63,63,63	0
59	MG	DA	3097	1/1	0.97	0.10	77,77,77,77	0
59	MG	DA	3098	1/1	0.97	0.24	60,60,60,60	0
59	MG	DA	3041	1/1	0.97	0.10	44,44,44,44	0
59	MG	BA	3130	1/1	0.97	0.21	63,63,63,63	0
59	MG	DA	3167	1/1	0.97	0.10	58,58,58,58	0
59	MG	BA	3095	1/1	0.98	0.11	69,69,69,69	0
59	MG	DA	3169	1/1	0.98	0.06	62,62,62,62	0
59	MG	DA	3022	1/1	0.98	0.08	40,40,40,40	0
59	MG	BA	3017	1/1	0.98	0.21	59,59,59,59	0
59	MG	BA	3067	1/1	0.98	0.05	67,67,67,67	0
59	MG	BE	301	1/1	0.98	0.17	73,73,73,73	0
59	MG	DA	3066	1/1	0.98	0.07	58,58,58,58	0
59	MG	DA	3027	1/1	0.98	0.34	57,57,57,57	0
59	MG	DA	3115	1/1	0.98	0.07	55,55,55,55	0
59	MG	DA	3068	1/1	0.98	0.13	56,56,56,56	0
59	MG	DA	3117	1/1	0.98	0.08	53,53,53,53	0
59	MG	DA	3118	1/1	0.98	0.09	67,67,67,67	0
59	MG	BA	3127	1/1	0.98	0.03	63,63,63,63	0
59	MG	BA	3129	1/1	0.98	0.03	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3121	1/1	0.98	0.10	50,50,50,50	0
59	MG	DA	3071	1/1	0.98	0.06	66,66,66,66	0
59	MG	BA	3021	1/1	0.98	0.12	66,66,66,66	0
59	MG	CA	1601	1/1	0.98	0.17	78,78,78,78	0
59	MG	BA	3099	1/1	0.98	0.09	67,67,67,67	0
59	MG	BA	3028	1/1	0.98	0.17	56,56,56,56	0
59	MG	CA	1604	1/1	0.98	0.20	58,58,58,58	0
59	MG	DA	3128	1/1	0.98	0.13	72,72,72,72	0
59	MG	DA	3077	1/1	0.98	0.11	70,70,70,70	0
59	MG	AA	1608	1/1	0.98	0.08	90,90,90,90	0
59	MG	DA	3132	1/1	0.98	0.27	72,72,72,72	0
59	MG	BA	3089	1/1	0.98	0.13	60,60,60,60	0
59	MG	BA	3090	1/1	0.98	0.15	60,60,60,60	0
59	MG	DA	3039	1/1	0.98	0.12	60,60,60,60	0
59	MG	DA	3006	1/1	0.98	0.12	51,51,51,51	0
59	MG	DA	3083	1/1	0.98	0.12	78,78,78,78	0
59	MG	BA	3118	1/1	0.98	0.06	80,80,80,80	0
59	MG	DA	3008	1/1	0.98	0.12	61,61,61,61	0
59	MG	DA	3043	1/1	0.98	0.19	53,53,53,53	0
59	MG	DA	3009	1/1	0.98	0.12	45,45,45,45	0
59	MG	BA	3023	1/1	0.98	0.14	45,45,45,45	0
59	MG	BA	3156	1/1	0.98	0.10	62,62,62,62	0
59	MG	DA	3144	1/1	0.98	0.06	70,70,70,70	0
59	MG	DA	3090	1/1	0.98	0.20	47,47,47,47	0
59	MG	DA	3091	1/1	0.98	0.12	56,56,56,56	0
59	MG	DA	3048	1/1	0.98	0.24	51,51,51,51	0
59	MG	DA	3012	1/1	0.98	0.24	60,60,60,60	0
59	MG	DA	3209	1/1	0.98	0.07	64,64,64,64	0
59	MG	DA	3051	1/1	0.98	0.11	60,60,60,60	0
59	MG	DA	3095	1/1	0.98	0.09	59,59,59,59	0
59	MG	DA	3152	1/1	0.98	0.11	61,61,61,61	0
59	MG	BA	3013	1/1	0.98	0.09	62,62,62,62	0
59	MG	DA	3214	1/1	0.98	0.07	80,80,80,80	0
59	MG	BA	3025	1/1	0.98	0.07	73,73,73,73	0
59	MG	DA	3217	1/1	0.98	0.14	56,56,56,56	0
59	MG	BA	3140	1/1	0.98	0.08	85,85,85,85	0
59	MG	DA	3055	1/1	0.98	0.17	62,62,62,62	0
59	MG	DA	3158	1/1	0.98	0.10	71,71,71,71	0
59	MG	DA	3100	1/1	0.98	0.04	57,57,57,57	0
59	MG	DA	3160	1/1	0.98	0.07	85,85,85,85	0
59	MG	BA	3107	1/1	0.98	0.13	91,91,91,91	0
59	MG	DA	3017	1/1	0.98	0.16	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3018	1/1	0.98	0.12	56,56,56,56	0
59	MG	BA	3040	1/1	0.98	0.09	55,55,55,55	0
59	MG	DU	201	1/1	0.98	0.12	62,62,62,62	0
59	MG	DA	3020	1/1	0.98	0.16	35,35,35,35	0
60	ZN	AD	301	1/1	0.98	0.19	117,117,117,117	0
60	ZN	AN	101	1/1	0.98	0.06	165,165,165,165	0
59	MG	DA	3166	1/1	0.98	0.11	55,55,55,55	0
59	MG	DA	3107	1/1	0.98	0.06	66,66,66,66	0
59	MG	DA	3050	1/1	0.99	0.09	49,49,49,49	0
59	MG	DA	3216	1/1	0.99	0.04	62,62,62,62	0
59	MG	BA	3128	1/1	0.99	0.07	83,83,83,83	0
59	MG	CA	1607	1/1	0.99	0.19	55,55,55,55	0
59	MG	DA	3001	1/1	0.99	0.19	36,36,36,36	0
59	MG	DA	3106	1/1	0.99	0.09	43,43,43,43	0
59	MG	CA	1608	1/1	0.99	0.24	78,78,78,78	0
59	MG	DA	3031	1/1	0.99	0.13	48,48,48,48	0
59	MG	BA	3064	1/1	0.99	0.13	51,51,51,51	0
59	MG	DA	3155	1/1	0.99	0.08	59,59,59,59	0
59	MG	BA	3002	1/1	0.99	0.24	50,50,50,50	0
59	MG	DA	3045	1/1	0.99	0.17	43,43,43,43	0
59	MG	DA	3005	1/1	0.99	0.21	44,44,44,44	0
59	MG	BA	3014	1/1	0.99	0.21	50,50,50,50	0
59	MG	BA	3006	1/1	0.99	0.20	41,41,41,41	0
59	MG	DA	3026	1/1	0.99	0.08	44,44,44,44	0
59	MG	DA	3145	1/1	0.99	0.03	58,58,58,58	0
60	ZN	CD	301	1/1	0.99	0.17	107,107,107,107	0
60	ZN	CN	101	1/1	0.99	0.04	170,170,170,170	0
59	MG	DA	3130	1/1	0.99	0.12	63,63,63,63	0

6.5 Other polymers (i)

There are no such residues in this entry.